# Cash assistance design matters for child well being

Lisa A. Gennetian, Marcos A. Rangel, Dana Thomson, Prachi Shukla, Kelly Evans, Luis Basurto

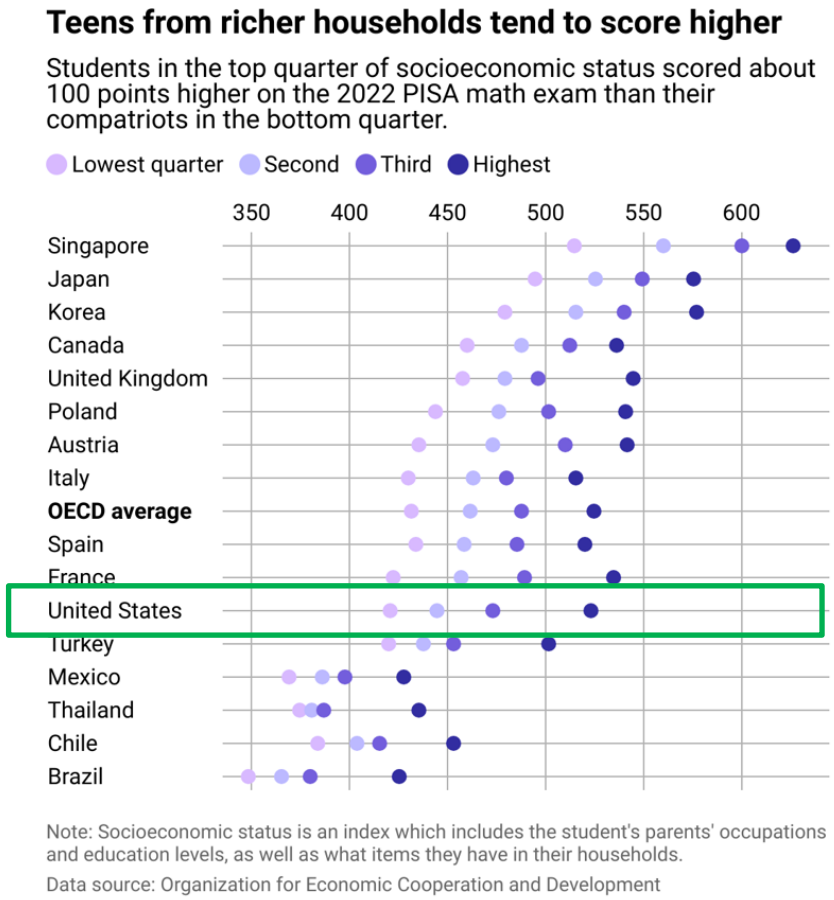
**Abstract**

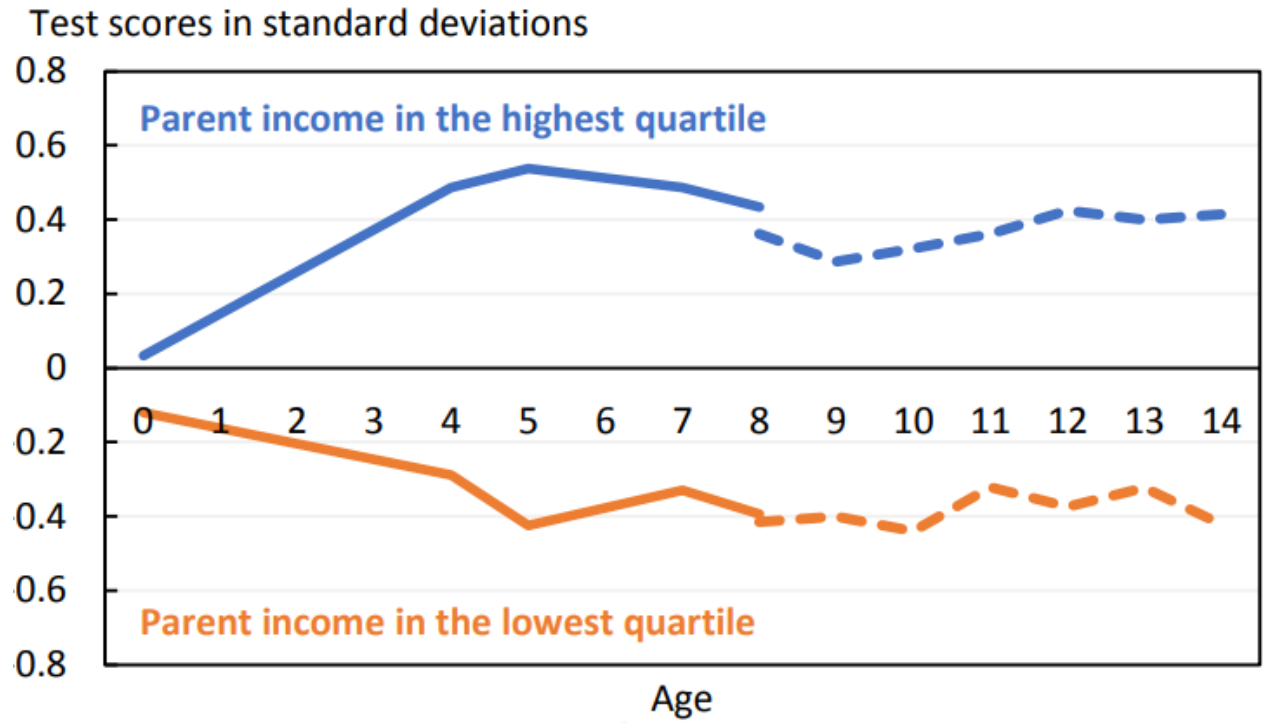
The impact of direct cash support on the development of children in households with low income in the contemporary U.S. context is relatively nascent. Basic cash assistance through the Temporary Assistance for Needy Families program is the only existing federally legislated cash-based safety net with 1996 reauthorization resulting in wide latitude on state authority to design, delivery and allocate funds. We leverage state level variation in cash assistance receipt and codify policy features of cash assistance via two theory-driven indices to examine impacts on household poverty and children's outcomes. Cash assistance program design features that increase government operational costs decrease cash benefit receipt and increase poverty among households with children. In comparison cash assistance program design features that increase administrative burden do not show effects on receipt rates or poverty. Using data from the National Survey of Children's Health and national registry of birth records, findings show that resulting increases in household poverty influenced by cash assistance design negatively impact children's health (BMI and birth weight) and schooling (grade repetition and on track for learning at school entry).

# Today's talk

- Motivation: Household income, children's development, and policy investments
- A study of basic cash assistance: Cash-Assistance Policy Design Matters for Child Outcomes
- Where does this leave us?

# Household economic resources and children's development




Note: IQ scores are available through age 8. After age 8, math test scores are shown. A three year moving average is used for math scores.
Sources: 2013 U.S. Collaborative Perinatal Project (solid lines); NLSY79 Child and Young Adult Supplement (dashed lines).

# Poverty alleviating policies in the U.S.

**Brief history:**

- Aid to Dependent Children at turn of 20th century, evolved to Aid to Families with Dependent Children (AFDC), evolved to the Temporary Assistance to Needy Families (TANF) program
- In-kind programs, 1960s War on Poverty—subsidizing food, health care and housing
- Tax credits, namely the earned income tax credit to supplement low earnings

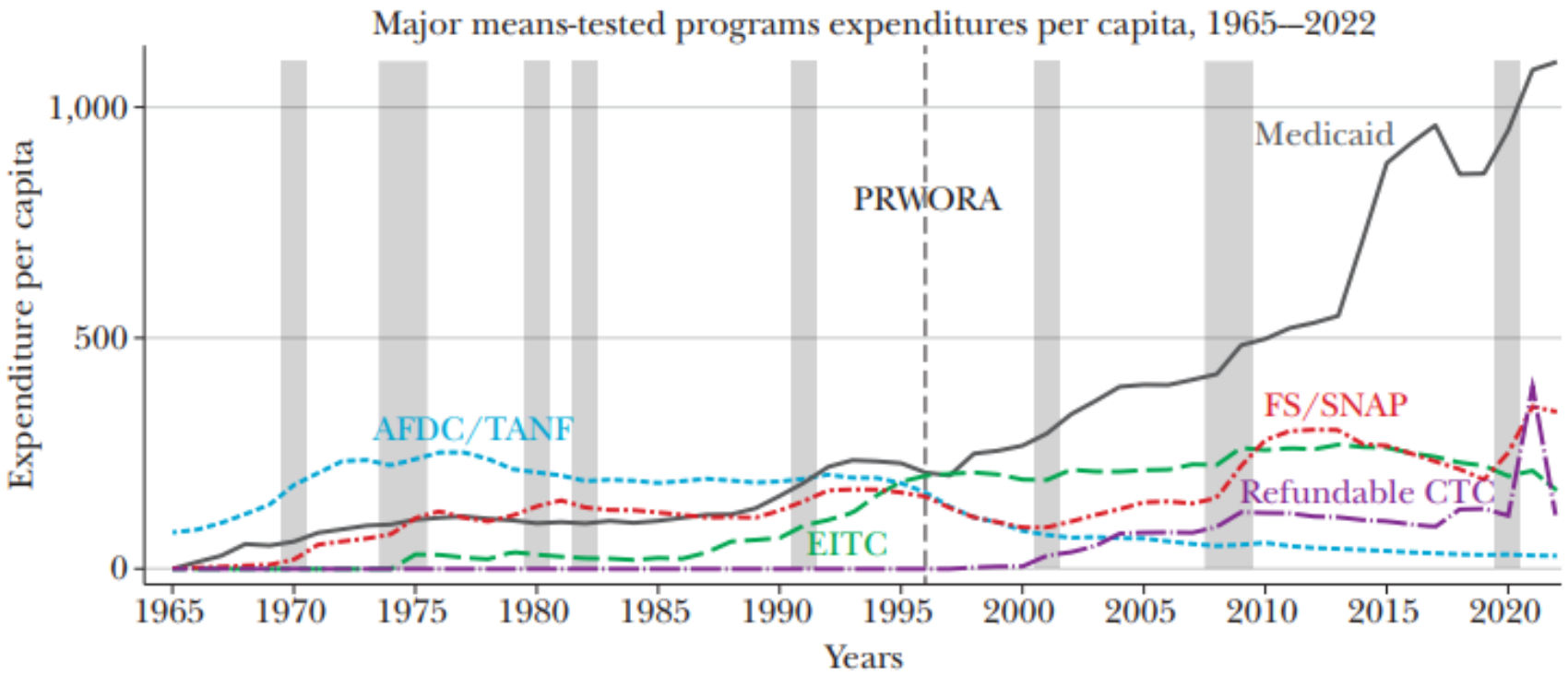
**Contemporary** U.S. social safety net is primarily in-kind programs (Schmidt, Shore-Shephard, Watson, 2025)

