

**2018–2020 Child Support Policy Research Agreement Task 13:
Shared Placement and Post-Divorce Economic Well-Being**

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There have been dramatic changes in children's post-divorce placement arrangements in recent decades. This is particularly well documented in Wisconsin, where shared placement increased from 14 percent of divorces involving children in the early 1990s, to 50 percent in 2010 (Meyer, Cancian, & Cook, 2017). National data, too, suggest that shared placement has been increasing, although neither as rapidly nor to as high a level as in Wisconsin. Indeed, Wisconsin appears to be among the states where shared placement is most common (Meyer, Carlson, & Alam, 2019). While considerable research attention has focused on the impact of placement arrangements on children's behavioral and developmental outcomes (for recent reviews, see Nielsen, 2018; Steinbach, 2019), there has been much less attention to shared placement's economic impacts. Yet shared placement, as an alternative to the longstanding sole-mother placement arrangement, may have important economic implications for both mothers and fathers, by altering both the way direct costs of children are allocated and the way support for children flows between households.

We have explored issues related to the economic implications of shared placement in previous reports using Wisconsin's administrative data, looking at divorces that entered the courts prior to 2007 (Bartfeld, Brown, & Ahn, 2009; Bartfeld, Ahn, & Ryu, 2012; Bartfeld & Han, 2014). In this report, we revisit this issue using more recent divorces, more complete income data, a longer follow-up period, and with new attention to differences between higher- and lower-income couples. Our analysis is descriptive: we examine changes in mothers' economic well-being and income composition before and after divorce; we compare these for mothers with different placement arrangements for their children; we compare outcomes for mothers and fathers; and we look at differences for mothers with different levels of baseline income.

BACKGROUND

Divorce has long been recognized as economically harmful to women, particularly to mothers—a pattern that has persisted for decades (see, e.g., Holden and Smock, 1991; Bartfeld, 2000; Bianchi, Subaiya, & Kahn, 1999; Bradbury & Katz, 2002; Gadalla, 2008; Gadalla, 2009; de Vaus, Gray, Qu, & Stanton, 2017). For instance, Bianchi and colleagues (1999) report an average decline of 1.6 in mothers' income-to-poverty ratios immediately following separation. Using data from the mid 2000's in Wisconsin, Bartfeld, Ahn, and Ryu (2012) find mean declines of approximately 1 in mothers' income-to-poverty ratios from prior to filing for divorce through the first post-divorce year. Using a longer time span and examining Canadian data, Gadalla (2009) finds that mothers' needs-adjusted incomes remain roughly 71-80 percent of their pre-divorce levels.

Furthermore, decades of research have found that, on average, divorced mothers fare worse economically than divorced fathers (see, e.g., Bartfeld, 2000; Bianchi et al., 1999; Gadalla, 2008; Gadalla, 2009; Bartfeld & Han, 2014). Most work finds that divorced women and men alike fare worse than they did while married (see, e.g., Mortelmans, 2020 for a recent international review of economic impacts of divorce).

Children play a central role in women's post-divorce economic hardship (Smock, 1994). Potential mechanisms include the longer-term impacts of women's differential child-rearing responsibilities during marriage, and the direct and indirect costs of children following divorce

under traditional mother-placement arrangements. At the same time, child support has played a role in offsetting divorced mothers' child-related economic costs (Bianchi et al., 1999; Bartfeld, 2000; Bartfeld et al., 2012). Indeed, child support has long been considered a critical strategy in combatting post-divorce economic hardship among mothers and children.

Most of the research on economic impacts of divorce has reflected longstanding normative arrangements in which children live primarily with mothers following divorce. Changes over time in child placement arrangements following divorce, with an increase in the prevalence of shared placement and a concomitant decline in sole-mother placement, have potentially important implications for economic outcomes among mothers and fathers alike. A shift from mother-sole to shared placements implies a shift in the direct costs of raising children, with mothers bearing less of those costs and fathers bearing more; but a shift towards shared placement also implies an increase in the collective costs of post-divorce parenting, given that some costs are of necessity duplicated when children live part-time in two homes. As such, expenses are not likely to decline proportionally to time in the home.

A shift to shared placement also implies a shift in child support transfers. In Wisconsin, as in many states, there are significant reductions in guidelines-based support obligations in shared compared to sole placement arrangements, in that parents are, in effect, both assessed offsetting orders reflecting the particular timeshare arrangements. Compared to sole-mother placement, the resulting child support orders decline as time with the mother declines below 75 percent, and, critically, also as mothers' income increases. For example, a divorced mother of two in Wisconsin with annual income of \$25,000 and an ex-husband with income of \$40,000 would be owed \$10,000 with sole placement, \$6,469 with 65 percent shared placement, and \$2,812 with equal shared placement, based on existing guidelines; were her income instead \$30,000, her support order at 65 percent time would decline to \$5,813, and at equal placement to \$1,875 (authors' calculations). Furthermore, there is some evidence that shared placement cases may be more likely in practice to either not have orders or have orders below guidelines-specified amounts than are sole-mother placement cases (Brown & Brito, 2007; Bartfeld, Cook, & Han, 2015; Hodges & Cook, 2019; Meyer, Cancian, & Chen, 2015). As such, there are competing financial effects of shared placement: mothers will presumably have lower direct expenses if the children live part-time rather than full-time in the home, but they can also expect lower child support receipts. On the other hand, some research suggests shared custody—construed broadly and not differentiating legal custody from physical placement—increases the likelihood of child support (Allen, Nunley, & Seals, 2008); and Meyer, Carlson, and Alum (2019) find higher probability of child support receipt, and in particular of full payment, for shared placement parents. Complicating matters further, placement may influence employment and earnings, by altering the time constraints facing parents who are balancing employment and parenting (see Vuri, 2018 for a recent study examining this).

There are also potentially competing impacts on fathers. Fathers will bear some of the direct costs of raising children when children live part-time in their home. At the same time, they can expect to make lower child support payments. The extent to which child support is less than would be the case with sole-mother placement depends not only on time in each home, but on parents' relative incomes.

An important challenge in exploring the relationship between placement and economic well-being is that the literature on the cost of raising children does not offer guidance on the appropriate estimation of child costs in the case of shared placement (see Lewin/ICF, 1990; Rothe & Berger, 2007; and Robb, 2019 for reviews). Poverty thresholds have a built-in equivalence scale, but such thresholds are not available for households with part-time children, making it difficult to standardize measures of economic well-being across households with varying placement arrangements. A notable exception is work in Australia that used budget-based approaches to identify the costs of caring for children at various time thresholds, relative to the costs assumed when children live 100 percent of time in one household. Henman (2005) estimates that normative child costs for a resident parent with 50 percent contact time are on average 72 percent of fulltime child costs for moderate income parents, and 87 percent of fulltime costs for low-income parents. This work, which makes specific assumptions about the degree to which various categories of costs would be duplicated rather than divided between homes, suggests that the total costs of care are substantially higher when children are cared for in two homes, and that the difference is particularly pronounced in lower-income families due to a higher proportion of fixed costs.

