



Job Quality Matters

How Our Future Economic Competitiveness Hinges
on the Quality of Parents' Jobs

Heather Boushey and Alexandra Mitukiewicz June 2014

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Introduction and summary

Being the parent of young children in the United States today is no easy task. Many have to juggle multiple jobs with unpredictable hours—single-parent and two-income families alike—and whether wealthy or poor, the question of childcare is ever present. Only adding to this stress is the growing evidence of the importance of the years between conception and kindergarten for a child’s development. No wonder parents, and particularly mothers given their traditional role as the primary caregiver and increasingly as breadwinner, are so concerned about how to balance work and raise their young children.

The findings of many new studies on the importance of children’s early years for future outcomes should give pause to parents and policymakers. As this paper documents, the research shows that children’s kindergarten skill levels are correlated with their subsequent success (or failure) in the job market as adults, even accounting for the quality and quantity of elementary, secondary, and post-secondary schooling.¹ An even more worrisome finding is that experiencing stress during childhood or adolescence (such as experiencing a parent working a low-quality job—or worse—losing a job) can negatively affect mental and physical health, and educational attainment and have lasting effects into adulthood.²

No wonder harried working mothers and fathers, up and down the income ladder, report conflicts between their job and meeting their children’s needs. Our workplace policies largely fail to help the majority of working parents—a substantial majority of whom lack the income to compensate for the lack of family-friendly workplace policies in our nation. In 2013, only 61 percent of private-sector workers had employer-provided paid sick days and only 12 percent had access to employer-provided paid family leave.³ Access to workplace flexibility policies is also extremely limited: in 2011, only half of workers had access to flexible hours policies and about one quarter of workers had access to flexible location policies.⁴

Low-income workers have even more limited access to policies to help them address conflicts between earning a living and caring for the next generation. Too

many families rely on a fragile patchwork of familial and non-relative care to try to balance the demands of work and home.⁵ In a 2000 study of low-income working parents, the majority of parents reported that they did not expect to be able adjust their work schedules or create arrangements to better balance work and family, other than through finding another job.⁶

In short, the structures of our workplaces today do not at all match the needs of working parents or their children. This crisis in the home is not just a private problem—it is one of national importance. In not meeting the needs of today’s children, we risk a lower-productivity future, which will have serious implications for our nation’s economic growth.

Economists have long argued that human capital, that is, the level of skills, education, and talents of the potential workforce, is one of the most important factors in determining economic growth.⁷ Human capital has long been the engine powering our nation’s global competitiveness. Yet, growing evidence suggests that the United States is falling behind other countries in terms of skill acquisition. New data from the Organisation for Economic Co-Operation and Development found that across 34 developed countries, U.S. teenagers rank 17th in reading, 21st in science, and 26th in math.⁸

In the national debate over how to improve skills of the U.S. workforce, economists and policymakers are looking to early childhood and finding compelling evidence that the early years matter far more than we previously understood. Economists traditionally measure human capital in terms of educational attainment or levels of training, but this may overstate the importance of post-secondary education.⁹ This is not to say that later investments are not important, but that recent research in economics points to the conclusion that, in order to improve our nation’s economic growth and competitiveness, policymakers must also focus on early childhood.¹⁰

Early childhood is so important because this is when we acquire what economist and Nobel laureate James Heckman terms “non-cognitive” skills, also known as “soft skills,” which are both important on their own as well as provide the foundation for later skill acquisition.¹¹ Non-cognitive skills are skills that are not specifi-

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cally intellectual or analytical in nature, such as a child’s perseverance or ability to get along with others. By and large, these soft skills are learned from primary caregivers very early in life—be they mom and dad, grandparents, childcare professionals, some combination of these role models, or sadly sometimes hardly anyone at all. This is why it is so important for our society and our policymakers to understand the largely under-explored issue of children’s widely differing early childhood experiences due to changes in inequality and the kinds of jobs in which their parents are engaged.

Two interrelated trends define the economic experience of families over the past 50 years. First, families have altered the way they work and care for children. Most children no longer have a full-time, stay-at-home parent, which means that where and how children spend their days are markedly different compared to a generation or two ago.¹² The typical American middle-income family put in an average of 11 more hours a week at work in 2007, just before the start of the Great Recession, than it did in 1979 and, in 2010, fewer than one third of children lived in a family with a full-time stay-at-home parent.¹³ Abundant economics research has explored the effects of greater maternal employment and the quality of childcare on children’s outcomes, but we know much less about how the quality—and flexibility—of parents’ jobs interacts with these processes. What we do know from the research points to the conclusion that parental job quality, including the ability to have some control over when work happens, is a very important issue.

Second, the United States has seen a sustained rise in economic inequality, widening the gap between low- and high-incomes to unprecedented levels.¹⁴ As has been well documented, inequality in the United States has taken the form of the top pulling apart from the rest of the income distribution, with little income gains for the bottom 90 percent of families.¹⁵ This means that while some children have access to immense resources, others lack access to the resources they need to be fully productive members of our society and economy. Just as importantly, high inequality is associated with greater divergence in access to high-quality jobs—those that pay good wages, offer stable and predictable schedules, and provide benefits that allow workers to address conflicts between work and family.¹⁶ This means that low-income children are experiencing the double-whammy of less income just as their parents cope with less control over their time to provide care.

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This report examines what is known about the importance of early childhood for the development of human capital, then turns to what we know about the effects of family income, employment patterns, and job quality on children's development. We find that job quality, especially control over schedules and access to benefits that allow workers to address conflict between work and family, is an under-examined issue in the economics literature. However the research that does exist shows that this is an important issue to include in our policy agenda to improve children's outcomes. Briefly, here is what we discovered:

- The time parents spend with their child affects the child's cognitive and non-cognitive development, with strong effects during a child's earliest years.
- Mothers' movement into the workplace and the rise in income inequality means there is a growing divergence across families in terms of resources that parents can devote to their children.
- Money matters. Parents', and particularly single mothers', access to well-paying work has real impacts on child outcomes through a variety of mechanisms. Perhaps most significantly, access to quality childcare is highly dependent on income.
- The level of stress among parents due to juggling work and family responsibilities has a direct effect their child's development.
- Most working parents have limited or no access to work-family policies such as workplace flexibility, paid leave, and paid sick days and those who do are more likely to be from higher income families. These policies help parents address conflicts between work and home, with real implications for parenting and children's outcomes.

All of these factors have a direct impact not only on the future human capital available in our country, but also, by extension, the productivity of our economy in the decades ahead.

A key conclusion of this paper is that we need to better understand the links between developing our children's human capital and the quality of their parents' jobs, including wages, the ability to have some control or flexibility on hours or scheduling, and the stress that they experience and bring home from work. One thing is very clear: our future economic competitiveness depends on getting this right.

Early childhood: Laying the foundation for future skills

Ask any economist what drives economic growth and they will almost certainly mention human capital, that is, the level of skills, education, and talents of the potential workforce. Traditionally, it was presumed that those skills were mostly learned in school, training, or on-the-job. But over the past couple of decades, a growing body of economic research has led to the consensus that early childhood—the time from birth to kindergarten—is a critical time for developing human capital. This is when we learn the “soft skills,” or non-cognitive skills that provide the foundation learning “hard skills,” or cognitive skills later in life. Furthermore, non-cognitive skills themselves are increasingly being seen as important: Paul Tough in his best-selling book, *How Children Succeed: Grit, Curiosity, and the Hidden Power of Character*, summarizes the literature showing that non-cognitive skills such as grit, self-control, and persistence developed during childhood are important for future success.¹⁷ Thus, in order to boost economic competitiveness in future years, we must attend to whether parents have access to the resources to make these critical investments in non-cognitive skill development.

