Minnesota Department of **Human Services**

Estimating the Costs of Raising a Child for Child Support Guidelines

Roadmap

Approaches to Child Support

1) Melson
2) Percentage income
3) Income Shares (require base support guideline amounts)

Available Data

1) Consumer Expenditure Surveys
2) CPI

Economic Models for Estimating Costs

1) USDA (and Minnesota!)
2) Engel
3) Rothbarth
4) Comanor et al.

Approaches to Child Support

1. Percentage of the Obligor's Income
   - Used in Alaska, Arkansas, Illinois, Mississippi, Nevada, North Dakota, Texas, Wisconsin

2. Melson Formula
   - Used only in Delaware, Hawaii, and Montana

3. Income Shares
   - Used in remaining 39 states, including Minnesota and DC

Percentage of Income

- Support is based on a percentage of the noncustodial parent's income, regardless of custodial parent's income.

- Example: Angie has custody of 2 joint children and makes $150,000 per month. Brad makes $2,000 per month. State law says that support is based on 25% of Brad's income, therefore support is set at $500.

- If custody changes, support would be $37,500.

The Melson Formula

- The Melson formula is based on Delaware caselaw and considers both parental incomes (*Dalton v. Clanton*, Del. Supr., 559 A.2d 1197 (1989))
- Assumes that children can't be supported unless both parents are able to provide for their own support. Therefore, a self support reserve is applied to each parent.
- Uses net income as defined in statute
- Calculates an amount for children's primary support needs based on a pre-determined percentage that is applied to the combined incomes of the parents after subtraction of the self-support reserve
- Prorates the child's primary support in accordance with the obligor's percentage share of combined net income
- Adds a standard of living allowance that is a fixed percentage of each parent's remaining income

Income Shares

- Underlying policy: the child should receive the same proportion of parental income which would have been received if the family were intact

- Adds income of both parents together and assigns guidelines support based on that combined income. The obligor pays the percentage of the guidelines that corresponds to the percentage of the combined income.

Income Shares Cont.

So what about Angie and Brad now?

- $150,000 + 2,000 = $152,000 combined PICS

- Angie's income is 99% of combined PICS

- Brad's income is 1% of combined PICS

- $4,000 guidelines support

- $4,000 x .01 = $40

- Brad's obligation is $40

The 39 income share states require guidelines schedules, but what the heck are guidelines schedules and where do they come from?

Contained in Minn. Stat. § 518A.35 The guideline for base support is a grid or schedule that determines base support

Guideline Excerpt Minn. Stat. § 518A.35

Combined Parental Income for Determining Child Support	Number of Children					
	One	Two	Three	Four	Five	Six
$0- $799	$50	$50	$75	$75	$100	$100
800- 899	80	129	149	173	201	233
900- 999	90	145	167	194	226	262
1,000- 1,099	116	161	186	216	251	291
1,100- 1,199	145	205	237	275	320	370
1,200- 1,299	177	254	294	341	396	459
1,300- 1,399	212	309	356	414	480	557
1,400- 1,499	251	368	425	493	573	664
1,500- 1,599	292	433	500	580	673	780
1,600- 1,699	337	502	580	673	781	905
1,700- 1,799	385	577	666	773	897	1,040
1,800- 1,899	436	657	758	880	1,021	1,183
1,900- 1,999	490	742	856	994	1,152	1,336

Getting to Guidelines
How much do kids cost?

- Similarities among states with base support guidelines:
  - Most state guidelines rely on studies of child-rearing expenditures across a range of incomes not studies that examine the minimum and basic needs of children
  - All states are required by federal law to examine their guidelines every four years (quadrennial review)
  - Look at two parent households

Data Sources

- Two main sources of data used to capture the cost of raising children
  - Consumer Expenditures Survey (CE)
  - Consumer Price Index (CPI)

Consumer Expenditures Survey

- Collected for Bureau of Labor Statistics by the U.S. Census Bureau

- Consists of Quarterly Interview Survey addressing monthly costs and Diary Survey addressing weekly expenditures of frequently purchased items

- Based on quarterly interviews of 7,000 families

- Best (and only?) survey with a nationally representative sample of spending habits of families that collects detailed information

- Used to revise the Consumer Price Index

Consumer Expenditures Survey

- **Collects housing info about**:
  - Type of structure and characteristics (how many rooms, etc)
  - Rent, own, or other arrangement?
    - Rental data collected is price paid by renter and does NOT include direct payments by local, state, or fed. agencies
    - Collects rental info about electric, gas, water, furniture, etc.
    - Expenses associated with acquisition are measured as well as ownership costs (including additional optional payments made).

Consumer Expenditures Survey

- **Food expenses** consist of food and nonalcoholic beverages purchased at grocery, convenience, and specialty stores, including purchases with Supplemental Nutrition Assistance Program (formerly called the Food Stamp Program) benefits; dining at restaurants; and household expenditures on school meals.

Consumer Expenditures Survey

- **Transportation expenses** consist of the monthly payments on vehicle loans, down payments, gasoline and motor oil, maintenance and repairs, insurance, and public transportation (including airline fares).

