Economic Review of the Massachusetts Child Support Guidelines

Submitted to:

Commonwealth of Massachusetts
Office of Court Management

Child Support Guidelines Task Force

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I. EXECUTIVE SUMMARY

The Commonwealth of Massachusetts Office of the Chief Justice of the Trial Court asked us to provide analysis for the 2012 Massachusetts Child Support Task Force on economic issues as they relate to the current Massachusetts Child Support Guidelines, effective January 1, 2009.

Child support amounts under the Guidelines are presumptive in the absence of specific findings to the contrary. Therefore, it is important to continually evaluate both the structure and results of the Guidelines relative to fundamental economic principles and standard economic benchmarks.

Most states base their child support guidelines, to some extent, on specific economic studies. However, the most widely used studies do not measure actual direct spending on children and are based on national data. Most child costs are not directly observable, but rather are indirect costs shared by adults and children in a household, such as housing and food. Therefore, the available economic data are estimates with theoretical and practical limitations, and the resulting child cost estimates are informative and important to consider, but they are not determinative.

The current Massachusetts Guidelines are based, in part, on a review by a prior Task Force of so-called Income Shares estimates. The Income Shares approach uses a child's share of a household's combined income to measure child costs. The term "income shares" refers to the share of household income required to cover child-related costs in a household, not the sharing of those costs between parents. This report explains both the Income Shares approach in theory and the empirical methodology used to implement it in practice. The report also discusses other approaches used to estimate child costs, as well as child cost benchmarks.

Specifically, we compare the current Massachusetts Guidelines amounts to three estimates of child costs as benchmarks: (1) current estimates using the Income Shares approach, (2) estimates from the U.S. Department of Agriculture (USDA), and (3) guidelines amounts in the five neighboring states (Connecticut, New Hampshire, New York, Rhode Island and Vermont). First, we compare the

Guidelines amounts for one child to each of the benchmarks, and then we compare the amounts for two and three children.[1] We find the current Guidelines amounts for one child are lower than the benchmark amounts at the very low-income range and are higher than the benchmarks, to varying degrees, as income increases.

Over the full range of incomes in the Massachusetts Guidelines Chart, the combined child support amounts for one child range from $18 per week to $915 per week, and are $295 per week at the current Massachusetts median income level. By comparison, current Income Shares estimates of child costs, excluding child care and extraordinary medical expenses, range from $24 per week at the lowest income levels to $342 at the highest income levels, and are $185 per week at median household income. So the Massachusetts Guidelines amounts, while lower than the Income Shares estimates at very low incomes (less than $165 per week), are higher at middle and high incomes. For two and three children, the same is true at incomes above $342 per week and $774 per week, respectively. While the combined amounts from the Guidelines Chart are the right basis of comparison to the Income Shares estimates, how much of the combined amount ultimately becomes a payor's child support obligation in Massachusetts depends on the payor's relative share of combined available income.

Likewise, the current Guidelines amounts for one, two, and three children are lower than or equivalent to the USDA national estimates at low incomes and higher at middle and high incomes, both in dollars and as a percentage of income. The USDA estimates of child costs for one child, again excluding child care and health care costs, range, by income level, from $175 to $373 per week for married households, and from $168 to $328 per week for single-headed households, averaging $256 per week. For the same income groups, the current Guidelines amounts are lower than USDA at low incomes and higher than USDA at middle and high incomes. The corresponding

[1] Our comparisons stop at three children due to data limitations. For example, the standard benchmarks have sample sizes that are statistically valid only up to three children, and USDA estimates are available only up to three children.

USDA estimates for the Northeast U.S. are 10 percent higher, ranging from $193 to $410 per week, and averaging $286 per week, for married households with one child. As with the national USDA estimates, the current Guidelines amounts are lower or equivalent at low incomes and higher at middle and high incomes.

The Massachusetts Guidelines amounts for one child also are higher at most income levels than the five neighboring states (Connecticut, New Hampshire, New York, Rhode Island, and Vermont). Only in cases of very low-income payors (*e.g.,* less than $20,000 per year) paired with middle- to high-income recipients (*e.g.,* $60,000 per year or more) are the Massachusetts amounts sometimes less than neighboring states. Otherwise, the current Guidelines amounts for one child are higher on a state-by-state basis by as little as 8 percent, and by more than 50 percent on average.

For simplicity, most of our comparisons assume no child care costs or health care costs, since the amounts of such costs vary widely across cases and they are handled differently in guidelines across states and in the sources of economic data available for the Task Force to consider as child cost benchmarks. To that extent, our calculations may overstate the differences in child support amounts between Massachusetts and neighboring states. Of all neighboring states, the Guidelines amounts for one child are most similar to New Hampshire: lower by at least 3 percent for low-income payors (*e.g.,* $20,000 per year or less) paired with middle- to high-income recipients (*e.g.,* $60,000 per year or more), and otherwise higher by at least 8 percent over the full range of recipient income.

While the Massachusetts Guidelines amounts for one child are mostly higher than the child cost benchmarks, the adjustment factors for additional children listed in Table B of the Guidelines are lower. These marginal adjustment factors apply some multiple to the Guidelines amounts for one child (from Table A or the Guidelines Chart) in order to account for the additional incremental cost of having an additional child in a household, up to five children in total. The marginal adjustments in the current Guidelines (20 percent for a second child and an additional 6 percent, 4 percent and 2 percent for each additional child) are below the entire range of adjustments for any number of

children and any benchmark. On average, the benchmark marginal adjustments are 47 percent for a second child, and 18 percent, 12 percent, and 13 percent, for each additional child up to five children, or two to six times the Massachusetts adjustments.

As a result, the Massachusetts Guidelines amounts for more than one child are lower than the benchmarks in more cases. They are lower than the Income Shares estimates, for example, at relatively low income levels (*e.g.*, at combined incomes of less than $342 per week for two children, and less than $774 per week for three children). They also are lower than both the USDA national and Northeast estimates at low incomes, but are higher at middle and high incomes. For two children, the Guidelines amounts are 22 and 29 percent lower than USDA national and Northeast estimates, respectively, for the low-income group. For three children, they are 30 and 36 percent lower at low incomes, and within 10 percent at middle incomes. The Guidelines amounts for more than one child are closer to the guidelines amounts in neighboring states, but they are still higher in most cases. The Guidelines amounts are lower than neighboring states for low-income payors paired with high-income recipients and otherwise higher, but by less than the differences in the amounts for one child.

The economic evidence, alone, in the three comparisons we performed does not explain the differences we observe between Massachusetts and each of the child cost benchmarks. However, there is empirical evidence that both incomes and expenses in Massachusetts are relatively high. Median income, as well as all of the largest components of household spending (*e.g.,* housing, child care and education, and health care) are higher in Massachusetts than in the U.S. overall. Median household income (currently $62,859 per year) is 25 percent higher; home ownership costs ($2,042 per month) are 10 percent higher; child care costs for young children ($224 to $288 per week) are 10 to 20 percent higher; and health care costs (*e.g.*, $93 per week for a single premium and $265 per week for a family premium) are 10 to 12 percent higher than the national average. Higher incomes and household costs in Massachusetts might indicate higher child costs as well. Not all households in Massachusetts have higher incomes, however, while all households do face the state's higher

cost of living. Therefore, household costs in Massachusetts may be disproportionately high relative to income for some households. To the extent higher overall costs tend to crowd out spending on other things, certain types of spending on children may be lower. To the extent, however, that higher costs overall in Massachusetts reflect higher child costs, it may be appropriate for the Massachusetts Guidelines amounts also to be higher than some benchmarks. No studies have specifically analyzed whether a higher cost of living crowds out spending on children or whether higher local costs lead to higher child costs.

* * *

II. INTRODUCTION

The 2012 Massachusetts Child Support Task Force formed by the Chief Justice of the Trial Court has asked us to assist as economic consultants in its review of the Massachusetts Child Support Guidelines. As part of its review, the Task Force asked us to provide background, data and analysis on economic issues relating to the Guidelines. This report summarizes that information. In addition to preparing this report, we reviewed and considered comments the Task Force received at a series of public forums. We also attended Task Force meetings in a consulting capacity, where we presented the data and information in this report to the Task Force, responded to questions of an economic nature, and assisted the Task Force in performing calculations over thousands of hypothetical fact patterns under the current Guidelines and alternative formulas and percentage tables.

In order to receive federal funds for child support enforcement, Federal law requires each state to review its child support guidelines at least every four years to assure their application results in appropriate child support amounts.[2] Massachusetts' current Guidelines took effect on January 1, 2009,[3] so the present Task Force review is being done within this federally mandated four-year window. As a matter of economics, this requirement is not a mere formality. It is important for children to have adequate financial support, ideally by both parents in an economically efficient and equitable proportion. Child support amounts under the Guidelines are presumptive in the absence of specific findings explaining why applying the presumptive amount would be unjust or inappropriate in a particular case.[4] Therefore, it is especially important to evaluate both the structure and results of the Guidelines amounts relative to the best available indicators of actual child costs in Massachusetts, and other economic benchmarks on the cost of raising children.

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[2] 42 U.S.C. sec. 667; accord 45 CFR 302.56 (e).

[3] See, Child Support Guidelines, The Commonwealth of Massachusetts Administrative Office of the Trial Court, January 1, 2009 at http://www.mass.gov/courts/childsupport/guidelines.pdf.

[4] 45 CFR 302.56 (f).

Since the amounts under the Guidelines are presumed to be appropriate, there should be a clear relationship between them and the information underlying that presumption (*e.g.,* economic studies, policy principles, *etc*.). An economic presumption should have a sound theoretical and empirical basis that can be evaluated and applied in practice. To that end, in addition to requiring child support guidelines to be reviewed at least every four years, federal law requires guidelines to be developed only after considering economic data on child costs:

> As part of the review of a State's guidelines required under paragraph (e) of this section, a State must consider economic data on the cost of raising children and analyze case data, gathered through sampling or other methods, on the application of, and deviations from the guidelines.[5]

The Task Force asked us to assist it in reviewing and evaluating the available current economic data on child costs. That is the focus of this report. Specifically, we provided the Task Force with data, analysis, and information regarding:

(1) the economic approaches used to estimate child costs;

(2) current estimates of child costs from economic studies and data sources;

(3) how the structure and results of the Guidelines amounts compare to other states, especially states neighboring Massachusetts; and

(4) alternative child support amounts under different formulas and percentage tables for various hypothetical fact patterns, to understand the potential impact of changes to the Guidelines.

This report summarizes the information we provided to the Task Force on each of the first three items listed above. It does not address the fourth item. Based in part on this information, as of the time of writing this report, the Task Force was still preparing its recommendations and report on what, if any, changes to the current Guidelines it recommends. Therefore, this report does not

[5] 45 CFR 302.56 (h).

anticipate or evaluate any specific recommendations of the Task Force. It simply lays out economic principles, facts, and comparisons to help inform any such recommendations.

III. CURRENT MASSACHUSETTS GUIDELINES

The current Massachusetts Guidelines are based on a comprehensive review by a prior Task Force over a two-year period in 2007 and 2008.[6] Its review included detailed examination of the assumptions, principles, and formulas underlying the Guidelines at the time. The Task Force's recommendations resulted in significant changes to the Guidelines for the first time in the 20 years since Massachusetts first revised its initial Guidelines in January 1989.[7] These changes are reflected in the percentages and multipliers listed in Tables A and B on the current Guidelines Worksheet, respectively. Table A on the Worksheet lists the marginal percentages of combined income used to determine the amount of child support for one child as income increases up to $250,000 per year. Each marginal percentage represents the share of incremental combined available income used to calculate the total child support amount. The resulting child support amount thus reflects the income-weighted average of the series of marginal percentages up to the actual amount of combined available income in a particular case. The marginal percentages range in an arc from 21 percent of combined income at the lowest levels, to 26 percent of incremental income (between $321 and $500 per week), and gradually declining to 15 percent at the highest income levels (above $3,500 per week). The resulting effective (*i.e.,* weighted average) percentages range from a minimum of 18 percent of combined income to as high as 25 percent.

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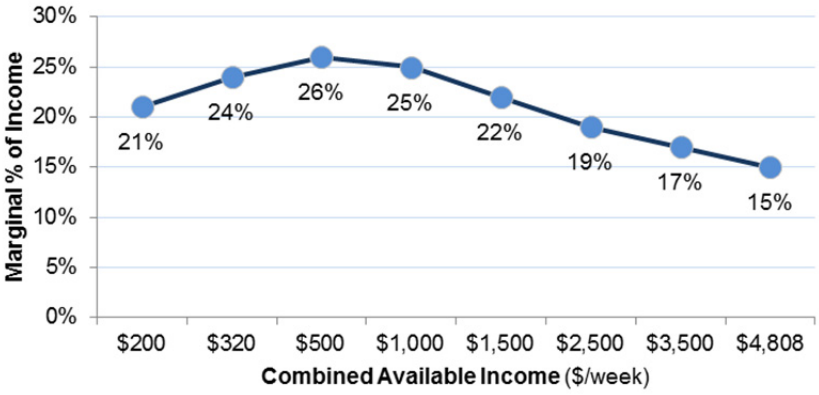
[6] The prior Task Force first met on October 31, 2006. Its review culminated in a detailed report, "Report of the Child Support Guidelines Task Force" (http://www.mass.gov/courts/childsupport/task-force-report.pdf), and a minority report (http://www.mass.gov/courts/childsupport/minority-report.pdf), both in October 2008. Dr. Sarro was a member of the prior Task Force.

[7] Under federal law, (42 U.S.C. sec. 667), each state had to establish advisory child support guidelines by October 1, 1987, and presumptive guidelines by October 13, 1989. Massachusetts issued interim guidelines in May 1987, to which it made minor changes four times (in 1989, 1994, 1998, and 2002). The 2009 Guidelines represented a fundamental shift toward the Income Shares approach described in Section V.

Figure 1 shows the shape of the arc under the current Guidelines. The shape of the arc was intended to reflect the marginal propensity to spend relatively more available income on children as household income increases from low-income levels, but only up to a point. Once outside of the poverty-level income range, child costs represent a decreasing percentage of higher income levels. At the lowest income levels, most consumption covers fixed costs shared by children and adults in a household (*e.g.,* housing, heat, *etc.*). As income increases, to a point, the household is able to spend relatively more on child-specific items, but at higher and higher income levels, marginal child costs represent a smaller share of overall household spending.[8]

Figure 1: Current Guidelines Marginal Income Percentages (1 child)



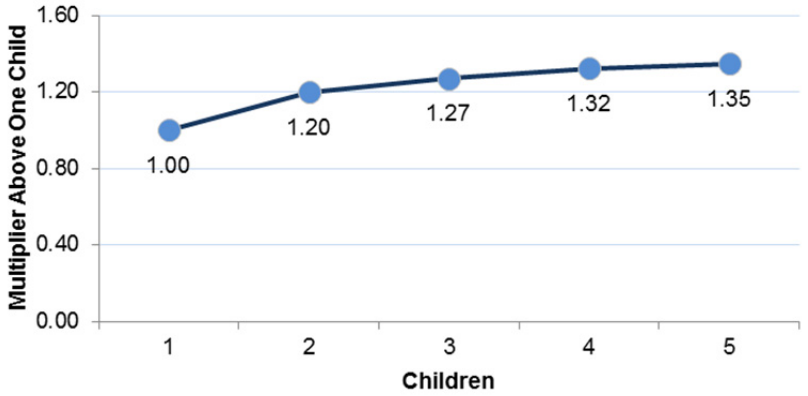
Source: Current (January 2009) Guidelines Worksheet, Table A

Table B on the Worksheet grosses up the Guidelines amount for one child by 20 percent for a second child and by an additional 6 percent, 4 percent and 2 percent for each additional child. These decreasing percentages reflect economies of scale in adding more children to a household and also the household budget constraint. The corresponding adjustment factors for additional children in the current Guidelines are 1.20, 1.27, 1.32, and 1.35 times the Guidelines amount for one child. This means the Guidelines amount for a household with two children, for example, is 20

[8] Economic research shows that the proportion of income spent on children generally decreases as income increases. This relationship is reflected in virtually all of the economic estimates of child costs underlying child support guidelines in most states (*i.e.,* so-called Income Shares states). The Income Shares approach and the economic research on which it is based are discussed later in this report.

percent higher than for an identical household with one child. Figure 2 shows the shape of the adjustment factors under the current Guidelines.

