IRP SPECIAL REPORT

UTILIZATION AND EFFECTS ON PAYMENTS OF PERCENTAGE-EXPRESSED CHILD SUPPORT ORDERS

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SR #55 July 1992

Institute for Research on Poverty
Special Report no. 55

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July 1992

This paper has been prepared under a contractual agreement between the Wisconsin Department of Health and Social Services and the Institute for Research on Poverty. Any views expressed in this paper are those of the authors and not necessarily those of the sponsoring institutions. The authors thank Dan Meyer and Pat Brown for their assistance.

Abstract

This report examines the use of child support orders expressed as a percentage of noncustodial parents' incomes and the effects of percentage-expressed orders on child support payments. Data are from court records in twenty-one Wisconsin counties and the Wisconsin Department of Revenue. The investigators discover that the use of percentage-expressed orders, as opposed to orders expressed as a fixed sum of money, results in substantially more money collected in child support payments, after controlling for differences between child support cases. Compliance rates, however, are lower in cases with percentage-expressed orders than in cases with fixed-sum orders. Even so, there are large increases over time in the dollar amounts of support orders when they are expressed as a percentage of income, and these increases offset the adverse effects of low compliance rates.

Utilization and Effects on Payments of Percentage-Expressed Child Support Orders

INTRODUCTION

This report examines the use of percentage-expressed child support orders in twenty-one Wisconsin counties from 1984 through 1989. Additionally, it provides information about the payment patterns of cases with such orders relative to cases with fixed-sum awards, and attempts to disaggregate these payment patterns into two underlying components, order amounts and compliance rates.

An understanding of the performance of percentage-expressed orders is important in light of recent child support reforms both in Wisconsin and at the federal level. The percentage-of-income standard, one of several recent reforms of the Wisconsin child support system, specifies the proportion of income that noncustodial parents are required to share with their children. The standard was published in 1983, and since July 1987 has been the presumptive child support obligation throughout the state. According to statute, support orders may be expressed in one of two ways: as a percentage of income so that the obligation changes each time the noncustodial parent's income changes; or as a fixed sum, based on a percentage, that may change every few years if the order is reviewed. The decision to use fixed or percentage-expressed orders is made by judges on a case-by-case basis. Thus far, there has only been preliminary information available regarding the use of percentage-expressed orders and the relative effects of percentage-expressed versus fixed awards on collections over time.

The issue of percentage-expressed orders is also of particular relevance to the provision in the 1988 Family Support Act which obligates states to update all IV-D child support orders (issued by the Office of Child Support Enforcement) every three years. Because percentage-expressed orders automatically index support awards to changes in the noncustodial parent's income, they offer an

alternative to updating on a case-by-case basis at regular intervals, and thus could present one option available to the state as a means of implementing the federal updating requirement.

The first section of this report discusses the advantages and limitations of percentage-expressed orders from a conceptual standpoint. The second section describes the data and methods used in this report. In the third section we discuss the extent to which percentage-expressed orders were used between 1984 and 1989, and describe the characteristics of these cases. The fourth section presents an analysis of the effects of percentage-expressed orders on subsequent payments, and the fifth and final section contains conclusions.

I. POTENTIAL ADVANTAGES AND DISADVANTAGES OF PERCENTAGE-EXPRESSED ORDERS

An important advantage of percentage-expressed support orders is that such orders most accurately reflect the concept underlying the percentage standard, namely, that parents are responsible for sharing a proportion of their income with their children. Based on this concept, the amount of a parent's support obligation at any given time should depend on his or her current income rather than on the amount he or she happened to be earning at the time of the order.

There are three principal reasons why payments over time for cases with percentage-expressed orders may be expected to differ from those for cases with fixed awards in the absence of routine updating. The primary reason is the explicit link to income changes, while secondary reasons are the potential impacts of the order type on compliance and work effort.

Recent research using Wisconsin data documents substantial increases over time in the earnings of noncustodial parents, especially in nonmarital child support cases (Phillips and Garfinkel, 1992; Meyer, 1992). To the extent that collections actually reflect earnings, then, the amount of collections in cases with percentage-expressed orders should increase correspondingly. Of course,

earnings also decrease in at least some cases, and percentage-expressed orders in these cases would lead to lower obligations and hence lower payments. Further, the direct link to current income could also be expected to lead to fluctuations in payment amounts: as the noncustodial parent's income increases or decreases, so does the child support obligation.

It is also possible that percentage-expressed orders may result in lower compliance rates than fixed orders. Because parents with percentage-expressed orders do not owe a fixed amount each month, it is difficult for child support agencies to monitor compliance and to apply standard enforcement tools when noncompliance is detected. In Wisconsin, the Clerks of Court cannot determine if the appropriate payment was made, because the effective obligation is based on current income rather than income at the time of the order. Without knowing the amount of the obligation, the courts are unable to calculate arrearages. In many counties, whatever payment is received is assumed to be the correct amount (Rothe, 1990). This inability of the courts to monitor compliance may in fact make it less likely that noncustodial parents will pay their full obligation. Such noncompliance is likely to be more problematic among payers who shift jobs frequently or who do not have support withheld from their paychecks.

Even when the Clerks of Court suspect that appropriate payments have not been made, enforcement is much more difficult than in cases with fixed orders. For fixed awards, routinized enforcement mechanisms, based on certified arrearages, are available. Such mechanisms include tax intercepts, lottery intercepts, and reporting to credit bureaus. In order to apply these mechanisms in cases with percentage-expressed orders, counties must first locate the noncustodial parent, obtain income information voluntarily or by court order, determine the amount owed based on the percentage ordered, and obtain court approval to determine arrearages (Rothe, 1990). This problem would be alleviated on an annual basis if the law required that noncustodial parents submit copies of

their annual income tax returns to the Office of Child Support; under current law there is no such requirement.

On the other hand, it is possible that percentage-expressed orders would lead to greater compliance if they are perceived as more fair by noncustodial parents. That is, parents may be more inclined to comply with support orders when such orders are a true reflection of current ability to pay rather than a seemingly arbitrary amount.