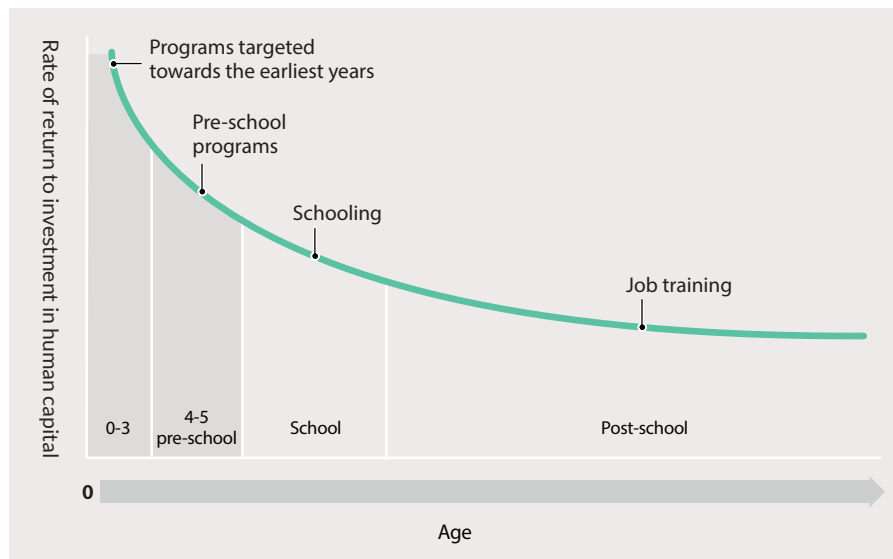
The standard economic model measures human capital in terms of the level of education and training a person has. But new research on early childhood poses a serious challenge to this model. In a series of papers, University of Chicago economist James Heckman and his co-authors argue that the returns to a marginal increase in investment in human capital is greatest at early ages, before the individual even enters school.¹⁸ Heckman describes this using a curve that shows as a child ages, the rate of return to human capital investments decrease. (See Figure 1.) This research has led some to argue that the monetary return on schooling in a standard earnings equation is “inflated” because it does not include important variables that account for non-cognitive skills.¹⁹

“In order to boost economic competitiveness in future years, we must attend to whether parents have access to the resources to make these critical investments in non-cognitive skill development.”

FIGURE 1

Measuring When Investments Matters Most

The importance of investments in childhood education over time:



Source: Heckman, James J. "The Case for Investing in Disadvantaged Young Children." In *Big Ideas for Children: Investing in Our Nation's Future*. First Focus, 2008. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.182.3796&rep=rep1&type=pdf>.

Non-cognitive skills are important for human capital

The term non-cognitive is often juxtaposed with cognitive as a catchall term for attributes not intellectual or analytical in nature.²⁰ Researcher Jeffrey A. Rosen at RTI International and his co-authors define it as:

Non-cognitive attributes are those academically and occupationally relevant skills and traits that are not specifically intellectual or analytical in nature. They include a range of personality and motivational habits and attitudes that facilitate functioning well in school. Non-cognitive traits, skills, and characteristics include perseverance, motivation, self-control, and other aspects of conscientiousness.²¹

Because the term is broadly accepted within economics literature, we will use the term non-cognitive throughout this report to mean behavioral, social, and emotional traits.²²

One often-quoted study that underscores the importance of non-cognitive skills is referred to as the "marshmallow test."²³ In the study, an interviewer left a young

child, around four to five years old, seated in a room with a marshmallow or other treat. The interviewer told the child that he would have to leave the child alone in the room for a few minutes and that the child was free to eat the treat, but if she waited until the interviewer returned, he would bring her a second treat.

Some children immediately gobbled up the treat, while others focused their energy on waiting patiently for the interviewer to return. Many years later, Columbia University psychologist Walter Mischel and his colleagues revisited the children who participated in the study and found that those who had demonstrated the most self-control, which the researchers identify as an important non-cognitive skill, had markedly better adult outcomes in terms of employment, earnings, and other factors.²⁴

University of Rochester professors Celeste Kidd, Holly Palmeri, and Richard N. Aslin build upon the marshmallow study and find that in addition to self-control, children's decisions to eat or not eat the marshmallow depends on how they perceive the environment, that is, whether the interviewer is reliable.²⁵ Furthermore, they find that these two factors can be related to later-life outcomes.²⁶ While this and other criticisms provide alternative theories to Mischel's findings, they still suggest that non-cognitive skills are important for long-term development. Desire to please and environmental perceptions are not "hard" skills that are taught in the classroom.²⁷

Research confirms that non-cognitive skills are important in the workplace.

University of Chicago economist James Heckman and his co-author economist Yona Rubinstein at the London School of Economics compared the earnings of workers who had a Graduate Equivalence Degree, or GED—a degree granted based on completion of a skills mastery test—to workers who had earned a regular high school diploma.²⁸ They found that once they controlled for ability, earnings for workers who had a GED were less than for those who had a high school diploma or high school dropouts. The authors conclude that earning a traditional high school diploma means more than a basket of technical skills; it's a marker of a student's willingness to play by the rules. They explain it like this:

[The] GEDs are the "wiseguys," who lack the abilities to think ahead, to persist in tasks, or to adapt to their environments. The performance of the GED recipients compared to both high-school dropouts of the same ability and high-school graduates demonstrates the importance of noncognitive skills in economic life.²⁹

Regardless of whether this is due to the socialization of high school itself or the skills required to finish the degree on time, it is clear that non-cognitive skills are important for future employment outcomes.³⁰

Early childhood *education* and non-cognitive skills

A large body of research documents the importance of early childhood education for the development of both cognitive and non-cognitive skills.³¹ In a comprehensive review of the recent literature, economists Douglas Almond of Columbia University and Janet Currie at Princeton University find that “child and family characteristics measured at school entry do as much to explain future outcomes as factors that labor economists have more traditionally focused on, such as years of education.”³² They point to a wide array of research, including that by Currie and Duke University’s Duncan Thomas, who found that a child’s test scores at ages six to eight can explain four to five percent of the variation in employment and 20 percent of the variation in wages at age 33.³³ As they note, this is especially striking since traditional earnings equations, which typically include the worker’s age, highest level of schooling completed, and years of on-the-job experience, can explain only about 30 percent of the wage variation.

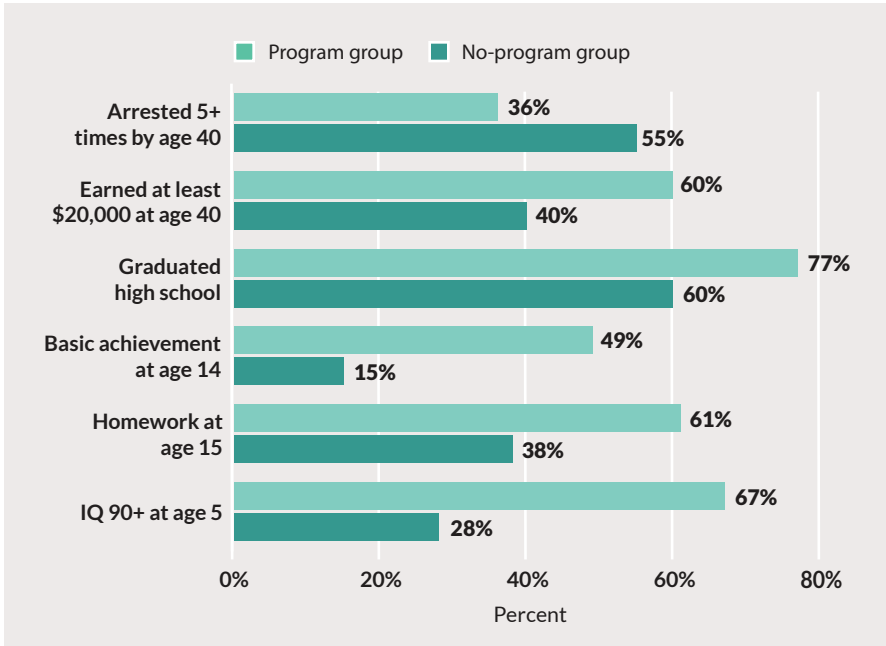
Some of the most compelling literature traces a direct line from a child’s early educational experiences to the kind of worker they become and the level of skills they have later on in life. One case in point: A preschool in Ypsilanti, Michigan—the High/Scope Perry Preschool program—conducted an experiment in the 1960s on 123 low-income, African American children considered to be at high risk for failure.³⁴ When the children were ages three and four, just under half were randomly assigned to a high-quality pre-school program, while the others received no preschool, and researchers continued to follow them for decades. At age 40, children in the program group were more economically successful on multiple measures: more likely to have graduated from high school, attended college, accrued higher earnings, established stable housing arrangements, and invested in savings accounts, compared to those not in the program.³⁵ (See Figure 2.)

“Regardless of whether this is due to the socialization of high school itself or the skills required to finish the degree on time, it is clear that non-cognitive skills are important for future employment outcomes.”

FIGURE 2

Major Findings of the High/Scope Perry Preschool Study

Program participants were more economically successful on multiple measures than their no-program counterparts.



