

U.S. Food and Nutrition Programs

Hilary Hoynes, UC Berkeley

Diane Whitmore Schanzenbach, Northwestern

Paper presented for

*Means-Tested Transfer Programs in the U.S.
Volume II*

Cambridge Dec 5-6, 2014

Scope of chapter

- Programs considered
 - SNAP, WIC, School Lunch, School Breakfast
- Issues surrounding the programs
 - Contrast “in-kindness” of the programs and the predicted effects on subsidized (and unsubsidized) goods
 - Intra-family considerations
 - Incentives for firms (and individuals)

Scope of chapter (cont)

- Challenges for empirical identification
 - Federal programs, (comparatively) fewer policy changes over time
- Outcomes examined in the literature
 - Program participation, consumption, health (of the mother, births, children), food insecurity, labor supply, student achievement

Scope of chapter (cont)

- New Developments and current policy discussions
 - Benefit “cycles”: within the month (SNAP), across the year (school feeding programs)
 - How to use SNAP to create better food choices: restricting the SNAP voucher; incentivizing healthy choices
 - Nudges
 - Program participation in the Great Recession

1. Overview of programs and rules

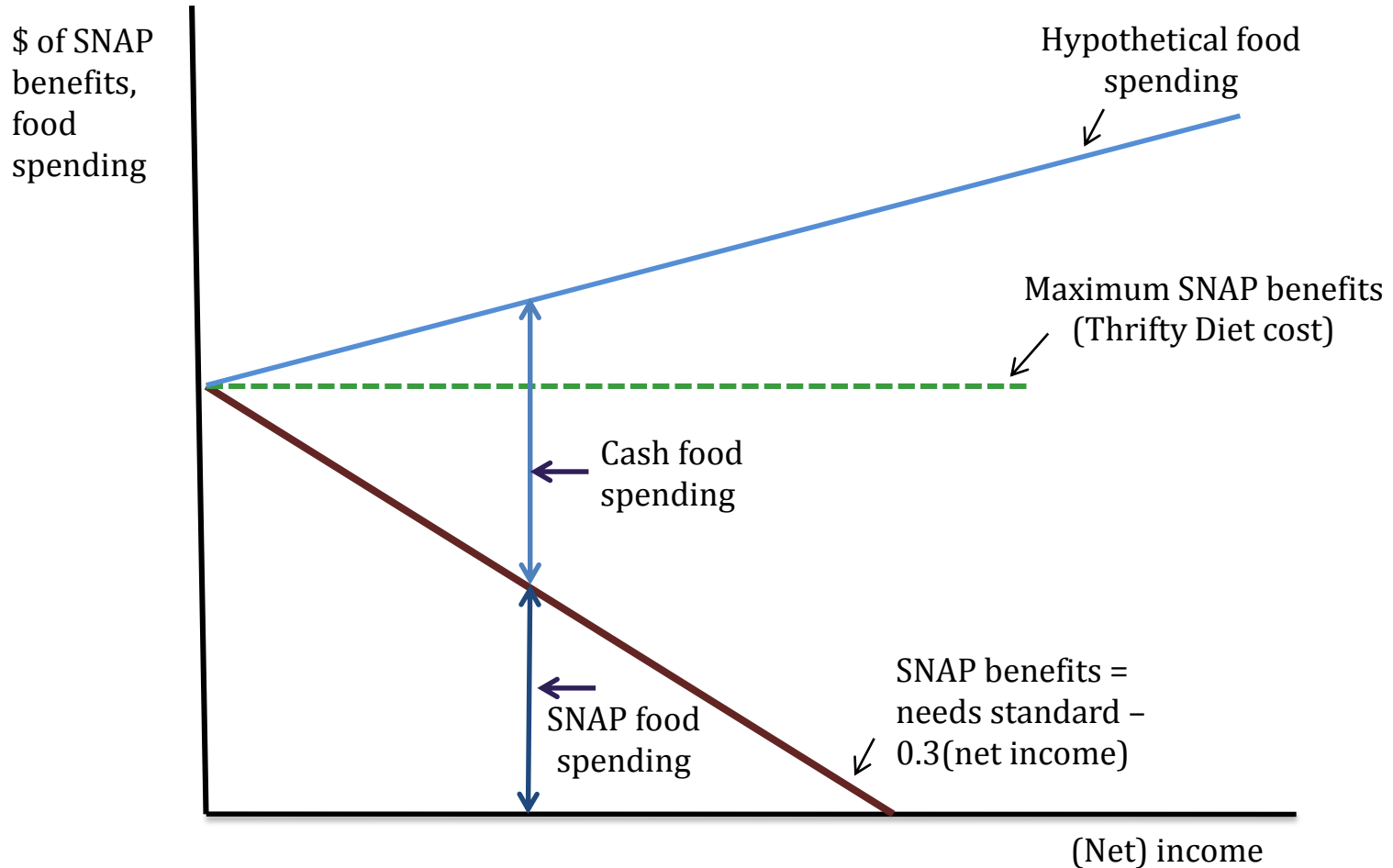
SNAP	WIC	Lunch	Breakfast
1961: pilot 1975: permanent	1972: pilot 1974: permanent	1946	1966: pilot 1975: permanent
\$79.9B	\$6.5B	\$11.1B	\$3.5B
Low-income households (universal)	Low-income pregnant, postpartum women, infants <1, children <5	Low-income school children	Low-income school children
47.6 M individuals/month (2013)	8.66 M individuals (2013)	18.9M free 2.6M reduced-price	10.2M free 1.0M reduced-price
Monthly benefit via EBT	Voucher for specific goods & quantities; Nutrition educ, screening	Lunches conforming to latest <i>Dietary Guidelines</i> standards	Breakfasts conform. to latest <i>Dietary Guidelines</i> standards
Household benefits	Individual benefits	Individual benefits	Individual benefits

SNAP	WIC	Lunch	Breakfast
Max = \$511/month (3-person family), Avg = \$133/pers./month \$275/HH/month	Food package varies by need (infant formula)	Reimbursement rate (avg): \$3.06/free; \$2.66 reduced	Reimbursement rate (avg): \$1.93 free; \$1.63 reduced
Gross income <1.3*FPL; assets <\$2250; universal w/restrictions on able-bodied adults	Gross income <1.85*FPL; At “nutritional risk”	Subsidies: Free: Inc.<1.3*FPL RP: Inc.<1.85*FPL (categorical for SNAP recipients)	(same as lunch)
BRR: 0.3*net income	None: eligible for all or nothing	Discontinuity at 1.3 & 1.85*FPL	Discontinuity at 1.3 & 1.85*FPL
Least in-kind: Voucher for dollar value	Voucher for quantity (price insensitive)	Most in-kind: Meal	Most in-kind: Meal
	Elig. if on SNAP	Elig. if on SNAP	Elig. if on SNAP

SNAP: important details

- Most grocery store foods
 - no hot foods for immediate consumption
- Gross income test relaxed recently (no more “notch”)
 - “expanded categorical eligibility”
 - Benefits if benefit formula awards them
 - Added families with high deductions (childcare costs, earnings, housing), generally below 130-160% FPL
- (Most, inframarginal) Consumers are price sensitive
- Complicated work incentive requirements for able-bodied adults
 - If there are “sufficient jobs”
- No market failure, just income support
 - Market part of rhetoric when displaced CDP

SNAP Benefits Formula + Spending



WIC: important details

- Specific basket of goods (for pregnant, nursing, infants, children)
- Fixed bundle; all income eligible get the full bundle (no phase-out)
- Categorical eligibility is individual (e.g. infant, child, etc.)
- Quantity voucher
 - Interesting pricing incentives for firms, depending on % customers on WIC and fraud detection (Meckel 2014)
- Recent changes in bundle: added fruits/veg; expanded dairy options; added whole grains
 - 2007: interim
 - 2014: permanent

Food Package	Recipient	Food
I	Infants, fully formula fed (0-5 months)	WIC formula: 823 fl oz reconstituted liquid concentrate (0-3 months)
		WIC formula: 896 fl oz reconstituted liquid concentrate (4-5 months)
	Infants, partially breastfed (0-5 months)	WIC formula: 104 fl oz reconstituted powder (0-1 month)
		WIC formula: 388 fl oz reconstituted liquid concentrate (1-3 months)
		WIC formula: 460 fl oz reconstituted liquid concentrate (4-5 months)
II	Infants, fully formula fed (6-11 months)	WIC formula: 630 fl oz reconstituted liquid concentrate
		Infant cereal: 24 oz
		Baby food fruits & vegetables: 128 oz
	Infants, partially breastfed (6-11 months)	WIC formula: 315 fl oz reconstituted liquid concentrate
		Infant cereal: 24 oz
		Baby food fruits & vegetables: 128 oz
	Infants, fully breastfed (6-11 months)	Infant cereal: 24 oz
		Baby food fruits & vegetables: 256 oz
		Baby food meat: 77.5 oz

