

TANF, Childcare and Well-being in Sole Parent Families

Marianne Bruins

Motivation

- ▶ Welfare reform over past two decades (primarily welfare-to-work) focused on:
 - ▶ increasing work participation
 - ▶ discouraging welfare dependency
 - ▶ Ended an era of entitlement to cash welfare
- ▶ Growing evidence that unconditional cash transfers improve long-run outcomes for the children of sole mothers (Aizer et. al. 2016; Hoynes et. al. 2012)
- ▶ Cash welfare much more generous for families with children
 - ▶ Implicit (original) objective of cash welfare:
- ▶ Have welfare-to-work reforms in the US lost sight of this original objective?

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- ▶ Welfare-to-work reforms a response to:
 - ▶ increases in welfare caseloads
 - ▶ increased non-marital childbearing
 - ▶ perceived intergenerational culture of welfare dependence
- ▶ In the USA welfare reforms introduced:
 - ▶ work requirements
 - ▶ life-time limits
 - ▶ limits to federal expenditure on welfare
 - ▶ greater autonomy for states in designing welfare programmes

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Stylised facts post-welfare reform era

Sole mothers (no college education)

- ▶ Decline in welfare participation



- ▶ Modest increase in labour force participation

- ▶ participation increased
- ▶ hours worked increased



- ▶ Reduction in home production

- ▶ decline in housework time-use
- ▶ increase in expenditure on food away from home
- ▶ decrease in expenditure on food at home



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Structural model

Household decision-making

- ▶ U_i is mother's utility:

$$U_i = u_i(c_i, l_i, q) + \delta_{iK} K(c_k, t_f, q) + \psi(x\beta)$$

- ▶ mother allocates time between: market work h_i , housework a_i , time with children t_i , and leisure l_i .
- ▶ K is children's utility
- ▶ $q = q(c_q, a_f)$ is quantity of public good produced
- ▶ ψ is the disutility from participating in the TANF/AFDC program

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Functional forms

- ▶ Parent's utility:

$$u(c, l, q) = \log c + \alpha_l \log l + \alpha_q \log q$$

- ▶ Children's utility:

$$K(c, t_f, q) = A (\gamma_c c^\eta + \gamma_t t_f^\eta + \gamma_q q^\eta)^{1/\eta}$$

- ▶ Public good production:

$$q(c_q, a_f) = (\delta_c c_q^\kappa + (1 - \delta_c) a_f^\kappa)^{1/\kappa}$$

- ▶ Disutility:

$$\psi(x\beta) = \exp(x\beta)$$

x – time dummies interacted with whether meet work requirement
(periods: 1993-95, 1996-99, 2000-04 and 2005-08)

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Constraints

- ▶ Budget constraint 

$$c_f + c_k + c_q + \text{cost of childcare} \leq AT(h_f; w_f) + y - s$$

- ▶ $AT(\cdot)$ gives after-tax earnings
- ▶ y is 'non-labour income', s is 'savings'
- ▶ Time constraints: for $i \in \{m, f\}$

$$a_i + l_i + t_i \leq T - h_i$$

- ▶ Budget set depends on h_f in a complicated way
 - ▶ to aid estimation, make hours choice discrete

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Data

Sources (1993–2008)

- ▶ Combine data from 5 disaggregated datasets on intra-household allocation:
 - ▶ Consumer Expenditure Survey
 - ▶ American Time-Use Survey / American Heritage Time-use Survey
 - ▶ Survey of Income and Program Participation
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Estimation

Simulated method of moments

- ▶ Household choices spread across two datasets:
 - ▶ CEX: (c_k, c_f, c_m, c_q) and x (exogenous household covariates)
 - ▶ ATUS: $(h_f, h_m, t_f, t_m, a_f, a_m)$ and x
- ▶ Model implies the 'demand functions'

$$c_i = c_i(x, \epsilon_i; \tau)$$

$$t_i = t_i(x, \epsilon_i; \tau)$$

$$h_i = h_i(x, \epsilon_i; \tau)$$

- ▶ ϵ_i is a vector of unobserved disturbances (assumed Gaussian)
- ▶ Estimate parameters τ by simulated method of moments
 - ▶ Singles: 140 moments; 29 parameters