Source: Schweinhart, Lawrence J., Jeanne Montie, Zongping Xiang, W. Steven Barnett, Clive R. Belfield, and Milagros Nores. *The High/Scope Perry Preschool Study Through Age 40: Summary, Conclusions, and Frequently Asked Questions*. Ypsilanti, MI: High/Scope Press, 2005.

Importantly, while the improvement in cognitive effects faded over time, the Perry Preschool program showed improvement in non-cognitive outcomes that did not fade and that affected adult outcomes. At age 40, program participants had significantly fewer arrests and more got along with their families than no-program participants.³⁶ Furthermore, at age 40, program participant males reported less drug use than their the no-program counterparts.³⁷ These improvements in non-cognitive traits have been confirmed in other similar studies (see box).

Experimental studies show the importance of early childhood education

It is now well accepted that pre-school matters, especially for “at-risk” children. Among the most commonly cited studies are those based on randomized control trials that follow children from pre-school through adulthood. While there are only a relatively small number of studies with experimental designs that have followed children for their entire lives, they

come to similar conclusions as the seminal work on the Perry Preschool in the 1960s and 1970s in Ypsilanti, Michigan. Children who participate in these programs do better in school, are more likely to graduate and attend college, and are less likely to smoke, use drugs, be on welfare, or become teenage mothers.³⁸

- The Early Training Project was a random assignment evaluation in the 1960s that assigned African American, low-income children, ages four to five, to two separate groups. One group consisted of weekly meetings and a pre-school program, while the control group did not.³⁹ Researchers found that the children in the experimental group outperformed children in the control group on various cognitive assessment tests administered during the intervention, yet these differences faded in later follow-ups three years after the intervention ended.⁴⁰
- The Milwaukee Project was an experimental study on young at-risk children, which began in 1966. The study assigned six-month-old children and their mothers to either an educational program, or a control group.⁴¹ Investigators found that at grade eight children in the program had higher IQs than those assigned to the control group.⁴²
- The Carolina Abecedarian Study was an experiment begun in 1972 that assigned 112 at risk children ages six to 12 weeks to pre-school or a control group, and followed the children to age 21.⁴³ Researchers found that children in the program group had higher IQ and test scores and were more likely to attend a four-year college than control group children.

While much of the research on early interventions focus specifically on low-income, minority, or at risk children, research that includes children from across the income distribution also finds persistence of skills learned early in life. In Project STAR, an experiment implemented across 79 schools in Tennessee from 1985 to 1989, 11,571 students and their teachers were randomly assigned to classrooms of differing sizes within their schools from kindergarten to third grade, and followed through age 27.⁴⁴ Based on analysis of this experiment, Harvard University economist Raj Chetty and his co-authors find that kindergarten test scores are highly correlated with outcomes at age 27, such as college attendance, home ownership, and retirement savings.⁴⁵ Like in the Perry Preschool/High Scope study, in Project STAR, researchers found that while the cognitive effects on test scores fade as a child ages, the non-cognitive effects did not.

One caveat of this research is that these early studies may not be replicable. While these studies allowed researchers to understand the effects of a specific program, we have to recognize the ethical issues of assigning pre-school age children to treatments or controls

that may have life-altering effects. Since the experimental early childhood research studies of the 1960s and 1970s, measures have been put in place to better protect human subjects participating in biomedical and behavioral research studies. In 1964, the World Medical Association developed the Declaration of Helsinki to provide guidance to physicians with ethical principles when conducting medical research involving human subjects.⁴⁶ Human subject protections were further expanded in 1974 when the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research was created under the National Research Act.⁴⁷

The commission's findings are summarized in *The Belmont Report*, which provides detailed criteria for human subjects research.⁴⁸ *The Belmont Report* is an important resource for Institutional Review Boards, which review and approve research studies involving human subjects before they can begin.⁴⁹ Special provisions usually govern certain populations, such as fetuses or pregnant women, prisoners, or children.⁵⁰ In addition, Institutional Review Boards ensure that research studies protect the privacy and confidentiality of participants.⁵¹ Together, these ensure that today's research studies treat participants ethically and fairly. This is why studies such as the High/Scope Perry Preschool Study cannot and should not be replicated. Advancements in empirical methods have allowed researchers to study their research questions of interest in more ethical fashions.

Early childhood and non-cognitive skills

Non-cognitive skills are not, of course, only learned in school. In order to better understand how children develop these skills economists have drawn on research in other disciplines, such as sociology, psychology, and medicine, in order to understand how factors such as maternal and infant health, breast-feeding, or parenting affect children's non-cognitive development and, therefore, cognitive and non-cognitive outcomes.⁵²

One finding that stands out in the research is that parents' time investments are important for children's development.⁵³ In a literature review of families and time, Miami University sociologists Ronald Bulanda and Stephen Lippmann find that parental time has implications for children's social, cognitive, and emotional development.⁵⁴ They summarize that the amount of time parents spend with their children is not only associated with better academic performance, but can also reduce the likelihood of developing behavioral problems, dropping out of high school, and teenage pregnancy.⁵⁵ And Columbia University economist Matthew Neidell finds that parental time investments during infancy can offer lasting benefits for children, especially for their non-cognitive development.⁵⁶

It's not just the amount of time, however, it's how parents interact with children when they are together. As we learn more about human development, there is a greater awareness of the effects of stress and its effects on not only our state of mind, but on how the mind develops. Behavioral economist Sendhil Mullainathan and cognitive psychologist Eldar Shafir talk of how the feeling of scarcity "captures the mind."⁵⁷ Parents who are engrossed in thinking about how to put the next meal on the table or are having to cope with a boss who doesn't understand the needs of a child with a high temperature will interact differently with their children than those who are less stressed.

Studies find that parental health and stress levels matter a great deal for child development. The National Scientific Council on the Developing Child at Harvard University has found that stressful experiences early in a child's life have long-term negative impacts.⁵⁸ The Council documents that, "frequent or sustained activation of brain systems that respond to stress can lead to heightened vulnerability to a range of behavioral and physiological disorders over a lifetime."⁵⁹ Heightened stress levels can arise from a variety of home environment factors. Specifically, the Council notes that economic hardship, quality of childcare and education, and children/caregiver relationships can affect children's elevated stress levels and later development.⁶⁰

The effects of parental stress on children's outcomes can be traced back as far as in utero. In their examination of how a mother's stress affects her unborn child and the child's future outcomes, a team of Brown University scholars—economist Anna Aizer, psychiatrist Laura Stroud, and epidemiologist Stephan Buka—find that "in-utero exposure to elevated levels of the stress hormone cortisol negatively affects offspring cognition, health and educational attainment."⁶¹ Overall, the evidence on the effects of pre-natal conditions on future human capital is so striking that, in their review of the literature, economists Almond and Currie conclude:

That is, despite being congenital (i.e. present from birth), this research indicates that the birth endowment is malleable in ways that shape human capital. This finding has potentially radical implications for public policy since it suggests that one of the more effective ways to improve children's long term outcomes might be to target women of child bearing age in addition to focusing on children after birth.⁶²

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One finding in particular is clear—the time parents spend with their child during a child’s earliest years is critical for their cognitive development, and may be even more important than monetary expenditures. Using detailed information on the time children spend in activities with both parents, economists Daniela Del Boca at the University of Torino, Christopher Flinn at New York University, and Matthew Wiswall at Arizona State University find that both mothers’ and fathers’ time is critical for a child’s development.⁶³ Furthermore, they show that while monetary expenditures on a child impact his or her cognitive development, this impact is modest.⁶⁴

Despite the fact that most parents work and work longer hours, both mothers and fathers still spend just as much—or more—time with their children. Even though mothers’ labor force participation has increased dramatically since 1975, mothers’ overall time with children has stayed about the same.⁶⁵ In 2000, employed mothers were recording as much time caring for their children as non-employed mothers did in 1975.⁶⁶ Rather than reduce parental time as their working hours increased, working mothers have instead reduced their time investments in other areas, such as housework or leisure.⁶⁷ Fathers are also investing more time in caring for children. Between 1975 and 2000, fathers’ time with their children increased by about 7 hours—from 25.8 hours to 32.6 hours per week—while the number of hours worked by working fathers remained unchanged.⁶⁸

“Despite the fact that most parents work and work longer hours, both mothers and fathers still spend just as much—or more—time with their children.”

