Life-Cycle Effects of Childhood Medicaid Expansions

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Abstract

This paper provides evidence on the dynamic effects of childhood Medicaid eligibility on individual health and economic outcomes in adulthood, tracing these effects at each age over 20 years, thereby extending existing estimates by 10 years. Using linked administrative tax and Census data, we study individuals born between 1981 and 1984, a set of birth years that spans substantial changes in Medicaid eligibility during childhood. Exploiting variation in eligibility across states and birth cohorts arising from policy changes over time, we find that the earnings effects of childhood Medicaid eligibility grow relative to mean income beyond early adulthood, while mortality reductions accumulate proportionately with age. In contrast, early fertility declines reverse in the 30s, reflecting delayed childbearing. These findings suggest that existing estimates, including government projections, based on outcomes in early adulthood understate the longer-run returns to childhood Medicaid coverage.

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1 Introduction

Childhood Medicaid eligibility has been shown to generate sizable economic returns into early adulthood, through higher earnings and reduced reliance on earnings-based transfers, as well as lower mortality (Brown, Kowalski and Lurie, 2020) and reduced hospitalizations (Wherry et al., 2018). Subsequent high-profile research based on these findings concludes that, alongside investments in education, investments in Medicaid for children have historically delivered the highest marginal values of public funds (Hendren and Sprung-Keyser, 2020). However, these conclusions are based on outcomes observed in early adulthood and therefore do not capture how these effects evolve later in life. Dynamic effects matter because, later in adulthood, earlier effects may continue to grow or reverse, depending on whether they reflect permanent changes or timing shifts. For example, existing estimates imply that Medicaid eligibility leads to a decline in fertility, but this may reflect only a delay beyond the time horizons studied so far.

In this paper, we estimate the causal effects of receiving childhood Medicaid eligibility up to 20 years after childhood (through age 38) and examine whether they vary by sex and race. To do so, we use longitudinally linked federal tax returns matched to the universe of Census administrative records to estimate the effects of an additional year of childhood Medicaid eligibility on mortality, fertility, wage income, and Earned Income Tax Credit (EITC) receipt. We calculate Medicaid eligibility using information on household income, family size, and state of residence for children born between 1981 and 1984, cohorts that experienced substantial variation in eligibility due to expansions in the late 1980s and 1990s. Following Currie and Gruber (1996*a*), we use simulated eligibility to isolate policy-driven variation across states and over time. Currie and Gruber (1996*a*) uses this approach to estimate contemporaneous effects, while Brown, Kowalski and Lurie (2020) uses it to estimate cumulative effects through early adulthood, up to around age 28. Using the same framework, we estimate cumulative effects at each age from 19 to 38, extending the horizon of Brown, Kowalski and Lurie (2020).

Extending the analysis beyond early adulthood reveals substantial additional impacts of childhood Medicaid eligibility. By age 38, cumulative wage income increases by roughly $10,900 per person (in 2011 dollars) and cumulative EITC receipt declines by about $470, indicating sustained improvements in earnings trajectories and reduced reliance on earnings-based transfers. While both increased earnings and reduced EITC receipt contribute to higher tax payments in early adulthood, earnings gains play a larger role beyond age 28 as income continues to grow. The effect on earnings as a proportion of mean income increases substantially between ages 28 and 38, implying that projections based on estimates at age 28 (approximately $7,000) would understate the effect at age 38 by over 35%. Mortality reductions also continue to accumulate: cumulative deaths decline by 3.09 per 10,000 individuals by age 28 and by 7.99 per 10,000 by age 38, implying that more than half of the total survival gains emerge after early adulthood. Our estimates imply that the cost of offering Medicaid eligibility per life saved falls from $2 million by age 28 to $0.75 million by age 38. In contrast,

fertility effects follow a different life-cycle pattern: while cumulative fertility declines by 179 births per 10,000 individuals by age 28, more than half of this reduction reverses by age 38, consistent with delayed childbearing rather than a permanent reduction in completed fertility.

Across both sex and race, differences in estimated effects are typically more pronounced in levels than in proportional terms. Absolute mortality reductions are larger for males, and absolute gains in earnings are larger for Non-Black individuals, while absolute decreases in EITC are larger for Black individuals. However, these patterns largely reflect differences in baseline mortality risk, income, and EITC receipt. When scaled relative to subgroup-specific means, effects are broadly similar across groups by the late 30s. This pattern suggests that childhood Medicaid eligibility generates comparable proportional improvements in health and economic outcomes across demographic groups, even where differences in baseline levels lead to larger absolute gains for some groups. One exception to this pattern is the effect on wages by sex, where we detect much larger absolute gains for women than for men despite women having *lower* income levels on average. As a result, women experience a 3% increase in cumulative wages per additional year of childhood Medicaid eligibility by age 38, while the corresponding estimate for men is 1.6%.

This paper builds most directly on Brown, Kowalski and Lurie (2020), who provide the first estimates of the long-run effects of own childhood Medicaid eligibility using administrative tax data through the US Treasury. Using simulated eligibility, they show that childhood Medicaid eligibility increases college attendance, raises earnings, reduces fertility, and lowers mortality through age 28. We extend their analysis by following the same cohorts through age 38 using linked Census administrative data rather than the IRS records used in Brown, Kowalski and Lurie (2020). Census data allow us to observe fertility more accurately than in the tax records, to identify individuals' state of birth, and to document heterogeneity in effects by race. Extending the horizon from 10 to 20 years reveals patterns of dynamic treatment effects which are not approximated by standard projections. This has an important policy implication for the accuracy of long-run projections performed by the Congressional Budget Office (CBO) in its scoring of new laws, which are typically limited to 10 years, even though the agency notes that fiscal returns to childhood Medicaid eligibility are likely to accrue beyond this period (Ash et al., 2023).

Several papers study the long-run consequences of the original introduction of Medicaid in the 1960s. Boudreaux, Golberstein and McAlpine (2016) document improvements in adult health associated with early-life Medicaid exposure, while Goodman-Bacon (2021) finds that childhood Medicaid exposure reduced mortality and disability while increasing employment several decades later. These studies examine the initial rollout of Medicaid and observe outcomes at discrete points in time many decades after childhood exposure, and therefore do not trace how these effects evolve earlier in the life cycle. Our analysis complements this work by tracing the evolution of the effects of childhood Medicaid eligibility from early adulthood into middle age. Doing so requires following individuals over time, which we achieve using linked administrative data.

Other work studies the consequences of Medicaid eligibility expansions for children during the 1980s and 1990s. Miller and Wherry (2019) find that prenatal and infant Medicaid eligibility improves adult health outcomes and educational attainment, while Cohodes et al. (2016) find increases in educational attainment associated with childhood public insurance expansions. Related work links childhood Medicaid eligibility to lower hospitalizations in adulthood (Wherry et al., 2018), reduced criminal behavior later in life (Arenberg, Neller and Stripling, 2024; Hendrix and Stock, 2024), and lower reliance on disability-related transfers (Levere et al., 2019). These studies typically focus on specific outcomes or observe individuals relatively early in adulthood. Our analysis complements this work by tracing how the effects of childhood Medicaid eligibility evolve from early adulthood through prime working years for cohorts exposed to these eligibility expansions. In addition, by linking tax records to Census data, we are able to examine heterogeneity in these effects by race.

Evidence from studies examining the mechanisms linking childhood Medicaid eligibility to later-life outcomes helps interpret our findings. Early work documents that Medicaid expansions increased the utilization of medical care and improved infant and child health outcomes (Currie and Gruber, 1996*a*,*b*; Card and Shore-Sheppard, 2004). More recent work suggests that improved health in early childhood may translate into gains in human capital accumulation. For example, Qureshi and Gangopadhyaya (2021) find that Medicaid eligibility during childhood improves grade progression and reduces the likelihood of falling behind in school. Other studies document improvements in cognitive development and behavioral outcomes associated with greater public insurance eligibility (Hull and Yan, 2024). Evidence from pregnancy-related Medicaid expansions further suggests that early access to coverage improves prenatal care and maternal well-being, which may generate downstream benefits for child development (Guldi and Hamersma, 2023).

Our analysis also relates to a broader literature evaluating the long-run effects of safety-net programs targeting children. A large body of work shows that early-life access to public resources can improve adult health, educational attainment, and labor market outcomes. For example, access to the Food Stamp Program in early childhood improves adult health and economic self-sufficiency (Hoynes, Schanzenbach and Almond, 2016; Bailey et al., 2024), while exposure to income support programs such as the Earned Income Tax Credit increases education and employment outcomes later in life (Bastian and Michelmore, 2018). Similarly, early childhood programs such as Head Start generate lasting improvements in human capital and economic outcomes (Garces, Thomas and Currie, 2002; Bailey, Sun and Timpe, 2021).