- **Clothing expenses** consist of children's apparel such as diapers, shirts, pants, dresses, and suits; footwear; and clothing services such as dry cleaning, alterations, and repair.

Consumer Expenditures Survey

- **Health care expenses** consist of medical and dental services not covered by insurance, prescription drugs and medical supplies not covered by insurance, and health insurance premiums not paid by an employer or other organization. Medical services include those related to physical and mental health.

Consumer Expenditures Survey

- **Child care and education expenses** consist of day care tuition and supplies; baby-sitting; and elementary and high school tuition, books, fees, and supplies. Books, fees, and supplies may be for private or public schools.

- **Miscellaneous expenses** consist of personal care items (haircuts, toothbrushes, etc.), entertainment (portable media players, sports equipment, televisions, computers, etc.), and reading materials (nonschool books, magazines, etc)

Consumer Expenditures Survey

- The CE collects child-specific expenditure data for clothing, child care, and education
  - In this category, expenses can be directly attributed to a household member, rather than to the household generally

Consumer Price Index (CPI)

- What is it?
- The CPI measures changes in the price level of a market basket of consumer goods and services purchased by households.
- There are multiple indexes (for example, regional indexes, or indexes specific to a type of good/service).
- All Items CPI for All Urban Consumers less Food and Energy is often what is meant in reference to "the core CPI."

Consumer Price Index

- For example: According to the Federal Bureau of Labor Statistics (BLS), the Consumer Price Index (CPI) shows a 30.4% increase in food prices 2002 – 2015

Year	Change
2002	1.8%
2003	2.2%
2004	3.8%
2005	1.9%
2006	1.7%
2007	4.2%
2008	6.4%
2009	-2.4%
2010	0.3%
2011	4.8%
2012	1.3%
2013	1.1%
2014	3.7%
2015	-0.4%
TOTAL	**30.4%**

Change in Food Prices 2002 - 2015
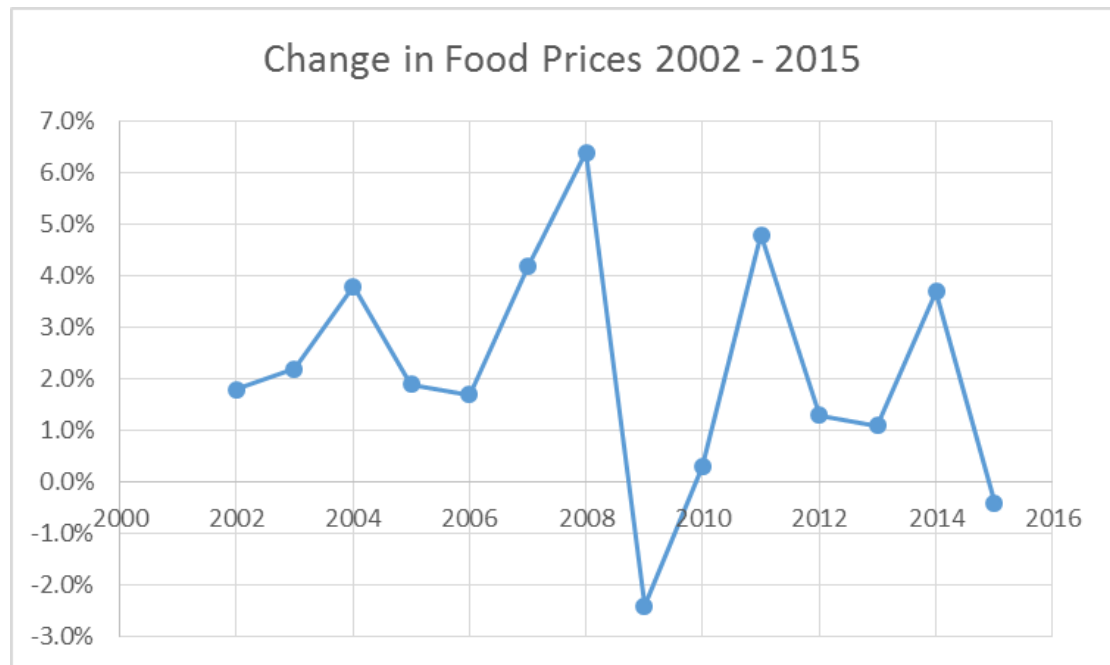
What to do with all the data?

Translating Data to Guidelines
Economic Models

- There is no agreement about what methodology is best or most accurate.

- There IS general agreement on which methodologies understate and overstate actual child-rearing expenditures.

- Guideline amounts between the lower and upper bounds of credible measurements of child-rearing expenditures are considered appropriate.

Translating Data to Guidelines
Economic Models

- States using the same guideline model rarely yield similar amounts for the same case circumstances for various reasons, including:
  - States use different studies of child-rearing measurements as the base of their schedules
  - States apply price levels and tax rates from different years
  - States make different assumptions regarding the impact parenting time has on base support
  - States vary in their treatment of adjustments for low-income parents
  - States update their guidelines to reflect changing economic data with differing frequency

Translating Data to Guidelines
Economic Models

- USDA: Used only by Minnesota

- Comanor

- Engel: Minority of States

- Betson-Rothbarth: Used by 30 states

Generally, states consider Engel estimates to be the upper bound and Betson-Rothbarth (BR) to be the lower bound for guideline determination. USDA falls between. Comanor is lowest estimate, falling below Betson-Rothbarth.