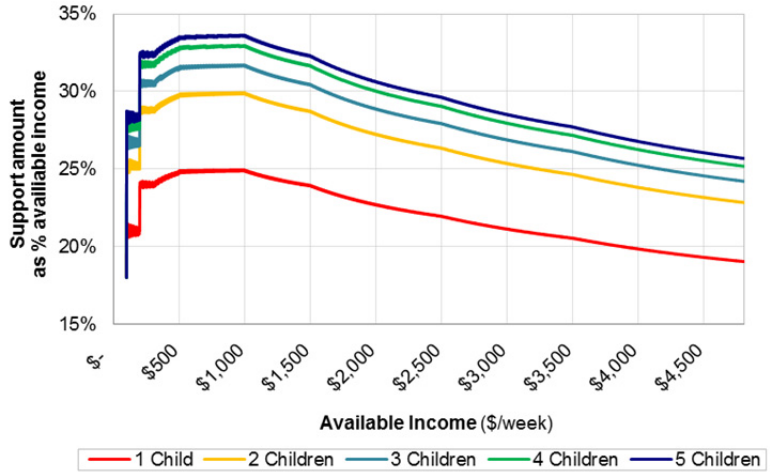
Figure 2: Current Guidelines Adjustment Factors for Additional Children



Source: Current (January 2009) Guidelines Worksheet, Table B

Based on the income percentages and adjustment factors in Figures 1 and 2, the Massachusetts Guidelines amounts for one child range from 18 to 25 percent of the combined gross available income of the payor and recipient. The Guidelines represent up to 30 percent of gross combined income for two children, and up to 35 percent for five children. Figure 3 shows the effective percentages resulting from the child support amounts in the current Guidelines Chart, in effect since January 2009.

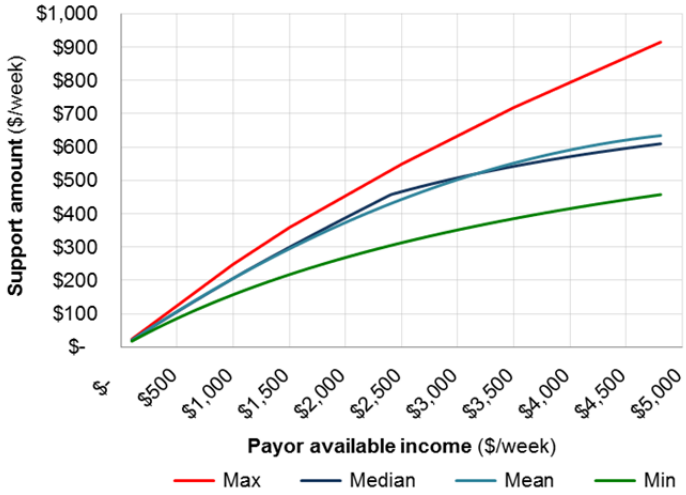
Figure 3: Current Guidelines Effective Income Percentages



Within this range, the current Guidelines amounts for one child represent 13 to 22 percent of a payor's gross available income, on average, depending on the relative incomes of the payor and recipient. Figure 4 shows the range of weekly support amounts under the Guidelines as a percent of the payor's gross available income, over the full range of recipient income under the Guidelines (*i.e.,* recipient income ranging from zero to $250,000 per year). Figure 5 shows the same weekly support amounts in dollars, rather than in percentage terms.

Figure 4: Current Guidelines as a Percent of Payor's Income
(Over the full range of recipient income; 1 child)

Figure 5: Current Guidelines Amounts
(Over the full range of recipient income; 1 child)



In dollar terms, the percentages in Figure 4 correspond to child support amounts ranging from a minimum of $18 per week to over $600 per week on average, and as much as $915 per week for a payor with the maximum gross available income on the current Guidelines Chart ($250,000 per year, or $4,808 per week) making a payment to a recipient with no income.

IV. ECONOMIC LIMITATIONS

Most states base their child support guidelines, to varying degrees, on specific economic studies. However, the most widely used studies do not measure actual direct spending on child costs and are not state-specific (*i.e.,* they use national data). None of the economic data currently available reflect actual spending on children. Rather, they are estimates of child costs with theoretical and practical limitations. There are both data limitations and methodological limitations. Since presumptive child costs in most states are merely estimates, economic benchmarks should be considered as informative only.

Most child costs are not directly observable. Instead, costs such as housing and food are "indirect costs" shared by both adults and children in a household. Such costs cannot be directly attributed to a particular person in the household, because specific data are not available on each person's share of the overall cost. Economists deal with this practical limitation by making certain assumptions to estimate child costs. The next section of this report discusses the most common assumptions underlying the economic models most states use to benchmark child costs.

Also, child costs are not uniform across households. There is wide variation, both across and within income groups, in what households typically spend on children. This reality notwithstanding, the economic research is based on *average* expenditures on children across households for a given level of household income and number of children. That means child cost estimates resulting from economic research, even if they are right *on average*, may or may not reflect an appropriate level of spending on children in any particular case. However, since the Guidelines are presumptively correct in every case absent specific findings to the contrary, they should reasonably reflect typical

child costs over the full range of income (*i.e.,* from $0 to $250,000 per year under the Massachusetts Guidelines) using a uniform, administratively simple formula, whereas actual child costs over the range of cases subject to the Guidelines are neither uniform nor simple. So, clearly identifying the child cost data and the underlying estimation approach on which the Guidelines are based provides a foundation for rebuttal when the particular facts of a given case differ from the presumed facts underlying the Guidelines.

The practical reality is that no simple child support guidelines formula, while presumptively correct as a policy matter, can be economically correct in all cases. Designing a single set of uniform guidelines based on imperfect estimates of actual child costs simply cannot generate precisely or objectively economically correct child support amounts in every case. While the prior Task Force considered numerous financial and non-financial determinants of child costs in creating Tables A and B of the current Guidelines Worksheet,[9] and the present Task Force has done in the same in considering potential changes to those amounts, there simply is not a definitive source of data to dictate whether the resulting Guidelines amounts are right or wrong with certainty and in every case. This is why presumptive awards are rebuttable, based on case specific facts that diverge from presumptive facts.The rest of this report summarizes the economic principles, approaches, and most current data available to help inform the Task Force's review of the current Guidelines.

V. ECONOMIC APPROACHES

Since the Guidelines are presumptive, they should reflect economically sound principles and economically relevant child costs while still allowing the resulting Guidelines amounts to be rebutted on a case specific basis. A general method of determining the appropriateness of a state's guideline presumptive amount is to evaluate their underlying economic basis and their relationship to cost data from current economic studies.

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[9] See, *e.g.*, "Report of the Child Support Guidelines Task Force," October 2008, *op. cit*.

Federal law does not specify the nature or structure of a state's child support guidelines. As a result, child support guidelines differ across states to varying degrees. Currently, all state guidelines use one of three approaches: (1) Income Shares, (2) Percent of Payor Income, or (3) the Melson Formula. Table 1 lists the guidelines approach used by each state.

Table 1: Guidelines Approaches by State

Income Shares			Percent of Payor Income	Melson Formula
Alabama	Louisiana	Oklahoma	Alaska	Delaware
Arizona	Maine	Oregon	Arkansas	Hawaii
California	Maryland	Pennsylvania	Illinois	Montana
Colorado	**Massachusetts**	**Rhode Island***	Mississippi	
Connecticut*	Michigan	South Carolina	Nevada	
Washington DC	Minnesota	South Dakota	**New York ***	
Florida	Missouri	Tennessee	North Dakota	
Georgia	Nebraska	Utah	Texas	
Idaho	**New Hampshire***	**Vermont***	Wisconsin	
Indiana	New Jersey	Virginia		
Iowa	New Mexico	Washington		
Kansas	North Carolina	West Virginia		
Kentucky	Ohio	Wyoming		
All	**39 76%**		**9 18%**	**3 6%**
***Neighboring MA**	**3 60%**		**2 40%**	**0 0%**

Source: (All but NH) Center for Policy Research reports: 2009 (NH), p. 3; 2012 (PA), p. 4.
Note: New Hampshire's current child support guidelines are a flat percent of payor income, varying only by the number of children. However, per House Bill 597 passed in 2012, New Hampshire's child support guidelines will shift to the Income Shares approach, effective July 1, 2013.

As in Massachusetts, guidelines in 76 percent of all states (37 states and the District of Columbia) at least nominally use an Income Shares approach and are based on sharing economically estimated child costs, such as those we describe in the next section.[10] Nine states, or 18 percent of all states,

[10] Originally, the Massachusetts Guidelines amounts were based on an economic study of child costs performed by Thomas Espenshade discussed in the next section. According to the original Guidelines Committee report (October 1985), "The Committee decided that Espenshade's work was the most comprehensive, up-to-date, reliable and in a form most usable for the Committee's purposes." However, the Guidelines amounts were not strictly consistent with Espenshade's child cost estimates.

use the Percent of Payor Income approach,[11] and the remaining three states use the Melson Formula. Guidelines in the five states bordering Massachusetts are split in their approaches: four of the five states (Connecticut, New Hampshire, Rhode Island, and Vermont) use Income Shares, while New York uses Percent of Payor Income, although differently. In New York, the ultimate child support payment is a strict payor-only amount – a flat 17 percent of the payor's income for one child. Notably, the current New Hampshire guidelines formula uses a combined income table but the table is based on fixed percentages of net income, 25 percent for one child, 33% for two children, 40% for three children, and 45% for four or more children. However, as of July 1, 2013, New Hampshire will shift to an Income Shares approach.[12] Table 1 and subsequent comparisons in this report reflect the July 2013 New Hampshire guidelines.

a. Income Shares

Income Shares guidelines are based on indirect estimates of a child's share of parents' combined income. Hence, the term "income shares" refers to the share of household income required to cover child-related costs in a household, not the sharing of those costs between parents. However, since most household spending is for "public goods" (*i.e.,* goods shared in some proportion by all members of the household), a child's actual income share is not directly observable. This is important because, to be perfectly clear, it means the Income Shares approach is not based on actual child costs that are directly observed or measured. Instead, the Income Shares approach yields estimates of child costs by applying a specific analytic methodology to what economic data are available.

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[11] Prior to the January 2009 revisions, the then-current Massachusetts Guidelines used a hybrid approach, starting off as a percent of payor income model until the recipient's income reached a predetermined disregard ($20,000 per year net of child care costs) and then applying combined income to the cost table, in part, based on Income Shares estimates.

[12] See, *e.g.*, H.B. 597 at legiscan.com/NH/text/HB597/id/151424 and July 2013 New Hampshire child support guidelines at www.nhbar.org/uploads/pdf/CSG-2013-July.pdf.

Since most actual child costs are not directly observed, the crux of the Income Shares approach is to compare equivalent households with and without children, in order to back-into the amount of household income spent on children. Specifically, the approach is to estimate the marginal cost of an additional child by comparing households with the same standard of living but different numbers of children. This comparison requires a measure to proxy for a household's standard of living. Initially, the Income Shares approach was applied to two different measures, only one of which is still used today. Both measures pre-date child support guidelines calculations and neither was originally developed to quantify child costs. The Income Shares approach simply applies these methodologies with the goal of estimating child costs.

The Income Shares approach was initially introduced in a child support context by public policy expert Dr. Robert Williams coincident with the federal requirement to establish presumptive guidelines in order to retain certain federal funding.[13] The initial Income Shares cost table Williams developed was based on prior research by Princeton sociologist Thomas Espenshade,[14] which in turn was based on a standard of living proxy developed by economist Ernst Engel in the late nineteenth century.[15] The Engel approach defines a household's standard of living by the proportion of its spending on food. Since food is a necessity, this approach assumes a household that spends proportionately less on food is better off (because it is spending proportionately more money on other things) than a household for which food is a larger component of spending. The Engel approach assumes households with the same proportional expenditure on food are equally well off, regardless of family size. Using this proxy, the Income Shares approach estimates child costs

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[13] Robert G. Williams, *Development of Guidelines for Child Support Orders: Advisory Panel Recommendations and Final Report*, Parts II and III, Policy Studies, Inc., Denver, Colorado, under a grant to the National Center for State Courts, Williamsburg, Virginia, submitted to U.S. Department of Health and Human Services, Washington, D.C., September 1987.

[14] *Ibid.,* pp. II-19 through II-20. See, Thomas J. Espenshade, *Investing in Children: New Estimates of Parental Expenditures*, The Urban Institute Press, Washington, D.C. (1984).

[15] Ernst Engel, "Consumption and Production in the Kingdom of Saxony," *Journal of the Statistical Bureau of the Ministry of the Interior* (1857).

based on the difference in total spending between households with the same food shares (as a proportion of income) but different numbers of children.

While a number of Income Shares states originally implemented variations of the original Engel-based cost table, economists now agree that the Engel-based cost tables were unreasonably high.[16] Therefore, Dr. David Betson at the University of Notre Dame applied the Income Shares approach to a different proxy for a household's standard of living. The new proxy was based on research done in the 1940s by statistician Erwin Rothbarth.[17] The Rothbarth approach defines a household's standard of living by its spending on adult clothing. It assumes a household that spends more on adult clothing is better off than a household that spends less, so that households with the same amount of spending on adult clothing are equally well off, regardless of family size. Under this approach, child costs are estimated by the difference in total spending between households that spend the same amounts on adult clothing but have different numbers of children.

From time to time, Betson has updated his Rothbarth estimates to account for the availability of more current data.[18] The most current Betson-Rothbarth estimates of child costs, published in 2010,[19] as well as other current Income Shares estimates published by the USDA using a slightly different methodology,[20] are discussed in more detail below.

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[16] See, *e.g.,* David M. Betson, "Alternative Estimates of the Cost of Children from the 1980-86 Consumer Expenditure Survey," September 1990, pp. 55-56, stating, "…given the high estimates that result from this methodology, even when compared to the per capita method, the estimates from the Engel method should be discounted."

[17] Erwin Rothbarth, "Notes on a method of determining equivalent income for families of different composition," in C. Madge (Ed.), *War-Time Pattern of Spending and Saving*, Cambridge University Press, Cambridge MA (1943).