The paper proceeds as follows. Section 2 provides the necessary context on the Medicaid program and describes the data and sample construction. Section 3 describes our empirical strategy and presents the estimating equations. Section 4 presents the main results on the long-run effects of Medicaid eligibility as well heterogeneity in effects by sex and race. Finally, Section 5 concludes.

2 Setting and Data

2.1 Medicaid

Medicaid is a joint federal–state program that has provided health insurance to low-income individuals in the United States since its introduction in 1965. Eligibility for children is means-tested and depends on household income relative to the federal poverty level (FPL), family size, the age of the child, and the state and year of residence. Prior to the mid-1980s, eligibility for children was largely tied to participation in cash welfare programs, primarily Aid to Families with Dependent Children (AFDC). As a result, Medicaid coverage for children was generally limited to those in very low-income households, and eligibility thresholds varied relatively little across states.

Beginning in the mid-1980s, a series of federal reforms substantially expanded Medicaid eligibility for children by raising income thresholds and gradually decoupling eligibility from welfare participation. Legislation including the Omnibus Budget Reconciliation Acts of 1986, 1989, and 1990 required states to extend coverage to broader groups of low-income children based on household income relative to the federal poverty level. These reforms generated substantial variation in Medicaid eligibility across states, birth cohorts, and ages during childhood.

2.2 Data

Our analysis uses linked administrative data from the U.S. Census Bureau, which incorporate federal income tax records along with other administrative sources. These data allow us to measure household income, family structure, and state of residence during childhood, which together determine Medicaid eligibility under the program's means-tested rules. Using these records, we construct measures of the number of years individuals are eligible for Medicaid coverage during childhood. We then examine how this exposure affects outcomes in adulthood, including wage income, Earned Income Tax Credit (EITC) receipt, fertility, and mortality.

We begin by identifying all children in the 1981–1984 birth cohorts using date of birth as recorded in the Census Numident file. Measuring childhood Medicaid exposure requires information on state of residence and family income relative to the poverty threshold over the course of childhood. Parent–child linkages via dependent claiming on Form 1040 enable the construction of these measures. We use data from Form 1040 for the years 1994–1995 and 1998–2019. Beginning in 1994, these data include the Census Bureau's unique person identifier (the Protected Identification Key, or PIK) for dependents claimed on the return, alongside the PIK of the filer(s), which is available in all years.[1] Using observed dependent claiming, we identify a primary claimer for each child and use that individual's tax records to construct measures of childhood Medicaid eligibility. We use adjusted gross income (AGI) as our measure of income and the total number of exemptions claimed as

[1] The available data allow us to observe who, if anyone, claims members of our oldest birth cohort of interest as dependents at ages 16 and 17, ages at which children are typically still living with their parents. We observe our youngest cohort of interest claimed as dependents at ages 9, 10, and from age 13 onward.

a measure of family size to construct income relative to poverty, and assign the state listed on Form 1040 as the individual's state of residence.

We measure adult outcomes including earnings, Earned Income Tax Credit (EITC) receipt, fertility, and mortality. Earnings are measured using Form W-2, and EITC receipt is estimated using Form 1040 data combined with NBER's TAXSIM calculator. Fertility is measured using the Census household composition key, and mortality using date of death recorded in the Census Numident. Since the 1040 data do not include information on tax liabilities or credits received, we use TAXSIM to construct simulated EITC amounts based on observed income and filing characteristics. All spending values are inflation adjusted to be in 2011 dollars.

We perform heterogeneity analyses examining the possibility that the effects of Medicaid may differ across sex and race/ethnicity. We obtain information on sex from the Census Numident. Race and ethnicity information are obtained from the Census Bureau's Best Race and Ethnicity Administrative Records Composite File, which collects race and ethnicity information across a range of survey and administrative data sources.

2.3 Inferring Medicaid Eligibility

Our main measure of exposure is cumulative childhood eligibility, defined as the total number of years an individual is eligible for Medicaid between birth and age 18. To determine Medicaid eligibility, we apply federal and state eligibility rules to household characteristics observed in the tax records. Eligibility depends on household income relative to the federal poverty level (FPL), family size, the child's age, and the state and year corresponding to that age.

For each child-age, we compute household income relative to the FPL and compare it to the eligibility threshold corresponding to the child's age, state, and year. A child is classified as eligible if income falls below this threshold. We then sum eligibility over childhood.

To isolate policy-induced variation in Medicaid eligibility and reduce measurement error, we construct a measure of simulated Medicaid eligibility following Currie and Gruber (1996*a*) and Brown, Kowalski and Lurie (2020). We begin with a fixed national sample of children and, for each state and year, apply Medicaid eligibility rules to this sample to calculate the share eligible. This yields a measure of eligibility that varies by state, birth cohort, and age, while holding constant the underlying distribution of household characteristics. We then assign these simulated eligibility rates to individuals in our data based on their state of residence and year, and sum eligibility over childhood. This approach captures variation in eligibility driven by policy changes rather than individual circumstances.

As shown in Brown, Kowalski and Lurie (2020), this variation is substantial. Children are eligible for Medicaid for approximately 3.77 years on average between birth and age 18, with a standard deviation of 5.61 years, while simulated eligibility averages 4.49 years with a standard deviation of 1.60 years. This variation reflects both cross-state differences in the timing and generosity of ex-

pansions and within-cohort differences arising from birth timing, leading to meaningful differences in cumulative eligibility across individuals. We implement the same simulated eligibility calculator using linked Census and tax data; summary statistics for this measure are pending disclosure.

3 Empirical Strategy

We estimate reduced-form effects of childhood Medicaid eligibility by regressing outcomes at each adult age on cumulative simulated eligibility during childhood, following Brown, Kowalski and Lurie (2020). The specification is as follows

$$Y_{i,a} = \theta_a \sum_{c=0}^{18} E_{i,c} + \gamma_c + \gamma_s + u_{i,a}, \tag{1}$$

where $\sum_{c=0}^{18} E_{i,c}$ is the total number of years individual i was eligible for Medicaid between birth and age 18, and c indexes childhood age. γ_c and γ_s represent fixed effects for the individual's month-year birth cohort and state of birth fixed effects, u represents idiosyncratic unobserved factors. The coefficient θ_a is the object of interest and is the effect of an additional year of Medicaid eligibility during childhood on the outcome measured at adult age a. Equation (1) is estimated separately for each adult age from 19 to 38, except for fertility, which is measured beginning at age 15.

For each outcome, we consider two measures: (i) the contemporaneous value at age a, and (ii) a cumulative measure from age 19 through age a. The specification is estimated in the full sample and separately by sex and race. Standard errors are clustered by state of residence at age 17 to allow for arbitrary correlation across all individuals residing within a state across cohorts.

3.1 Relationship between simulated and actual Medicaid eligibility

Our main estimates relate outcomes to simulated eligibility, which varies only with policy rules. To interpret these estimates in terms of actual Medicaid eligibility, we examine the relationship between simulated and observed eligibility. We estimate:

$$\sum_{c=0}^{18} E_{i,c} = \pi \sum_{c=0}^{18} Z_{i,c} + \gamma_c + \gamma_s + v_i, \tag{2}$$

where $\sum_{c=0}^{18} Z_{i,c}$ denotes total simulated Medicaid eligibility between birth and age 18. The specification includes the same cohort and state fixed effects as in the main regression, with standard errors clustered by state of birth. Results are reported in Table 1.

Simulated eligibility closely tracks observed eligibility, with coefficients near one across all samples. This indicates an approximately one-to-one relationship between simulated and actual eligibility: a one-year increase in simulated eligibility corresponds closely to a one-year increase in

actual eligibility. As a result, our reduced-form coefficients can be interpreted as approximately estimating the effect of an additional year of childhood Medicaid eligibility.

4 Results

Figure 1 summarizes the effects of childhood Medicaid eligibility on cumulative outcomes through age 38. Two central patterns emerge. First, for mortality, wages, and EIC receipt, childhood Medicaid eligibility continues to shape outcomes well beyond age 28, the endpoint of prior estimates. Second, fertility follows a distinct U-shaped trajectory, consistent with delayed childbearing rather than a permanent reduction in completed fertility. Columns correspond to outcomes, while rows provide complementary perspectives on each outcome: the top row reports estimated effects in levels, the middle row shows mean cumulative outcomes by age, and the bottom row scales effects relative to subgroup-specific mean outcomes. The vertical line at age 28 marks the endpoint of prior work.[2]

Mortality Childhood Medicaid eligibility continues to reduce cumulative mortality through age 38. In the full population, cumulative mortality declines by 3.09 deaths per 10,000 by age 28 and 7.99 deaths per 10,000 by age 38, with effects that are statistically significant at both ages. Approximately 61% of the total mortality reduction observed by age 38 accrues after age 28, implying that analyses stopping at early adulthood would capture less than half of the long-run survival gains from childhood Medicaid eligibility.