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Estimation

Choice of moments

- ▶ Moments conditioned on: parents' education, age of youngest child, number of children, parents' average wage.

	t_f	a_f	h_f	c_f	c_k	c_q	c_{pr}
<i>ATUS</i>							
s.d.							
corr w/							
<i>CEX</i>							
s.d.							
corr w/							

$c_{pr} = c_f + c_m + c_k$, \checkmark – exact data.

E – estimates obtained using Dunbar, Lewbel and Pendakur (2014).




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<i>ATUS</i>	✓	✓	✓				
s.d.	✓	✓	✓				
corr w/							
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s.d.	✓	✓	✓				
corr w/							
<i>CEX</i>			✓	<i>E</i>	<i>E</i>	✓	✓
s.d.			✓			✓	✓
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<i>CEX</i>			✓	<i>E</i>	<i>E</i>	✓	✓
s.d.			✓			✓	✓
corr w/	h_f	h_f				$h_{f,m}$	$h_{f,m}$

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Estimation

Accounting for life-time limits

- ▶ Reasons not to take TANF:
 - (a) ineligible (i.e. income too high)
 - (b) disutility from taking TANF too high
 - (c) life-time limits
- ▶ Extend Blundell and Walker (1987) to include lifetime limits
 - ▶ in first stage individual has some probability of not taking TANF if (a) and (b) hold
 - ▶ need to estimate probability
- ▶ Adopt approach from Grogger and Michalopoulos (2003)

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Accounting for life-time limits

- ▶ Approach from Grogger and Michalopoulos (2003):
- ▶ Estimate probit for receiving TANF with:
 - ▶ Dummy variable if mother never exposed to time-limits D_1
 - ▶ Youngest child over 12 when time-limits introduced in state
 - ▶ Dummy variable if mother only partially exposed to time-limits D_2
 - ▶ Youngest child already born when time-limits introduced in state
- ▶ Probability of not taking TANF due to life-time limits:

$$\left[\Phi \left(x_r' \hat{\beta}_r + \hat{\beta}_{D_1} + \epsilon_r > 0 \right) - \Phi \left(x_r' \hat{\beta}_r + \hat{\beta}_{D_2} x_{D_2} + \hat{\beta}_{D_1} x_{D_1} + \epsilon_r > 0 \right) \right]$$

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Poverty and cash welfare

- ▶ How has levels of child poverty changed over the last 20 years?
- ▶ No decline in child poverty in sole parent households since 1996 (Black 2002, Meyer et. al. 2003)
 - ▶ Estimates based on household level consumption and income
- ▶ Estimates don't account for:
 - ▶ home production
 - ▶ the value of maternal time
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Poverty and cash welfare

Intra-household allocation-based child poverty measures

- ▶ Children receive: private consumption (c_k); time with both parents (t_f, t_m); a home-produced public good (q)
 - ▶ Value goods at decentralised prices ($\tilde{w}_f, \tilde{w}_m, \tilde{p}_k$)
- ▶ Two measures of child's resources:
 - ▶ Consumption measure:

$$C_k := c_k + \tilde{p}_k q$$

where $\{\tilde{p}_i\}$ denotes the Lindahl prices for the public good.

- ▶ Full income measure:

$$\rho_k := C_k + \tilde{w}_f t_f + \tilde{w}_m t_m,$$

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$$\rho_k := C_k + \tilde{w}_f t_f + \tilde{w}_m t_m,$$

where $(\tilde{w}_f, \tilde{w}_m)$ are 'after-tax' marginal wage rates

Poverty and cash welfare

Intra-household allocation-based child poverty measures

- ▶ How has levels of child poverty changed over the last 20 years?

- ▶ Calculation

- ▶ Take two measures of child resources
- ▶ Calculate the 30th and 50th percentiles of distribution in 1993-95
- ▶ How many children under this threshold in 2004-08?