A third way in which percentage-expressed orders may influence payment patterns is through an effect on work effort. Economic theory suggests that a child support award which is expressed as a percentage of income may lead to less work effort and greater underreporting of earnings on the part of the noncustodial parent than a child support award which is fixed in dollar terms. A fixed-sum award, like a lump-sum tax, reduces the take-home income of the noncustodial parent without reducing the reward for work. The loss of income actually promotes greater work. A percentage-expressed order, like an income tax, not only reduces net income, but also reduces the reward for work. It is possible that the reductions in work will be sufficiently large to lead to decreases in child support obligations that outweigh any gains from automatic indexing.

In sum, theory suggests that percentage-expressed orders would lead to higher payments by indexing the support obligation to income, while simultaneously contributing to lower payments by reducing compliance and work effort, with the relative magnitude of these impacts not known.

Updating orders periodically, as mandated by the Family Support Act, serves the same general purpose as expressing orders in percentage terms. However, there are several ways in which such updating may be problematic.

First, updating every three years is likely to lead to lower average increases in awards and payments than automatic updating. When orders are updated on a three-year basis, increases in

income during the interim years do not result in higher orders. With percentage-expressed orders, the link to income is simply more direct and explicit.

Second, updating each order on a regular basis may prove more cumbersome and costly from an administrative standpoint than would the use of percentage-expressed orders. A substantial administrative burden associated with routine updating has been documented in the Modification Demonstration Projects currently under way in four states (Paulin, 1991).

Third, updating orders in non-AFDC cases may place an undue burden on the custodial parent. Prior to pursuing a revision in non-AFDC cases, the courts must receive authorization from at least one of the parents. In the order revision pilot project currently under way in Wisconsin, the most common reason for dropping non-AFDC cases after an initial decision to pursue a revision has been a lack of cooperation by the custodial parent. In fact, 70 percent of cases which were identified as potentially appropriate for revision were not pursued due to lack of authorization![1] Pilot staff indicate several reasons why custodial parents have been reluctant to pursue an order revision, including excessive paperwork and fees, concern with upsetting their relationship with the noncustodial parent, and a general reluctance to "rock the boat" and risk jeopardizing existing custody or visitation arrangements (Corbett and Brown, 1990). Similar findings are reported in the Modification Demonstration Projects referred to above (Paulin, 1991).

Fourth, staff are apparently reluctant to pursue revisions when such revisions would result in lower rather than higher support orders (Paulin, 1991; Corbett, Brown, and Kost, 1991). Although decreased income yielding downward revisions are not the desired outcome, fairness argues that such revisions should be pursued when warranted. Using percentage-expressed orders would address such situations automatically.

The majority of arguments for and against percentage-expressed support orders relate directly or indirectly to their effects on payment patterns. The previous discussion suggests that percentage-

expressed orders may lead both to higher payments and to payments which more accurately reflect the noncustodial parent's current income. The former--higher payments--is desirable from the standpoint of custodial parents and their children, as well as the standpoint of the state, which may realize savings in AFDC expenditures. The latter outcome--payments which reflect current noncustodial parent income--is also desirable in that it reflects the basic philosophy underlying the support guidelines. In light of these potentially desirable outcomes, an empirical analysis of the actual effects of percentage-expressed support orders is warranted.

II. DATA AND METHODS

Data

The Institute for Research on Poverty has collected court record and payment history data on a sample of divorce, separation, and paternity cases involving at least one child under age eighteen from twenty-one Wisconsin counties. Data have been collected for cases which entered the courts between July 1980 and June 1988, including payment records and all support-related court actions for up to four years. These data include information on case characteristics, details of support orders, and characteristics of both parents, including age, income, and employment. Unfortunately, income information is missing in a substantial number of cases.

An additional data source used in this analysis consists of income data from the Wisconsin Department of Revenue (DOR). Personal taxable income information is available annually, from 1980 through 1989, for parents in our sample who filed Wisconsin income tax returns.[2] In any given year, income data are missing for a subset of the parents, specifically those who have moved out of state, those with incomes too low to necessitate the filing of a return, and those avoiding payment of income taxes.

We use two primary samples in this analysis. Our broadest sample, used to examine the utilization of percentage-expressed orders, consists of all cases which entered the courts between January 1984 and June 1988 in which there was a support order with one parent designated as the payer. Earlier cases were excluded because percentage-expressed orders were not used prior to 1984, while cases in which both parents paid support were excluded in order to obtain a more homogeneous sample.

We use a somewhat more restrictive sample to analyze the performance of percentage-expressed versus fixed orders over time. We exclude non-father payers and Action to Compel (ATC) and Uniform Reciprocal Enforcement of Support Act (URESA) cases[3] because the determinants of payment may differ in such cases. We exclude cases in which the expression of the support order changes over the case history or cannot be determined from the data, as well as cases in which a support order was no longer in effect during the final five-month period in which payment patterns were analyzed. Finally, we include only those cases for which a minimum of eight months of payment history were available, as the purpose is to compare the payment patterns over time of percentage-expressed as compared to fixed orders.

Table 1 shows the characteristics of the two samples. The first sample includes a total of 6232 cases--1364 paternity cases, 3821 divorce cases, and 1047 ATC and URESA cases. The second sample includes 3358 cases--962 paternity cases and 2396 divorce cases. For divorce cases, we used data from the action in which the final judgment was issued. In non-divorce cases, as well as divorce cases with no final judgment, we used data from the first action in which support was ordered.

Methods

We address two primary issues in this analysis. The first concerns the use of percentage-expressed orders, while the second concerns the payment patterns of such orders over time.