[18] See, *e.g.,* David M. Betson: (1) "Alternative Estimates of the Cost of Children from the 1980-86 Consumer Expenditure Survey," Institute for Research on Poverty, Special Report 51, University of Wisconsin-Madison (1990); (2) "Parental Expenditures on Children: A Preliminary Report," unpublished manuscript (2000); (3) "Parental Expenditures on Children: Rothbarth Estimates," prepared for Policy Studies, Inc., for the State of Oregon (2006).

[19] David M. Betson (2010), "Appendix A: Parental Expenditures on Children: Rothbarth Estimates," in Judicial Council of California, Review of Statewide Uniform Child Support Guidelines (June 28, 2011).

[20] Mark Lino, USDA, "Expenditures on Children by Families, 2011" (June 2012).

b. Percent of Payor Income

Currently, child support guidelines in 9 states, including one state bordering Massachusetts (New York), use a Percent of Payor Income approach.[21] This approach was developed initially by economist Jacques van der Gaag at the University of Wisconsin at Madison.[22] As the name suggests, child support guidelines using this approach consider only the payor's income, not the relative incomes or combined income of both the payor and the recipient. Typically, Percent of Payor Income guidelines establish child support as a fixed percentage of a payor's income at all income levels (*i.e.,* child support as a percent of income does not vary by income level). In most states, the resulting guideline amounts are simply a flat percentage of the payor's income. Some states' guidelines, however, such as Arkansas and Wisconsin, use tiered percentages of payor income. Initially, the Percent of Payor Income approach was intended to be used only in extreme low-income (*i.e.,* welfare) cases and the percentage reflected child costs only at low-income levels. The initial study assumed the recipient had no income but full parenting responsibility, and that child support payments would be less than the amount required of the recipient's welfare payments.

While the Percent of Payor Income approach is relatively simple to implement, current payor-only guidelines violate essentially every assumption of the original van der Gaag study. In addition, flat child support percentages regardless of the payor's income level contradict economic principles and data showing the proportion of income spent on children decreases as income increases.

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[21] Again, the ultimate child support payment in New York is a flat 17 percent of the payor's income, while the guidelines amount in New Hampshire is based only on the payor's income only, but the ultimate payment amount is based on the payor's relative share of combined income.

[22] Jacques van der Gaag, "On Measuring the Cost of Children," Child Support: Technical Papers, Vol. III, SR32C, Institute for Research on Poverty, Special Report Series, University of Wisconsin, 1982.

c. Melson Formula

The Melson Formula was developed by Delaware Family Court judge, Elwood Melson.[23] It incorporates several public policy assumptions designed to provide a self-support reserve for each parent in addition to providing for their child(ren). Beyond self-support, the formula establishes a standard of living adjustment (as a percentage of income), which automatically enables a child to share in any increases in household income. The formula adds to a baseline support amount (called "primary support") both child care costs and extraordinary medical expenses. It calculates an ultimate child support amount based on each parent's relative share of total net income, while also accounting for the standard of living adjustment. This is an income sharing approach which, by design, does not reflect any child cost studies for incomes above the poverty level.

While the Income Shares approach is the most common of these three basic economic approaches, and is most consistent with economic principles in estimating child costs, it has many known limitations. As discussed above, Income Shares cost tables reflect *indirect estimates* of child costs, not *actual spending* on children. Thus, while Income Shares estimates may be the best available estimates of child costs, they do not reflect specific itemized spending on children. They rely on indirect but narrow proxies for a household's standard of living (*e.g.,* adult clothing) in order to compare spending across households with different numbers of children.

Income Shares estimates, such as the Betson-Rothbarth amounts, also rely on data from intact (specifically, husband-wife) households to inform policy decisions for households, which are not intact. These guideline models implicitly assume economic decisions are made the same way for separate households as for married households, when, in fact, the economic tradeoffs may be very different. One obvious difference is the additional overhead cost required by two separate households relative to the cost of a single household. By failing to account for this additional cost,

[23] See *Dalton v. Clanton*, 559 A.2d 1197 (Del. 1989).

economic models likely overestimate the standard of living of a non-intact household at a given income level. Maintaining a standard of living estimated based on intact household data likely requires more income than is actually available to a non-intact household.

Finally, as a practical matter, Income Shares estimates are only as good as the data on which they are based. For example, the latest Betson and USDA estimates use data (on intact households only) from the Consumer Expenditure Survey (CEX) conducted by the U.S. Census Bureau on characteristics, income, and expenditures for individual households.[24] The USDA report describes the CEX data as:

> …the most comprehensive source of information on household expenditures available at the national level, containing expenditure data for housing, food, transportation, clothing, health care, child care and education, and miscellaneous goods and services.[25]

While we agree that the CEX is the best available data source for detailed household-level expenditures, the data are not without their known limitations.[26] The CEX data show expenditures in excess of reported income for about half of respondents, typically in the lower half of reported income ranges. This means income may be systematically underreported in the CEX data. However, there is no theoretical basis for making an economically reasoned adjustment in economic models using the data. Betson adjusts his estimates, for example, by simply capping the ratio of expenses to income at one for low-income groups, which has the effect of increasing the corresponding child cost estimates relative to the more likely circumstance in which the ratio of expenses to income is something less than one. That is, actual income for low-income groups likely is higher than reported income. At higher incomes, the CEX data exhibit the opposite problem. Savings reported for high-income households seems unreasonably high, suggesting that

[24] For more information on the Consumer Expenditure Survey, see *www.bls.gov/cex*.

[25] Lino (2012), *op. cit.,* p. 1.

[26] See, *e.g.,* Ira Mark Ellman, "Fudging Failure: The Economic Analysis Used to Construct Child Support Guidelines", The University of Chicago Legal Forum (2004), p. 23.

expenditures may be underreported. Again, however, there is no basis for making an economically appropriate adjustment in using the data to estimate child costs.

With these limitations in mind, the available economic data on child costs are informative and, along with sound economic principles, can provide a basis for the Task Force to evaluate the appropriateness of child support amounts under the current Guidelines.

VI. CURRENT CHILD COST ESTIMATES

In developing the current Guidelines, the prior Task Force considered then-current economic estimates of child costs, most notably three Income Shares studies in which Betson applied both the Engel and Rothbarth methodologies to CEX data through 2004.[27] That Task Force noted that the Betson-Rothbarth estimates: (1) consistently placed the marginal expenditure for one child at approximately 25 percent of total household spending (not income); (2) consistent with general economic theory, showed expenditures on children account for a decreasing percentage of household spending as income increases; and (3) showed no significant differences in expenditures on children of different ages.

a. Recent Child Cost Studies

Between the time of the prior Task Force and today, three new studies have estimated child costs: McCaleb, et al. (2008),[28] Betson (2010),[29] and USDA (2012).[30] In addition, a Massachusetts non-profit group periodically publishes estimates of the cost of living in the state.

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[27] Betson (1990, 2000, and 2006), *op. cit*.

[28] Thomas S. McCaleb, *et al.,* (2008), "Review and Update of Florida's Child Support Guidelines, Report to the Florida Legislature," Florida State University, Tallahassee, Florida.

[29] Betson (2010), *op. cit.*

[30] Lino (2012), *op. cit.*

McCaleb, et al. (2008)

To develop a revised cost table for consideration by the Florida legislature, Thomas McCaleb at Florida State University developed Income Shares estimates by applying the Engel approach to CEX data from 2004 to 2006. The study does not report its average estimates, but does report that the estimates are considerably lower than prior estimates by Espenshade and Betson using the Engel approach. Ultimately, the Florida legislature did not adopt McCaleb's child cost estimates. While Florida has changed certain provisions of its guidelines, the dollar amount of child support under its guidelines at each income level has remained unchanged since 1993.[31]

Even if these estimates were reported, because the McCaleb estimates use the Engel approach, rather than the Rothbarth approach, we would not recommend those estimates to the Task Force due to the widely recognized flaws in the economic methodology. Again, the Engel methodology uses a household's spending on food as a proxy for its standard of living in comparing it to other households with a different number of children. However, children are "food intensive" (relative to adult proportional spending on food), meaning the Engel methodology is upwardly biased in estimating child costs.

Betson (2010)

In 2010, as part of California's guidelines review, Betson updated his Rothbarth estimates of child costs using data from the CEX for 2004 through the first quarter of 2009. As in his three prior studies (1990, 2000, and 2006), Betson's estimates measure child costs as a percentage of total family expenditures across a range of income levels, but the California report does not include the detailed estimates. They are reported, however, in a subsequent report for the state of Illinois, and are listed in the data and comparisons we report below. The current Massachusetts Guidelines are based, in part, on a review by the prior Task Force of the 2006 Betson-Rothbarth estimates.[32]

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[31] The Florida Senate, "Review of Child Support Guidelines," Interim Report 2010-210 (October 2009).

[32] Report of the Child Support Guidelines Task Force (2008), *op. cit.*, pp. 22-24.

Through this report, the current Task Force will consider the latest Betson estimates as part of its review of the current Guidelines. Several states have already considered the latest Betson estimates as part of their guidelines reviews, including at least two states bordering Massachusetts, Rhode Island and Vermont, each of which revised their cost tables in 2012.

The latest Betson study applies only the Rothbarth approach.[33] It reflects two changes in the CEX data Betson used to derive his estimates. First, Betson uses an income series newly created by the Bureau of Labor Statistics to correct for the problem of income non-reporting in the CEX discussed above, particularly at low incomes. This likely decreases estimated child costs at low incomes, all else equal, but also results in more realistic estimates. Second, Betson switched from using CEX data on household "expenditures" to using "outlays," which include finance changes and mortgage principal payments rather than treating them as changes in net liabilities. Ultimately, Betson's current Rothbarth estimates are similar to the estimates from his prior (2006) study. According to the study, (intact) households spend, on average, 24 percent of total household spending (not income) for one child, 37 percent for two children, and 45 percent for three children. These estimates are discussed in more detail below.

USDA (2012)

Every year since 1960, the USDA has estimated expenditures on children through age 17 for both married and single parent households. The latest USDA report was released in June 2012, based on CEX data from 2005-06 updated to 2011 dollars using the Consumer Price Index. The report provides child cost estimates for each of seven expenditure categories (housing, food, transportation, clothing, child care and education, health care, and miscellaneous expenses) by child age, household income, and region. For example, for the overall United States, the latest USDA report estimates annual child costs of between $12,290 and $14,320 for a child in a two-child,

[33] Betson did not apply the Engel approach at all in the 2010 study, and he specifically repudiated that approach as economically unsound.

married household in the middle-income group. The report also provides estimated adjustment factors for number of children.

Like the Betson studies, the USDA uses the CEX data to derive its child cost estimates. However, it applies a different analytic approach to the data. Prior to 2008, the USDA estimated expenditures for shared costs within a household, such as housing and transportation, on a per capita basis; that is, by dividing the expenditure by the number of people in the household. Most economists agree the per capita approach overstates actual child costs. It violates the economic principle that allocation decisions depend on marginal rather than average costs. Optimal decisions require balancing the additional benefits with the additional costs from any proposed, but per capita estimates simply reflect average costs. Notably, per capita allocation moves some pre-existing adult costs to child cost estimates.

As a result, the USDA discarded that approach for housing expenditures in its most recent reports. Instead, housing expenditures on children are estimated based on the average cost of an additional bedroom. Implicit in this approach is the assumption that the same household without children would live in a similar dwelling but with fewer bedrooms. That assumption may be correct in some cases, but not always. Also, the marginal cost approach does not apply only to just housing; it applies to other expenditure categories as well.

However, the USDA continues to simply prorate other expenses, such as food, transportation, and miscellaneous, by a pre-determined factor related to the number of people in the household. For example, the USDA essentially assumes a child's haircut costs the same as a woman's hair treatment. Also, the cost of transportation (such as automobile note payment and gasoline) are equally pro-rated between adults and children even though adults would incur nearly all of these expenses even without children. Finally, the USDA in recent years added payment on principal on house payments as part of its cost calculations. Other methodologies exclude payment on principal

because it is considered an investment and not a cost. These factors lead most economists to view the USDA methodology as likely overstating child costs.

Massachusetts Economic Independence Index (2013)

The Crittenton Women's Union (CWU), a Massachusetts non-profit advocacy group for low-income women, periodically publishes estimates of the cost of living in Massachusetts. The CWU released its latest estimates in March 2013.[34] Since prior CWU estimates were considered by the prior (2008) Task Force in its guidelines review, we include mention of the current estimates here. However, we do not recommend that the Task Force rely on the CWU estimates as more than illustrative of possible costs under specific assumptions.

The CWU report estimates the costs of various household expenditures (*e.g.,* housing, food, transportation, child care, health care, personal items, and taxes) for different types of households at the state level and by county. For example, it reports estimated costs for households with: only an adult; one adult, a pre-school age child, and a school-age child; and two adults with a pre-school age child and a school-age child. The resulting estimates reflect "index budgets" by family type and location, which *assume* each type of family makes certain types of expenditures. For example, the report assumes all adults work full-time, regardless of family type, and have certain work-related travel and child-care expenses. It also assumes all children under 14 years old require before and after school care, while children not in school require full-time child care.

As a result, while the CWU report can generate cost estimates for many different family types, its findings are tied to specific underlying income, tax-related, and spending assumptions, rather than broadly reflecting a wide range of possible income and spending patterns. The corresponding estimates may reflect costs reliably, on average, for the assumed scenarios. However, by design, they will not reflect costs for income and spending patterns outside of those fixed assumptions.

[34] Massachusetts Economic Independence Index 2013 (March 2013), available at www.liveworkthrive.org.

Since the Guidelines apply broadly to all households over a wide range of incomes (currently up to $250,000) and spending patterns, it is important that they consider economic data on child costs which also are broadly applicable and based on actual spending data.

Likewise, it is important for the Guidelines to consider data on marginal child costs, not overall household expenditures. While estimates of marginal child costs can be derived from the overall estimates in the CWU report (*e.g.,* by calculating the cost difference between households at the same income level but with and without a child), those child cost estimates also are entirely dependent on the specific "basket" of goods and services the report assumes each household consumes, and they are not more broadly indicative of child costs. The CWU data reflect more of a policy choice set (the basket of goods and services) than data on actual spending.

b. Comparisons to Massachusetts Guidelines

It is useful to compare the current Guidelines amounts to child cost estimates over a wide range of incomes and based on methodologies viewed as standard by economists. The current Betson-Rothbarth and USDA estimates are the best data available for making such a comparison. Comparing the Betson-Rothbarth and USDA estimates of child costs to the Massachusetts Guidelines amounts first requires various calculations to put the published estimates and Guidelines amounts on the same basis. In this section, we compare the amounts for one child. In the next section, we compare the amounts for more than one child.

1. Betson-Rothbarth Estimates

Betson's Rothbarth estimates reflect spending on children as a percent of total expenditures and current consumption as a percent of a household's *net* income (not gross income) at various income levels and numbers of children, based on a national sample of households from the CEX data. The resulting estimates reflect child costs excluding child care costs and extraordinary health care costs (but including the children's share of health insurance premiums), since these expenses either do

not always occur (*e.g.,* child care) or are treated separately (*e.g.,* health insurance premiums and extraordinary health care costs). Table 2 shows the standard Betson-Rothbarth table as reported in Betson's 2010 report. On average, Betson estimates that households spend 81 percent of their income, with child costs accounting for 23 percent of total spending in households with one child, 36 percent for two children, and 45 percent for three children.

