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CHILDCARE COSTS, LABOR SUPPLY CONSTRAINTS, AND WORKFORCE PRODUCTIVITY IN THE UNITED STATES

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ABSTRACT

Childcare in the United States is a household expense, a labor market input, and an industry with distinctive constraints. This integrative narrative review synthesizes economic research, statistical releases, and policy documents to examine how childcare prices and availability shape parental labor supply and workforce productivity. The national average price of care reached $13,184 in 2025, about 10% of median income for married-couple households with children and about 33% for single parents. Supply, not only cost, now limits access for many families. Evidence has moved from cross-sectional elasticities toward quasi-experimental, administrative, and neighborhood-level designs, and it generally shows that lower costs and greater local supply raise maternal labor force participation. Effects are modest on average but substantial where formal care is the binding constraint, baseline participation is low, and informal alternatives are scarce. Labor supply gains reach productivity through lower absenteeism and turnover, better allocation of talent, preserved human capital, and, when care is of high quality, stronger skills in the next generation. A conceptual model links policy, market conditions, labor supply, and productivity, and supply, workforce compensation, and provider finances matter as much as price. Federal tax changes enacted in 2025, the 2026 rescission of federal copayment and payment requirements, and universal programs in New Mexico and New York City offer an opportunity to evaluate competing approaches and design support that relaxes binding constraints.

KEYWORDS: Childcare; Maternal Labor Supply; Labor Force Participation; Productivity; Child Penalty; Early Care and Education; Tax Policy; Child Care and Development Fund.

JEL Classification: J13, J16, J22, J24, H24, H53, I28

1. INTRODUCTION

The economics of childcare has moved from the margins of labor economics to the center of debates about growth, gender equity, and fiscal policy. Three developments explain this shift. First, the price of formal care has risen faster than general inflation for much of the past decade, and it now rivals housing as a household budget item for families with young children. Second, the COVID-19 pandemic exposed how quickly disruptions in care can ripple through the labor market, as closures of centers and schools forced parents, disproportionately mothers, to reduce hours or exit employment. Third, a tight labor market and slowing growth of the working-age population have made employers and policymakers more attentive to any untapped source of labor supply. Parents of young children, and mothers in particular, are among the largest such sources.

The gap is substantial. In 2025, about 68% of mothers with children under age six participated in the labor force, compared with roughly 95% of fathers of children the same age, a gap of more than 27 percentage points (Bureau of Labor Statistics [BLS], 2026a). Not all of this gap reflects constraints; preferences over parental care differ across families, and many parents choose to care for young children at home. The policy-relevant question is how much of the gap reflects constraints that families would prefer to relax if care were more affordable or available, and what the economic consequences of those constraints are for families, employers, and the broader economy.

This review addresses that question. It has three aims. The first is to assemble the most current evidence on childcare prices, supply, and the cost structure of the industry. The second is to synthesize theoretical and empirical research on the link between childcare costs and parental labor supply, with attention to recent advances in identification and data. The third is to trace the pathway from labor supply to productivity and to evaluate the policy options that have emerged, particularly in the unusually active period of 2025 and 2026. Throughout, we emphasize heterogeneity: effects that appear modest in national averages can be large for specific groups, places, and types of care, and policy design that ignores this heterogeneity risks both waste and missed opportunity.

The remainder of the paper proceeds as follows. Section 2 describes the research method. Section 3 presents the results and discussion: it synthesizes the evidence on the cost and supply landscape, theoretical foundations, empirical evidence on labor supply, the channels linking labor supply to productivity, and recent policy developments (Sections 3.1 to 3.5),

develops a conceptual model and propositions (Section 3.6), discusses the findings and unresolved tensions (Section 3.7), and sets out implications for policy, practice, and research (Section 3.8).

2. RESEARCH METHOD

2.1 Review design

This study is an integrative narrative review. An integrative design was chosen over a formal systematic review or meta-analysis for three reasons. First, the question spans several literatures (labor economics, public finance, early childhood policy, organizational research, and public administration) that use different outcome measures and methods, which makes statistical pooling inappropriate. Second, much of the most relevant recent evidence appears in working papers, agency reports, and administrative data releases rather than in journals indexed by a single database. Third, the policy environment changed rapidly in 2025 and 2026, and primary policy documents had to be reviewed alongside research findings. The review therefore aims at conceptual and policy synthesis rather than a single pooled estimate.

2.2 Search strategy and sources

Sources were identified through four complementary routes. The first was structured searching of economics and social science databases and repositories, including EconLit, Google Scholar, the National Bureau of Economic Research and Census Bureau working paper series, Federal Reserve Bank research publications, and the Social Science Research Network. Search strings combined terms for childcare (childcare, child care, early care and education, preschool, prekindergarten) with terms for labor outcomes (labor supply, labor force participation, maternal employment, child penalty) and for productivity and policy (productivity, absenteeism, turnover, subsidy, tax credit, Child Care and Development Fund).

The second route was backward and forward citation tracking from foundational studies and earlier reviews, including Blau and Currie (2006) and Morrissey (2017). The third was a review of statistical and policy sources: Child Care Aware of America price and supply reports, the Department of Labor's National Database of Childcare Prices, Bureau of Labor Statistics releases, the Federal Register, federal statutes, and state and city government announcements current to November 2026. The fourth was a curated corpus of applied research in adjacent fields, covering workforce management, small-enterprise operations, education and training, health systems, public financial management, and data analytics, which was screened for conceptual relevance to the mechanisms examined here.

2.3 Inclusion criteria and scope

Studies were included if they (a) examined childcare prices, availability, quality, or public provision in relation to parental employment, earnings, or related outcomes; (b) examined the childcare industry's costs, workforce, or market structure; (c) evaluated policies that affect childcare affordability or supply; or (d) offered frameworks from adjacent fields that bear directly on a mechanism in the conceptual model, such as employee retention, small-business finance, program integrity, or service access. The core empirical synthesis focuses on the United States, with international studies included where they provide well-identified evidence on mechanisms. Publications from 1990 through 2026 were eligible, with emphasis on work published since 2015. Opinion pieces without data or analysis were excluded, and no source dated after 2026 was included.

Our focus is the United States, but we draw on international evidence where it clarifies mechanisms, particularly the well-studied universal programs in Quebec and Norway and the long-run evidence on family policy in Denmark and Austria. We concentrate on care for children from birth to school age, where prices are highest and supply is most constrained, while noting evidence on school-age care where relevant. Because the policy environment changed substantially during 2025 and 2026, we describe recent developments as of November 2026, recognizing that implementation is ongoing and that rigorous evaluations of the newest programs are not yet available.

2.4 Appraisal and synthesis

Evidence was appraised according to the credibility of its research design. For causal claims about labor supply, priority was given to studies using natural experiments, instrumental variables, regression discontinuity, difference-in-differences, or event-study designs, and to studies with placebo or falsification tests. Descriptive studies were used to establish facts about prices, supply, and workforce conditions, and adjacent-field frameworks were used to inform mechanisms and design considerations rather than to support causal estimates for childcare.

Findings were synthesized thematically. Each study was coded by the mechanism it informs (price, supply, quality, workforce, provider finance, labor supply margin, productivity channel, or policy instrument), the population and setting, and the direction and size of effects where reported. These themes were then organized into the results in Sections 3.1 to 3.5 and integrated into the conceptual model in Section 3.6.

3. RESULTS AND DISCUSSION

This section presents the results of the review and discusses them. Sections 3.1 to 3.5 report the synthesized evidence in five parts: the cost and supply landscape, theoretical foundations, empirical evidence on labor supply, the channels linking labor supply to productivity, and the policy landscape of 2025 and 2026. Section 3.6 integrates these results into a conceptual model, Section 3.7 discusses the findings and the tensions that remain unresolved, and Section 3.8 sets out their implications.

