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## COMMENT

# The State Bonus to Reward a Decrease in 'Illegitimacy': Flawed Methods and Questionable Effects

By Jane Lawler Dye and Harriet B. Presser

In 1994, one-third of all births in the United States occurred outside of marriage, and the rate of nonmarital childbearing was rising among women of all reproductive ages.<sup>1</sup> The role of welfare in this trend was at issue during the debates on welfare reform occurring at that time. Some commentators viewed welfare payments as the principal factor encouraging nonmarital childbearing and asserted that states could readily discourage such behavior with financial disincentives.<sup>2</sup> In contrast, others linked nonmarital childbearing to poverty and social disadvantage, and recommended welfare reforms—government-subsidized child care, health care and job training—that might help to alleviate these conditions.<sup>3</sup>

When the new welfare law, the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, was enacted, it contained a provision entitled the "Bonus to Reward a Decrease in Illegitimacy." This provision, which reflected the first perspective, was included to encourage states to reduce the number of pregnancies among unmarried women, especially teenagers.<sup>4</sup>

Specifically, the law offers a \$20 million incentive, to be awarded annually for four years, to each of the five states that experience the largest declines in the "illegitimacy ratio"\* and have a lower ratio of abortions to live births than they did in 1995. If fewer than five states qualify, the bonus would rise to \$25 million each.<sup>5</sup>

## THE NEW WELFARE LAW

Proponents of the bonus expect it to reduce the prevalence of nonmarital childbearing and therefore lower the welfare caseload, given that unmarried mothers are more likely than married mothers to qualify for public support. Future funding of welfare programs could thus be reduced, and this in turn could further reduce nonmarital childbearing. This reasoning, which reflects a convergence of interest among moral and economic conservatives, is rooted in the assumption that there is a causal relationship between nonmarital childbearing and the availability of welfare—an

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assumption made despite mixed empirical evidence.<sup>6</sup>

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 defined the "illegitimacy ratio" as the ratio between the number of nonmarital births in the two most recent years to the number in the two previous years.<sup>7</sup> However, technical corrections to the law enacted in the Balanced Budget Act of 1997 subsequently changed the formula of the ratio.<sup>8</sup> The computation was redefined as the number of nonmarital births to residents in a state divided by the number of all births to residents in the state in the most recent two years, compared with the same calculation for the prior two years. The law established the years 1999, 2000, 2001 and 2002 as the fiscal years in which the bonus will be paid. To receive the bonus, eligible states must show a decline in the ratio of abortions to live births.

## CONCERNS OVER THE BONUS

Putting aside the issue of whether one can—or should want to—legislate a reduction in nonmarital births, we argue that the "illegitimacy bonus" is not a good policy because the provision is significantly flawed in the measurement of its explicitly stated goals, in the lack of program and policy guidelines for states and in the lack of accurate state data. Although these problems may affect other legislation as well, we contend that they were exacerbated in this case by the highly controversial nature of the legislation.<sup>9</sup>

## PROBLEMS IN MEASURING GOALS

Not all the explicit goals of the provision are reflected in the measurement that determines whether a state is eligible for the bonus. The goals of providing a bonus for a decrease in the "illegitimacy ratio" are "to prevent and reduce the incidence of out-of-wedlock pregnancies, with special emphasis on teenage pregnancies, and establish numerical goals for reducing the illegitimacy ratio of the State."<sup>10</sup> The provision encourages states to target teenage pregnancies, but there is no attempt to specifically measure or provide incentives for any reduction in the number of births to teenage women. And although the provision is part of welfare reform legislation, it applies to nonmarital births to all women, not just those to women receiving welfare. Further, the law denies a state the bonus if their rate of abortion increases, even if the rise is based primarily or solely on increases in abortions among women who are not receiving welfare.

The redefinition of the "illegitimacy ratio" contained in the technical corrections is problematic. This measure of change in the number of nonmarital births will be affected by changes in the number of marital births. States in which nonmarital births remain stable could receive the bonus if marital births increase, thus lowering their "illegitimacy ratio."

Moreover, if a state experiences a change in the population of unmarried women of childbearing age, the "illegitimacy ratio" could change arbitrarily without any policy intervention. In fact, Ventura and colleagues predict that the number of teenage women will soon increase and the number of women in their 30s will decrease, raising the proportion of unmarried women in the population.<sup>11</sup> Therefore, the number of nonmarital births is likely to grow simply as a result of changes in the age structure.