In past work, we have estimated the economic well-being of shared-placement households by using a range of assumptions for the extent to which costs are duplicated in the case of shared placement. Across a range of assumptions (from all costs being duplicated in both homes to all costs being prorated between homes), we found that mothers in shared-placement households fared better during the first two years after divorce than their sole-placement counterparts in absolute terms, but that they experienced substantially larger declines relative to their pre-divorce economic well-being—particularly when we assume at least some duplication of costs (Bartfeld & Han, 2014). We also found that, across placement arrangements, divorced mothers fared worse than divorced fathers (Bartfeld & Han, 2014). In other early work, we found that mothers with shared placement fared somewhat worse economically than they would have under sole placement, although the differences were small and were sensitive to assumptions about cost duplication in shared-placement homes (Bartfeld et al., 2009). In more recent work that controlled for baseline differences between parents with different placement arrangements, we found some evidence of a small beneficial impact of shared placement on mothers' earnings during the first two years after divorce (Bartfeld & Han, 2014), which suggests the possibility that there may be more substantive improvements with a longer follow-up period.

In this report, we explore the economic outcomes of different placement arrangements by examining whether and to what extent shared placement is associated with different economic outcomes for mothers relative to sole-mother placement, focusing on divorces occurring in Wisconsin over a six-year period spanning 2007 through 2013. We illustrate the overall economic changes that occur between the last year of marriage and the initial four years following divorce; examine how these patterns differ for mothers with sole versus shared placement; compare outcomes for mothers and fathers; and examine how post-divorce changes across placement categories differ for mothers from higher- versus lower-income households prior to divorce. We do this strictly in a descriptive sense. That is, we focus on comparing economic changes across placement arrangements, but we do not consider whether placement plays a causal role.

This report differs from and builds on past IRP reports in several key ways. We use more recent cohorts than in our earlier work, providing a more current picture of divorce outcomes. We also look at a longer follow-up period, following mothers for four years after divorce—twice as long as in earlier work. Because of this, we limit our analysis to parents whose children are age 13 or younger, to ensure that the children remain eligible for child support throughout the observation period. Our income measure is more comprehensive, as we include income from unemployment compensation benefits that was not available in our earlier work. We also make use of more extensive location information, which allows us to identify and exclude parents who appear to move out of state at any time during the observation period, rather than only observing moves that occurred prior to the divorce petition; this is important because when parents live out of state their incomes generally do not show up in the administrative data, such that they appear to have no income if we do not exclude them from our analyses. Finally, we look at how outcomes differ for mothers with higher and lower baseline incomes.

DATA AND METHODS

Data and sample

Our sample consists of divorced parents in Cohorts 28 through 33 of the Wisconsin Court Record Database (CRD).¹ We include parents filing for divorce between October 2007 and December 2013 in 21 counties in Wisconsin (including Milwaukee, the largest urban county in the state); the data are weighted to be representative of all divorcing parents in those counties. Data were collected from court records and include demographic information about parents and children; and information about parents' income, child placement arrangements, and child support obligations at the time of the divorce's final judgment. Data are linked to administrative records from several sources: the state child support system, which provides information about child support and maintenance payments and receipts; state public assistance records, which provide information about public assistance benefits; records of unemployment compensation payments; and wage records from the Unemployment Insurance (UI) program, which provide information on quarterly earnings for jobs in Wisconsin.

The sample is limited to parents with at least one child born when the case initially came to court (the petition date) and with all children under age 13 at the final judgment. It excludes cases that are missing a social security number for one or both parents (required for matching with earnings data).

Our base sample includes 2,009 couples. We classify the cases according to placement arrangements, differentiating among sole-mother placement, shared placement (at least 25 percent time with each parent, in accordance with the definition in state statutes), and sole-or other placement types. Within the shared placement group, our initial analyses further classify cases as either mother primary, equal shared, or father primary, based on a counting of

¹ We did not include earlier cohorts in this analysis because complete information on unemployment compensation benefits before and after divorce is not available for earlier cohorts, and we wanted to have uniform data sources for the whole sample.

overnights to be spent with each parent. For most of our analyses, we further limit the analysis to the subset in the sole-mother, mother-primary, and equal-shared placement groups (n=1,832), due to the very limited numbers in father-primary and sole-father categories, and to long-term trends that suggest that the shift over time has been largely from sole-mother to either mother-primary or equal shared placement, with little change in the other groups (Berger et al., 2008; Brown & Cook, 2012; Cook & Brown, 2006). When we look at post-divorce outcomes, we further limit to the 1,759 mothers and 1,665 fathers who, based on available data, have lived in state throughout the observation period. This includes 93.8 percent of the mothers with sole-mother placement, 97.2 percent of mothers with mother-primary shared placement, and 97.8 percent of mothers with equal-shared placement; and 82.4 percent, 95.2 percent, and 97.9 percent of the fathers in each of those groups. We also conduct sensitivity tests on the subsample with both mothers and fathers living in state for the whole period.

Methods

We present descriptive analyses to examine pre- and post-divorce differences in economic circumstances among mothers who receive various placement outcomes. We focus on both total income and needs-adjusted income (as described below). In the context of examining total income, we also look at specific income components—including earnings, child support, and safety net programs. The safety net programs we consider are UI; the Supplemental Nutrition Assistance Program (SNAP), known as FoodShare in Wisconsin; and Temporary Assistance for Needy Families (TANF). We consider economic outcomes at five time points for most analyses: the year preceding the divorce petition, and the first four years following the final divorce judgment (which most commonly occurs 6 to 12 months after the petition date). We also present analyses of mothers' earnings over a longer period beginning three years prior to petition. The pre-petition year is based on the four calendar quarters preceding the petition. Thus, for example, the pre-petition year for a couple filing for divorce during July through September of 2010 would be July 2009 through June 2010. Similarly, the post-divorce years begin in the first calendar quarter following the final judgment. For analyses focused on baseline characteristics, we do not drop parents who later move out of state. For analyses focusing on post-divorce outcomes, and on trends from pre- to -post divorce, we exclude the out-of-state parents.

Measuring income and economic well-being

Total income: We use a definition of income that includes earnings as reported in the UI wage data; unemployment compensation benefits; TANF cash assistance; FoodShare benefits; and net transfers as reported in the KIDS system (including child support, maintenance, and family support). Because transfers reported in KIDS are, in practice, almost entirely child support, we refer to them collectively as child support throughout this report. All income amounts are adjusted to 2010 dollars using the Consumer Price Index.

