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Comparing Income-Shares and Percentage-of-Income Child Support Guidelines

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Abstract

States must weigh a variety of policy tradeoffs in the development of child support guidelines, including issues of equity, transparency, and simplicity. An increasing number of states are shifting to the "income shares" model from the "percentage of income" model, citing a perceived increase in equity and flexibility. Given the additional complexities in implementing the income-shares model, we ask how often, and for whom, alternative guidelines models can be expected to yield substantially different child support orders. We first review the underlying logic of each model. We then use information on matched pairs of divorcing and never married parents from Wisconsin Court Record Data to simulate expected order amounts for each type of guideline—comparing outcomes with the current percentage-of-income guidelines used in Wisconsin, and the income-shares guidelines used in four other states (Iowa, Massachusetts, Minnesota, Utah), reflecting a range of income-shares approaches. We find that for most Wisconsin families, adopting one of the income-shares examples would result in only modest changes in the amount of child support due. However, there are some instances where a different model would result in large changes in the amount of support due, particularly for relatively low-income fathers.

Comparing Income-Shares and Percentage-of-Income Child Support Guidelines

About 40 percent of children in the United States are born to unmarried parents, and many married couples with minor children will divorce. Thus, it has been estimated that most children in the U.S. will spend at least some time living apart from one of their parents (Andersson 2002; Bumpass 1984). In this context, child support is a critical part of assuring that children receive support from both their parents. While federal law has required states to have presumptive numerical guidelines for the amount of child support to be paid by noncustodial parents since 1988, the guidelines vary across states and have developed and changed over time. In this report we compare Wisconsin's percentage-of-income guideline with four current income-shares guidelines, and use micro data simulations to demonstrate the extent to which contemporary alternatives yield different results for parents and their children.

A well-functioning child support system assures that noncustodial parents contribute, supporting the economic well-being of children and reducing direct and indirect public costs (Meyer and Hu, 1999; Pirog and Ziol-Guest, 2006; Cancian, Yang and Slack, 2013; Cancian and Meyer, 2017). Early proponents of child support enforcement aimed both to reduce the public assistance costs of supporting single mother families, and to reduce the incentive for fathers to "abandon" their families—by requiring that fathers continue to provide economic support for their children even if they did not live with them. If applied consistently, child support guidelines also assure horizontal equity—that is, they assure that noncustodial parents in similar circumstances will have similar orders. Consistent use of established guidelines may also reduce uncertainty and conflict that may be associated with negotiating support.

In developing child support guidelines, states must balance a number of competing objectives. Guidelines should provide for adequate support for the child, and a manageable burden for the paying parent—a difficult thing to achieve when the paying parent has limited income or obligations to support many children (Mincy and Sorensen, 1998; Cancian and Meyer, 2011). The principle of "continuity of expenditures," that noncustodial parents should contribute child support that is consistent with the amount they would contribute were they living with the child and the custodial parent, is central (Venohr, 2013).

However, it is difficult to apply this principle in some contexts—for example when the parent is not regularly employed (what level of income should be assumed?), or has obligations to multiple families (what counterfactual living arrangement should be assumed?)

Child support guidelines must also balance the need to account for different circumstances, and to offer a straightforward approach that can be understood by families and consistently applied by courts and the child support enforcement system. Developing different guidelines for a range of different situations may allow for more flexibility, but also leads to guidelines that are harder to understand and apply. This can contribute to increased uncertainty about outcomes, which may increase negotiations and conflict, and reduce horizontal equity. In developing and applying guidelines that will be seen as fair to all parties, it is challenging to balance flexibility and transparency. When the child support order amount is difficult to calculate or understand, reduced transparency may also erode confidence in the fairness of the guideline. On the other hand, if guidelines are simple, and do not account for multiple factors and circumstances, that may also reduce the sense of fairness.

States have adopted a range of strategies to balance the tradeoffs inherent in alternative guidelines. In this paper we compare examples of the two most common types of guidelines, "income shares" and "percentage of income." After reviewing their underlying logics, we use microdata on matched pairs of divorcing and never married parents to simulate expected order amounts for each type of guideline. As detailed below, we use data from Wisconsin court records to measure the distribution of income for parents, distinguishing the income of the mother and father in each pair. We then apply the current percentage-of-income guidelines used in Wisconsin, and the income-shares guidelines as used in four other states, reflecting a range of income-shares approaches. We document how often, and for whom, alternative guidelines yield substantially different child support orders.

CURRENT GUIDELINE TYPES

As states determine how best to balance the many trade-offs inherent in setting child support guidelines, they generally choose between two major guidelines models. The most common is the

income-shares model, currently used in forty states, including many of Wisconsin's neighbors, among

them Illinois, Iowa, Michigan, and Minnesota (National Conference of State Legislatures (NCSL), 2017).

The income-shares model explicitly accounts for the income of both the noncustodial and custodial

parent. The total support amount is based on the combined income of both parents, and each parent's

share is then prorated according to their proportional share of the combined income. Thus, in a

hypothetical situation where the custodial and noncustodial parent each earn $30,000 annually, the

support amount would be based on a combined household income of $60,000 and would be split evenly

between the two parents. The noncustodial parent pays their share, and the custodial parent is assumed to

contribute their share. Though forty states employ this model, states make a variety of policy decisions

underlying the income-shares model, which results in different relationships between income and order

levels across states.

The next most common guideline model is the percentage-of-income model. The percentage-of-

income model is currently used in seven states, including Wisconsin (NCSL, 2017).[1] In this model, only

the noncustodial parent's income is considered when setting the support amount; child support is set as a

percentage of the noncustodial parent's income, independent of the custodial parent's income. The

percentage-of-income model is based on research showing that the percentage of parental income and

assets used in supporting children does not vary substantially by income; thus, it is not necessary to

account for the custodial parent's income when setting the order (van der Gaag, 1981). Like the income-

shares model, states make a variety of additional policy decisions when implementing this model, which

results in varying relationships between income and order levels. Some states employ a flat percentage of

income, while others vary the percentage of income (NCSL, 2017). In the hypothetical case described

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[1]NCSL does not include an eighth state, New York, as a percentage of income model state. However, it is commonly included in this group in other reviews of the literature (e.g., Sarro and Rogers, 2017; Venohr, 2017b; Noyes, 2011).

previously, only the noncustodial parent's income of $30,000 would be considered in setting the support amount.

Wisconsin uses a flat percentage-of-income model for middle range incomes, set at 17 percent, 25 percent and 29 percent of the noncustodial parent's income for one, two or three children, with lower guidelines for low- and high-income cases. Wisconsin updates its low-income guidelines yearly based on updates to the federal poverty guidelines. The high-income guidelines apply at incomes higher than $84,0000. Other adjustments, including for shared parenting time, may also apply (Wisconsin Administrative Code, DCF 150.04).

CRITERIA FOR COMPARISON

In recent years, the income-shares model has grown in popularity. Since 1990, ten states have made the switch from percentage of income to income shares models, including most recently Illinois in 2017 (Venohr, 2013; NCSL, 2017). The Illinois proposal to adopt income shares clearly underscores the perceived fairness of the income-shares model compared to the percentage-of-income model as one of the major reasons for the change (Center for Policy Research, 2012). In its public Frequently Asked Questions document about the recommended change, the Illinois guidelines review committee says that a switch to income shares is recommended in part because "[i]n general, income shares is considered a more equitable approach to computing child support" (Illinois Child Support Guidelines Review Committee, 2012). Similar statements appear regularly in states' required quadrennial reviews of their child support guidelines, particularly in states contemplating a shift to income shares. For example, documentation from Minnesota, which changed from a percentage-of-income model to income shares in 2007, repeatedly references the "more fair" approach of income shares (e.g., Beld, 2001; Neuville as cited in Erickson, 2007; Minnesota Department of Human Services, 2014). For an earlier report, Noyes conducted interviews with officials from ten states, and found similar perceptions existed across states (2011).

This perception that an income-shares approach is more equitable likely stems from several factors. Notably, the income-shares model considers both parents' income in setting child support guidelines, and also includes an explicit calculation of the custodial parent's contribution, even though that amount is never directly paid (Venohr, 2017b). Income shares is also considered by some to be a more flexible model and therefore more equipped to accommodate changing family realities (Smith et al., 2009; Venohr, 2013). Illinois, for example, cites its explicit accounting of parent income as more amenable for shifts in shared or split custody (Center for Policy Research, 2012). This theme is also found in the literature from Minnesota and other income-shares states (Center for Policy Research, 2008; Minnesota Department of Human Services, 2014). Though this is often thought to be unique to income shares, Wisconsin and other percentage-of-income states similarly account for shared parenting time and other complexities in their guidelines.