## IMPRECISE LEGISLATIVE LANGUAGE

To receive the bonus, eligible states must show a decline in their ratio of abortions to live births. Although the law specifies that nonmarital births are to be calculated for residents of each state, it does not require abortion data to be based on the number of state residents who obtained abortions. A policy analysis from The Alan Guttmacher Institute (AGI) raises concerns about either counting the number of abortions performed in a state or counting only the number of state residents who have abortions in the state.<sup>12</sup> The analysis suggests that if the policy intends to count all abortions obtained in a given state, rates may be inflated by the policies of neighboring states that are designed to limit access to abortion services, thereby forcing women to cross state lines to terminate a pregnancy. Basing the calculation on the number of abortions obtained by state of residency, on the other hand, is problematic because the quality of state information on the residence of women who obtain abortions is unsatisfactory. In 1994, 10 states did not obtain any information on the residency of women obtaining abortions. For states that do collect information on residency, the Centers for Disease Control and Prevention (CDC) estimate the percentage of abortions obtained by out-of-state residents based on women whose residence was known. The estimated proportion of abortions provided to nonresidents in 1994 ranges from about 50% in the District of Columbia to about 2% in New Jersey.<sup>13</sup>

The Administration for Children and Families of the Department of Health and Human Services (DHHS) recently released regulations for the "Bonus to Reward a Decrease in Illegitimacy."<sup>14</sup> Under the final regulations, only states deemed "potentially eligible" based on their illegitimacy ratio will need to submit abortion data. The regulations allow states the option of submitting either data on the total number of abortions or data on abortions to residents of their state, as long as the measure is consistent across the two years under consideration. The regulations encourage (but do not require) states to report data on the number of abortions provided to their own residents, because this measure is more representative of state policies that might affect the abortion rate. The result of this flexibility is that states may be able to choose which data to submit when one measure but not the other shows a decline in abortions. Further, if a state submits abortion data only for state residents, all out-of-state abortions will go uncounted for the purposes of this provision.

Moreover, the ratio of abortions to live births is affected by the number of births as well as by the number of abortions. Consequently, even when the number of abortions declines, the ratio may increase if there is a decline in the number of births that more than compensates for the abortion decline.

## NO GUIDELINES OR ACCOUNTABILITY

The law does not provide states with any guidelines on how they should attempt to reduce the number of nonmarital pregnancies and births, to all women or to teenagers, nor does it hold states to any standards of accountability. In fact, legislators specifically intended to provide states with this "flexibility" and to impose no "unfunded mandates" on states.

In addition, the law provides no safeguards for the people this may affect. Insofar as the completeness of state abortion reporting depends on the amount of effort exerted

by state agencies responsible for health statistics, it could be argued that the bonus establishes an incentive to reduce these efforts.<sup>14</sup> And by encouraging states to experiment with new ways of reducing nonmarital childbearing without guidelines and accountability, the federal government may be rewarding states for ineffective and potentially harmful state policies.

The law does require states to submit a plan to the Secretary of Health and Human Services that contains an outline of the state's "Family Assistance Program," which includes establishing goals and taking action to reduce nonmarital pregnancies (especially to adolescents) and establishing "numerical goals for reducing the illegitimacy ratio."<sup>15</sup> But this directive is not sufficient to ensure that states receiving the bonus will not use the bonus to justify ineffective or potentially harmful policies.

Nonmarital childbearing can be reduced only through increases in marriage, abstinence,<sup>14</sup> use of contraceptive methods or recourse to abortion. States could attempt to influence these behaviors in several ways. Because an increase in abortions would disqualify an eligible state from receiving the bonus, however, improving access to abortion services is not an option that states seeking the bonus will want to pursue.

A decrease in access to services has already been occurring, along with a decline in the abortion rate. Matthews and colleagues link the two trends, estimating that reduced access to abortion accounted for about 24-30% of the 5% decline in abortion rates between 1988 and 1992, and that the reduced number of women in their late teens accounted for much of the remaining decline.<sup>16</sup> Although reductions in access to abortion services are likely to continue in any case, the provision gives states an incentive to encourage the trend.

