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Cost of Raising Children and Expenditures on Children

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INTRODUCTION

This report is intended to serve as input into a review of the child support guidelines for the state of Wisconsin. This brief considers the costs of raising children, accounting for recent advances in cost estimation in the literature and adjustments in market prices faced by parents and caregivers. These estimated costs are also examined in relation to the current guidelines for the state of Wisconsin.

Wisconsin is one of nine states that apply a percentage-of-income standard, wherein only the income of the obligated parent is considered in child support calculations. The more common method of estimating support is the income-shares approach (used by thirty-nine states) which considers both parents' income in support calculations. These different standards appear to result in more than trivial differences in order amounts specified by state guidelines. Venohr (2017) noted statistically significant differences in guideline amounts between income-shares and percentage-of-income states. Specifically, Venohr noted that average estimated guideline amounts for low-income households were higher in income-shares states compared with percentage-of-income states whereas the opposite was true when high income households were analyzed. This is due largely to the fact that the income-shares approach assumes that a declining percentage of income is devoted to child rearing as income increases, and because the income-shares approach recognizes the contributions of both parents.

ESTIMATING THE COST OF CHILDREN

Whereas the cost of children can be broadly explored, accounting for experts' assessments of basic needs and market valuation of goods and services to fulfill those needs,

policy estimates tend to focus on observed behavior with an emphasis on what families spend on children. This report applies the observed behavior approach, and considers the most recent data available on what consumers spend on children. This approach accounts for the fact that household expenditures are not only a reflection of tastes, but also of available resources. A central caveat to consider with regard to Wisconsin policy is the guiding principle of continuity of expenditure, which essentially means that a child's standard of living should not change significantly simply because his or her parents are no longer living together. Thus, the cost of children for the purpose of this report is based on expenditures on children in married-couple households.

The cost of raising children can be a challenging topic to consider, as not all costs are directly measurable.[1] Whereas there are numerous competing approaches for cost measurement, most methods are reliant to some degree on a marginal cost approach. The marginal cost approach measures expenditures on children as the difference in expenses between a family with children and an equivalent family with no children or between households with different numbers of children (e.g. a two-child household versus a three-child household). Two marginal cost approaches that have been used most commonly are the Engel and Rothbarth methods (See Bassi and Barnow, 1993 for a detailed overview of these approaches). Economic models such as the Engel method place an emphasis on food consumption, as food expenditures necessarily increase with family size. Alternatively, the Rothbarth method focuses on expenditures on luxury goods (e.g. alcohol, tobacco, entertainment, and sweets) along with savings levels.

[1]Examples of indirect costs of raising children include time costs and foregone earnings or career opportunities, among other possible costs.

Both approaches are limited, however, as they fail to effectively account for economies of scale (bulk discounts may apply when larger quantities of food are purchased) or substitutability of goods (i.e. households can begin to purchase larger quantities of cheaper goods or alter spending within categories of goods). Further, these approaches are often not applied as true marginal cost approaches in the literature. Studies using these methods tend to compare expenditures across different households (those with children versus those without), and they fail to examine the real change in household expenditures resulting from having a child in the home. A review of the literature on the application of these two methods also reveals that expenditure estimates vary greatly from one study to the next (Lino et al., 2017). For a married-couple household with two children, the Engel estimates ranged from a low of 31 percent of income spent on children to a high of 44 percent, whereas the Rothbarth estimates ranged from a low of 36 percent to a high of 47 percent, thus bringing the consistency of these measures into question.

More recent estimates published by the United States Department of Agriculture (USDA) use data from the Consumer Expenditure Survey (CE). The CE provides detailed data for direct expenditures on children (child-specific expenditures) as well as overall household expenditures which may be attributed proportionally to different members of the family. This is an important limitation to consider as methods to generate proportional costs may vary greatly. The most recent estimates based on CE data were published in 2017 and reflect consumer expenditures on children in 2015 dollars (Lino et al., 2017).[2] Estimates are provided for families in five different geographic regions, for six different age ranges of children, at three income levels. The report additionally makes distinctions between single-parent and married-couple families. As noted

[2]CE data are adjusted for inflation using the Consumer Price Index- All Urban Consumers (CPI-U)

above, the present report uses only those data provided for married-couple families based on the state of Wisconsin standard of continuity of expenditure.