Using a similar estimation approach, we find that an additional year of simulated Medicaid eligibility increases Medicaid spending by $593 per individual. Combining the estimated effects on cumulative mortality and spending allows us to quantify the cost per life saved from childhood Medicaid eligibility. The average cost per life saved was $ 2 million by age 28, and this drops to $0.75 million by age 38. These values are substantially lower than the estimates of a value of a statistical life commonly used in the literature (Kniesner and Viscusi, 2019).

Fertility Fertility follows a qualitatively different dynamic path. By age 28, childhood Medicaid eligibility reduces cumulative fertility by 179 births per 10,000, and the effect is statistically significant, By age 38, this effect attenuates to 85 fewer births per 10,000, though it remains statistically significant. More than half of the initial fertility reduction observed by age 28 reverses by age 38, indicating that analyses stopping at early adulthood would overstate effects on completed fertility and instead miss evidence of postponed childbearing.

Wages Cumulative wage effects exhibit substantial post-28 accumulation. Childhood Medicaid eligibility increases cumulative earnings by approximately $1,400 by age 28 and $10,900 by age 38 (2011 dollars), with effects that remain statistically significant throughout adulthood. Roughly 87% of total

[2]For mortality and fertility, effects are reported per 10,000 individuals.

cumulative earnings gains by age 38 accrue after age 28, indicating that estimates restricted to early adulthood would substantially understate long-run labor market returns.

EITC Effects on EITC receipt also continue to accumulate beyond early adulthood. Childhood Medicaid eligibility reduces cumulative EITC payments by approximately $200 per person by age 28 and $470 per person by age 38, reflecting reduced reliance on earnings-based transfers as income rises. Approximately 58% of the total reduction in cumulative EITC receipt accrues after age 28, implying that early-adulthood estimates materially understate longer-run fiscal impacts.

Relative effects The bottom row of Figure 1 reports effects scaled relative to mean outcomes at each age. Scaling effects relative to the mean clarifies whether the growth in level effects over the life cycle reflects increasing proportional impacts of Medicaid eligibility or rising baseline outcomes. Across mortality and EITC receipt, relative effects are fairly stable over age, indicating that the accumulation of level effects primarily reflects growth in baseline mortality risk or in the values of economic outcomes rather than increasing proportional treatment effects.

In contrast, the relative effects on wages and fertility noticeably change with age. The relative fertility effect attenuates substantially with age. For example, it declines from about 4% at age 28 to slightly over 1% by age 38, reinforcing the interpretation that fertility responses reflect delayed timing rather than persistent reductions in completed fertility. The relative effect on wage increases after age 30. An additional year of Medicaid eligibility results in 1.4% higher wages at age 28, which grows to 2.1% by age 38.

4.1 Heterogeneity by sex

Mortality The mortality effects of childhood Medicaid eligibility are present for both males and females through age 38 (Figure 2, top row). Among females, cumulative mortality declines by 2.05 deaths per 10,000 by age 28 and 6.04 deaths per 10,000 by age 38, with approximately 66% of the total reduction accruing after age 28. Among males, cumulative mortality declines by 4.09 deaths per 10,000 by age 28 and 9.90 deaths per 10,000 by age 38, with roughly 59% of the total effect accruing after age 28. Consistent with higher baseline mortality risk, absolute mortality reductions are larger for males at all ages. Nevertheless, for both males and females, a substantial share of the total survival benefit emerges after early adulthood, indicating that analyses stopping at age 28 would substantially understate long-run mortality gains.

Scaling effects relative to subgroup-specific mean mortality clarifies whether differences in absolute mortality reductions reflect baseline risk or differences in the proportional impact of Medicaid eligibility. Relative mortality reductions are larger for females early in adulthood but attenuate and converge across sex by the early 30s, yielding broadly similar proportional reductions in baseline mortality by mid-adulthood (Figure 2, bottom row).

Fertility Fertility effects of childhood Medicaid eligibility are present for both males and females, but follow a distinct life-cycle pattern consistent with delayed childbearing (Figure 3, top row). Among females, cumulative fertility declines by 200 births per 10,000 by age 28 and 86.8 births per 10,000 by age 38, implying that more than half of the initial reduction observed by early adulthood reverses by the late 30s. Among males, cumulative fertility declines by 157.8 births per 10,000 by age 28 and 82.4 births per 10,000 by age 38, exhibiting a similar attenuation over the life cycle. These patterns indicate that analyses stopping at age 28 would substantially overstate the long-run impact of childhood Medicaid eligibility on completed fertility.

Scaling effects relative to subgroup-specific mean fertility clarifies the timing of these responses (Figure 3, bottom row). Relative fertility reductions are largest early in adulthood, at roughly 15% of mean cumulative fertility, and then steadily move toward zero as age increases. Relative effects are larger for females early in adulthood but converge across sex by the mid-30s.

Wages Wage effects of childhood Medicaid eligibility are present for both males and females and continue to accumulate well beyond early adulthood (Figure 4, top row). Among females, cumulative wages increase by $2,169 by age 28 and $12,990 by age 38, indicating that the majority of long-run earnings gains accrue after age 28. Among males, cumulative wages increase by $718 by age 28 and $8,935 by age 38, exhibiting a similar pattern of persistent accumulation over time, although the effects for females are larger. Consistent with Brown, Kowalski and Lurie (2020), estimates for males at age 28 are not statistically significant, but become larger and more precisely estimated at later ages. For both sexes, analyses that stop at age 28 would substantially understate long-run earnings gains from childhood Medicaid eligibility.

Scaling effects relative to subgroup-specific mean wages highlights differences in the magnitude and precision of earnings gains across sex (Figure 4, bottom row). Relative wage effects are consistently larger for females than for males, reflecting both lower baseline earnings and larger absolute gains among women. In addition, relative wage effects for females are more precisely estimated across much of the age range, whereas estimates for males are smaller in magnitude and noisier. By the late 30s, however, relative wage gains for both sexes are positive, indicating sustained improvements in earnings trajectories resulting from childhood Medicaid eligibility.

EITC Reductions in EITC receipt from childhood Medicaid eligibility are present for both males and females and continue to accumulate beyond early adulthood (Figure 5, top row). Among females, cumulative EITC receipt declines by $267 by age 28 and $665 by age 38, indicating that a substantial share of total reductions accrues after age 28. Among males, cumulative EITC receipt declines by $126 by age 28 and $282 by age 38, exhibiting a similar pattern of persistent reductions over time. For both sexes, analyses that stop at age 28 would substantially understate longer-run reductions in reliance on earnings-based transfers.

Scaling effects relative to subgroup-specific mean EITC receipt clarifies how these reductions

evolve with age (Figure 5, bottom row). Relative reductions in EITC receipt are largest early in adulthood and become less negative as age increases, but remain substantively below zero through the late 30s. Relative effects are larger and more precisely estimated for females than for males.

4.2 Heterogeneity by race

Mortality The mortality effects of childhood Medicaid eligibility differ across race groups (Figure 6). Among non-Black individuals, cumulative mortality declines are statistically significant at both age 28 and age 38, with substantial accumulation after age 28. Among Black individuals, point estimates are negative and increase in magnitude with age but are not statistically significant. By age 38, cumulative mortality declines are similar in magnitude across groups in levels, though estimates for Black individuals remain less precisely estimated.

Scaling effects relative to subgroup-specific mean mortality highlights differences in proportional gains. Relative mortality reductions are larger and statistically significant for non-Black individuals early in adulthood, while relative effects for Black individuals are smaller and not statistically significant at younger ages. By the late 30s, relative mortality reductions for Black individuals increase in magnitude, indicating growing proportional gains over time, though estimates remain noisier than for non-Black individuals.

Fertility Childhood Medicaid eligibility reduces cumulative fertility for both Black and non-Black individuals, with effects that attenuate with age (Figure 7). At age 28, cumulative fertility declines by approximately 112 births per 10,000 among Black individuals and 172 births per 10,000 among non-Black individuals. By age 38, these reductions shrink to 72 and 88 births per 10,000, respectively, indicating substantial catch-up in fertility after early adulthood for both groups.

Scaling effects relative to subgroup-specific mean fertility clarifies the timing of these responses. Relative fertility reductions are larger for non-Black individuals early in adulthood, reflecting lower baseline fertility levels, but move toward zero with age for both groups. This convergence in relative effects is consistent with postponed childbearing rather than persistent reductions in lifetime fertility across race groups.