3.1 The Cost and Supply Landscape

3.1.1 Prices and affordability

Two complementary data sources now anchor measurement of childcare prices. Child Care Aware of America (CCAoA) surveys state agencies and resource and referral organizations each year. Its most recent report finds that the national average annual price of care was $13,184 in 2025, up slightly from $13,128 in 2024, a figure computed by averaging three estimation methods across the 47 states that reported price data (CCAoA, 2026a). That average represents about 10% of median income for married-couple households with children and about 33% for single parents. Prices rose about 23% between 2021 and 2025, and averages for full-time center-based infant care ranged from $6,492 in Mississippi to $27,067 in Massachusetts. For families using center-based care for two children, prices exceeded median rent in all reporting states and exceeded the typical mortgage payment in 39 states (CCAoA, 2026b).

The second source, the Department of Labor's National Database of Childcare Prices (NDCP), provides county-level median prices derived from state market rate surveys, with data for 2018 and 2022. The initial release covered 2,360 counties and found that prices for a single child ranged from roughly 8% to 19.3% of median family income, depending on provider type, the child's age, and county size (U.S. Department of Labor, Women's Bureau, 2023). These shares are for one child; families with two children in care face roughly double the burden. County-level variation is striking: in Suffolk County, Massachusetts, infant center-based care consumed about 29% of median family income in 2022. Notably, the share of income consumed by infant center-based care in very large counties fell from 19.3% in 2018 to 16.0% in 2022, a decline that analysts have partly attributed to temporary pandemic-era stabilization funding (U.S. Department of Labor, Women's Bureau, 2024).

A useful benchmark is the federal affordability standard of 7% of family income, adopted for subsidy copayments in the 2024 Child Care and Development Fund rule. By that standard, unsubsidized market prices are unaffordable for the median family in nearly every county,

and for single-parent families the gap is several-fold. Section 3.5.2 discusses the subsequent rescission of the federal copayment cap.

3.1.2 Supply and access

Price is only one dimension of access. A family that can afford care may still be unable to find an open slot nearby, at the right hours, or for an infant. National survey data indicate that the binding constraint has shifted in recent years. In the 2019 Early Childhood Program Participation survey, cost was the most frequently cited barrier among parents who had difficulty finding care; by 2023, cost and a lack of open slots were each cited by roughly a third of such families (Luengo-Prado & Zhao, 2026). Earlier mapping work estimated that more than half of Americans live in childcare deserts, defined as areas with more than three young children for every licensed slot (ReadyNation, 2023).

Recent supply trends are mixed. CCAoA reports a small decrease, about 1%, in the number of licensed centers between 2024 and 2025, reversing several years of growth, alongside a small increase in family childcare homes (CCAoA, 2026a). Over the longer run, home-based care has declined substantially. In New England, home-based supply fell in every state between 2010 and 2023, shifting capacity toward centers, which accounted for about three quarters of licensed slots on average (Luengo-Prado & Zhao, 2026). This shift matters because home-based providers tend to be cheaper, more flexible about hours, and more common in rural and lower-income areas.

3.1.3 The cost structure and the workforce

Childcare is labor intensive by necessity. Regulated staff-to-child ratios fix the minimum quantity of labor per child, particularly for infants and toddlers, and wages and salaries account for roughly 52% to 63% of program expenses (Workman, 2018). The industry is therefore a textbook case of Baumol's cost disease: because productivity per worker cannot rise much without changing ratios, the relative price of care tends to rise as wages elsewhere in the economy grow.

At the same time, compensation in the sector is very low. Childcare workers earned a median of $16.82 per hour in May 2025 (BLS, 2026b), slightly below retail salespersons nationally and below them in 36 states. The BLS projects that employment of childcare workers will decline about 3% between 2024 and 2034 (BLS, 2025). This combination produces the central paradox of the market: prices are high relative to family budgets, yet wages are too low to recruit and retain an adequate workforce, and provider margins are thin. The U.S. Department of the Treasury (2021) characterized the market as one in which high costs and

inadequate supply coexist because parents cannot pay the full social value of care and providers cannot capture it.

The workforce problem is also a management problem. Research on employee retention shows that turnover is most effectively reduced when retention systems are tied directly to operational productivity measures, so that the costs of attrition become visible to decision makers (Falemi et al., 2023a; Ukadike, 2019). Structured recruitment and onboarding, competency frameworks, and deliberate integration of new hires shorten the time to full productivity and lower early-tenure exits (Akhigbe et al., 2020; Akhigbe, Falemi, & Akin-Oluyomi, 2023; Ukadike, 2018). In childcare, where a single staff departure can force a classroom to close because ratios can no longer be met, these practices have unusually large consequences. Staffing volatility during periods of rapid expansion is a recognized risk in other labor-intensive sectors, and workforce optimization models developed there offer transferable tools for programs that are scaling quickly, such as New Mexico's universal system (Anene et al., 2025; Falemi et al., 2020; Falemi et al., 2023b). Digitized scheduling and attendance systems can reduce administrative burden on directors and improve the matching of staff hours to enrollment (Okwesa et al., 2023; Ussher-Eke et al., 2025), while transparent performance appraisal and career progression pathways strengthen motivation in occupations with flat wage structures (Aniji et al., 2026; Falemi et al., 2025; Okafor et al., 2025).

Pipeline development is the longer-run complement to retention. Studies of talent development in other skill-constrained sectors stress coordinated sourcing, placement, and performance measurement across partner institutions (Akhigbe, Wikiri, & Udeh, 2023; Wikiri & Akhigbe, 2026; Wikiri et al., 2022; Wikiri et al., 2024; Wikiri, 2019), and analyses of labor market transitions emphasize skills mapping to identify which displaced or underemployed workers can move into growing occupations (Komi & Adamolekun, 2024). Workforce readiness research in technical and vocational education highlights work-integrated learning, industry and training-provider partnerships, and government coordination as conditions for successful pipelines (Joseph et al., 2025b; Joseph et al., 2025c; Joseph et al., 2025d; Nwangwu et al., 2019). These lessons apply directly to early childhood credentialing, where apprenticeship models and employer-sponsored training are expanding.

3.1.4 Providers as small enterprises: finance, operations, and fragility

Most childcare providers are small enterprises. Centers typically operate as small businesses or nonprofits, and family childcare homes are microenterprises run by a single owner. Their financial position therefore shapes supply as much as parental demand does. Research on

small and micro-enterprises shows that access to finance is a central determinant of enterprise growth, particularly in rural communities (Michael & Ogunsola, 2019a), and that digital lending and financial technology can widen access for small firms that traditional lenders underserve (Agboada et al., 2022; Okafor et al., 2021; Pedro et al., 2024). For childcare providers, start-up and facilities financing is a recurring barrier to adding capacity, especially for infant rooms that require more space and staff per child.

Operational capacity also matters. Studies of lean management in small organizations find that standard operating procedures, simple process-improvement methods, and structured change management help resource-constrained firms sustain quality while controlling costs (Agboada et al., 2019; Ambali et al., 2021; Eyetsemitan et al., 2022; Eyetsemitan et al., 2023a). Integrated approaches that combine process documentation, automation, and compliance workflows are particularly relevant for providers that must satisfy licensing, subsidy, and tax requirements simultaneously (Alieme et al., 2022; Eyetsemitan et al., 2021; Eyetsemitan et al., 2025). Small practices in health care have reduced administrative time through client-management and workflow automation, and similar tools can streamline enrollment, billing, and subsidy reporting for childcare programs (Eyetsemitan et al., 2024a; Eyetsemitan et al., 2024b; Oyeleye et al., 2022). Technology adoption in small firms, however, depends on readiness, user testing, and phased implementation rather than on the technology alone (Alieme et al., 2023; Eyetsemitan et al., 2023b), and performance dashboards are most useful when they give owners a clear view of a few key indicators such as enrollment, attendance, and cash position (Ezeako et al., 2024).