Overall the CE data consider child living and care expenses falling within seven distinct categories: housing, food, transportation, clothing, health care, childcare and education, and miscellaneous. Of these categories, only the categories of clothing and childcare/education were collected as child-specific data. All other categories are expenditure totals for the household, and require some estimation of what percentage might be applied to a child or children in the home. We highlight estimated total expenditures for married-couple[3] families in the urban Midwest and rural areas (all regions) in Appendix A Table 1 of the Appendix. As noted in Appendix A Table 1, urban households generally report higher expenditures compared to those in rural areas. In addition, expenditures generally increase as children age, with the highest expenditures occurring among children aged 15 to 17. Expenditures also increase directly with household income, though percentage of income dedicated to child expenses declines as income increases (See Appendix A Table 2). As noted in Appendix A Table 2, a low-income, urban family spends an average of 25 percent of their income on child expenses, whereas a high-income, urban family only spends an average of 11.4 percent of their income even though the absolute dollars spent by the high-income household are on average more than double the amount spent by low-income households. Any state policy related to child support orders should account for the high fixed costs of having children in the home. In addition, policymakers should consider how best to structure orders in cases where parents maintain joint custody, which is increasingly common in Wisconsin and many other states (Cancian et al., 2014; Chandler, 2017).

[3]Estimated expenditures are higher in married-couple households compared to single-parent households.

From an expenditure standpoint, it is also important to account for variations in the number of children in the household. Based on data from the USDA, we generated estimates for the percentage of income spent on children in 2015 for Midwestern households[4] with up to 5 children (Table 1). Estimated expenditures are adjusted based on the general findings that married-couple households with two children tend to spend about 21 percent less on each child compared to similar households with one child. For three or more children, the findings suggest that married-couple households spend about 24 percent less per child than the per-child expenditure in a two-child family. It should be noted that the USDA estimates apply a constant expenditure factor for each additional child in households with three or more children.

Table 1. Percentage of Income Spent on Children

	Number of Children				
	One	Two	Three	Four	Five
Consumer expenditure data					
All children	17.1%	26.9%	30.7%	41.0%	51.2%
Per child	17.1	13.5	10.2	10.2	10.2
Wisconsin Guidelines					
All children	17.0%	25.0%	29.0%	31.0%	34.0%
Per child	17.0	12.5	9.7	7.8	6.8

Note: These percentage estimates can be determined via multiple methods. An alternative approach is provided in Appendix A Table 3. Additionally, an explanation of the calculations for Tables 1 and 3 of Appendix A is provided in Appendix B.

Table 1 highlights the expenditures of consumers in the Midwest relative to the guidelines outlined by the state of Wisconsin. For households with three children or less it appears that the guidelines are an accurate reflection of expenditures realized by households. However, because Wisconsin guidelines use lower per-child percentages for households with

[4]For Table 1, percentage of income reflects the average expenditures for all households in the urban Midwest or any rural region.

four or five children and the CE data calculate an average for all households with more than three children, the Wisconsin guidelines are significantly lower for households with four or five than observed expenditures for these households based on the CE data. The researchers who compiled the CE report note that a clear majority of households in the United States have 3 children or fewer, thus they collapse households with 3 or more children into a single category (Lino et al., 2017). Appendix A Table 3 highlights a different approach for generating estimated percentage of income spent on children; with this alternate approach, the Wisconsin guidelines are below estimated expenditures for all household scenarios. Note that the estimates from Appendix A Table 3 are also closer to the USDA estimates for all households in the United States (2015 dollars), and that the USDA estimates include Northeastern and Western regions where expenses tend to be higher.

Establishing guidelines for child support is no easy task, and any measure of need or expenditures has some necessary limitations. Many costs associated with raising children are not easy to measure directly (e.g. costs of living in a more desirable school zone, opportunity costs related to work force participation, etc.), and in other cases expenditures are a subjective choice (e.g. whether to invest in enrichment activities or extra educational opportunities). The current data (Table 1) suggest that Wisconsin guidelines may provide a reasonable portrayal of parental spending behavior for families with three children or fewer (although alternative estimates from Appendix A Table 3 indicate a potential underestimation for household expenditures). The Wisconsin guidelines are intended to establish a minimum level of support from each parent, and under that standard the current guidelines may be effective. It should be noted that observed parental spending is but one of many factors to consider when establishing appropriate support guidelines.

Special Consideration: Costs of Childcare

One notable cost of raising children that has continued to see tremendous growth is the cost of childcare. Zandi and Koropeckyj (2019) provided an overview of this growth, noting that childcare cost increases have outpaced inflation and effectively doubled over the past two decades. Some of this growth may be attributed to the costs of high-quality, center-based care, which equates to roughly $800 per month in the state of Wisconsin (Wisconsin Department of Children and Families). It is worth noting that over half of the households surveyed for the CE reported no expenditures for this category, and that the percentage of households that did report such expenditures varied significantly by income. Lower income households often seek alternatives due to the high cost of professional care. Roughly a quarter of lower income respondents indicated paying childcare and/or education expenses, whereas over half of higher income households reported these expenditures. To the extent that childcare expenditures are a consideration in a child support decision, the state may consider adjustments in cases where informal or family care is provided versus center-based care.