Wages Childhood Medicaid eligibility increases cumulative wages for both Black and non-Black individuals that grow substantially with age (Figure 8). At age 28, cumulative wage gains are modest—$607 for Black individuals and $1,008 for non-Black individuals—and are imprecisely estimated for Black individuals. By age 38, cumulative wage gains increase to $6,074 for Black individuals and $8,863 for non-Black individuals, and are statistically significant for both groups, indicating substantial accumulation of earnings gains after early adulthood.

Scaling effects relative to subgroup-specific mean wages highlights convergence in proportional gains across race. Relative wage effects are similar for Black and non-Black individuals at

age 28 and remain closely aligned by age 38, at approximately 1.7% of mean cumulative wages for both groups. This pattern indicates that while baseline earnings levels differ across race, childhood Medicaid eligibility produces proportional improvements in earnings trajectories by mid-adulthood.

EITC Childhood Medicaid eligibility causes significant and persistent reductions in EITC receipt for both Black and non-Black individuals (Figure 9). At age 28, cumulative EITC receipt declines by $318 for Black individuals and $158 for non-Black individuals. By age 38, these reductions grow to $815 and $352, respectively, indicating substantial accumulation of reductions in reliance on earnings-based transfers after early adulthood for both groups. Although reductions in EITC receipt are larger in levels for Black individuals, scaling effects relative to subgroup-specific mean receipt reveals closely aligned proportional reductions across race groups.

5 Conclusion

This paper estimates the effects of childhood Medicaid eligibility for individuals on their health and economic outcomes through age 38, extending prior work that focuses on early adulthood. We find that the impacts of childhood Medicaid eligibility continue to evolve well beyond age 28. Earnings gains grow substantially relative to mean income in the 30s, while mortality reductions accumulate proportionately with age. In contrast, early declines in fertility partially reverse by the late 30s, consistent with delayed childbearing rather than reductions in completed fertility. These patterns imply that estimates based on early-adulthood outcomes understate the longer-run effects of childhood Medicaid eligibility.

We also document that, while absolute effects differ across sex and race due to differences in baseline outcomes, proportional impacts are broadly similar across groups by mid-adulthood. This pattern suggests that childhood Medicaid eligibility generates comparable improvements in health and economic outcomes across demographic groups, even where level differences lead to larger absolute gains for some populations.

An important direction for future research is to better understand the mechanisms underlying these long-run dynamic effects. In particular, distinguishing between persistent improvements in human capital and health versus dynamic responses in labor supply and family formation would help clarify how early-life insurance coverage translates into long-run outcomes. Extending the analysis to later ages and to additional outcomes would provide a more complete picture of the long-run effects of childhood Medicaid eligibility.

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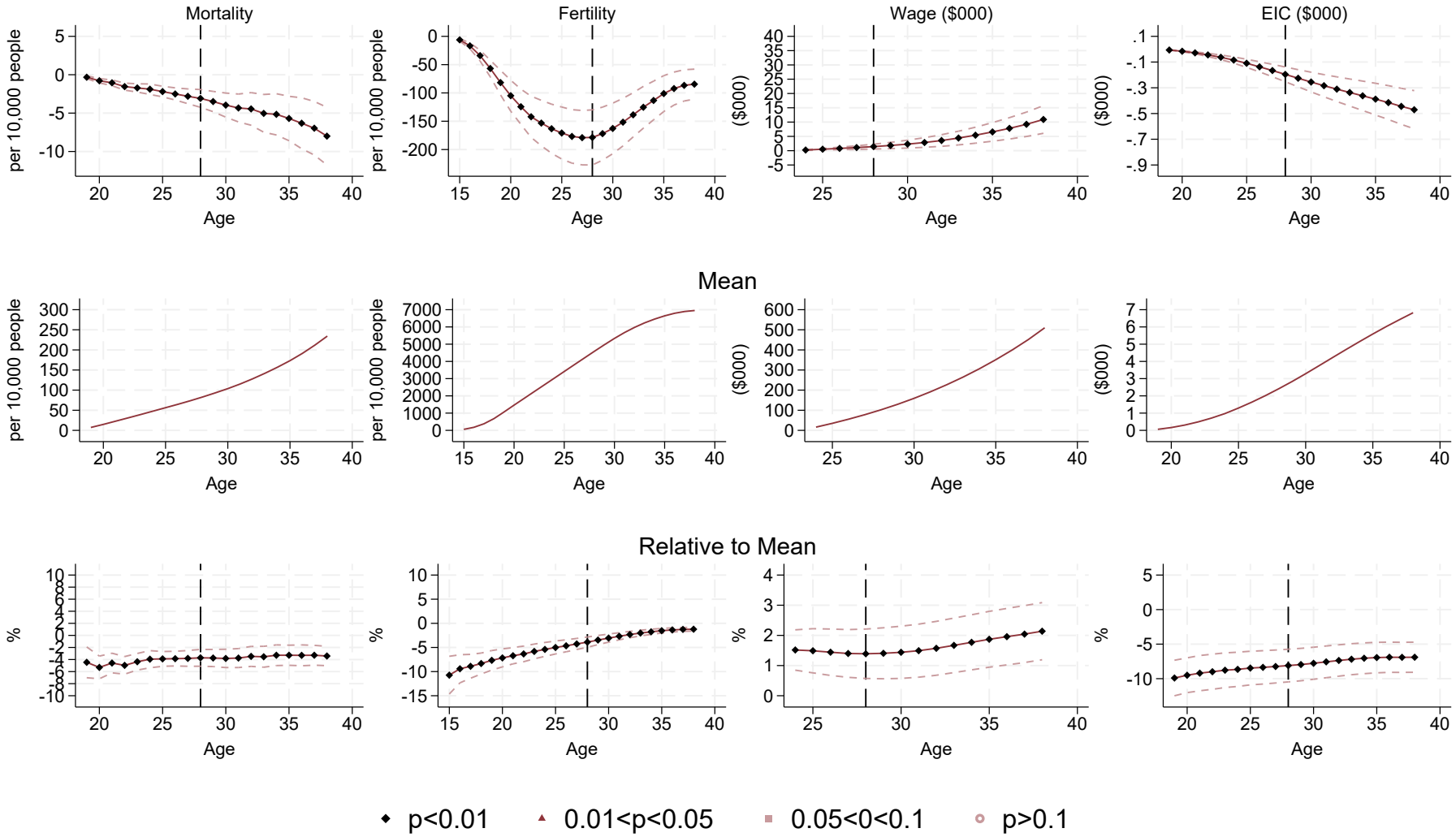
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Table 1: First Stage

	All	Female	Male	Black	Non-black
Simulated Eligibility	0.9406***	0.9367***	0.9444***	0.9964***	0.9666***
	(0.0716)	(0.07111)	(0.07227)	(0.07583)	(0.0687)
N	11,900,000	5,872,000	6,031,000	1,657,000	10,250,000