- ▶ Answer: approximately 45% and 65% for the 30th and 50th percentiles respectively

Increase in child poverty of 15 percentage points in sole parent households

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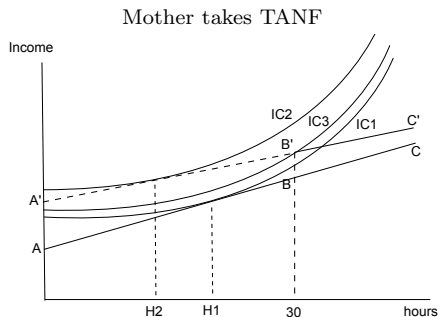
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Increase in child poverty of 15 percentage points in sole parent households

Model and estimates

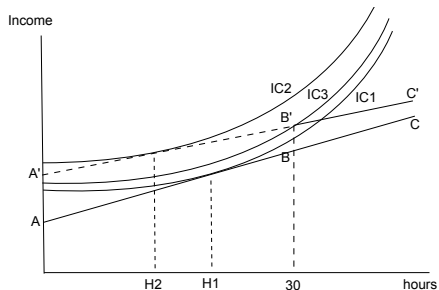


- ◇ Budget constraints: A'B'C' AFDC, ABB'C' TANF, ABC no welfare.

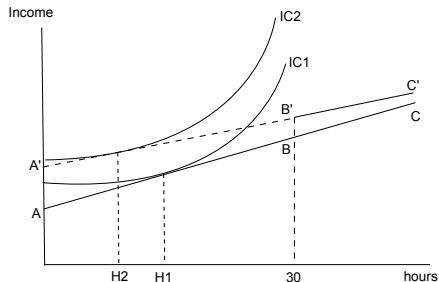
Model and estimates



Mother takes TANF



Mother doesn't take TANF



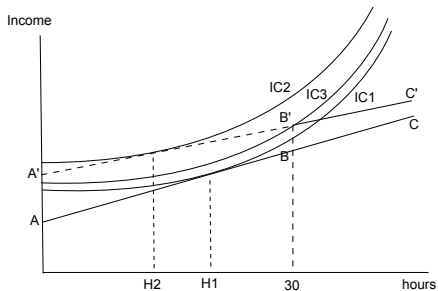
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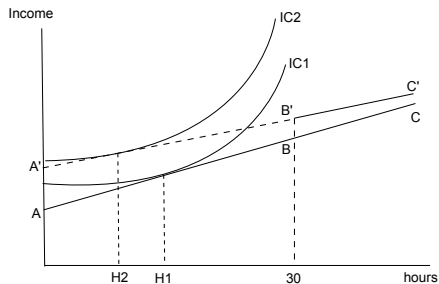
▶ 20 per cent of sample on AFDC (1993-95)



Mother takes TANF



Mother doesn't take TANF

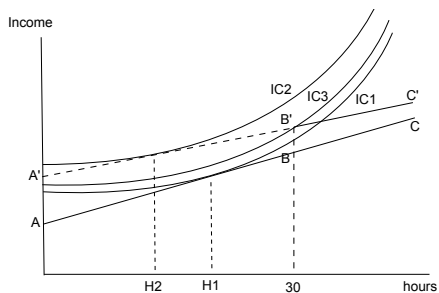


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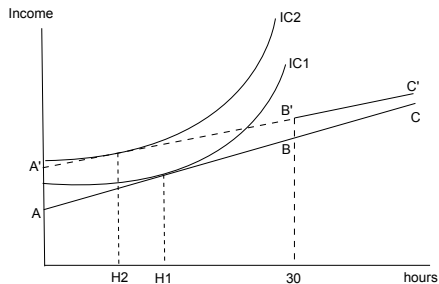
Model and estimates

- ▶ 20 per cent of sample on AFDC (1993-95)
- ▶ 9 per cent can get TANF while working 30 hours
- ▶