Because labor is the dominant cost and margins are thin, cash-flow management is critical. Forecasting and working-capital models developed for retail and corporate settings show how predictable revenue streams reduce the need for costly short-term borrowing (Oduleye & Medon, 2023a; Tonoyan et al., 2021b). This is the economic logic behind enrollment-based subsidy payment: it converts volatile attendance-based revenue into predictable revenue. Data-driven cost management, variance analysis, and planning models can help providers identify which classrooms and age groups are financially sustainable (Adesuyi et al., 2023; Aliliele et al., 2024; Medon & Oduleye, 2023; Oduleye & Medon, 2021), and simulation and predictive approaches to cost optimization can inform rate-setting based on the true cost of care (Tonoyan et al., 2022b; Tonoyan et al., 2022c). Shared purchasing and vendor management, which reduce input costs in other sectors, are among the services offered by shared-services networks for home-based providers (Nwangwu et al., 2025; Okonkwo et al., 2019). For nonprofit centers, research on financial sustainability, governance, and donor

management in community-based organizations is directly applicable (Aliliele et al., 2025; Badmus et al., 2026; Odihi et al., 2026). Finally, research on advisory services that expand compliance capacity for small firms, and on using legal and regulatory tools to support enterprise development in underserved communities, points to low-cost technical assistance as a supply-side lever (Jones & Ominyi, 2025a; Jones & Ominyi, 2026).

3.2 Theoretical Foundations

3.2.1 Childcare as an implicit tax on work

The canonical static model treats the price of non-parental care as a cost that must be paid for each hour (or each day) a parent works. For a secondary earner, typically the mother in different-sex couples, the relevant net wage is the market wage less taxes and the hourly price of care. When care is priced per enrollment slot rather than per hour, it acts as a fixed cost of working, which creates a discontinuity at the participation margin: a parent may find it optimal either to work full time or not at all. This framework predicts that price changes should affect the extensive margin (whether to work) more than the intensive margin (how many hours), that responses should be larger for lower-wage parents for whom care is a larger share of earnings, and that responses should be smaller where low-cost informal care, such as care by relatives, is available.

A useful extension combines childcare costs with the tax and transfer system. Phase-outs of means-tested benefits, the structure of joint taxation, and the loss of eligibility for subsidies at income thresholds can combine with childcare prices to produce very high effective marginal tax rates on secondary earners. Under such conditions, a parent can take a job and see little or no gain in household disposable income for several years, even if the job has strong long-run prospects.

3.2.2 Dynamic models: human capital and career continuity

Static models understate the cost of childcare constraints because labor market experience has value beyond current earnings. In dynamic models, time out of the labor force depreciates skills and forgoes on-the-job learning, promotions, and job matches. A parent who exits for three years may return at a lower wage trajectory for decades. This logic implies that a decision that looks rational in a single year, for example staying home because care costs nearly equal net earnings, can be costly over the life cycle. If families face borrowing constraints, as is likely when childcare costs peak early in careers and earnings are lowest, they cannot smooth across this temporary cost spike even when doing so would raise lifetime income.

The empirical counterpart of this idea is the child penalty. Using Danish administrative data and an event-study design around the birth of the first child, Kleven, Landais, and Søgaard (2019) found that women's earnings fall sharply after the first birth and remain about 20% below their pre-birth trajectory in the long run, while men's earnings are essentially unaffected. Goldin (2014) argued that the persistence of gender gaps in high-wage occupations reflects the disproportionate reward to long and inflexible hours, which interacts with caregiving responsibilities. Both literatures imply that childcare constraints can have lasting effects on women's careers, not just transitory effects on participation.

3.2.3 Market failures in the childcare sector

A third strand asks why the market fails to provide adequate care at affordable prices. Several features stand out. Information about quality is costly for parents to observe, which weakens incentives for providers to invest in quality. Positive externalities flow from early care to children's later outcomes and to public budgets, and from parental employment to tax revenue and to employers, none of which parents internalize when buying care. Parents face liquidity constraints precisely when care is most expensive. Providers operate with thin margins and high fixed costs, which makes them vulnerable to enrollment fluctuations; attendance-based reimbursement in subsidy programs amplifies this vulnerability. Finally, regulation, while intended to protect quality and safety, raises costs and can reduce supply. These features provide the economic rationale for public intervention, though they do not by themselves determine its optimal form.

3.3 Empirical Evidence on Childcare Costs and Labor Supply

3.3.1 Price elasticities from the first generation of research

Early studies estimated the elasticity of maternal employment with respect to the price of care using cross-sectional survey data and structural models. Estimates varied widely, from near zero to above one in absolute value, reflecting differences in samples, price measures, and methods for addressing the fact that prices are observed only for families who purchase care (Anderson & Levine, 2000; Blau & Currie, 2006). In a review of this literature, Morrissey (2017) concluded that a 10% decrease in childcare costs is associated with roughly a 0.5% to 2.5% increase in maternal employment, with larger responses among single mothers and lower-income mothers. These elasticities imply meaningful but not transformative effects of price changes on aggregate employment, and they were the basis for many policy simulations in the 2000s and 2010s.

3.3.2 Quasi-experimental evidence from public provision

A second generation of research exploited variation in public provision of care or early education. The findings are informative precisely because they are heterogeneous.

In the United States, Gelbach (2002) used quarter of birth as an instrument for kindergarten eligibility and found meaningful increases in the labor supply of mothers whose youngest child became eligible for public school. Cascio (2009) studied the staggered introduction of public kindergartens and found effects concentrated among single mothers with no younger children, with little effect for married mothers. Fitzpatrick (2010) found little average effect of universal prekindergarten in Georgia and Oklahoma on maternal employment, with gains concentrated in small subgroups. Herbst (2017) studied the federal Lanham Act, which funded childcare during World War II, and found increases in maternal employment along with long-run benefits for the children who were exposed. More recently, Malik (2018) documented that labor force participation among mothers of young children in Washington, D.C. rose by roughly 12 percentage points after the city introduced universal full-day preschool for three- and four-year-olds, attributing about 10 percentage points of that increase to the program.

International evidence reinforces the lesson that effects depend on context. Baker, Gruber, and Milligan (2008) found that Quebec's low-fee universal childcare program raised maternal employment by about 7.7 percentage points, though they also reported negative effects on some measures of child behavior and parental well-being. Lefebvre and Merrigan (2008) likewise found substantial employment gains in Quebec. In contrast, Havnes and Mogstad (2011) found that a large expansion of subsidized care in Norway had almost no effect on maternal employment because new formal slots mostly replaced informal arrangements that mothers already used while working. Kleven et al. (2024), studying six decades of Austrian family policy, found that large expansions of parental leave and childcare had little effect on the long-run child penalty.

These results are consistent with a simple principle. Public provision raises maternal employment when it relaxes a binding constraint: where baseline participation is low, where informal alternatives are scarce, and where the subsidy is large relative to earnings. Where mothers are already working and have arranged care, expansions mainly shift who pays for care and what kind of care is used. Both outcomes can be valuable, but only the first produces new labor supply.

3.3.3 New administrative and spatial evidence, 2023 to 2026

The most important recent advance is the combination of fine-grained price data with administrative and survey microdata. Three contributions stand out.

First, the NDCP has made it possible to relate local prices to local labor market outcomes. In its initial analysis, the Women's Bureau found that county-level maternal employment rates were lower where childcare prices were higher, even in higher-wage areas, and that counties with prices twice the median had maternal employment rates about 4 percentage points lower (U.S. Department of Labor, Women's Bureau, 2023). These associations are descriptive but establish the relevant geography.

Second, Araujo, McBride, and Sandler (2025), in a Census Bureau working paper, linked the NDCP to the American Community Survey and the Longitudinal Employer-Household Dynamics data. They estimated the effect of childcare costs on maternal labor force participation using two designs: a fixed-effects strategy that absorbs geographic and temporal heterogeneity and mothers' persistent preferences, and an instrumental-variables strategy that exploits variation in state childcare licensing requirements. Both designs indicate that higher costs reduce maternal participation, and lower-income mothers are more responsive to cost changes. The use of licensing requirements as an instrument is notable because it ties cost variation to a policy lever directly under state control.