- Basic cash assistance ranks low in contributing to child poverty reduction
- Even though simulations and 2021 child tax credit expansions demonstrate that cash is key to reduce child poverty by half (2019 NASEM; 2026 NASEM)

# Expenditures on in-kind and tax credit increased over time vs. flat and decreasing expenditures on basic cash assistance

*Figure 1*

**Expenditures per Capita, Major Cash, Near-Cash, and Health Insurance Programs, 1965–2022**

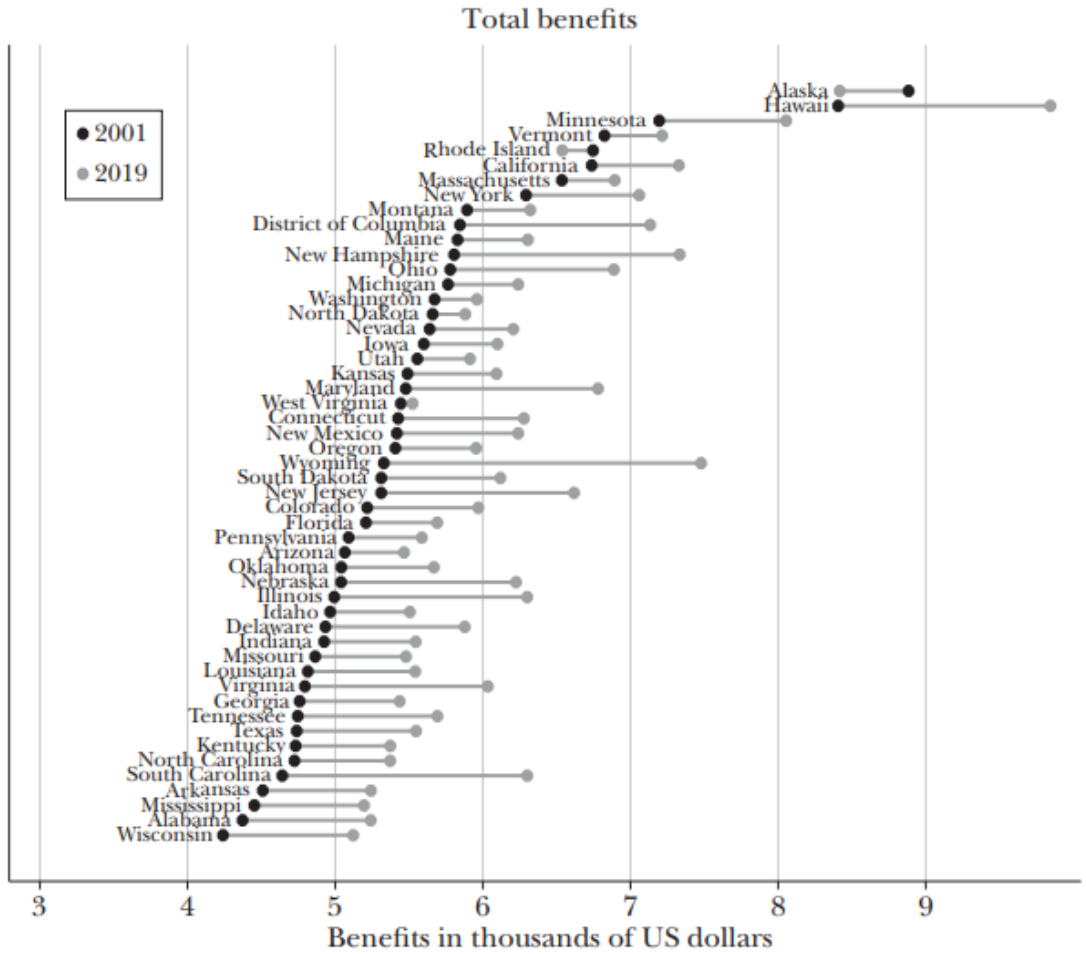



Source: Schmidt, Shore-Shephard & Watson, 2025

# Increased heterogeneity in safety net benefits over time and across U.S. states

*Figure 2*

**Simulated Safety Net Benefits by State, 2001 and 2019**




Source: Schmidt, Shore-Shephard & Watson, 2025

# Household income and children's development: Stylized economic framework

We consider a model of human capital accumulation ins the spirit of (Attanasio, et al, 2022; Cunha and Heckman, 2007)

$$\theta_{t+1} = f(I_t; \theta_t, \kappa),$$

Where we emphasize the role of parental investments $I_t$ (conditional on past stocks and parental/household "*kappa*cteristics")

Applying this conceptualization to the data, we emphasize elements of the budget constraint. In particular, the income generation process (which follows a Becker-style "transformation technology"):

$$Y_t = y^e(T_t^e, X_t^e; \lambda^e) + y^g(T_t^g, X_t^g; \lambda^g),$$

Earnings

Government transfers

# Evidence: household income and children's development?

Does income matter? **Yes!**

- At lowest end of income distribution (Page, 2024)
- Especially prenatal through early childhood (Almond and Currie, 2011; Shah and Gennetian, 2023)

Do additional financial resources through safety net programs and tax credits matter? **Yes!**

- Via in-kind programs (Hoynes and Schanzenbach, 2018)
- Via tax credits (Barr et al., 2022; Bastian and Michelmore, 2017; Hoynes et al., 2016; NASEM 2019, 2023)

How does basic cash assistance matter? **Mixed and unclear so far.**

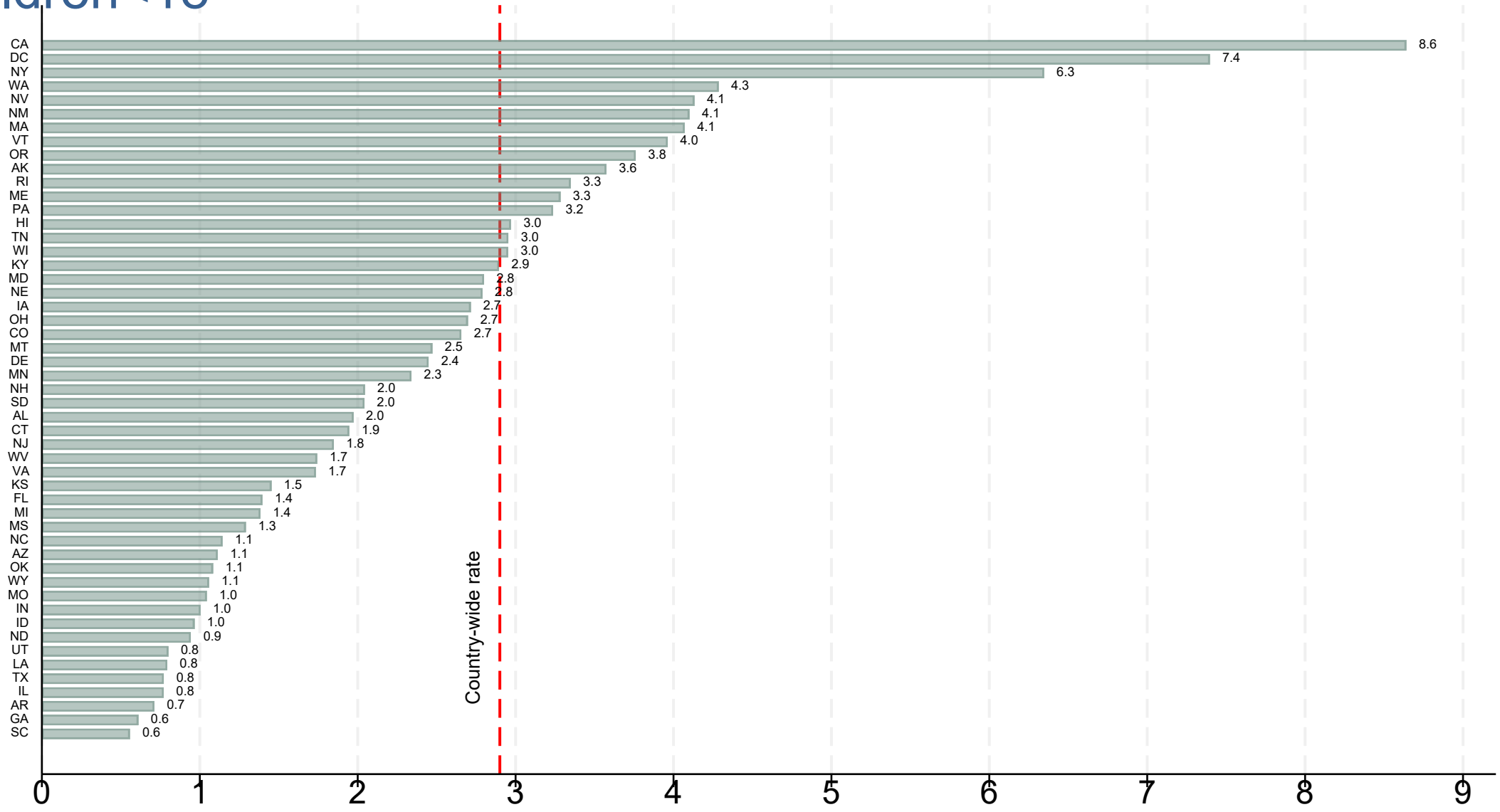
- **Yes**. Maternal pension fund/ADC (Aizer, et al. 2016)
- **Mixed**. AFDC / TANF (short-medium term favorable impacts welfare reform studies, Morris et al, 2007) but no longer-term impacts so far (Leung et al., 2026)
- **Yes?** Short term emergency funds directed to prenatal to birth period reduced pre-term births (RxKids)
- **Unknown**: contemporary analysis of basic cash assistance through TANF