Mother takes TANF



Mother doesn't take TANF

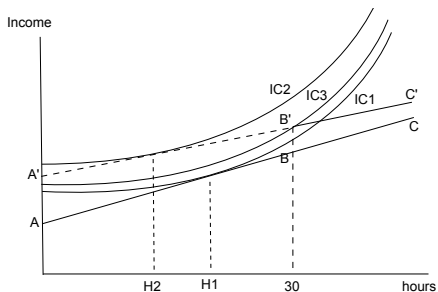


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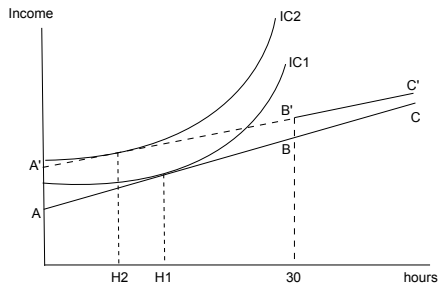
Model and estimates

- ▶ 20 per cent of sample on AFDC (1993-95)
- ▶ 9 per cent can get TANF while working 30 hours
- ▶ only 2 per cent do

Mother takes TANF



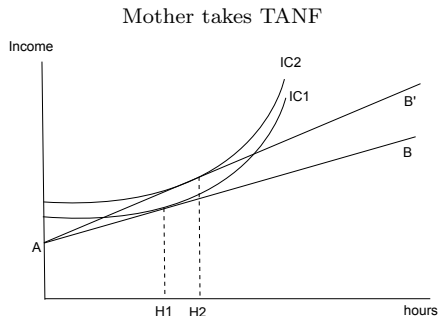
Mother doesn't take TANF



◇ Budget constraints: A'B'C' AFDC, ABB'C' TANF, ABC no welfare.

Model and estimates

- ▶ Alternative policies to encourage work, increase return from working (e.g. wage subsidy)



- ◇ Budget constraints: AB' wage subsidy, AB no wage subsidy.

Counterfactuals

- ▶ With the model we can:
 - ▶ Consider changes to welfare different from those observed historically
 - ▶ Value resources at decentralised prices
- ▶ To quantify the value of welfare we ask the following question:

How much money do we need to give the mother (child) to make them as well off under the counterfactual, when the baseline is in place.

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Methodology

- ▶ Counterfactuals considered (sample 1993-2008):
 - ▶ replace TANF with AFDC (1995 parameters in real values)
 - ▶ replace TANF with free childcare
 - ▶ replace TANF with wage subsidy (\$1)
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Counterfactuals

- ▶ Those that switch from TANF to AFDC – 63% of additional spending goes to children

	CV_f	CV_k	net cost	pass thru.	recipients
	(\$/wk)	(\$/wk)	(\$/wk)	%	%

Switch from TANF to AFDC

Received benefits under:

AFDC 59.1

AFDC only

TANF and AFDC

Counterfactuals

- ▶ Those that switch from TANF to AFDC – 63% of additional spending goes to children

	CV_f (\$/wk)	CV_k (\$/wk)	net cost (\$/wk)	pass thru. %	recipients %
<hr/>					
Switch from TANF to AFDC					
<hr/>					
<i>Received benefits under:</i>					
AFDC	59.1	36.9			
AFDC only					
TANF and AFDC					

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<hr/>					
Switch from TANF to AFDC					
<hr/>					
<i>Received benefits under:</i>					
AFDC	59.1	36.9	135.7		
AFDC only					
TANF and AFDC					

Counterfactuals

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	CV_f (\$/wk)	CV_k (\$/wk)	net cost (\$/wk)	pass thru. %	recipients %
<hr/>					
Switch from TANF to AFDC					
<hr/>					
<i>Received benefits under:</i>					
AFDC	59.1	36.9	135.7	27.2	
AFDC only					
TANF and AFDC					