Food Package	Recipient	Food
IV	Children: 1 - 4 years old	Juice, single strength: 128 fl oz
		Milk: 16 qt*
		Breakfast cereal: 36 oz
		Eggs: 1 dozen
		Fruits & vegetables: \$8.00 in cash value voucher
		Whole wheat bread: 2 lb**
		Legumes, 1 lb dry or 64 oz canned OR peanut butter, 18 oz
V	Pregnant and partially breastfeeding women (up to 1 year postpartum)	Juice, single strength: 144 fl oz
		Milk: 22 qt*
		Breakfast cereal: 36 oz
		Eggs: 1 dozen
		Fruits & vegetables: \$10.00 in cash value voucher
		Whole wheat bread: 1 lb**
		Legumes, 1 lb dry or 64 oz canned AND peanut butter, 18 oz

NSLP & SBP: important details

- Recent changes in payment structures
 - Encouraging universal free meals
 - Function of participation in SNAP, multi-year eligibility
 - Free participation dramatically increased
 - Expansion of breakfast programs
- Feds regulate nutrition
 - Schools set menus
 - Profit maximizing subject to regulations
 - Students decide whether to participate based on price, food quality

2010 Healthy, Hunger-Free Kids Act

Table 1.5

Previous and Current School Meal Caloric Standards

Previous (pre HHFKA)	Current (post HHFKA)
-------------------------	-------------------------

Lunch

grades K-3 Min: 633 Max: none	grades K-5 Min: 550 Max: 650
grades 4-12 Min: 785 Max: none	grades 6-8 Min: 600 Max: 700
grades 7-12 (optional) Min: 825 Max: none	grades 9-12 Min: 750 Max: 850

Breakfast

grades K-12 Min: 554 Max: none	grades K-5 Min: 350 Max: 500
	grades 6-8 Min: 400 Max: 550

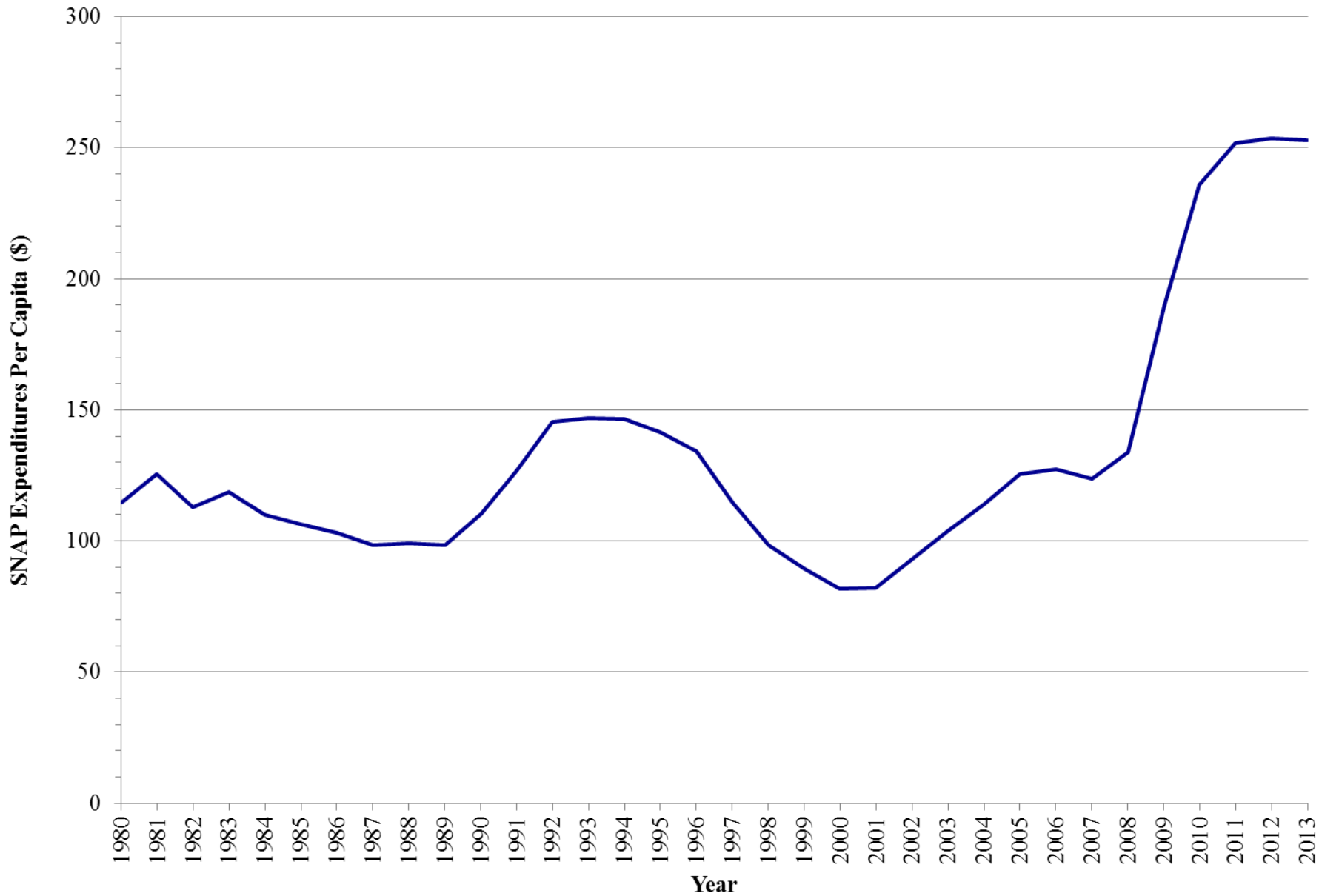
2. Program Statistics and Recipient Characteristics

	1990	1995	2000	2005	2010	2012	2013
<i>Caseload (as % Relevant Population)</i>							
SNAP	8.1	10.1	6.2	8.7	13.2	15.0	15.2
WIC							
Women (as share of all women 18-44)	1.9	2.9	3.1	3.6	3.9	3.7	3.6
Children 1-4	13.5	21.7	23.0	24.6	28.3	29.6	28.5
Infants < 1	35.3	46.5	48.5	50.5	52.9	53.4	53.8
NSLP (as % of children aged 5-17 in income group)							
Free and reduced meals	25.0	28.0	29.1	32.6	38.4	39.5	39.7
Free meals	21.4	24.4	24.5	22.7	32.8	34.5	35.0
All meals	52.5	50.2	51.5	55.3	59.2	58.3	56.6
SBP (as % of children aged 5-17 in income group)							
Free and reduced meals	7.6	10.7	12.0	14.3	18.1	19.9	20.6
Free meals	7.2	10.0	10.8	12.7	16.2	18.0	18.8
All meals	8.8	12.4	14.3	17.4	21.7	23.7	24.4