## RELIANCE ON INACCURATE DATA

Finally, the data necessary to determine eligibility for the bonus are, in many states, inconsistent and inaccurate. The National Center for Health Statistics (NCHS) and its Centers for Disease Control and Prevention obtain information of varying completeness from states regarding the number of nonmarital births and the number of abortions that occur in each state. In some cases, these numbers are estimated or inferred, with differing degrees of success.

Although 45 states and the District of Columbia determine the marital status of a new mother with a direct question on the birth certificate, in some states new mothers are generally considered unmarried if the mother's last name is different from the father's (California, Connecticut, Michigan, Nevada and New York).<sup>17</sup> In Texas<sup>\*\*</sup> and Michigan, however, women are considered married if paternity is acknowledged at the time of birth. Since married women today often choose to retain their maiden name, states that designate births as nonmarital based on parental surnames overstate the number of nonmarital births.

These measurement issues can have a significant impact on the official number of nonmarital births. In 1995, for example, California implemented a new reporting method (still based on surnames) for marital status that substantially decreased its nonmarital birthrate; because it is a large state, this change in reporting accounted for almost two-thirds of the 3% decline in nonmarital births in the United States.<sup>18</sup> Nonmarital births also have been understated in states that use paternity

establishment as a basis for determining marital status. For example, Michigan reported 36,326 nonmarital births to NCHS in 1993, a number 26% below the number of nonmarital births that included births with paternity affidavits.<sup>19</sup>

The quality of state abortion statistics also varies greatly. Abortion data from CDC will ultimately be used to determine a state's eligibility for the "illegitimacy ratio" bonus. In all states except five, abortion data are reported to CDC by the central health agencies of each state. In Alaska, Iowa, New Hampshire and Oklahoma, abortion data are reported directly to CDC by hospitals and other medical facilities in the state; the number of abortions in California is indirectly estimated by CDC.<sup>20</sup>

Further, among the states that report abortion statistics to CDC, some report 35-50% fewer abortions than AGI finds in its survey of state abortion providers.<sup>21</sup> Overall, CDC reports 17% fewer abortions than are reported in AGI provider surveys.

However, as Table 1 illustrates, the differences in rates of abortion between AGI and CDC vary significantly across states. Although CDC abortion rates are almost always lower than AGI rates, in some cases the opposite is true. Table 1 shows that AGI found increases in abortions between 1991 and 1992 in seven states where CDC found decreases, and that AGI found decreases in five states where CDC found increases. Most likely, any improvement that states make in reporting procedures will make their reported abortion rate increase, potentially making them ineligible for the bonus. The law does specify that any improvement in data collection shall be disregarded when determining a state's eligibility for the bonus. However, as others have noted, "the method of factoring out those changes is unclear. Given this incentive structure, states are unlikely to attempt to improve their data collection procedures."<sup>22</sup>

**Table 1. Number of legal abortions performed in 1991 and 1992 and percentage change from 1991 to 1992, by state, according to source of data**

State	1991			1992			% change, 1991-1992	
	AGI	CDC	% difference	AGI	CDC	% difference	AGI	CDC
<b>All</b>	<b>1,556,510</b>	<b>1,388,937</b>	<b>-10.77</b>	<b>1,528,930</b>	<b>1,359,145</b>	<b>-11.10</b>	<b>-1.77</b>	<b>-2.14</b>
Alabama	17,400	14,097	-18.98	17,450	13,358	-23.45	0.29	-5.24
Alaska	2,400	1,718	-28.42	2,370	1,783	-24.77	-1.25	3.78
Arizona	19,690	15,491	-21.33	20,600	14,353	-30.33	4.62	-7.35
Arkansas	7,150	6,211	-13.13	7,130	5,675	-20.41	-0.28	-8.63
California	320,960	350,98	9.35	304,230	338,700	11.33	-5.21	-3.50
Colorado	21,010	11,402	-45.73	19,880	10,607	-46.64	-5.38	-6.97
Connecticut	20,530	18,534	-9.72	19,720	17,762	-9.93	-3.95	-4.17
Delaware	5,720	5,547	-3.02	5,730	5,601	-2.25	0.17	0.97
D.C.	21,510	18,899	-12.14	21,320	17,698	-16.99	-0.88	-6.35
Florida	84,570	71,254	-15.75	84,680	69,285	-18.18	0.13	-2.76
Georgia	39,720	38,407	-3.31	39,680	38,052	-4.10	-0.10	-0.92
Hawaii	12,130	5,714	-52.89	12,190	5,954	-51.16	0.49	4.20
Idaho	1,740	1,647	-5.34	1,710	1,378	-19.42	-1.72	-16.33
Illinois	64,990	46,502	-28.45	68,420	56,552	-17.35	5.28	21.61
Indiana	15,940	13,493	-15.35	15,840	12,983	-18.04	-0.63	-3.78
Iowa	7,200	7,029	-2.38	6,970	6,759	-3.03	-3.19	-3.84