On the other hand, the percentage-of-income model is often seen as easier to implement, administer, and understand (Smith et al., 2009; Noyes, 2011). The calculations are simple, resulting in the need for fewer resources and support for families in calculating the payment amount. Morgan, for example, argues that the additional complexity of income shares is unnecessary since the custodial parent's contributions are assumed to be made through direct spending and are never explicitly paid out (as cited in Smith et al., 2009). The ease of administration has potential benefits for the state, courts, and families. Administratively, states must account for one parent's income compared with two, and only major changes in the payer's income (but not changes in the payee's income) will trigger the need for a new order. Additionally, the computation is generally straightforward and simpler. This can reduce the amount of educational resources the state provides for stakeholders (Venohr, 2009). For families, it is also comparatively easy to estimate child support amounts, and understand how income changes may affect support amounts. This can lead to an increased sense of transparency in the process.

As more states move towards income shares, despite the potential for increased administrative burden, we seek to better understand the trade-offs inherent in these two guidelines models. We note that Illinois, in its shift to income shares, indicated that the two guidelines often result in similar amounts for

most families, but can lead to substantial variation in families with disparate incomes (Center for Policy

Research, 2012). With this in mind, we ask: (1) how often do child support order amounts differ

substantially between the two models; and, crucially, (2) for whom do these differences apply? We use

court record data from Wisconsin, which include the actual income distributions affected by child support

orders, to answer these questions.

METHOD/APPROACH

To answer how often, and for whom, the guideline amounts differ, we compare actual guidelines

for Wisconsin, which uses the percentage-of-income model, and four income-shares states—Iowa,

Massachusetts, Minnesota, and Utah. As noted, in addition to a state's underlying guidelines model (that

is, whether they use an income-shares or percentage-of-income model), states must make a variety of

policy decisions that drive their child support guidelines and resulting order amounts. These include level

of child support orders, the relationship between income levels and orders, what constitutes income, low-

and high-income thresholds, and adjustments for number of children and for shared parenting time. Thus,

as we have indicated, guidelines using the same model still result in a variety of child support amounts.[2]

Wisconsin's support guidelines draw on a 1981 cost study from van der Gaag, one of the first of

its kind. As a result, many percentage-of-income states have taken the Wisconsin estimates and modified

them (Venohr, 2017b). Wisconsin's guidelines specify a percentage of 17 percent for one child; other

states use similar or higher rates. Alaska, for example, sets the guideline for one child at 20 percent of the

noncustodial parent's income (Alaska Civil Court Rule 90.3), and Nevada uses 18 percent (Nevada

Revised Statutes 125B.070). Arkansas, which NCSL describes as using a "varying" percentage-of-income

model (2017), sets its guideline at 15 percent, with variation up to 25 percent for low-income payers

(Arkansas Judiciary, 2016).

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[2]For a detailed review, see: Venohr, 2017b.

To facilitate a robust understanding of the difference between income-shares and percentage-of-income models, we selected income-shares states that represent a variety of potential income-shares models. One of the major drivers of states' support amounts is the child-rearing cost assumptions that underlie the guidelines. The assumptions are often based on a handful of common economic studies, and we have selected states representing each of the three most common estimates. We include income-shares models from Minnesota, Iowa, Massachusetts and Utah. Income-shares guidelines most often rely on estimates known as the Betson-Rothbarth (BR) estimates. The BR estimates were first developed in 1990 and have since been updated three times. Iowa is among the states that use one of the four BR estimates (Venohr, 2017b). The U.S. Department of Agriculture (USDA) has also developed its own estimates of child costs. Currently, the only state to rely on the USDA estimates is Minnesota (Venohr, 2017a). In general, economists believe that the BR estimates are a lower bound of child costs and the USDA estimates may be an overestimate, particularly at lower incomes (Venohr, 2017a).

We also selected Massachusetts and Utah, neither of which rely on a specific economic study (Sarro and Rogers, 2017; Billings, 1989). Instead, both states formed their guidelines after a review of the literature and common economic estimates, and accounting for state-specific needs. Both result in "flatter" guidelines than the traditional economic estimates. The most recent Massachusetts guidelines, updated in 2017, are similar to USDA 2012 cost estimates and result in comparatively high support amounts (Sarro and Rogers, 2017). Utah's guidelines, though also relatively flat, have not been updated since 2008 (Utah Judiciary Code 78B-12-301), and result in some of the lowest child support amounts in the nation (Venohr, 2013).

Each of the states' guidelines, then, reflect different underlying assumptions about the cost of raising children. In addition to the different estimates related to child costs, states must make a variety of decisions about how to most equitably handle low-income noncustodial parents. That is, they must balance the need to provide an adequate level of support for the child while still allowing the parent to maintain a reasonable base of self-sufficiency. In addition to the differing underlying cost assumptions in the four states selected, it is also clear that the states represent a range of policy decisions related to low-

income payers. We limited our selection to states that provide guidelines at all levels of income; some states, including Illinois, do not publish specific guidelines for very low-income noncustodial parents, which would prevent us from providing comparisons across the entire income spectrum.

As illustrated in Figure 1, we have selected states to represent a range of potential income-shares guidelines while taking care to include the most common underlying cost estimates. In particular, we focus on the shape of the guideline distribution, meaning how the percentage of income required for support changes as total household income rises. The shape of the guideline is what determines differences in order amounts across the income spectrum. If the percent of income required for child support did not vary with income, as is mostly true in percentage-of-income states like Wisconsin, this would yield identical amounts for income-shares and percentage-of-income guidelines. For example, if parents are expected to provide 25 percent of total household income at all points on the income spectrum, then the noncustodial parent will always owe 25 percent of income regardless of the custodial parent's income.

As Figure 1 highlights, guidelines also differ in level. That is, some states require a higher or lower percentage of income to go toward child support. To illustrate a range of model options, we include states that represent a range of levels. However, since any type of guideline could be set at a higher or lower level regardless of the model, our focus remains on the shape of the guideline, since that drives variation in order amount across the income distribution.

We analyze how child support order amounts vary across alternative guidelines as the income of the mother and father varies. For simplicity and ease of interpretation, we hold several other factors constant. First, we analyze orders when the mother has sole custody. This is the most common arrangement, though no longer the majority outcome for current divorce cases in Wisconsin, as shared custody has grown (Meyer, Cancian and Cook, 2017). Despite the perception that income shares may be more amenable to arrangements such as shared custody, both income-shares states and percentage-of-income states regularly incorporate shared parenting time into their calculation of owed support. For example, all the states included in our analysis, regardless of model type, include an adjustment for shared

parenting time. Like guideline level, whether and how to incorporate shared parenting time into a state's guidelines is a policy decision that is independent of the guideline model type. Additionally, given how income-shares and percentage-of-income models account for the noncustodial parent's income, differences in orders across the income spectrum will be most pronounced in sole-custody cases; thus, our estimates can be considered an upper bound of differences between models.

We analyze guidelines for one child. States must decide how to adjust guidelines for multiple children across guideline models, regardless of the guideline model used. In our simulations, we use the income distribution for all cases (regardless of number of children). Sensitivity tests suggest that the use of different family sizes would not change our conclusions. Notably, we find that the family income distribution for one-child cases and multiple-child cases do not differ markedly.[3]

Using these criteria, we then use data from Wisconsin court records on matched parental pairs from Wisconsin divorce and nonmarital cases to simulate alternative orders by state guideline. We compare the results of the simulated orders from Wisconsin's percentage-of-income guidelines with the simulated orders from applying the income-shares guidelines in use in Iowa, Massachusetts, Minnesota, and Utah. We use these comparisons to illustrate how and for whom orders based on percentage-of-income guidelines vary from orders based on income shares.

DATA

For this analysis, we use unique data from Wisconsin court records collected and maintained by the Institute for Research on Poverty. The Court Record Data (CRD) are drawn from court records from divorce, paternity establishment, and child support orders in 21 counties across the state of Wisconsin. We use data from the most recent CRD cohort currently available, collected between July 1, 2009 and

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[3]The median father income for one-child nonmarital cases is $8,383 in our sample, compared to $9,465 in cases with more than one child; for divorce cases, the median father income is $34,562 for one child cases, compared to $35,885. The median household income for one-child nonmarital cases is $16,604, compared to $20,959 for cases with more than one child; for divorce cases, the median household income is $61,752 in one-child cases, compared to $65,239.