# Basic cash assistance in the U.S.

TANF remains the only federal legislated cash-based safety net program

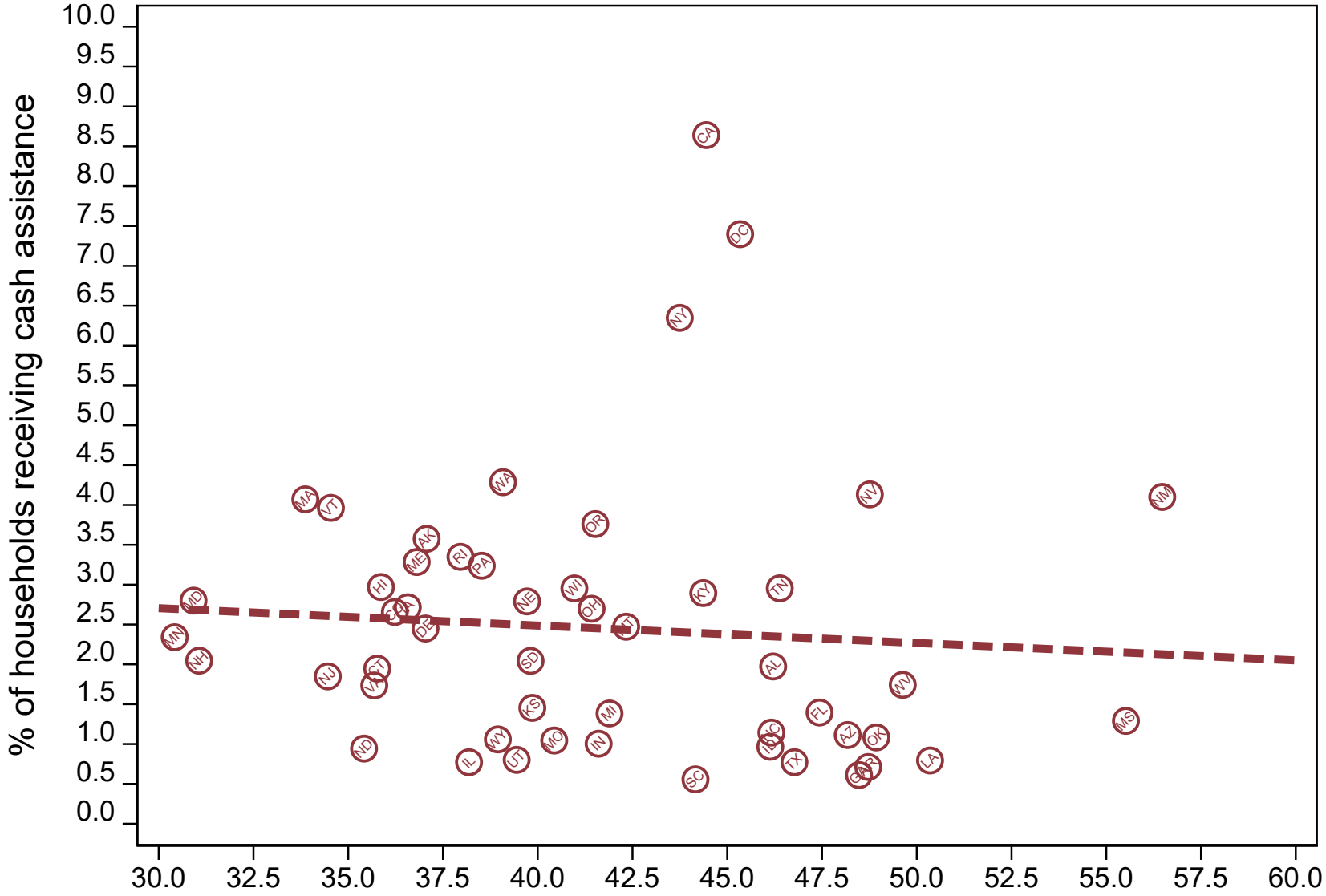
- Block grant to states with authority to use and implement within federal guidelines
- 25%, $8.3 of $34 billion in 2023 TANF expenditures went toward basic cash assistance (vs. childcare 15%; program management & other e.g. non-reoccurring short-term benefits)
- Substantial state variation in TANF cash assistance expenditures (4.2% in NC vs. >10% in CA)

# Heterogeneous cash assistance receipt across states, households with children<18



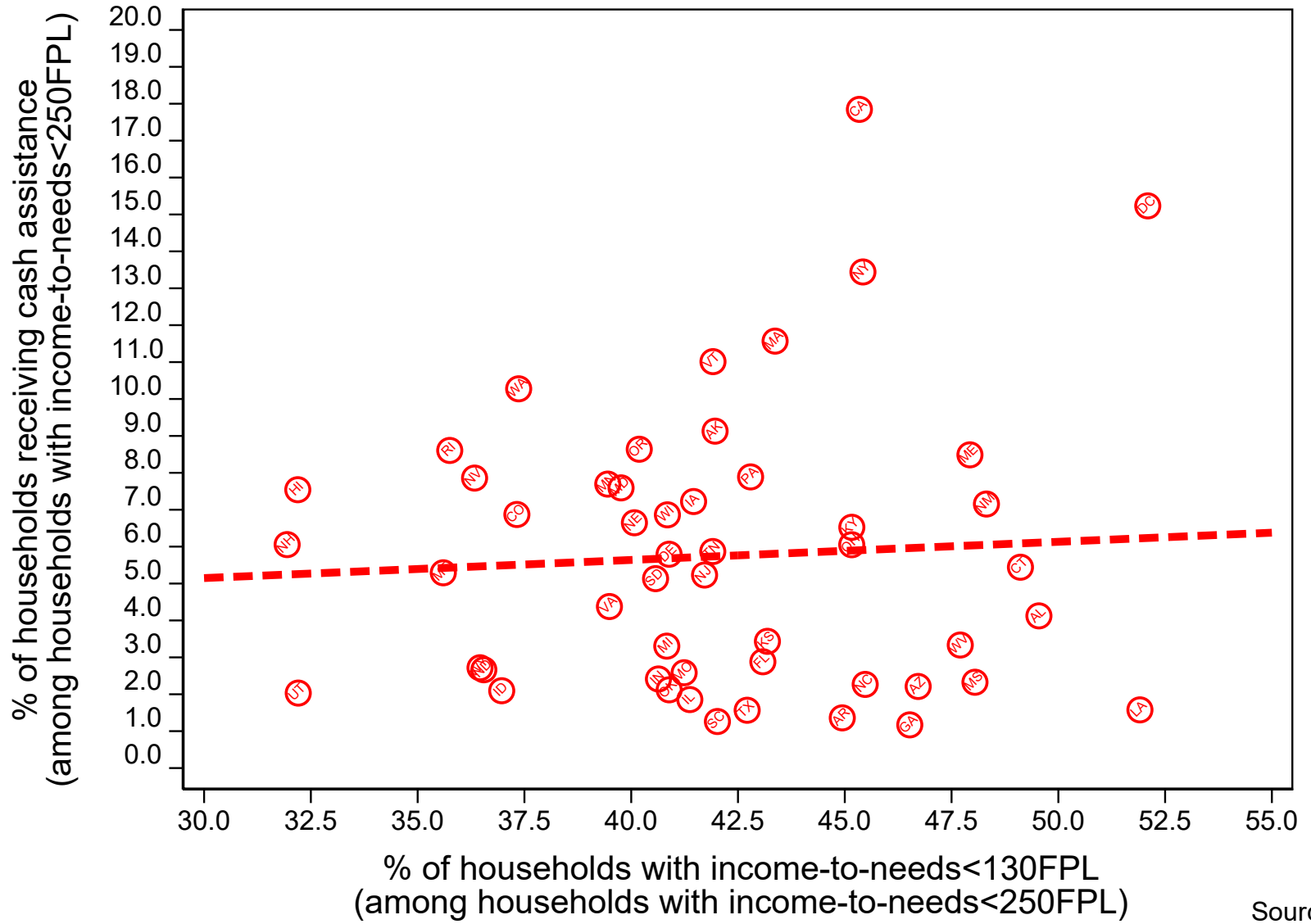

Source: Authors calculation based on CPS, 2016-19, TRIM3

# Heterogeneous cash assistance receipt across states by poverty, households with children<18




Source: Authors calculation based on CPS, 2016-19, TRIM3

# And, by poverty intensity




Source: Authors calculation based on CPS, 2016-19, TRIM3

# Proposition: heterogeneity of cash assistance receipt shaped by *de jure* policy design at the state level

- Households face heterogenous costs – financial, time, access to information, risks (which in our conceptual model represent a "technological" restriction over income generation)
- These "technological" restrictions vary across states due to bureaucrats' design choices

*Theory informed a priori* coding of state policy features:

- *Cost-minimization* (**OCM**, field of economics): government agencies seek to minimize operational costs and increase efficiency in allocating scarce public resources to improve targeting, e.g. eligibility criteria and time limits (e.g. Wu and Moffitt)

- *Administrative burdens* (**ADB**, field of political science): psychological, compliance, learning, and redemption costs create burdens (e.g. procedural hoops) that reduce intended receipt of benefits, e.g. wait times, multiple approval points, procedural errors (e.g., Moynihan & Herd; Heinrich et al; Homonoff et al; Cook et al.)

# Coding policy design (*de jure*) – 2019 snapshot

- State-specific TANF policy dimensions from Urban Institute's Welfare Rules Database, including initial eligibility requirements, work and activity requirements, and ongoing eligibility and time limits