Kansas	12,770	7,318	-42.69	12,570	10,385	-17.38	-1.57	41.91
Kentucky	8,270	9,590	15.96	10,000	8,696	-13.04	20.92	-9.32
Louisiana	13,930	12,190	-12.49	13,600	12,423	-8.65	-2.37	1.91
Maine	4,210	3,827	-9.10	4,200	3,226	-23.19	-0.24	-15.70
Maryland	33,000	18,994	-42.44	31,260	19,860	-36.47	-5.27	4.56
Massachusetts	44,150	37,071	-16.03	40,660	34,527	-15.08	-7.90	-6.86
Michigan	55,800	34,556	-38.07	55,580	34,496	-37.93	-0.39	-0.17
Minnesota	16,880	16,177	-4.16	16,180	15,546	-3.92	-4.15	-3.90
Mississippi	8,180	8,184	0.05	7,550	7,555	0.07	-7.70	-7.69
Missouri	15,770	15,473	-1.88	13,510	13,390	-0.89	-14.33	13.46
Montana	3,680	3,226	-12.34	3,300	2,869	-13.06	-10.33	11.07
Nebraska	6,230	6,194	-0.58	5,580	5,637	1.02	-10.43	-8.99
Nevada	14,450	7,484	-48.21	13,300	8,022	-39.68	-7.96	7.19
New Hampshire	4,260	3,842	-9.81	3,890	3,129	-19.56	-8.69	-18.56
New Jersey	55,800	37,541	-32.72	55,320	38,168	-31.01	-0.86	1.67
New Mexico	6,190	5,745	-7.19	6,410	5,624	-12.26	3.55	-2.11
New York	190,410	158,76	-16.62	195,390	164,274	-15.93	2.62	3.47
North Carolina	37,210	36,420	-2.12	36,180	35,253	-2.56	-2.77	-3.20
North Dakota	1,600	1,602	0.13	1,490	1,493	0.20	-6.88	-6.80
Ohio	52,030	41,705	-19.84	49,520	36,019	-27.26	-4.82	-13.63
Oklahoma	9,130	10,533	15.37	8,940	9,881	10.53	-2.08	-6.19
Oregon	16,580	14,310	-13.69	16,060	12,685	-21.01	-3.14	-11.36
Pennsylvania	51,780	50,988	-1.53	49,740	49,042	-1.40	-3.94	-3.82
Rhode Island	7,500	7,412	-1.17	6,990	6,667	-4.62	-6.80	-10.05
South Carolina	13,520	12,538	-7.26	12,190	11,008	-9.70	-9.84	-12.20
South Dakota	980	984	0.41	1,040	1,038	-0.19	6.12	5.49
Tennessee	19,840	19,779	-0.31	19,060	18,029	-5.41	-3.93	-8.85
Texas	95,930	91,947	-4.15	97,400	91,113	-6.45	1.53	-0.91
Utah	4,250	4,213	-0.87	3,940	3,941	0.03	-7.29	-6.46
Vermont	3,110	3,015	-3.05	2,900	2,778	-4.21	-6.75	-7.86
Virginia	35,170	31,943	-9.18	35,020	29,641	-15.36	-0.43	-7.21
Washington	32,640	30,243	-7.34	33,190	27,573	-16.92	1.69	-8.83
West Virginia	2,590	1,598	-38.30	3,140	2,812	-10.45	21.24	75.97
Wisconsin	15,510	16,237	4.69	15,450	15,549	0.64	-0.39	-4.24
Wyoming	520	369	-29.04	460	296	-35.65	-11.54	19.78

Notes: For all states except five, CDC abortion statistics are based on data reported by the central health agencies in each state. In Alaska, Iowa, New Hampshire and Oklahoma, abortion data are reported directly to CDC by hospitals and other medical facilities. For California, CDC estimates the number of abortions. AGI data are collected through surveys of abortion providers in each state. The number of abortions in 1992 was the most recent information available from AGI at the time this article was written. Sources: **AGI data**—Henshaw SK and Van Vort J, Abortion services in the United States, 1991 and 1992, *Family Planning Perspectives*, 1994, 26(3):100-106 & 112. **CDC data**—reference 12; reference 20; and Koonin LM et al., Abortion surveillance—United States, 1992, *Morbidity and Mortality Weekly Report*, 1996, 45(SS-3):1-36.