June 30, 2010. This includes a total of 1,750 cases, of which 56 percent (N= 984) are nonmarital cases, and 44 percent are divorce cases (N=766).

The CRD contains information on a variety of factors related to each case. For purposes of this analysis, we focus on the following: type of case (divorce or nonmarital), paternal income, and maternal income. We consider maternal and paternal income at the time of final judgment as recorded in the CRD. This is recorded as a monthly amount, which we then annualize. Approximately one-third of the cases in the CRD are missing one or both parent's income, meaning it is either recorded as zero or is missing. To fill in these missing data where possible, we use state Unemployment Insurance (UI) wage data. We compare the income recorded in the CRD with UI wage records from the quarters immediately preceding and following the final judgment date.

Because we are interested in exploring the differences in outcomes based on different household incomes, particularly as father's income changes relative to mother's income, we exclude cases where father's income is zero. Across all guidelines models of which we are aware, a father with zero earnings will either owe no or a minimum child support amount, regardless of mother's income. A total of 376 cases, or approximately 20 percent of our sample, are excluded because father's income is zero; since nonmarital cases are on average more economically disadvantaged than divorce cases, the excluded cases are disproportionately nonmarital. Our final analytic sample of 1,374 comprises 684 nonmarital cases and 690 divorce cases.[4]

In Figure 2, we graph the distribution of father's income for nonmarital and divorce cases by income quintile. Because the income distributions differ markedly between these two types of cases, we analyze each type separately. We use the actual income distribution from the Wisconsin CRD to find the median of each quintile of fathers' incomes. We then find the distribution of maternal income within each

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[4]If we include cases where fathers have no income reported, and assume the have zero income, the median father income is $8,389 (compared to $16,021 with those cases excluded) for nonmarital cases and $35,285 (compared to $37,847) for divorce cases. The median household income is $19,890 (compared to $24,095) for nonmarital cases and $64,595 (compared to $66,812) for divorce cases.

quintile of paternal income. In particular, we calculate 20th, 50th, and 80th percentiles of mothers' contribution to income within each quintile of fathers' income. We use these summary calculations to project mother's income and total household income within each quintile of fathers' income, and at the 20th, 50th and 80th percentile of mothers' income. Since we look at three different levels of mothers' income within each of the five fathers' income quintiles, we end up with 15 data points within the joint distribution of parents' income for both divorce and nonmarital cases.

Theoretically, application of income-shares guidelines may result in large differences from percentage-of-income models in cases where parents have a large disparity in their incomes. By using the actual income distribution from the Wisconsin CRD, we are able to simulate and compare child support outcomes under different guideline models. Crucially, these data also allow us to examine how often alternative guidelines would lead to substantially different expected orders, given the actual distribution of mothers' and fathers' incomes in recent cases.

ALTERNATIVE CHILD SUPPORT GUIDELINES

As we have noted above, the percentage-of-income and income-shares guidelines imply different orders only if the specific guidelines call for the proportion of income to be paid as child support to vary at different levels of income. For example, consider a family where the custodial mother earns $20,000 per year and the noncustodial father earns $30,000 per year, for a total annual family income of $50,000. If an income-shares guideline were to require 20 percent of total income to be paid by parents, in proportion to their share of total income, then the father would be expected to pay $6,000 in child support (20 percent of $30,000), with the mother assumed to contribute $4,000 (20 percent of $20,000). A 20 percent percentage-of-income guideline would result in an identical amount ($6,000) due from the father (and, again, $4,000 assumed from the mother). However, income-shares and percentage-of-income guidelines potentially yield different results when guidelines call for a different proportion of income to be due at different levels of family income, as they typically do.

Figure 1 shows how guidelines vary with income level for the five states considered here (for Wisconsin, the only state shown with a percentage-of-income guideline, we include two examples: the heavy solid line assumes each parent contributes half of family income, while the heavy dashed line assumes the noncustodial parent earns all the income; see Appendix Figure 1 for additional options). All the guidelines considered here call for the proportion of income to be paid to decline at higher incomes, though the high-income adjustment in Wisconsin is relatively modest. Many, but not all, guidelines call for a lower proportion of income to be paid by low-income parents. In the case of Wisconsin, noncustodial parents with incomes below about $18,000 are expected to pay a lower percentage, regardless of the custodial parent's income. In contrast, income-shares guidelines refer to total family income. To see why this is consequential, consider a noncustodial father earning $10,000, which corresponds to an order of roughly 12 percent (or $99 per month) under current Wisconsin guidelines. In contrast, if income-shares principles were applied, the order would depend on the parents' shared income. If the custodial mother had no income, the total family income of $10,000 would still qualify for use of the low-income guidelines. However, if the custodial mother had, for example, $40,000 in income, the total family income ($50,000) would not qualify for the low-income guideline; the noncustodial father would ultimately be expected to pay more support (17 percent of his income, rather than 12 percent). Because the guideline percentage varies with total income, the amount paid by the noncustodial father at a given income level rises, and then falls, as the custodial mother's income rises.[5]

To illustrate further, Figure 3 shows the range of child support owed by a noncustodial father with incomes of $10,000 (3a), $30,000 (3b) or $85,000 (3c), as custodial mother's income rises from $0 to $90,000. In Wisconsin, the noncustodial father's order does not vary with mother's income—each graph shows a horizontal line. In contrast, a lower-income father's order would rise and then fall in two

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[5]One exception to this is Iowa. For low-income families, Iowa's guidelines consider only the income of the noncustodial parent.

income-shares states, Minnesota and Utah (Figure 3a); and a higher-income father's order would typically fall with mother's rising income for income-shares states (Figure 3c).

In Wisconsin, the guidelines call for noncustodial parents who owe child support for one child to pay 17 percent of income, unless they qualify for the low- (minimum 12 percent) or high-income (14 percent) adjustment. Figure 4 summarizes the potential variance in orders for fathers with incomes between $10,000 and $50,000 and total household incomes between $20,000 and $100,000 (reflecting low-income, but not high-income adjustments in Wisconsin). The figure shows the minimum and maximum percentage of income a noncustodial father would owe, with the percentage owed if each parent earned $30,000 also shown, for reference. With the exception of Massachusetts, the range for noncustodial parents in income-shares states is larger than the range for noncustodial parents in Wisconsin. The ranges also vary across income-shares states, illustrating the effect of varying guideline shapes and levels.

SIMULATION RESULTS: THE POTENTIAL IMPLICATIONS OF ALTERNATIVE GUIDELINES FOR WISCONSIN FAMILIES

The implications of alternative guidelines depend to a substantial degree on the level and distribution of parents' income. Income-shares guidelines, in contrast to percentage-of-income guidelines, call for the child support due from the noncustodial parent to vary with the custodial parent's income. We use information on parents' incomes drawn from Wisconsin data to evaluate how often, and for whom, alternative guidelines would substantially alter the amount of child support owed. We consider divorced and nonmarital parents separately, and consider parents, and individual mothers and fathers, with low, average and high incomes, relative to other Wisconsin families. As noted above, for simplicity we focus our analysis on mother sole custody cases, and assume one child.

We sort divorcing and nonmarital parents by the quintile of father's income—for example, among fathers in the bottom quintile (lowest 20 percent of income) percent, median income was $13,934, for those in the middle quintile median income was $37,847, while for those in the top quartile (highest 20 percent of income), median income was $84,124. We then calculated the distribution of income among

the associated mothers. Table 1 shows the results for fathers in the middle quintile (40 percent of fathers have lower incomes, and 40 percent have higher incomes). As shown in the first panel, median father's income was $37,847 for divorcing fathers. We then calculated the 20th percentile, 50th percentile (median) and 80th percentile of relative income for the mothers associated with these fathers. The median mother's share of income was 40.8 percent—in other words, half of the associated mothers accounted for less than 40.8 percent of the family's total income, and half accounted for more than 40.8 percent of the family's total income. Using these proportions, we calculated mother's projected income, total household projected income, and the resulting child support owed by the father. The second row of Table 1 shows that the median father's income for the middle quintile (which, by definition, is also the median income of all fathers) was $37,847, and among fathers in this middle quintile, mothers contributed a median 40.8 percent, or $26,084, resulting in a projected total family income of $63,930. Among these same middle-quintile fathers, the 80th percentile of mother's contribution to income (that is, the level at which 80 percent of mothers contribute less, and 20 percent of mothers contribute more) is 52.7 percent, or $40,349, resulting in a project total family income of $78,196. (Appendix Table 1 shows the results for each quintile of fathers' income.)