Importantly, again, Betson estimates child costs as a share of total *spending*, not total *income*. Therefore, we transformed his estimates into income shares. Table 2 reports child costs a percent of household spending and spending as a percent of household net income. Multiplying those percentages together yields child costs as a percent of net income.

Table 2: Betson (2010) Child Cost as a Percent of Spending

Net Income (Jan. 2012 $/year)	Spending as a % Net Income	Child Cost as % Spending		
		1 Child	2 Children	3 Children
Less than $ 15,000	100%	21.7%	33.8%	41.7%
$ 20,000	100%	22.5%	35.0%	43.1%
$ 25,000	100%	22.7%	35.3%	43.5%
$ 30,000	100%	22.9%	35.6%	43.8%
$ 40,000	100%	23.1%	35.9%	44.2%
$ 45,000	99%	23.2%	36.1%	44.4%
$ 50,000	96%	23.3%	36.2%	44.5%
$ 60,000	89%	23.3%	36.3%	44.6%
$ 65,000	85%	23.4%	36.4%	44.7%
$ 70,000	83%	23.4%	36.4%	44.8%
$ 75,000	78%	23.5%	36.4%	44.8%
$ 80,000	76%	23.5%	36.5%	44.9%
$ 90,000	76%	23.5%	36.6%	45.0%
$ 95,000	73%	23.6%	36.6%	45.0%
$100,000	72%	23.6%	36.7%	45.1%
$110,000	70%	23.7%	36.7%	45.1%
$120,000	66%	23.7%	36.7%	45.2%
$130,000	66%	23.7%	36.8%	45.3%
$150,000	61%	23.8%	36.9%	45.3%
$175,000	59%	23.8%	37.0%	45.5%
More than $175,000	51%	23.9%	37.1%	45.6%
Maximum	100%	23.9%	37.1%	45.6%
Minimum	51%	21.7%	33.8%	41.7%
Average (Mean)	**81%**	**23.3%**	**36.2%**	**44.6%**

"Proposal to Adopt the Income Shares Model for the Illinois Child Support Guidelines," May 16, 2012, Exhibit 2, p. 53. Per Betson (2010).

Table 3 shows the corresponding child cost percentages: 19 percent, on average, in households with one child, 29 percent for two children, and 36 percent for three children.

Table 3: Betson (2010) Child Cost as a Percent of Net Income

Net Income (Jan. 2012 $/year)		Child Cost as % Net Income		
		1 Child	2 Children	3 Children
Less than	$ 15,000	21.7%	33.8%	41.7%
	$ 20,000	22.5%	35.0%	43.1%
	$ 25,000	22.7%	35.3%	43.5%
	$ 30,000	22.9%	35.6%	43.8%
	$ 40,000	23.1%	35.9%	44.2%
	$ 45,000	22.9%	35.6%	43.9%
	$ 50,000	22.3%	34.6%	42.6%
	$ 60,000	20.8%	32.3%	39.8%
	$ 65,000	19.9%	31.0%	38.1%
	$ 70,000	19.4%	30.1%	37.0%
	$ 75,000	18.3%	28.5%	35.0%
	$ 80,000	17.8%	27.6%	34.0%
	$ 90,000	17.8%	27.6%	34.0%
	$ 95,000	17.2%	26.8%	32.9%
	$100,000	17.1%	26.5%	32.6%
	$110,000	16.6%	25.7%	31.6%
	$120,000	15.7%	24.4%	30.0%
	$130,000	15.7%	24.4%	30.0%
	$150,000	14.6%	22.6%	27.8%
	$175,000	14.0%	21.7%	26.7%
More than	$175,000	12.1%	18.8%	23.1%
Maximum		23.1%	35.9%	44.2%
Minimum		12.1%	18.8%	23.1%
Average (Mean)		**18.8%**	**29.2%**	**36.0%**

Source: Table 2, Spending as % Net Income x Child Cost as % Spending

To compare the child cost percentages, and corresponding dollar amounts, in these Betson-Rothbarth tables to the percentages and dollar amounts in the current Massachusetts Guidelines requires two adjustments. First, we converted the annual income figures to weekly amounts, since the Guidelines Chart is based on available weekly income. Second, we calculated the net income equivalents of gross weekly income amounts for Massachusetts, since the Guidelines use gross income and the Betson-Rothbarth estimates use net income. We made this adjustment using state-specific income withholding tables for Massachusetts and standard withholding for Social Security.[35] This effectively restates the gross income amounts on the Guidelines Chart in terms of net income, for comparison to the Betson-Rothbarth estimates, but specifically for Massachusetts.[36]

[35] For Massachusetts income withholding tables, see Massachusetts Circular M, effective January 1, 2012. The standard Social Security withholding is 6.2 percent up to $110,100 of income. We used the standard withholding since the temporary reduction in Social Security payroll taxes currently in place expired at the end of 2012.

[36] Applying the Massachusetts income withholding tables to the Betson-Rothbarth estimates results in estimates specific to Massachusetts. So, these estimates are different from, but are consistent with, Betson-Rothbarth estimates developed for other states for purposes of guidelines review.

At that point, we used Betson's estimates of current consumption as a percent of net income to estimate total spending at each income level on the Guidelines Chart, and his percentages of child spending as a percent of total spending to calculate child costs for one to three children. Since the Guidelines apply up to five children, we used the same approach to estimate child costs for four and five children by applying published estimates of scaling ratios for four and five children to Betson's cost estimates for three children.[37] The ultimate result of these calculations is a set of estimated child costs based on the current Betson-Rothbarth estimates, but specific to Massachusetts and for the full range of incomes and number of children covered by the Guidelines.[38]

Table 4 summarizes the resulting child cost estimates (excluding child care and extraordinary health care costs) over the full range of incomes covered by the Massachusetts Guidelines Chart (up to $250,000 per year), both in dollars per week and as a percent of gross income.

Table 4: Betson (2010) Child Costs for Massachusetts

	Number of Children				
	1	2	3	4	5
	$/week				
Maximum	$ 342	$ 497	$ 569	$ 635	$ 699
Minimum	$ 24	$ 40	$ 51	$ 57	$ 63
MA Median	**$ 185**	**$ 282**	**$ 340**	**$ 379**	**$ 417**
	% Gross Income				
Maximum	24%	39%	51%	56%	62%
Minimum	7%	10%	11%	12%	14%
MA Median	**15%**	**23%**	**28%**	**32%**	**35%**

Source: Massachusetts estimates based on Betson (2010).

Figure 6 shows the child cost estimates underlying Table 4 as a percent of gross income over the full income range. For one child, the percentages range from 7 percent of gross income at the highest

[37] These scaling ratios are derived and explained in Constance F. Citro and Robert T. Michael, ed., *Measuring Poverty: A New Approach*, National Academy Press, Washington, D.C. (1995), p. 161.

[38] Note that Betson (2010) reports results in percentages, as listed in Table 2, not in dollars. The dollar equivalents we calculate are as of January 2012, because they are based on net income levels as of that date. We do not apply any inflation adjustment to today, as any such adjustment would be minor and would have to account for growth in both cost and income, which would largely offset.

income levels to 24 percent at the lowest incomes. Child costs range from 10 percent to 39 percent of gross income for two children, and higher percentages for more children. At the current median level of household income in Massachusetts ($62,895 per year, or $1,210 per week),[39] child costs account for 15 percent to 35 percent of gross income, depending on the number of children.

In dollars, the Betson-Rothbarth estimates for one child range from as little as $24 per week at the lowest income levels to $342 at the highest income levels, and are $185 per week at the current Massachusetts median income level. By comparison, the Guidelines amounts for one child range from $18 per week to $915 per week, and are $295 per week at median household income. Thus, the current Guidelines amounts for one child are lower than the Betson-Rothbarth estimates at the lowest income range (from zero to $165 per week) but are higher otherwise.

Figure 6: Betson (2010) Child Costs as a Percent of Gross Income

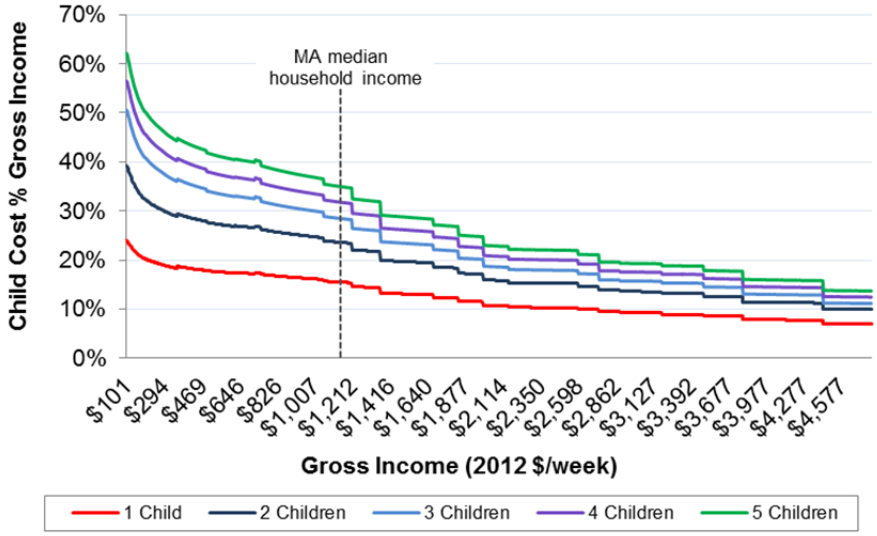
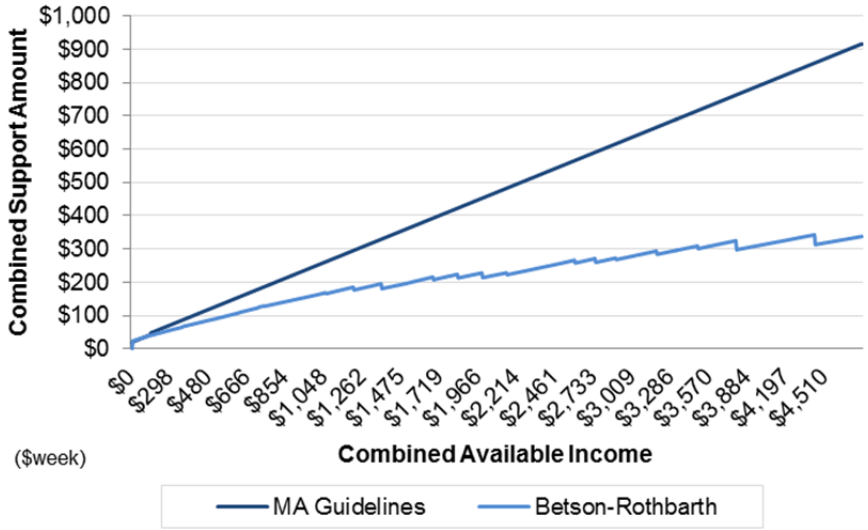


Figure 7 compares the current amounts from the Massachusetts Guidelines Chart for one child to the Betson-Rothbarth estimates over the full range of incomes covered by the Guidelines.[40]

[39] U.S. Census Bureau, 2011 American Community Survey.

[40] The staggering breaks in the Betson-Rothbarth curve are due to shifts from one tax bracket to the next for income taxes and payroll taxes as income increases.

Figure 7: Current Guidelines v. Betson (2010) Child Cost Estimates (1 child)



The Guidelines amounts in Figure 7 represent combined child support amounts, so they are not necessarily the amounts a payor will pay in any specific case. How much of the total Guidelines amount shown in Figure 7 at a given combined income level is allocated to a payor or to a recipient, respectively, depends on their relative share of combined available income. Only when a recipient has no income at all will a payor pay the full combined Guidelines amount shown in Figure 7. In all but very low-income cases, however, this comparison indicates that the Guidelines amounts payors pay for one child is higher than the same proportionate share of the corresponding Betson-Rothbarth estimates.

2. USDA Estimates

The USDA estimates child costs at the national level for husband-wife and single-headed households, as well as for husband-wife households in the Northeast. We compare the current Guidelines amounts to both the national and Northeast estimates. For consistency with the Betson-Rothbarth estimates, we consider both sets of USDA estimates excluding child care costs and health care costs.

Directly comparing the current Guidelines amounts to the latest USDA child cost estimates in either case requires some adjustments to the USDA estimates as they are reported. The USDA reports estimated expenses by spending component (specifically, housing, food, transportation, clothing, child care and education, health care, and miscellaneous expenses) for the younger child in a two-child household up to age 18. Overall, the economic evidence on whether child costs vary systematically by age is mixed. For example, Betson has found no significant differences in child costs by the age of the child using the Rothbarth approach,[41] and the current Betson-Rothbarth estimates are not reported separately by age. The USDA estimates vary widely over the different cost components, between married and single-headed households, and across income groups.

The USDA child cost estimates are published for only a limited number of income scenarios: three scenarios for married households (low, middle, and high), and two (low and high) for single-headed households. These scenarios are available for the U.S. overall and by census region, including the Northeast. Each income scenario has a stated income range and specific average income over that range.

The USDA estimates are based on gross income, so there is no need to calculate net income as with the Betson-Rothbarth estimates. However, we did have to make two adjustments to the estimates as reported. First, the USDA estimates are reported in annual dollars, which we converted to weekly amounts, since the Guidelines Chart uses weekly amounts. Second, the USDA estimates had to be adjusted for the number of children in a household.

Because the USDA estimates are for the younger child in a two-child household, the report suggests adjustment factors to calculate estimated costs for a one-child household and for households with two and three children. Notably, the reported adjustment factors differ for married and single-headed households, since the USDA estimates of child costs are lower in single-headed

[41] See*, e.g.,* David M. Betson, "Chapter 5: Parental Expenditures on Children," in *Judicial Council of California, Review of Statewide Uniform Child Support Guidelines*, San Francisco, California, (2001).

households.[42] For married households with two children, the USDA indicates that costs for the older child are approximately the same as the reported costs for the younger child. So, to calculate expenses for two children, the estimate for the younger child should be multiplied by two. In single-headed households, however, the estimate for the younger child should be multiplied by 1.97. Likewise, the adjustment factors are different for one child (1.25 for married households and 1.29 for single-headed households) and for each of three children (0.78 for married households and 0.77 for single-headed households).

To compare the USDA estimates to the current Guidelines amounts, we calculated the estimated cost of one, two, and three children using the reported costs and the USDA suggested adjustment factors. As with the Betson-Rothbarth estimates, we also calculated estimated costs for four and five children (since the Guidelines cover up to five children) using the same scaling ratios for four and five children relative to the USDA cost estimates for three children.[43]

USDA National Estimates

Table 5 shows the resulting USDA estimates for the overall U.S. by income group for both married and single-headed households. The dollar values at the top of the table are the average estimates within each group, stated in dollars per week.[44] The percentages in the middle of the table report those dollar values relative to the average income level for each group. The percentages at the bottom of the table report the incremental cost of an additional child, calculated as the percentage change in estimated cost for going from one child to two children, two to three, *etc.,* within each

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[42] For example, total costs for the younger child in a two-child household are estimated to be $181 per week in a married household and $168 per week, or 7 percent lower, in a single household. (See Tables 1 and 7 of USDA (2012), respectively). However, the lower child costs represent a larger share of income in single-headed households.