Third, Luengo-Prado and Zhao (2026) at the Federal Reserve Bank of Boston constructed neighborhood-level measures of supply and cost for New England using licensing records from 2010 to 2023 and a spatial method that accounts for travel time to providers within a 20-minute drive. Their estimates indicate that a one-standard-deviation increase in supply (about 0.23 slots per child) is associated with a 0.42 percentage point increase in the participation of mothers of young children, while a one-standard-deviation decrease in cost (about $563 per month) is associated with a 1.91 percentage point increase in participation and a 1.76 percentage point increase in employment. They found no relationship between these measures and outcomes for women without children, a placebo test that supports a causal interpretation. Home-based supply mattered more in non-urban and lower-income neighborhoods, whereas center-based supply mattered more in urban areas, and cost sensitivity was greatest in urban and higher-income areas where families pay full market prices. Individual-level estimates in their companion work are larger, implying increases of 5.4 to 7 percentage points for a combined improvement in supply and cost.

The apparent difference between the Census finding (larger responses among lower-income mothers) and the Boston Fed finding (larger price responses in higher-income

neighborhoods) is instructive rather than contradictory. Lower-income families are more likely to receive subsidies or use informal care, which mutes their response to market prices, while being highly responsive to the overall cost they actually face. Measurement of the relevant price, whether market price, subsidized price, or effective cost including informal options, therefore shapes the estimated elasticity.

3.3.4 Evidence from the pandemic shock

The COVID-19 pandemic provided a large, if unwelcome, natural experiment. Ali, Herbst, and Makridis (2021) documented sharp declines in childcare employment and establishments following stay-at-home orders. The resulting disruption in care coincided with larger employment losses among mothers than fathers. The recovery offers a further lesson: the rapid spread of remote and hybrid work allowed many parents, especially college-educated mothers, to return to or remain in employment despite incomplete childcare recovery. Remote work therefore appears to be a partial substitute for care in some occupations, but it is unavailable to most workers in service, health, and production jobs, and practitioners caution that it does not remove the need for care for young children.

Table 1. Selected studies on childcare costs, provision, and maternal labor supply.

Study	Setting and design	Main labor supply finding	Interpretation
Gelbach (2002)	U.S.; kindergarten eligibility by quarter of birth	Higher labor supply among mothers of newly eligible children	Free public care relaxes a binding constraint
Baker, Gruber & Milligan (2008)	Quebec low-fee universal care; difference-in-differences	Maternal employment up about 7.7 pp	Large effects where baseline use was low; some adverse child outcomes
Cascio (2009)	U.S.; staggered kindergarten introduction	Gains among single mothers without younger children	Effects depend on family structure
Fitzpatrick (2010)	Georgia and Oklahoma universal pre-K; regression discontinuity	Small average effects	Crowd-out of existing arrangements
Havnes & Mogstad (2011)	Norway 1975 expansion; difference-in-differences	Little effect on maternal employment	Formal care replaced informal care
Herbst (2017)	U.S. Lanham Act	Higher maternal	Large-scale public

Study	Setting and design	Main labor supply finding	Interpretation
	(World War II)	employment; long-run child benefits	provision can raise supply
Malik (2018)	Washington, D.C. universal pre-K	About 10 pp of a 12 pp rise in participation attributed to pre-K	Full-day, universal design matters
Morrissey (2017)	Review of U.S. elasticity estimates	10% lower cost raises maternal employment 0.5% to 2.5%	Modest average elasticity; larger for low-income
Kleven et al. (2024)	Austria; 60 years of policy reforms	Little effect on long-run child penalty	Norms and other factors also drive gaps
Araujo, McBride & Sandler (2025)	U.S. counties; NDCP with ACS and LEHD; fixed effects and IV	Higher costs reduce participation; low-income mothers more responsive	Licensing rules shift costs and labor supply
Luengo-Prado & Zhao (2026)	New England block groups, 2010 to 2023; spatial access	1 SD lower cost raises participation 1.91 pp; 1 SD more supply raises it 0.42 pp	Supply and price both matter; type of care varies by place

Note: pp = percentage points; SD = standard deviation; NDCP = National Database of Childcare Prices; ACS = American Community Survey; LEHD = Longitudinal Employer-Household Dynamics.

3.4 From Labor Supply to Workforce Productivity

The connection between childcare and productivity runs through several channels, which operate at different time horizons and are measured with different degrees of confidence.

3.4.1 Absenteeism, turnover, and on-the-job performance

The most immediate channel operates among parents who are already employed. Unreliable care leads to late arrivals, early departures, missed days, distraction, and in some cases resignation. A survey-based study by ReadyNation (2023) found that almost two thirds of parents of infants and toddlers facing childcare problems reported arriving late or leaving early, and more than half reported being distracted at work or missing full days. The study estimated that the infant and toddler childcare crisis costs the economy $122 billion per year, composed of $78 billion in lost earnings and job search costs for parents, $23 billion in lost productivity and recruitment costs for employers, and $21 billion in forgone tax revenue. These figures rest on survey responses and modeling assumptions and should be read as

orders of magnitude rather than precise estimates, but they indicate that the costs extend well beyond the households directly affected.

Turnover is particularly costly. Replacing a worker typically involves recruitment, onboarding, and a period of reduced productivity, and these costs rise with the skill level of the position. Employer accounts consistently describe childcare-related separations as a source of persistent vacancies, overtime costs, and forgone business, particularly in manufacturing, health care, and other sectors with shift schedules that rarely match standard center hours.

Employer responses to these costs increasingly rely on human resource analytics. Frameworks that integrate HR strategy with enterprise risk management treat caregiving-related absences and separations as measurable operational risks rather than private employee problems (Falemi et al., 2024). Multi-site employers can use data-driven performance indicators to identify locations where absenteeism and turnover cluster, which often coincide with gaps in local childcare supply (Akin-Oluyomi & Akhigbe, 2023a). Research on organizational readiness for technology and on change management indicates that new benefits, such as dependent care accounts or partnerships with local providers, require deliberate implementation to achieve take-up (Akhigbe et al., 2024; Ukadike, 2025; Uzondu et al., 2021). Evidence that workforce behavior shapes customer experience and service quality underscores that the productivity costs of caregiving stress are not limited to hours lost (Akhigbe et al., 2025; Wikiri, 2021). Training, ethics, and safety programs also show that investments in employees produce measurable behavioral and operational returns when they are designed with clear metrics (Anichukwueze et al., 2020; Obriki et al., 2022a).

Work scheduling is a related margin. A meta-analytic review of four-day workweek trials found operational and psychosocial effects that depend on industry and implementation (Oparah et al., 2024a). Compressed or predictable schedules can reduce the hours of care a family must purchase or make informal care easier to arrange, while unpredictable shift schedules raise the effective cost of care. Research on the future of work similarly suggests that technology will reshape job roles and schedules in ways that alter the demand for care at nonstandard hours (Essandoh et al., 2025; Oluwo et al., 2022).

3.4.2 The allocation of talent

A second channel is the allocation of talent across occupations. Hsieh, Hurst, Jones, and Klenow (2019) estimated that the improved allocation of women and Black men across occupations between 1960 and 2010 accounts for roughly 20% to 40% of the growth in aggregate market output per person over that period. Barriers that keep able workers out of

the occupations in which they would be most productive reduce aggregate output, not merely individual earnings. Childcare constraints are one such barrier: they push parents toward jobs that offer predictable or reduced hours, proximity to home, or tolerance for interruptions, even when those jobs make poorer use of their skills. Blau and Kahn (2013) found that the relative lack of family-friendly policies in the United States accounts for a meaningful part of the decline in American women's labor force participation relative to other high-income countries since 1990.

A broader literature on gender, leadership, and inclusion reaches similar conclusions in other contexts. Reviews of women's leadership pathways identify caregiving responsibilities and limited support networks as recurring barriers to advancement (Ukadike & Ibeh, 2020), and studies of gender inclusion in agricultural value chains show that constraints on women's time reduce both their earnings and sector productivity (Michael & Ogunsola, 2022b). Quantitative models for evaluating diversity and inclusion investments suggest that firms can measure the returns to policies that retain women in the pipeline (Uchechi et al., 2022). Studies of women in administrative and secretarial occupations document how workplace culture, professional attributes, and organizational practices shape career outcomes and organizational performance (Onche & Ogbonna, 2021; Onche et al., 2021; Onche et al., 2026; Onche, 2021). Programs that build youth entrepreneurial and employment competencies further illustrate the general point that removing barriers to labor market entry raises productivity over the life cycle (Michael & Ogunsola, 2019b).