Income-to-poverty ratio: To construct the income-to-poverty ratio, we divide the total income of each parent by the poverty line corresponding to her or his household size. In the case of parents with sole placement, determining the household size and thus the appropriate poverty line is straightforward. In the case of shared placement, determining the household size and the appropriate poverty line is less clear, because there are both fixed costs of raising children (such

as housing) and costs that are proportional to time in the home (such as food), and we lack empirical information on these costs in shared-placement homes. Here, we use a hybrid approach that averages the fixed-cost and proportional-cost estimates of cost allocation.² This assumes, essentially, that in shared-placement households half of child-related costs are fixed regardless of whether children are part-time or full-time in the home, and half are proportional to time in the home. For instance, our adjustment for household size assumes that in the case of equal shared placement, the costs are 75 percent of what they would be in the case of sole placement. For moderate income parents with equal shared placement, this estimate is roughly consistent with limited research from Australia (see footnote 2) (Henman 2005); for low-income parents and those who have shared placement with a larger-than-50 percent time share, we likely underestimate costs and overestimate economic well-being.

Limitations of economic well-being measures

Our measures of well-being are imperfect. We assume each mother's household consists of herself, children from the current divorce according to the terms of court-ordered placement, and her other minor children (if any), and we make analogous assumptions for fathers.³ We have no information about other adults who may be in the household, including new romantic partners, nor do we consider that actual living arrangements of children may vary from those in the placement order from the final judgment.⁴ Our measures thus describe *the level of economic well-being achievable by divorced parents on the basis of their personal incomes from earnings, child support and maintenance, unemployment compensation, SNAP, and TANF*. Because we limit our sample to parents whose children all remain child support eligible (based on age) throughout the period, we do not need to account for children aging out.

We are also missing some potential income sources—including non-Wisconsin earnings, self-employed earnings, earnings not reported to the UI system such as under-the-table earnings, and investment income—and thus may be underestimating economic well-being. With regard to out-

² If all child costs were fixed regardless of whether the children spend part of the time versus all of the time in the home, it would be appropriate to count them as living in the home with either sole or shared placement, and to select the appropriate poverty line accordingly. Such an approach would in essence assume the cost of a child is constant so long as she lives at least one-quarter of time in the household (the shared placement minimum). Alternatively, we could assume all child costs are proportional to time in the home, and thus that there are no duplication of costs between homes. In the case of a mother with one child and equal shared placement, this would suggest imputing a poverty line midway between that for a 1-person and 2-person household. This approach would underestimate costs, since at least some child costs are fixed (such as housing). The limited estimates available, from research in Australia, point towards an estimate that is roughly midway between the two for moderate income households, and much closer to the fixed-cost measure for lower income households (Henman, 2005). In earlier work, we have sometimes reported both the fully-fixed and fully-proportion variants of these measures.

³ This assumes that parents' minor children outside of the marriage live in their homes until turning 18. This is not necessarily accurate, and likely biases our household size estimates upward for fathers more than for mothers, and therefore likely underestimates fathers' needs-adjusted incomes more than mothers. As such, we likely underestimate differences between mothers' and fathers' needs-adjusted incomes after divorce.

⁴ Past work in Wisconsin, however, has found relatively little systematic changes in where children live in the years following the divorce. To the extent that children with shared placement may de facto spend more time living with mothers than their order specifies, our measures would overestimate the well-being of mothers with shared placement.

of-state earnings, we have information from the Court Record Data regarding address as of the final judgment, and data from KIDS about address changes in the follow-up years; using that information, we can identify parents who appear to be out of state for some or all of the observation period, and we exclude them from our post-divorce analyses—though it is possible that parents could have earnings from out of state while residing in Wisconsin. Note also that the location data are imperfect; we only know about moves out of state if they are reflected in the court record by the time of the final divorce, or over the subsequent four years if reflected in the KIDS data. Parents who either do not have formal orders in KIDS or do not report changes would not be flagged. As such, some parents in our remaining sample may, in fact, live out of state and thus have incomplete income data available to us. Our measures also do not account for taxes—either taxes paid or tax credits or benefits accruing from claiming children as dependents.

RESULTS

Economic circumstances prior to divorce

We look first at economic circumstances of the couples in our sample during the year prior to the initial divorce petition (Table 1). Overall, divorcing couples have average income from all known sources of \$61,781 and median income of \$53,575 (in 2010 dollars). These incomes translate into a mean income-to-poverty ratio of 3.04, and median ratio of 2.59.

Baseline incomes provide some foreshadowing of what to expect after divorce. Mothers appear particularly vulnerable: On average, the mothers in our sample have \$23,181 in mean annual earnings, as compared to \$36,507 for fathers. This largely reflects differences in amount of earnings rather than differences in employment, as 80 percent of mothers and 82 percent of fathers have some earnings during the year. Unemployment compensation benefits contribute a small amount to incomes—an average of \$341 for mothers and \$791 for fathers, with benefits received by 9 percent of mothers and 18 percent of fathers. FoodShare is received by 26 percent of couples and contributes an average of \$1118, while TANF is infrequently received (about 2 percent) and provides only \$51. Households both pay and receive some child support during the baseline year, on behalf of other children mothers and fathers may have; these transfers largely cancel each other out and have a negligible impact in the aggregate.

Changes in economic circumstance from pre-petition to post-divorce

We look next at how mothers' and fathers' economic circumstances change from pre-petition to post-divorce. These initial analyses focus on all divorcing couples and do not differentiate by placement. Income data are generally not available when parents live out of state, so we focus on the subset of our sample who, based on the location information in our data, remain in the state during the entire 4-year follow-up period. Because we exclude out-of-state parents from this analysis, the pre-petition numbers differ slightly from those shown above, and also differ slightly for mothers and fathers. We lose more fathers than mothers due to fathers' higher rate of moving, so the results for fathers are somewhat less representative of all divorcing couples than is the case for mothers.

Table 1. Pre-divorce economic well-being of divorcing parents in year prior to divorce petition

<i>N</i>	2,009
Total income	
Mean	\$61,781
Median	\$53,575
Income-to-poverty ratio	
Mean	3.04
Median	2.59
Mothers' earnings	
Mean	\$23,181
Share with any	0.80
Fathers' earnings	
Mean	\$36,507
Share with any	0.82
Unemployment insurance	
Mean	\$1,132
Share with any	0.25
FoodShare	
Mean	\$1,118
Share with any	0.26
TANF	
Mean	\$51
Share with any	0.02
Child support	
Paid (mean)	\$631
Received (mean)	\$681

Note: All values are calculated using weights to adjust for different sample percentages by county. All dollar values are adjusted to 2010 dollars. The time period is the four calendar quarters preceding the quarter of the divorce petition.

Post-divorce incomes reflect parents' own earnings, safety net income, and net gain or loss from child support transfers. Consistent with what we have seen in earlier cohorts in our previous work, both mothers and fathers' mean needs-adjusted incomes decline after divorce (Table 2). The average income-to-poverty ratio for mothers prior to divorce is 3.16, which falls to 2.19 in the first year after divorce, with very little change in the subsequent years. For fathers, the decline is also substantial, though less dramatic than for mothers: from 3.22 prior to petition to 2.52 in the first post-divorce year, and gradually increasing to 2.65 by the fourth post-divorce year. This overall pattern, with both parents experiencing losses but mothers losing more than fathers, persists when we look at medians rather than means.