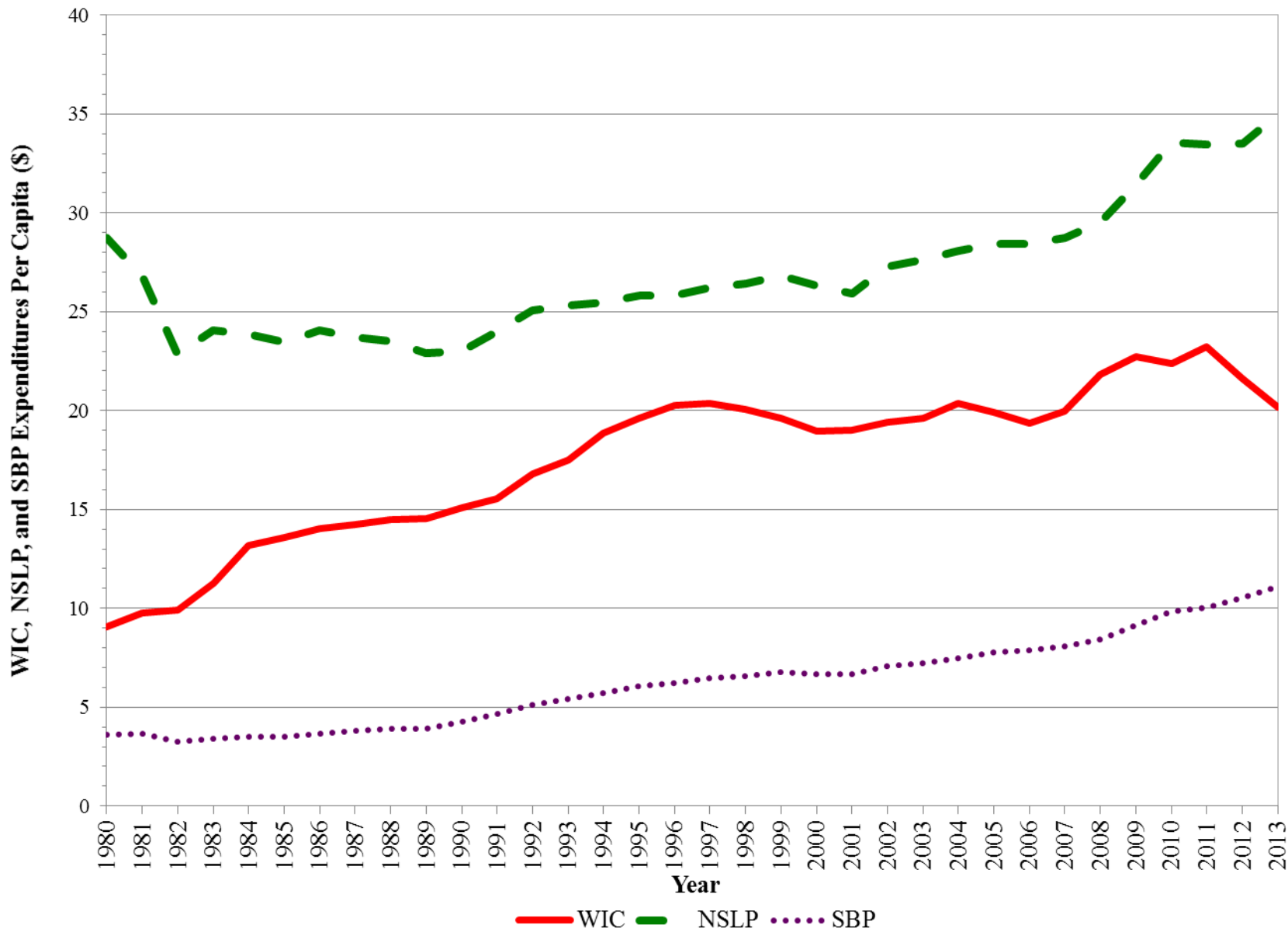
SNAP recipient characteristics

	1996	2000	2005	2010	2012
<u>All Food Stamp Households</u>					
Share with children	60	54	54	49	45
Share female heads with children	39	35	32	26	24
Share with elderly members	16	21	17	16	17
Share of individuals <18	47	47	47	44	43
Share of individuals >=65	9	10	7	5	6
Share with gross monthly income below poverty	91	89	88	85	82
Share with no cash income	10	8	14	20	20
Share with any earnings	23	27	29	30	31
<u>Multiple program participation; share with income from:</u>					
AFDC/TANF	37	26	15	8	7
General Assistance	6	5	6	4	3
SSI	24	32	26	21	20
Social Security	19	25	23	21	23
Unemployment Insurance	2	2	2	7	5
Veterans Benefits	1	1	1	1	1

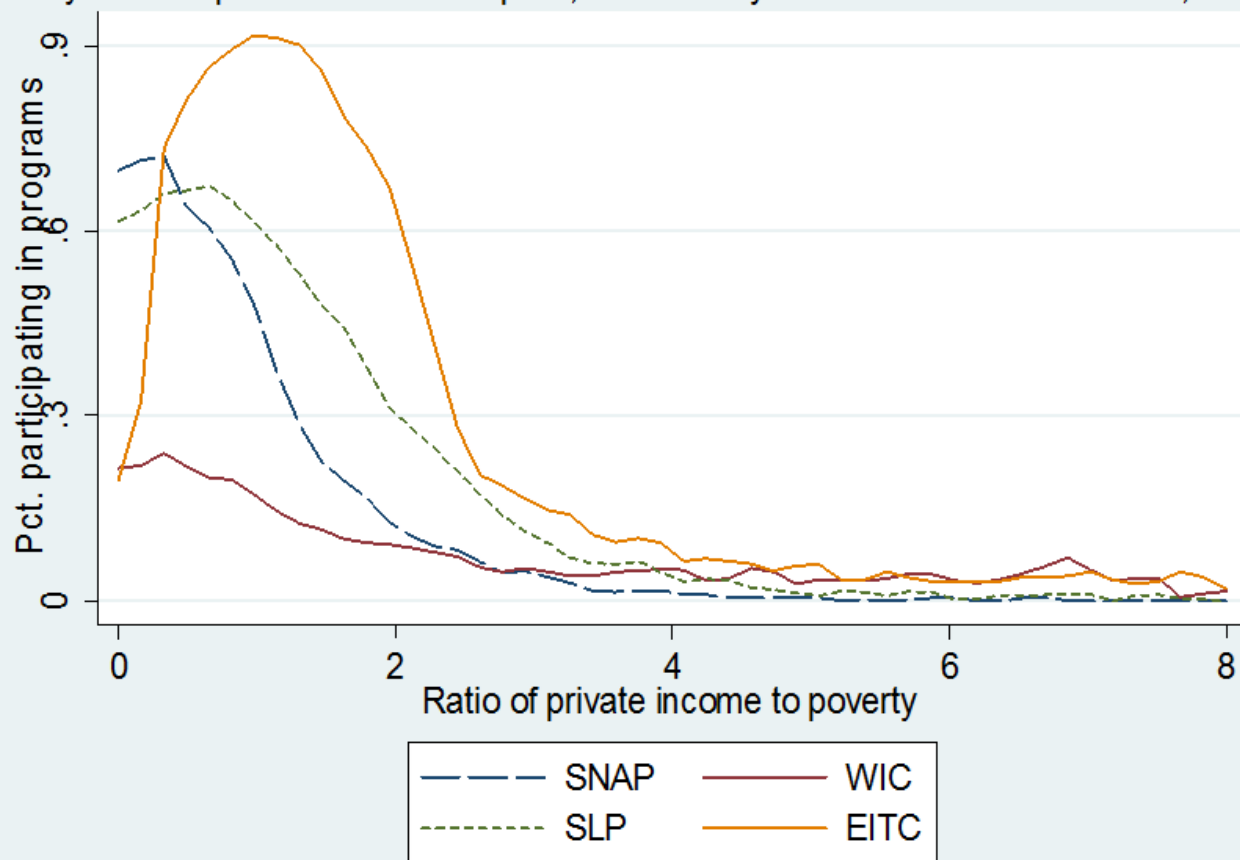
Annual SNAP Expenditures Per Capita (real \$2013)