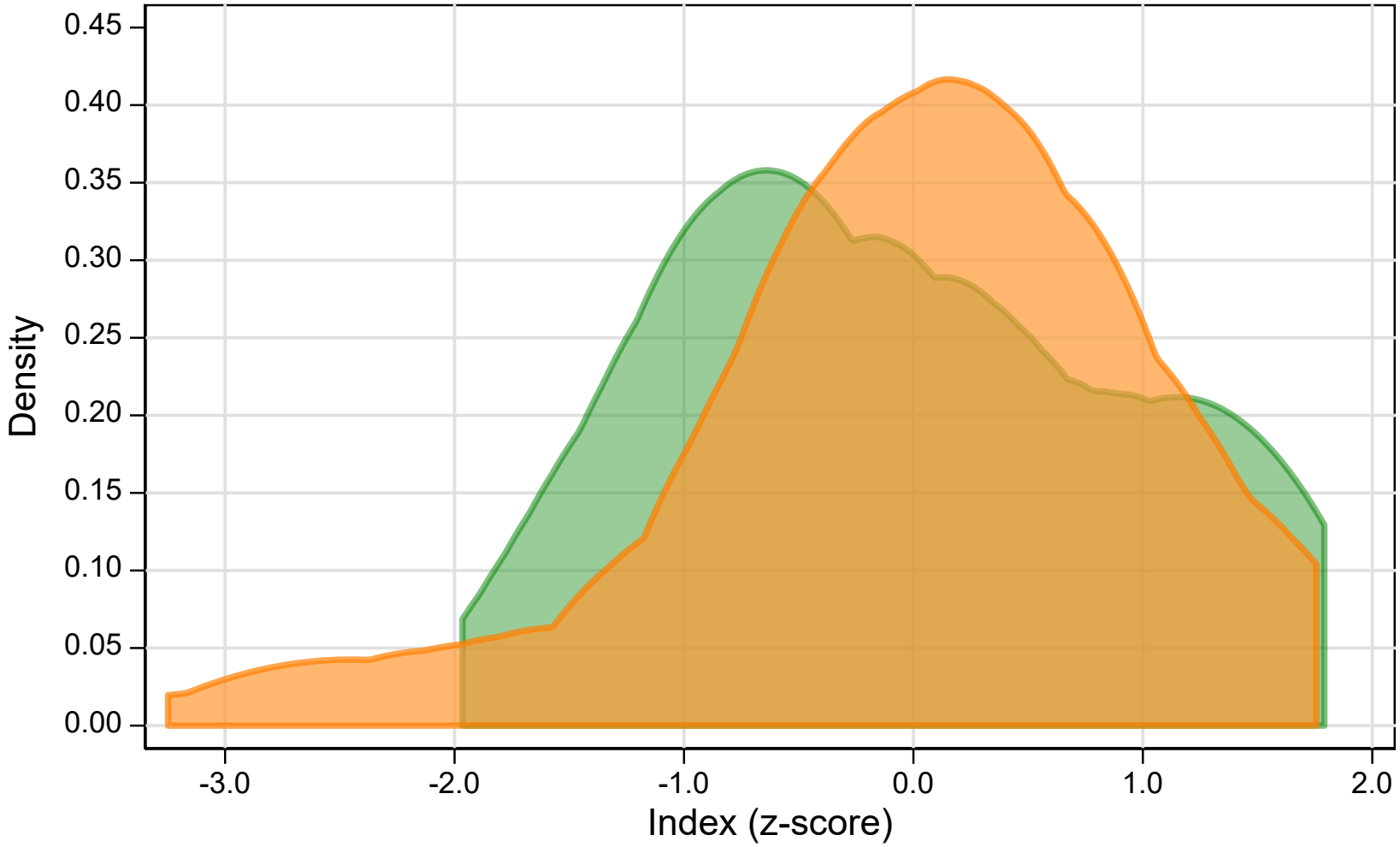
- Supplemented by data from Code for America's Benefits Enrollment Field Guide on online accessibility of applications, use of combined application processes, and the time required to complete the application

- Supplemented by availability of program information in multiple languages, application and recertification requirements (including, e.g., request for SSN of household members), etc. via direct data collection from state TANF websites

See: Dana Thomson, Prachi Shukla, Lisa A. Gennetian, Luis E. Basurto, Marcos A. Rangel (2025), *State Policy Design: Administrative Burden and Cost Minimization Indices for SNAP and TANF Cash Assistance.* https://doi.org/10.7910/DVN/OSLQEK, Harvard Dataverse

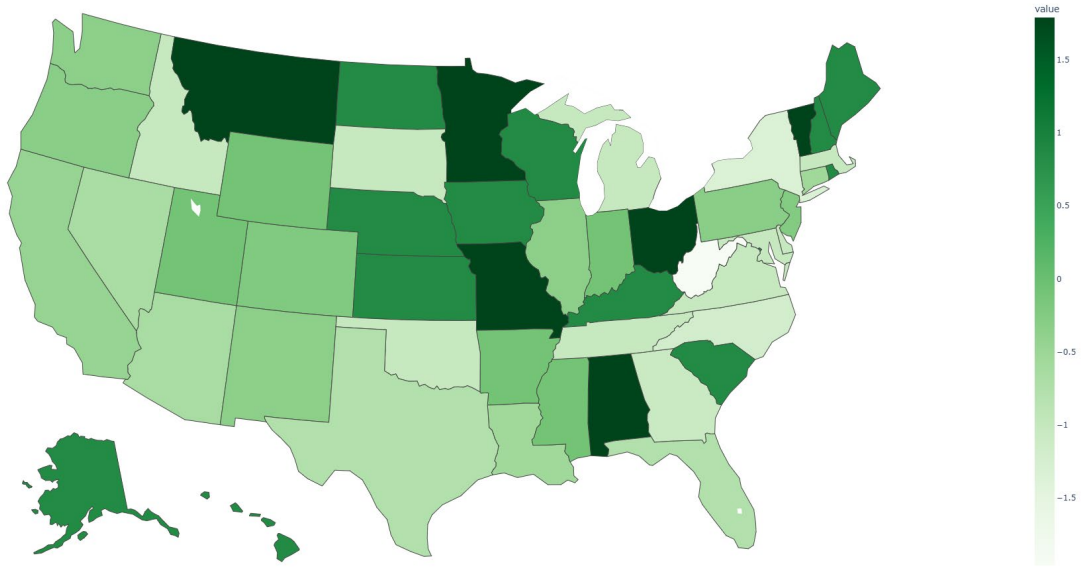
| TANF cash assistance cost minimization (OCM) | TANF cash assistance administrative burden (ADB) |
|---|---|
| | |
| Does the application ask for the SSN of the applicant? | Can the application be submitted online? |
| Does the state require recertification? | Does the state use a combined application form for access to multiple support programs? |
| Is documentation required to support information provided in the application? | How much time does it take to complete the application? (in minutes) |
| Does application or accompanying instructions indicate information might be shared with other government agencies? | Does the state have any school requirements? |
| Can the application be submitted online? | Does the state have any immunization requirements? |
| Does the state use a combined application form for access to multiple support programs? | Does the state have any health screening requirements? |
| Eligibility of Non-Exempt, Pre-PRWORA, Qualified Noncitizens: LPRs | Does the state have any work requirements for non-parent caretakers or parents outside the assistance unit? |
| Nonparent caretakers are included in assistance unit | Are benefits issued through electronic benefit transfer (EBT) or electronic payment card (EPC) systems? |