## RETROSPECTIVE ILLUSTRATION

How likely is it that any states will be eligible for the "illegitimacy bonus"? Since the actual "winners" (if any) will be based on data for 1994-2000, at best we can consider which states would have been recipients if the law had been in place during the years 1992-1995, the most recent years for which data were available at the time this article was written.

We use data from the NCHS for 1992-1995 and calculate the "illegitimacy ratio" for each state by taking the sum of the number of nonmarital births for 1992 and 1993 in each state, divided by the sum of all births for 1992 and 1993 in each state; we do the same for 1994 and 1995. We then calculate the proportionate change by subtracting the ratio for the prior period from the ratio for the more recent period and dividing the remainder by the ratio for the prior period. As shown in Table 2, five states (California, Georgia, Massachusetts, Montana and North Carolina) show a reduction in their "illegitimacy ratio." (The fact that some of the reductions are very small does not prevent the states from qualifying for the bonus.)

**Table 2. Illegitimacy ratios for 1992-1993 and 1994-1995, and percentage change between periods, by state**

State	Illegitimacy ratio*		% change
	1992-1993	1994-1995	
<b>All</b>	<b>0.3056</b>	<b>0.3239</b>	<b>5.98</b>
Alabama	0.3303	0.3447	4.34
Alaska	0.2770	0.2957	6.73
Arizona	0.3705	0.3829	3.34
Arkansas	0.3134	0.3276	4.54
California	0.3477	0.3392	<b>-2.44</b>
Colorado	0.2427	0.2492	2.68
Connecticut	0.2925	0.3055	4.43
Delaware	0.3320	0.3482	4.87
D.C.	0.6737	0.6739	0.02
Florida	0.3459	0.3574	3.33
Georgia	0.3540	0.3534	<b>-0.19</b>
Hawaii	0.2669	0.2876	7.75
Idaho	0.1852	0.1930	4.18
Illinois	0.3378	0.3406	0.83
Indiana	0.3012	0.3174	5.36
Iowa	0.2406	0.2501	3.95
Kansas	0.2508	0.2592	3.32
Kentucky	0.2675	0.2808	4.95
Louisiana	0.4113	0.4255	3.44
Maine	0.2610	0.2797	7.15
Maryland	0.3145	0.3352	6.60
Massachusetts	0.2618	0.2610	<b>-0.31</b>
Michigan	0.2639	0.3468	31.37
Minnesota	0.2315	0.2393	3.37
Mississippi	0.4365	0.4540	4.00

Missouri	0.3194	0.3229	1.12
Montana	0.2687	0.2599	<b>-3.27</b>
Nebraska	0.2303	0.2455	6.56
Nevada	0.3364	0.3854	14.57
New Hampshire	0.1988	0.2216	11.47
New Jersey	0.2676	0.2787	4.15
New Mexico	0.4043	0.4211	4.16
New York	0.3601	0.3775	4.82
North Carolina	0.3172	0.3165	<b>-0.24</b>
North Dakota	0.2282	0.2325	1.89
Ohio	0.3230	0.3297	2.07
Oklahoma	0.2871	0.3014	5.00
Oregon	0.2760	0.2880	4.36
Pennsylvania	0.3188	0.3261	2.29
Rhode Island	0.3067	0.3164	3.15
South Carolina	0.3571	0.3714	4.00
South Dakota	0.2715	0.2786	2.63
Tennessee	0.3316	0.3325	0.28
Texas	0.1721	0.2944	71.02
Utah	0.1001	0.1571	56.94
Vermont	0.2354	0.2509	6.61
Virginia	0.2866	0.2924	2.00
Washington	0.2580	0.2634	2.12
West Virginia	0.2838	0.3037	6.99
Wisconsin	0.2658	0.2727	2.60
Wyoming	0.2487	0.2694	8.32