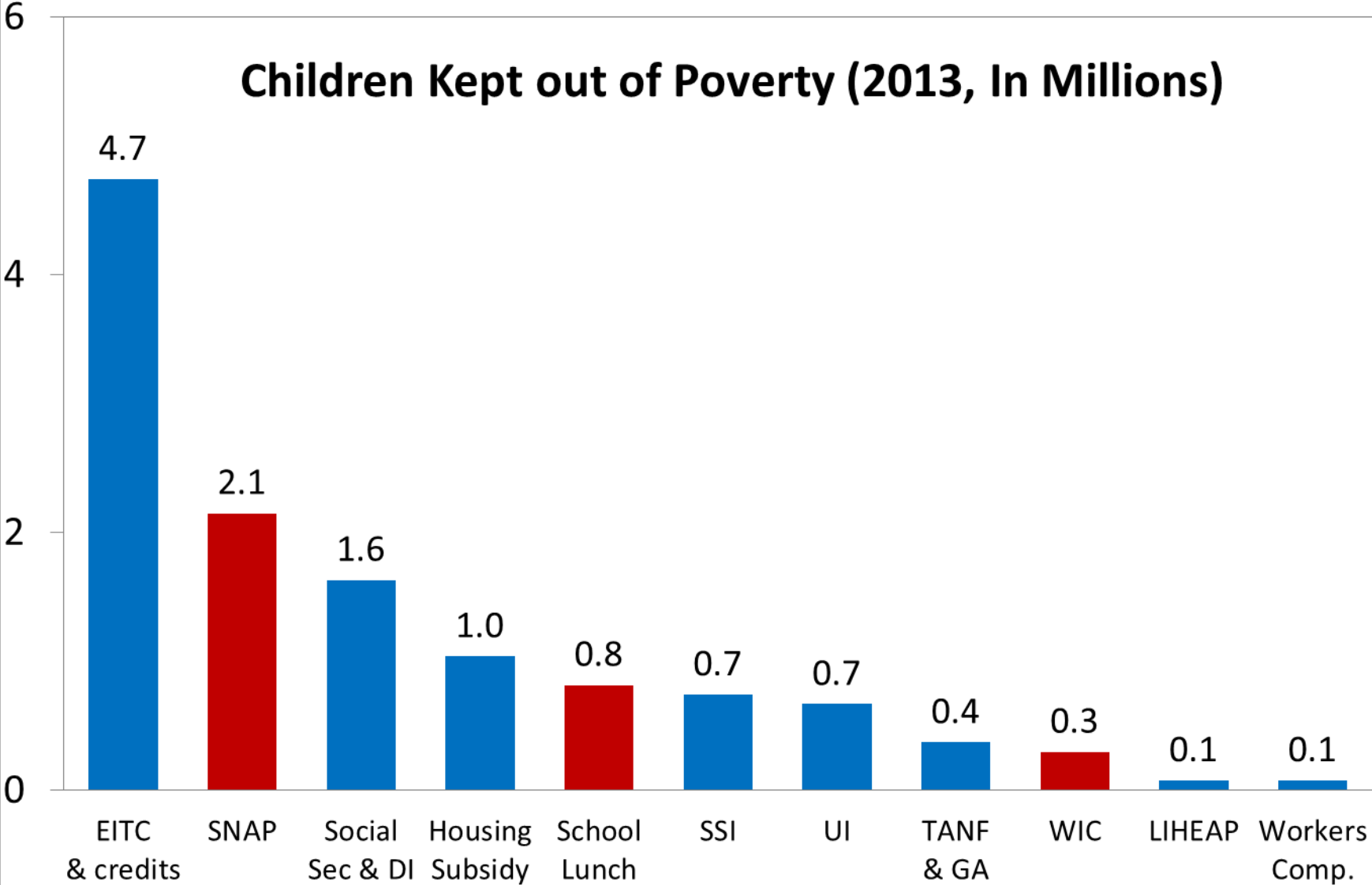
Annual WIC, NSLP, and SBP Expenditures Per Capita (real \$2013)



Kernel Density Plot of HH program participation,
by ratio of private income to pov., non-elderly hh heads in hhs with kids, 2013



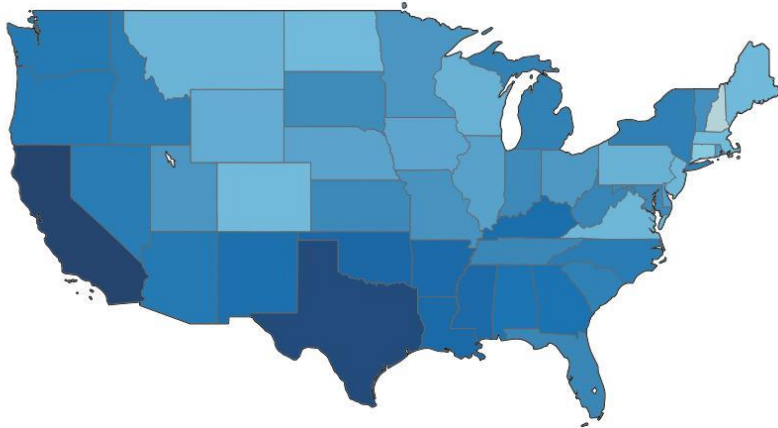
Children Kept out of Poverty (2013, In Millions)



Participation Rates by State

WIC

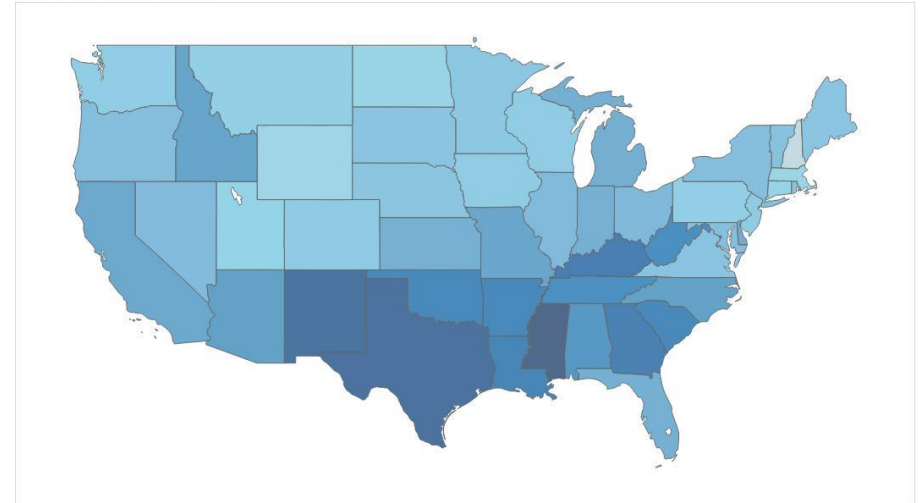
2013 WIC Recipients/Population



Map based on Longitude (generated) and Latitude (generated). Color shows sum of Recipients/Population. Details are shown for Region.

Breakfast

2013 SBP Recipients/Population



Map based on Longitude (generated) and Latitude (generated). Color shows sum of Recipients/Population. Details are shown for Region.

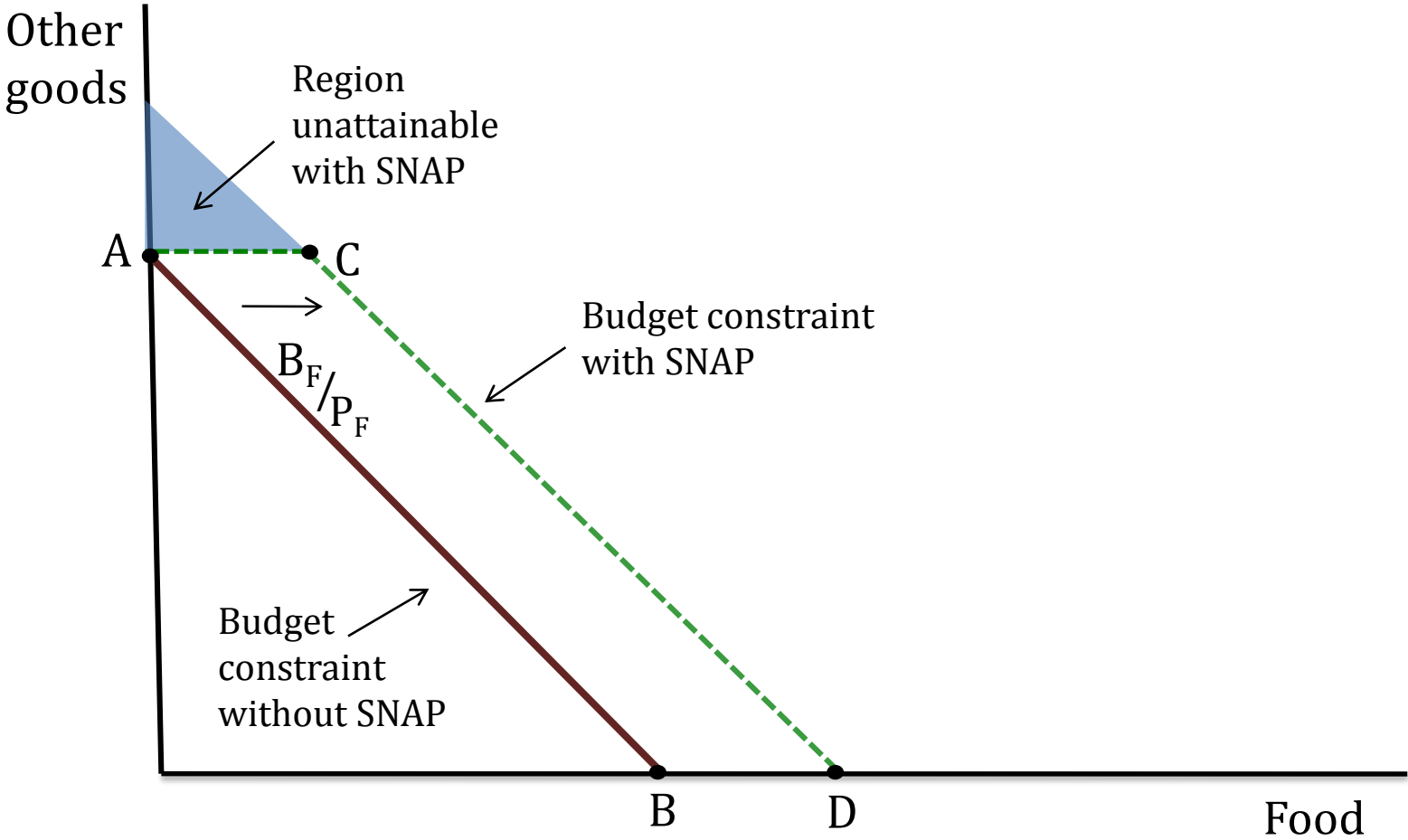
3. Review of issues surrounding the programs