3.4.3 Human capital depreciation and the child penalty

A third channel is the erosion of human capital during career interruptions. Because skills depreciate and experience compounds, an exit induced by childcare constraints lowers productivity long after the constraint is lifted. The child penalty literature shows that the earnings gap that opens at first birth is large and persistent (Kleven et al., 2019), and Goldin (2014) emphasized the nonlinear rewards to long and continuous hours in many high-wage occupations. To the extent that affordable, reliable care allows parents to maintain continuous attachment, it preserves human capital that would otherwise be lost. The Austrian evidence (Kleven et al., 2024) is a reminder that childcare alone may not close the penalty, since norms, workplace structures, and the division of household labor also matter.

3.4.4 The next generation's productivity

A fourth channel operates through children themselves. High-quality early care and education can raise children's later skills, health, and earnings. García, Heckman, Leaf, and Prados (2020) estimated an internal rate of return of 13.7% per year for an intensive early childhood

program that began in infancy, accounting for both child outcomes and the program's effect on maternal earnings. Hendren and Sprung-Keyser (2020) found that direct investments in children's health and education often have very high returns per dollar of net government cost, in some cases paying for themselves. The evidence is not uniformly positive: the Quebec program, which expanded quickly with limited attention to quality, was associated with adverse behavioral outcomes for some children (Baker et al., 2008). The lesson for productivity is that quality is not separable from quantity; programs that expand access at the expense of quality may raise parental labor supply while sacrificing some of the long-run gains.

Quality in early care depends heavily on the educator workforce, and research in adjacent areas of education is informative. Studies of teacher resilience identify burnout and psychological strain as drivers of attrition (Yeboah et al., 2025), and research on professional development shows that continuous learning improves teacher competence with children who have diverse needs (Joseph & Nwankwo, 2024; Onwuzulike et al., 2024; Yeboah et al., 2019). Reforms to teacher preparation curricula and pedagogical strategies for resource-constrained settings provide models for early childhood credentialing (Bobga et al., 2018; Bobga et al., 2025; Yeboah & Oloto, 2024). Parent engagement and home-school partnerships improve children's progress, a finding that supports family engagement standards in early learning programs (Ogbona et al., 2020b; Yeboah & Oloto, 2025b).

Early identification of developmental needs is a further channel through which quality care raises long-run productivity. Research on special education service delivery highlights data-driven individualized planning, monitoring of implementation fidelity, and positive behavioral supports (Yeboah & Oloto, 2022; Yeboah & Oloto, 2023; Yeboah & Oloto, 2025a; Yeboah et al., 2022), along with evidence on the effectiveness of behavioral intervention approaches (Ogbona et al., 2023; Oloto & Yeboah, 2023). Studies of compliance, procedural safeguards, documentation, and leadership in these programs show how accountability systems can protect quality as programs grow (Oloto & Yeboah, 2022; Oloto & Yeboah, 2024; Oloto & Yeboah, 2025; Oloto & Yeboah, 2026). Trauma-informed and emotional-regulation interventions for children and adolescents point to the value of social-emotional supports that early care settings are well placed to deliver (Akinse, Ohanebo, & Ekechi, 2023; Eribenne et al., 2024; Eribenne et al., 2026).

Technology is changing how early educators are trained and how learning is supported. Research on educational technology, inclusive digital learning, and accessibility documents both opportunities and risks (Ijiga et al., 2024; Joseph & Uzondu, 2024c; Unamma et al.,

2018; Yeboah et al., 2024). Learning analytics and performance dashboards in professional education can track the development of educators (Orise & Niniola, 2020; Orise & Niniola, 2022; Orise & Niniola, 2024a), and digital transformation in professional training expands access to credentials for working adults (Joseph et al., 2024; Orise & Niniola, 2024b; Orise & Niniola, 2026). Artificial intelligence offers adaptive and personalized learning tools (Fawehinmi et al., 2026; Joseph & Uzondu, 2024a; Onwubuya et al., 2026), although researchers caution that such tools must preserve critical thinking and assessment integrity (Adams, 2023; Adams, 2024). Across education systems, curriculum design, advising, mentorship, and a sense of belonging support persistence among students from underrepresented groups, which is relevant for workers pursuing early childhood credentials while employed (Githinji & Atobatele, 2025a; Githinji & Atobatele, 2025b; Githinji & Atobatele, 2026; Joseph & Uzondu, 2024b; Ogbona et al., 2020a). Evidence from entrepreneurship and vocational training, including longitudinal evaluations, shows that well-designed training produces lasting gains in skills and earnings (Dada et al., 2024; Joseph et al., 2025a; Michael & Ogunsola, 2023e; Michael & Ogunsola, 2025d; Unamma et al., 2018a).

3.4.5 Fiscal returns

Finally, increased labor supply raises tax revenue and can reduce transfer spending, partly offsetting the cost of public support. The size of the offset depends on how many additional parents work because of the policy rather than receiving support for care they would have purchased anyway. Evidence on crowd-out (Havnes & Mogstad, 2011; Fitzpatrick, 2010) suggests that fiscal offsets are largest for well-targeted programs and smallest for universal programs in places where most mothers already work. Universal programs may nonetheless deliver other benefits, including administrative simplicity, higher take-up, and broader political support, which a narrow fiscal calculation does not capture.

3.4.6 Health, well-being, and caregiving

Childcare constraints also affect productivity through health. Maternal health is shaped by socioeconomic conditions, and integrated models that address rural inequities emphasize the links among income, access to services, and family well-being (Akinse, Ekechi, & Ohanebo, 2023). Social determinants of health, including caregiving burdens, influence care plans and outcomes for families in underserved urban areas (Atakpa & Abolaji, 2020; Peteranaba et al., 2024). Population health models that combine value-based care, digital tools, and equity goals treat these determinants as part of the health system's responsibility (Ilodigwe & Adesemoye, 2026b; Osinem et al., 2025a).

Caregiving stress is a recognized occupational health risk. Evidence on mindfulness-based and skills-based interventions shows that stress reduction can be achieved at scale (Osinem et al., 2021; Osinem et al., 2023), and policy frameworks for mental health screening, behavioral health crisis response, and continuity of behavioral care highlight the importance of integrated support for working adults (Akinlolu et al., 2022; Fapohunda et al., 2025c; Igweonu et al., 2024). Analytics applied to mental health resource allocation and service operations can target support where need is greatest (Anioke & Atima, 2023b; Nnaji & Akinlolu, 2024b; Nnaji & Akinlolu, 2026; Owoade et al., 2022).

Access to care for children and adults overlaps with access to childcare. Parents of young children rely on primary care, chronic disease management, and home health services, and gaps in these services generate additional absences from work (Akinlolu et al., 2023; Ekemezie et al., 2023a; Omaghomi, Igweonu, et al., 2025). Telehealth and digital outreach reduce the time costs of care, particularly in rural areas (Abutu & Alawode, 2024; Fapohunda et al., 2023a; Oparah et al., 2024b), and remote primary care models offer lessons for delivering services in isolated settings (Gbaraba et al., 2026). Community health workers and culturally relevant, multi-channel communication improve uptake of preventive services such as childhood immunization (Abutu & Alawode, 2020; Abutu & Alawode, 2021; Abutu & Alawode, 2022; Omaghomi, Akinlolu, & Fapohunda, 2025). Continuity-of-care research emphasizes administrative governance and standardized transitions, principles that apply equally to transitions between childcare settings (Ogundipe & Ominde, 2024; Ogundipe & Ominde, 2025). Access, affordability, and equitable supply are common themes across these health care studies (Asiedu & Asiedu, 2024a; Asiedu, 2026), and research on health financing and payer-provider incentives shows how payment design shapes supply, a parallel to subsidy payment practices in childcare (Ilodigwe & Adesemoye, 2019a; Ilodigwe & Adesemoye, 2026a).