[43] See Citro (1995), *op. cit.*

[44] The dollar values in USDA (2012) are as of 2011. We do not apply an inflation adjustment to today. This is consistent with our handling of the Income Shares dollar figures (which are as of January 2012), and for the same reasons (*i.e.,* any adjustment would be minor, and growth in both costs and incomes would have offsetting effects).

group. Table 5 reports the USDA estimates both for all costs, and excluding child care, education, and health care, since different states' guidelines formulas handle those costs differently.

The average USDA estimates in Table 5 for one child range, according to income level, from $226 to $520 per week for married households, and from $217 to $460 per week for single-headed households, averaging $347 per week. The corresponding costs, excluding child care and health care costs, range from $175 to $373 per week for married households, and from $168 to $328 per week for single-headed households, averaging $256 per week. By comparison, child support amounts for one child under the current Guidelines range from $18 per week to $915 per week, and average $470 per week over the full range of incomes.

Table 5: USDA Child Cost Estimates ($/week, Overall U.S.)

	All Costs						**Excluding Child Care, Education, and Health Care**					
$/week	Married			Single			Married			Single		
	Income Group						Income Group					
	Low	Mid	High	Low	High		Low	Mid	High	Low	High	
Children	$731	$1,537	$3,462	$507	$2,073	**Average**	$731	$1,537	$3,462	$507	$2,073	**Average**
						Total						
1	$226	$314	$520	$217	$460	**$347**	$175	$233	$373	$168	$328	**$256**
2	$361	$502	$833	$331	$702	**$546**	$281	$374	$597	$256	$501	**$402**
3	$423	$587	$974	$388	$823	**$639**	$328	$437	$699	$300	$588	**$470**
4	$472	$656	$1,088	$434	$919	**$714**	$367	$488	$780	$335	$656	**$525**
5	$519	$721	$1,197	$477	$1,011	**$785**	$403	$537	$858	$369	$722	**$578**
						As % Income						
1	31%	20%	15%	43%	22%	**26%**	24%	15%	11%	33%	16%	**20%**
2	49%	33%	24%	65%	34%	**41%**	38%	24%	17%	51%	24%	**31%**
3	58%	38%	28%	77%	40%	**48%**	45%	28%	20%	59%	28%	**36%**
4	65%	43%	31%	86%	44%	**54%**	50%	32%	23%	66%	32%	**40%**
5	71%	47%	35%	94%	49%	**59%**	55%	35%	25%	73%	35%	**44%**
						Marginal Cost of Additional Child						
1												
2	60%	60%	60%	53%	53%	**56%**	60%	60%	60%	53%	53%	**56%**
3	17%	17%	17%	17%	17%	**17%**	17%	17%	17%	17%	17%	**17%**
4	12%	12%	12%	12%	12%	**12%**	12%	12%	12%	12%	12%	**12%**
5	10%	10%	10%	10%	10%	**10%**	10%	10%	10%	10%	10%	**10%**

Source: USDA, Expenditures on Children by Families, 2011 (June 2012). $ are average $/week.

For a more targeted comparison to the USDA national cost estimates, Table 6 reports the current Guidelines amounts broken down into the same income groups as in the USDA report: less than $1,143 per week, $1,143 to $1,978, and above $1,978 for married households, and below/above

$1,143 per week for single-headed households. The average income level within each group is different under the Guidelines than for the households in the USDA report. Therefore, Table 6 reports the Guidelines amounts both: (1) within each income group, on average, and (2) at the average level of income reported by the USDA for each group.

Table 6: Current Guidelines Amounts by Income Group
($/week for 1 child; USDA Overall U.S.)

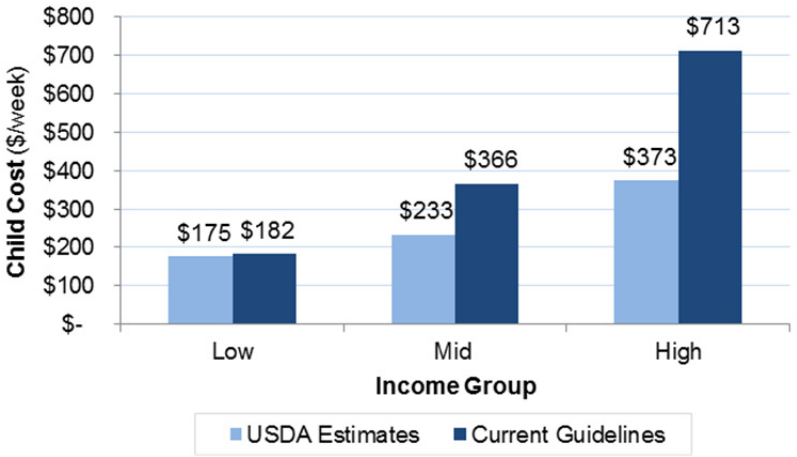
	Income Group		
	Low	Mid	High
Average Available Income	$ 571	$ 1,561	$ 3,394
Average Guidelines Amount	$ 141	$ 368	$ 694
Guidelines Amount as % Income	25%	24%	20%

	Married			Single	
	Income Group				
	Low	Mid	High	Low	High
USDA Average Income	$ 731	$ 1,537	$ 3,462	$ 507	$ 2,073
Guidelines Amount	$ 182	$ 366	$ 713	$ 126	$ 468
USDA U.S. Average	$ 175	$ 233	$ 373	$ 168	$ 328
Difference ($)	$ 7	$ 133	$ 340	$ (42)	$ 140
(%)	4%	57%	91%	-25%	43%
Guidelines Amount as % Income	25%	24%	21%	25%	23%

Source: USDA (2012); Current (January 2009) Massachusetts Guidelines Chart

Figure 8 illustrates the Guidelines amounts and the USDA national estimates by income group.

Figure 8: Current Guidelines v. USDA Estimates
($/week for 1 child; Overall U.S.)



Comparing the current Guidelines amounts in Table 6 to the USDA national estimates in Table 5 for the same income groups indicates that the current Guidelines amounts for one child are roughly equivalent to the USDA estimates at relatively low incomes, but are increasingly higher at middle- and high-income levels both in dollars and as a percentage of income. For example, the average USDA estimate for married households in the low-income group is $175 per week, compared to $141 per week on average over the same range of incomes on the current Guidelines Chart. At the USDA average income level for that group ($731 per week), the Guidelines amount is $182 per week, or 4 percent higher than the USDA national estimate. Over the middle- and high-income ranges, the current Guidelines amounts are higher than the USDA national estimates by 57 and 91 percent, respectively.

The same is true of the dollar amounts relative to income. At the low end, the current Guidelines amounts represent roughly the same share of income as the average USDA national estimates: 25 percent of income, compared to 24 percent for married households (per Table 5). However, the Guidelines amounts are higher than USDA relative to income for the middle and high incomes: 24 percent compared to 15 percent for middle incomes, and 21 percent compared to 11 percent, for example, for the high-income married group. This result is similar to the comparison of the current Guidelines amounts to the Betson-Rothbarth estimates (*i.e.,* the Guidelines amounts are increasingly higher at the middle and upper end).

USDA Northeast Estimates

In addition to the child cost estimates discussed above for the overall U.S., the USDA report includes estimates for husband-wife households in each of the same three income groups in the Northeast. Table 7 reports the USDA estimates of all child costs for both the Northeast and the overall U.S., side by side. The cost estimates for the Northeast are 10 percent higher, on average, than the national estimates across income groups. For example, the estimated cost of one child in a low-income household in the Northeast is $193 per week, compared to $175 per week for the same

income group nationally. In the middle-income group, the average cost for one child is $256 per week in the Northeast, compared to $233 nationally. In the high-income group, the costs are $410 per week and $373 per week, respectively.

Table 7: USDA Child Cost Estimates ($/week, Northeast)

	All Costs (Married Households)											
$/week	U.S.				Northeast				% Difference			
	Income Group				Income Group				Income Group			
	Low	Mid	High		Low	Mid	High		Low	Mid	High	
Children	$731	$1,537	$3,462	**Avg.**	$734	$1,544	$3,478	**Avg.**	0.5%	0.5%	0.5%	**Avg.**
	Total											
1	$175	$233	$373	**$261**	$193	$256	$410	**$286**	10%	9%	10%	**10%**
2	$281	$374	$597	**$417**	$309	$409	$656	**$458**	10%	9%	10%	**10%**
3	$328	$437	$699	**$488**	$361	$478	$768	**$536**	10%	9%	10%	**10%**
4	$367	$488	$780	**$545**	$403	$534	$857	**$598**	10%	9%	10%	**10%**
5	$403	$537	$858	**$599**	$444	$588	$943	**$658**	10%	9%	10%	**10%**
	As % Income											
1	24%	15%	11%	**17%**	26%	17%	12%	**18%**	9%	9%	9%	**9%**
2	38%	24%	17%	**27%**	42%	26%	19%	**29%**	9%	9%	9%	**9%**
3	45%	28%	20%	**31%**	49%	31%	22%	**34%**	9%	9%	9%	**9%**
4	50%	32%	23%	**35%**	55%	35%	25%	**38%**	9%	9%	9%	**9%**
5	55%	35%	25%	**38%**	60%	38%	27%	**42%**	9%	9%	9%	**9%**

Source: USDA, Expenditures on Children by Families, 2011 (June 2012). $ are average $/week (one child).

For comparison to the USDA Northeast cost estimates, Table 8 reports the current Guidelines amounts broken-down into the same income groups. As with the national numbers (in Table 6), the average income level within each group is different under the Guidelines than for the households in the USDA report, so Table 8 reports the Guidelines amounts both: (1) within each income group, on average, and (2) at the average level of income reported by the USDA.

Table 8: Current Guidelines Amounts by Income Group
($/week for 1 child; USDA Northeast)

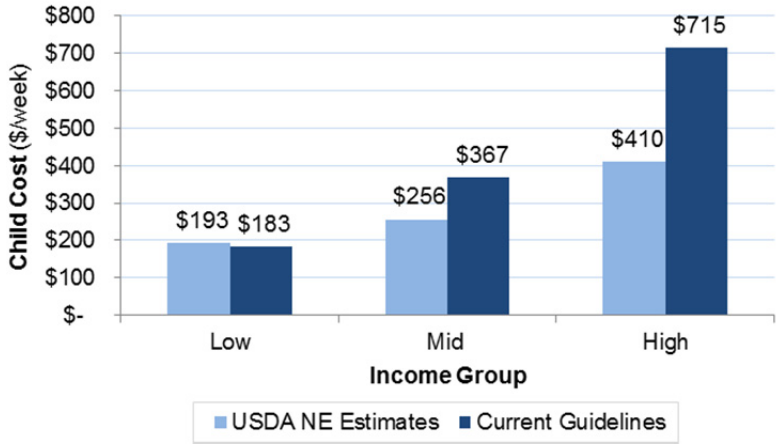
	Income Group		
	Low	Mid	High
Average Available Income	$ 574	$ 1,568	$ 3,398
Average Guidelines Amount	$ 142	$ 370	$ 695
Guidelines Amount as % Income	25%	24%	20%

	Married			Single	
	Income Group				
	Low	Mid	High	Low	High
USDA NE Average Income	$ 734	$ 1,544	$ 3,478	NA	
Guidelines Amount	$ 183	$ 367	$ 715		
USDA Northeast Average	$ 193	$ 256	$ 410		
Difference ($)	$ (10)	$ 111	$ 305	NA	
(%)	-5%	44%	74%		
Guidelines Amount as % Income	25%	24%	21%		

Source: USDA (2012); Current (January 2009) Massachusetts Guidelines Chart

Figure 9 illustrates this comparison.

Figure 9: Current Guidelines v. USDA Estimates
($/week for 1 child; Northeast)



The comparison to the USDA Northeast estimates reflects the same result as for the national estimates: the current Guidelines amounts for one child are roughly equivalent to the USDA estimates at relatively low incomes and are increasingly higher at middle and high incomes. However, because the USDA estimates are higher for the Northeast than for the overall U.S., the differences between the USDA estimates and the Guidelines amounts are smaller. At the middle-

income level, for example, the difference is 44 percent, on average (rather than 57 percent), with the USDA estimating child costs of $256 per week relative to the current Massachusetts Guidelines amount of $367 per week.

3. Guidelines Amounts in Neighboring States

Another potentially interesting basis of comparison for the current Guidelines is how they compare to other states. For illustration, we compared the current Guidelines to the guidelines in each of the five states bordering Massachusetts: Connecticut, New Hampshire, New York, Rhode Island, and Vermont. As we pointed out previously, child support guidelines in four of these five states (Connecticut, New Hampshire, Rhode Island, and Vermont) use the Income Shares approach, while New York uses a Percent of Payor Income approach. Three of these five states (New Hampshire, Rhode Island and Vermont) reviewed their guidelines in 2012. As previously noted, New Hampshire shifted in 2012 from a Percent of Payor approach to an Income Shares approach, effective July 1, 2013.

Currently, the NH guidelines amounts vary only according to the number of children: 25 percent of net income for one child, 33 percent for two children, 40percent for three children, and 45 percent for four or more children, regardless of income. Under the new guidelines as of July 1, 2013, those percentages will change to declining percentages of income. For example, child support will range from 19 to 26 percent of net income for one child, depending on the income level. The corresponding ranges for two, three, and four or more children are 26 to 36 percent, 31 to 43 percent, and 34 to 45 percent, respectively. In effect, New Hampshire's new guidelines simply create an Income Shares range around the current percentages. Relative to New Hampshire's current guidelines, the new percentages lead to lower child support amounts at all but the lowest income levels, and increasingly lower amounts as income increases. On average, child support amounts under the July 2013 New Hampshire guidelines will be approximately 15 to 20 percent lower, depending on the income level and number of children.

For all five states, and for Massachusetts, we calculated presumptive child support amounts over the range of income covered under the current Guidelines, in different combinations of payor and recipient income. For Massachusetts and each neighboring state, we calculated child support amounts over the full range of potential income combinations under the Guidelines.[45] Specifically, we calculated child support amounts for fifteen different income combinations, representing all possible combinations of four different income levels for each of the payor and recipient ($20,000, $60,000, $120,000 and $200,000 per year)[46] up to $250,000 per year of combined income (the maximum income level on the Guidelines chart), as well as the same four payor income levels run with zero recipient income. Table 9 shows the child support amounts from the current Guidelines Chart for each of the resulting fifteen income combinations.

Table 9: Current Guidelines Amounts for State Comparisons (1 child)

Recipient	Payor Income			
Income	$385	$1,154	$2,308	$3,846
$0	$94	$283	$513	$771
$385	$95	$274	$501	$754
$1,154	$69	$256	$478	off Chart
$2,308	$54	$235	$443	
$3,846	$46	off Chart		

Source: Current (January 2009) Guidelines. ($/week)

Income-Only Comparisons

Comparing these child support amounts to guidelines amounts for other states requires certain assumptions about items such as taxes, child care costs, and health care costs, to the extent the guidelines in different states handle those items differently. While the current Massachusetts Guidelines are based on gross income, as are New Hampshire and Rhode Island, guidelines in Connecticut and Vermont are based on net income. New York is based on gross income but with a theoretical cap applied subjectively at $80,000 per year of combined gross income. Therefore, we

[45] Our comparisons use the new July 2013 New Hampshire's guidelines since they are already known and will be effective within a month of writing this report.

[46] The corresponding weekly amounts are $385, $1,154, $2,308, and $3,846 per week.

calculated the guidelines amounts for each of those three states using the net income equivalents of the various gross income numbers we used for Massachusetts.