Main framing of the issues

1. Range of “in-kindness” in the programs
 - Cash > SNAP > WIC > School feeding
2. Programs should balance protection vs distortion
 - Protections: food insecurity/malnutrition particularly during critical periods, consumption smoothing
 - Distortions: reduce labor supply, DWL
3. Program design and effects on takeup

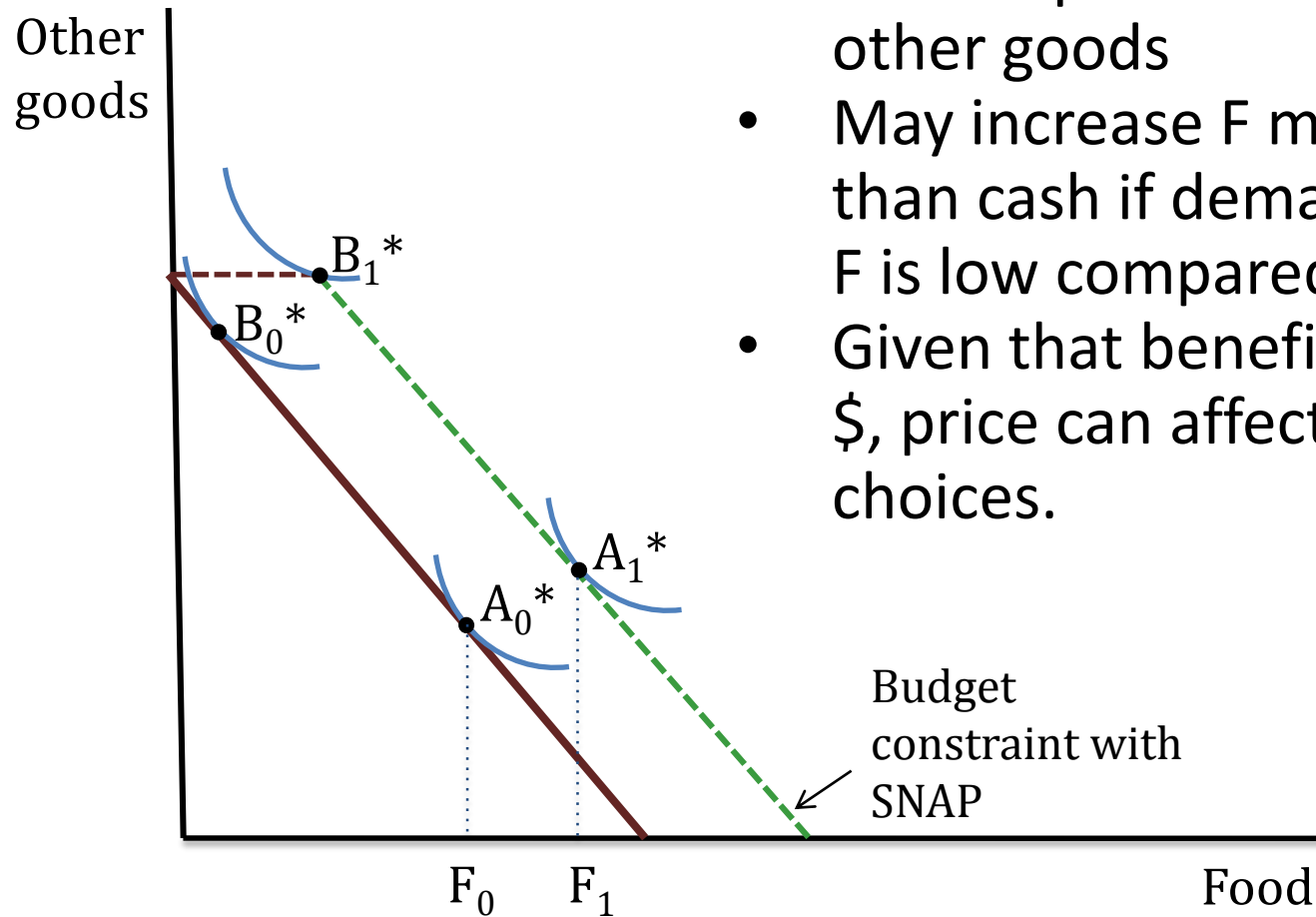
Expected effects on consumption

SNAP (unrestricted food voucher)