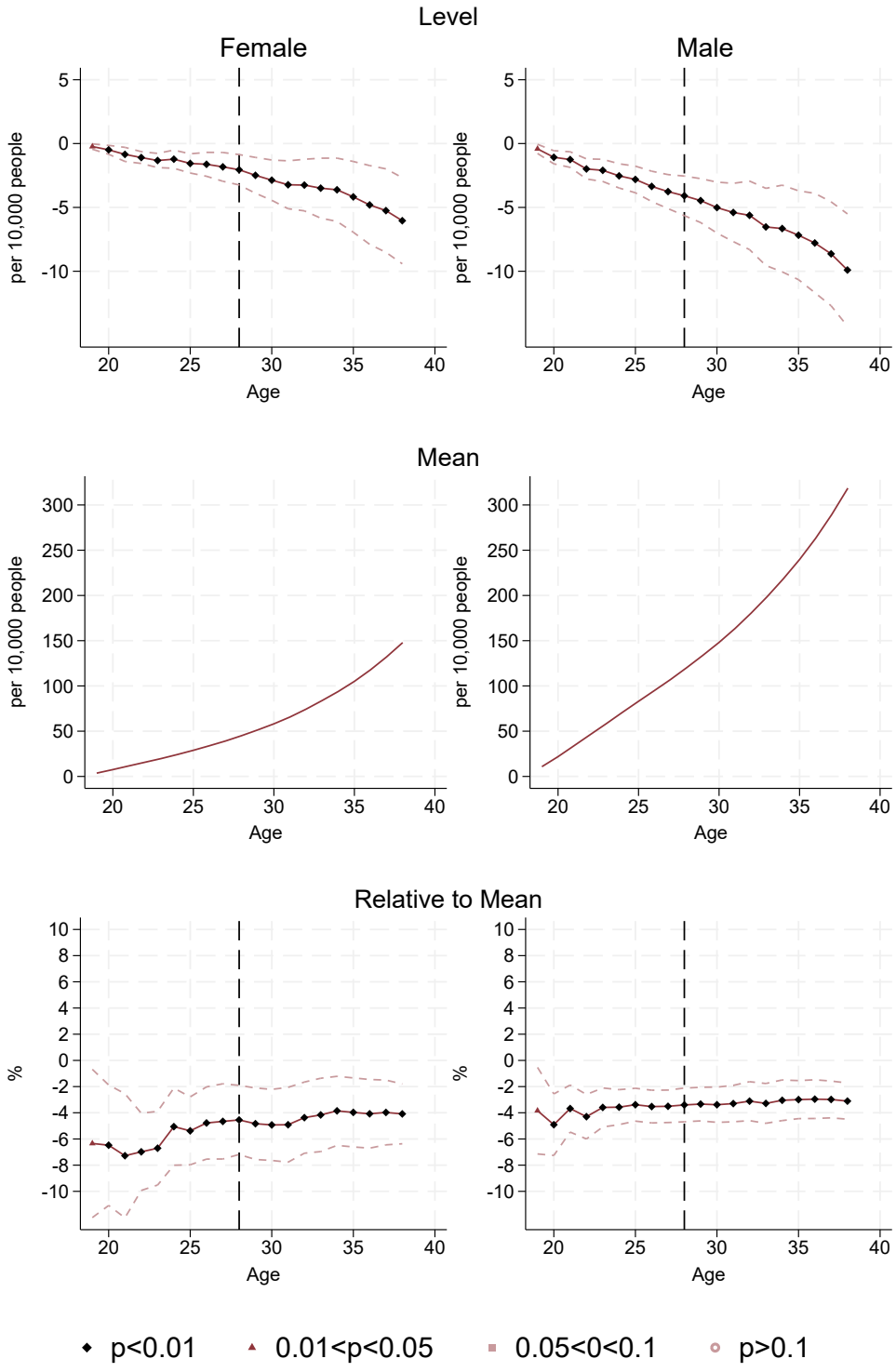
Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$ All regressions include fixed effects for the birth month-year cohort and state of birth. Standard errors are clustered by state.

Figure 1: Cumulative Effects



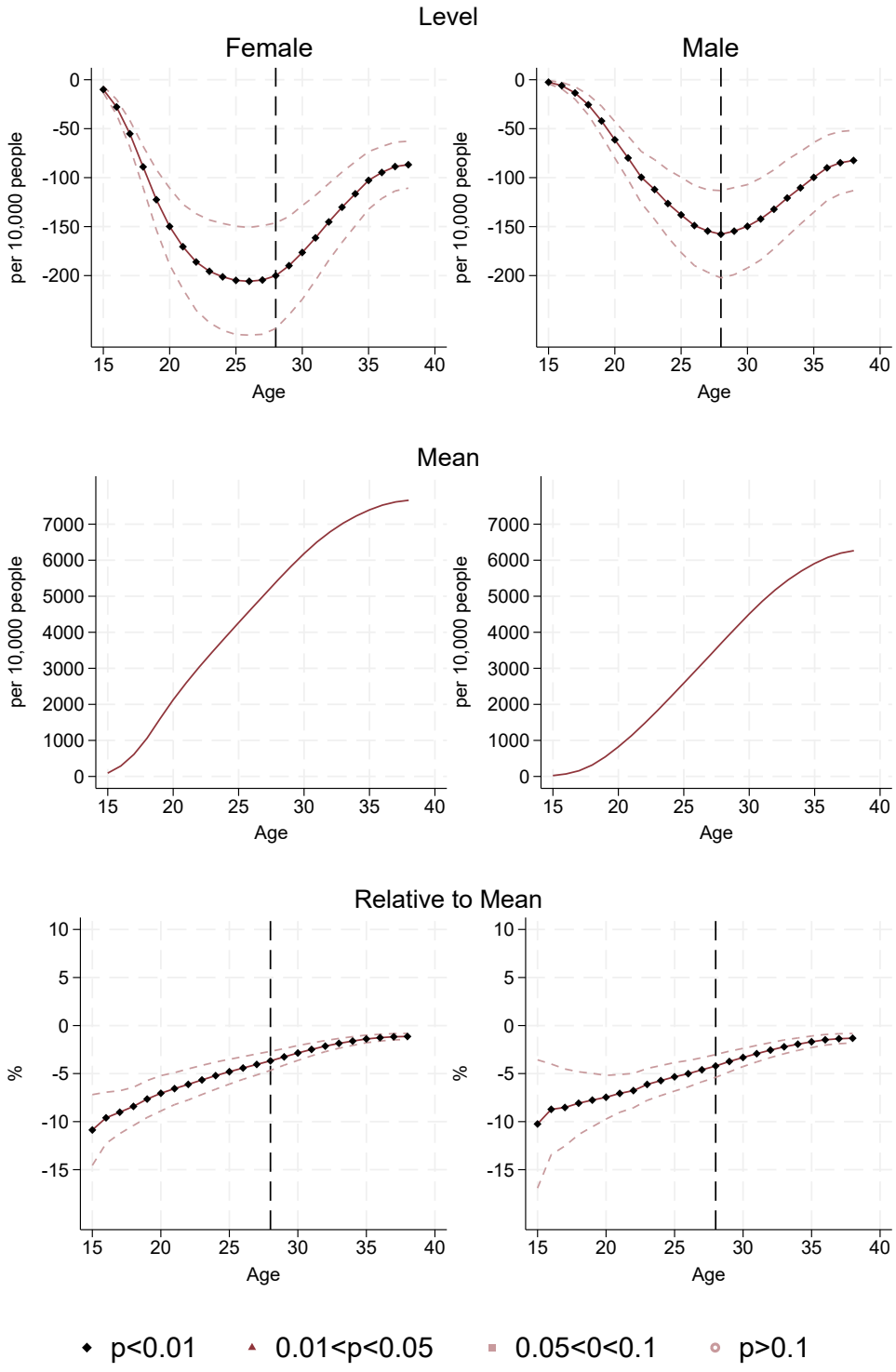
Notes: The figure reports the effects of childhood Medicaid eligibility on cumulative outcomes by age. Columns correspond to outcomes: mortality, fertility, wages, and EITC receipt. Rows provide complementary perspectives on each outcome. The top row reports estimated treatment effects in levels; the middle row shows mean cumulative outcomes by age; and the bottom row scales estimated effects relative to subgroup-specific mean outcomes. Mortality and fertility effects are reported per 10,000 individuals, while wage and EITC effects are reported in 2011 dollars per person (with axes scaled in thousands). The vertical dashed line marks age 28, the endpoint of prior estimates. Shaded regions denote 95% confidence intervals.