Likewise, the current Massachusetts Guidelines account for the costs of child care and health care as deductions from gross income in computing available income on which the amount of child support is based. New Hampshire, Rhode Island, and Vermont also deduct health care costs from gross income, but only New Hampshire also deducts child care costs. Connecticut and New York adjust their child support amounts directly to account for health care costs, rather than deducting them from income, as do all of the neighboring states except New Hampshire for child care costs. The adjustments for child care costs and health care costs in each state differ across states, as do the typical amounts of the costs themselves. For simplicity, therefore, our comparisons assume no child care or health care costs. To that extent, our calculations may overstate the differences in child support amounts between Massachusetts and neighboring states whose guidelines directly adjust for those costs, resulting in higher guidelines amounts in cases where such costs are present.[47]

The resulting guidelines amounts for one child for a given income combination sometimes are similar and sometimes vary widely across states due to differences in both the structure and percentages of each state's guidelines. For example, the guidelines amount for a low-income payor ($20,000 per year) and a recipient with no income are 18 percent of the payor's gross income for Rhode Island, 24 percent for Vermont, 21 percent for Connecticut, and 22 percent for New Hampshire. Only New York's flat 17 percent of income is very different, by design. The guidelines amounts at higher income combinations are more varied. The guidelines amounts for a relatively high-income payor ($120,000 per year) and a recipient with no income, for example, range from 12 percent of the payor's gross income (in Vermont) to 15 percent (in New Hampshire and New York). Table 10

[47] To test the sensitivity of our comparisons to the presence of child care costs and health care costs, we also ran comparisons to the July 2013 New Hampshire guidelines including costs. We discuss those results below.

shows the guidelines amounts across all five neighboring states, on average, for each of the fifteen possible income combinations, as well as the corresponding percentages for Massachusetts.

Table 10: Guidelines Amounts as a Percent of Payor Gross Income (1 child)

Recipient Income	Payor Income			
	$385	**$1,154**	**$2,308**	**$3,846**
	Massachusetts			
$0	24%	25%	22%	20%
$385	25%	24%	22%	20%
$1,154	18%	22%	21%	off Chart
$2,308	14%	20%	19%	
$3,846	12%	off Chart		
	Average of Neighboring States			
$0	20%	17%	13%	12%
$385	19%	15%	13%	11%
$1,154	17%	14%	12%	off Chart
$2,308	19%	12%	11%	
$3,846	13%	off Chart		

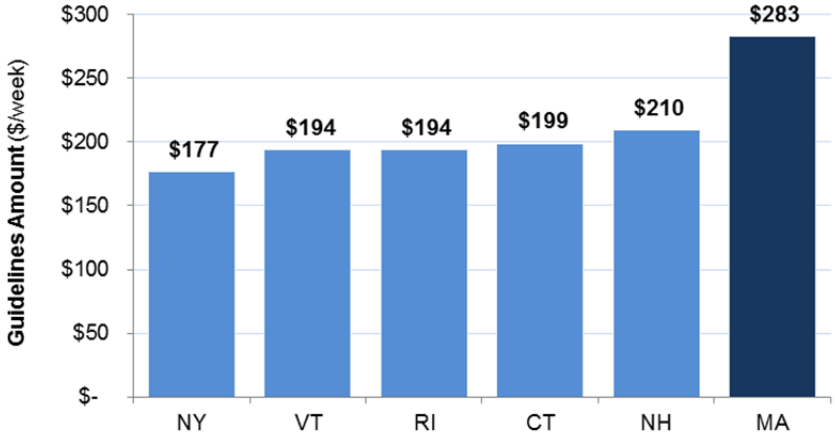
Guidelines calculations by state. ($/w eek)
Note: assumes no child care or health care costs.

For most income combinations in Table 10, the current Massachusetts Guidelines amounts for one child are a higher percentage of the payor's income than the average of the five neighboring states. In two of the fifteen cases, with very low-income payors and very high-income recipients, the Massachusetts percentages are lower on average. The current Guidelines amounts for one child are mostly higher on a state-by-state basis as well for the same income combinations. For example, the Guidelines amounts for one child compared to the July 2013 New Hampshire guidelines are: lower for low-income payors and high-income recipients by 3 to 10 percent, but otherwise higher by 8 to more than 50 percent, again in the absence of adjustments for child care or health care costs.

For illustration, Figure 10 shows the guidelines amounts for Massachusetts and each neighboring state for a payor and recipient with one child and roughly median combined income[48] ($60,000 per year, or $1,154 per week) earned by the payor (*i.e.,* no recipient income).

[48] U.S. Census Bureau, 2011 American Community Survey, *op. cit.*

Figure 10: Current Guidelines v. Neighboring States
(Approximately Median Income; 1 child)



Based on $60,000 per year of income for payor and $0 for recipient.
Assumes no child care or health care costs.

At this income combination, the current Massachusetts Guidelines amount of $283 per week for one child is: 35 percent ($73 per week) higher than the next-highest state, New Hampshire; 42 percent ($84 per week) higher than Connecticut; 46 percent ($89 per week) higher than Rhode Island and Vermont; and 60 percent ($106 per week) higher than New York. The same figure for most income combinations would show a similar qualitative result. However, the Massachusetts presumptive amounts for one child are lower than the amounts in neighboring states for low-income payors ($20,000 per year or less) who are paired with high-income recipients ($120,000 per year or more).

Including Child Care Costs and Health Care Costs

Again, the comparisons to neighboring states in Table 10 and Figure 10 are based only on the relative incomes of a recipient and payor, assuming no child care costs or health care costs. When such costs are present and are handled differently in neighboring states, the Massachusetts Guidelines amounts yield different relative results. To test the sensitivity of our comparisons to the presence of child care costs or health care costs, we compared the Massachusetts Guidelines amounts, with those costs, to the July 2013 New Hampshire guidelines with the same costs for all fifteen income combinations. We ran these sensitivities relative to New Hampshire because: (1) the Massachusetts and New Hampshire guidelines handle child care costs and health care costs

differently, and (2) the no-cost New Hampshire guidelines amounts (*i.e.,* excluding child care costs and health care costs) are the closest of the neighboring states to the Massachusetts Guidelines amounts.

Under the Massachusetts guidelines, out-of-pocket child care costs and health insurance costs are deducted from the incomes of a payor and a recipient, and the combined child support amount is calculated based on the remaining combined available income. To determine the combined support amount, the New Hampshire guidelines only deduct a *payor's* cost of health insurance coverage, and only for the children covered by an order (*i.e.,* not the full cost of health insurance, like Massachusetts).[49] A recipient's income is adjusted for any cost of the children's health insurance or child care only after the combined support amount is determined, and then the combined support amount is prorated between a payor and a recipient based on their respective incomes adjusted for all costs.

To compare guidelines amounts with child care costs and health care costs requires an assumption about the magnitude of those costs. Our comparisons are based on the average costs reported for Massachusetts. Child care costs average at least $109 per week for Massachusetts, and $99 per week nationally, depending on a child's age.[50] Our comparisons assumed $100 per week. The average cost of a family health plan in Massachusetts is $326 per week, and single coverage is 35 percent of that cost.[51] Employers usually pay some part of health care premiums, say 50 percent, so the corresponding out-of-pocket health insurance cost is $162 per week. So our comparisons assumed $160 per week for a family plan and $56 per week (*i.e.,* 35 percent of $160) to cover a child. We used these costs in all scenarios with sufficient income to warrant them. For example, in the scenarios with zero recipient income, we assumed zero costs for the recipient. Also, the New

[49] Both states deduct health insurance costs. However, Massachusetts deducts the full cost, while New Hampshire deducts only the child's portion of the cost and also applies a 4% "reasonable cost" threshold.

[50] See Table 13 below.

[51] See Figure 16 and related text below.

Hampshire guidelines cap the "reasonable cost" of children's health insurance at 4 percent of a payor's gross income. So our comparisons used the lesser of $56 per week or 4 percent of income.

Including child care and health care costs in our comparisons of Massachusetts and New Hampshire guidelines amounts for one child resulted in different numbers but the same qualitative result: the Massachusetts amounts are still higher for most income scenarios, but by less than in the income-only comparisons. For example, at approximately median payor income ($60,000 per year) and no recipient income, with $160 per month in health insurance costs, the guidelines amount is $248 per week in Massachusetts, or 22 percent higher than the $204 per week under New Hampshire's July 2013 guidelines. The guidelines amounts for the same income scenario with no costs were $283 and $210 per week, respectively, a 35 percent difference. The differences between are wider at higher incomes. As before, only in cases of low-income payors are the Massachusetts guideline amounts for one child lower than the New Hampshire amounts, by approximately 20 percent, on average; the Massachusetts amounts are otherwise higher, even after accounting for the differences in handling child care costs and health care costs.[52]

4. Marginal Increases for Additional Children

So far, the comparisons discussed reflect the cost of one child. Relative to the current Betson-Rothbarth child cost estimates, USDA estimates, and guidelines amounts in neighboring states, the current Massachusetts Guidelines amounts for one child are relatively high, especially at middle and high incomes. However, the comparisons for one child reflect only the percentages in Table A on the Guidelines Worksheet and the amounts on the resulting Guidelines Chart. We have not yet discussed how the scale factors in Table B on the Worksheet, which apply in cases with two to five children, compare with available benchmarks. This section reports the results of those comparisons.

[52] We note the analogous results for two and three children in the next section.

Table B on the Worksheet grosses up the Guideline amounts for one child by decreasing percentages to reflect economies of scale in households with more and more children. The factors in Table B scale-up the Guidelines amounts by 20 percent for a second child, and by far less for each additional child (6 percent, 4 percent and 2 percent, respectively). The corresponding scale factors (shown in Figure 2) are 1.20, 1.27, 1.32, and 1.35 times the Guidelines amount for one child. While our comparisons indicate the current Guidelines for one child are consistently higher than the benchmarks, the scale factors in Table B of the Worksheet are consistently lower than the same benchmarks. Table 11 shows the marginal increases in each of the benchmarks to account for additional children in a household.

Table 11: Marginal Increases for Additional Children

	Number of Children				
Benchmark	**2**	**3**	**4**	**5**	**6**
Child Cost Estimates					
Betson (2010)	55%	23%			
USDA (2012)	56%	17%	12%	10%	
Neighboring States					
Connecticut	34%	11%	11%	10%	9%
New Hampshire	37%	20%	8%	8%	8%
New York	47%	16%	7%	13%	13%
Rhode Island	50%	19%	11%	9%	8%
Vermont	51%	20%	12%	10%	9%
Benchmark Summary Statistics					
Min	34%	11%	7%	9%	8%
Max	56%	23%	21%	21%	21%
Median	50%	19%	11%	10%	9%
Mean	47%	18%	10%	10%	9%
MA Guidelines	**20%**	**6%**	**4%**	**2%**	

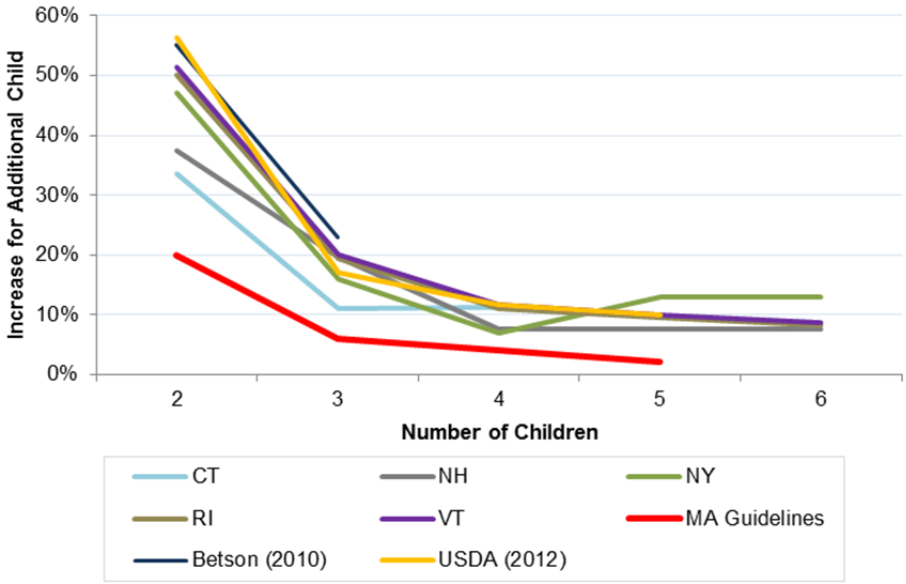
State guidelines, Betson (2010), and USDA (2012).

Most numbers in Table 11 reflect the average increase over the full range of incomes for a given number of children. For example, the Betson-Rothbarth 55 percent increase for a second child reflects the increase in the estimated costs for two children (37 percent) relative to one child (24 percent) over the full range of incomes listed in Table 2 above. The analogous USDA 56 percent increase is the difference between the estimated 41 percent of income spent on two children relative

to 26 percent of income for one child, as listed in Table 5 above. For the four neighboring Income Shares states (Connecticut, New Hampshire, Rhode Island, and Vermont), the various adjustments reflect the average changes in each state's guidelines cost tables for different numbers of children over the full range of income to which the guidelines apply. For New York, the guidelines explicitly set the guidelines amounts as a fixed percent of income for different numbers of children, regardless of income level, and the increases in Table 11 reflect the incremental increases in those stated percentages.

Figure 11 illustrates the marginal increases listed in Table 11:

Figure 11: Marginal Increases for Additional Children



While the benchmarks are mostly lower than the Massachusetts Guidelines amounts for one child, the benchmark adjustments for additional children are all higher than the Massachusetts scale factors. The marginal increases for a second child range from just above 30 percent (34 percent in Connecticut and 37 percent in New Hampshire) to 55 percent or more, based on the Betson-Rothbarth and USDA child cost estimates. The average increase for a second child is 47 percent, or still more than double the increase under the current Massachusetts Guidelines. The average increases for a third and fourth child are 18 percent and 10 percent, respectively, or 3x and 2x the

analogous increases in the current Guidelines. The average increase for a fifth child is also 10 percent, or five times the Massachusetts adjustment. Again, however, these higher increases for more than one child are set against higher Massachusetts Guidelines amounts for one child.

In the end, the scale factors in Table B of the Massachusetts Guidelines Worksheet are lower than the benchmarks adjustments for multiple children, but they are being applied to higher Guidelines amounts. The Task Force should bear in mind this interaction in evaluating each element of the Guidelines. Increasing the scale factors in Table B on the Guidelines Worksheet to bring them into line with the benchmarks, without also lowering the Guidelines amounts for one child, would simply extend to cases with multiple children the differences between the benchmarks and the Guidelines amounts for one child.

To evaluate the current Massachusetts Guidelines amounts for more than one child, we compared the Guidelines amounts for two and three children to each of the three economic benchmarks.

Compared to the Betson-Rothbarth estimates, the current Guidelines amounts for more than one child are higher at all but very low income levels. Recall, the Guidelines amounts for one child are higher than the Betson-Rothbarth estimates at all income levels above $165 per week. For two and three children, the same is true at incomes above $342 per week and $774 per week.