What are the USDA Costs for Child-Rearing?

- The USDA produces estimates for the cost of raising a child based upon 3 broad income ranges, and geographical region
  - See: **http://www.cnpp.usda.gov/tools/CRC_Calculator/**

- USDA estimates child-rearing expenditures for:
  - Housing
  - Food
  - Transportation
  - Clothing
  - Health care
  - Child care
  - Education
  - Miscellaneous goods and services

USDA Costs for Child-Rearing Current Calculations

- The USDA issues an annual report. There are some variation from year to year on how items are calculated.

- The USDA uses the CPI to determine costs in dollars for years different from the year in which the CE data was compiled
  - For example, the 2013 report on expenditures is based upon the 2005-06 CE, updated by the CPI to reflect 2013 dollars

- The most recent calculations from the USDA are discussed in the USDA report: ***Expenditures on Children by Families, 2013***
  - https://www.cnpp.usda.gov/sites/default/files/expenditures_on_children_by_families/crc2013.pdf

USDA Costs for Child-Rearing

- The USDA estimates costs using multiple methods

  - Costs for child care, education, and child's clothing are each individually measured.

  - Costs for transportation and miscellaneous goods and services are measured by dividing the cost by the number of family members (*per capita*)

  - Food and healthcare costs are allocated to children based on findings from various surveys (differs by year.)

USDA Costs for Child-Rearing

- The USDA estimates costs using multiple methods
  - Housing costs have been measured per capita, but are now measured using the average cost of an extra bedroom.
    - The USDA believes this to be a conservative estimate as it does not account for parents seeking housing in certain school districts, larger yard, playroom, etc.
    - Did not use a comparison to comparable no-child households because comparable households are difficult to find. (many are either empty nesters, or younger couples who may be anticipating/preparing for children).

The USDA Approach in MN

- No guideline for base support was needed when child support was determined as a share of the obligor's net income (Minnesota's pre-2007 child support determination method)
- The enactment of an income shares/shared responsibility child support model in 2005 required adoption of a guideline for base support
  - The income shares model and base support guideline became effective on January 1, 2007

The USDA Approach in MN

- In 2001, DHS introduced legislation to implement a shared income method for calculating child support. (See HF 1500/SF 1364.) That legislation used USDA cost estimates, without adjustment, to determine the base support guideline. It did not pass.

- To create the 2001 legislation, the USDA provided technical assistance, and created a schedule that:
  - Determined base child support in $100 gross income increments
  - Used modified USDA estimates for urban and suburban Midwest. Known modifications included:
    - Use of marginal cost for housing because *per capita* calculation overestimates the expense
    - Did not include child care, health care, and education costs

The USDA Approach in MN

- When income shares was enacted in 2005, the legislature determined it was appropriate to use a modified version of the USDA guideline provided for the 2001 legislation

- Minnesota was the first state to use USDA costs as a basis for child support guidelines

- Legislature asked DHS to seek professional review of the guidelines to ensure they were appropriate

The USDA Approach in MN

- Guideline for basic support was reviewed by Dr. Jane C. Venohr, then of Policy Studies Inc.
- Dr. Venohr concluded that Minnesota's guidelines scheduled for implementation on 1/1/2007 were within widely accepted ranges for the costs of child rearing, except:

  1. at lower incomes guideline was below lowest cost estimates,
  2. at middle incomes, guideline was below lowest estimates for one child, and
  3. at high incomes, the guideline was above the upper bound of cost estimates.

USDA Costs for Child-Rearing

- The report was submitted to DHS in December, 2005

- In 2006, the legislature made revisions to the guidelines as suggested by Dr. Venohr, and negotiated among legislators

- The guidelines have not been updated to reflect changes in costs that have occurred since 2001

Translating Data to Guidelines
Economic Models

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- Engel: Minority of states

- Betson-Rothbarth: Used by 30 states

Comanor et al.

- Like USDA, examines each budgetary category, then adds them to get final cost.

- Rejects the standard of living comparison advocated in Engel and Rothbarth methods

- Measures only the expenditures directly attributable to children

- Considers that expenditures attributable to children go up with income

Comanor et al.

$70,000 $70,000
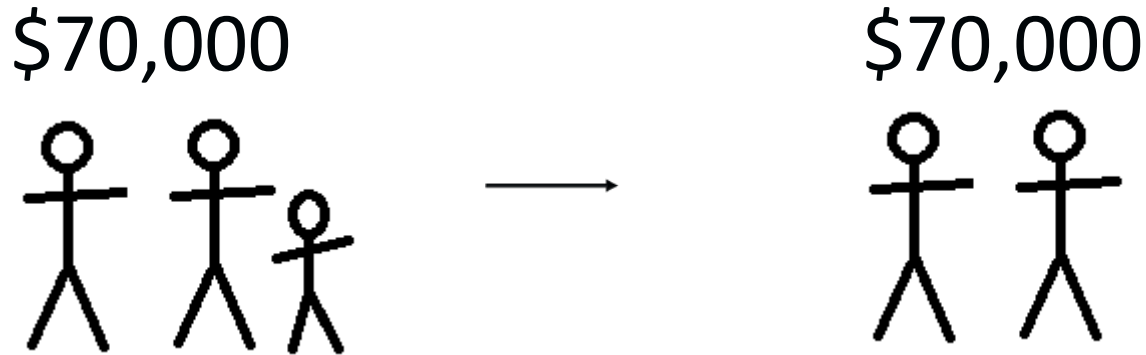
How much did spending increase in each category when a child is introduced ?