Table 2. Income-to-poverty ratios before petition and for four years after divorce

	<i>N</i>	Pre-petition	1 year after divorce	2 years after divorce	3 years after divorce	4 years after divorce
Mothers	1,803					
Mean		3.16	2.19*	2.18**	2.2**	2.21**
Median		2.73	1.79	1.76	1.77	1.81
Fathers	1,711					
Mean		3.22	2.52	2.59	2.59	2.65
Median		2.79	2.12	2.18	2.2	2.27

Note: All values are calculated using weights to adjust for different sample percentages by county. All changes in means from pre-petition to post-divorce are statistically significant ($p < .01$). Asterisks refer to significant difference between means for mothers and fathers (*= $<.1$, **= $<.05$)

We also replicated our analyses on a matched sample of mothers and fathers including only couples where both parents remained in state through the observation period. The results were substantively similar to those reported here (not shown).

Pre-divorce economic circumstances and placement outcomes

The above results include parents across a range of placement outcomes. As shown in Table 3, shared placement is the most common (53 percent), including 35 percent with equal shared, 18 percent with mother-primary shared (51-75 percent time with mother), and fewer than 1 percent with father-primary shared. Thirty-nine percent of couples have traditional mother-primary placement (more than 75 percent time with mother), and the remaining 8 percent have a range of other outcomes including split placement, sole-father placement, or other arrangements. We limit the subsequent by-placement analyses to couples with the most common placement outcomes—sole mother, equal shared, and mother primary, which together account for 92 percent of the couples in our sample. Our primary focus is on how parents’ economic well-being, and changes in economic well-being, vary across these placement groups.

Earlier research in Wisconsin has found substantial differences in how placement is used across income groups, and that continues to be true in the current cohorts. Table 3 shows how placement outcomes differ across pre-divorce income ranges that roughly correspond to quartiles of the incomes of our sample. Shared placement increases from 39 percent of the lowest-income households (those with less than \$30,000 in total pre-divorce income) and 43 percent among those in the \$30,000 to \$55,000 income range, to 56 percent among couples in the \$55,000-\$80,000 range and over three-quarters of the highest-income couples. While shared placement has become increasingly common over the past two decades, the higher use in higher-income households has been a persistent feature of placement patterns throughout the period.

Reflecting these patterns, the mean baseline income among subsequent sole-mother placement couples is \$49,280, as compared to \$71,971 among mother-primary placement couples, and \$75,310 among equal-shared placement couples (Table 4). The higher baseline incomes among shared as compared to sole-placement couples reflect modest differences in mothers’ earnings and more sizable differences in fathers’ earnings. For instance, mothers’ mean baseline earnings

are just over \$20,000 in the sole placement group, as compared to about \$25,000 among those who transition to mother primary and about \$29,000 among those who transition to equal shared. Fathers' mean baseline earnings vary from about \$26,000 to about \$45,000 across the three placement groups. Thus, compared to couples who ultimately end up with sole-mother placement, those couples who transition to shared placement tend to have both higher incomes and more unbalanced earnings between parents.

Table 3. Placement outcomes among divorcing couples, overall and by pre-divorce income

Type of placement	All	Pre-divorce household income			
		<\$30,000	\$30,000– \$55,000	\$55,000– \$85,000	>\$85,000
Mother sole	38.9	48.8	47.9	36.4	20.4
Shared: mother primary	18.0	14.6	14.9	18.3	25.0
Shared: equal	34.5	23.3	27.9	37.7	51.0
Shared: father primary	0.5	1.2	0.2	0.2	0.3
Father sole	1.7	2.0	1.9	2.2	0.4
Split	5.4	7.6	6.5	4.6	2.5
Other	1.1	2.6	0.7	0.6	0.5
<i>N</i>	2,009	539	547	505	418

Note: All values are calculated using weights to adjust for different sample percentages by county. Due to rounding, columns may not sum to 100 percent. All dollar values are adjusted to 2010 dollars. The time period is the four calendar quarters preceding the quarter of the divorce petition.

Table 4. Pre-divorce characteristics of divorcing households that transition to mother-sole, mother-primary, and equal-shared placement

	Mother sole	Mother primary	Equal shared
Household income	\$49,280	\$71,971	\$75,310
Mothers' earnings	\$20,085	\$24,827	\$29,011
Fathers' earnings	\$26,320	\$45,414	\$45,025
Safety net income	\$3,255	\$1,734	\$1,320
Net child support	-\$39	\$187	\$99
<i>N</i>	767	355	710

Note: All values are calculated using weights to adjust for different sample percentages by county. All dollar values are adjusted to 2010 dollars. Safety net income includes FoodShare, TANF, and Unemployment Insurance benefits. The time period is the four calendar quarters preceding the quarter of the divorce petition.

These patterns have several implications for what to expect following divorce. On the one hand, mothers moving into shared versus sole placement have a slightly higher earnings base to build upon, making them at least a little bit less vulnerable, though not dramatically so. At the same time, those mothers stand to lose the most in terms of their husbands' earnings, in both absolute

and relative terms. And, by virtue of the way child support works in shared placement cases, they are likely to recoup a smaller share of that income in the form of child support following divorce. They do save some costs due to children having less time in the home, though these costs do not decline proportionally to time; this less-than-proportional savings in child costs is reflected in our household-size adjustment. That shared placement couples tend to have unbalanced incomes, however, does mean that mothers are likely to receive more of their ex-partners' earnings than would be the case if shared placement were used primarily in couples with balanced earnings. The more equal parents' separate incomes are, the smaller are the guidelines-based orders; in the case of equal shared placement, the guidelines result in no order when incomes are equal. Overall, what we would expect to see in terms of post-divorce economic outcomes reflects an interplay between the inherently lower support orders in shared relative to sole placement cases (by virtue of the formulas used), and the particular income patterns of parents who end up in each of the placement groups. In short, given the way placement is allocated across couples, we would expect mothers with shared placement to be better off than their counterparts with sole placement, but to fall farther relative to their pre-divorce circumstances. It is also relevant to note that research has found that orders are less common in shared-placement households, even when application of support guidelines would result in an order (Bartfeld, et al., 2015; Hodges & Cook, 2019). Because our analyses are based on what actually happens with child support payments—not what guidelines say should happen—we would expect even larger relative declines for mothers with shared placement than the guidelines imply.