Figure 2: Mortality by Sex



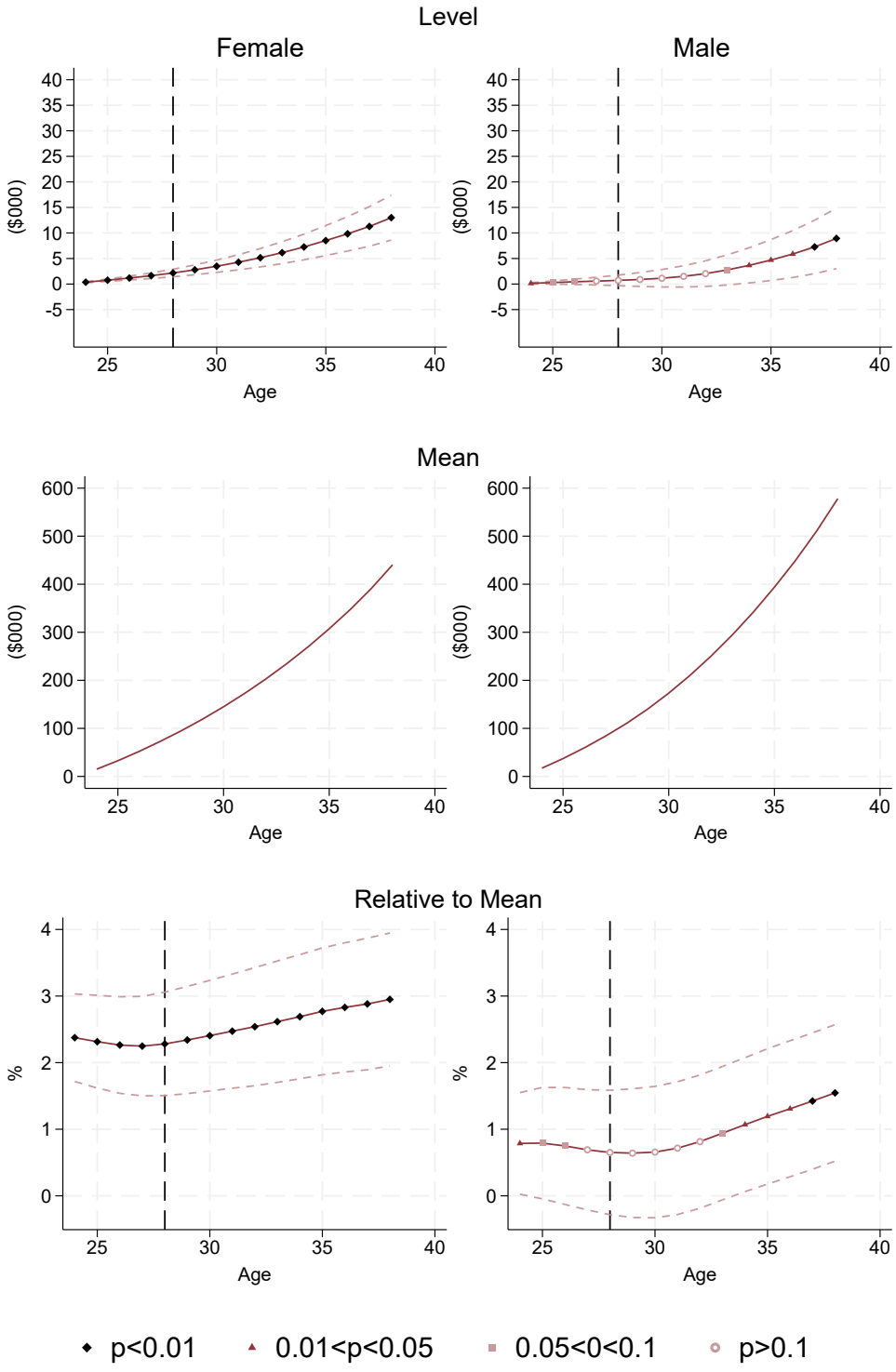
Notes: The figure reports the effects of childhood Medicaid eligibility on cumulative mortality by age and sex. Columns correspond to outcomes for females and males, respectively. Rows provide complementary perspectives on each outcome. The top row reports estimated treatment effects in levels (per 10,000 people); the middle row shows mean cumulative mortality rates by age; and the bottom row scales estimated effects relative to subgroup-specific mean outcomes. The vertical dashed line marks age 28, the endpoint of prior estimates. Dashed lines denote 95% confidence intervals. Standard errors are clustered by state.

Figure 3: Fertility by Sex



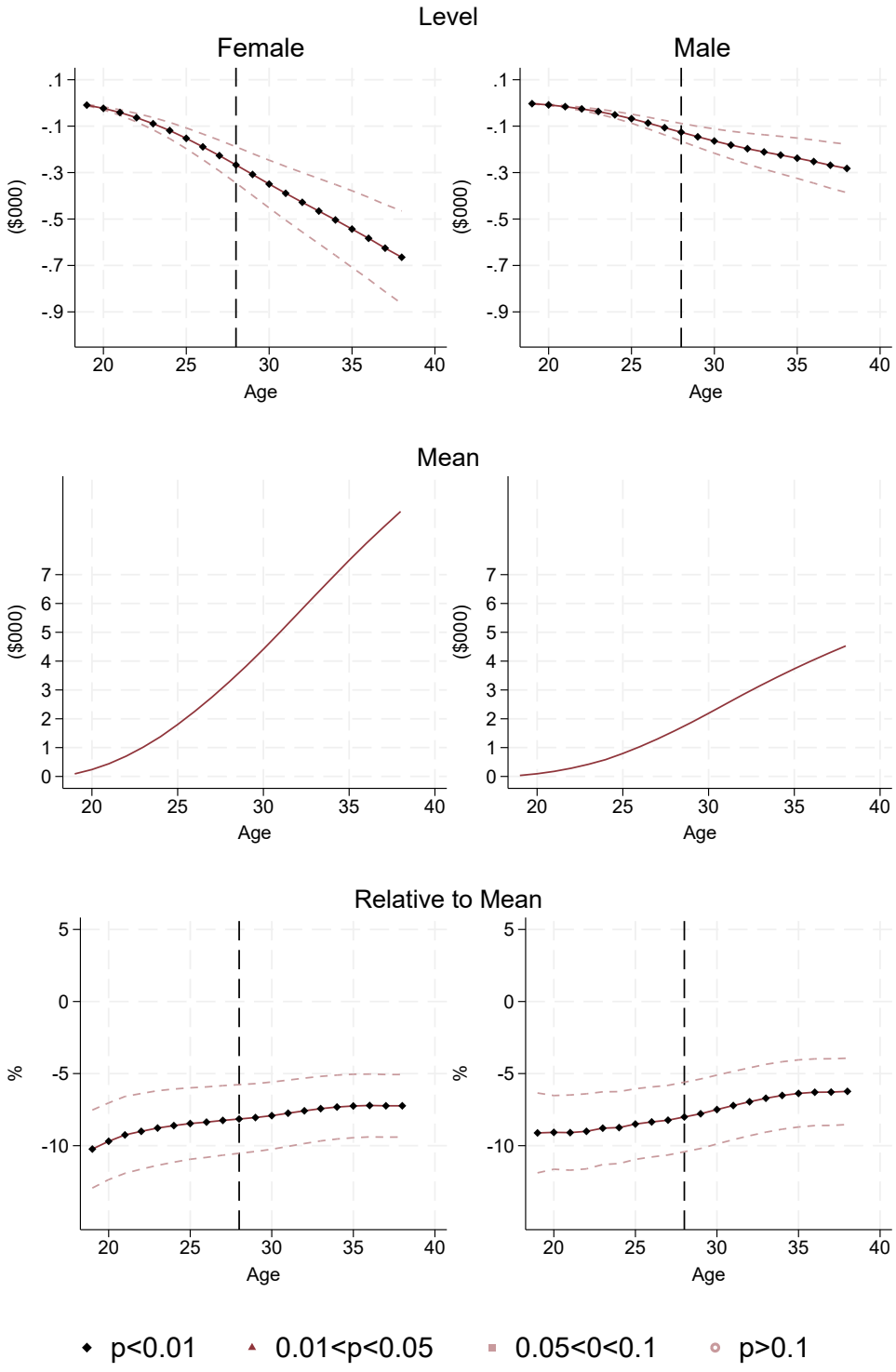
Notes: The figure reports the effects of childhood Medicaid eligibility on cumulative fertility by age and sex, which is defined at the individual level as an indicator for ever having children by the focal age. Columns correspond to outcomes for females and males, respectively. Rows provide complementary perspectives on each outcome. The top row reports estimated treatment effects in levels (per 10,000 people); the middle row shows mean cumulative fertility rates by age; and the bottom row scales estimated effects relative to subgroup-specific mean outcomes. The vertical dashed line marks age 28, the endpoint of prior estimates. Dashed lines denote 95% confidence intervals. Standard errors are clustered by state.