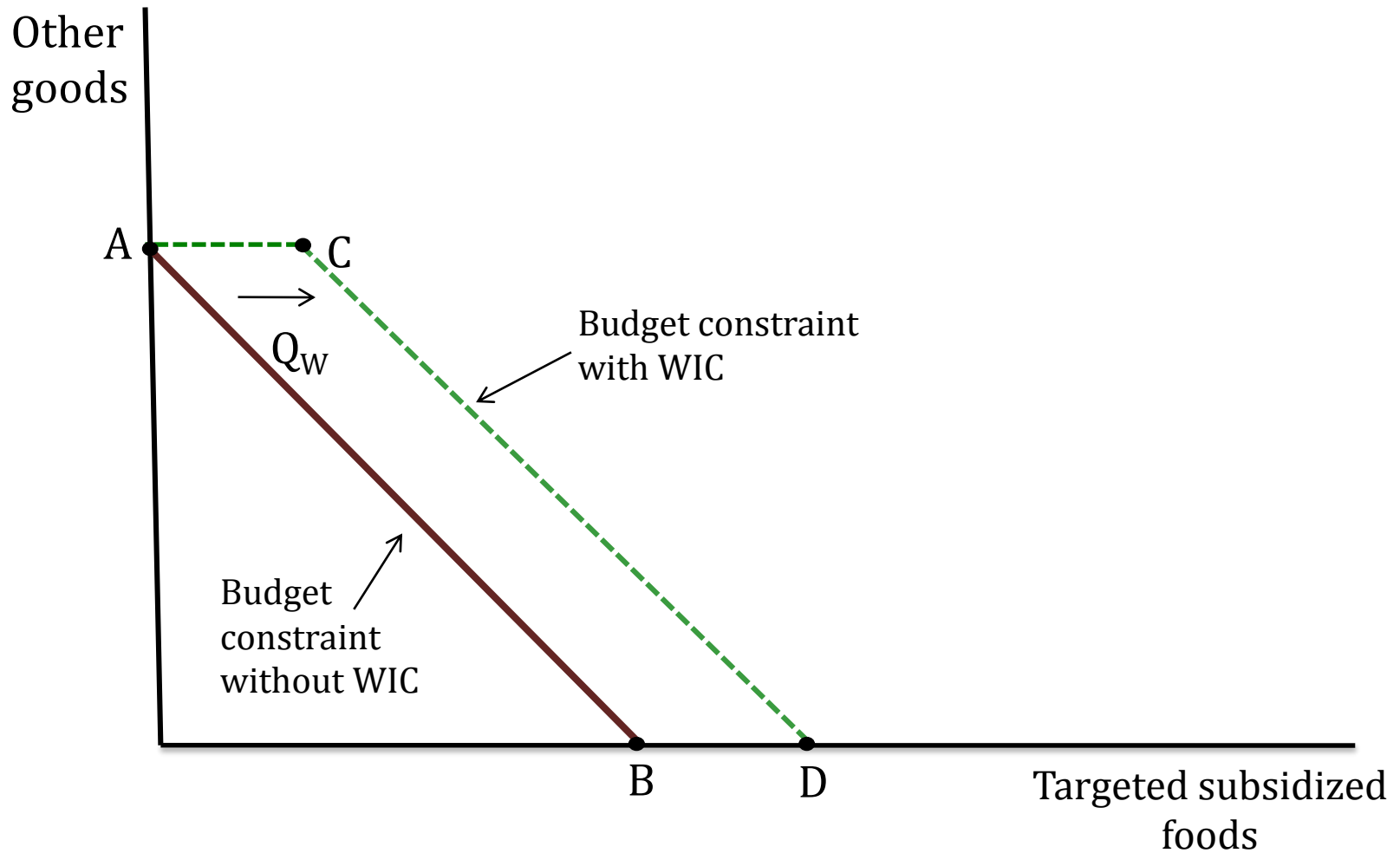


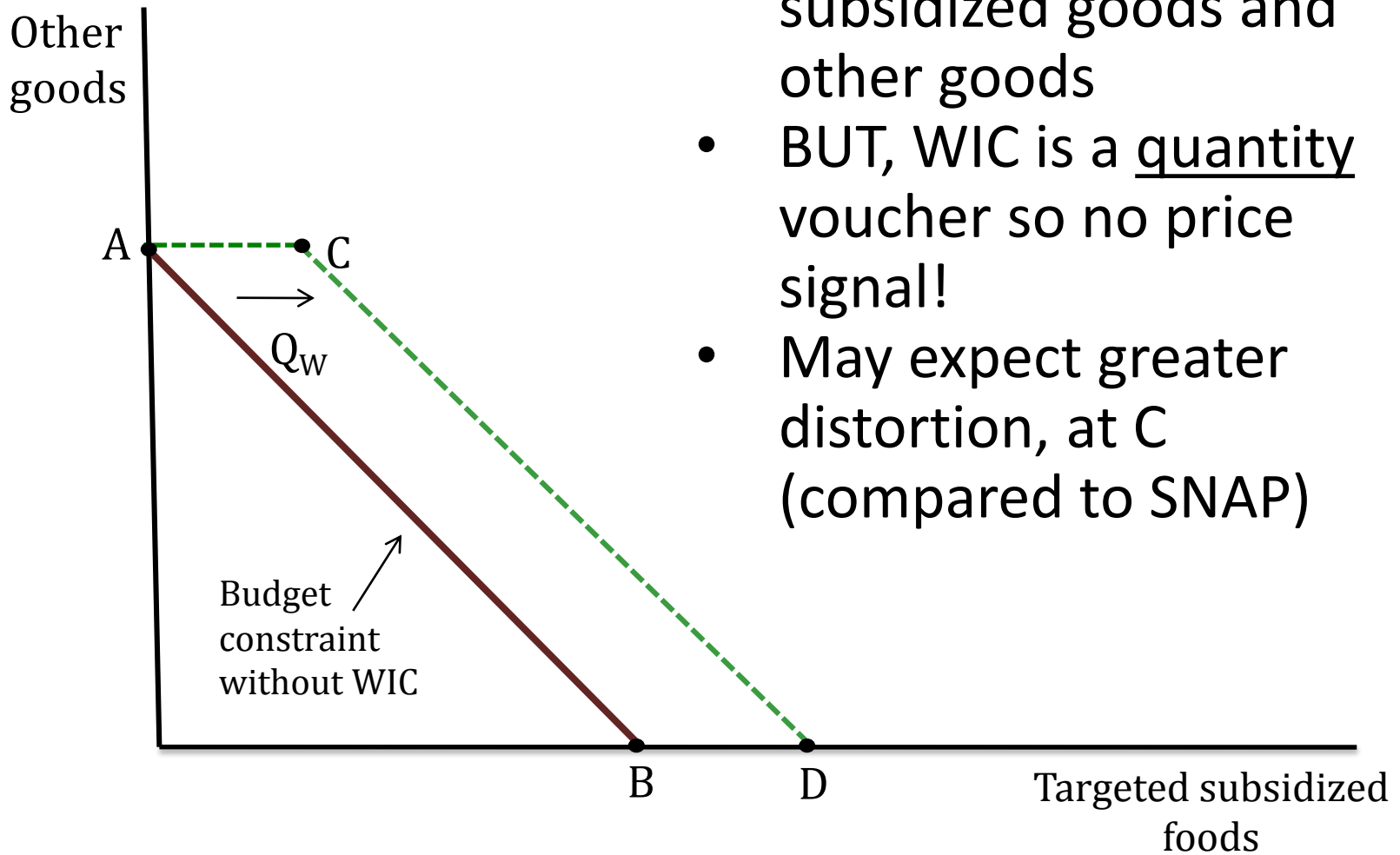
Standard results:

- SNAP increases consumption of F and other goods
- May increase F more than cash if demand for F is low compared to B
- Given that benefit is in \$, price can affect choices.



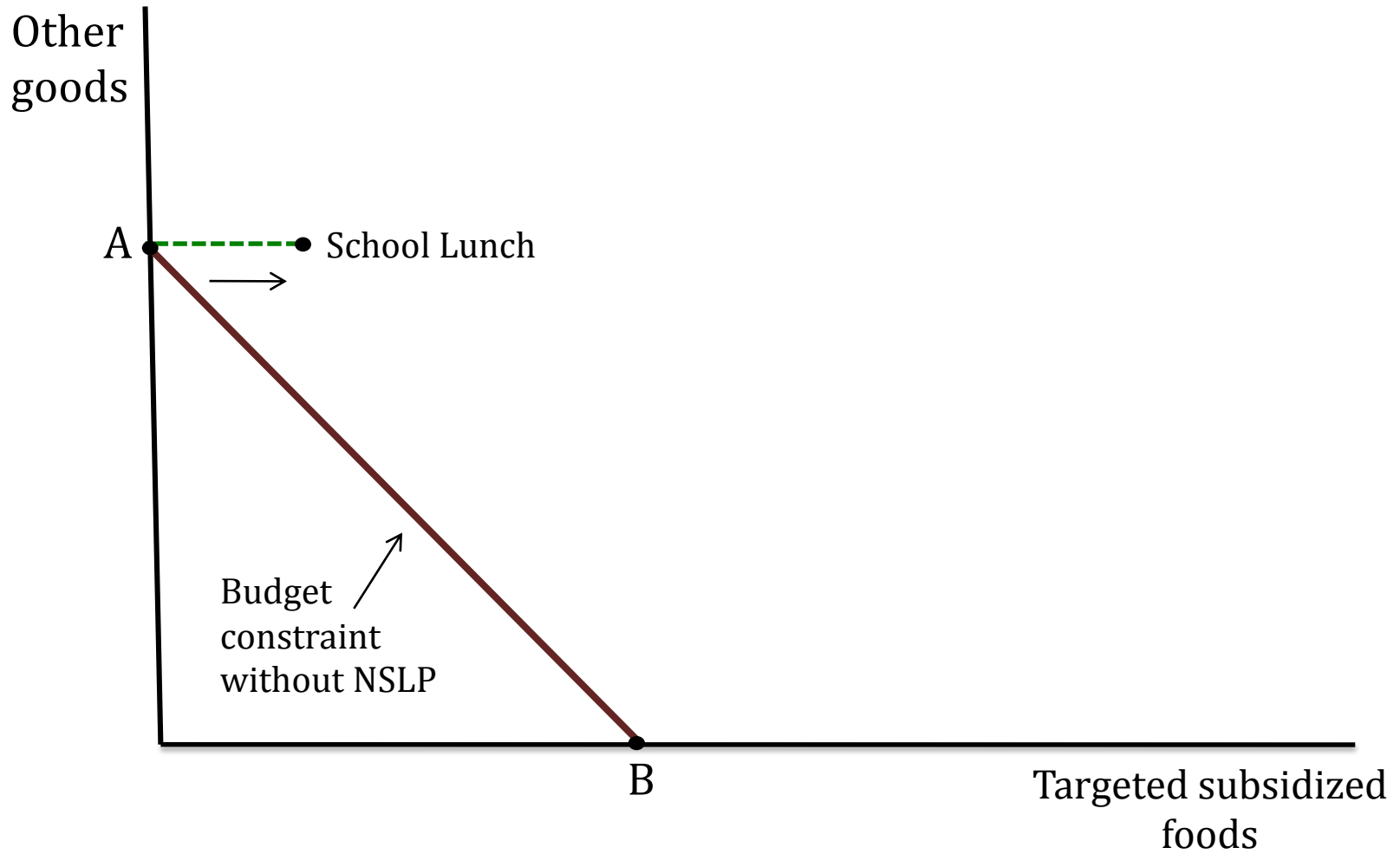
WIC (fixed bundle of Q)