There is evidence that these time investments vary across the income distribution, as higher-income and higher-educated parents are investing in parenting techniques calibrated to boost children’s skill development. In her book, *Unequal Childhoods*, University of Pennsylvania sociologist Annette Lareau finds that there are distinct differences across class in how families spend their parenting time. While middle class families focus on what she terms “concerted cultivation,” that is, an emphasis on developing a child’s talents, lower-class families focus on meeting children’s material and emotional needs.⁶⁹ University of California, San Diego economists Garey Ramey and Valerie Ramey find college-educated parents have increased the time they spend on childcare more than other families and argue that this is due to the heightened competition for college admissions. They term this the “rug rat race,” noting that the highly competitive U.S. college application system is creating a scenario whereby parents feel they must do more to help their children get into the best college.⁷⁰

It is for all these reasons that economists have called for a renewed focus on how families foster children's skills. As the University of Chicago's Heckman argues:

The conventional wisdom espoused by most politicians, educated laypersons, and even many academics places formal educational institutions in a central role as the main producers of the skills required by the modern economy. *It neglects the crucial role of families and firms in fostering skill and the variety of abilities required to succeed in the modern economy.* [Emphasis added.] Popular discussions of skill formation almost always focus on expenditures in schools or on educational reforms and neglect important non-institutional sources of skill formation, which are equally important, if not more important, producers of the varieties of skills that are useful in a modern economy.⁷¹

If families are where children learn the skills they need to be productive later in life, we need to consider not only what educational institutions deliver to help children acquire those skills but also how inequality, in incomes and job quality, affects parenting.⁷²

Children from birth to kindergarten: Who cares?

Two economic trends have redefined family's experiences with respect to their ability to care, creating a widening gap in resources of both time and money across families. First, one of the most significant changes over the past 50 years is that most mothers are now employed outside the home. Prior to the 1960s, most women, and especially most mothers, did not work outside the home. While many women worked prior to marriage, after marriage and children, most left the labor force. That began to change in the 1960s and the tipping point to a majority of mothers entering the labor force occurred in the mid-1970s.⁷³ This transformation has been remarkable. Between 1970 and 2000, the share of married mothers in the labor force nearly doubled, rising from 39.7 percent to 70.6 percent.⁷⁴ Notably, most mothers work full time: in 2013, three-quarters of working mothers were putting in at least 35 hours per week.⁷⁵

Second, the United States has seen rising wage and income inequality, which means that families have increasingly different levels of access to services that augment children's skills. Furthermore, heightened inequality in wages and incomes has been associated with inequality in access to high quality jobs. Higher educated and higher paid workers are much more likely to be in jobs that provide workplace flexibility which allows them to better coordinate their children's needs with their own job responsibilities. Demographic changes also play a role in widening gaps in family resources as higher rates of single motherhood leave many families with only one person who has to be both breadwinner and caregiver.⁷⁶

The result is an increasing divergence across families in terms of the time and money that parents can devote to their children. Some families have gained much-needed income but are left with less time and very little support for the demands

“Once economists recognize that the skills taught in school are only one piece of the puzzle and that the real learning starts much earlier, we need to consider how jobs, and the quality of jobs, affect parenting and children's outcomes.”

of parenting. Other families have gained income that pushes them way up the income ladder, but they can cope with having less time for parenting by using their money to purchase high-quality care for their children. Higher-income families are also more likely to have flexible workplace rules, which enable them to engage in parenting, such as having a conversation over a meal or helping with homework.

The economics literature has delved into the implications for children's outcomes of both greater maternal employment and family incomes. Clearly, creating the conditions for children to acquire the non-cognitive and cognitive skills they need to be productive as adults is an extremely complex process. Once economists recognize that the skills taught in school are only one piece of the puzzle, and that the real learning starts much earlier—both inside and outside of day care, as well as at home—we need to consider how jobs, and the quality of jobs, affect parenting and children's outcomes.

The rise of “breadwinner moms” and children's outcomes

Let's begin with breadwinner moms. While there has been a good deal of investigation into whether and how maternal employment affects children's development, this body of research does not tell us that having a working mother is unequivocally good or bad for children. One of the clearest conclusions in the literature is that whether “mom works” isn't even the right research question. Instead, what we need to understand is how parental employment affects family income, the quality of care and education children receive when parents are working, and how working—and the quality of parents' jobs—affects the amount and quality of the time parents spend with their children.

A new study released by the Organisation for Economic Cooperation and Development that examined five countries—Australia, Canada, Denmark, the United Kingdom and the United States—finds that family income, parental education, and the quality of parental interaction with children were more important factors affecting child development than whether or not a mother worked outside the home.⁷⁷ While the study finds negative effects of mothers' employment in the first six months after the child was born, these effects were small and not consistent across different demographic groups. The OECD study was able to control for a large number of indicators that could affect the relationship between mothers' employment and children's outcomes, including the number of hours a mother worked at the time of data collection, and the type of childcare (a day-care center or other formal care, care with a non-parent relative or family friend, and parental care).

This study is consistent with the research literature more generally. Overall, very few studies show negative outcomes for children when their mothers work. In a meta-analysis of 69 studies that examine the effects of maternal employment during infancy and early childhood on achievement and behavior problems, developmental psychologists Rachel G. Lucas-Thompson from Colorado State University, Wendy A. Goldberg from University of Michigan and JoAnn Prause from the University of California, Irvine, find that for very young children (with a few exceptions), having a mother in the workforce was not significantly associated with later achievement or internalizing or externalizing behaviors. In fact, mothers' employment when children are very young appeared most beneficial for single-parent families or families with access to government anti-poverty assistance programs.⁷⁸

Researchers have found that very specific family characteristics can play a key role in how children react to maternal employment, sometimes leading to negative outcomes. For example, child development professor Jeanne Brooks-Gunn and social policy professor Wen Jui-Han, along with Columbia University professor Jane Waldfogel conducted an analysis of 900 European-American children from the National Institute of Child Health and Human Development Study of Early Childcare and found that maternal employment by the ninth month of the child's life was linked to lower school readiness scores when the child was three years old.⁷⁹ What mattered was how many hours a mother worked. Lower school readiness scores were lower for children whose mothers worked more than 30 hours per week, even when controlling for the quality of childcare, home environment, and maternal sensitivity. In other research, the same authors find adverse effects of first-year maternal employment on cognitive outcomes for non-Hispanic white children, but not for African American and Hispanic children.⁸⁰ Furthermore, the authors find positive effects of maternal employment for non-Hispanic, white children's cognitive development when children were ages two and three, contrary to the adverse effects observed in year one.⁸¹ The findings from this study indicate while mothers are working more hours in recent decades, they have done so in a way with minimal negative effects on the child.

“ Having a mother in the workforce was not significantly associated with later achievement or internalizing or externalizing behaviors.”

One often-overlooked family characteristic is the role the fathers play in their children's development. Men are biologically well suited to care for their children. Scientific studies find increased levels of oxytocin—known as the love and bonding hormone—among fathers who bond with their babies during the first few weeks of a newborn's life.⁸² Mothers and fathers often have

different parenting styles, which can provide well-rounded development for the child. For example, a study found that fathers are more important than mothers for children's language development, regardless of the mother's educational attainment.⁸³ The authors explain that fathers don't use simplified and familiar vocabulary with their children as often as mothers do. As a result, children learn more new words and concepts. Further, a review of scientific studies finds that children who have a positively engaged father do better in school, have greater psychological well-being, and higher levels of career success.⁸⁴

As with the mother, the father-child relationship can be affected by the father's employment patterns. Economists have typically focused on the implications of maternal but not paternal employment. This makes sense given that the economic change of women moving into employment. But if the focus is on children's development then it may be that the focus should be on parental, not just maternal, employment. Researchers find that fathers do matter and that fathers' employment patterns can affect children's outcomes. Certainly, disruptions in paternal employment—including father's unemployment—affect children's outcomes.⁸⁵ Furthermore, researchers find among other things, that fathers' multiple involuntary job losses are associated with higher levels of mothers' parenting stress, which could negatively impact children's academic progress.⁸⁶

“A review of scientific studies finds that children who have a positively engaged father do better in school, have greater psychological well-being, and higher levels of career success.”

Indeed, when seeking to understand maternal employment and income on children's outcomes, researchers have to be acutely aware of the complex nature of the decisions that families must make. For a researcher to conclude that maternal employment affects children's outcomes in a particular way, she needs to find a way to compare the outcomes of children in families with a working mother and in families with stay-at-home mother where these families were otherwise virtually identical. Otherwise, how can we know whether maternal employment or some other factor is affecting children's outcomes?⁸⁷ Understanding all the other factors that can come into play—many of which are difficult to isolate in rigorous social science experiments—can pose enormous challenges, but also push us to consider the importance of qualitative research.