We use these summary measures of the distribution of parents' incomes to calculate the expected child support order for each of the guidelines considered here. While our earlier discussion demonstrated the potential effect of different guidelines across a wide range of theoretically possible incomes, these simulations focus on the actual incomes observed among divorcing and nonmarital parents in Wisconsin. The second set of columns in Table 1, and Figure 5, show the results. Using the Wisconsin percentage-of-income guidelines, there is no change in the child support owed by median-income fathers as mothers' contributions to income grow from the level observed at the 20th percentile of mothers' contributions, through the median, to the 80th percentile. The other guidelines generally call for changes in order amounts, but in most cases the changes are modest. Relative to the amount owed by median-income divorcing fathers when mothers' income is at the 20th percentile, fathers owe 1 percent (in Massachusetts) to 11 percent (in Minnesota) less when the mother contributes the median amount, and 3

percent (in Massachusetts) to 20 percent (in Minnesota) less when the mother contributes at the 80th

percentile. Among fathers in median-income nonmarital cases (who on average have lower incomes than

divorcing fathers), we see substantial changes in only two states, applying the Minnesota guidelines, the

father's order would increase by 31 to 37 percent as mother's contribution to total income rises, while

using Utah's guidelines would result in a decline of 9 percent for fathers associated with the highest

income (80th percentile) mothers.

Figures 6 and 7show the variation in annual child support owed by divorcing and nonmarital

fathers across the distribution of both fathers' and mothers' incomes. Figure 6 shows results for divorcing

fathers with incomes at the 20th percentile, the median (repeating Figure 5), and the 80th percentile. In

every case, orders based on Wisconsin guidelines do not change with changes in mother's income. In

contrast, applying the income-shares guidelines considered here generally results in variation in father's

order with changes in mother's income. However, the resulting variation is generally modest; even

comparing families in which mothers are at the 20th percentile (only 1 in 5 mothers earn less) and the

80th percentile (only 1 in 5 mothers earn more), divorcing fathers' expected orders change by more than

20 percent in only three cases, lower-income fathers in Minnesota (33 percent decline) and Utah (28

percent decline), and high-income fathers in Iowa (23 percent decline). In the case of nonmarital fathers,

shown in Figure 7, again, most orders change fairly modestly with changes in mothers' earnings. But, the

exceptions are dramatic: both the Minnesota and Utah guidelines call for low-income fathers' orders to

more than double as the income of the mother (and therefore, shared income) rises.

SUMMARY AND CONCLUSIONS

Wisconsin is among a minority of states that continue to rely on percentage-of-income child

support guidelines, with adjustments for low-income and high-income parents, and for cases with shared

parenting time. The percentage-of-income guidelines are seen as easier to understand and implement,

with the increased transparency expected to reduce uncertainty and, therefore, potentially reduce litigation

and conflict between parents. Nonetheless, income-shares models have become more popular. The

income-shares model may be seen as more equitable because it explicitly accounts for both parents' income. As we have seen from the simulations reported above, while most income-shares guidelines result in modest changes in orders for most families, there are cases for which applying income-shares guidelines to the incomes of Wisconsin families would yield dramatically different orders (even putting aside differences related to the overall level of orders). In order to assess the relative merits of different guidelines, it is helpful to understand how much and how often the more complex guidelines provide for substantially different outcomes. We present evidence on these questions using data on Wisconsin families' incomes from the CRD.

Income-shares guidelines provide for order amounts to reflect the parents' total income, while percentage-of-income guidelines generally reflect only the noncustodial parent's income. However, both guideline models can take into account other factors. For example, income-shares guidelines include an explicit calculation of the custodial parent's contribution, but this type of calculation could also be made with percentage-of-income guidelines; and in any case, the expected contribution from the custodial parent is not monitored under any current guideline model. Income-shares models are sometimes cited as better able to accommodate shifts in shared or split custody, but, again, percentage-of-income guidelines, like Wisconsin's, also account for shared parenting time and other complexities in their schedules.

For most Wisconsin families entering the child support system, application of the shape of many of the income-shares models discussed here would have only modest implications for the amount of child support due. However, especially for relatively low-income fathers, application of some options considered here would result in substantially smaller orders; for guidelines that call for substantial declines in the proportion of income due as income levels rise, a lower guideline would apply when a relatively high-income custodial mother's income is also taken into account. If Wisconsin were to adopt an income-shares model, the effect on order amounts would depend on decisions about the shape of the guideline, the level of orders, and adjustments for family size and shared parenting. The consequences for the child support enforcement system and Wisconsin families would depend on whether the increased complexity of orders created barriers to understanding and implementing the guidelines, and whether

perceptions regarding the new guidelines altered the frequency of seeking and receiving deviations, and, ultimately, compliance.

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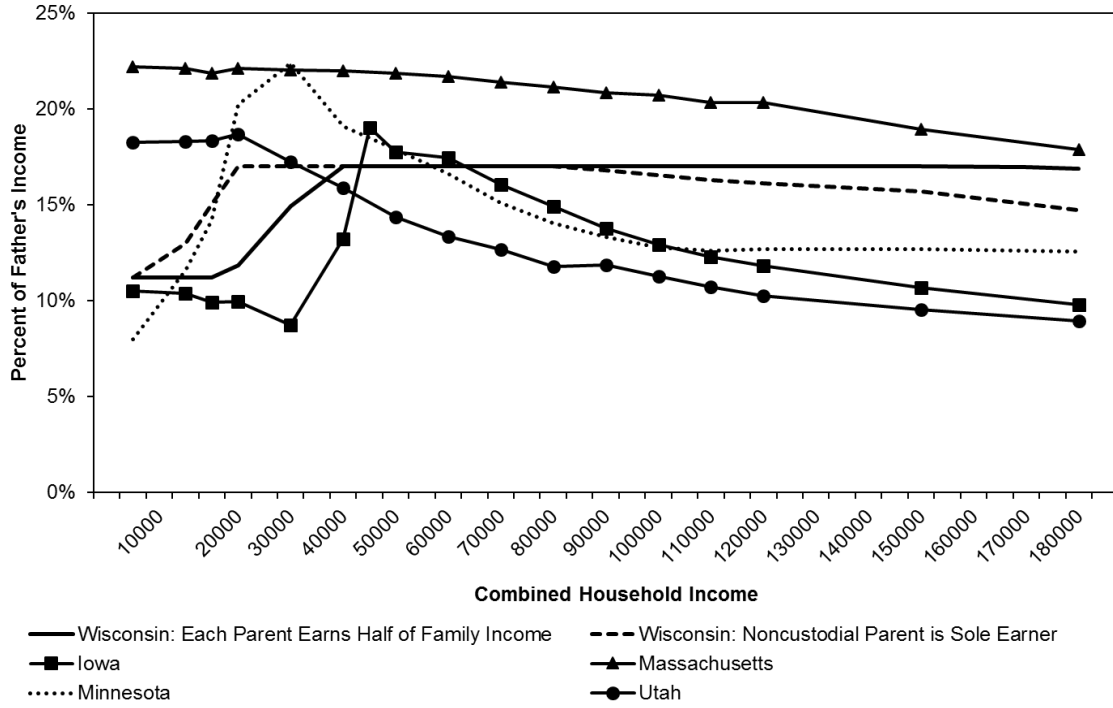**Figure 1: Share of Income Required by Guidelines**