# Distribution of *de jure* policy indices

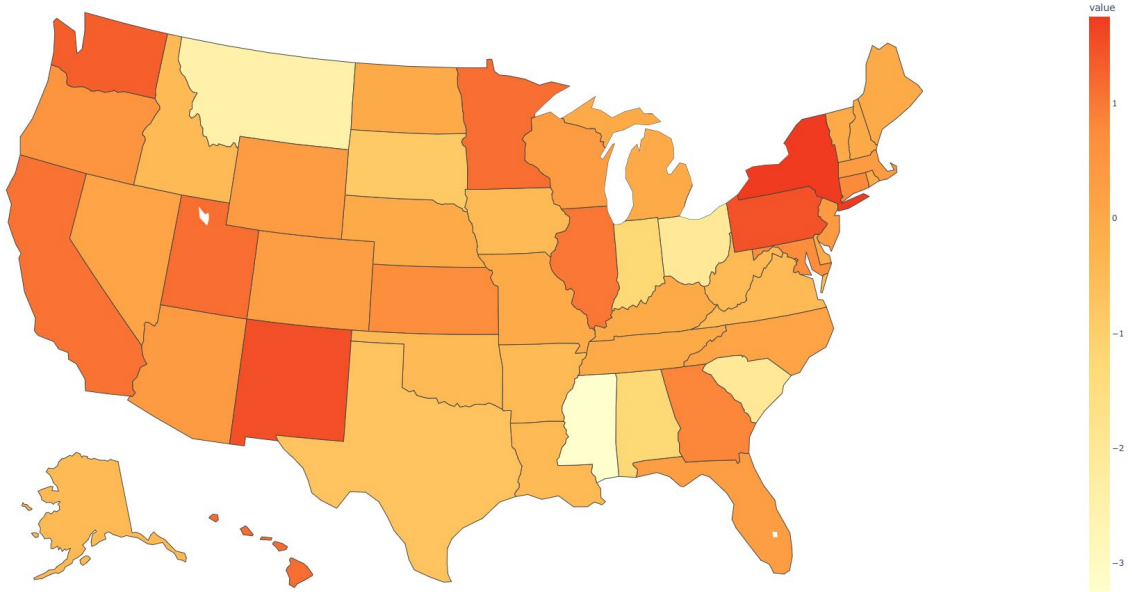



Source: Authors calculation

# Spatial distribution of *de jure* policy indices

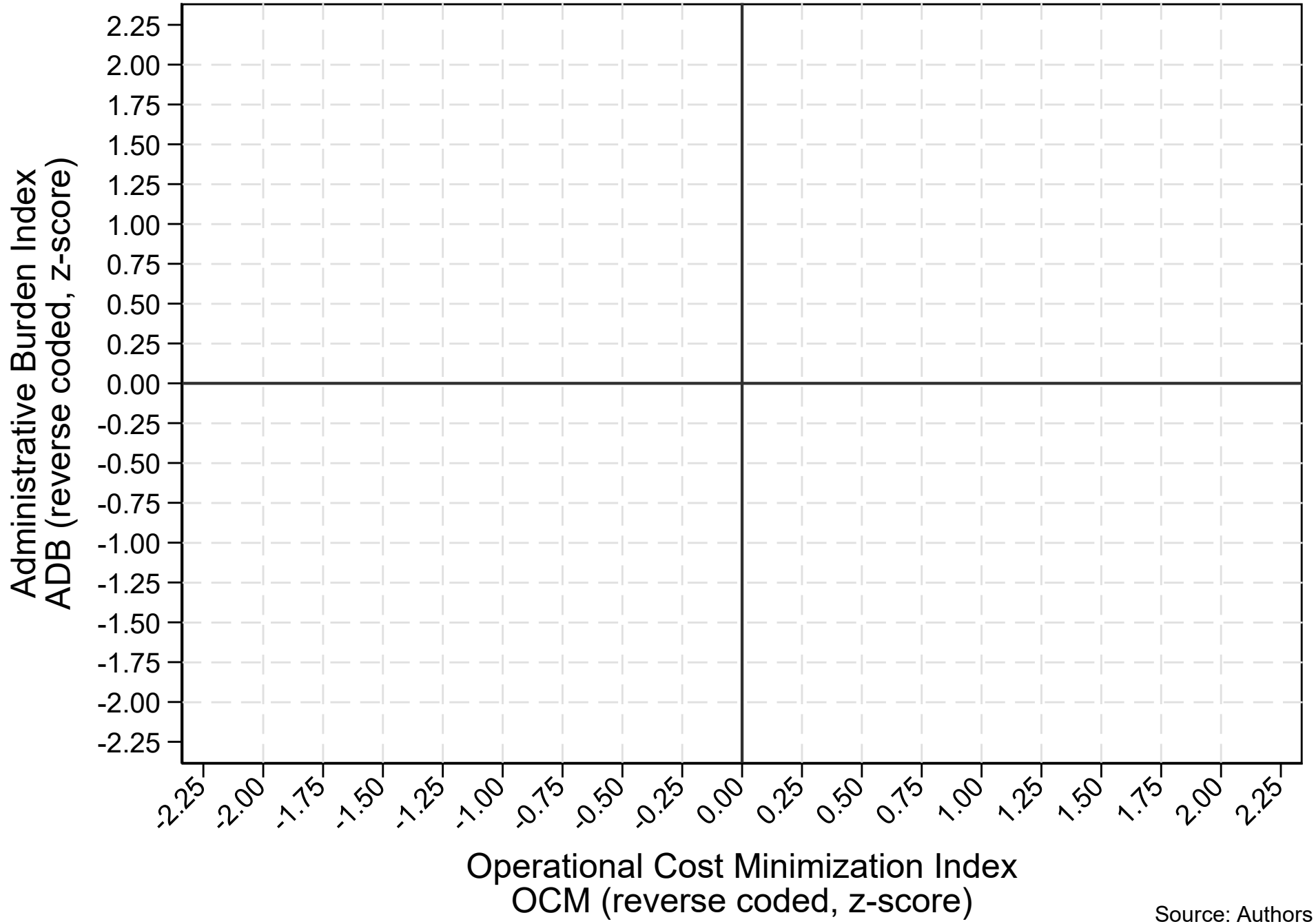



Administrative Burden, ADB (reverse coded)

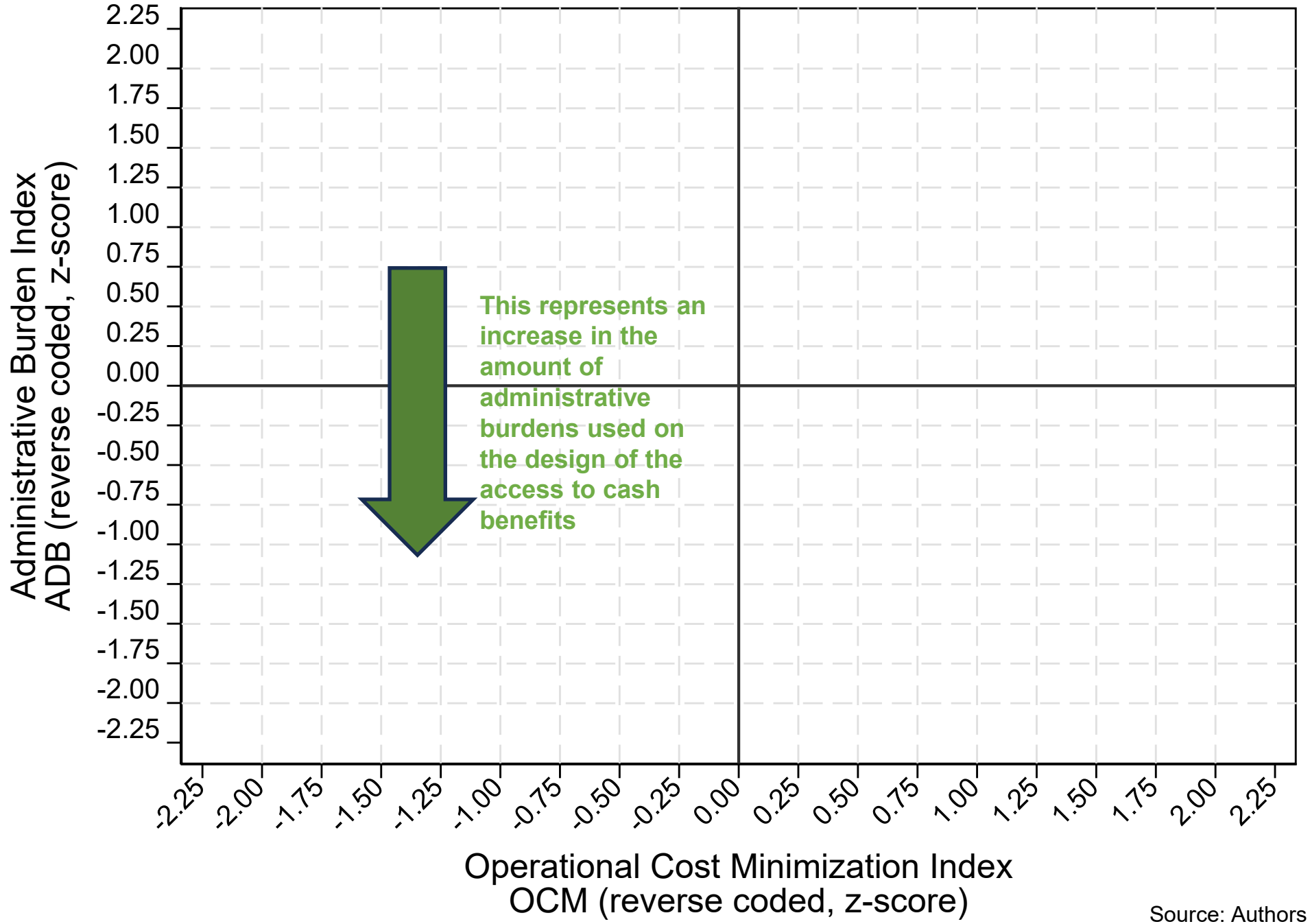



Operational Cost Minimization, OCM (reverse coded)