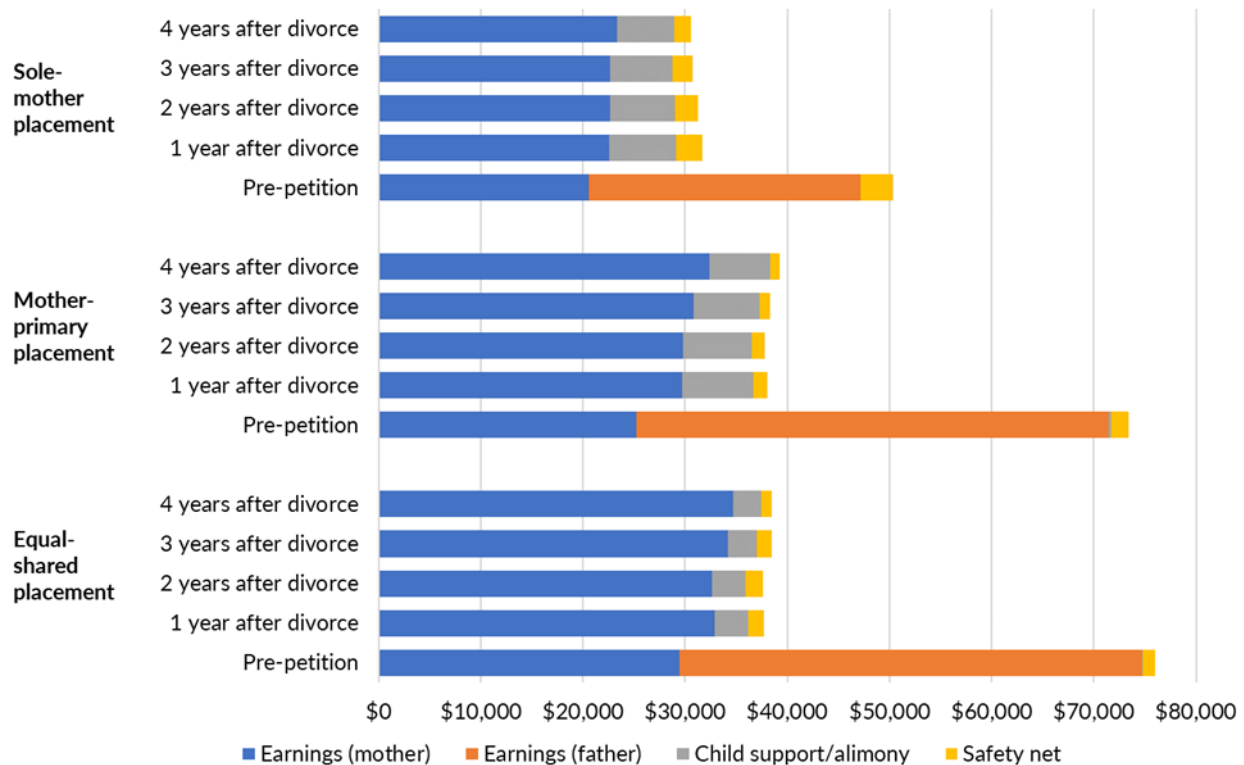
These patterns also have implications for fathers. Fathers moving into shared placement have higher incomes than their counterparts with mother-sole placement; child support formulas mean they would tend to owe less of that income in support; and empirical research shows orders are less frequent for shared placement as compared to mother placement couples. On the other hand, they would also incur direct costs associated with children in the household; our household size adjustments do not allocate any direct child costs to fathers in the event of sole-mother placement.

Changes in mothers' income composition by placement

We examine changes in mothers' income composition from pre-petition to post-divorce, across placement groups (Figure 1).

Prior to divorce, mothers who subsequently receive sole placement had mean combined incomes of approximately \$50,000. This includes mothers' earnings of \$20,566, which constituted 41 percent of their combined income. Their husbands earned an average of \$26,568, or 53 percent of combined income. The remaining 6 percent came from safety net income. Child support payments and receipts largely cancelled each other out. In the first year following divorce, mothers' incomes fell to \$31,658, or 63 percent of their pre-divorce levels. Mothers' own mean earnings increased by about 10 percent, to \$22,555, which represents 71 percent of their post-divorce income. Child support, averaging \$6,580, was equivalent to about one-quarter of fathers' prior earnings, and made up 21 percent of mothers' post-divorce income. The remaining 7 percent came from safety net income, largely FoodShare.

Figure 1. Mothers' income components before and after divorce, by placement



Note: Sample includes 720 mothers with sole-mother placement; 345 with mother-primary placement; 694 with equal-shared placement. All values are calculated by using weights to adjust for different sample percentages by county. Dollar values are adjusted to 2010 dollars.

Turning to mothers who transitioned to mother primary placement, their mean pre-divorce income of \$73,199 consisted of mothers' earnings of \$24,208 (34 percent of income); fathers' earnings of \$46,269 (63 percent of income); and an additional 3 percent of income from safety net programs. Mothers' mean earnings increased substantially after divorce, to \$29,726—an increase of 18 percent and constituting 78 percent of post-divorce income. Child support averaging \$6,916 was equivalent to 15 percent of fathers' pre-divorce earnings, and made up 18 percent of mothers' post-divorce income, with the remaining 4 percent from safety net programs. Overall, mothers' income fell to \$38,021, or 52 percent of pre-divorce levels.

Finally, mothers who subsequently transitioned to equal placement arrangements had the highest pre-divorce incomes, \$75,878. This included an average of \$29,412 in own earnings (39 percent of income); \$45,267 in husband's earnings (60 percent of income); and very limited additional safety net income. These mothers' incomes fell to an average of \$37,660, or half of pre-divorce levels—quite similar to the mother primary placement group. Mothers earnings increased by about 12 percent, to \$32,923, which constitute 87 percent of post-divorce income. Child support averaged \$3,274, equivalent to only 7 percent of fathers' pre-divorce earnings and 9 percent of mothers' post-divorce income. The remaining 4 percent came from safety net programs.

These patterns did not change dramatically over the 4 years. For mothers with sole placement, there was a small decline in total income, from \$31,658 in year 1 to \$30,554 in year 4. This resulted from a small earnings increase, from \$22,555 to \$23,308 over the period, offset by a

decline in child support from \$6,580 to \$5,579 and small declines in safety net payments. Mothers in both shared placement groups saw small gains in income over the period of around \$1,000. These arose from earnings gains of \$2,600 (9 percent) for mother primary households and \$1,800 (5 percent) for equal-shared households, offset by losses of less than \$1,000 in child support. Across groups, mothers' own earnings represented an increasing share of her total income, and child support a decreasing share, over the four post-divorce years.

Overall, all three groups of mothers experienced substantial declines in mean income, with the declines largest in the case of shared placement. As a result, mothers' incomes across placement groups were much more similar after divorce than before, since the pre-divorce differences were heavily influenced by differences in earnings among fathers, and those higher earnings were most common among shared placement groups in which a smaller share was recouped by mothers after divorce. Thus, own earnings for mothers with shared placement constituted a larger share of post-divorce income, on average, than for mothers with sole placement, and this difference grew somewhat over the period. Note that this analysis looks only at changes in total income; there are also, of course, declines in household size after divorce, which we address next.