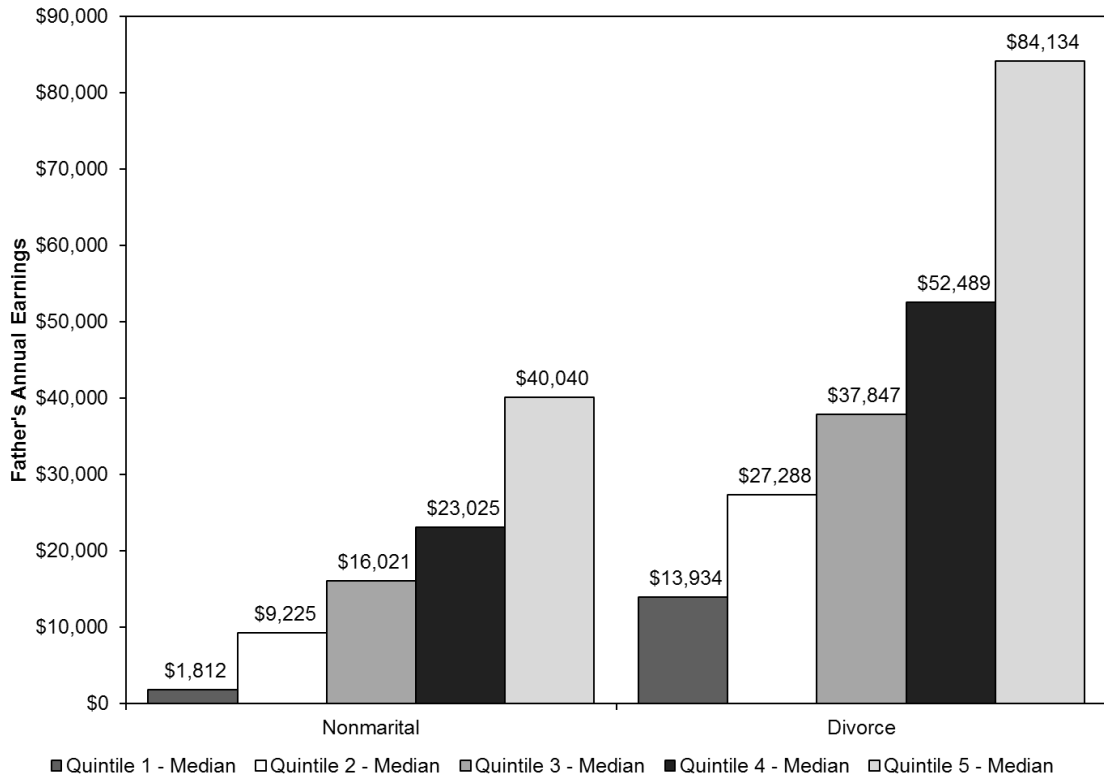Note: For calculating low-income guidelines in Wisconsin when assuming equal income for mother and father, we keep low-income guidelines in place until father and mother income=$18,000, and combined income=$36,000 and high-income guidelines start at combined income = $168,00

Figure 2: Father Annual Earnings by Quintile

Figure 3: Variation in Annual Child Support Owed by Total Household Income

A. Father's Income: $10,0000

B. Father's Income: $30,000

C. Father's Income: $85,000
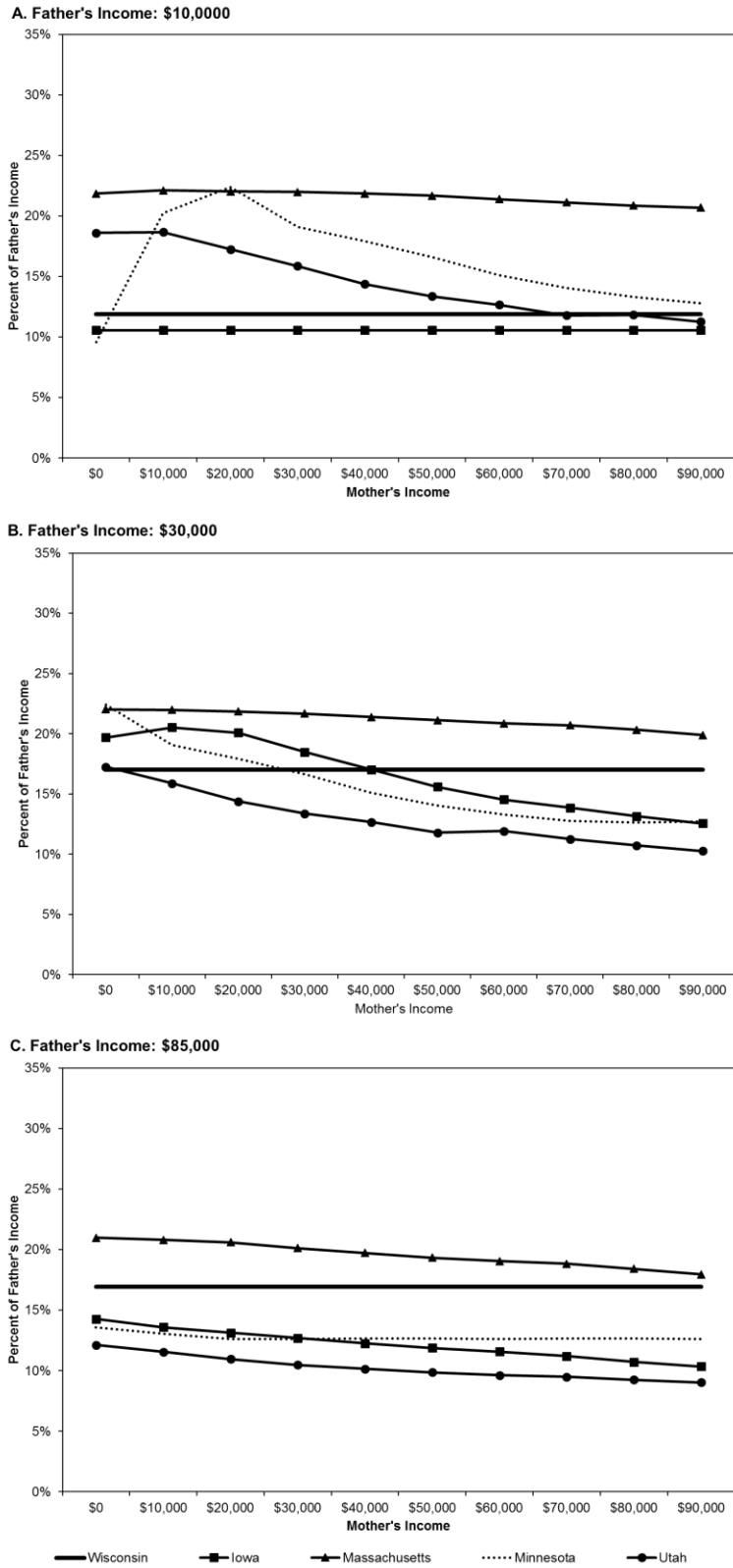
Figure 4: Range of Percentage of Father's Income Owed:
Father Income $10,000 - $50,000 & Household Income $20,000 - $100,000

Total Household Income of $60,000 Split Evenly between Mother and Father
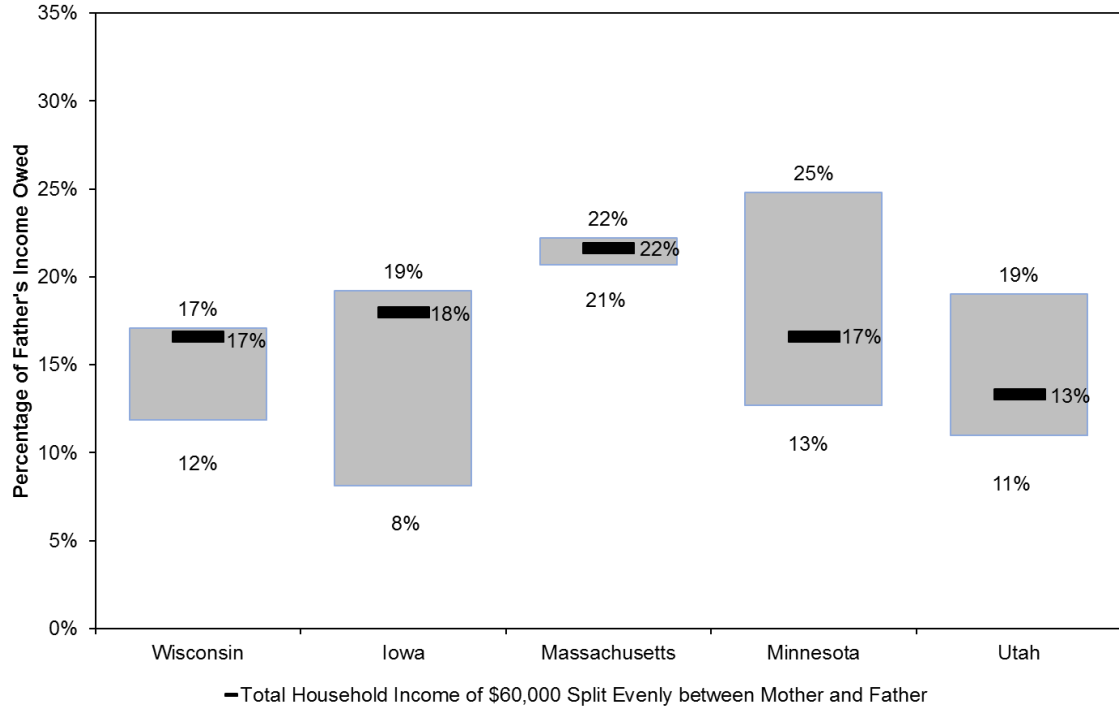
Note: Father income range selected to roughly represent 20th-80th percentiles of paternal income range in analytic sample.