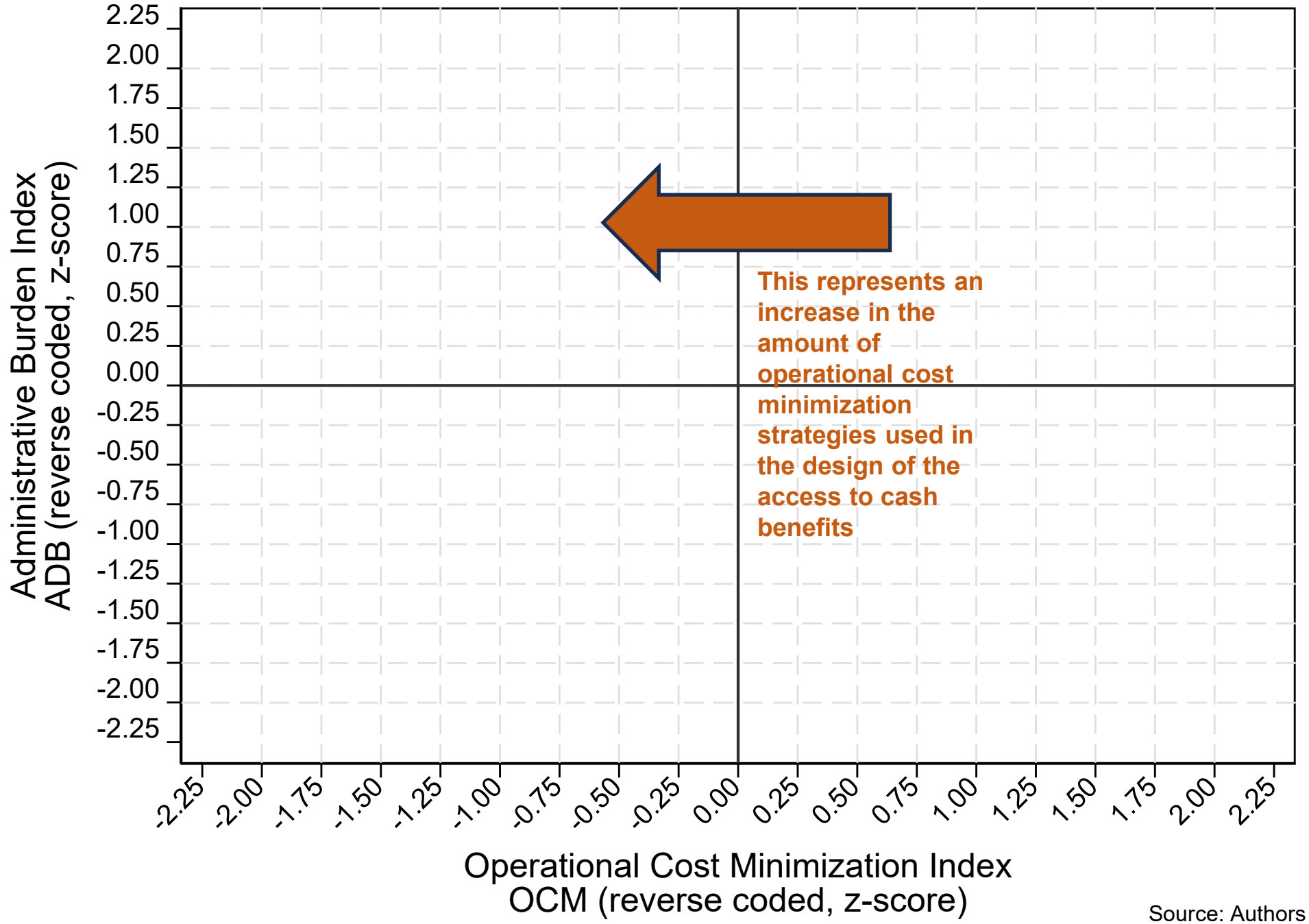
Source: Authors calculation



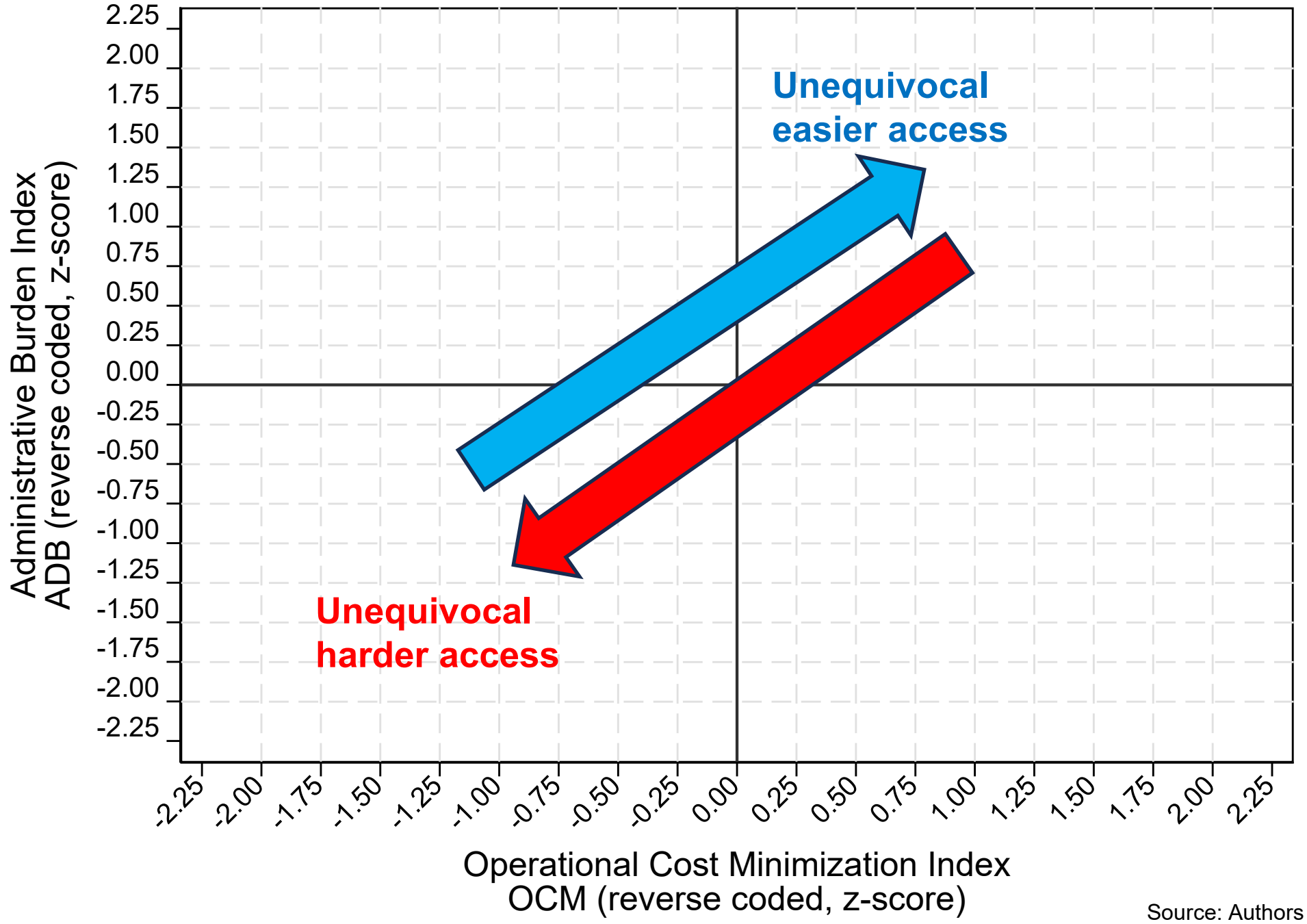

Source: Authors calculation



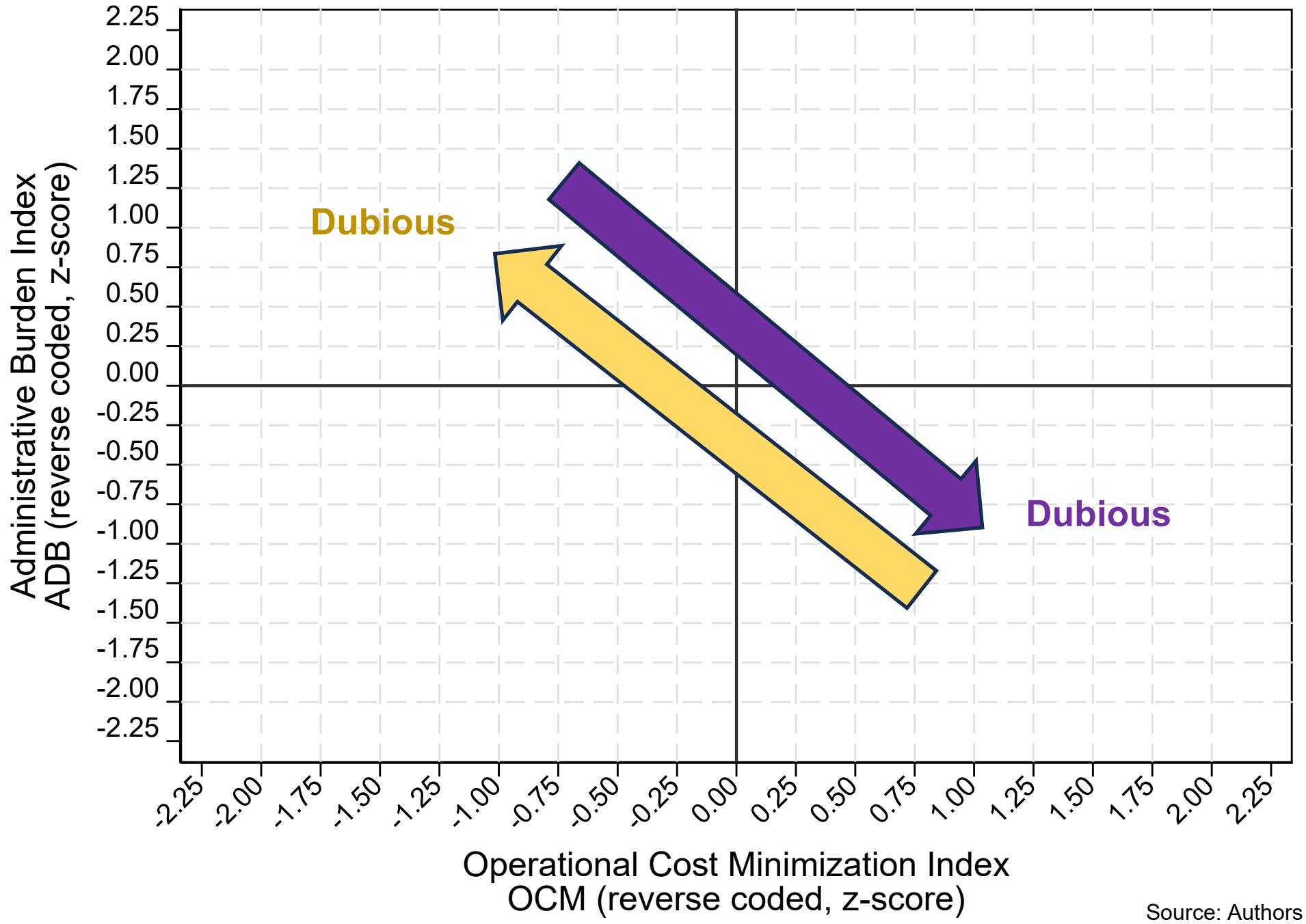

Source: Authors calculation



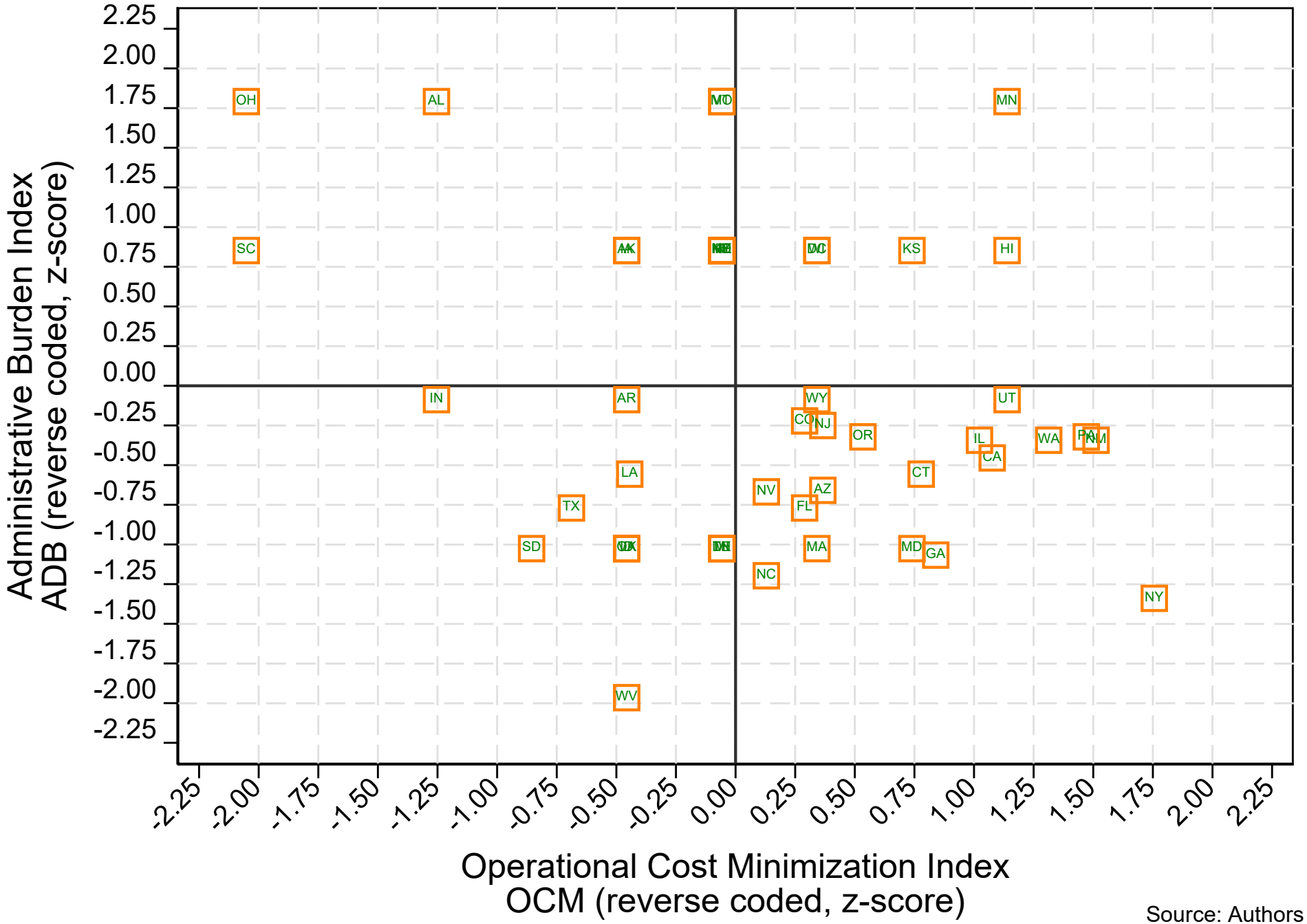

Source: Authors calculation




Source: Authors calculation




Source: Authors calculation




Source: Authors calculation

But does policy design correlate with receipt after all?