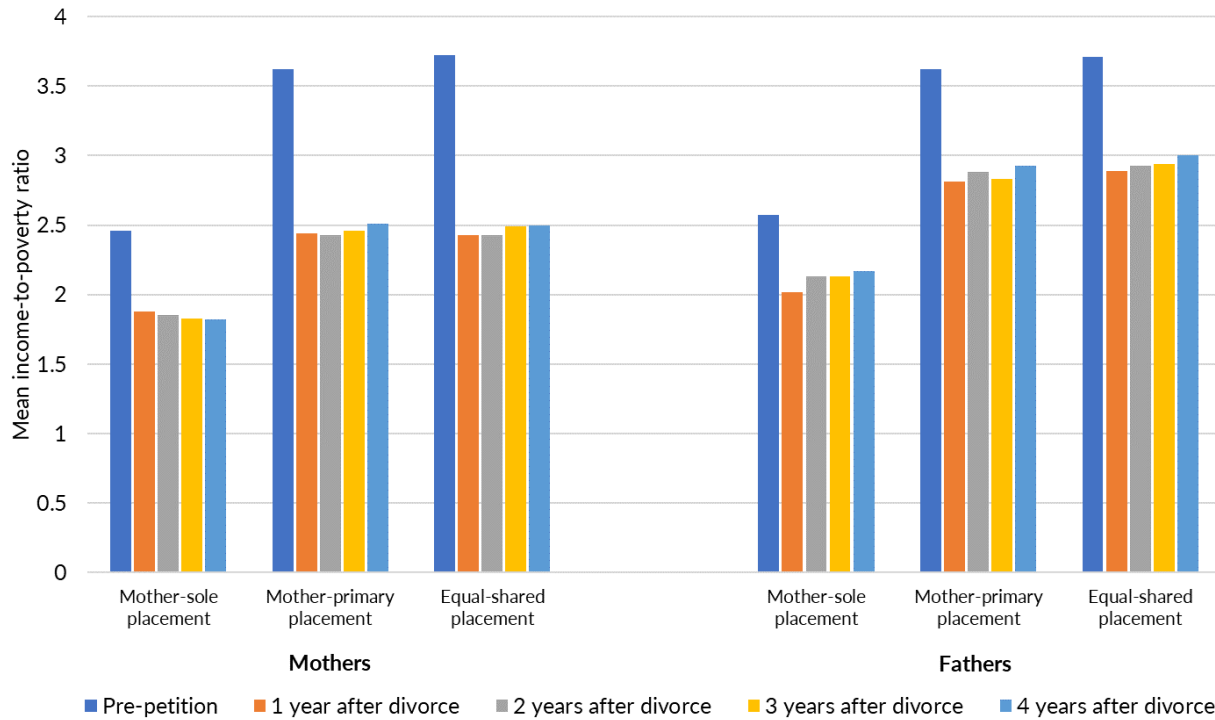
Placement and post-divorce economic well-being for mothers and fathers

Differences in the magnitude of income changes across placement groups also translate into differences in needs-adjusted incomes. Figure 2 shows pre-petition and post-divorce income-to-poverty ratios by placement arrangement, for mothers and fathers. Mothers with sole placement fall from a mean income-to-poverty ratio of 2.46 before petition to 1.88 after divorce, and this drops slightly more to 1.82 by the fourth post-divorce year. Mothers with mother-primary placement fall from a mean income-to-poverty ratio of 3.62 before petition to 2.44 after divorce, and this increases slightly to 2.51 over the four-year period; and mothers with equal shared placement fall from 3.72 to 2.43, increasing slightly to 2.5 by the fourth year. Thus, mothers with shared placement continue to have higher needs-adjusted income than their sole placement counterparts, but they fall further from where they started, with only a negligible improvement over the period.

Fathers also experience a post-divorce drop in needs-adjusted income across placement groups, though the difference in mean income-to-poverty ratio from the pre- to post-divorce period is smaller than for mothers in each of the placement groups. As a result, fathers fare better than mothers in all placement groups at all post-divorce timepoints. Fathers in sole-mother placement couples experience mean declines in income-to-poverty ratios from 2.57 to 2.02, rebounding to 2.17 by the fourth year. Fathers in mother-primary couples see declines from 3.62 to 2.81, rebounding slightly to 2.93 by the fourth post-divorce year; and fathers with equal-shared placement see declines from 3.71 to 2.89, rebounding slightly to 3.0. As is the case for mothers, the decline for fathers is larger in the case of shared versus sole-mother placement. The net impact of these patterns is that across placement groups, mothers and fathers fare worse after divorce than during marriage; across placement groups, mothers on average experience larger drops than fathers; mothers and fathers both experience larger drops in economic well-being in the case of shared versus sole-mother placement; and the differential decline in economic well-being for shared relative to sole placement is larger for mothers than for fathers. These general

patterns hold throughout the four-year follow-up period. As a caution, we note again that the sole-placement fathers may be less representative of all sole-placement fathers, in that we are missing a larger share of them because we know they have moved out of state. However, we replicated our analysis on a sample limited to couples in which mothers and fathers both remained in state, and the patterns were quite similar to those reported (not shown).

Figure 2. Mothers' and fathers' mean income-to-poverty ratios before petition and for four years after divorce, by placement type



Note: Sample includes 720 mothers with mother sole placement; 345 with mother primary placement; 694 with equal shared placement; 632 fathers with mother sole placement; 338 with mother primary placement; and 695 with equal shared placement. All values are calculated using weights to adjust for different sample percentages by county.

Post-divorce economic outcomes for parents with lower and higher pre-divorce incomes

The economic implications of divorce are a function of mothers' earnings, fathers' earnings, and the direct and indirect sharing of the costs of raising children via placement and child support. We have seen that mothers have larger absolute declines in needs-adjusted income when they have shared versus sole placement. However, shared placement is used disproportionately in higher income households, where there is more room for income to fall. To better differentiate how economic outcomes vary by placement, we divide our sample into lower income and higher income couples based on pre-divorce incomes under or over \$55,000—roughly the midpoint of the income distribution. Table 5 shows how needs-adjusted incomes change one year and four years after divorce, for mothers with mother-sole placement and equal shared placement in each of the two baseline income groups. In the lower-income sample, mean pre-divorce income-to-

poverty ratios were 1.46 for both placement groups. Mothers with equal shared placement experienced somewhat larger absolute declines on average in the first post-divorce year (-.28 versus -.12), though there was little difference by the fourth year. Among the higher-income mothers, mean income-to-poverty ratios were 5.12 and 4.22 for mothers who transitioned to equal-shared and sole-mother placement, respectively; the absolute post-divorce declines were again larger for mothers in the equal placement group, and this persisted over the four-year period, although by the end of the period the relative (versus absolute) declines were the same. Overall, the differential declines experienced by mothers with equal versus sole placement are evident in both lower and higher income households, though the differentials in the separate income groups are less pronounced than in the full sample, which suggests that the differential is at least partly explained by baseline differences between incomes in shared versus sole placement couples.