Figure 5: Annual Child Support Owed by Fathers with Median Income by Mother's Income

A. Divorce Cases

B. Paternity Cases
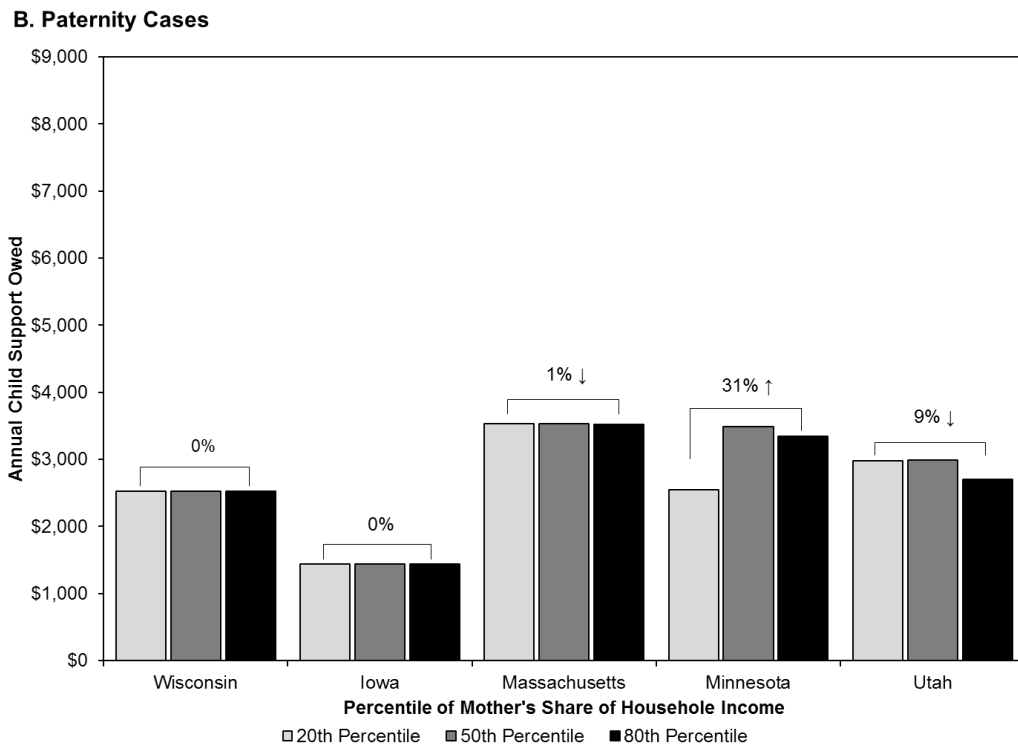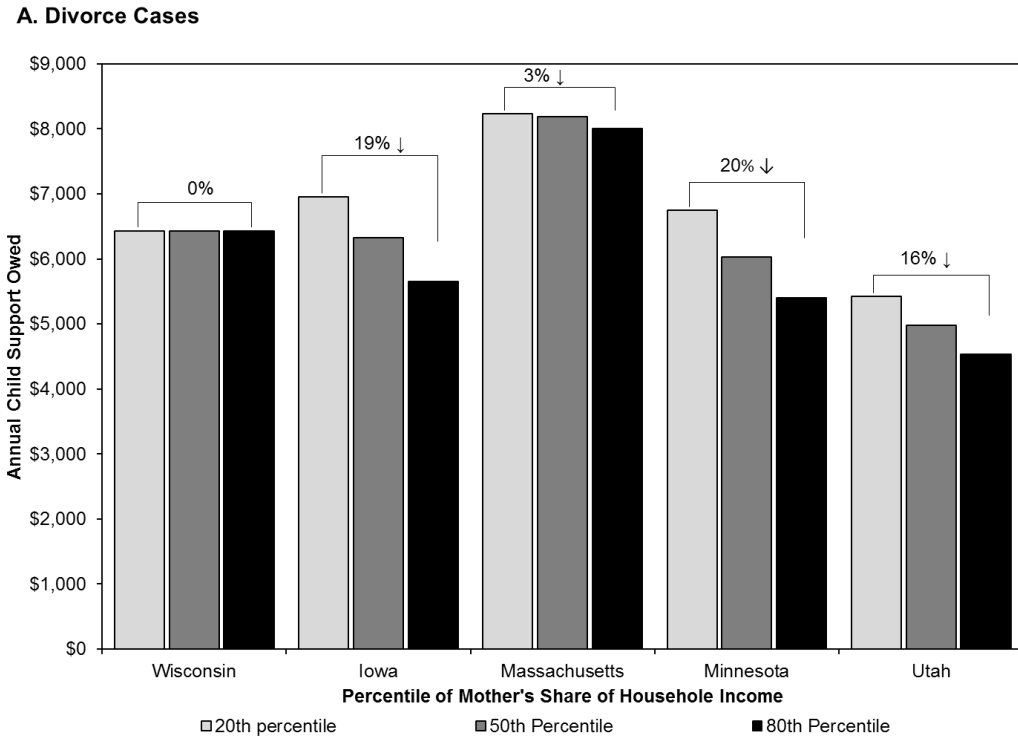
Note: For divorce cases, the 20th/50th/80th percentiles of mother's proportion of income for the median father's income are 25%, 41%, and 52%, respective, as detailed in Table 1. For nonmarital cases, the 20th/50th/80th percentiles of mother's proportion of income are 0%, 25%, and 53%, respectively.