Compared to the USDA estimates, the current Guidelines amounts for more than one child also are mostly, but not always, higher. For example, the Guidelines amounts for two and three children are lower or comparable at the low- and middle-income levels. Relative to the USDA national estimates, the current Guidelines amounts for two children are 22 percent lower than USDA for the low-income group. For three children, the Guidelines amounts are 30 percent lower at low incomes, and within 10 percent at middle incomes.[53] The Guidelines amounts are higher than the USDA national estimates at higher income levels. The same holds for the Guidelines amounts relative to the USDA

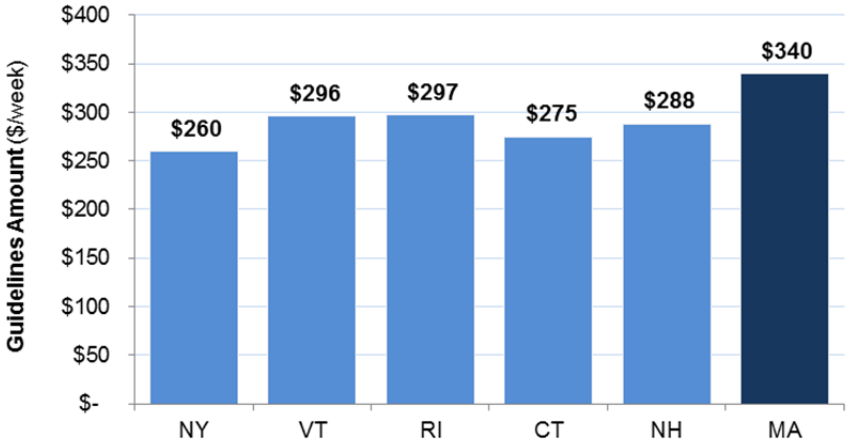
[53] These differences are calculated at the average level of income for each income group, shown on Table 5 above.

Northeast child cost estimates: the Guidelines amounts for two children are 29 percent lower than USDA at low incomes, within 10 percent at middle incomes, and higher at high incomes. For three children, the Guidelines are 36 percent lower at low incomes, 2 percent lower at middle incomes, and higher at high incomes.

Relative to neighboring states, the current Massachusetts Guidelines amounts for more than one child are higher in most, but not all, cases. They tend to be lower than neighboring states for low-income payors paired with high-income recipients and otherwise higher, but by less than the differences in the amounts for one child. For example, where the current Guidelines for two children are higher for the income combinations we considered, they are within 12 percent of New Hampshire guidelines amounts. Compared to other neighboring states, the current Guidelines amounts for two children are relatively higher.

Figure 12 compares the guidelines amounts for two children at $60,000 per year ($1,154 per week) of payor income and no recipient income (*i.e.,* analogous to Figure 10 above, but for two children rather than one child). At this income combination, the current Massachusetts Guidelines amount of $340 per week for two children is: 14 percent ($43 per week) higher than Rhode Island; 15 percent ($44 per week) higher than Vermont; 18 percent ($52 per week) higher than New Hampshire (2013); 24 percent ($65 per week) higher than Connecticut;; and 31 percent ($80 per week) higher than New York.

Figure 12: Current Guidelines v. Neighboring States
(Approximately Median Income; 2 children)

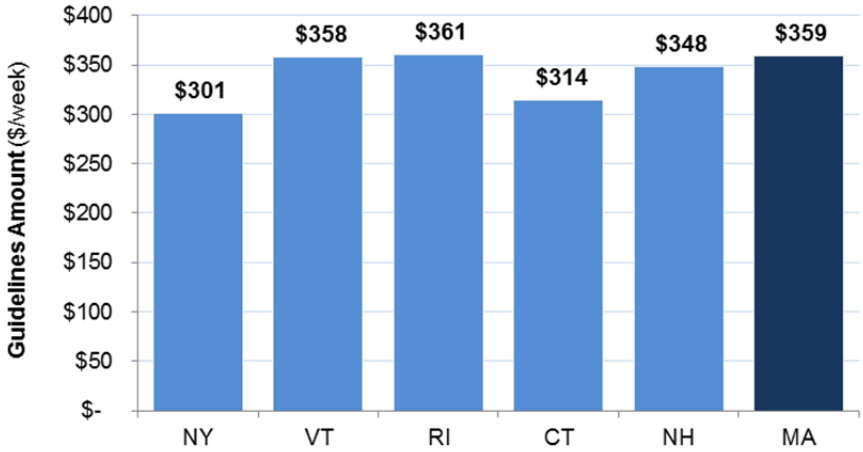


Based on $60,000 per year of income for payor and $0 for recipient.
Assumes no child care or health care costs.

Again, we tested the sensitivity of this result to the inclusion of child care costs and health care costs in our comparison to the July 2013 New Hampshire guidelines. Using the same costs described above, the Massachusetts presumptive amount for two children is $298 per week, rather than the $340 per week shown in Figure 12. This is only slightly above the $281 per week under New Hampshire's July 2013 guidelines.

Figure 13 compares the Guidelines amounts for three children at the same income combination as in Figures 10 and 12 for one and two children, respectively. At that particular income level, the Massachusetts Guidelines amounts are roughly comparable to neighboring states. Over the full income range, the current Guidelines amounts for three children are: comparable or lower for low-income payors; comparable to New York for relatively high-income payors; and otherwise still materially higher than neighboring states. Accounting for child care costs and health care costs in our comparisons to the July 2013 New Hampshire guidelines for three children reduces the Massachusetts Guidelines amount in this scenario from $359 to $315 per week, or 7 percent less the New Hampshire amount of $339 per week with those costs.

Figure 13: Current Guidelines v. Neighboring States
(Approximately Median Income; 3 children)



Based on $60,000 per year of income for payor and $0 for recipient.
Assumes no child care or health care costs.

To summarize, the current Guidelines amounts for more than one child are: mostly higher than the Betson-Rothbarth and USDA estimates; higher than guidelines amounts in neighboring states for two children, but by proportionately less than the relative differences for one child; and comparable to, or just higher than, guidelines amounts in neighboring states for three children in most, but not all, cases and likely not after accounting for the presence and handling of child care costs and health insurance.

VII. RELATIVE COSTS IN MASSACHUSETTS

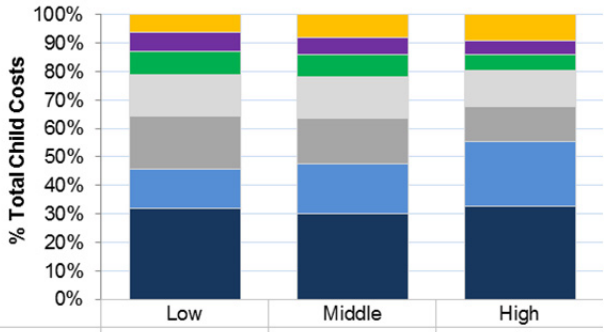
The preceding comparisons indicate the current Massachusetts Guidelines amounts, particularly for one child, are relatively high, especially at middle- and high-income levels. From an economic perspective, that would be appropriate if child costs in Massachusetts, especially at those income levels, are higher than for the benchmark group. To the extent that overall incomes and household costs are higher in Massachusetts, for example, then child costs also may be higher.[54]

[54] Whether or not child costs are higher due to higher overall costs depends on whether the additional cost of adult items "crowds out" spending on children that may otherwise occur, reflecting the household budget constraint.

The data indicate that both household income and expenses in Massachusetts are above average. Of course, higher incomes and higher costs manifest themselves differently for different households. Not all households in Massachusetts have similarly higher incomes relative to the national average, but all households do face the state's higher cost of living. Therefore, household costs in Massachusetts may be disproportionately higher than income for some households. There are competing economic ideas on the impact of above average household costs on child costs. Higher adult "overhead" (such as housing and utilities) may reduce income available for spending on children. Alternatively, parents may choose to incur higher costs for children. Currently, there is no empirical answer to (*i.e.,* no study of) this issue.

Figure 14 shows the breakdown of child costs into its cost components for each income group, based on the current USDA estimates for married households with one child.

Figure 14: Estimated Child Cost Shares by Cost Component



	Low	Middle	High
Misc.	6%	8%	9%
Clothing	7%	6%	5%
Health Care	8%	8%	6%
Transportation	15%	14%	13%
Food	18%	16%	12%
Child Care / Education	14%	17%	23%
Housing	32%	30%	33%

Income Group

Source: USDA (2012), Table 1 averages by expenditure category.

Housing costs are the largest cost component of child costs (approximately one-third), followed by child care and education (18 percent, on average), food (16 percent), and transportation (14 percent). Health care costs, clothing, and miscellaneous expenses are each less than 10 percent of overall child costs. Incomes as well as two of the two largest cost components, housing and child

care costs, are higher in Massachusetts than in the U.S. overall. Notably, Massachusetts' health care costs are higher as well.

a. Housing Costs

Table 12 shows household income and housing costs for the U.S. and for Massachusetts, both overall and by county. Median household income in Massachusetts is nearly 25 percent higher than in the U.S. overall. Gross rent is higher in Massachusetts in dollar terms, but is below the national average as a percent of income in all but two counties (Barnstable and Suffolk). However, owning a home costs 10 percent more, on average, and in all but two counties (Franklin and Norfolk).[55]

Table 12: Income and Housing Costs: U.S. and Massachusetts

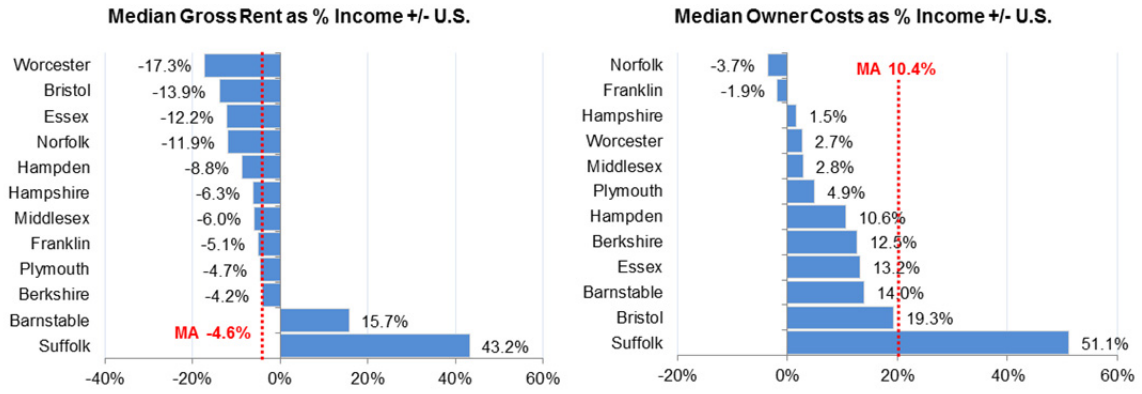
			Gross Income		Gross Rent			Owner Costs		
	Population	% Total	$/year	+/- US	$/month	% Income	+/- US	$/month	% Income	+/- US
U.S.	**311,591,919**		**50,502**		**871**	**20.7%**		**1,486**	**35.3%**	
MA	**6,587,536**	**100%**	**62,859**	**124.5%**	**1,034**	**19.7%**	**-4.6%**	**2,042**	**39.0%**	**10.4%**
Difference			**12,357**		**163**			**556**		
			24.5%		**18.7%**			**37.4%**		
Barnstable	215,769	3.3%	56,699	12.3%	1,131.00	23.9%	15.7%	1902	40.3%	14.0%
Berkshire	130,458	2.0%	42,969	-14.9%	710.00	19.8%	-4.2%	1423	39.7%	12.5%
Bristol	548,922	8.3%	53,409	5.8%	793.00	17.8%	-13.9%	1875	42.1%	19.3%
Essex	748,930	11.4%	64,887	28.5%	983.00	18.2%	-12.2%	2161	40.0%	13.2%
Franklin	71,599	1.1%	50,361	-0.3%	824.00	19.6%	-5.1%	1454	34.6%	-1.9%
Hampden	463,783	7.0%	47,897	-5.2%	753.00	18.9%	-8.8%	1559	39.1%	10.6%
Hampshire	157,822	2.4%	54,179	7.3%	876.00	19.4%	-6.3%	1618	35.8%	1.5%
Middlesex	1,518,171	23.0%	76,978	52.4%	1,248.00	19.5%	-6.0%	2329	36.3%	2.8%
Norfolk	675,436	10.3%	81,889	62.2%	1,244.00	18.2%	-11.9%	2321	34.0%	-3.7%
Plymouth	497,579	7.6%	68,253	35.1%	1,122.00	19.7%	-4.7%	2107	37.0%	4.9%
Suffolk	730,932	11.1%	49,276	-2.4%	1,217.00	29.6%	43.2%	2191	53.4%	51.1%
Worcester	801,227	12.2%	60,493	19.8%	863.00	17.1%	-17.3%	1828	36.3%	2.7%

Source: U.S. Census Bureau, 2011 American Community Survey

Figure 15 illustrates the Massachusetts data relative to the U.S. overall.

[55] The Census Bureau data includes in owner costs all forms of debt where the property is pledged as security for repayment of the debt, including mortgages, home equity loans, deeds of trust, and land contracts. Also includes cost of property insurance, utilities, real estate taxes, *etc*.

Figure 15: Massachusetts Housing Costs Relative to U.S.



b. Child Care Costs

Likewise, child care costs in Massachusetts are higher than in the U.S. overall and in neighboring states. In fact, Massachusetts ranks in the top ten least affordable states for child care, at $14,980 per year ($288 per week) for an infant and $11,669 ($224 per week) for a toddler.[56] In both categories, Massachusetts' child care costs for one, two, and three children are the highest in the U.S. in dollar terms, and as a percent of income for households at the poverty level.[57] New York is the only neighboring state in the top ten for infant care (at $269 per week). New York, Rhode Island, and Vermont are all in the top ten for toddler care (at $223, $191, and $168 per week, respectively). Table 13 summarizes child care costs for the U.S. overall, Massachusetts, and the five neighboring states. The percentages on the table measure each of the benchmark costs relative to Massachusetts. Only for school-age child care is the cost in Massachusetts less than the national average or any of the neighboring states.

[56] See, Child Care Aware of America, "Parents and the High Cost of Child Care" (2012), at Tables 1 and 3.

[57] *Ibid,* at Tables 5 and 6.

Table 13: Child Care Costs: U.S., Massachusetts, and Neighboring States

State	Child Care Center (1 Child)					
	Infant		Toddler		School Age	
Massachusetts	**$ 288**	100%	**$ 224**	100%	**$ 109**	100%
Connecticut	$ 247	86%	$ 203	90%	$ 104	95%
New Hampshire	$ 231	80%	$ 183	82%	$ 81	74%
New York	$ 269	94%	$ 223	99%	$ 211	193%
Rhode Island	$ 228	79%	$ 191	85%	$ 150	137%
Vermont	$ 185	64%	$ 168	75%	$ 93	85%
U.S. Overall	**$ 185**	64%	**$ 149**	66%	**$ 99**	90%

Source: Child Care Aware of America (2012), Appendix 1, stated in $/week.

It should be noted that there is no adjustment to the standard presumptive child support award when child care costs are incurred. Economic theory and budget analysis indicate that when child care costs are incurred spending on other (including standard child costs) is reduced. That is, budget limitations argue for a downward adjustment in other child costs when child care costs are incurred.

c. Health Care Costs

Federal regulations require state child support guidelines to address how a child's health care needs will be provided-for through health insurance coverage and/or cash medical support.[58] Under federal regulations, the court—or child support agency in administrative hearings—must address health insurance coverage in both private cases and child support agency cases. In Massachusetts, courts also are required to determine whether medical insurance coverage for children is available, and, if so, the courts must order the payor to obtain and maintain such insurance.[59]

Federal regulations require each state's child support guidelines to address how parents will provide for a child's health insurance coverage and/or cash medical support.[60] Most states directly account for health insurance premiums in their guidelines formulas, typically as a deduction from available

[58] CFR § 302.56(c)(3).