Table 5. Income-to-poverty ratios before petition and changes after divorce, by pre-divorce income and subsequent placement

	N	Income-to-poverty ratio		
		Pre-petition	Change 1 year after divorce	Change 4 years after divorce
All couples				
Mother sole	720	2.46	-0.58***	-0.63***
Equal shared	694	3.72	-1.29	-1.21
Lower household income (<\$55,000)				
Mother sole	478	1.46	-0.12**	-0.14
Equal shared	284	1.46	-0.28	-0.17
Higher household income (>\$55,000)				
Mother sole	242	4.22	-1.39***	-1.5***
Equal shared	410	5.12	-1.91	-1.86

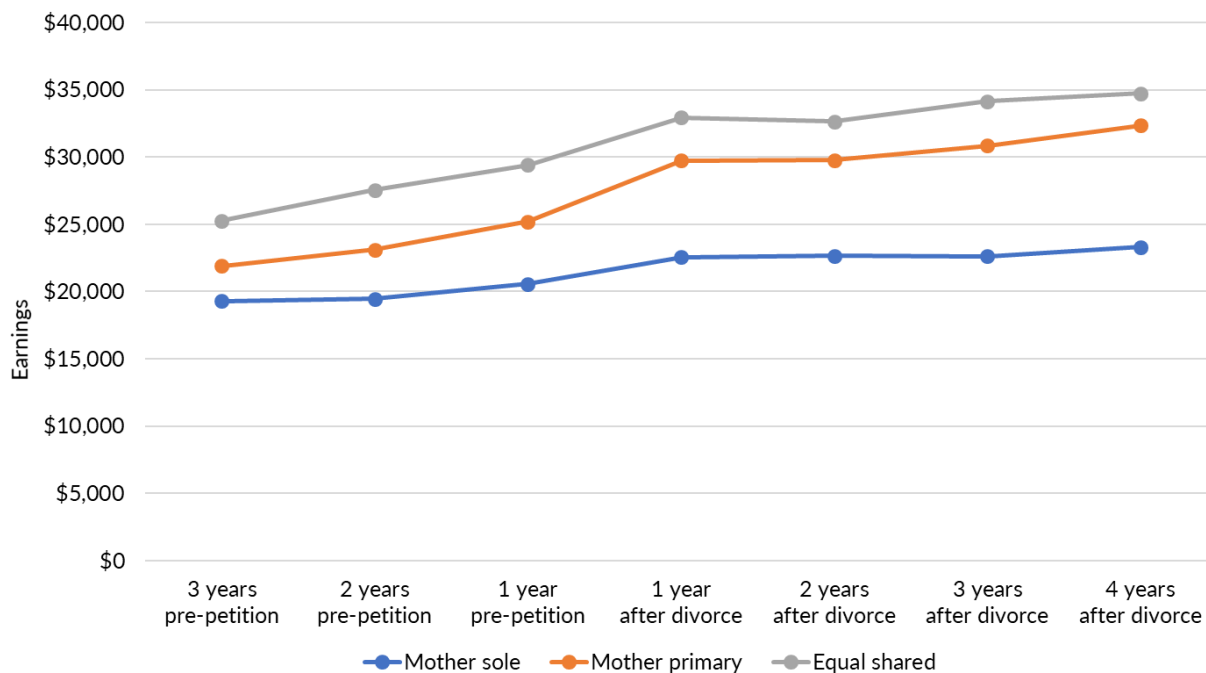
Note: All values are calculated using weights to adjust for different sample percentages by county. Asterisks indicate significant difference between mothers with sole and equal placement, **= $p < .05$, ***= $p < .01$.

Earnings trajectories before and after divorce

While our focus in this report is on describing changes in economic well-being over time for parents who move into different placement arrangements after divorce, this is not solely a function of changes in how fixed resources are allocated across household. Income trajectories could influence parents' preferences for different placement outcomes, and could in turn be influenced by time or financial circumstances after divorce. In earlier work, we found some evidence that shared placement may lead to small increases in mothers' earnings over the first two post-divorce years, relative to sole-mother placement (Bartfeld & Han, 2014). While a causal analysis is beyond the scope of the current study, we look at mothers' earnings changes over the three pre-petition and four post-divorce years, to illustrate how, in a purely descriptive sense, these patterns differ across placement groups over a longer period. As shown in Figure 3,

mean earnings were increasing more rapidly in the years leading up to divorce among mothers who subsequently transition to shared versus sole placement, and these differences continued after divorce. These pre-divorce patterns suggest that different earnings trajectories for mothers with shared versus sole placement may precede the divorce. These income trends notwithstanding, as shown in Table 2 above, mothers with shared placement still have losses in needs-adjusted incomes that are larger than their sole placement counterparts, and larger than shared placement fathers, four years after their divorces were finalized.

Figure 3. Mothers' earnings trajectories before and after divorce, by placement



Note: All values are calculated using weights to adjust for different sample percentages by county. Values are mean annual earnings adjusted to 2010 dollars. The time periods refer to the three years preceding the divorce petition and the four years following the divorce final judgment. Sample includes 720 sole placement mothers, 345 primary placement mothers, and 694 equal placement mothers. All values are calculated using weights to adjust for different sample percentages by county. Values are mean annual earnings adjusted to 2010 dollars. The time periods refer to the three years preceding the divorce petition and the four years following the divorce final judgment. Sample includes 720 sole placement mothers, 345 primary placement mothers, and 694 equal placement mothers.

Sensitivity analyses: extending to additional cohorts

Our analyses have used cohorts 28-33, the most recent cohorts in the CRD; as such they provide the most current information we have access to on the economic impacts of divorce under shared and sole placement. These are also the only cohorts for which we are able to incorporate unemployment compensation benefits in our income measure, due to data availability. As shown earlier (Table 1), these benefits were received by one-quarter of households in the year prior to divorce petition. We replicated our main analyses on a broader set of cohorts (24-33), and while the income measure is less comprehensive in the earlier cohorts due to the lack of unemployment compensation benefits, the same pattern of results holds: mothers with shared placement have larger mean declines than those with sole-mother placement; fathers have smaller mean declines

in income-to-poverty ratios than mothers after divorce; and the differences between mothers and fathers are largest with shared placement.

CONCLUSIONS

The growth in shared placement as a normative placement arrangement has added complexity to discussions of the economic impacts of divorce. Whereas much of the longstanding discussion in this area highlights the interplay among women's lower earnings, their dominant role in child placement arrangements, and the amount of child support payments as a primary cause of mothers' economic hardship—both relative to pre-divorce income levels and relative to their ex-husbands' incomes—the narrative is more complicated when children live part-time with both parents and the direct costs of raising children are thus shared. With shared placement, the economic outcomes of divorce are much more strongly linked to parents' own earnings, and less to differences in the direct (via placement) and indirect (via child support) sharing of child-related costs. Yet, the majority of research on divorce impacts has not grappled with this issue.