(CPS-based exercises)

# Indices predict cash assistance receipt

| | Cash-assistance receipt (%) | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| ADB (reversed, z-score) | 0.358 | 0.427 | 0.389 |
| | (0.352) | (0.438) | (0.375) |
| OCM (reversed, z-score) | 0.519** | 0.526** | 0.618** |
| | (0.199) | (0.237) | (0.242) |
| ADB × OCM | −0.139 | −0.054 | −0.066 |
| | (0.213) | (0.294) | (0.281) |
| *Controls* | | | |
| State level poverty | No | Yes | Yes |
| Household/Head covariates | No | No | Yes |
| F-test policy design *[p-value]* | 0.018 | 0.049 | 0.037 |
| Mean Dep. Var. | 2.92 | 2.92 | 2.92 |
| Observations | 52979 | 52979 | 52979 |

*Notes*:Standard-errors clustered at state-level. All regressions control for state-level poverty and for household and household-head characteristics.

Source: Authors calculation based on CPS, 2016-19, self-reported receipt

# Indices predict cash assistance receipt …but not SNAP receipt

| | Cash-assistance receipt (%) | | | Falsification SNAP receipt (%) |
|---|---|---|---|---|
| | (1) | (2) | (3) | (3) |
| ADB (reversed, z-score) | 0.358 | 0.427 | 0.389 | 0.289 |
| | (0.352) | (0.438) | (0.375) | (0.558) |
| OCM (reversed, z-score) | 0.519** | 0.526** | 0.618** | 0.369 |
| | (0.199) | (0.237) | (0.242) | (0.584) |
| ADB × OCM | −0.139 | −0.054 | −0.066 | −0.397 |
| | (0.213) | (0.294) | (0.281) | (0.396) |
| *Controls* | | | | |
| State level poverty | No | Yes | Yes | Yes |
| Household/Head covariates | No | No | Yes | Yes |
| F-test policy design *[p-value]* | 0.018 | 0.049 | 0.037 | 0.653 |
| Mean Dep. Var. | 2.92 | 2.92 | 2.92 | 24.21 |
| Observations | 52979 | 52979 | 52979 | 52979 |

*Notes*:Standard-errors clustered at state-level. All regressions control for state-level poverty and for household and household-head characteristics.

Source: Authors calculation based on CPS, 2016-19, self-reported receipt

# Empirical approach for child outcomes

# Empirical approach: cash assistance design matters for child development

First stage:

- Capture heterogeneity of basic cash assistance receipt via features of state policy design (*de jure*)
  - Validated indices - predict cash assistance receipt (Gennetian et al. 2025a,b)
- Use *de jure* state policy indices as instruments to predict household income-to-needs among households with children

Second stage:

- Estimate predicted variation in household income-to-needs on available children's outcomes
  - National survey of children's health (NSCH)
  - National registry of birth records

# Empirical approach, first stage

The relationship between household income-to-needs ($Y_{hs}$) and state-level policy design:

$$Y_{hs} = \pi_0 + \pi_1 ADB_s + \pi_2 OCM_s + \pi_3 OCM_s \times ADB_s + X'_{hs}\pi_4 + \varepsilon_{hs},$$

- where $ADB_s$ (administrative burden) and $OCM_s$ (cost minimization) are indices of program implementation design features in state *s*
- $X_{hs}$ is a vector of household- and child-level controls (e.g., parental education, household size and composition, and child age)
- $\varepsilon_{hs}$ accounts for sampling variation as well as unobserved characteristics that affect household income-to-needs

# Empirical approach, second stage

Estimate the effect of household income-to-needs (accounted for by state policy design features) on children's outcomes:

$$C_{hs} = \beta_0 + \beta_1 \widehat{Y}_{hs} + X'_{hs}\beta_2 + u_{hs},$$

- Predicted income is the fitted value from the first stage representing variation in household income-to-needs attributable to state-level policy design
- Identification: exclusion restriction that $ADB_s$ and $OCM_s$ affect child outcomes $C_{hs}$ only through its effect on household financial resources

# Illustration of first-stage: Relation between indices and Income-to-needs ratio (CPS)

| | Income-to-needs | | |
|---|---|---|---|
| | $< 250\%$FPL $\times 100$ | as % of FPL | ln scale $\times 100$ |
| | (1) | (2) | (3) |
| ADB (reversed, z-score) | −0.135 | −0.024 | 0.037 |
| | (0.351) | (0.880) | (0.590) |
| OCM (reversed, z-score) | −0.442* | 1.055* | 0.797** |
| | (0.235) | (0.548) | (0.353) |
| ADB × OCM | −0.130 | 0.066 | 0.052 |
| | (0.227) | (0.554) | (0.393) |
| F-test policy design *[p-value]* | 0.150 | 0.127 | 0.077 |
| Mean Dep. Var. | 71.38 | 188.56 | 509.45 |
| Observations | 52,979 | 52,979 | 52,979 |

*Notes*:Standard-errors clustered at state-level. All regressions control for state-lever poverty and for household and household-head characteristics.

Source: Authors calculation based on CPS, 2016-19, self-reported receipt

# Illustration of first-stage: Relation between indices, income-to-needs by household head education strata (CPS)

| | Income-to-needs as % of FPL | | |
|---|---|---|---|
| | All HHs | HHs headed by less educated | HHs headed by more educated |
| | (1) | (2) | (3) |
| ADB (reversed, z-score) | −0.024 | 0.181 | −1.008 |
| | (0.880) | (0.910) | (1.442) |
| OCM (reversed, z-score) | 1.055* | 1.473*** | −0.701 |
| | (0.548) | (0.544) | (1.092) |
| ADB × OCM | 0.066 | −0.151 | 1.008 |
| | (0.554) | (0.563) | (0.947) |
| F-test policy design *[p-value]* | 0.127 | 0.025 | 0.669 |
| Mean Dep. Var. | 188.56 | 178.50 | 229.25 |
| Observations | 52979 | 42829 | 10150 |

*Notes*:Standard-errors clustered at state-level. All regressions control for state-lever poverty and for household and household-head characteristics.

Source: Authors calculation based on CPS, 2016-19, self-reported receipt

# Illustration of first-stage: Relation between indices and Income-to-needs ratio (ln scale), by household head's education strata (CPS)

| | Income-to-needs (ln scale ×100) | | |
|---|---|---|---|
| | All HHs | HHs headed by less educated | HHs headed by more educated |
| | (1) | (2) | (3) |
| ADB (reversed, z-score) | 0.037 | 0.229 | −0.816 |
| | (0.590) | (0.632) | (0.886) |
| OCM (reversed, z-score) | 0.797** | 1.183*** | −0.809 |
| | (0.353) | (0.379) | (0.616) |
| ADB × OCM | 0.052 | −0.115 | 0.782 |
| | (0.393) | (0.425) | (0.566) |
| F-test policy design *[p-value]* | 0.077 | 0.013 | 0.342 |
| Mean Dep. Var. | 509.45 | 503.35 | 534.11 |
| Observations | 52979 | 42829 | 10150 |

*Notes*:Standard-errors clustered at state-level. All regressions control for state-lever poverty and for household and household-head characteristics.

Source: Authors calculation based on CPS, 2016-19, self-reported receipt

# Data on child outcomes

National Survey of Children's Health, 2016-19 and 2022):

- 2016-19: grade repetition, children ages 13 to 17
- 2016-19: BMI>=95 percentile, children ages 10 to 17
- 2022: not on track healthy and ready to learn, children ages 3 to 5

National registry of birth records, 2016-19

- preterm birth (before 37 weeks),
- low birth weight (<2500g)

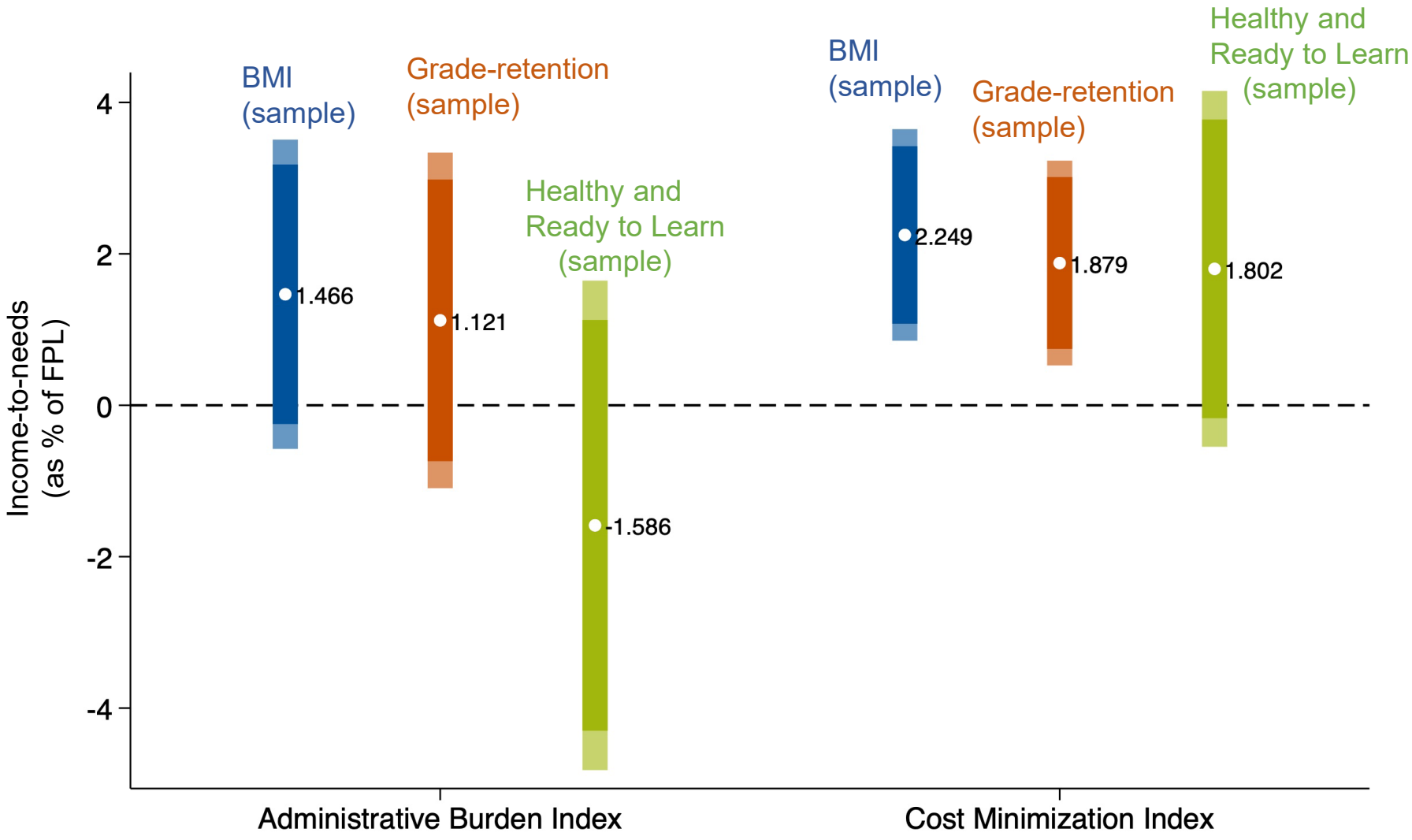
# Empirical implementation: notes

- Not possible to predict first stage (income-to-needs) with birth records data;
- We proxy “need” via maternal level of education;
- Produce reduced-form models of effect of indices on outcomes from birth records and from NCSH outcomes for comparison.