Figure 6: Variation in Annual Child Support Owed by Fathers: Divorce Cases

A. Fathers at 20th Income Percentile
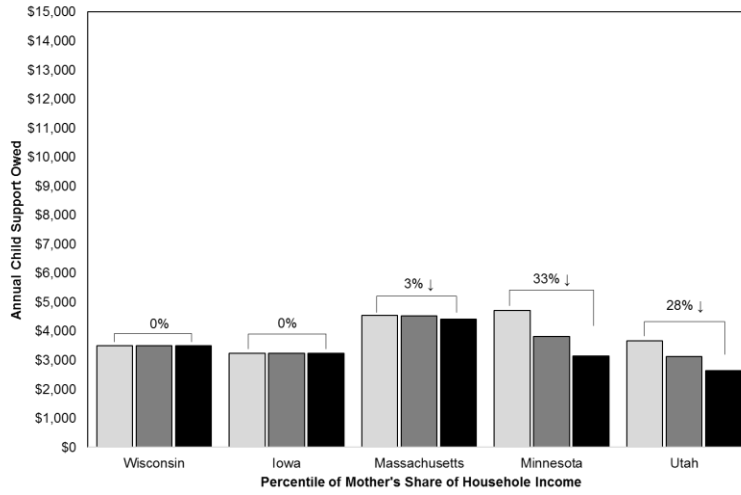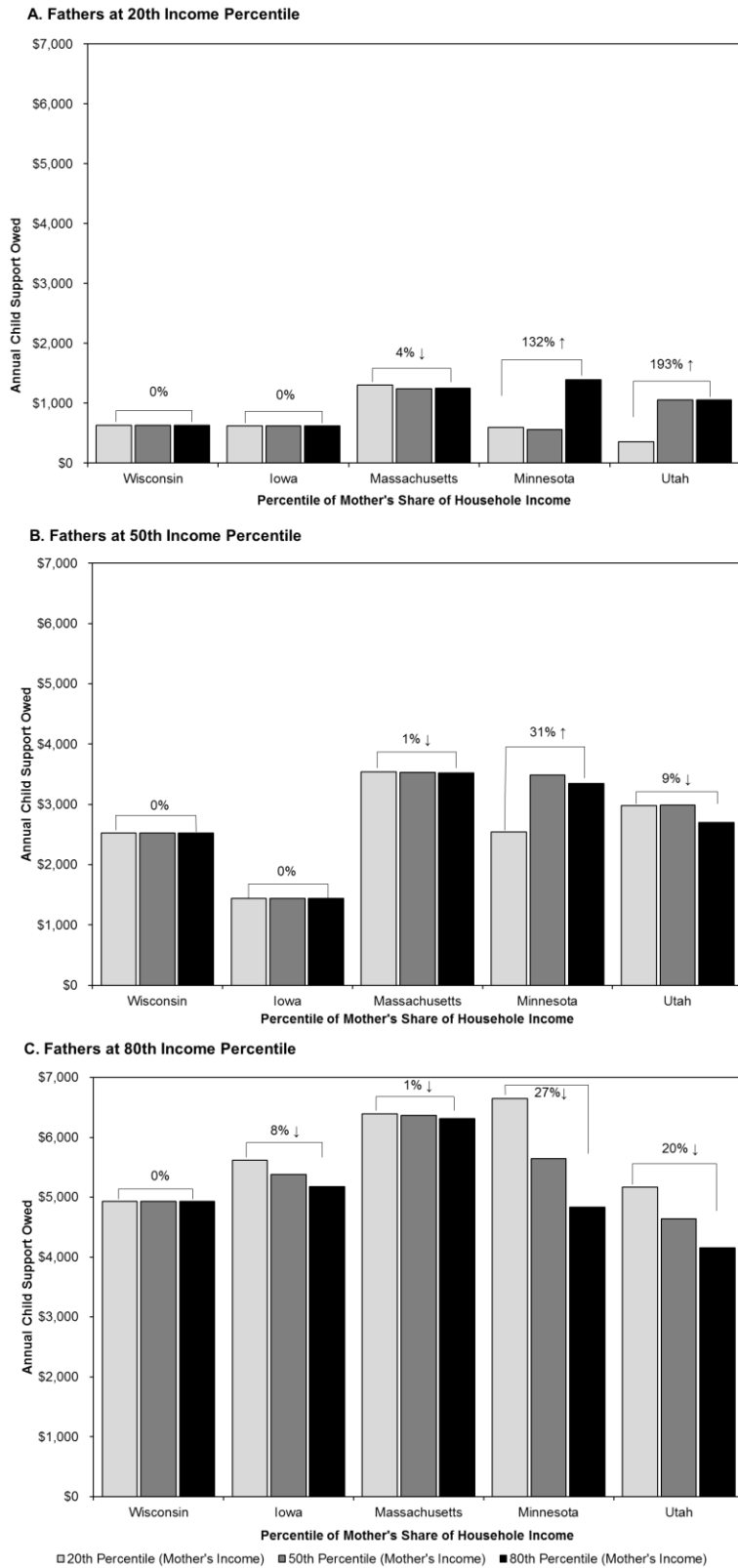

B. Fathers at 50th Income Percentile
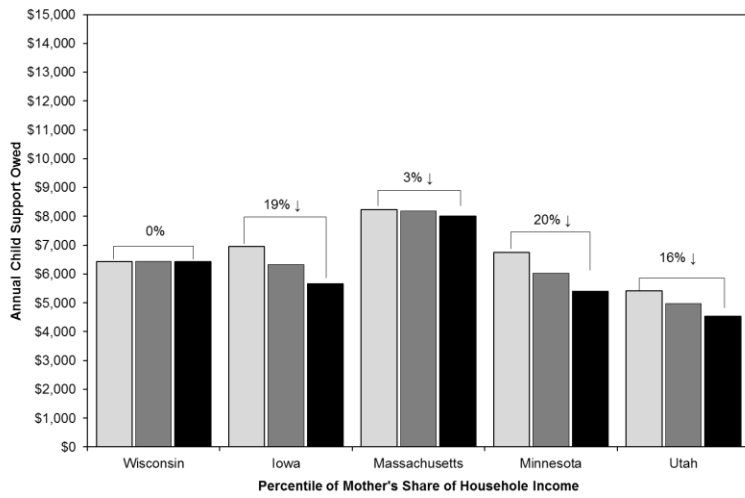
C. Fathers at 80th Income Percentile
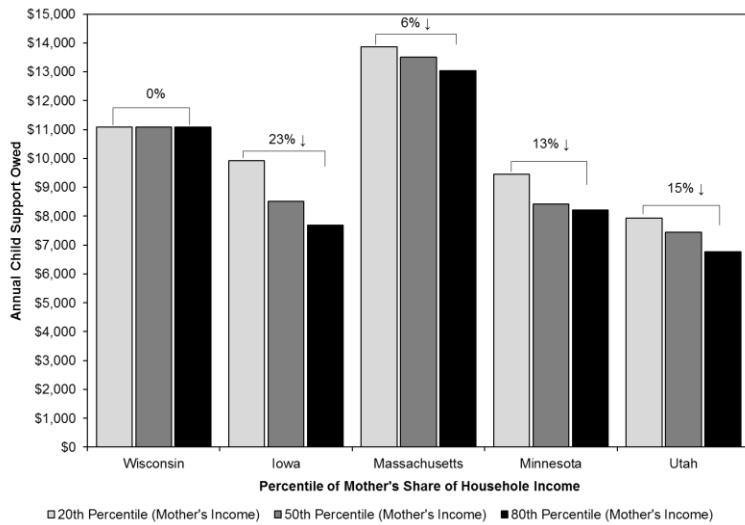
□ 20th Percentile (Mother's Income)   ▨ 50th Percentile (Mother's Income)   ■ 80th Percentile (Mother's Income)

Figure 7: Variation in Annual Child Support Owed by Fathers: Paternity Cases

A. Fathers at 20th Income Percentile

B. Fathers at 50th Income Percentile

C. Fathers at 80th Income Percentile

Appendix Figure 1: Share of Father's Income Required by Current Wisconsin Guidelines: Alternate Specifications

Combined Household Income
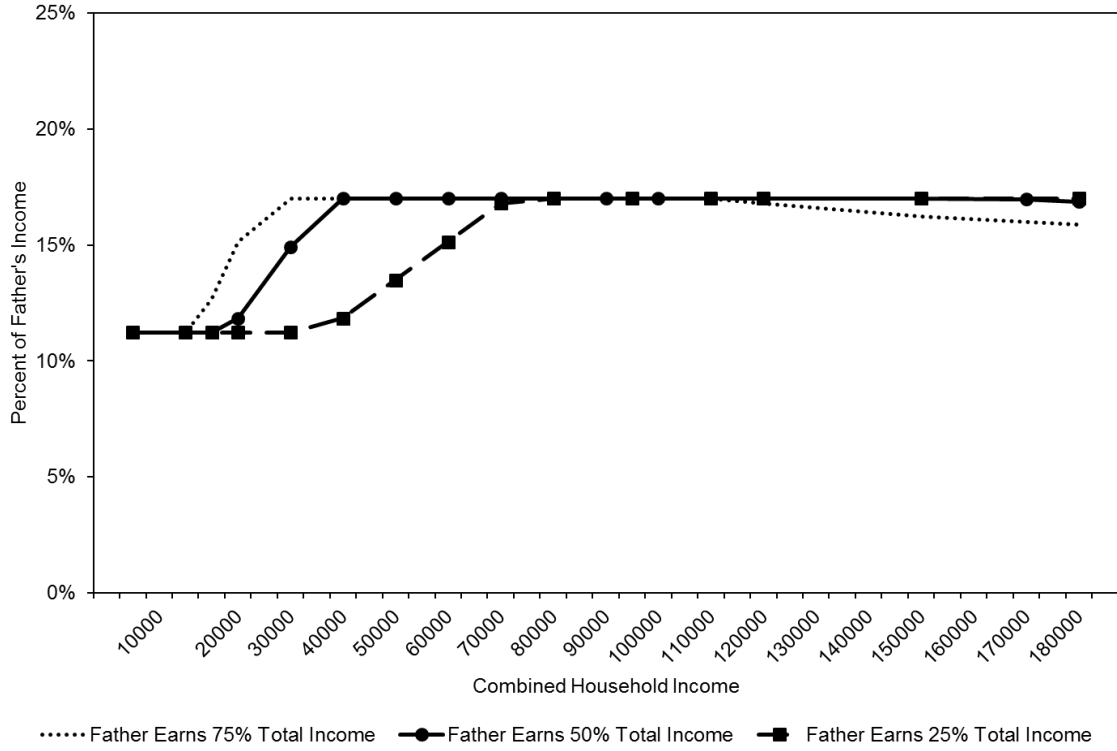
Percent of Father's Income

······ Father Earns 75% Total Income   ●— Father Earns 50% Total Income   ■— Father Earns 25% Total Income