Comanor et al.

$70,000 $70,000
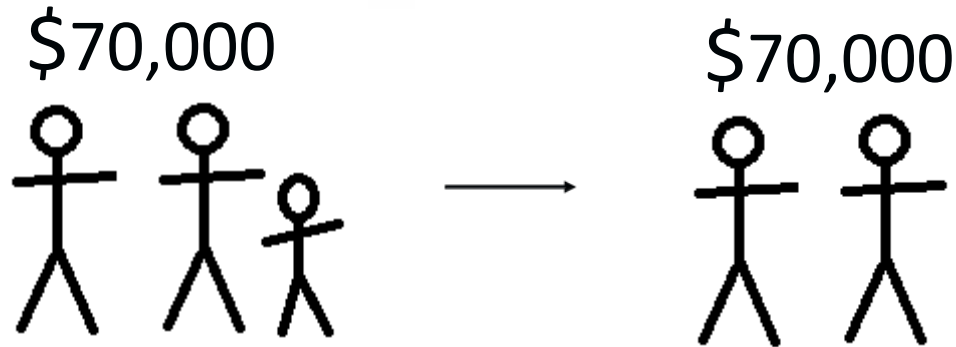
Food	600	500
Transportation	600	600
Housing	1300	1200
Clothing Adult	~~2,000~~	~~2,500~~
Clothing Child	50	0
Total	2550	2300

2550 – 2300 = $250/month attributable to children for above expense categories.

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Engel Method

- Theory first introduced by Ernst Engel in the 1800's. Later used by Thomas Espenshade in the 1980's and formed the basis of guidelines when states began switching to income share models.

- Both Engel and Rothbarth examine how parents reallocate consumption to make room for a child.

- Compare "equally well off" families with and without children. To do this, must hold standard of living constant (as opposed to income or overall spending).

Engel Method

$70,000 $70,000

$$\neq$$
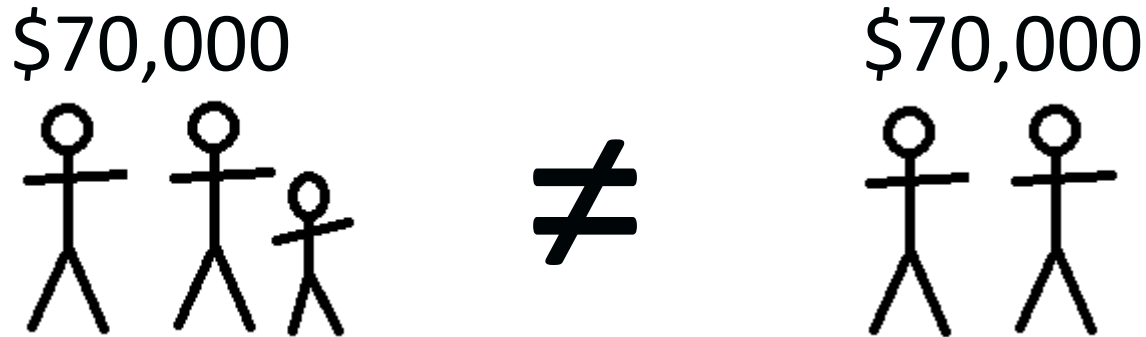
All else being equal, which family is more well off?

Engel Method

$??,??? = $70,000
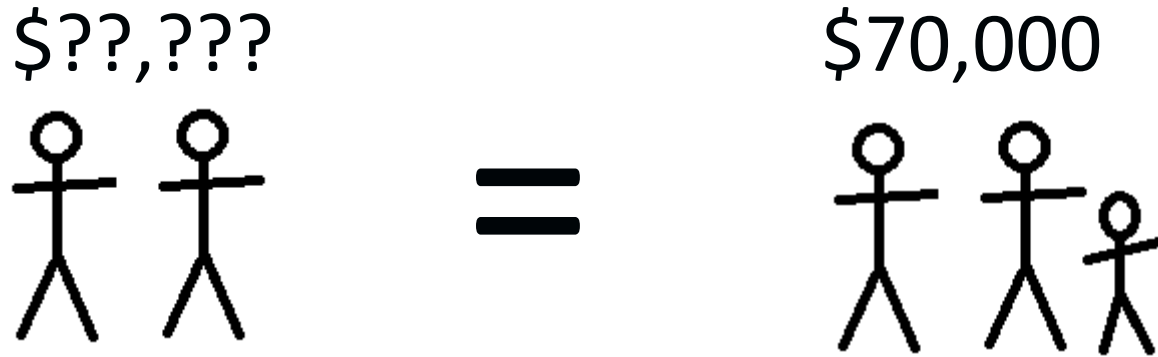
The Engel (and Rothbarth) methods try to compare families with the same standard of living. The difference between the total expenditures of the childless couple and the couple with the child represent the cost of the child.