\*Number of nonmarital births divided by total number of births for each state.  
*Notes:* For individual states, boldface type indicates a reduction in a state's illegitimacy ratio. For 45 states and the District of Columbia, the mother's marital status is reported on the birth certificate; for five states, the mother's marital status is inferred. *Sources:* Ventura SJ, Births to unmarried mothers: United States, 1980-92, *Vital and Health Statistics*, 1995, 21(53):1-55; Ventura SJ et al., Advance report of final natality statistics, 1993, *Monthly Vital Statistics Report*, 1995, Vol. 44, No. 3, Suppl.; reference 1; and reference 20.

The most recent data available on the number of abortions provided in states is for 1995. Abortion data for 1995 are the benchmark with which state changes in abortions will be compared for bonus eligibility. So, using a comparison of the ratio of abortions to live births in each state for 1994 and 1995, we found that all five states that reported a reduction in the "illegitimacy ratio" also showed a reduction in the ratio of abortions to live births (Table 3). Because five states were eligible for the bonus in this example, bonuses of \$20 million would have been awarded to each.

State	Ratio				% change		
	1992	1993	1994	1995	1992-1993	1993-1994	1994-1995
<b>All</b>	<b>0.334</b>	<b>0.333</b>	<b>0.321</b>	<b>0.311</b>	<b>-0.529</b>	<b>-3.591</b>	<b>-3.158</b>
Alabama	0.215	0.235	0.243	0.236	9.478	3.571	<b>-3.104</b>
Alaska	0.152	0.148	0.148	0.185	-2.358	-0.022	24.755



Arizona	0.209	0.198	0.197	0.165	-5.224	-0.513	-16.248
Arkansas	0.163	0.163	0.170	0.164	-0.116	4.125	3.446
California	0.563	0.553	0.543	0.525	-1.676	-1.830	<b>-3.316</b>
Colorado	0.194	0.187	0.177	0.173	-3.733	-5.335	-2.557
Connecticut	0.373	0.357	0.323	0.255	-4.279	-9.558	-20.970
Delaware	0.526	0.477	0.541	0.418	-9.321	13.600	-22.731
D.C.	1.615	1.645	1.655	1.568	1.873	0.624	-5.293
Florida	0.361	0.364	0.385	0.396	0.699	5.780	2.888
Georgia	0.342	0.342	0.328	0.313	-0.168	-4.158	<b>-4.383</b>
Hawaii	0.300	0.298	0.296	0.298	-0.643	-0.505	0.421
Idaho	0.079	0.077	0.060	0.054	-2.759	-22.596	-9.969
Illinois	0.295	0.296	0.291	0.291	0.319	-1.868	0.082
Indiana	0.154	0.135	0.151	0.149	-12.533	12.126	-1.223
Iowa	0.176	0.167	0.159	0.160	-4.845	-4.599	0.475
Kansas	0.273	0.293	0.280	0.289	7.455	-4.568	3.348
Kentucky	0.162	0.159	0.154	0.142	-1.254	-3.613	-7.624
Louisiana	0.176	0.178	0.179	0.175	1.470	0.526	-2.321
Maine	0.201	0.219	0.214	0.203	9.063	-2.379	-5.162
Maryland	0.255	0.258	0.238	0.224	0.938	-7.499	-6.073
Massachusetts	0.396	0.417	0.384	0.356	5.370	-7.868	<b>-7.255</b>
Michigan	0.239	0.256	0.240	0.231	6.734	-6.264	-3.594
Minnesota	0.237	0.222	0.218	0.222	-6.324	-1.729	-1.575
Mississippi	0.177	0.142	0.095	0.086	-19.553	-33.397	9.134
Missouri	0.175	0.167	0.162	0.153	-5.044	-3.069	-5.026
Montana	0.250	0.233	0.249	0.240	-6.940	7.196	<b>-3.803</b>
Nebraska	0.241	0.236	0.230	0.208	-1.954	-2.668	-9.469
Nevada	0.359	0.310	0.282	0.277	-13.413	-9.257	-5.109
New Hampshire	0.196	0.198	0.199	0.189	1.205	0.547	-1.651
New Jersey	0.318	0.310	0.283	0.287	-2.542	-8.682	1.286
New Mexico	0.201	0.193	0.179	0.179	-4.080	-7.533	0.039
New York	0.571	0.559	0.537	0.515	-2.015	-3.891	-4.209
North Carolina	0.339	0.344	0.346	0.329	1.565	0.459	<b>-4.915</b>
North Dakota	0.169	0.162	0.152	0.157	-4.516	-6.325	3.843
Ohio	0.222	0.262	0.242	0.240	18.214	-7.778	-0.904
Oklahoma	0.208	0.218	0.148	0.175	4.819	-31.943	17.957
Oregon	0.302	0.312	0.320	0.329	3.304	2.681	2.738
Pennsylvania	0.298	0.298	0.265	0.257	0.073	-11.064	-3.007
Rhode Island	0.460	0.475	0.452	0.447	3.391	-4.836	-1.260
South Carolina	0.196	0.216	0.210	0.196	10.096	-2.695	-6.583
South Dakota	0.094	0.100	0.094	0.102	6.453	-6.334	8.741
Tennessee	0.245	0.236	0.230	0.246	-3.539	-2.626	7.070
Texas	0.284	0.282	0.278	0.271	-0.745	-1.464	-2.602
Utah	0.106	0.106	0.094	0.094	0.298	<b>-11.270</b>	-0.707
Vermont	0.359	0.346	0.315	0.320	-3.640	-9.063	1.635
Virginia	0.305	0.298	0.277	0.273	-2.309	<b>-6.867</b>	-1.496
Washington	0.347	0.350	0.336	0.325	0.969	-4.213	-3.265
West Virginia	0.127	0.120	0.098	0.126	-5.248	-18.836	29.153