Counterfactuals

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	CV_f (\$/wk)	CV_k (\$/wk)	net cost (\$/wk)	pass thru. %	recipients %
<hr/>					
Switch from TANF to AFDC					
<hr/>					
<i>Received benefits under:</i>					
AFDC	59.1	36.9	135.7	27.2	22.3
AFDC only					
TANF and AFDC					

Counterfactuals

- ▶ Those that switch from TANF to AFDC – 63% of additional spending goes to children

	CV_f (\$/wk)	CV_k (\$/wk)	net cost (\$/wk)	pass thru. %	recipients %
<hr/>					
Switch from TANF to AFDC					
<hr/>					
<i>Received benefits under:</i>					
AFDC	59.1	36.9	135.7	27.2	22.3
AFDC only	62.6	41.1	163.3	25.2	17.5
TANF and AFDC					

Counterfactuals

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	CV_f (\$/wk)	CV_k (\$/wk)	net cost (\$/wk)	pass thru. %	recipients %
<hr/>					
Switch from TANF to AFDC					
<hr/>					
<i>Received benefits under:</i>					
AFDC	59.1	36.9	135.7	27.2	22.3
AFDC only	62.6	41.1	163.3	25.2	17.5
TANF and AFDC	46.2	21.4	34.9	61.2	4.8

Alternatives to TANF



	CV_f	CV_k	pass through	recipients	net cost
	(\$/wk)	(\$/wk)	%	%	%
<i>Childcare:</i>					
CDCTC	18.2	10.1	70.1	24.3	14.4
Free childcare					
<hr/>					
<i>Counterfactual:</i>					
CA					
CB					
CC					

Full sample of recipients of either programme.

Alternatives to TANF



	CV_f	CV_k	pass through	recipients	net cost
	(\$/wk)	(\$/wk)	%	%	%
<i>Childcare:</i>					
CDCTC	18.2	10.1	70.1	24.3	14.4
Free childcare	61.4	50.2	68.8	29.8	72.9
<hr/>					
<i>Counterfactual:</i>					
CA					
CB					
CC					

Full sample of recipients of either programme.

Alternatives to TANF

- ▶ CA: TANF to free childcare.

	CV_f	CV_k	pass through	recipients	net cost
	(\$/wk)	(\$/wk)	%	%	%
<i>Childcare:</i>					
CDCTC	18.2	10.1	70.1	24.3	14.4
Free childcare	61.4	50.2	68.8	29.8	72.9
<hr/>					
<i>Counterfactual:</i>					
CA	39.6	34.0	90.2	36.8	37.6
CB					
CC					

Full sample of recipients of either programme.

Alternatives to TANF

- ▶ CB: TANF to wage subsidy.

	CV_f	CV_k	pass through	recipients	net cost
	(\$/wk)	(\$/wk)	%	%	%
<i>Childcare:</i>					
CDCTC	18.2	10.1	70.1	24.3	14.4
Free childcare	61.4	50.2	68.8	29.8	72.9
<i>Counterfactual:</i>					
CA	39.6	34.0	90.2	36.8	37.6
CB	16.4	14.3	130.6	84.0	11.0
CC					

Full sample of recipients of either programme.

Alternatives to TANF

- ▶ CC: TANF to minimum wage.

	CV_f	CV_k	pass through	recipients	net cost
	(\$/wk)	(\$/wk)	%	%	%
<i>Childcare:</i>					
CDCTC	18.2	10.1	70.1	24.3	14.4
Free childcare	61.4	50.2	68.8	29.8	72.9
<hr/>					
<i>Counterfactual:</i>					
CA	39.6	34.0	90.2	36.8	37.6
CB	16.4	14.3	130.6	84.0	11.0
CC	70.1	54.9	80.7	56.0	68.0

Full sample of recipients of either programme.