APPENDIX A. ADDITIONAL TABLES

Appendix A Table 1 .Estimates Annual Expenditures on a Child, Married-Couple Families

	Urban Midwest			Rural		
Age of Child	Income < $59,200	Income $59,200 to $107,400	Income > $107,400	Income < $59,200	Income $59,200 to $107,400	Income > $107,400
0–2	$9,460	$12,370	$19,310	$8,000	$10,380	$14,940
3–5	$9,460	$12,420	$19,320	$8,020	$10,440	$14,970
6–8	$9,060	$12,030	$18,900	$7,650	$10,090	$14,600
9–11	$9,690	$12,830	$20,200	$8,270	$10,880	$15,880
12–14	$9,310	$12,680	$20,540	$8,200	$10,960	$15,970
15–17	$9,660	$13,470	$22,730	$8,630	$11,590	$17,000

Source: Lino et al. (2017), Appendix Tables 4 and 6.

Appendix A Table 2. Estimated Expenditures on a Child for Couple Households as a Percentage of Income

	Urban Midwest			Rural		
Age of Child	Income < $59,200	Income $59,200 to $107,400	Income > $107,400	Income < $59,200	Income $59,200 to $107,400	Income > $107,400
0–2	$9,460	$12,370	$19,310	$8,000	$10,380	$14,940
3–5	$9,460	$12,420	$19,320	$8,020	$10,440	$14,970
6–8	$9,060	$12,030	$18,900	$7,650	$10,090	$14,600
9–11	$9,690	$12,830	$20,200	$8,270	$10,880	$15,880
12–14	$9,310	$12,680	$20,540	$8,200	$10,960	$15,970
15–17	$9,660	$13,470	$22,730	$8,630	$11,590	$17,000
Average	$9,440	$12,633	$20,167	$8,128	$10,723	$15,560
Average Income	$37,600	$81,700	$177,300	$36,100	$79,500	$156,800
Average Expenditure as a percentage of Income	25.1%	15.5%	11.4%	22.5%	13.5%	9.9%

Source: Modified from Lino et al. (2017), Appendix Tables 4 and 6.

Appendix A Table 3. Percentage of Income Spent on Children (Alternative Method)

	Number of Children				
	One	Two	Three	Four	Five
Consumer expenditure data					
All children	20.7%	32.6%	37.2%	49.6%	62.0%
Per child	20.7	16.3	12.4	12.4	12.4
Wisconsin Guidelines					
All children	17.0%	25.0%	29.0%	31.0%	34.0%
Per child	17.0	12.5	9.7	7.8	6.8

APPENDIX B. EXPLANATION OF CALCULATIONS

The USDA estimates presented in Table 1 were developed based on the following calculations:

Step 1. Calculate average household income (Midwest urban and all rural regions)

	Urban	Rural
Low Income (average)	$37,600	$36,100
Middle Income (average)	$81,700	$79,500
High Income (average)	$177,300	$156,800
Average Across Income Levels	$98,867	$90,800
Average Income (Urban and Rural)	$94,833	

Step 2. Calculate average expenditures per child (urban Midwest and rural regions)

Using the average expenditure figures from Appendix A Table 2 (averages are generated for income level and urban versus rural), the average amount spent on a single child is $12,775. USDA estimates suggest that expenditures for a single child should be adjusted upward by 27 percent, with no adjustment for a two-child family, and a downward adjustment for families with three or more children. Adjusted expenditures based on number of children are calculated in the table below:

Number of Children	Average Cost	Adjusted Cost	Expenditures as a Percent of Average Income ($94,833)
1	$12,775	$12,775*1.27 = $16,224.6	17.1%
2	$25,551	NA	26.9%
3	$38,326	$38,326*0.76 = $29,127.6	30.7%
4	$51,101	$51,101*0.76 = $38,836.8	41%
5	$63,876	$63,876*0.76 = $48,546	51.2%

The USDA estimates presented in Appendix A Table 3 were developed based on the following calculations:

Step 1: Calculate average percentage of income spent by households (Midwest urban and all rural regions). These data are provided in the last row of Appendix A Table 2. On average, urban households spent 17.3 percent of their income on child expenses whereas rural households spent 15.3 percent of their income on child expenses. The average expenditures overall (urban and rural) would thus be about 16.3 percent.

Step 2: Calculate percentage of income spent per child based on recommended USDA adjustments (detailed in step 2 above). These percentages are calculated in the table below:

Number of Children	Percentage of Income Spent	Adjusted Percent
1	16.3%	16.3*1.27 = 20.7%
2	32.6%	32.6%
3	48.9%	48.9%*0.76 = 37.2%
4	65.2%	65.2%*0.76 = 49.6%
5	81.5%	81.5%*0.76 = 62%

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