Ratio regulation offers a particularly close analogy. In public hospitals, governance frameworks for workforce planning and nurse-patient ratios balance quality and safety against cost and staffing availability (Omaghomi et al., 2023), and analytics-driven models address productivity and workflow inefficiencies in care delivery (Nnaji & Akinlolu, 2023). The same tradeoff between staffing ratios, quality, and cost lies at the center of childcare regulation.

3.5 The Policy Landscape: Developments in 2025 and 2026

The years 2025 and 2026 brought significant changes at the federal, state, and local levels, moving in different directions. Federal policy expanded tax-based support while giving states

more discretion in subsidy design, while several states and cities moved toward universal or near-universal public provision.

3.5.1 Federal tax policy

The One Big Beautiful Bill Act (Public Law 119-21), enacted in July 2025, made three changes relevant to childcare. First, beginning in 2026 it raised the maximum rate of the Child and Dependent Care Tax Credit (CDCTC) from 35% to 50% for the lowest-income filers, while leaving the expense limits at $3,000 for one child and $6,000 for two or more. Second, it increased the limit on tax-free employer-provided dependent care assistance, commonly delivered through dependent care flexible spending accounts, from $5,000 to $7,500, the first increase since 1986. Third, it expanded the employer-provided childcare credit under section 45F, raising the annual cap from $150,000 to $500,000, or $600,000 for eligible small businesses, with inflation indexing.

Economic analysis of these changes turns on incidence and distribution. Supporters argue that the changes deliver relief through existing, familiar channels, encourage employer involvement, and avoid creating new federal programs. Critics note that the CDCTC remains nonrefundable, so families with little or no income tax liability, who are among the most price-sensitive in the empirical literature, receive little benefit from the higher rate. The value of the dependent care exclusion rises with a family's marginal tax rate and requires access to an employer plan, which tilts its benefits toward higher earners in larger firms. Because expenses excluded under an employer plan cannot also be claimed for the credit, a family using the full $7,500 exclusion will generally have no remaining expenses eligible for the CDCTC. The expense limits, unchanged in nominal terms for many years, cover a shrinking share of actual prices.

3.5.2 The Child Care and Development Fund

The Child Care and Development Fund (CCDF) is the primary federal subsidy program for low-income working families, serving about 1.4 million children each month. A 2024 rule required states to cap family copayments at 7% of income, to pay providers based on enrollment rather than attendance, to pay providers prospectively, and to use some grants or contracts to secure slots. In January 2026, the Department of Health and Human Services proposed rescinding these requirements, and a final rule titled *Restoring Flexibility in the Child Care and Development Fund* was published on May 12, 2026, effective July 13, 2026 (U.S. Department of Health and Human Services, 2026). States may still adopt the rescinded practices voluntarily, and many had already done so; as of March 2026, 19 states had not lowered their maximum copayment to 7%.

The debate reflects a genuine tradeoff. The administration and supporters of the change argue that the 2024 requirements raised state administrative costs, reduced the number of families that fixed funding could serve, and created program-integrity risks, and that states are better positioned to set copayments and payment practices for their own markets. Opponents argue that enrollment-based payment stabilizes provider finances, that copayment caps are essential for affordability, and that rescission will reduce access for low-income families. A resolution of disapproval under the Congressional Review Act was introduced in the House. From the perspective of the research reviewed here, the payment-practice provisions bear directly on supply, since providers facing volatile revenue are less likely to accept subsidized children or to expand, while copayment levels bear directly on the effective price faced by the most price-sensitive families.

3.5.3 State and local initiatives

New Mexico. On November 1, 2025, New Mexico became the first state to offer no-cost childcare to families regardless of income, building on several years of expanding eligibility and higher provider reimbursement financed largely from a dedicated early childhood trust fund and permanent fund distributions. In March 2026 the governor signed legislation codifying the program. According to the state, an additional 12,666 families and 16,706 children enrolled between the launch and March 2026, and 63 new providers registered (Office of the Governor of New Mexico, 2026). State analyses indicate that the childcare workforce grew substantially between 2019 and 2024 alongside rising wages. Critics have questioned the use of public funds for higher-income families and whether capacity can keep pace with demand. New Mexico offers the most important natural experiment in U.S. childcare policy in decades, and rigorous evaluation of its labor market effects should be a priority.

New York. In January 2026, the governor of New York and the newly inaugurated mayor of New York City announced 2-Care, a program of free childcare for two-year-olds that builds on the city's universal prekindergarten and 3-K programs. The program was planned to begin in fall 2026 with about 2,000 slots in high-need neighborhoods at an initial cost of roughly $75 million funded by the state, with a stated goal of universal coverage by the end of the mayor's term. The state also announced investments to make prekindergarten universal statewide, expand subsidies, and pilot county-level models, and created a new Office of Child Care and Early Education. Questions about long-term financing, including the mayor's proposals to raise taxes on high earners, remain contested.

Other states. Connecticut enacted legislation making care free for families earning under $100,000 and capping costs at 7% of income for those earning more. New England states have combined demand-side measures with supply-side reforms, including adjustments to staff-to-child ratios, new licensing categories for small centers, higher reimbursement rates, separate infant rates, worker stipends and retention bonuses, and shifts to enrollment-based payment (Luengo-Prado & Zhao, 2026). These reforms provide a rich set of policy variation for future research.

3.5.4 Lessons from adjacent policy domains

Other areas of social and infrastructure policy face structurally similar problems, and their research literatures offer transferable lessons. Housing affordability research identifies income, land, and construction costs as joint determinants of affordability (Gil-Ozoudeh et al., 2018) and shows that public-private partnerships and implementation capacity determine whether affordable housing is delivered at scale (Uduokhai et al., 2022; Uduokhai et al., 2023d). Evaluations of user satisfaction in government-sponsored housing illustrate the importance of measuring outcomes from the user's perspective (Uduokhai et al., 2023b), and studies of hazard mitigation funding show how federal resources can be used to preserve existing affordable stock (Hilliman et al., 2025). Childcare facilities face analogous challenges of land, construction, and preservation.

Research on energy poverty is especially relevant to the debate between universal and targeted programs. A systematic review of financing mechanisms concludes that no single instrument reaches the poorest households (Komi & Adeniji, 2024a), and a critical review argues that universal programs can deepen inequality when they ignore differences in households' ability to take up benefits (Komi & Ganiu, 2025). Socio-technical design frameworks for equitable transitions and work on co-optimizing performance and affordability emphasize designing for both efficiency and access (Komi & Adamolekun, 2026; Komi & Adeniji, 2020). Evidence on guaranteed income programs in the United States provides a further comparison: unconditional cash gives families flexibility to purchase care, informal or formal, but does not by itself expand supply (Jones & Ominyi, 2025b). Platform models that coordinate services across housing, education, health, and mobility suggest ways to integrate childcare with other supports (Osuji et al., 2024), and research on household economic stability in agricultural value chains highlights how income volatility shapes families' ability to pay for services (Jones & Ominyi, 2021). Secure digital identity verification, studied as a tool for financial inclusion, could simplify eligibility determination across programs (Kumuyi et al., 2024b).

Table 2. Principal policy instruments and their expected labor market effects.