TABLE 1

Characteristics of Final Samples in Study of Fixed and Percentage-Expressed Child Support Orders

	Sample 1[a]		Sample 2[b]	
	No. of Cases	% of Sample	No. of Cases	% of Sample
Total	6232	100	3358	100
Case type:				
Paternity	1364	22	962	29
Divorce	3821	61	2396	71
ATC/URESA	1047	16	(Not included)	
Year of order:				
1984	562	9	253	7
1985	1361	22	788	23
1986	1605	26	939	28
1987	1317	21	825	25
1988-89	1387	22	553	17
Order type:				
Fixed	5092	82	2963	88
Percentage-expressed	733	12	395	12
Unclear	407	6	(Not included)	

Source: Wisconsin Court Record Database.

[a]Sample 1 includes all cases that entered the courts between January 1984 and June 1988 in which there was a support order with one parent designated as the payer.

[b]Sample 2 is a subset of Sample 1 and includes only those cases for which a minimum of eight months of payment history are available and excludes cases in which the mother is the payer, ATC and URESA cases, cases in which the type of support order has changed or cannot be determined, and cases in which a support order was no longer in effect during the final five-month period in which payment patterns were analyzed.

We begin by presenting cross-tabulations showing the use of percentage-expressed orders according to various case characteristics. Here we distinguish between cases with fixed orders, cases with percentage-expressed orders, and cases in which the expression of the order is not clear from the data. Included in the latter category are "hybrid" orders--orders expressed in both fixed and percentage terms (for instance, "the greater of $100 or 17 percent of income").

In order to determine which characteristics are associated with the expression of support orders when other variables are held constant, we also estimate a probit model. In this analysis the unclear orders, constituting 6 percent of the sample, are excluded, yielding a dichotomous dependent variable.

We next consider the payment pattern of cases with percentage-expressed as compared to fixed orders. Because payments are a function of the amount of the obligation as well as the level of compliance with that obligation, we look separately at these two components. The amount of the order for fixed-order cases is obtained from the court record data, while the amount of the obligation for percentage-expressed cases is calculated from annual income data, using the percentage specified in the court record. Additionally, we calculate how orders would have changed for cases with fixed orders had they instead been percentage-expressed, again using annual income data. To determine whether payments change at different rates for the two order types, we look at the average change in monthly payment in the first four years of the support order.

Finally, we use a multivariate approach to estimate the impact of percentage-expressed orders on payments while controlling for the effects of other variables. Our dependent variable is payments during the last five-month period for which payment record data are available--January-May 1989 for all cases in Milwaukee County, January-May 1988 for non-Milwaukee County cases which entered the courts before June 1986, and August-December 1989 for non-Milwaukee County cases which entered the courts after June 1986.

There are two potential problems with estimating an ordinary least squares (OLS) regression for this analysis. First, the dependent variable--payments--is truncated at zero, suggesting that a model explicitly accounting for this truncation would be appropriate. Second, to the extent that there are unobserved variables which influence both the order type (percentage-expressed versus fixed) and the payment amount, OLS coefficients would be biased. The latter problem can be handled with a treatment effects model, as described by Barnow, Cain, and Goldberger (1981). Unfortunately, this model is not appropriate for estimation methods other than OLS. Because we are concerned about heterogeneity between cases with the two order types, we use a treatment effects model to obtain selectivity-corrected OLS results rather than uncorrected results addressing the truncation at zero.

In the first stage of the treatment effects model, a correction term, lambda, is calculated from a probit model in which the dependent variable is the order type. In the second stage, this correction term is included in an OLS with payments as the dependent variable. This approach explicitly controls for any correlation between the error terms in the order type equation and the payment equation, and yields consistent estimates, assuming the errors are distributed bivariate normal. For further discussion of this approach, see Barnow, Cain, and Goldberger (1981).

III. USE OF PERCENTAGE-EXPRESSED ORDERS

Table 2 presents data on the numbers and proportions of sample cases with fixed, percentage-expressed, and unclear orders. In the total sample, 12 percent have percentage-expressed orders, 82 percent have fixed awards, and the remaining 7 percent have orders which are unclear from the available data.

The use of percentage-expressed orders increased steadily from 1984 through 1989. Among orders issued in 1984, only 2 percent were percentage-expressed, as compared to 14 percent in 1987 and 31 percent in 1989. This increase occurred in conjunction with an increase in the use of the

TABLE 2
Child Support Cases with Fixed, Percentage-Expressed, and Unclear Orders, by Case Characteristics

	Fixed Orders		Percentage-Expressed Orders		Unclear	
	No. of Cases	% of All Cases in Row	No. of Cases	% of All Cases in Row	No. of Cases	% of All Cases in Row
Total	5092	82	733	12	407	7
Year of order:						
1984	535	95	14	2	13	2
1985	1210	89	69	5	82	6
1986	1370	85	121	8	114	7
1987	1056	80	183	14	78	6
1988	774	69	264	23	88	8
1989	145	57	79	31	31	12
County:						
Calumet	131	68	48	25	14	7
Clark	76	53	50	35	18	13
Dane	467	93	10	2	24	5
Dodge	131	60	32	15	57	26
Dunn	131	82	15	9	14	9
Green	171	94	3	2	8	4
Jefferson	219	91	1	0	21	9
Juneau	130	78	27	16	10	6
Kewaunee	40	54	24	32	10	14
Marathon	219	78	35	12	28	10
Milwaukee	1266	84	202	13	35	2
Monroe	99	60	56	34	10	6
Oneida	178	82	18	8	20	9
Ozaukee	213	85	23	9	15	6
Price	90	82	15	14	5	5
Racine	332	92	5	1	22	6
Richland	134	84	19	12	7	4
St.Croix	161	70	51	22	17	7
Sheboygan	155	64	51	21	38	16
Waukesha	445	87	40	8	28	5
Winnebago	304	96	8	3	6	2
Case type:						
Paternity	1206	88	121	9	37	3
Divorce	2882	75	581	15	358	9
ATC/URESA	1004	96	31	3	12	1
Payer:						
Father	4924	82	700	12	389	6
Mother	168	77	33	15	18	8

Source: Wisconsin Court Record Database.
Note: Sample is Sample 1 (see note to Table 1). Percentages may not add to 100 due to rounding.

percentage standard over this period, especially after July 1987, when it became the presumptive award (Garfinkel and Bartfeld, 1990).