Engel Method

- Food! The perfect proxy? It is:

  1. Observable

  2. Used by every family

  3. Food spending increases with overall spending (is an indicator of increased standard of living)

Engel Method

- Engel found an inverse relationship between food shares (percent of overall spending that is spent on food) and standard of living.
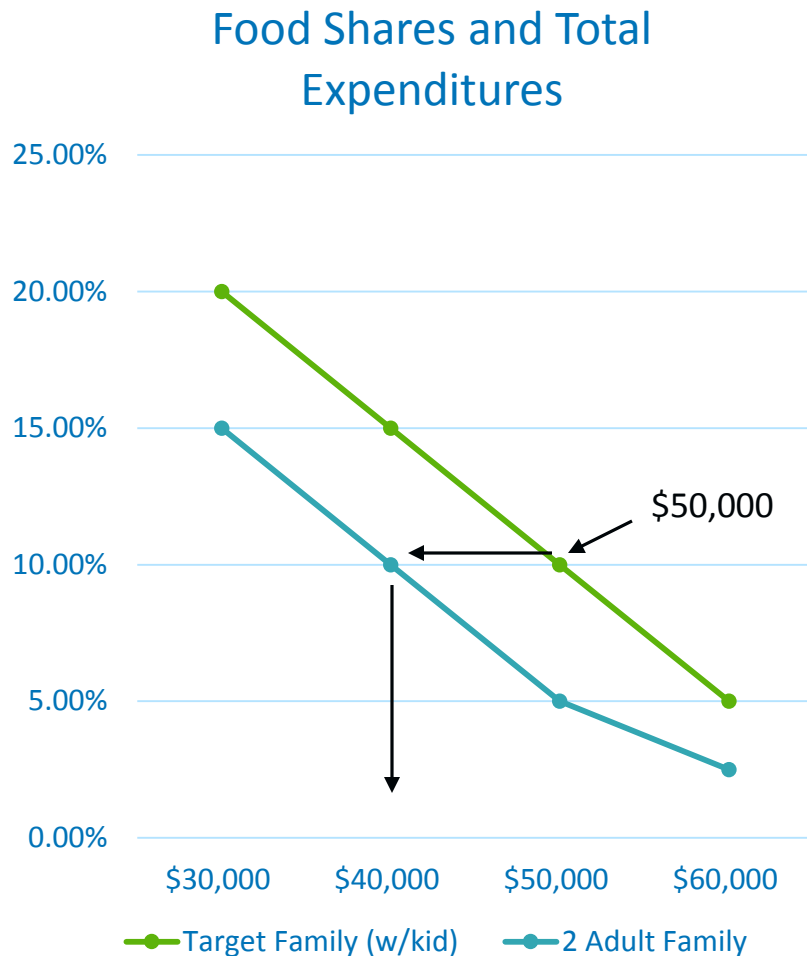
Food Spending as % of Total
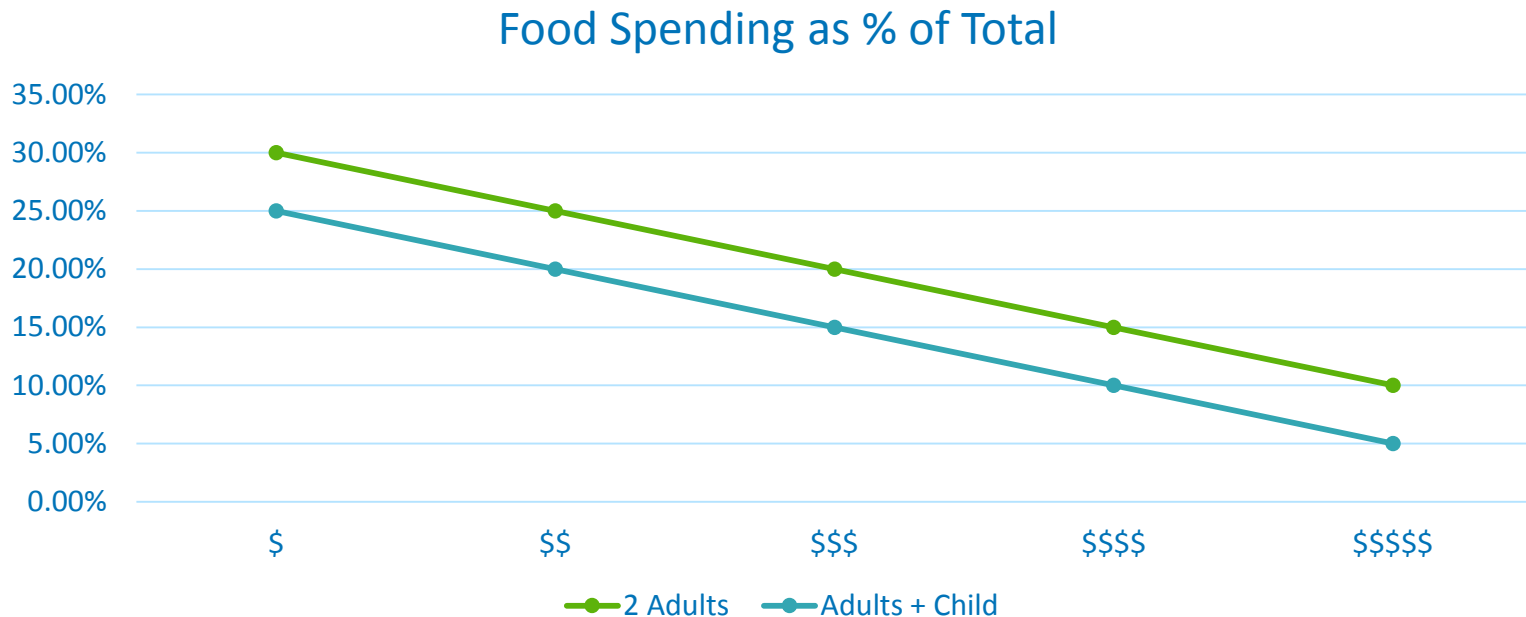
Patterns in Food Spending