There is, however, one policy area where researchers were able to conduct studies on families in order to understand the implications of maternal employment: welfare reform toward the end of the 20th century. Between the 1980s and 1996, the federal government granted waivers to 27 states to implement programs to

encourage greater employment among parents, nearly all of them mothers, who received Aid to Families with Dependent Children benefits, with a condition being that the state had to evaluate their program's effectiveness.⁸⁸ These waivers created a unique opportunity to study which policies were most effective in promoting maternal employment.⁸⁹ Because policymakers had to evaluate the programs, they randomly assigned eligible participating mothers to either a program group—such as training and employment programs—or a control group in order to evaluate which programs were more effective.⁹⁰

A number of studies tracked children's outcomes alongside the mothers' employment outcomes. In an issue of the *Future of Children*, a journal jointly produced by The Brookings Institution and Princeton University, Child Trends scholar Martha Zaslow and her co-authors find that of the 10 experimental studies that evaluated child outcomes, the programs designed to increase employment of low-wage mothers receiving Aid to Families with Dependent Children either had no impact or positive impacts on young children's academic and cognitive development. But they also found that these programs had mixed outcomes on children's behavioral and emotional outcomes as well as an unfavorable impact on child health.⁹¹

These random assignment studies found that the effects of maternal employment on children's outcomes were very much affected by the quality of the mother's job and the income she brought in. Zaslow and her colleagues note that the positive consequences on cognitive and academic outcomes for school-age children were observed in welfare reform programs that not only increased employment but also increased maternal educational attainment or family economic status.⁹²

These findings based on mothers receiving public assistance are echoed in research focusing on families of all different socio-economic backgrounds. Taking into consideration parents' job quality, including wages, hours, and occupational complexity, North Carolina State professor Toby L. Parcel and Ohio State professor Elizabeth G. Menaghan find that early maternal employment has minimal effects on child outcomes, and that maternal employment in good quality jobs has the strongest positive impact on children's development. Their analysis shows that working conditions, including working overtime hours, have an effect on children's cognitive development and social outcomes.⁹³ The authors

“These random assignment studies found that the effects of maternal employment on children's outcomes were very much affected by the quality of the mother's job and the income she brought in.”

explain: “Our explicit consideration of such conditions suggests that employment has its strongest benefits for mothers with better jobs and less benign implications for mothers restricted to routine, monotonous labor at low wages.”⁹⁴ Specifically, the authors find overtime parental hours are associated with lower levels of verbal facility among children ages three to six.⁹⁵

Money matters for children’s development

Most families now rely on a mother’s earnings to make ends meet. The idea that income matters for children’s outcomes may seem so obvious as to be a nonsensical research topic. However, the effect of parental income has been highly contested.⁹⁶ Here, as with maternal employment, the issue is complex. Is it the family’s income that matters or is it what money can buy? Is it that higher-income families tend to have higher-educated parents, live in places with better schools or can afford high-quality private schooling, or can afford the best childcare?⁹⁷ Or, is it just that higher-income children are smarter?⁹⁸

These are critical policy questions. If it is just that money matters then policymakers may want to focus on improving incomes. But if good schools or high-quality childcare can make up for coming from a low-income family, then policymakers can focus their efforts on ensuring equality of opportunity for all children. Given the significant rise in income inequality, the question of understanding the role of income in human capital development takes on even greater urgency.

A new, comprehensive survey of the available literature by London School of Economics researchers Kerris Cooper and Kitty Stewart finds that money does indeed matter. They identify the 34 relevant research studies from 1988 to 2012 and conclude from this body of work that “children in lower-income families have worse cognitive, social-behavioral and health outcomes in part *because they are poorer*, not just because poverty is correlated with other household and parental characteristics.”⁹⁹ Stanford University sociologist Sean Reardon’s research finds that not only does money matter, but also that schools are not altering the advantage of having high-income parents:

It may seem counterintuitive, but schools don’t seem to produce much of the disparity in test scores between high- and low-income students. We know this because children from rich and poor families score very differently on school readiness tests when they enter kindergarten, and this gap grows by less than 10 percent between kindergarten and high school. There is some evidence that achievement gaps between high- and low-income

students actually narrow during the nine-month school year, but they widen again in the summer months.¹⁰⁰

Economists Gordon B. Dahl of the University of California, San Diego, and Lance Lochner at the University of Ontario use an innovative method to study the impact of income changes on children's development outcomes within low-income families with at least one person in the workforce. They looked at changes in the amount of money families could receive from the Earned Income Tax Credit, a federal government program that provides cash assistance to working low-income families and individuals.¹⁰¹ They find that a \$1,000 increase in income raises combine math and reading test scores by 6 percent of a standard deviation in the short run.¹⁰²

Research finds that income matters especially when children are young, which is when parents are more likely to be young adults and earning the lowest salaries of their careers. University of California, Irvine professor Greg J. Duncan, New York University professor Pamela A. Morris, and Columbia University professor Chris Rodriques find that a \$1,000 increase in annual income among parents increases young children's achievement by 5 to 6 percent of a standard deviation, concluding, "our results suggest that family income has a policy-relevant, positive impact on the eventual school achievement of preschool children."¹⁰³ Similarly, University of British Columbia economist Kevin Milligan and University of Toronto professor Mark Stabile look at expansions in the Canadian child-benefit program and also find the same positive effects of extra income on children's test scores.¹⁰⁴

But this research doesn't get at whether it is income that causes the better education outcomes or whether it is what that money buys. In an attempt to unpack this dynamic, University of Wisconsin-Madison professor Lawrence M. Berger, President of Brown University (then Princeton University economist) Christina Paxson, and Columbia University professor Jane Waldfogel explore the relationship between family income, home environments, child mental health outcomes, and cognitive test scores using data from the Fragile Families and Child Well-being Study, which follows a cohort of 5,000 children born in several large U.S. cities between 1998 and 2000.¹⁰⁵ They find that a child's family income is associated with a variety of outcomes, including language ability and a

"Research finds that income matters especially when children are young, which is when parents are more likely to be young adults and earning the lowest salaries of their careers."

variety of behavioral problems. But when they examine the mechanisms through which children's outcomes are related to family income and other socioeconomic characteristic, they conclude that, "the results are consistent with the hypothesis that low incomes influence children's developmental outcomes in *large part through their effects on multiple aspects of the child's home environment.*"¹⁰⁶ (Emphasis added.) Thus, while there is an income effect, this study shows that the important issue is *what* money buys.

Money buys many things, of course, but, in an era of widespread maternal employment, perhaps most pressing for children's development is the type and quality of childcare. Most young children spend some time in some type of childcare.¹⁰⁷ The quality of that care can make a difference in whether maternal employment has a positive or negative outcome on children's development.¹⁰⁸ Children who receive high-quality childcare have better developmental outcomes in early childhood, including better cognitive, language, and communication development, which, in turn, promotes learning.¹⁰⁹ The National Institute of Child Health and Human Development Early Childcare Research Network finds that among childcare indicators, childcare quality was the most consistent predictor of young children's behavior.¹¹⁰ Like with pre-school, the quality of childcare matters.¹¹¹

Yet most childcare in the United States is not of high—or even good—quality. Economists David Blau from Ohio State University and Princeton's Currie summarize the best available literature on childcare quality, noting from the outset that there are no nationally representative samples of U.S. day care centers with such measures.¹¹² They point to two studies, the Cost, Quality, and Outcomes Study and the National Child Care Staffing Study, both of which have reasonable sample sizes and measured quality in site-specific samples of day care centers using equivalent scales. These two studies measure child-care quality using the Early Childhood Environment Rating Scale and its infant-toddler counterpart.¹¹³ They summarize the findings and show that, "the overall average rating in both studies is just under 4, or about halfway between minimal and good."¹¹⁴

"The reality is that it is impossible for most families to afford to pay for the full cost of childcare, particularly for high-quality care."