Despite the steady increase over time in the use of percentage-expressed orders, there remains substantial variation among counties. Use of such orders ranged from less than 1 percent in Jefferson County to a high of 35 percent in Clark County. Overall, five counties used percentage-expressed orders in fewer than 5 percent of their cases, while four counties used such orders in at least 25 percent of their cases.

Use also varies somewhat by case type: 15 percent of divorce cases use percentage-expressed orders as compared to only 9 percent of paternity cases. This difference became more pronounced over time as the use of percentage-expressed orders increased (not shown). Also, percentage-expressed orders are slightly more common in cases in which the mother is the payer.

It is possible that judges may issue percentage-expressed orders based on the apparent benefit of such orders in a given case. For instance, judges may be more likely to use such orders when a fixed order corresponding to the requisite percentage of income seems unreasonably high or low (i.e., when current income is extremely high or low); when they anticipate that income may change significantly over time (for instance, when the payer is young or has an irregular source of income); when income information from which to determine an appropriate fixed award is not available in the record; or when support is to be withheld from income. The last condition may increase the usefulness of percentage-expressed orders by increasing the likelihood of compliance, in that the noncustodial parent has less control over the amount of payment. Table 3 shows the use of percentage-expressed orders according to the income and age of the noncustodial parent and whether his child support payment is withheld from his income, as well as other characteristics.

As expected, a number of income and employment characteristics of the payer appear to be associated with the expression of support orders. Noncustodial parents who are employed at the time

TABLE 3
Child Support Cases with Fixed, Percentage-Expressed, and Unclear Orders, by Payer's Characteristics

	Fixed Orders		Percentage-Expressed Orders		Unclear	
	No. of Cases	% of All Cases in Row	No. of Cases	% of All Cases in Row	No. of Cases	% of All Cases in Row
Employed:						
Yes	4135	82	540	11	345	7
No	486	77	103	16	45	7
Missing	471	81	90	16	17	3
Income:						
Zero	211	77	53	19	11	4
$1-9999	939	83	129	11	62	5
$10,000-14,999	709	81	93	11	76	9
$15,000-19,999	690	81	94	11	67	8
$20,000-29,999	879	80	130	12	94	8
$30,000-39,999	430	83	44	8	45	9
$40,000+	223	84	23	9	20	8
Missing	1011	84	167	14	32	3
Source of income:						
Employment	3570	81	500	11	322	7
Self-employment	280	89	15	5	21	7
Unempl. comp.	87	74	16	14	15	13
Other	102	86	9	8	8	7
None	186	75	52	21	9	4
Missing	1011	84	167	14	32	3
Income withholding:						
Yes	3526	80	583	13	309	7
No	1566	86	151	8	98	5
Age:						
<21	484	83	78	13	23	4
21-35	2995	81	458	12	260	7
>35	1375	83	176	11	115	7

Source: Wisconsin Court Record Database and Wisconsin Department of Revenue.

Note: Sample is Sample 1 (see note to Table 1). Percentages may not add to 100 due to rounding.

of the order are least likely to have a percentage-expressed order (11 percent), while payers who are unemployed or for whom employment information is not available in the court record are more likely (16 percent). Similarly, 19 percent of payers with no income have percentage-expressed orders, as do 14 percent of those with missing income information.[4] Among those noncustodial parents with known incomes, use of percentage-expressed orders is somewhat less common for those with higher incomes. There is no apparent relationship between the age of the payer and the expression of support orders. Finally, percentage-expressed orders are more common in cases with income withholding (13 percent) than in those without withholding (8 percent).

In Table 4, we present results of a probit analysis of the use of percentage-expressed orders. As noted earlier, cases in which the expression of the order is unclear are excluded. The dependent variables in the model are similar to those presented in the cross-tabulations: we include variables for case type, wage withholding, payer's age, employment status, income, year of order, payer, and county. Note that one of the county dummy variables is in fact a block of five counties in which percentage-expressed orders were rarely used and for which we were unable to estimate separate coefficients.

The results of the probit analysis confirm those seen in the previous cross-tabulations. Paternity and ATC/URESA cases are significantly less likely to have percentage-expressed orders than are divorce cases. All of the year coefficients are significantly different from zero and become increasingly larger, indicating increased use of percentage-expressed orders since 1984 (the omitted year). Additionally, a number of counties have coefficients significantly different from zero (Waukesha is omitted), indicating that use of percentage-expressed orders varies among counties even after controlling for case characteristics.

A number of payer's characteristics also have coefficients significantly different from zero, again confirming the bivariate results. The results indicate that noncustodial parents who are

TABLE 4
Probit Analysis of the Utilization of Percentage-Expressed Child Support Orders

	Coefficient	Standard Error
Constant	-2.70**	.19
Case type:		
Paternity	-.72**	.08
Divorce	(Omitted category)	
ATC/URESA	-1.15**	.11
Wage assignment indicator	.33**	.06
Age of payer:		
Missing	.11	.16
<21	.25*	.10
21-35	(Omitted category)	
>35	-.08	.06
Employment of payer:		
Unemployed	.27**	.10
Missing	.41**	.09
Employed	(Omitted category)	
Annual income of payer:		
Missing	.55**	.12
Zero	.67**	.17
$1-$9999	.38**	.12
$10,000-$14,999	.20	.12
$15,000-$19,999	.18	.12
$20,000-$29,999	.21	.11
$30,000-$39,999	(Omitted category)	
$40,000+	.01	.16
Year of order:		
1984	(Omitted category)	
1985	.33*	.15
1986	.69**	.15
1987	1.04**	.15
1988-89	1.62**	.14
County indicator:		
Calumet	.88**	.14
Clark	1.45**	.16
Dodge	.54**	.15
Dunn	.31	.18
Juneau	.27	.17
Kewaunee	1.24**	.20
Marathon	.39**	.14

(table continues)

TABLE 4 (continued)

	Coefficient	Standard Error
Milwaukee	.10	.10
Monroe	1.35**	.15
Oneida	0.04	.17
Ozaukee	.06	.16
Price	.26	.20
Richland	.01	.18
St.Croix	.80**	.14
Sheboygan	.75**	.13
Waukesha	(Omitted category)	
Other (Dane, Green, Jefferson,Racine, Winnebago)	-.73**	.13
Mother payer indicator	-.18	.13
N=5825		
Log-likelihood=-1608		

Source: Authors' computations based on Wisconsin Court Record Database and Wisconsin Department of Revenue data.