Food Spending as % of Total

Chart Title
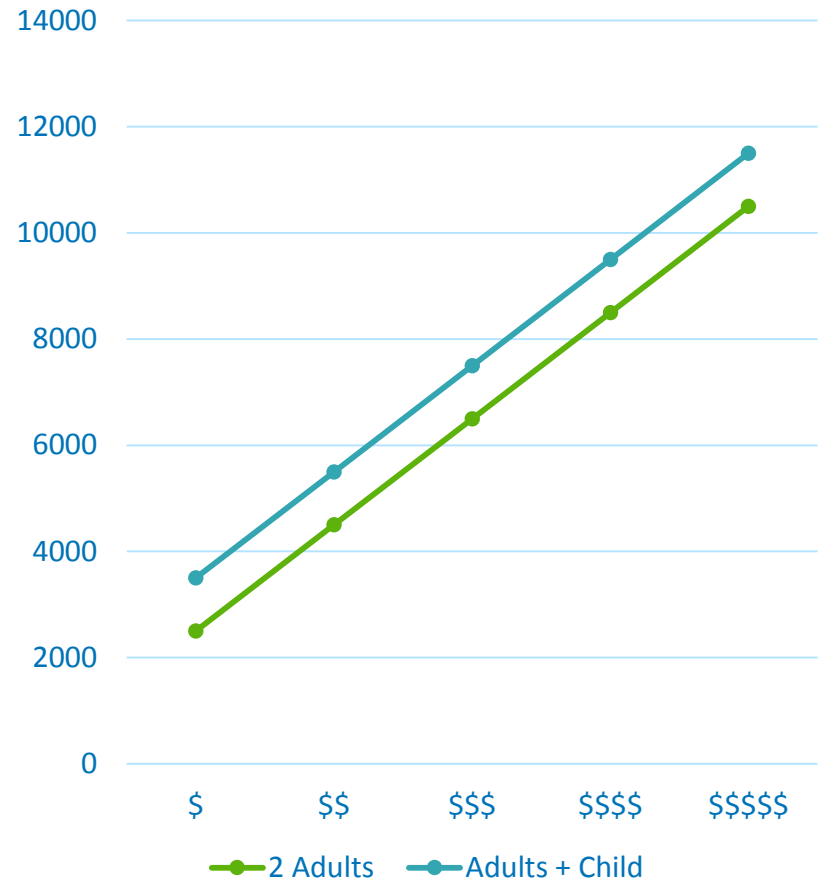
Translate Into Cost of Raising Child

Food Shares and Total Expenditures

1) Identify income of target family.

2) Find no-child family with the same food share. These two families are "equally well off."

3) Subtract income of target family from that of childless family. Divide by target income