Instrument	Recent U.S. examples	Primary channel	Key design issues
Tax credits	CDCTC rate raised to 50% for lowest incomes (2026)	Lowers effective price for taxpaying families	Nonrefundability limits reach to low-income families; expense caps not indexed
Employer exclusions and credits	$7,500 dependent care exclusion; expanded section 45F credit	Employer-mediated price reduction and on-site supply	Benefits skew toward higher earners and large firms
Targeted subsidies (CCDF)	2024 rule; 2026 rescission of mandatory requirements	Lowers price for low-income families; payment rules affect supply	Funding limits, copayments, provider participation
Universal public provision	New Mexico universal care; NYC 2-Care, 3-K, and pre-K	Removes price barrier; can expand supply if rates adequate	Fiscal cost, crowd-out, capacity and workforce constraints
Supply-side grants and rates	Operating grants, enrollment-based payment, infant rates	Stabilizes providers and raises capacity	Sustainability after one-time funds expire
Workforce compensation	Stipends, retention bonuses, wage supplements	Raises recruitment and retention	Ongoing cost; interaction with prices
Regulatory reform	Ratio and licensing changes in several states	Lowers cost per slot; may expand home-based care	Potential tradeoff with quality and safety

Note: CDCTC = Child and Dependent Care Tax Credit; CCDF = Child Care and Development Fund.

3.6 Conceptual Model

Drawing the strands of the literature together, Figure 1 presents a conceptual model of how childcare policy and market conditions affect parental labor supply and productivity. The model is organized as a causal chain with moderators and a feedback loop.

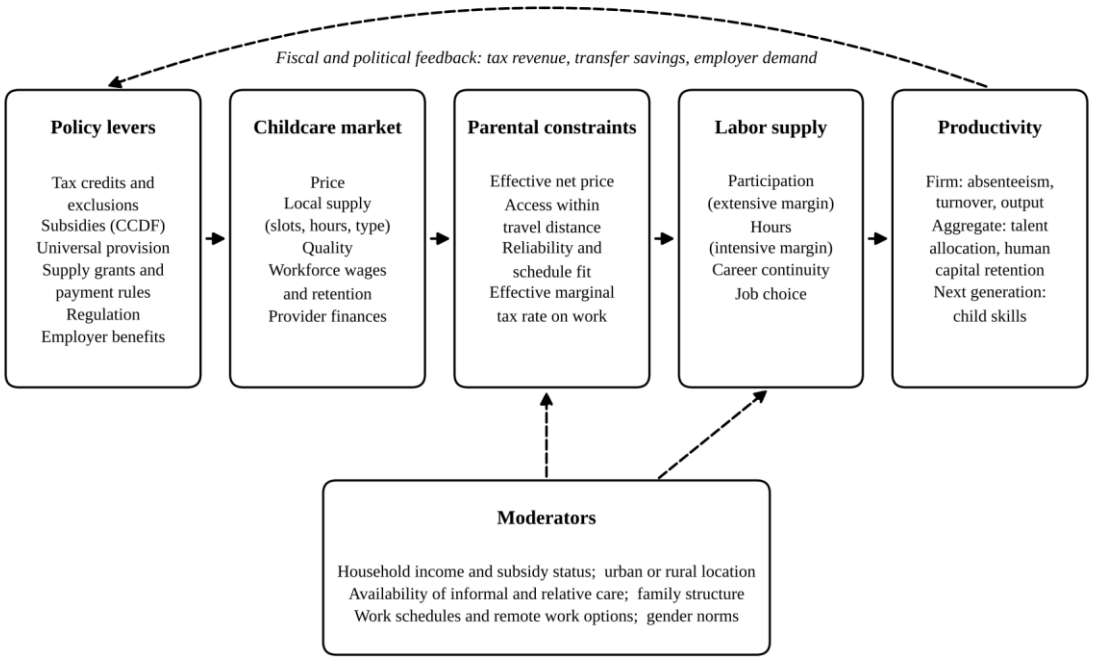


Figure 1. Conceptual model linking childcare policy, market conditions, parental labor supply, and productivity.

Policy levers (tax credits and exclusions, targeted subsidies, universal provision, supply-side grants and payment rules, regulation, and employer benefits) act on the **childcare market**, which is characterized by price, local supply, quality, workforce wages and retention, and provider finances. Market conditions determine the **constraints parents face**: the effective net price after subsidies and taxes, access to care within a feasible travel distance, the reliability of care and its fit with work schedules, and the effective marginal tax rate on additional work. These constraints shape **labor supply** on the extensive margin (participation), the intensive margin (hours), career continuity, and job choice. Labor supply then affects **productivity** at the firm level through absenteeism, turnover, and output; at the aggregate level through the allocation of talent and the retention of human capital; and in the next generation through children's skills when care is of high quality.

Moderators condition the strength of each link. Household income and subsidy status determine whether families respond to market prices or to subsidized prices. Urban or rural location affects which type of care is available. The availability of relatives and other informal care determines whether new formal slots create new labor supply or replace existing arrangements. Work schedules, remote work options, family structure, and gender norms shape both the demand for care and who adjusts their work when care is unavailable.

Finally, a **feedback loop** links productivity back to policy. Higher parental employment raises tax revenue and reduces transfer spending, which affects the fiscal cost of policy, and employer demand for workers creates political support for intervention. This feedback helps explain why childcare has become a workforce and economic development issue rather than solely a family policy issue.

The model yields six propositions that summarize the evidence and can guide future research:

- **Proposition 1.** Reductions in the effective price of care raise maternal labor force participation, with larger effects on the extensive margin than on hours.
- **Proposition 2.** The labor supply effect of a policy is largest where formal care is the binding constraint: where baseline participation is low, informal alternatives are scarce, and the subsidy is large relative to earnings.
- **Proposition 3.** Demand-side subsidies expand access only to the extent that supply is elastic; where supply is constrained, part of their value is absorbed in higher prices.
- **Proposition 4.** Supply depends on the workforce and on provider finances, so policies that stabilize revenue and raise compensation are complements to price subsidies.
- **Proposition 5.** Productivity gains operate through several channels with different time horizons: absenteeism and turnover in the short run, talent allocation and human capital in the medium run, and child development in the long run.
- **Proposition 6.** The net fiscal cost of a policy declines with the share of beneficiaries whose labor supply changes because of the policy, so targeting and design determine the strength of the fiscal feedback.

3.7 DISCUSSION OF FINDINGS

Three broad conclusions emerge from the synthesis, along with several tensions that the literature has not fully resolved.

Heterogeneity is the central finding, not a nuisance. The apparent disagreement in the literature, with large effects in Quebec and Washington, D.C. and small effects in Norway and in some U.S. prekindergarten evaluations, is largely explained by context. Effects are large where policies relax a binding constraint and small where they mainly finance care that families already use. The recent U.S. evidence fits this pattern: the Census Bureau study finds that lower-income mothers respond more to costs, while the Boston Fed study finds that market prices matter most in higher-income urban neighborhoods where families pay full price and have strong labor market opportunities. Read together, these studies indicate that

the relevant price is the one a family actually faces, and that responsiveness depends on both that price and the value of the job available. Average elasticities are therefore a poor guide to the effect of any specific program.

Supply has become as important as price. Earlier research focused largely on price elasticities. The shift in parents' reported barriers toward a lack of open slots, the long decline in home-based providers, and evidence that local supply independently predicts maternal participation all indicate that supply is now a first-order constraint. This has a direct policy implication captured in Proposition 3: demand-side subsidies alone may raise prices without proportionally expanding access in constrained markets. It also connects the childcare literature with research on the economics of small enterprises, workforce retention, and public financial management, which this review has drawn on to explain how supply responds.

Productivity effects are plausible and multi-channel, but measured less directly than labor supply. The link from childcare to participation is well established. The link from participation to productivity rests on several channels whose magnitudes are supported by different kinds of evidence: survey-based estimates of absenteeism and turnover costs, macroeconomic estimates of talent misallocation, event-study evidence on the child penalty, and program evaluations of early education. Each channel is credible, but direct estimates of childcare's effect on firm output or wage growth remain scarce.

Several tensions remain contested, and the evidence does not settle them. The first concerns **universal versus targeted designs**. Supporters of universal programs, such as those in New Mexico and New York City, emphasize simplicity, higher take-up, reduced stigma, and the absence of benefit cliffs that discourage additional work. Critics point to the higher fiscal cost per additional worker, crowd-out of existing arrangements, and the use of public funds for families who could afford care, and they caution that capacity constraints may leave some families unable to use their benefit. Evidence from other policy domains suggests that design and implementation, rather than the universal or targeted label alone, determine distributional outcomes.