There is evidence that highest quality center-based care has a positive effect on early learning and school achievement.¹¹⁵ To cite just one study by New York University professor Jennifer Hill and Columbia University professors Waldfogel and Brooks-Gunn: They estimate the effects of access to high-quality child care

for children who would otherwise have participated in one of three childcare options—no non-maternal care, home-based non-maternal care, and center-based care—and find that children participating in home-based or non-maternal care would have gained the most from high-quality center-based care, and would have retained these positive benefits over time.¹¹⁶

Childcare is very expensive and access to the limited number of high-quality childcare slots is a privilege too-often reserved for high-income children or the lucky few who can access special programs. In 2011, the average cost for a 4-year old in center-based care ranged from less than \$4,000 a year to more than \$15,000 a year.¹¹⁷ Analysis from the Survey of Income and Program Participation, based on data from the late 2000s, found that the share of income spent to have a pre-school aged child in childcare ranged from 3 to 7 percent for upper-income professional families to about 14 percent for low-income families.¹¹⁸ While low-income children may be eligible for child-care subsidies, co-payments can still be fairly high as a percentage of income, and waiting lists are long and growing.¹¹⁹

The reality is that it is impossible for most families to afford to pay for the full cost of childcare, particularly for high-quality care. Decent childcare is by definition costly; a trained and qualified individual can watch over no more than a handful of young children, on top of costs for appropriate facilities and enriching activities. Without subsidies, it is not possible for most families to pay for high-quality childcare on their own. The challenge is that most families need childcare when parents are relatively young and are therefore earning the lowest salaries of their careers, having had little time to amass sufficient savings.¹²⁰

It's what happens everyday that matters: Jobs, time, and stress

What we've learned from the research literature is that the twin changes of higher maternal employment and rising income inequality both have implications for children's development, in no small part because of the implications for parental stress, the effects on the time they spend with children, and the quality of non-parental care the child receives. One conclusion from the research examined above is that it's not just about whether mothers—or parents—work, but also whether their jobs both provide sufficient income as well sufficient workplace flexibility to allow parents time to care.

This brings us to the clear conclusion that the quality of parental employment matters for children's development. Different job qualities affect parenting, in no small part through their effect on parental stress, including:

- The stability of parent's employment
- The number of hours worked
- When those hours are worked
- Schedule predictability
- Scheduling flexibility for the worker (as opposed to the needs of the employer)
- Job-protected time off to care for a new child or a sick child
- Whether any of that time is paid time off

In short, the quality of parents' jobs (both mothers' and fathers') affect parenting styles, home environment, and children's development.

These are questions that economists have spent time examining, but often not included in economic analysis about what affects human capital. Two cases in

point: In an otherwise excellent review of the literature on what we know about early childhood and human capital, economists Douglas Almond of Columbia University, and Currie at Princeton discuss the literature on maternal employment, childcare, health status, home environment, and toxic exposure, but make no mention of parents' job quality.¹²¹ Similarly, a review of the University of Chicago's Heckman's research on early childhood and human capital does not show that he includes job quality as a key factor affecting parenting and children's outcomes.

But, there is evidence pointing to the importance of job quality. First and foremost, the quality of a parent's job affects the parent's stress levels and the quality of time they spend with children, which, as noted above, affects children's outcomes in measurable ways. University of Chicago psychologist Ariel Kalil and Robert Wood Johnson Foundation Health and Society Scholar Kathleen M. Ziol-Guest find that adolescents whose mothers are employed in a "bad" job (a low-paying and/or low-benefit job) are more likely to repeat a grade. The authors find that these negative effects are largely unexplained by changes in family income. Instead, Kalil and Ziol-Guest conclude that job loss or job quality can cause intra-family stress that in turn affects children's outcomes.¹²²

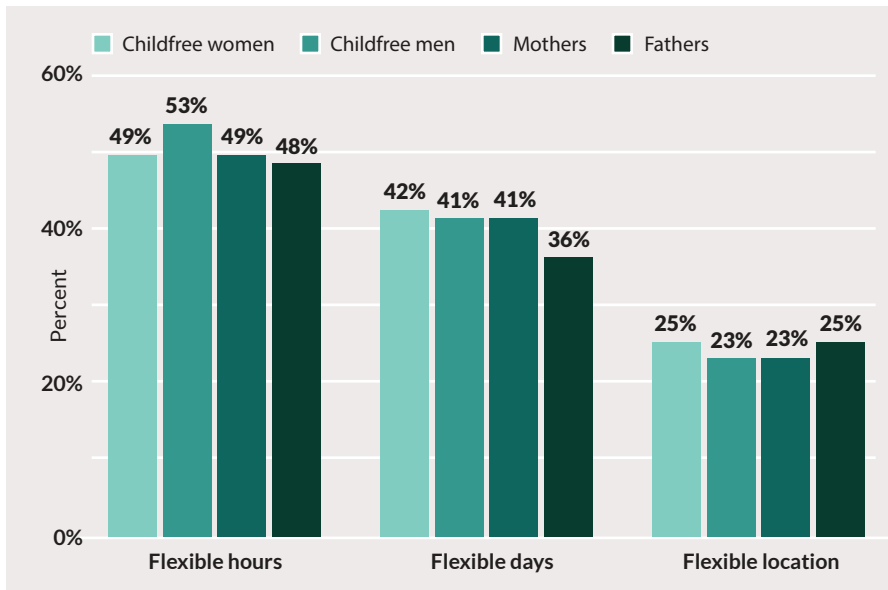
"The quality of parents' jobs affects their stress levels and the quality of time they spend with their children affects their kids in measurable ways."

Few nationwide labor standards create boundaries for how work can affect parenting practices, which means many parents toil in jobs that exacerbate conflicts between being a good employee and being a good parent. As summarized above, if a job turns a parent into someone who is usually stressed or "unreliable" for the child, such as having to work unscheduled, mandatory overtime, this can have negative outcomes for children's development. Yet, as sociologist Sarah Jane Glynn at the Center for American Progress finds, more than half of working parents do not have the ability to change their hours, or when and where they work.¹²³ (See Figure 3.) The Fair Labor Standards Act provides no guidance on minimum hours or scheduling predictability, which means that workers face mandatory, unplanned overtime, or have a nonstandard rotating schedule.¹²⁴ Further, only a few states and localities have implemented more family friendly policies related to paid leave, paid sick days, and workplace flexibility.¹²⁵

FIGURE 3

Working Parents Have Limited Access to Workplace Flexibility

Share of workers with access to workplace flexibility, by parental status, 2011



Note: Includes workers ages 25-44.

Source: Glynn, Sarah Jane. *Working Parents' Lack of Access to Paid Leave and Workplace Flexibility*. Washington, DC: Center for American Progress, November 2012. <http://cdn.americanprogress.org/wp-content/uploads/2012/11/GlynnWorkingParents-1.pdf>.

Rare as they are, research shows that access to policies that address conflicts between caring for a family and job responsibilities are good for children's development. University of Massachusetts, Amherst, psychologists Maureen Perry-Jenkins, JuliAnne Z. Smith, and Lauren Page Wadsworth followed 125 dual-earner, working class couples during the transition to parenthood and found that, on average, parents had few workplace policies, such as schedule flexibility or child care supports, available to them.¹²⁶ But for those who had access, these policies really mattered. New parents who had some schedule flexibility, perceived greater support for childcare, and maternity leave had fewer depressive symptoms and less anxiety.¹²⁷ This is important since parental depression and anxiety can affect the home environment and children's early development.¹²⁸

Although the economics literature too often leaves out the effect of job quality on future human capital, economists can look to recent publications providing comprehensive literature reviews of the existing research on this very topic. A recent paper by Professor Carolyn J. Heinrich at the University of Texas at Austin and a book edited by University of California, Los Angeles sociologist Suzanne M. Bianchi, University of Southern California sociologist Lynne M. Casper and

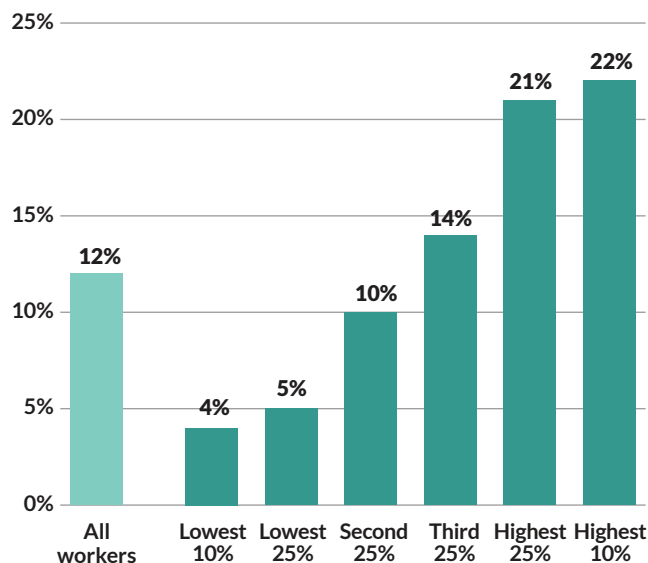
National Institutes of Health researcher Rosalind Berkowitz King summarize the existing literature and find that parental time, hours of work, schedule flexibility and predictability, and family leave affect how parents care for their families.¹²⁹ Both publications find that low-quality jobs—those with low pay, irregular hours, and few benefits—are likely to have negative effects on children’s development. Parents working these types of low-quality jobs are the least likely to have access to family leave, which can further exacerbate work-family conflict and negatively affect children’s long-term outcomes.