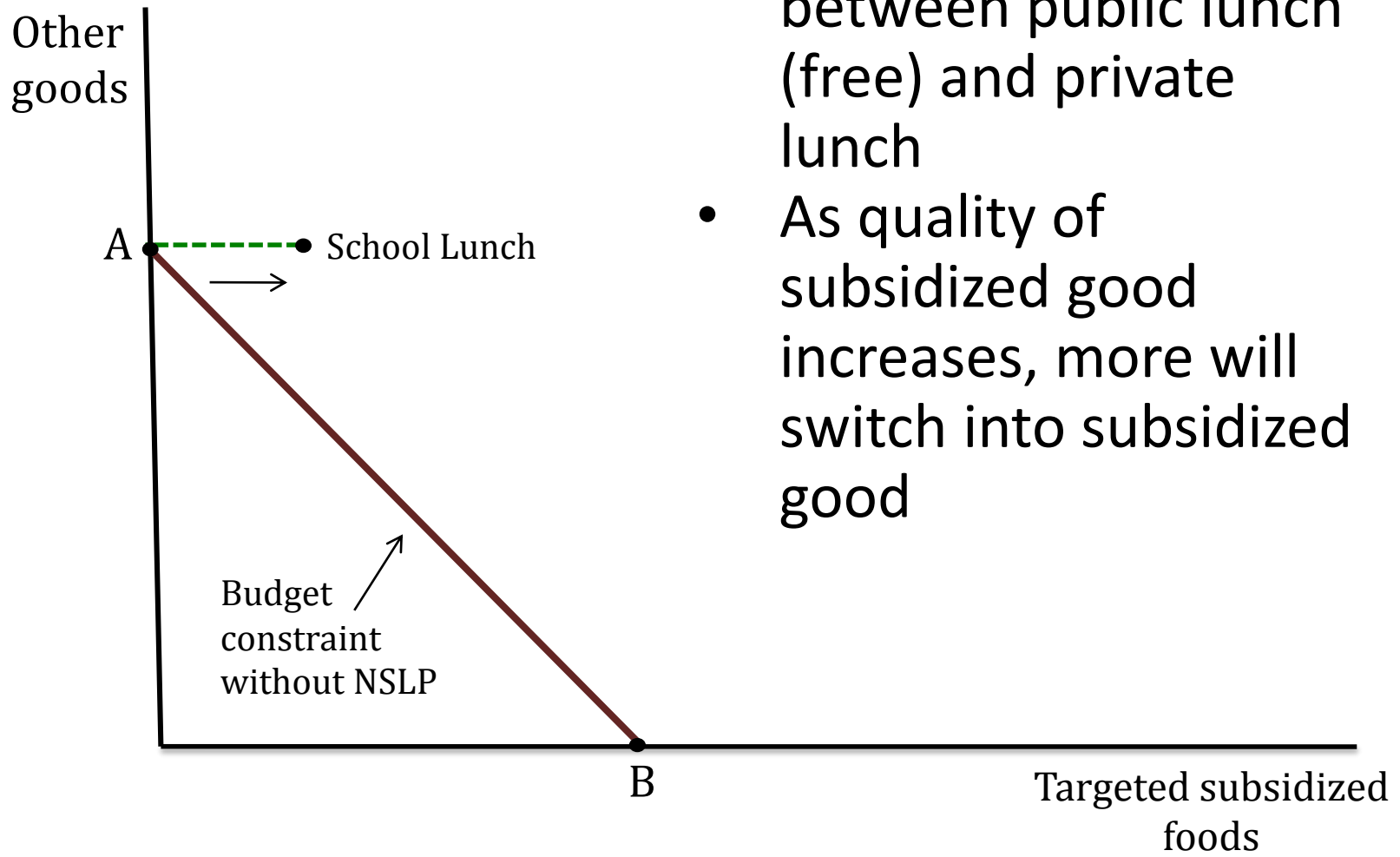




- As with SNAP, WIC should increase subsidized goods and other goods
- BUT, WIC is a quantity voucher so no price signal!
- May expect greater distortion, at C (compared to SNAP)

NSLP and SBP (fixed Q)





- Benefits are “take it or leave it” -- choice between public lunch (free) and private lunch
- As quality of subsidized good increases, more will switch into subsidized good

What do we conclude?

- The more unrestricted the transfer (SNAP) the smaller the distortions
- Do policy makers / voters care about distortions?
 - Paternalism
 - In practice, this is likely small in SNAP
 - Very few consumers at flat/kinked part of budget
 - Information

Other issues to consider

- Intra-family considerations
 - Who does the shopping may have more control
 - How might offering meals at school affect allocation of food at home
 - There may be spillover effects of the targeted programs (WIC, NSLP, SBP) on nontargeted members of the family
- The firm side
 - As a quantity voucher, WIC recipients are price insensitive. Firms (formula manufacturers, retail shops) have incentive to increase prices.
 - School meal providers maximize profit, takeup

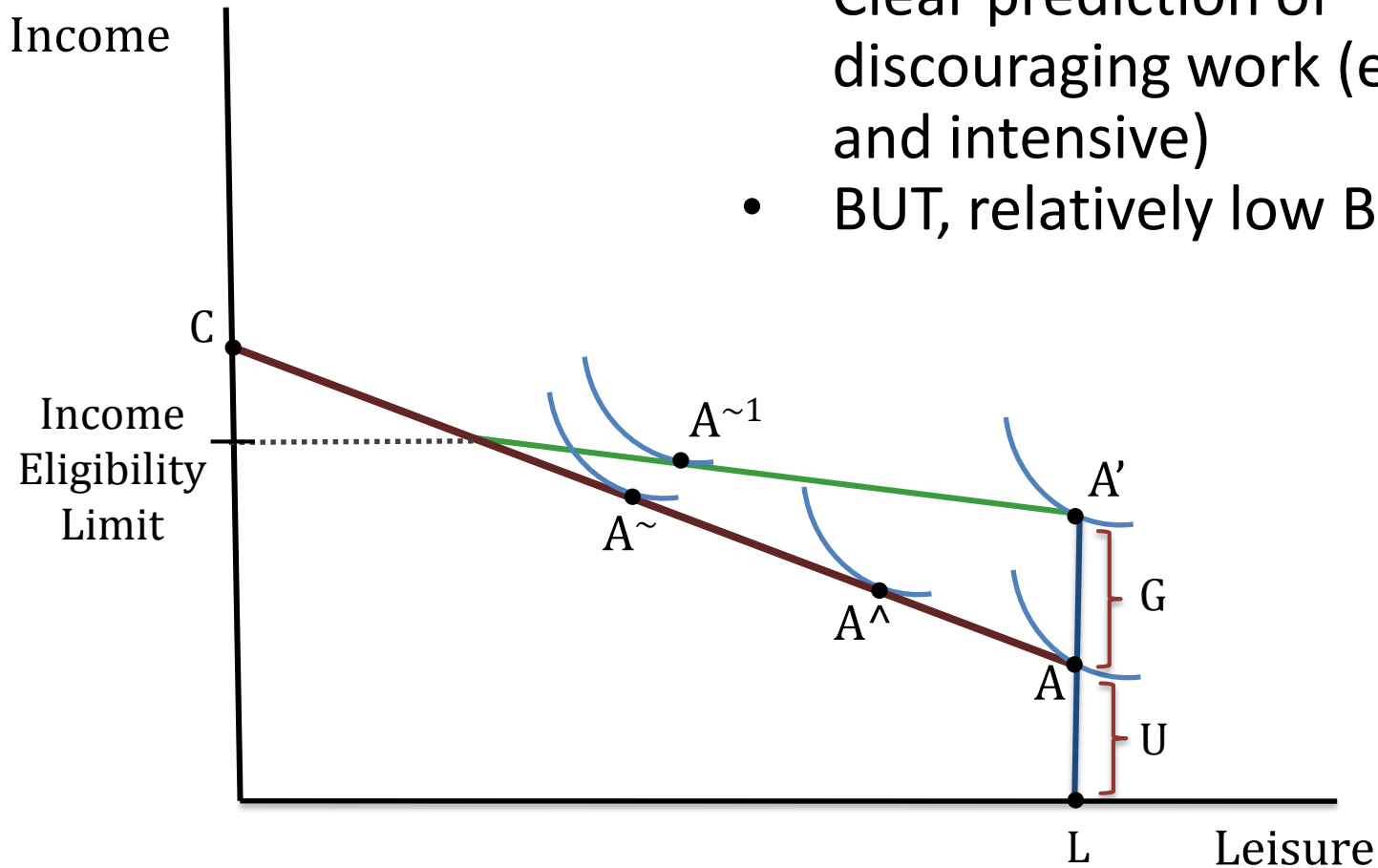
Expected effects on food insecurity and health