Table 1: Annual Child Support Owed by Fathers with Median Income By Variation in Mother's Income

Percentile of Mother's Share of Household Income	Median Income for Fathers in the Middle Quinitle	Mother's Share of Household Income	Mother's Contribution to Household Income (Projected)	Total Household Income (Projected)	Wisconsin	Iowa	Massachusetts	Minnesota	Utah
Divorcing Couples									
20th Percentile	$37,847	24.6%	$12,348	$50,195	$6,434	$6,958	$8,234	$6,750	$5,420
50th Percentile	$37,847	40.8%	$26,084	$63,930	$6,434	$6,323	$8,189	$6,031	$4,980
80th Percentile	$37,847	51.6%	$40,349	$78,196	$6,434	$5,651	$8,003	$5,401	$4,530
Nonmarital Couples									
20th Percentile	$16,021	0.0%	$0	$16,021	$2,525	$1,440	$3,536	$2,544	$2,976
50th Percentile	$16,021	24.5%	$5,199	$21,220	$2,525	$1,440	$3,533	$3,488	$2,990
80th Percentile	$16,021	52.7%	$17,850	$33,872	$2,525	$1,440	$3,517	$3,343	$2,696

Appendix Table 1: Annual Child Support Owed, By Fathers' Income Quintile and Mothers' Income Percentile

	Father Income Quintile	Median Father's Income by Quintile	Maternal Proportion of HH Income (20th/50th/80th percentiles)	Mother's Income (projected)	Total Household Income (Projected)	Mother					Father					Total				
						Wisconsin	Iowa	Massachusetts	Minnesota	Utah	Wisconsin	Iowa	Massachusetts	Minnesota	Utah	Wisconsin	Iowa	Massachusetts	Minnesota	Utah
Divorce	1	$13,934	41%	$9,763	$23,697	$1,135	$0	$2,142	$2,423	$1,810	$2,023	$1,128	$3,058	$3,457	$2,582	$3,159	$1,128	$5,200	$5,880	$4,392
	1	$13,934	62%	$22,977	$36,910	$3,906	$0	$5,050	$4,504	$3,705	$2,023	$1,128	$3,062	$2,732	$2,247	$5,929	$1,128	$8,112	$7,236	$5,952
	1	$13,934	81%	$60,181	$74,115	$10,231	$0	$12,794	$8,789	$7,366	$2,023	$1,128	$2,962	$2,035	$1,706	$12,254	$1,128	$15,756	$10,824	$9,072
	2	$27,288	26%	$9,390	$36,678	$1,073	$1,803	$2,063	$1,852	$1,524	$4,639	$5,241	$5,997	$5,384	$4,428	$5,712	$7,044	$8,060	$7,236	$5,952
	2	$27,288	45%	$22,282	$49,570	$3,788	$4,083	$4,862	$4,024	$3,231	$4,639	$5,001	$5,954	$4,928	$3,957	$8,427	$9,084	$10,816	$8,952	$7,188
	2	$27,288	60%	$40,593	$67,881	$6,901	$6,552	$8,707	$6,214	$5,224	$4,639	$4,404	$5,853	$4,178	$3,512	$11,540	$10,956	$14,560	$10,392	$8,736
	3	$37,847	25%	$12,348	$50,195	$1,640	$2,270	$2,686	$2,202	$1,768	$6,434	$6,958	$8,234	$6,750	$5,420	$8,074	$9,228	$10,920	$8,952	$7,188
	3	$37,847	41%	$26,084	$63,930	$4,434	$4,357	$5,643	$4,157	$3,432	$6,434	$6,323	$8,189	$6,031	$4,980	$10,868	$10,680	$13,832	$10,188	$8,412
	3	$37,847	52%	$40,349	$78,196	$6,859	$6,025	$8,533	$5,759	$4,830	$6,434	$5,651	$8,003	$5,401	$4,530	$13,293	$11,676	$16,536	$11,160	$9,360
	4	$52,489	17%	$10,599	$63,088	$1,277	$1,782	$2,289	$1,699	$1,397	$8,923	$8,826	$11,335	$8,417	$6,919	$10,200	$10,608	$13,624	$10,116	$8,316
	4	$52,489	35%	$28,763	$81,253	$4,890	$4,201	$6,056	$4,006	$3,339	$8,923	$7,667	$11,052	$7,310	$6,093	$13,813	$11,868	$17,108	$11,316	$9,432
	4	$52,489	47%	$46,734	$99,224	$7,945	$6,008	$9,674	$5,969	$5,273	$8,923	$6,748	$10,866	$6,703	$5,923	$16,868	$12,756	$20,540	$12,672	$11,196
	5	$84,134	12%	$11,800	$95,934	$1,519	$1,548	$2,450	$1,523	$1,351	$14,299	$11,040	$17,466	$10,861	$9,629	$15,817	$12,588	$19,916	$12,384	$10,980
	5	$84,134	30%	$35,886	$120,020	$6,101	$4,198	$7,137	$4,557	$3,706	$14,299	$9,842	$16,731	$10,683	$8,690	$20,399	$14,040	$23,868	$15,240	$12,396
	5	$84,134	42%	$61,679	$145,812	$10,485	$6,584	$11,746	$7,802	$5,944	$14,299	$8,980	$16,022	$10,642	$8,108	$24,784	$15,564	$27,768	$18,444	$14,052
Nonmarital	1	$1,812	0%	$0	$1,812	$0	$0	$0	$0	$0	$203	$360	$1,300	$600	$360	$203	$360	$1,300	$600	$360
	1	$1,812	66%	$3,502	$5,314	$393	$0	$857	$395	$237	$203	$360	$443	$205	$123	$596	$360	$1,300	$600	$360
	1	$1,812	92%	$20,021	$21,833	$3,404	$0	$4,387	$4,798	$3,730	$203	$360	$397	$434	$338	$3,607	$360	$4,784	$5,232	$4,068
	2	$9,225	0%	$0	$9,225	$0	$0	$0	$0	$0	$1,054	$876	$2,028	$600	$1,692	$1,054	$876	$2,028	$600	$1,692
	2	$9,225	40%	$6,202	$15,427	$696	$0	$1,359	$854	$1,148	$1,054	$876	$2,021	$1,270	$1,708	$1,750	$876	$3,380	$2,124	$2,856
	2	$9,225	63%	$15,843	$25,068	$2,497	$0	$3,484	$3,913	$2,920	$1,054	$876	$2,028	$2,279	$1,700	$3,551	$876	$5,512	$6,192	$4,620
	3	$16,021	0%	$0	$16,021	$0	$0	$0	$0	$0	$2,525	$1,440	$3,536	$2,544	$2,976	$2,525	$1,440	$3,536	$2,544	$2,976
	3	$16,021	25%	$5,199	$21,220	$583	$0	$1,147	$1,132	$970	$2,525	$1,440	$3,533	$3,488	$2,990	$3,108	$1,440	$4,680	$4,620	$3,960
	3	$16,021	53%	$17,850	$33,872	$3,035	$0	$3,919	$3,725	$3,004	$2,525	$1,440	$3,517	$3,343	$2,696	$5,559	$1,440	$7,436	$7,068	$5,700
	4	$23,025	0%	$0	$23,025	$0	$0	$0	$0	$0	$3,914	$4,140	$5,044	$5,880	$4,296	$3,914	$4,140	$5,044	$5,880	$4,296
	4	$23,025	27%	$8,690	$31,715	$975	$0	$1,909	$1,874	$1,489	$3,914	$4,140	$5,059	$4,966	$3,947	$4,889	$4,140	$6,968	$6,840	$5,436
	4	$23,025	46%	$19,300	$42,325	$3,281	$0	$4,221	$3,633	$2,999	$3,914	$4,140	$5,035	$4,335	$3,577	$7,195	$4,140	$9,256	$7,968	$6,576
	5	$40,040	2%	$651	$40,691	$73	$124	$143	$122	$102	$6,807	$7,640	$8,801	$7,510	$6,246	$6,880	$7,764	$8,944	$7,632	$6,348
	5	$40,040	19%	$9,210	$49,250	$1,053	$1,699	$2,003	$1,674	$1,344	$6,807	$7,385	$8,709	$7,278	$5,844	$7,859	$9,084	$10,712	$8,952	$7,188
	5	$40,040	37%	$23,516	$63,556	$3,998	$3,903	$5,079	$3,743	$3,077	$6,807	$6,645	$8,649	$6,373	$5,239	$10,804	$10,548	$13,728	$10,116	$8,316