Figure 4: Wages by Sex



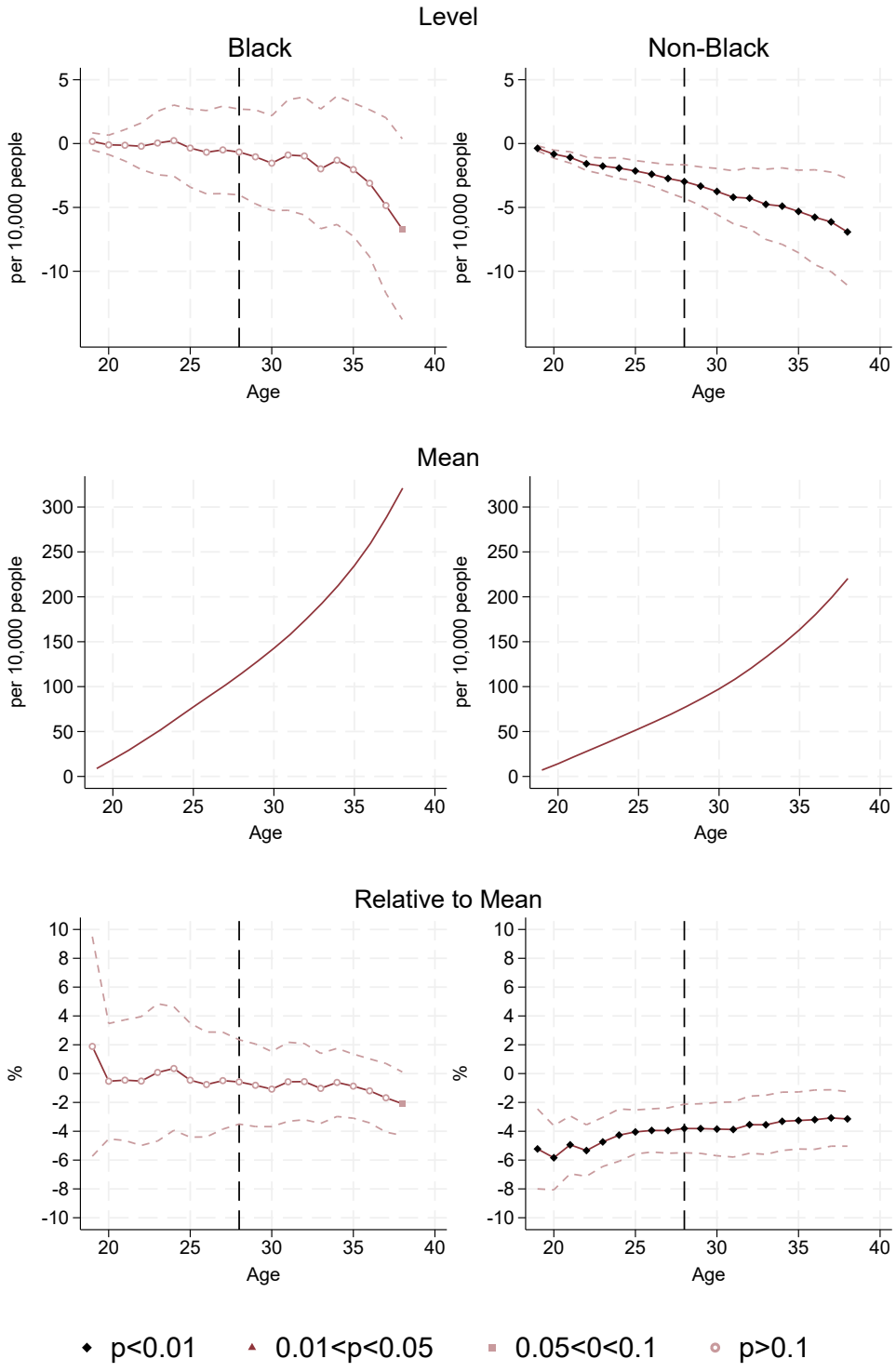
Notes: The figure reports the effects of childhood Medicaid eligibility on cumulative wages by age and sex. Columns correspond to outcomes for females and males, respectively. Rows provide complementary perspectives on each outcome. The top row reports estimated treatment effects in levels (thousands of 2011 dollars); the middle row shows mean cumulative wages by age; and the bottom row scales estimated effects relative to subgroup-specific mean outcomes. The vertical dashed line marks age 28, the endpoint of prior estimates. Dashed lines denote 95% confidence intervals. Standard errors are clustered by state.

Figure 5: EITC receipt by Sex



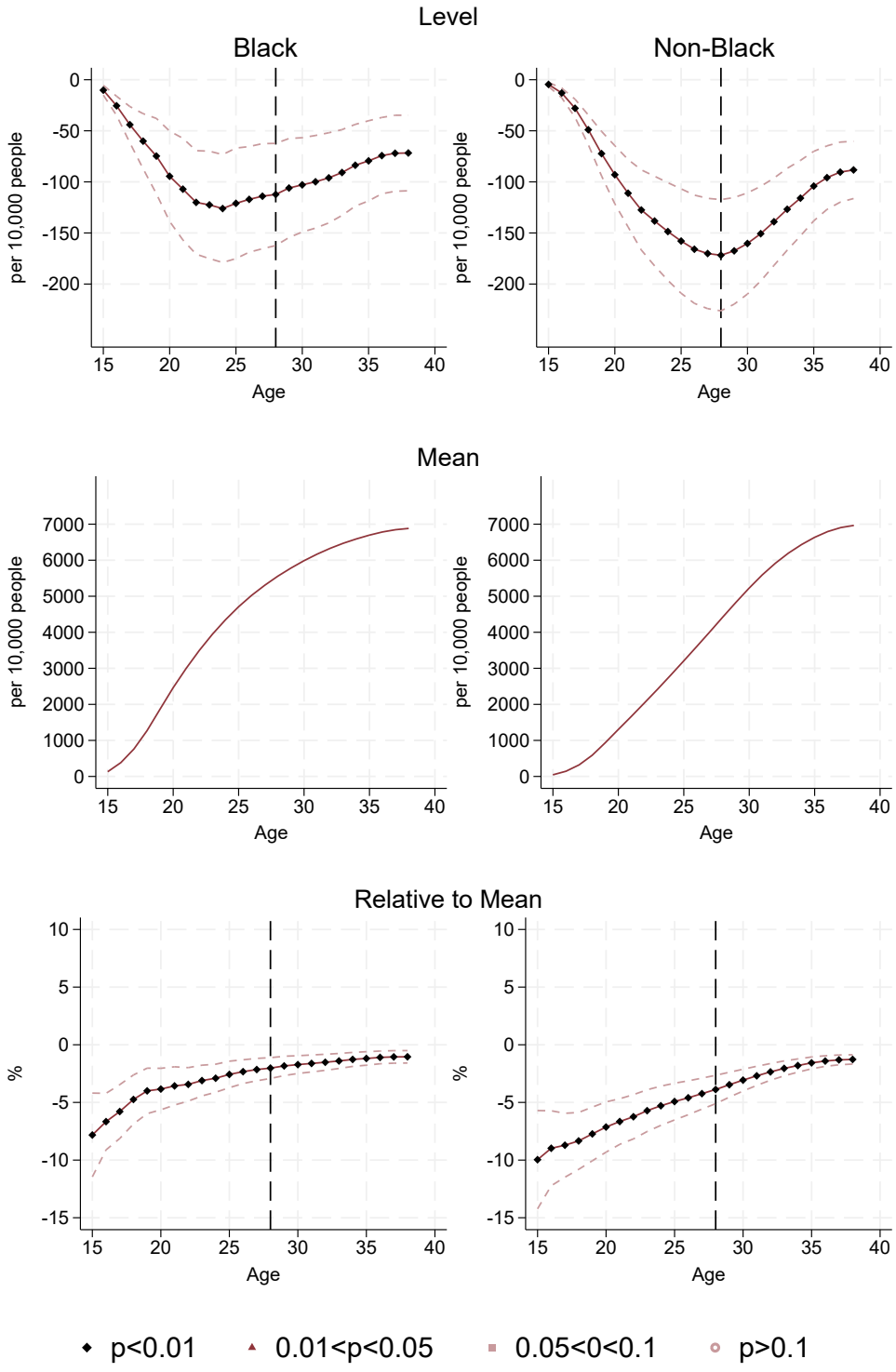
Notes: The figure reports the effects of childhood Medicaid eligibility on cumulative Earned Income Tax Credit (EITC) by age and sex. Columns correspond to outcomes for females and males, respectively. Rows provide complementary perspectives on each outcome. The top row reports estimated treatment effects in levels (thousands of 2011 dollars); the middle row shows mean cumulative EITC receipt amounts by age; and the bottom row scales estimated effects relative to subgroup-specific mean outcomes. The vertical dashed line marks age 28, the endpoint of prior estimates. Dashed lines denote 95% confidence intervals. Standard errors are clustered by state.