Translate Into Cost of Raising Child

Food Shares and Total Expenditures (for illustration only!)
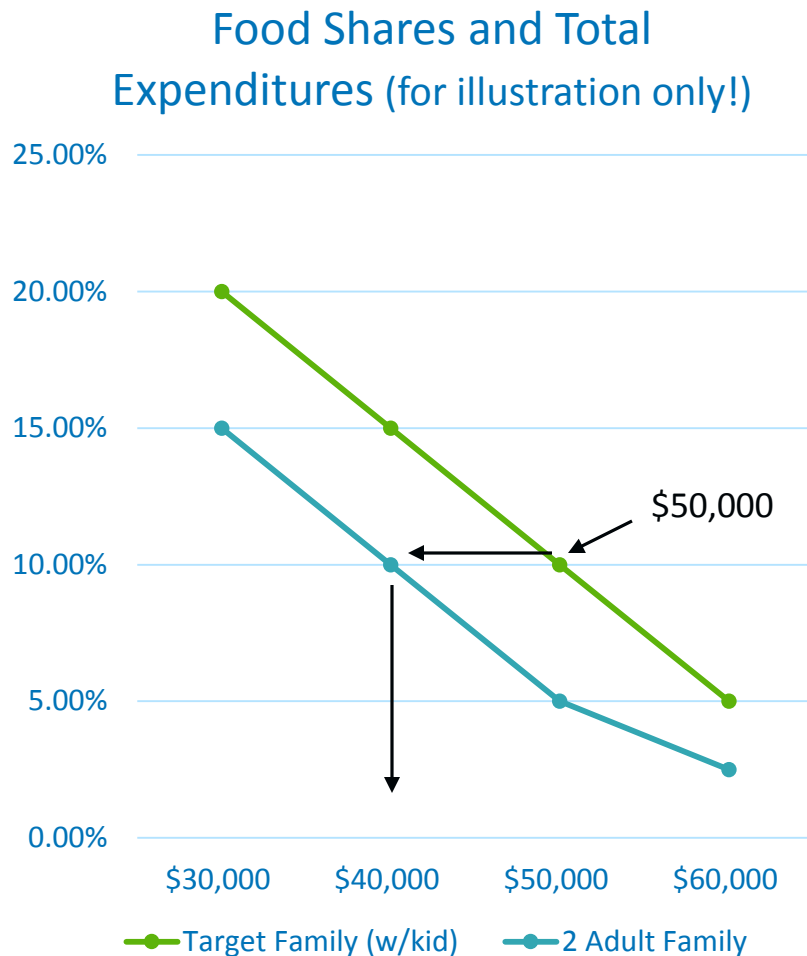
Subtract income of target family from that of childless family. Divide by target income.

$$\frac{\$50,000 - \$40,000}{\$50,000} = 0.2$$

Using this method, costs of raising one child in the 2 parent household would be 20% of overall expenditures.

Engel Method

- The **Engel method** produces the highest results because it measures the cost of raising children based on the marginal consumption of food by a household with children versus a household without children.

- Since children's food consumption is a higher percentage of their overall consumption than adults, a child's addition to a household is likely to increase the percentage of consumption going to food more than it increases the percentage of overall household consumption.

- The Engel method tends to produce the highest results.

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The Betson-Rothbarth Model

- Developed by David M. Betson, Ph.D., a professor at the University of Notre Dame

- The BR piggy backs off of Engel, but attempts to find a better proxy for standard of living

- There are four different BR calculations, each based upon economic data from different periods of time

- Theorizes that parents must make room for the consumption of children by reducing their own purchases
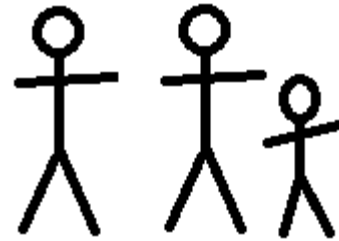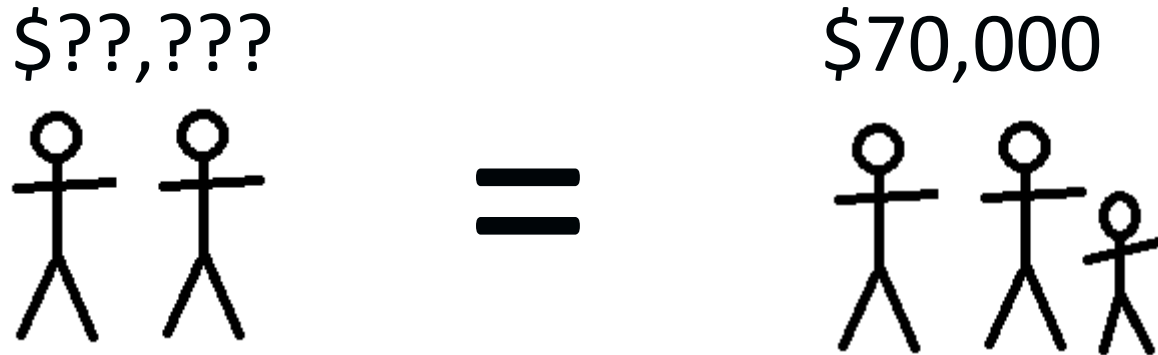
Rothbarth Method

$70,000   ≠ $70,000
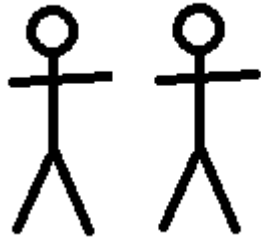
All else being equal, which family is more well off?

Rothbarth Method

$??,??? = $70,000

Like Engel, compares expenditures of two sets of equally well-off households: one set consists of two-parent families with children and the other consists of couples without children.

Differences in spending attributed to child costs.

The Betson-Rothbarth Model

- What is the proxy for standard of living?