- Food insecurity predicted to decrease
- Health more complicated
 - How does change in nutrition impact health?
 - More calories? Higher-quality calories?
 - Also depends on counterfactual

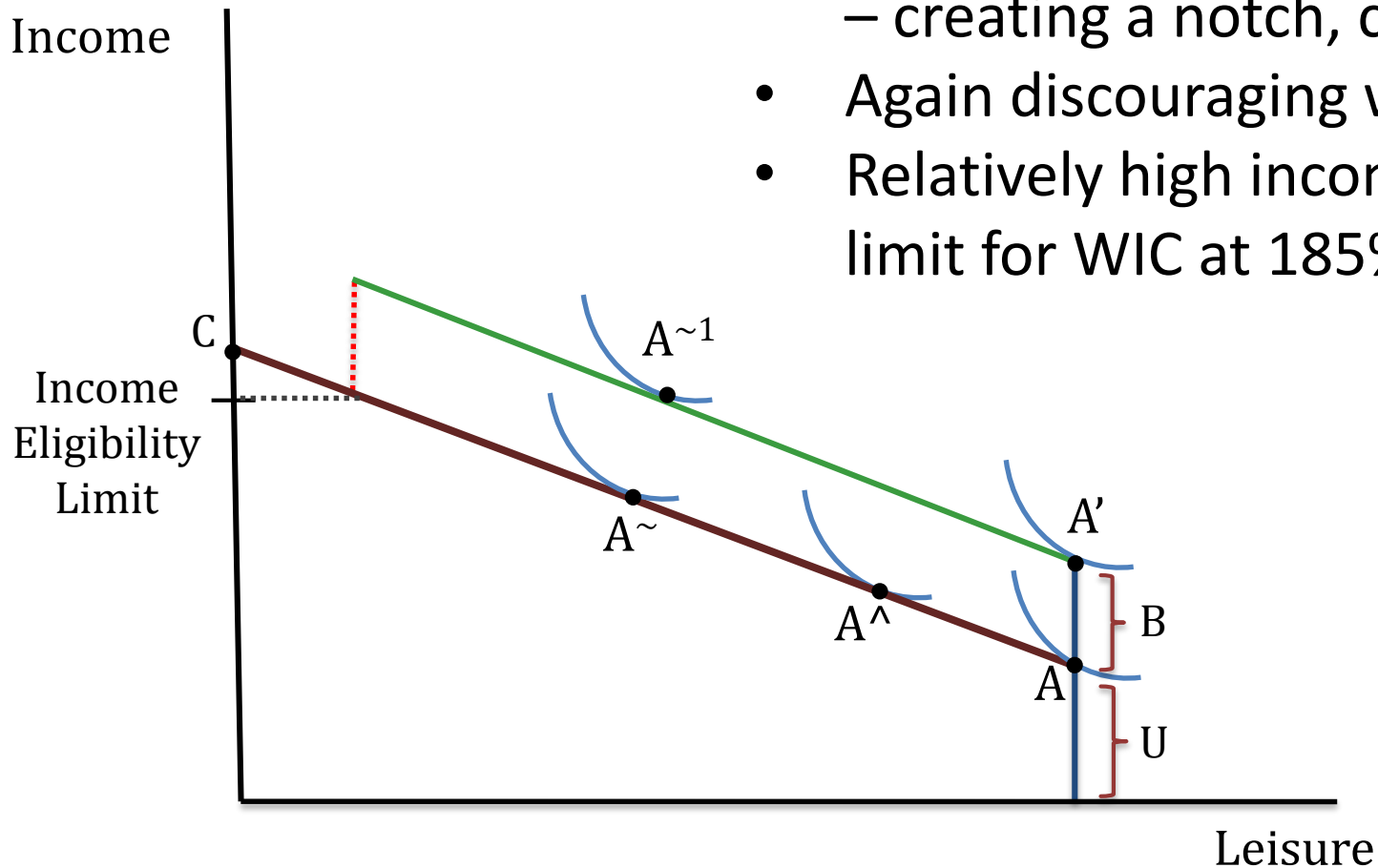
Expected effects on labor supply

- Unearned income transfer -> unambiguously predicted to decrease labor supply

- SNAP is “classic” income support with G and tax rate
- Clear prediction of discouraging work (extensive and intensive)
- BUT, relatively low $BRR = 0.3$



- WIC and School feeding programs are “all or nothing” – creating a notch, cliff
- Again discouraging work
- Relatively high income elig. limit for WIC at 185% FPL



4. Review of the literature

Challenge to causal identification

- Federal programs with little variation across space or over time (reform)
- Approaches taken in the literature:
 - Program rollout: SNAP, WIC, breakfast
 - Use available policy variation across states/time (reduced form or IV): seen more in the SNAP literature
 - Sibling and family FE: problematic if it is driven by unobs determinants of participation or if spillovers are large
 - Regression discontinuity: seen more in school meals literature
 - RCTs: Food Stamp “cashout” experiments in 1980s, universal breakfast program

Results: SNAP Participation

- **Variation over business cycle** (Bitler & Hoynes 2014; Figlio et al. 2000; Ziliak et al. 2003)
 - Most of GR increase due to macroeconomy (Ganong & Liebman 2013)
- **Responds to policy changes in SNAP** (Currie et al. 2001; Kabbani & Wilde 2003)
 - Also policy changes in other programs
- **Demographic predictors** (Ziliak 2013)

Results: SNAP Consumption, Labor Supply

- **Acts as consumption insurance** (Blundell & Pstaferrri 2003; Gundersen & Ziliak 2003)
- **Increases food consumption, similar to cash income** (Hoynes & Schanzenbach 2009)
- **Reduces food insecurity** (Depolt et al. 2009; Mykerezi & Mills 2010; Ratcliffe et al. 2011; Schmidt et al. 2013; Shaefer & Gutierrez 2013; Yen et al. 2008)
- **Reduces LFP and hours among single mothers** (Hoynes & Schanzenbach 2012)

Results: SNAP on Health

- **Child health: birth weight improved** (Almond et al. 2011); **obesity may decline** (Kreider et al. 2012; Schmeiser 2012)
- **Adult health: obesity results mixed** (Vartanian & Houser 2012; Fan 2010; Gibson 2003; Hoynes et al. 2013; Kaushal 2007)

Results: WIC

- Participation:
 - Negative selection into program (Bitler & Currie 2005)
 - No real cyclical component (Bitler et al. 2003; Corsetto 2012)
- Birth outcomes:
 - ↓ low birth weight (Bitler & Currie 2005; Figlio et al. 2009; Hoynes et al. 2012; Joyce et al. 2005)
 - Some evidence of ↑ average birth weight (Currie & Ranjani 2014; Hoynes et al. 2012; Joyce et al. 2005; Rossin-Slater 2013)
 - Some evidence of ↑ gestation length (Joyce et al. 2005)

Results: Lunch

- **Dietary quality: ambiguous on number, quality of calories** (Gleason & Suitor 2003)
 - Appears to reduce food insecurity (Nord & Romig 2006)
- **Obesity before HHFKA mixed** (reduces: Gundersen et al. 2012; no impact: Mirtcheva & Powell 2013; increases: Schanzenbach 2009; Millimet et al. 2010)
- **Academic outcomes mixed** (no impact: Dunifon & Kowaleski-Jones 2003; improves: Hinrichs 2010)

Results: Breakfast

- Participation:
 - Universal free breakfast increases participation for income-eligible and income ineligible (Leos-Urbel et al. 2013; Ribar & Haldeman 2013; Schanzenbach & Zaki 2014)
- Dietary quality:
 - Improves nutritional quality intake (Bhattacharya et al. 2006; Crepinsek et al. 2006; Frisvold 2012)
 - Substantial crowd out, eating 2 breakfasts (Schanzenbach & Zaki 2014)
- Achievement:
 - May increase achievement (Dotter 2012; Frisvold 2012; Imberman & Kugler 2014) or not (Schanzenbach & Zaki 2014)

Other developments/Future directions

- **Food stamp/paycheck cycle** (Shapiro 2005; Hastings and Washington 2010; Zaki 2014)
- **Improving food consumption choices**
 - Broader food consumption literature
 - Ban soda purchase (unlikely to alter consumption bundle)
 - Subsidize healthy foods (Healthy Incentives Pilot)
 - Nudges (UK Healthy Start, Griffith et al.; Wansink school lunch trials)
- **Firm interactions with benefits**
 - SNAP payments staggered – no incentive for temporary price increase
 - WIC stores
 - School meals profit maximization

Future directions

- Are programs too generous?
- Are benefits inadequate? (IOM panel report)