Note: Sample is a subset of Sample 1 (see note to Table 1) and excludes cases in which the type of order is unclear.

unemployed or who have missing employment information are more likely to have percentage-expressed orders, as are those with zero income, low incomes, or missing incomes. Use of percentage-expressed orders is also significantly higher among the youngest payers--those under age 21--as compared to those aged 21 to 35, a finding which was not apparent in the bivariate results.

These findings indicate that percentage-expressed orders are disproportionately used in the "worst" cases, that is, cases in which lower payments would be expected regardless of the type of order. Because of this differential use, it is crucial to control for heterogeneity among cases with percentage versus fixed orders in analyzing the relationship between order expression and payment patterns.

IV. PAYMENT PATTERNS OF PERCENTAGE-EXPRESSED VERSUS FIXED ORDERS

Changes in payments over time are driven by two underlying factors--changes in the amount of the obligation, and the rate of compliance with that obligation. As discussed earlier, both of these components may be influenced by the expression of the support order, with percentage-expressed obligations hypothesized to increase faster than fixed orders yet to result in lower compliance.

Changes in Amount of Obligation

Unfortunately, the nature of the available data limits the extent to which we may break down payment patterns into these two underlying components. For cases with fixed orders, the amount of the initial order is available in the court record data.[5] Likewise, any changes in the amount of the order over the case history are also available in the data. For cases with percentage-expressed orders, however, the actual amount owed in any given year must be calculated from the payer's annual income. While we do have annual income information available from the DOR data, this is missing

for a substantial number of cases in any given year. Thus, we only know the amount of the order for a subset of the cases with percentage-expressed orders in any given year.

In light of these data limitations, we use the following approach to analyze changes in the support obligation over time: For cases with percentage-expressed orders, we calculate the change from the original support obligation for each year subsequent to the original order, using a changing sample which includes all cases with available information. That is, we calculate the change after one year for all cases in which income information is available in the first two years, the change after two years for all cases with known income in the first and third year, etc. This changing sample is drawn from the more restrictive of the two samples described earlier. Note that the potential number of cases decreases steadily, as later cases have fewer potential years of information than earlier cases. For cases with fixed orders, complete order information is available in the court record data. In order to allow unbiased comparisons with the sample of cases with percentage-expressed orders, however, we only calculate the order changes for those cases with tax data for the relevant years. Thus, any bias introduced by the missing tax data will be associated with both types of orders. We present cross-tabulations between the type of order and the change in obligation amount, using a series of ranges for the order change.

As expected, there is substantially more change over time in the percentage-expressed orders than in the fixed orders, with obligations primarily increasing rather than decreasing (Table 5). After one year, 29 percent of percentage-expressed orders had increased by at least $75 per month, compared to only 2 percent of fixed orders. After three years the comparable figures were 53 percent and 5 percent, although the number of cases with data is quite small among those with percentage-expressed orders. Note that three years after the order corresponds to the time at which fixed orders would be revised under routine updating as mandated by the Family Support Act.

TABLE 5
Change in Monthly Child Support Orders, by Type of Order and Years Since Order

	Decrease in Order of >$75		Decrease in Order of $25-$75		Constant -$25-+$25		Increase in Order of $25-$75		Increase in Order of >$75	
	No. of Cases	% of All Cases in Row	No. of Cases	% of All Cases in Row	No. of Cases	% of All Cases in Row	No. of Cases	% of All Cases in Row	No. of Cases	% of All Cases in Row
1 Year Since Order										
Fixed orders	74	4	74	4	1470	86	42	2	42	2
Percentage-expressed orders	15	9	15	9	51	30	39	23	49	29
Fixed adj. orders[a]	111	6	175	10	618	37	402	24	369	22
2 Years Since Order										
Fixed orders	86	7	56	4	1026	81	40	3	53	4
Percentage-expressed orders	9	9	6	6	24	25	18	18	41	42
Fixed adj. orders	79	6	102	8	332	27	319	26	416	33
3 Years Since Order										
Fixed orders	41	7	22	4	436	77	34	6	30	5
Percentage-expressed orders	2	13	0	0	0	0	5	33	8	53
Fixed adj. orders	30	5	38	7	118	21	135	24	235	42

Source: Wisconsin Court Record Database and Wisconsin Department of Revenue.

Note: Sample is a subset of Sample 2 (see note to Table 1) and includes only those cases for which income information from Wisconsin income tax returns is available. Percentages may not add to 100 due to rounding.

[a]The adjusted fixed order is the amount the order would have been had it been indexed to income.

Perhaps more revealing than the comparison between fixed and percentage-expressed orders is the comparison between fixed orders and "adjusted" fixed orders, that is, the potential value of such orders had they changed proportionally to income. By the second year (i.e., one year since the order), 22 percent of fixed orders would have increased by at least $75 per month had they been expressed as percentages, while 42 percent would have increased this much by the fourth year. The actual percentages of fixed-order cases with such increases, however, were only 2 percent and 5 percent. Thus, failure to modify support orders over time, either by routine updating or by explicitly linking orders to income, results in substantially lower obligations than are warranted by the child support guidelines.

Even updating every three years results in substantially lower average orders than does expressing orders as a percentage of income. This is apparent by looking at the large increases in adjusted fixed orders one and two years after the initial order was established, the years in which fixed orders would not be updated. Under periodic updating, the increased ability to pay in these years would not be captured.