# Descriptive statistics

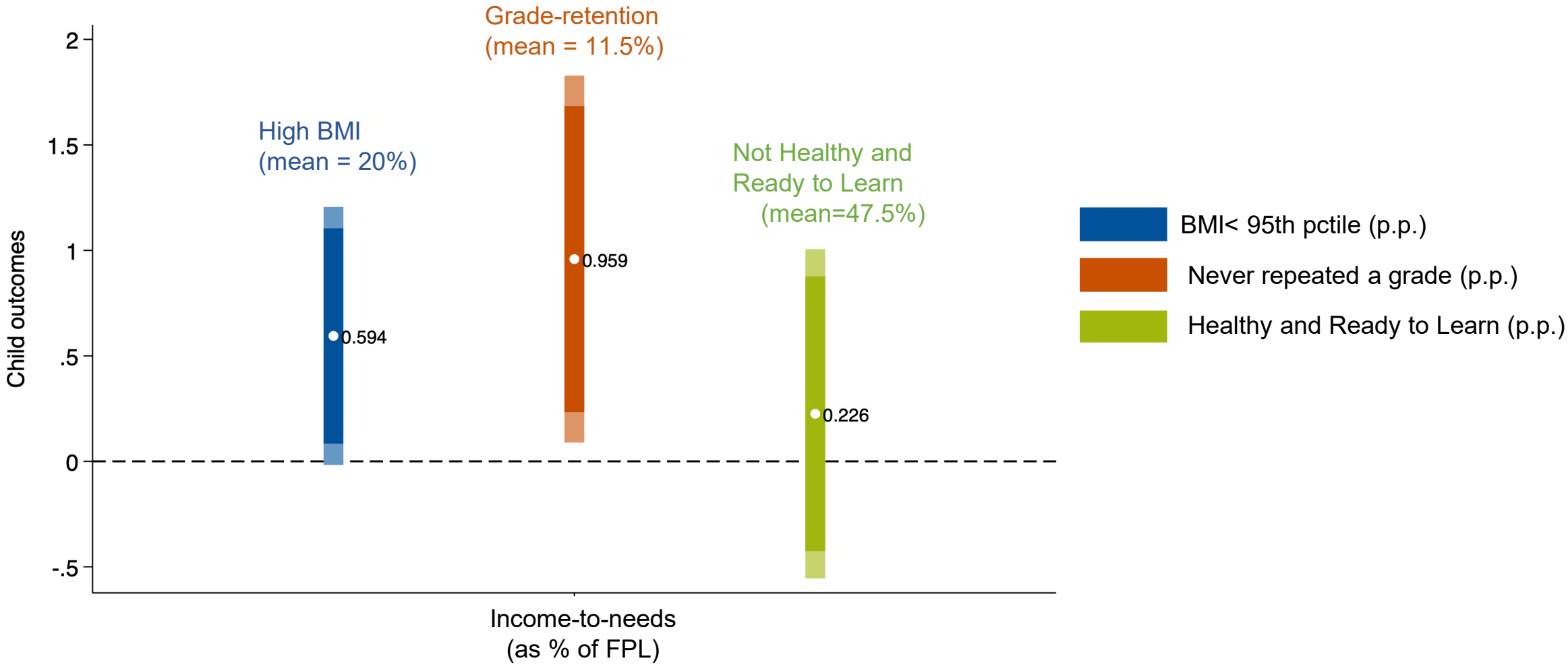
| | NCHS | | Birth records | |
|---|---|---|---|---|
| | <250% of FPL | Less educated | All | Less educated |
| Income to needs ratio (% of FPL) [sd] | 139.0 [62.1] | 172.7 [108.8] | – | – |
| Healthy and Ready to Learn (HRTL) not on track (children 3–5, $n = 3{,}898$) | 47.5 | 51.1 | – | – |
| BMI $\geqslant$ 95th percentile (children 10–17, $n = 21{,}611$) | 19.9 | 20.9 | – | – |
| Repeated any grades since starting kindergarten (children 13–17, $n = 15{,}194$) | 11.5 | 10.8 | – | – |
| Preterm (before 37 weeks) | – | – | 8.0 | 9.4 |
| Low birth weight ($<$ 2500g) | – | – | 6.5 | 8.0 |
| *Child Demographics* | | | | |
| Male | 50.6 | 49.9 | 51.2 | 51.1 |
| Latino | 24.5 | 33.2 | 24.5 | 36.5 |
| *Respondent Demographics* | | | | |
| Mother with high school education or less | 35.6 | 100.0 | 54.5 | 100.0 |

# Cash assistance policy design predicts income-to-needs. First-stage, NSCH households (neediest households subsample)



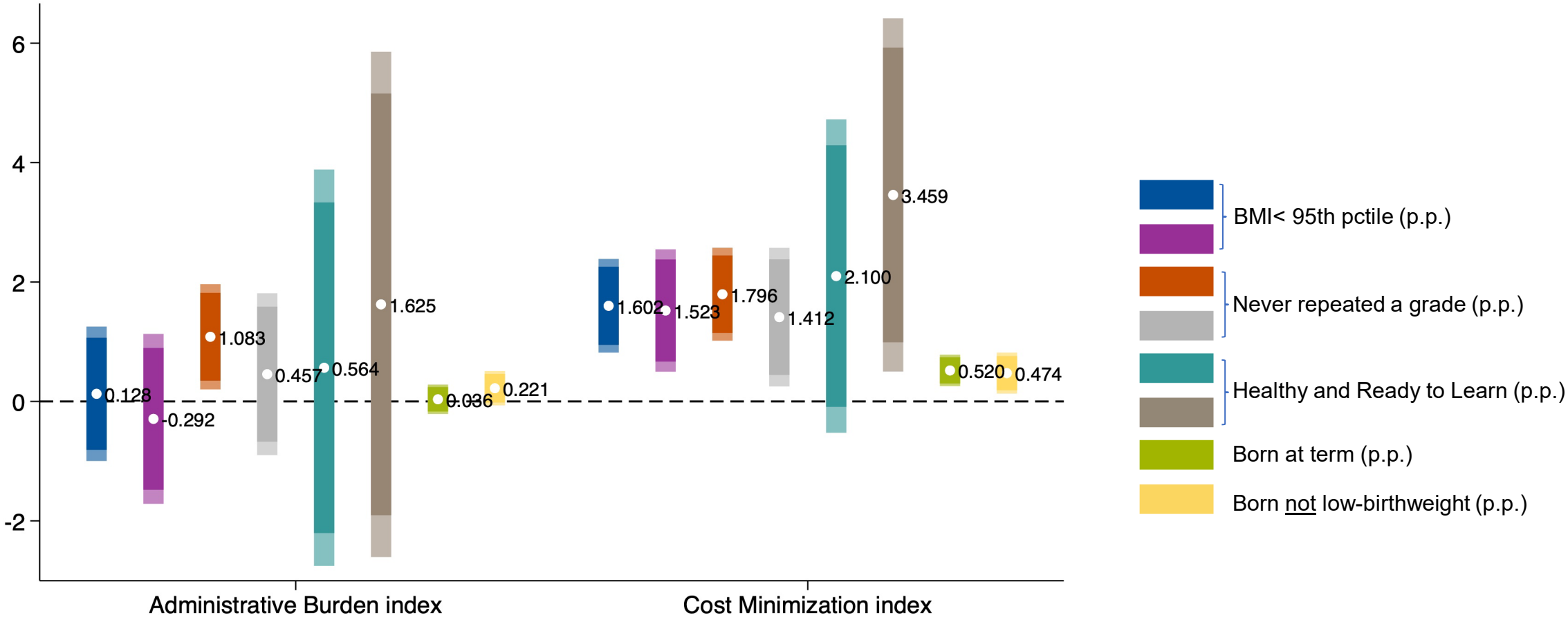

Blue=BMI outcome sample, Red=Ever repeated a grade sample, Green=HRTL sample
*note: dark shading on bars represents 90% CI and light shading on bars represents 95% CI

# Household income-to-needs impacts child outcomes
# Second-stage, NSCH households (neediest households subsample)




*note: dark shading on bars represents 90% CI and light shading on bars represents 95% CI

# Reduced-form positive income-to-needs effects seen across multiple outcome models and data sets




*note: dark shading on bars represents 90% CI and light shading on bars represents 95% CI

# Cash assistance, policy design, child well being

- State policy features of cash assistance reduce receipt independent from poverty incidence or intensity

Among households with children:

- OCM (1SD fewer restrictions) increases cash assistance receipt by ~0.6 pp (~20% relative to the mean)
- OCM (1SD fewer restrictions) increases income-to-needs

- Poverty reduction from state OCM (and ADB) policy features favorably affect children's outcomes (reductions in grade repetition and high BMI); and, OCM (fewer restrictions) alone implicitly increases full birth weight, born at term, and children being healthy and ready to learn

- Robust to falsification and placebo tests (SNAP); TANF indices do not impact SNAP receipt; SNAP indices do not impact TANF receipt

# Cash support: reflections

What does this imply for the future of basic cash assistance and/or the design of TANF?

- Incentivizing states to allocate toward cash assistance
- Considering cash assistance as a population health approach to supporting families and children, as evidenced by RxKids
- Cash assistance plus complementing (or substituting?) to other types, or mechanisms, of cash including refundable tax credits, as evidenced from expanded 2021 CTC

# Thank you.