Wisconsin	0.220	0.210	0.196	0.189	-4.425	-6.705	-3.448
Wyoming	0.044	0.039	0.027	0.029	-12.336	-29.866	7.388

Notes: For individual states, boldface type indicates a reduction in the illegitimacy ratio (see Tables 2 and 4). Sources: reference 12; reference 21; and Koonin LM et al., Abortion surveillance-United States, 1992, *Morbidity and Mortality Weekly Report*, 45(SS-3):1-36.

An examination of the accuracy of data on nonmarital births and abortions and of any other informative trends peculiar to these five states reveals that the data on marital status and abortions in Georgia, Massachusetts, Montana and North Carolina present no unusual problems. All four ask the marital status of mothers on the child's birth certificate and provide information on the number of abortions to CDC. Interestingly, however, Georgia would have been awarded the bonus despite an increase in the absolute number of nonmarital births in the state. The state experienced an increase from 78,500 nonmarital births for the period 1992-1993 to 78,903 nonmarital births for the period 1994-1995, but because the increase in all births in the state was larger, the "illegitimacy ratio" showed a decline.

CDC abortion surveillance summaries show that the decrease in the number of abortions between 1994 and 1995 in Georgia, Massachusetts, Montana and North Carolina followed national trends.<sup>23</sup> Most abortions in these states were among 20-24-year-old women. The proportion of abortions to women who resided out-of-state ranged from 6% in Massachusetts to 17% in Montana. However, the marital status of women who obtained abortions in these states in 1995 was reported only for Georgia and Montana. About 18% of abortions in 1994-1995 in both of these states were to married women, a proportion similar to the national average.

In contrast, California presents numerous problems. First, California's birth certificate does not include a direct question on the marital status of the mother. Therefore, marital status is inferred from the last names of the parents and child.<sup>††</sup> Second, California does not report the number of abortions obtained in the state to CDC, so CDC estimates the number of abortions obtained in the state based on national trends and demographic information. Therefore, while Georgia, Massachusetts, Montana and North Carolina would have "justifiably" won the bonus, other states might have objected to California's bonus because of its unreliable data. The District of Columbia, for example, experienced a very slight increase in its "illegitimacy ratio" (0.02%, as shown in Table 2) and a decline in the ratio of abortions to live births (Table 3). If it had used last names to estimate the number of nonmarital births rather than a direct question on marital status on the birth certificate, the District of Columbia might have been eligible to receive a bonus.