As a rough estimate of the magnitude of this difference, we calculate the average monthly order over the first three calendar years for cases with fixed orders, and compare this to the average potential order (if percentage-expressed) during the same period, again determining the potential order from annual DOR data. Using only cases with three years of income data (n=1155), we find an average difference of $63 per month, corresponding to an average of $2268 per case over the three-year period which would not be ordered under routine updating![6] This is equivalent to an average of 23 percent of the actual obligation over this period.

Compliance Rates

We next compare mean compliance rates for cases with the two order types, looking at the year of the order and the subsequent three years. Again, we include only those cases for which tax

data are available in a given year, with the following exception: we also include cases in which no payments were made, regardless of the availability of tax data, and assume zero compliance. To the extent that noncustodial parents in cases with percentage-expressed orders have at least some income in any given year, this adjustment is appropriate. However, to the extent that such parents have no income for the entire year, this will underestimate compliance for percentage-expressed orders.

Results, shown in Table 6, indicate that compliance is substantially lower among cases with percentage-expressed orders in each of the first four years. Mean compliance rates in the first year are .61 for fixed orders and .48 for percentage-expressed orders, with this difference persisting over the subsequent three years. These figures tell us nothing about the extent to which lower compliance is a result of the type of order rather than underlying differences between the two types of cases. That the difference in compliance between percentage-expressed and fixed orders remains relatively constant over time, while the difference in the amount of the obligation increases, suggests that lower compliance may be primarily a function of heterogeneity between cases with the two order types. Nonetheless, greater attention to assessing and enforcing compliance in cases with percentage-expressed support orders seems warranted.

Payment Patterns

The above discussion indicates that obligations increase faster for cases with percentage-expressed orders than those with fixed orders, while compliance rates are lower. To evaluate the net impact of these two factors, we compare changes in payments over time for cases with the two types of awards.

Table 7 presents the change in mean monthly payments (in nominal dollars) from the calendar year of the order to each of the subsequent three years.[7] The results indicate that payments for cases with percentage-expressed orders are slightly less likely to either decrease or remain constant over time than are payments for fixed-order cases, and are somewhat more likely to increase, especially by

TABLE 6

Mean Compliance with Child Support Orders, by Type of Order and Years Since Order

	No. of Cases	Mean Rate of Compliance
Year of order		
Fixed orders	2521	.61
Percentage-expressed orders	338	.48
1 Year Since Order		
Fixed orders	2428	.62
Percentage-expressed orders	272	.51
2 Years Since Order		
Fixed orders	1996	.58
Percentage-expressed orders	168	.45
3 Years Since Order		
Fixed orders	1014	.55
Percentage-expressed orders	41	.41

Source: Wisconsin Court Record Database and Wisconsin Department of Revenue.

Note: Sample is a subset of Sample 2 (see note to Table 1) and includes only those cases for which income information from Wisconsin income tax returns is available and cases with zero payments.

TABLE 7
Change in Mean Monthly Child Support Payments, by Type of Order and Years Since Order

	Decrease in Payment of >$75		Decrease in Payment of $25-$75		Constant -$25-+$25		Increase in Payment of $25-$75		Increase in Payment of >$75	
	No. of Cases	% of All Cases in Row	No. of Cases	% of All Cases in Row	No. of Cases	% of All Cases in Row	No. of Cases	% of All Cases in Row	No. of Cases	% of All Cases in Row
1 Year Since Order										
Fixed orders	469	14	483	15	1624	49	373	11	340	10
Percentage-expressed orders	68	17	43	11	172	44	55	14	57	14
2 Years Since Order										
Fixed orders	486	19	327	13	1067	42	325	13	332	13
Percentage-expressed orders	45	20	22	10	84	38	27	12	45	20
3 Years Since Order										
Fixed orders	233	19	158	13	497	41	146	12	185	15
Percentage-expressed orders	8	17	3	7	18	39	7	15	10	22

Source: Wisconsin Court Record Database.

Note: Sample is Sample 2 (see note to Table 1). Percentages may not add to 100 due to rounding.

the fourth year (i.e., three years after the order). Among cases with fixed orders, 32 percent have monthly payments which decrease by more than $25 between the first and fourth year, as compared to 24 percent of cases with percentage-expressed orders. During this period 27 percent of cases with fixed orders increased their monthly payment by at least $25, as did 37 percent of cases with percentage-expressed orders. Note that the latter cases in the sample had a shorter period for which payment data were available, so the number of cases with data decreased substantially over the four-year period, especially for percentage-expressed orders.

It is possible that differences in payment patterns over time in cases with fixed and percentage-expressed orders may be influenced by underlying differences between the two groups. This seems especially likely in light of the results presented earlier regarding more frequent use of percentage-expressed orders in cases in which the noncustodial parent was unemployed, had zero income, had missing income information, or was very young. To obtain a clearer understanding of the payment pattern of percentage-expressed versus fixed orders we use a multivariate approach to control for these differences. This analysis uses the more restrictive of the two samples described earlier.

We estimate a treatment effects model, described above, in which the dependent variable in the primary equation is the average monthly payment during the final five-month payment period for which data are available. Independent variables include a dummy for paternity cases; an indicator for income withholding; dummy variables for cases with a final payment period in 1988 (versus 1989); number of months between the order and the payment period; a series of dummy variables for initial income ranges (including zero and unknown); dummy variables for employment status; dummy variables for the age of the payer; a series of dummy variables for counties; and a dummy variable for percentage-expressed orders. We also include a variable for the amount of the initial obligation, equal to the mean when missing, and a dummy variable indicating unknown initial obligation.[8] All

payment, order, and income amounts are in constant 1988 dollars. The order type equation is the same form as the probit model used earlier, although the sample here is somewhat more restricted.

The full selectivity-corrected regression is reported in Table 8. The coefficient on the percentage-expressed order variable is 111, which is more than three times its standard error. Thus, controlling for income and the initial child support order as well as for a host of other factors, and correcting for unobserved variables which influence both the order type and the amount paid, percentage-expressed orders are associated with an increase in child support payments of $111 per month.[9] This corresponds to an increase of 54 percent over the mean monthly payment of those with fixed orders!