This report has explored the economic outcomes of divorce for Wisconsin parents, with a focus on how those outcomes differ for parents with shared versus sole-mother placement for their children. We look at income composition and needs-adjusted incomes prior to filing for divorce, and for four years after divorce finalization. Our report is the most recent in a series of IRP reports to examine this issue. We expand on previous work by focusing on more recent cohorts of divorcing parents, a longer follow-up period, and examination of outcomes for lower and higher income households. And, we make a variety of methodological improvements over past work, resulting in more comprehensive and accurate income information and more thorough exclusion of out-of-state parents for whom relevant income information is not available.

Our past work has consistently found that shared placement is used disproportionately among higher-income couples; that mothers with shared placement experience larger declines in total and needs-adjusted income immediately following divorce than do mothers with sole placement; and that declines in economic well-being for mothers are larger than for fathers across placement groups. Those general patterns continue in the more recent cohorts examined here. Notably, the patterns largely persist over a four-year post-divorce follow-up period—twice as long as we have been able to look at in earlier work. We do observe very modest gains in the needs-adjusted incomes of shared placement mothers over the four-year period, in contrast to small declines for mothers with sole placement, which stem from increases in mothers' own earnings. However, these changes over the four-year period do not substantively alter the overarching outcomes; larger post-divorce declines for mothers with shared placement, but higher absolute levels of economic well-being, vis-à-vis mothers with sole placement.

While mothers and fathers alike experience losses, fathers remain, on average, better off economically than mothers over the four-year period; and these gender differences are larger in conjunction with shared placement than sole-mother placement. This arises from the disproportionately higher earnings of shared placement fathers, coupled with shared placement formulas that result in smaller orders. Shared placement has the effect of linking parents' post-divorce economic well-being more tightly to their own earnings, a connection that only grows with time as we observe declines in child support across placement groups over the follow-up

period along with differential increases in mothers' own earnings in the case of shared placement. Across all placement groups, fathers on average recover more over the four-year follow-up period than do mothers, though their changes are modest as well. Despite these differences among placement groups and between mothers and fathers, though, after four years, mothers and fathers in each placement group remain less economically secure than before divorce. This is not surprising; there are lost economies of scale when moving from one household to two.

Two issues are important to keep in mind with regard to these results. First, and as noted earlier, there are limitations to our income measure; a fuller measure would potentially affect the patterns seen here. The lack of information on earnings outside of formal Wisconsin earnings reported to the UI system means that self-employment, under-the-table, and out-of-state earnings are missing. While we have no way of estimating the magnitude of this, we do observe nontrivial child support payments among some fathers with no evident earnings, suggesting there may be income we are missing.⁵ We also fail to account for tax payments and credits which, while mostly relevant at the end of the year rather than on a regular cash-flow basis, is nonetheless significant and has implications for both parents' annual income. Accounting for tax implications, in practice, is complex because of the various rules regarding tax benefits in the case of divorced couples, although Earned Income Tax Credit (EITC) benefits are likely of particular relevance to mothers with primary placement.⁶ Finally, we reiterate that our income measures and household sizes pertain to parents and their children as of the time of the divorce; the resulting needs-adjusted income measures describe the extent to which parents can support themselves and those children in the subsequent years. They do not reflect any changes associated with subsequent cohabitation, remarriage, or additional children.

A second issue to highlight is that our analyses are not intended to be causal. Our focus is on demonstrating the way economic well-being unfolds after divorce for mothers and fathers who have different placement outcomes, while recognizing that parents' baseline economic circumstances differ for shared versus mother-sole placement couples, and that the application of and compliance with child support guidelines differs with placement as well. We do not argue that either placement or child support guidelines themselves cause the absolute or relative

⁵ Among seemingly in-state father with no known earnings, from 27 percent to 33 percent of fathers in sole-mother placement cases, and 18 percent to 22 percent in equal shared placement cases, pay at least \$2500 in child support in a given post-divorce year. We believe, therefore, that we are underestimating fathers' income; we do not have the same kind of indicator available for mothers.

⁶ Which parent claims the child as a dependent is often negotiated as part of a divorce settlement, and comes with financial benefits in the form of reduced taxable income. EITC eligibility is tied to where the child lives the majority of the time, and in the case of exactly equal time, is only available to the parent with higher income, who still must meet income criteria to qualify. Eligibility and amount of the credit, for those meeting the resident-child criteria, depend on earnings and number of children. In general, the EITC would benefit mothers in sole-mother and mother-primary placement households, and potentially fathers in equal-shared placement households. However, this is not straightforward as there is some leeway to parents to jointly make decisions about the allocation of child dependency allocation as part of divorce settlements, and EITC claims by virtue of annual filing decisions.

outcomes discussed; we merely describe the way, in practice, economic outcomes have unfolded, both across placement groups and between mothers and fathers.

As shared placement continues to increase among divorcing couples in Wisconsin, it is important to understand its ramifications for children and families across a variety of domains. Whereas discussions of economic impacts of divorce have often focused on the role of child responsibilities after divorce, our findings regarding persistently large declines for mothers with shared placement, both relative to their sole placement counterparts and relative to fathers with shared placement, highlights the importance of mothers' own earnings as a driver of post-divorce economic well-being. Examination of shared placement mothers' income components before and after divorce makes this clear, as the post-divorce absence of fathers' earnings swamps the post-divorce role of child support and mothers' own earnings gains; as a result, mothers' needs-adjusted incomes remain persistently below fathers' incomes.

Our analyses do not speak to the question of whether the child support system is working in the way that it either could or should. The goal of child support is not to equalize either incomes or economic well-being, nor to maintain either party at pre-divorce levels; the resulting patterns do not, in and of themselves, point to specific flaws in the system. They do, however, highlight the implications of the system as it currently operates—where results arise from the interplay of parents' absolute and relative incomes, the extent to which guidelines are applied, and parents' compliance with orders. We do know from other work that child support guidelines are less consistently implemented in shared placement cases; our work suggests that the courts may wish to be more cautious in deviating from the guidelines that have been established, in light of the economic outcomes that we observe. Moreover, it would be useful in subsequent work to assess the extent to which the patterns we observe would differ in the context of full adherence to child support guidelines.

Finally, we emphasize that it is important to consider any negative economic ramifications of shared placement in the context of the growing shared placement literature, which documents a range of psychological, behavioral, and interpersonal benefits (see, e.g., Nielsen, 2018 and Steinbach, 2019 for reviews), even as questions remain. While there are inherent costs built into shared placement due to duplication in costs when children live in two homes, research suggests there may also be benefits.

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