Conclusions

- ▶ Consider replacing TANF with AFDC (1995)
- ▶ Policy recipients:
 - ▶ mothers \$60 p/w better off
 - ▶ children \$40 p/w better off
- ▶ 30 per cent of spending on AFDC/TANF passes through to children

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Conclusions

- ▶ **Work requirements distort allocation of mothers' time**
 - ▶ reduce home production
 - ▶ hurts children who care a lot about home production
 - ▶ child poverty in sole parent families has increased by 15 percent
- ▶ Consider replacing TANF with alternatives: free childcare, wage subsidy, minimum wage
 - ▶ at least twice as much home production per dollar spent
 - ▶ higher rates of pass through to children e.g. minimum wage 100 per cent pass through

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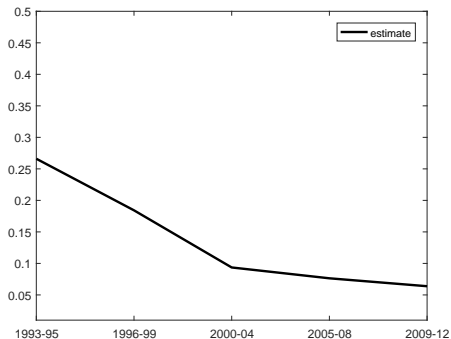
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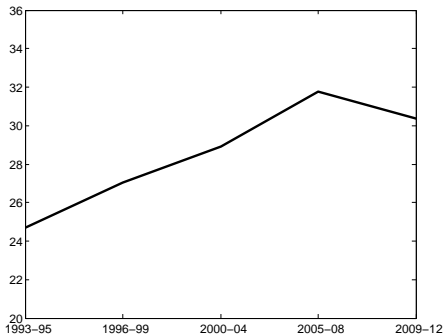
Decline in welfare participation



◇ Source: CPS. Sole mothers without a college degree.

Increase in labour supply

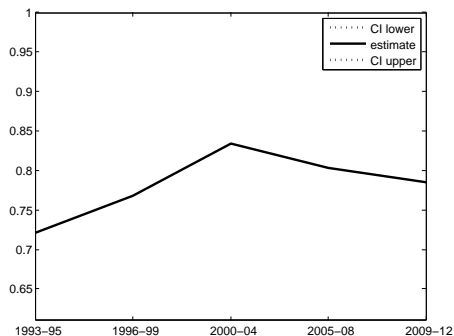
Hours worked per week



◇ Source: CPS. Sole mothers without a college degree.

Increase in labour supply

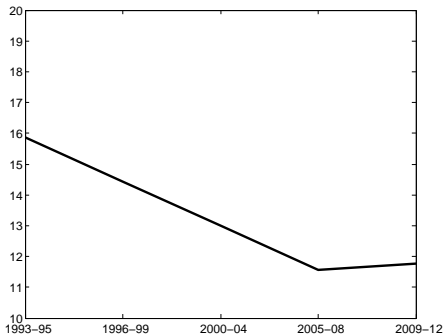
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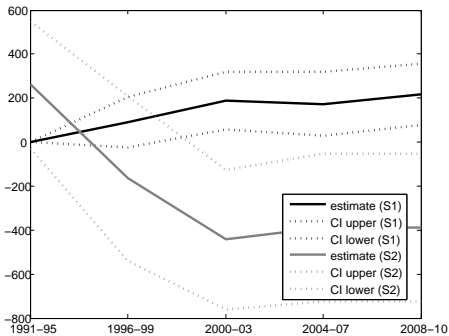
Housework



◇ Source: AHTUS/ATUS. Sole mothers without a college degree.

Decline in home production

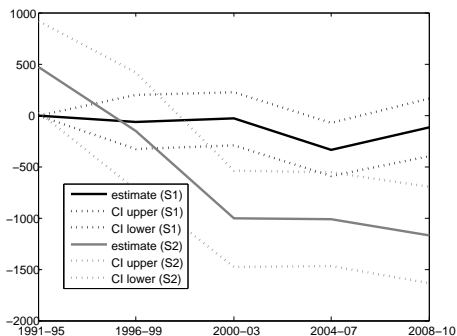
Food away from home



◇ Source: CE. Sole mothers without a college degree.

Decline in home production

Food at home



◇ Source: CE. Sole mothers without a college degree.