The second tension concerns **federal flexibility versus federal standards** in subsidy programs. The 2026 rescission of mandatory CCDF requirements reflects the view that states are better placed to set copayments and payment practices and that uniform requirements raised costs and reduced the number of families served. Opponents argue that copayment caps and enrollment-based payment are important for affordability and provider stability. The research reviewed here suggests that both payment practices and effective prices matter for

outcomes, but it does not by itself determine whether these practices should be required federally or left to state discretion.

The third tension concerns **regulation and quality**. Staff-to-child ratios and licensing requirements raise the cost of care and can reduce supply, yet they also protect safety and support the quality that produces long-run benefits for children. Several states loosened requirements in 2024 to 2026 to expand supply. Whether these changes increase access without reducing quality is an open empirical question.

3.8 Implications

The synthesis has implications for policymakers, for employers and practitioners in the childcare sector, and for theory and research.

3.8.1 Implications for policy

The research reviewed above does not dictate a single policy approach, and reasonable people weigh the tradeoffs differently. It does, however, point to a set of design principles that apply across approaches.

- **Address supply alongside price.** When supply is inelastic, demand-side subsidies risk raising prices rather than expanding access, transferring part of their value to providers or landlords without increasing the number of slots. The shift in parents' reported barriers from cost alone to cost and availability suggests that supply is now a binding constraint in many places. Payment practices that stabilize provider revenue, start-up and facilities support, and adequate reimbursement rates for infant care are complements to price subsidies rather than alternatives.
- **Treat the workforce as the core input.** Because wages account for more than half of operating costs and are already low, sustainable expansion requires a credible plan for compensation and training. Programs that expand public prekindergarten without expanding the overall workforce can draw teachers away from infant and toddler care, reducing supply for the youngest children (Brown, 2019).
- **Match the instrument to the constraint.** Evidence that effects are largest where participation is low and alternatives are scarce supports targeting toward lower-income families, single parents, and areas with limited supply. Universal designs offer simplicity, higher take-up, and broader support but spend more per additional worker. Mixed approaches, such as universal eligibility with income-related copayments, attempt to combine the strengths of both.
- **Design tax benefits with refundability and indexing in mind.** Tax-based support reaches families with tax liability efficiently but misses many of the most price-sensitive

families unless credits are refundable. Indexing expense limits to childcare price growth would prevent the erosion that has occurred over two decades.

- **Weigh regulatory tradeoffs explicitly.** Licensing rules and staff-to-child ratios raise the cost per slot and can reduce supply, especially in lower-income markets, while improving the quality of the care that remains (Hotz & Xiao, 2011). The Census evidence that licensing requirements affect maternal participation makes these tradeoffs concrete. Changes should be evaluated with attention to both access and child outcomes.
- **Support home-based and nontraditional-hours care.** Home-based providers serve rural, lower-income, and shift-working families, and their decline is a distinct problem from center capacity. Simplified licensing, shared-services networks for back-office functions, and targeted grants are low-cost tools to support them.
- **Engage employers where incentives align.** The expanded section 45F credit and dependent care exclusion create new incentives for employers, especially in sectors with high turnover costs and shift schedules. Consortium models that allow smaller firms to pool resources can extend these benefits beyond large employers.
- **Invest in data and evaluation.** Regular updates to the NDCP, linkage of licensing records with administrative earnings data, and systematic evaluation of the New Mexico and New York programs would greatly improve the evidence base for future decisions.

Administrative capacity, accountability, and program integrity. The 2026 CCDF rule was justified partly on program-integrity grounds, and integrity concerns are legitimate in any subsidy program. Research on public financial management suggests that integrity and access need not be in conflict. Predictive analytics and audit analytics can detect fraud and improper payments in public and donor-funded programs without imposing blanket burdens on all participants (Abetoh & Atakpa, 2022; Abetoh & Atakpa, 2024; Adelanwa et al., 2023b; Ashore-Onisemo & Unamma, 2022b; Bello et al., 2025). Budget compliance, reconciliation controls, and automated close procedures improve the reliability of financial reporting in public agencies (Dogbatsey & Ebhojie, 2018; Dogbatsey et al., 2019; Oyeleye et al., 2025), and corrective action planning and audit liaison frameworks provide structured responses when problems are found (Dogbatsey et al., 2026; Ebhojie et al., 2023a). Strategic accounting and reporting systems strengthen transparency for both administrators and providers (Bola-Sadipe et al., 2019; Medon & Oduleye, 2022), while regulatory technology can reduce the compliance costs that fall on small organizations (Mensah et al., 2025). Cost-control and accountability frameworks for large public construction programs, and governance and risk-

allocation models for public-private partnerships, are applicable to facilities investments in the childcare sector (Aminu-Ibrahim et al., 2024; Aminu-Ibrahim et al., 2025a; Ike et al., 2024a; Nwafor et al., 2019b). Tax compliance and governance research is relevant to the administration of tax credits and employer exclusions (Bola-Sadipe et al., 2022; Lawal & Oduleye, 2018b). Performance intelligence, real-time governance dashboards, and digital complaint-resolution systems can make outcomes visible to policymakers and the public (Adelanwa et al., 2024; Ashore-Onisemo et al., 2026; Unamma et al., 2019b), and single-source-of-truth data standards facilitate reporting across the agencies that share responsibility for early childhood programs (Unamma et al., 2019a).

3.8.2 Implications for employers and practice

For employers, the evidence indicates that childcare constraints impose measurable costs through absenteeism, turnover, and constrained job choice, particularly in sectors with shift schedules. The expanded section 45F credit and the higher dependent care exclusion lower the cost of employer action. Options range from offering dependent care accounts and backup care to forming consortia with other employers to reserve slots at local providers. Employers can track the business case using the retention and productivity metrics discussed in Section 3.4, and predictable scheduling can reduce the amount and cost of care families must purchase.

For childcare providers and intermediaries, the evidence on small-enterprise operations suggests that financial stability depends on predictable revenue, cost management, and administrative efficiency. Shared-services networks, which pool billing, enrollment, purchasing, and compliance functions across many small providers, can reduce overhead and are particularly valuable for home-based providers. Workforce strategies that combine compensation improvements with structured onboarding, career pathways, and reduced administrative burden address the retention problem that limits capacity.

For state and local administrators, the implementation of large programs depends on administrative capacity: eligibility systems that minimize burden, payment systems that providers trust, data systems that allow monitoring, and integrity controls that are targeted rather than blanket.

3.8.3 Implications for theory and research

For theory and research, the review suggests three implications. First, models of maternal labor supply should treat access, reliability, and schedule fit as constraints alongside price, since the evidence shows each has independent effects. Second, the childcare market should be modeled as a labor-intensive industry with thin margins and regulatory constraints, so that

the incidence of subsidies and the supply response can be analyzed jointly. Third, productivity effects should be studied directly with linked employer-employee data rather than inferred from participation effects alone. The conceptual model in Section 3.6 provides a framework for organizing these efforts.

4. CONCLUSION

The evidence assembled in this review supports four conclusions. First, childcare is expensive relative to family incomes across nearly all of the United States, and supply, not only price, is now a binding constraint for many families. Second, lower costs and greater local supply raise maternal labor force participation; the effects are modest on average but substantial where formal care is the binding constraint, and recent administrative and spatial studies have strengthened the case for a causal interpretation. Third, the consequences extend beyond household budgets to workforce productivity through absenteeism and turnover, the allocation of talent, the preservation of human capital, and, when care is of high quality, the skills of the next generation. Fourth, the policy environment is in a period of unusual experimentation, with federal policy emphasizing tax incentives and state discretion while several states and cities pursue universal provision.

These developments create a rare opportunity for learning. The variation in approaches across federal, state, and local governments, combined with new data infrastructure, makes it possible to measure the labor market and productivity effects of childcare policy with greater precision than ever before. The central challenge for both research and policy is to design support that relaxes the constraints that actually bind, sustains the workforce on which the sector depends, and preserves the quality that gives early care its long-run value.

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