Several other variables in the model reported in Table 8 are significant. Not surprisingly, payments are most strongly related to the order amount. Income at the time of the order is also significant, with lower payments in both the lowest and highest income groups. Payments are also lower in cases in which information on the order amount, employment, or income of the noncustodial parent is missing at the time of the order,[10] as well as in cases with the youngest noncustodial parents (under twenty-one at the payment period). Payments are higher in cases with immediate withholding, as expected, and decline as the months between the order and the payment period increase. Surprisingly, paternity cases pay more than divorce cases when other variables are held constant. A number of county variables also have significant coefficients.

The correction term, lambda, has a negative coefficient that is significantly different from zero, indicating that unobserved variables which affect both the order type and payment amount are associated with lower payments. This result illustrates the importance of using a treatment effects model.[11] That there are unobserved variables which both increase the likelihood of having a percentage-expressed order and decrease the expected payment is not surprising in light of the way in which such orders appear to have been used. Many observed characteristics associated with

TABLE 8
Selectivity-Corrected Regression Analysis of the Effects of Percentage-Expressed Child Support Orders on the Amount of Support Payments

	Coefficient	Standard Error
Constant	41.69*	19.53
Percentage-expressed order indicator	111.32**	34.24
Paternity indicator	20.35*	9.19
Wage assignment indicator	26.24**	7.97
Age of payer:		
Missing	-3.35	29.61
<21	-30.83*	14.53
21-35	(omitted category)	
>35	-12.49	7.34
Employment of payer:		
Unemployed	-6.00	13.81
Missing	-37.73**	14.32
Employed	(omitted category)	
Annual income of payer:		
Missing	-70.60**	15.39
Zero	-36.13	22.73
$1-$9999	-39.67**	14.33
$10,000-$14,999	-36.48**	14.28
$15,000-$19,999	-18.28	13.77
$20,000-$29,999	-9.61	12.49
$30,000-$39,999	(omitted category)	
$40,000+	-43.25*	18.46
County indicators:		
Calumet	-13.08	21.76
Clark	-58.82*	28.34
Dane	-9.41	15.24
Dodge	-6.44	21.07
Dunn	-24.41	23.49
Green	-7.36	20.93
Jefferson	7.66	18.49
Juneau	-13.50	20.47
Kewaunee	-16.15	33.15
Marathon	-9.39	17.66
Milwaukee	-30.24*	12.64

(table continues)

TABLE 8 (continued)

	Coefficient	Standard Error
Monroe	-79.26*	24.44
Oneida	-18.44	18.79
Ozaukee	6.13	18.08
Price	-21.77	24.62
Richland	-14.99	21.09
St.Croix	-97.88**	19.22
Sheboygan	-15.16	18.93
Racine	-34.17*	16.72
Waukesha	(omitted category)	
Winnebago	-28.97	17.09
Initial monthly order	.70**	.01
Missing order indicator	-85.74**	17.37
Cohort 4,5,6 indicator	6.52	8.18
Months from order to payment period	-1.14**	.36
Lambda	-53.49**	19.22
N = 3358		

Source: Authors' computations based on Wisconsin Court Record Database and Wisconsin Department of Revenue data.

Note: Sample is Sample 2 (see note to Table 1).

*Significant at the .05 level.
**Significant at the .01 level.

percentage-expressed orders are also associated with lower payments, such as missing employment information, low or missing income, and very young payers. Thus, it is certainly possible that percentage-expressed orders are disproportionately used in cases which are "worse" in other ways as well.

Because we expected the effects of percentage-expressed orders to increase over time, we also interacted the percentage-expressed order variable with a set of dummies for months between the child support order and the final payment period. The breakdown of percentage-expressed and fixed orders into categories for these time intervals is shown in Table 9; the model is shown in Table 10. The regression coefficients correspond to the following number of months between the effective date of the order and the last payment period: 4 to 6, 7 to 12, 13 to 18, 19 to 24, 25 to 30, and 31+.. Note that we did not include a non-interaction percentage-expressed order term in these equations. Additionally, note that the coefficients on the interaction terms indicate the difference in payments for percentage-expressed orders relative to fixed orders of the same length.

With the exception of the shortest time period, these results conform quite well to our expectations--the coefficients increase fairly steadily from the second to the sixth time interval. Thus, the differential increase in payments associated with percentage-expressed orders becomes greater as the time between the order and the payment period increases.[12] The puzzling result in these models is the high coefficient on percentage-expressed orders with the shortest time between the order and payment period. Note, however, that there are only twenty-one cases with percentage-expressed orders in this category.

V. CONCLUSION

In this report we have examined both the utilization of percentage-expressed orders and the differential impact of such orders on payment patterns over time. Additionally, we have attempted to

TABLE 9

Child Support Cases with Fixed and Percentage-Expressed Orders, by Number of Months between Order and Final Payment Period

	Fixed Orders (Number of Cases)	Percentage-Expressed Orders (Number of Cases)
Number of Months:		
4-6	60	21
7-12	263	79
13-18	660	131
19-24	575	65
25-30	641	66
31+	764	33

Source: Wisconsin Court Record Database.

Note: Sample is Sample 2 (see note to Table 1).