Figure 6: Mortality by Race



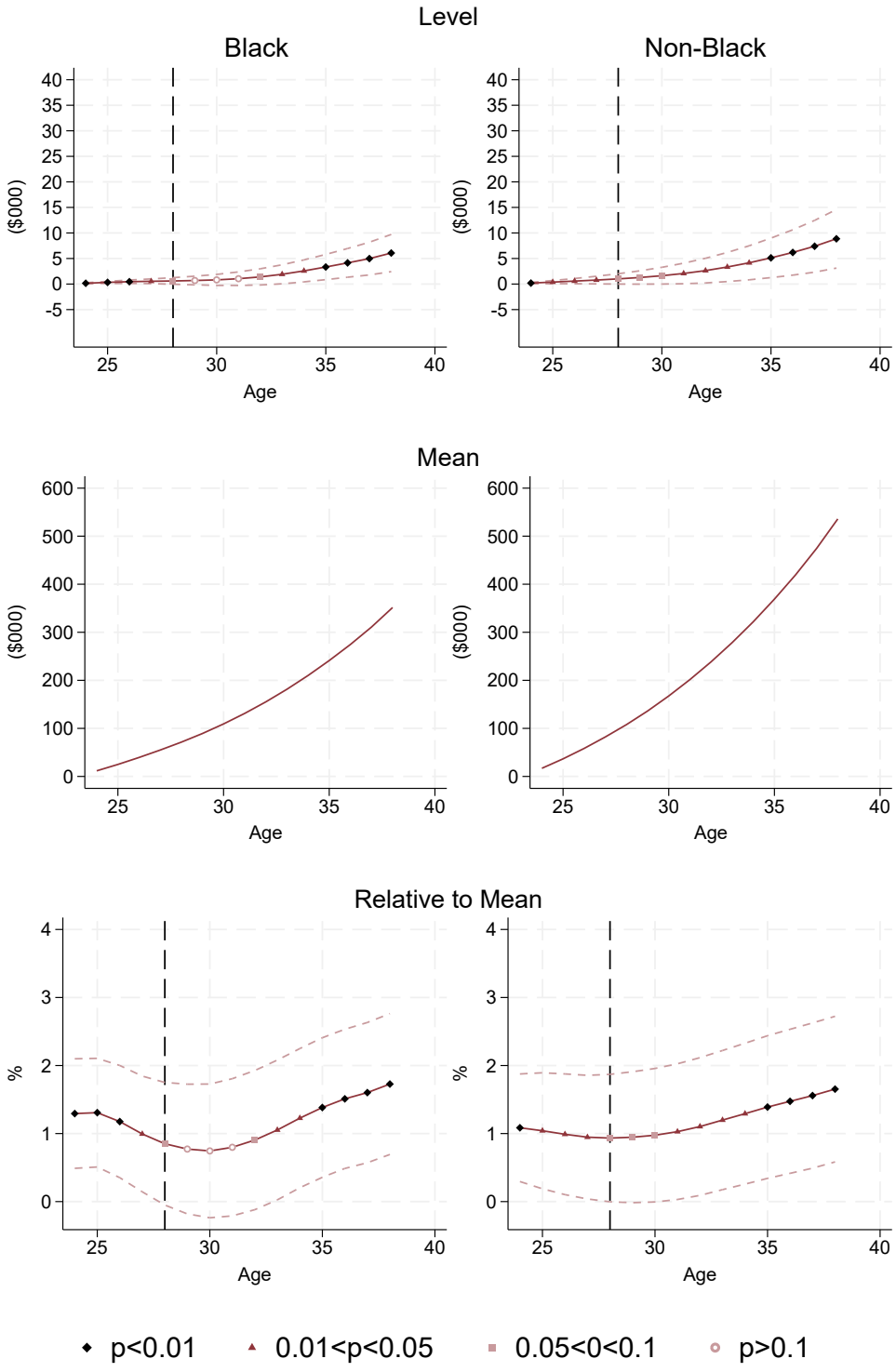
Notes: The figure reports the effects of childhood Medicaid eligibility on cumulative mortality by age and race. Columns correspond to outcomes for Black and Non-Black individuals, respectively. Rows provide complementary perspectives on each outcome. The top row reports estimated treatment effects in levels (per 10,000 people); the middle row shows mean cumulative mortality rates by age; and the bottom row scales estimated effects relative to subgroup-specific mean outcomes. The vertical dashed line marks age 28, the endpoint of prior estimates. Dashed lines denote 95% confidence intervals. Standard errors are clustered by state.

Figure 7: Fertility by Race



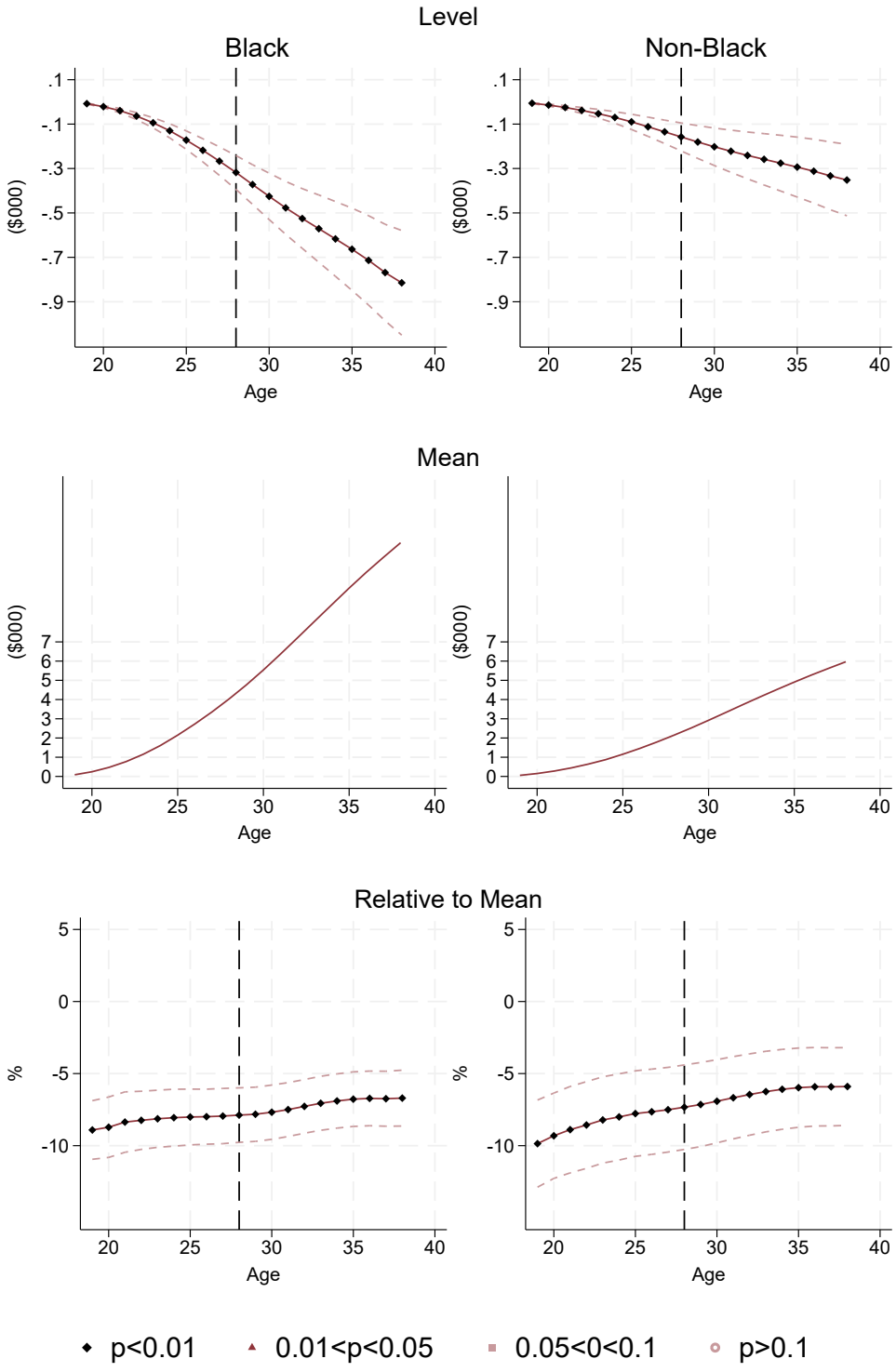
Notes: The figure reports the effects of childhood Medicaid eligibility on cumulative fertility by age and race, which is defined at the individual level as an indicator for ever having children by the focal age. Columns correspond to outcomes for Black and Non-Black individuals, respectively. Rows provide complementary perspectives on each outcome. The top row reports estimated treatment effects in levels (per 10,000 people); the middle row shows mean cumulative fertility rates by age; and the bottom row scales estimated effects relative to subgroup-specific mean outcomes. The vertical dashed line marks age 28, the endpoint of prior estimates. Dashed lines denote 95% confidence intervals. Standard errors are clustered by state.

Figure 8: Wages by Race



Notes: The figure reports the effects of childhood Medicaid eligibility on cumulative wages by age and race. Columns correspond to outcomes for Black and Non-Black individuals, respectively. Rows provide complementary perspectives on each outcome. The top row reports estimated treatment effects in levels (thousands of 2011 dollars); the middle row shows mean cumulative wages by age; and the bottom row scales estimated effects relative to subgroup-specific mean outcomes. The vertical dashed line marks age 28, the endpoint of prior estimates. Dashed lines denote 95% confidence intervals. Standard errors are clustered by state.

Figure 9: EITC by Race



Notes: The figure reports the effects of childhood Medicaid eligibility on cumulative Earned Income Tax Credit (EITC) by age and race. Columns correspond to outcomes for Black and Non-Black individuals, respectively. Rows provide complementary perspectives on each outcome. The top row reports estimated treatment effects in levels (thousands of 2011 dollars); the middle row shows mean cumulative EITC receipt amounts by age; and the bottom row scales estimated effects relative to subgroup-specific mean outcomes. The vertical dashed line marks age 28, the endpoint of prior estimates. Dashed lines denote 95% confidence intervals. Standard errors are clustered by state.