Yet, typically only workers at the top of the economic ladder have access to these kinds of policies. (See Figures 4 and 5.) Workers whose wages are in the lowest 25 percent of average wages are approximately four times less likely to have access to paid family leave than those in the highest 25 percent.¹³⁰ One study finds that flexible scheduling is available to less than one-third of working parents with incomes less than \$28,000 a year.¹³¹ While job benefits such as predictable working hours, schedule flexibility, and paid family and medical leave help working parents balance work-family conflict and spend more time with their children, employees do not necessarily have the same access to these benefits. As Kalil and Ziol-Guest explain:

Available jobs in [the low-wage labor market] often have unpredictable or non-traditional schedules that can prompt job separations, or provide wages and benefits that are too meager to support the families’ economic viability.¹³²

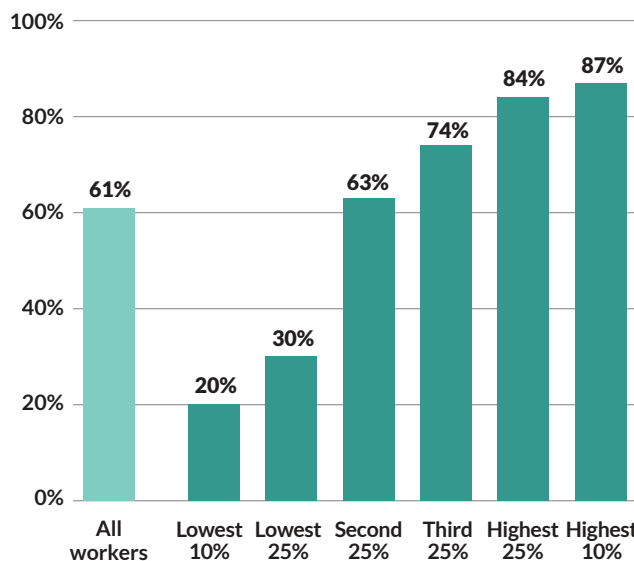
Policies that help parents address conflict between work and family can also help parents stay employed, which is also important for children’s

FIGURE 4
Share of workers with paid family leave through their employer, by average wage, 2013



Notes: Includes all private industry workers. The categories above are based on the average wage for each occupation surveyed. In 2013, the states of California and New Jersey required paid family leave coverage. In addition, the states of Hawaii, New York, and Rhode Island provided paid maternity leave under their temporary disability insurance programs.

FIGURE 5
Share of workers with paid sick days through their employer, by average wage, 2013



Notes: Includes all private industry workers. The categories above are based on the average wage for each occupation surveyed. As of 2013, the state of Connecticut, the District of Columbia, San Francisco, and Seattle require that at least some workers have paid sick days coverage.

Source for both figure 4 and 5: Bureau of Labor Statistics, *Table 32. Leave benefits: Access, private industry workers, National Compensation Survey, March 2013* (U.S. Department of Labor, 2013), available at <http://www.bls.gov/ncs/ebs/benefits/2013/ownership/private/table21a.pdf>.

development. For many workers, not having workplace flexibility means they are “one sick child” away from being fired.¹³³ As University of California, Berkeley professor Rucker C. Johnson and his colleagues find, children of working mothers exhibit fewer behavioral problems when their mother experiences job stability, relative to children whose mothers do not work.¹³⁴ Conversely, children with a mother who works full-time in a job that does not require cognitive skills or has a fluctuating schedule, both of which mean this is likely a low-skilled or low-wage job, exhibit more behavioral problems and have a higher likelihood of repeating a grade or being placed in special education.¹³⁵

When work affects children

Parents control over their work schedule is a key element of job quality. Research on workplace flexibility shows significant effects of control over time on outcomes for workers and for children. Wilkes University professors Robert Tuttle and Michael Garr examine the effects of shift work and find that it creates greater conflicts between work and family, whereas having some control over one’s schedule reduces conflict.¹³⁶ In a longitudinal study of working mothers from birth to the child’s 7th birthday, sociologist Sarah Beth Estes at the University of Arkansas at Little Rock finds that “the use of workplace arrangements by employed mothers is positively related to parenting time and parenting behaviors.”¹³⁷ The links between flexible workplace policies and parenting, however, were not large or widespread partly because policies seemed to be administered inconsistently.¹³⁸ Inconsistent implementation of workplace flexibility is common as this can be highly contingent on having a particular manager.¹³⁹

Researchers have examined the effects of parents working nonstandard hours, that is, hours outside the traditional Monday through Friday, 9-to-5 shifts. Approximately 40 percent of all U.S. workers have nonstandard schedules.¹⁴⁰ Children with mothers who work nonstandard schedules have more negative outcomes at all ages during childhood. University of North Carolina, Greensboro professor Stephanie S. Daniel and her co-authors find that children aged two and three whose mothers worked a nonstandard schedule were more likely than other children to have behavioral issues.¹⁴¹ New York University professor of social work Wen-Jui Han finds that maternal nonstandard work schedules during a child’s first year of life negatively affected a child’s cognitive development at two years and expressive language at three years.¹⁴² In other research, Han observes similar negative associations between mothers who work nonstandard schedules and outcomes for children at younger and older ages, ranging from ages 4 to 17.¹⁴³

This is consistent with research by Australian psychologist Lyndall Strazdins and her co-authors, who find strong associations between parent’s schedules and children’s well-being, even when controlling for socioeconomic status.¹⁴⁴ Her and her co-authors looked at Canadian families with children ages 2 to 11, comparing families where both parents worked standard hours with those where one or both parents worked evenings, nights, or weekends. In one, they found,

Parents working nonstandard schedules reported worse family functioning, more depressive symptoms, and less effective parenting. Their children were also more likely to have social and emotional difficulties, and these associations were partially mediated through family relationships and parent well-being.¹⁴⁵

In another study, Strazdins and some of the same co-authors found associations between children’s well-being and parent work schedules, which “persisted after adjusting for several confounding factors including socio-economic status, parent part-time or full-time work, and childcare use, and were evident whether mothers, fathers or both parents worked non-standard times.”¹⁴⁶

Furthermore, child development could be compromised if the children’s parents experience adverse effects from shift work. Working night shifts can lead to fatigue, sleep disruption, additional job stress, and long-term health complications.¹⁴⁷ General practitioner Marc Martens and his co-authors find that working irregular hours or varying shifts is associated with sleep, health, and psychological issues.¹⁴⁸

Part of the issue is the kind of childcare parents can use when they are working nonstandard hours. Most childcare centers do not offer around-the-clock care, which can pose significant challenges for parents with nonstandard schedules. University of Chicago social work professors Susan Lambert and Julie Henly study the mismatch between scheduling in low-wage jobs and the hours of childcare centers and find that the very way that work is organized causes significant challenges. In their analysis, they find that retail workers often have unpredictable schedules; yet childcare centers cannot often handle that unpredictability, leaving parents to pay for childcare they do not end up needing or scrambling to find care when an unexpected shift happens.¹⁴⁹ New York University’s Han suggests that the observed negative child outcomes due to maternal nonstandard schedules could be due to the type of childcare.¹⁵⁰

The kind of childcare a family uses is also affected by parents' work schedules. For low- and moderate-income families, one of the most common types of childcare is actually "parental."¹⁵¹ This is because many families "tag team"—that is, parents alternate their schedules so that one parent can provide care while the other one is at work. Therefore, researchers find that fathers providing care is highest in families where both parents work nonstandard hours. Further, lower-income families are more likely than high-income ones to rely on informal rather than formal care, which may not be as enriching for children's development.