[59] Guidelines, Section G(1), p. 5, referring to the requirements of Chapter 58 of the Acts of 2006, *An Act Providing Access to Affordable, Quality, Accountable Health Care*, signed into law on April 12, 2006.

[60] CFR 302.56(c)(3).

income or as a proportional credit against the guidelines amount. The current Massachusetts Guidelines, as well as four of the five neighboring states (all but New York), deduct health insurance costs from income.[61]

A key point in ordering medical support is the affordability of health insurance coverage. Federal regulations require establishing a definition of affordability, and offer guidance at 5 percent of the gross income of the parent paying for coverage.[62] Each state may create its own definition of affordability. However, federal regulations require that the definition of affordability be based on income and be numeric. The definition of affordability in the current Massachusetts Guidelines reflects current Massachusetts law, but is neither income-based nor numeric.[63]

Available data show that health care costs in Massachusetts are relatively high. Massachusetts spends more per capita on health care than any other state. Per capita spending in Massachusetts is higher than the national average in every major category of health care services (*e.g.,* physician and hospital services, prescription drugs, and nursing homes), with the widest gaps in spending on hospitals and nursing homes.[64] Table 14 shows total per capita health care spending in 2009 for the U.S. overall, Massachusetts, and the five neighboring states. Health care spending in Massachusetts is 36 percent above the national average. This is driven, in part, by higher incomes and more health care research funding. That gap increased from 29 percent above the national average in 2004, as per capita health care costs grew at an average annual rate of 6.6 percent in the 5 years from 2004 through 2009.

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[61] Instead, New York credits payors for reasonable health care costs not covered by insurance in proportion to the payor's share of the guidelines amount.

[62] CFR § 303.31(a).

[63] "Health care coverage shall be deemed available to the Payor at reasonable cost if it is available through an employer." Guidelines, Section G(1), p. 5.

[64] Centers for Medicare and Medicaid Services, "Health Expenditures by State of Residence," (2011).

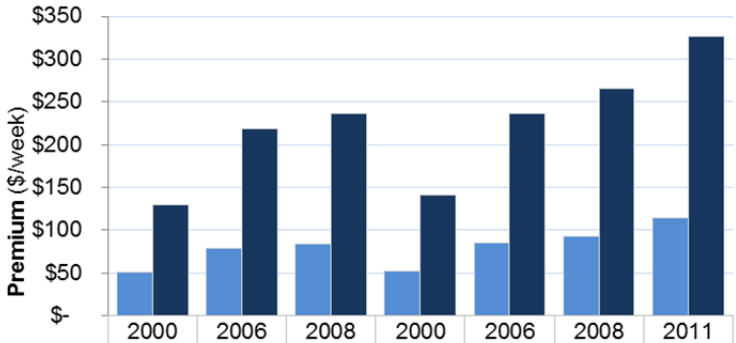
Table 14: Per Capita Health Care Costs: U.S., Massachusetts, and Neighboring States

State	$/week 1998	$/week 2004	$/week 2009	As % U.S. 1998	As % U.S. 2004	As % U.S. 2009	Annual Growth 1998 - 2004	Annual Growth 2004 - 2009
United States	**$ 72**	**$ 104**	**$ 131**	100%	100%	100%	**7.5%**	**5.2%**
Massachusetts	**$ 92**	**$ 134**	**$ 178**	**129%**	**129%**	**136%**	**7.6%**	**6.6%**
Connecticut	$ 91	$ 131	$ 166	126%	126%	127%	7.5%	5.4%
New Hampshire	$ 72	$ 110	$ 151	101%	106%	115%	8.6%	7.4%
New York	$ 89	$ 129	$ 160	124%	124%	122%	7.5%	4.9%
Rhode Island	$ 83	$ 125	$ 160	115%	120%	122%	8.5%	5.6%
Vermont	$ 70	$ 120	$ 147	98%	115%	112%	11.9%	4.5%

Cuckler, G., et al., "Health Spending by State of Residence, 1991–2009," Medicare & Medicaid Research Review 1(4) (2011), Exhibit 2, stated in $/week.

Massachusetts health insurance premiums are also higher than the national average. The average family premium in Massachusetts in 2011 was $16,953 per year, or $326 per week. This cost is approximately 16 percent higher than the average cost in 2010 of $14,606 ($281 per week), an increase of twice the national average increase of about 8 percent.[65] Figure 16 shows the cost of single and family premiums in Massachusetts and in the U.S. overall in prior years.

Figure 16: Massachusetts Health Insurance Premiums Relative to U.S.



	2000	2006	2008	2000	2006	2008	2011
	U.S.			Massachusetts			
Single Premium	$51	$79	$84	$52	$86	$93	$114
Family Premium	$130	$219	$237	$141	$236	$265	$326

Source: MA Division of Health Finance and Policy, "Massachusetts Health Care Cost Trends" (November 2009), slide 16, stated in $/week.

2011 family premium per Boston Globe, November 12, 2012, *op. cit.;* single premium inferred from relative atio in 2008.

[65] *The Boston Globe*, "Mass. insurance costs again listed as most expensive in the nation," November 12, 2012.

In 2008, premiums were $93 per week for single coverage and $265 for family coverage. This is 10 percent and 12 percent, respectively, above the national average premiums. The growth in premiums has slowed since Massachusetts passed health care reform legislation in 2006, to growth rates below the national average. However, the gap between Massachusetts and the rest of the U.S. in the cost of health insurance premiums is widening. A single premium in Massachusetts was 2 percent, 8 percent, and 10 percent higher than in the U.S. overall in 2000, 2006 and 2008, respectively. Likewise, the family premium was 8 percent, 8 percent, and 12 percent above the national average for each of the same years.

With empirical evidence of higher costs for housing, child care, and health care in Massachusetts, it is not unreasonable to expect the portion of such costs attributable to children to be similarly higher than benchmarks reflecting national averages or costs in other states. To the extent those costs represent the majority of child costs, child costs in Massachusetts likely are higher than nationally or in other states. However, the same may or may not be true of other child costs as well, which may be subject to binding household budget constraints. Households facing a higher overall cost of living in Massachusetts, for example, may have to reduce certain types of spending on children (*e.g.,* private school tuition, more individualized child care, sports fees, *etc.*) in favor of lower-cost options, because they have only so much money to spend.

Also, to the extent child costs in Massachusetts are higher than in other states, then that is true for both households in which such costs are incurred, a recipient's household and a payor's household alike. However, the current Guidelines do not account for the common economic reality in the context of child support of two separate households, each of which incurs both: (1) fixed overhead expenses, such as rent/mortgage and utilities, and (2) variable costs to the extent a child spends time in each household.[66] Even at the one-third/two-thirds parenting presumption in the current

[66] Currently, Kansas is the only state with a second household adjustment (a deduction from available income) in its Income Shares guidelines formula, to account for the payor's additional housing costs.

Guidelines, those costs are material and may be no less in the payor's household than they are in the recipient's household. In practice, some payors could end up paying several of the same costs twice, once in each household.

The standard Income Shares child cost tables do not reflect the fact that the payor's available income in many cases is reduced by the cost of a separate mortgage or rent payment and a second set of household utilities. Instead, the Income Shares tables yield guidelines amounts based on data from an intact household applied to a payor in a second single-parent household, but who is presumed to have the same available income as in the non-existent situation of shared expenses in one household rather than two. Also ignored is the fact that when intact households take on new or higher costs, such as child care or health care costs, they frequently cut back on other spending accordingly to stay within their budget constraints. Thus, although household costs in Massachusetts appear to be higher than the benchmarks, it may not be equitable or economically realistic for the amounts payors pay under the Guidelines to be higher as well. The current Massachusetts Guidelines do not fully address the interaction of these factors.

VIII. TAX CONSIDERATIONS

The current Massachusetts Guidelines consider the gross available income of the payor and recipient, as opposed to their net income after taxes and tax-related child benefits. Of the 38 states listed in Table 1 whose guidelines are based on the Income Shares model, 26 states (like Massachusetts) use gross income. However, the distinction between gross and net income in this context is not clear-cut, as the underlying tax assumptions and formulas vary widely. For example, the Betson-Rothbarth estimates on which many income shares guidelines are based relate child costs to net income. So many states whose guidelines use gross income simply apply state and federal tax tables to gross up the net income amounts in the underlying economic studies. In that sense, those guidelines use gross incomes but the guidelines amounts are based on underlying child cost estimates relating to net incomes.

Using gross income in the Guidelines is appealing for its simplicity. By considering only gross income, the Guidelines Worksheet does not have to incorporate information about the payor or recipient's tax filing status, the amount of income taxes each pays, or the relative financial impact of various deductions and credits. And the discovery and analytical burden on the court is reduced. From an economic perspective, however, gross income may not best reflect the amount of income that is actually available to a payor or recipient to spend on a child.

Gross income also does not reflect the availability or dollar value of child-related tax credits, deductions, and exemptions. The financial impact of three key child-related tax credits are subject to policy uncertainty at the federal level: (1) the child tax credit; (2) the child care tax credit, and (3) the earned income tax credit, all of which were scheduled to be cut if Congress had not reached a compromise on the "fiscal cliff" in January 2013.[67] While the near-term uncertainty regarding these tax benefits has been resolved, they will continue to be subject to revision going forward. More specifically:[68]

> The child tax credit allows married couples with household incomes less than $110,000 and single parents earning less than $75,000 to claim $1,000 per child under age 17. This credit was doubled to its current amount by the Tax Relief Reconciliation Act of 2001, and would have reverted to $500 per child if it had not been extended this year. The fiscal cliff deal extended this tax credit for five years.

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[67] Other child-related tax benefits were not affected by the fiscal cliff deal, including the dollar values of the head of household standard deduction and the child dependency exemption, which is different from the child tax credit.

[68] Elise Marrion, "Critical Tax Credits for Families May Expire," October 17, 2012 (http://www.creditscore.net/critical-tax-credits-for-families-may-expire/); Blake Ellis, "Fiscal cliff deal protects family tax breaks," CNN Money, January 3, 2013 (http://money.cnn.com/2013/01/03/pf/taxes/family-tax-breaks-fiscal-cliff/index.html).

The earned income tax credit benefits both families and low-income married couples without children. Married couples earning less than $50,270 with three or more children can save up to $5,891 per year in 2012. The fiscal cliff deal also extended this tax credit for five years, averting a reduction of up to $600 per year.

The child and dependent care tax credit helps working parents cover child care costs by allowing them to claim a credit of up to 35% of such costs up to $3,000 per child or $6,000 per family. The fiscal cliff deal extended this credit without sunset (*i.e.,* permanently for now), averting a reduction to $2,400 per child or $4,800 per family, and up to 30% of child care costs.

Since the current Massachusetts Guidelines use gross income, not net income, any uncertainty regarding the future value of child-related tax credits, deductions, or exemptions would not directly affect the Guidelines amounts. However, the availability and dollar-value of such tax benefits does affect the relative incomes actually available to payors and recipients to cover child costs.

IX. CONCLUSION

Based on our analysis of current child cost benchmarks, including the latest Betson-Rothbarth estimates, the latest USDA estimates, and guidelines amounts in neighboring states, the current Massachusetts Guidelines amounts for one child are relatively high. However, the marginal increases for additional children are relatively low. As a result, the current Guidelines amounts for more than one child are mostly higher than the Betson-Rothbarth estimates, USDA estimates, and neighboring states, but by proportionately less than the amounts for one child. Compared to those benchmarks, the current Guidelines amounts are higher at all but the lowest income levels, though to a lesser degree for more than one child.

There is not a clear economic rationale to explain why actual child costs, if we could observe them directly, would be higher in Massachusetts than in the U.S. overall (as reflected in the Betson-

Rothbarth and USDA national numbers), or regionally (as reflected in the USDA Northeast numbers and in neighboring states' guidelines, assuming they reasonably reflect child costs). However, the data do show that the overall cost of living is higher in Massachusetts than in the nation as a whole or in neighboring states. This may indicate higher child costs as well. However, the precise question of how Massachusetts' higher cost of living translates into child costs at various income levels, taking into account household budget constraints, is a complex and unresolved empirical question.

Ultimately, it is important for the Massachusetts Guidelines to have their foundation in fundamental economic principles and actual data on child costs. By having a strong economic foundation, the Guidelines can better establish the appropriate amount of support for a child and create appropriate economic incentives for both payors and recipients. The economic principles, facts, and comparisons in this report provide the Task Force with current information and data to help inform its recommendations with that objective in mind.

* * *

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Dr. Mark Sarro is a financial economist, a Principal in the Cambridge, Massachusetts office of The Brattle Group, and a Managing Director of Watermark Economics. He works with academics, attorneys, entrepreneurs, executives, and policymakers, providing expertise on economic issues involving private decision-making and public finance.

In the area of household economics, he has researched the significance of financial and non-financial factors in household economic decision-making. His prior research developed a behavioral economic framework for, and reported empirical evidence on, the interrelated economic decisions to have children, marry, work, and/or seek public assistance.

From 2006-2008, he was the economist on the Massachusetts Child Support Guidelines Task Force, whose recommendations were the basis for the child support guidelines formula in Massachusetts. He also has testified before the New Hampshire Senate Ways and Means Committee regarding proposed child support legislation, and has provided expert testimony in alimony and child support cases.

Dr. Sarro has worked for over 15 years as an economic expert with international firms in the Boston area, in addition to Watermark Economics, which he co-founded. He holds a Ph.D. in Economics from Boston College, specializing in Public Finance and Monetary Economics, conducted public policy research, and taught micro- and macroeconomics. He also holds a BA from Fairfield University, *magna cum laude*, with a double major in Economics and English Writing and a minor in Politics.

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R. Mark Rogers is a former Federal Reserve economist with two decades of experience at the Federal Reserve Bank of Atlanta, Georgia as an expert on forecasting and data analysis. He also was a commissioner on the 1998 Georgia Commission on Child Support and is a leading authority on the economics of that field.

As an independent consultant and expert witness, Mr. Rogers has consulted on forensic economics relating to child support for both custodial and noncustodial parents. He regularly publishes about analysis of economic conditions and on child costs.

He was a governor's appointee to the Georgia Commission on Child Support, 1998, and was its only economist. In that role, he engaged in economic research regarding the origins of states' guidelines and conflict with long-established, mainstream economic research and theory. His child cost research included, but was not limited to: review of child support guideline methodologies, child costs by differing methodologies, analysis of tax treatment for payors and recipients, and their standards of living.

Mr. Rogers has consulted on child cost issues for clients in Alabama, Florida, Georgia, Illinois, Indiana, Kentucky, Maryland, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Mexico, New York, Ohio, Texas, Virginia, Wisconsin, Wyoming, and Washington State. Rogers has testified on child support issues before legislative committees in Georgia, Minnesota, and Virginia and by invitation before the U.S. Congress. He has presented to child support review commissions in Alabama, Georgia, Ohio, Tennessee, and Virginia.