TABLE 10

Selectivity-Corrected Regression Analysis of the Effects of Percentage-Expressed Child Support Orders on the Amount of Support Payments, with Interaction Terms

	Coefficient	Standard Error
Constant	15.57	19.13
Percentage-expressed-order interaction terms:[a]		
4-6 months	194.82**	56.18
7-12 months	89.29*	40.05
13-18 months	113.97**	38.05
19-24 months	123.28**	42.94
25-30 months	147.21**	42.93
31+ months	185.07**	53.86
Months from order to payment period:[b]		
4-6 months	58.52*	24.42
7-12 months	21.40	13.40
13-18 months	(omitted category)	
19-24 months	-12.86	10.51
25-30 months	2.39	10.30
31+ months	-21.58*	10.34
Paternity indicator	23.87*	9.32
Wage assignment indicator	26.70**	8.06
Age of payer:		
Missing	-.60	29.55
<21	-29.29*	14.48
21-35	(omitted category)	
>35	-12.90	7.32
Employment of payer:		
Unemployed	-6.53	13.79
Missing	-36.58*	14.37
Employed	(omitted category)	
Annual income of payer:		
Missing	-73.69**	15.30
Zero	-40.01	22.75
$1-$9999	-42.37**	14.34
$10,000-14,999	-38.19**	14.26
$15,000-19,999	-18.79	13.73
$20,000-29,999	-10.80	12.47
$30,000-39,999	(omitted category)	
$40,000+	-42.77*	18.45

(table continues)

TABLE 10 (continued)

	Coefficient	Standard Error
County indicators:		
Calumet	-16.01	21.84
Clark	-60.07*	28.62
Dane	-6.19	15.26
Dodge	-8.52	21.09
Dunn	-23.68	23.42
Green	-4.51	20.93
Jefferson	10.42	18.50
Juneau	-13.47	20.48
Kewaunee	-22.07	33.54
Marathon	-9.51	17.65
Milwaukee	-29.10*	12.63
Monroe	-85.20**	24.94
Oneida	-19.33	18.75
Ozaukee	8.80	18.05
Price	-20.66	24.59
Richland	-14.20	21.05
St.Croix	-97.77**	19.32
Sheboygan	-18.03	19.04
Racine	-29.05	16.76
Waukesha	(omitted category)	
Winnebago	-25.79	17.11
Initial monthly order	.70**	.01
Missing order indicator	-86.62**	17.38
Cohort 4,5,6 indicator	7.66	8.37
Lambda	-63.63**	20.52
N = 3358		

Source: Authors' computations based on Wisconsin Court Record Database and Wisconsin Department of Revenue data.

Note: Sample is Sample 2 (see note to Table 1).

[a]Cases with percentage-expressed orders were assigned a value of 1 for one of the time periods and values of 0 for the other periods; cases with fixed orders were assigned a value of 0 for all time periods.
[b]All cases, whether with percentage-expressed or fixed orders, were assigned a value of 1 for one of the time periods and values of 0 for the other periods.

*Significant at the .05 level.
**Significant at the .01 level.

disaggregate payment patterns into two underlying components, order amounts and compliance rates. A number of interesting findings have emerged.

First, we found that the use of percentage-expressed orders varies according to a wide range of characteristics including case type, county, year, and various characteristics of the noncustodial parent. Such orders are disproportionately used in cases in which there is insufficient information (e.g., missing income or employment information) available in the record from which to determine an appropriate fixed order, as well as in cases in which there is some indication that income may change substantially (e.g., cases in which the payer is unemployed or very young). Further, the use of percentage-expressed orders has increased substantially over time, although there remains significant variation among counties.

The most significant finding is that percentage-expressed orders are associated with the collection of substantially higher child support payments than are fixed orders, after controlling for differences between cases which receive the two award types. Further, the impact of percentage-expressed orders increases steadily over time. Collections increase because of large increases over time in the amount of the obligation and <u>despite</u> the consistently lower rates of compliance. The latter implies that further gains may be possible by improving the capacity of the courts to monitor compliance via access to current income information. Modeling the effect of percentage-expressed orders on compliance, while controlling for heterogeneity among cases with percentage-expressed versus fixed orders, is an important area for future research.

Endnotes

[1]Based on analysis of data from the Wisconsin Order Revision Pilot by IRP staff.

[2]A small number of parents in our sample (less than 5 percent) do not have social security numbers available in the court record data. For these cases, we were unable to obtain income information from the tax data.

[3]ATC cases are separation (rather than divorce) cases; URESA cases are interstate child support cases.

[4]When income information is not available in the court record, we use income from the DOR data. Cases are only classified as missing income when information is not available from either of these data sets.

[5]For a small number of cases, the data indicate that the order is fixed yet the amount of the order is missing.

[6]We have used a somewhat rough approach to derive this estimate. Specifically, we treat the first three calendar years for each case as full years, although the orders in fact start at varying points in the first calendar year. Technically, the first three years of a case usually include a segment of the fourth calendar year.

[7]Cases in which payment amounts are missing are excluded from this analysis.

[8]In comparing the payment experience of obligors, it is important to control for the initial amount of support owed. However, there are practical difficulties in doing so due to missing first-year income information for cases with percentage-expressed orders. Indeed, as noted earlier, the courts were more likely to use percentage-expressed orders in cases with missing income information. Cases with missing income, and hence missing initial obligations, make up 22 percent of the percentage-expressed orders in our restricted sample. One solution to this problem is to assign to percentage-

expressed cases with missing income the mean child support order in the sample and to enter a dummy variable for missing orders, as we have done. An alternative solution is to omit the order variable from the regression and to add a variable which controls instead for initial child support payments. In the latter case, the initial payments are used as a proxy for the amount of the initial order. A third alternative is to include both the order (assigned the mean if missing) and the initial payment variables. We estimated all three models and obtained similar results.

[9]Because we excluded cases in which the expression of the order changed over the case history, it is possible that we excluded the worst-performing percentage-expressed cases. To test this, we estimated the same model for a sample which included cases with changing order types (categorized by initial order type) and obtained similar results.

[10]That the missing-order coefficient is so negative suggests that the results may well be quite sensitive to the measurement of the child support order and its inclusion in the model. In order to assess the importance of missing-order information, we estimated the model without such cases and obtained results which were quite similar.

[11]The importance of a treatment effects model is also confirmed by comparing these results to results obtained from a regression without a correction term included. Although the coefficient on the percentage-expressed order variable is positive, it is substantially lower than the selectivity-corrected estimate and is not statistically significant.

[12]This pattern is also apparent when we estimate an uncorrected regression, although the coefficients are smaller and are not statistically significant.

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