Nonstandard hours may also be a way that some families address conflicts between work and family. A study from the Netherlands by Tallinn University professor Kadri That and University of Groningen professor Melinda Mills find that tag-team scheduling can reduce work-family conflict when the scheduling is under the control of the parents to the extent that they can coordinate.¹⁵² Even under the best of circumstances, however, tag teaming is likely not a long-term viable solution to childcare and is associated with less positive outcomes for marriages. With alternating schedules, parents are unable to see one another and their children as often, which can result in marital and family stress. Tag-team parents divorce at three to six times the national average.¹⁵³ In the same vein, research finds that job satisfaction has implications for marital quality.¹⁵⁴ Parents working unsatisfying jobs may lead to marital stress and divorce, which have been found to negatively affect children's development.¹⁵⁵

Parenting and leaves from work

Few parents have access to workplace policies that give them the flexibility to be away from work when a child needs care. The United States is the only advanced industrial nation without a national law providing paid maternity leave.¹⁵⁶ It is one of few nations that does not offer paid family and medical leave, which can be used to recover from a serious illness and/or provide care to family members.¹⁵⁷

Only about 60 percent of workers have access to paid sick days, for short term illnesses and even fewer can use this time to stay home with a sick child.¹⁵⁸ In a 2012 survey conducted by University of Michigan's C.S. Mott Children's Hospital, almost half—42 percent—of parents of young children in childcare reported having to miss work because of a sick child.¹⁵⁹ About one quarter of parents—26 percent—reported missing work three or more times during a one-year period because of a sick child.¹⁶⁰ Sick children have fewer negative symptoms and a faster recovery when their parents are home to provide care.¹⁶¹

Lack of access to these kinds of leave policies can affect children's development. Leave-taking in a child's first few months of life can have a long-term effect on children's development. Academics Lawrence Berger of the University of Wisconsin, Madison, and Jennifer Hill, and Jane Waldfogel of Columbia University find "considerable associations between early returns to work and children's outcomes."¹⁶² Their analysis suggests that returning to work within 12 weeks, especially returning to work full-time, leads to less breastfeeding, reduces the number of immunizations the child receives, as well as increases the infant's behavior problems.¹⁶³ These, in turn, are associated with poor non-cognitive outcomes among children.

Aside from improving a child's health outcome, research provides evidence that maternity leave can help improve children's human capital. Universidad de los Andes economist Raquel Bernal and World Bank economist Anna Fruttero explain that paid maternity leave can increase a children's average human capital through two channels.¹⁶⁴ First, paid maternity leave increases the likelihood that the mother will remain in the labor force, thereby increasing household income, which has been found to increase children's human capital. Second, they find that parents use their leave to spend time with their new baby, which as research indicates, increases child's human capital.¹⁶⁵

The positive effect of family leave on child outcomes seems to be greatest during short to moderate leaves, further indicating that it's not maternal employment alone but rather how maternal employment and taking short-term leave play out inside the family that affects children's development. As noted above, providing maternity leave to working mothers is critical for children's long-term development.

Yet as lengths of leave increase, there are fewer additional benefits for children's long-term outcomes, confirming again that maternal employment is not the issue, but what matters is how employment affects families. University of Virginia economist Christopher Ruhm and Columbia's Waldfogel review the long-term effects of parental leave and found limited evidence that expansions of parental leave durations improved long-run educational or labor market outcomes of the children whose parents were affected by those expansions.¹⁶⁶ One especially interesting study in this area is by University of Toronto economists Michael Baker and Kevin Milligan, who examine the expansion of maternity leave in Canada on children's

"Yet as lengths of leave increase, there are fewer additional benefits for children's long-term outcomes, confirming again that maternal employment is not the issue, but what matters is how employment affects families."

outcomes.¹⁶⁷ They find that the policy change led to mothers taking off more time with a new baby, typically substituting their care for home-based care by non-licensed relatives. This had only a weak effect on indicators of child development—measures of temperament and motor and social development show small and statistically insignificant changes.¹⁶⁸ While leave is critical for the newborn shortly after childbirth, there are benefits to the mother returning back to the labor force after a certain period of time.

Focusing on the family means focusing on jobs

Policymakers are honing in on early childhood education as important for our nation's economic growth because it is so critical for human capital development. Writing for *The Washington Post* advocating passage of President Barack Obama's initiative to get every U.S. four-year old into early childhood education, Education Secretary Arne Duncan cited the economics evidence:

Graduates of [high quality early learning] programs are less likely to commit crimes or rely on food stamps and cash assistance; they have greater lifetime earnings, creating increased tax revenue. Although the range of savings varies across studies, the studies consistently find robust returns to taxpayers.¹⁶⁹

Just over a year earlier, the Chairman of the Federal Reserve, Ben Bernanke told an audience at the Children's Defense Fund National Conference:

When individuals are denied opportunities to reach their maximum potential, it harms not only those individuals, of course, but also the larger economy, which depends vitally on having a skilled, productive workforce.¹⁷⁰

The business community has also endorsed public investment in early childhood education. A joint report by the U.S. Chamber of Commerce and Institute for a Competitive Workforce stated that investment in early childhood education could benefit the business community as a "smart investment with positive returns, but [also] is the right thing to do."¹⁷¹

What we've learned in this review of the literature is that while early childhood *education* is important, *early childhood* itself it also important. Evidence from social science research shows that making sure that parents have a job that provides them with the tools to address conflicts between work and family is a must-needed, smart investment with positive returns. Given the changes in how families work and live, combined with the rise in economic inequality, it is critical that policymakers seek to ensure that all jobs, not just those at the very top of the income ladder, provide these benefits. Our economic competitiveness depends on this.

We must, however, be careful to include a variety of research findings in our assessment of what works. The consensus on the importance of early childhood education, especially for low-income children, rests on the findings of a small number of important experimental studies done in the late 1960s and early 1970s, such as the famous Perry Preschool study. While this research taught us a great deal, we must also look to the plethora of research—from a variety of academic disciplines—that shows that parental job quality matters for children’s development. We will most likely never see a controlled experiment assigning one group of parents in otherwise identical families to high quality jobs with the kinds of flexibility that allows them to address conflicts between work and family, and the other inflexible workplaces. But, this does not mean that there is not overwhelming evidence that job quality affects families and the lives of children in ways that will affect our nation’s future human capital.

We are already having a national conversation about the importance of job quality for addressing conflict between work and family. Facebook’s Sheryl Sandberg’s *Lean In* is a call to action for women to push themselves to aspire professionally and she devotes an entire chapter, “Don’t Leave Before You Leave,” to encouraging women to ask for the flexibility they need.¹⁷² Professional women may have the power to demand these kinds of workplace changes, although even they have been unable to solve this problem on their own. But, as Sandberg and others recognize, not all workers have the ability to make these kinds of demands, let alone get what they need. This is where policymakers need to step in.

About the authors

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Acknowledgments

The authors would like to thank Bianca Marquez and Pedro Spivakovsky-Gonzalez for their research assistance. We are grateful to Jane Farrell, Sarah Jane Glynn, Ann O’Leary, John Schmitt, and Judy Warner for being invaluable sounding boards during the early stages of this report. The authors thank the panelists on the “Overcoming Causes of Income Inequality and Fostering Economic and Social Stability” panel at the 2014 American Economic Association annual meeting and Paul Gregg, Matt Dickson, Mariña Fernández Salgado, Lynn Prince Cooke, and seminar participants at the University of Bath, Department of Social & Policy Sciences for their useful comments and critiques on working drafts of this report. The authors also wish to thank Shawn Fremstad, Elisabeth Jacobs, and Robert Lynch for their suggestions, reviews, and edits. Many thanks to Bridget Ansel, David Evans, and Ed Paisley for their excellent editorial and art assistance. The errors, of course, remain entirely our own.

The authors thank the Sandler Foundation and the Blanchette Hooker Rockefeller Fund for their support of the Washington Center for Equitable Growth.

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- We eschew the term "non-cognitive" to describe personality traits even though many recent papers in economics use this term in this way. In popular usage, and in our own prior work, "non-cognitive" is often juxtaposed with "cognitive." This contrast has intuitive appeal because of contrast between cognitive ability and traits other than cognitive ability. However, a contrast between "cognitive" and "non-cognitive" traits creates the potential for much confusion because few aspects of human behavior are devoid of cognition. Many aspects of personality are influenced by cognitive processes. We show that measurements of cognitive ability are affected by personality factors.
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 - Beneficence. Research studies should aim to maximize individuals' possible benefits and minimize possible harms.
 - Justice. The benefits and burdens of research studies should be evenly distributed.
- Research studies can adhere to these three principles by:
- Informed consent. Individuals must be given the option to participate in the research study. The individuals must be given information about the study, comprehend the information provided, and participate voluntarily.
 - Assessment of risk and benefits. A careful assessment of the risks and benefits of the proposed research.
 - Selection of subjects. Selection of individuals should exhibit fairness. Researchers should not select individuals from particular classes or backgrounds or provide certain individuals with preferential treatment.
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