- Relies on the percentage of total expenditures devoted to adult goods to determine if families are equally well-off. Specifically, Betson looks to adult clothing.
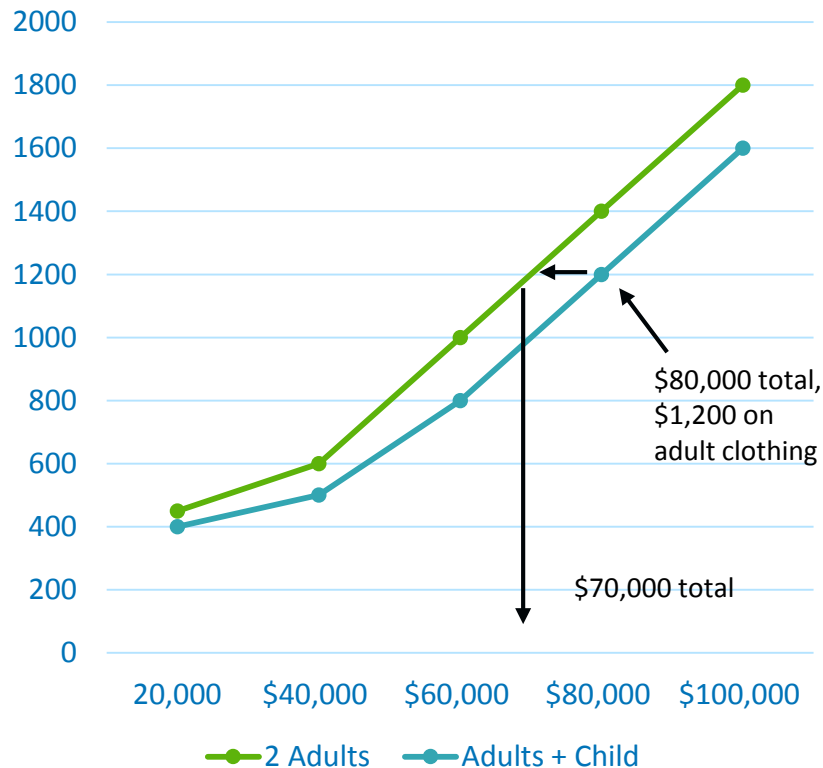
The Betson-Rothbarth Method

Adult Clothing Expenditures (for illustration only)

$80,000 total, $1,200 on adult clothing

$70,000 total

— 2 Adults — Adults + Child
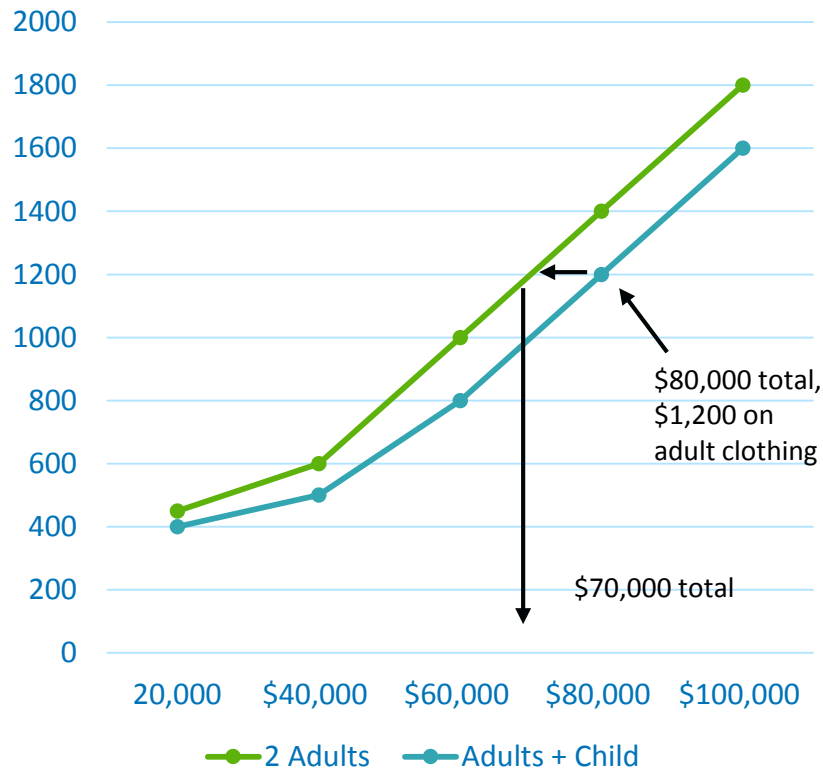
1) Identify income of target family.

2) Find no-child family with the same adult clo. These two families are "equally well off."

3) Subtract income of target family from that of childless family. Divide by target income

The Betson-Rothbarth Method

Adult Clothing Expenditures (for illustration only)

Subtract income of target family from that of childless family. Divide by target income

$$\frac{\$80,000 - \$70,000}{\$80,000} = .125$$

In this case, the cost of raising the child is estimated to be 12.5% of total expenditures, or $10,000/year.

The Betson-Rothbarth Model

- The most recent BR estimates found expenditures on child rearing to be an average of:
  - 27 percent for one child families
  - 37 percent for two child families
  - 45 percent for four child families
- When converted to a percentage of net or gross income, the share of income spent on children declines as income increases
  - Higher-income families do not spend all of their income and pay higher effective tax rates

Roadmap: For the future

Approaches to Child Support

1) Melson
2) Percentage income
3) Income Shares (require base support guideline amounts)
4) Other?

Available Data

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2) CPI
3) Other?

Economic Models for Estimating Costs

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5) Other?