If we instead compute the "illegitimacy ratio" using 1991-1994 data, the picture changes. In this period, Utah and Virginia showed a reduction in their "illegitimacy ratio" from 1991-1992 to 1993-1994 (Table 4). Both of these states would have qualified for the bonus because they also showed a reduction in the ratio of abortions to live births (Table 3). Because fewer than five states had a reduction in their "illegitimacy ratio," Utah and Virginia would have been awarded a \$25 million bonus. Interestingly, CDC estimates suggest that a substantial proportion—about 40%—of the abortions obtained in Utah in 1993-1994 were to married women.<sup>24</sup> Furthermore, although Utah showed a decrease in abortions between 1993 and 1994, the state had experienced an increase in abortions between 1992 and 1993.

**Table 4. Illegitimacy ratio in 1991-1992 and 1993-1994 and percentage change between periods, by state**

State	Illegitimacy ratio		% change
	1991-1992	1993-1994	
<b>All</b>	<b>0.2983</b>	<b>0.3181</b>	<b>6.64</b>
Alabama	0.3221	0.3399	5.53
Alaska	0.2718	0.2862	5.32
Arizona	0.3566	0.3811	6.85
Arkansas	0.3042	0.3215	5.71
California	0.3389	0.3548	4.71
Colorado	0.2368	0.2487	5.03
Connecticut	0.2833	0.3014	6.37
Delaware	0.3218	0.3428	6.53
D.C.	0.6659	0.6830	2.57
Florida	0.3360	0.3538	5.29
Georgia	0.3480	0.3565	2.44
Hawaii	0.2614	0.2777	6.25
Idaho	0.1785	0.1871	4.78
Illinois	0.3299	0.3422	3.75
Indiana	0.2890	0.3116	7.82
Iowa	0.2287	0.2471	8.04
Kansas	0.2369	0.2595	9.55
Kentucky	0.2586	0.2741	5.96
Louisiana	0.3929	0.4234	7.76
Maine	0.2512	0.2755	9.65
Maryland	0.3058	0.3308	8.18
Massachusetts	0.2593	0.2652	2.27
Michigan	0.2704	0.3047	12.70
Minnesota	0.2264	0.2367	4.55
Mississippi	0.4265	0.4493	5.34
Missouri	0.3083	0.3244	5.20
Montana	0.2580	0.2642	2.40
Nebraska	0.2208	0.2412	9.23
Nevada	0.3258	0.3449	5.86
New Hampshire	0.1876	0.2134	13.77
New Jersey	0.2636	0.2763	4.85
New Mexico	0.3853	0.4152	7.78
New York	0.3445	0.3742	8.61
North Carolina	0.3145	0.3201	1.78
North Dakota	0.2230	0.2298	3.05
Ohio	0.3114	0.3296	5.87
Oklahoma	0.2775	0.2943	6.05
Oregon	0.2681	0.2846	6.15
Pennsylvania	0.3098	0.3250	4.90
Rhode Island	0.2863	0.3193	11.52
South Carolina	0.3510	0.3639	3.67
South Dakota	0.2574	0.2771	7.67

Tennessee	0.3246	0.3354	3.31
Texas	0.1762	0.2292	30.05
Utah	0.1479	0.1036	<b>-29.96</b>
Vermont	0.2307	0.2446	6.06
Virginia	0.5624	0.2910	<b>-48.25</b>
Washington	0.2512	0.2613	4.02
West Virginia	0.2728	0.2961	8.54
Wisconsin	0.2570	0.2713	5.56
Wyoming	0.2353	0.2660	13.07

Notes: For 45 states and the District of Columbia, the mother's marital status is reported on the birth certificate; for five states, it is inferred. For individual states, boldface type indicates a reduction in the state's illegitimacy ratio. Sources: Ventura SJ, Births to unmarried mothers: United States, 1980-92, *Vital and Health Statistics*, 1995, 21(53):1-55; Ventura SJ et al., Advance report of final natality statistics, 1993, *Monthly Vital Statistics Report*, 1995, Vol. 44, No. 3, Suppl.; reference 1; and National Center for Health Statistics, *Vital Statistics of the United States, 1991, Vol. 1, Natality*, Washington, DC: Public Health Service, 1995.

## CONCLUSION

Our analysis of state experience in the recent past illustrates the complex methodological problems involved in the "illegitimacy bonus" provision of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996. These problems relate to the measurement of marital status, the accuracy of the abortion data used and the differences between states with regard to both issues. Moreover, during the two most recent time periods for which data are currently available, no state consistently showed a reduction in both nonmarital births (1991-1994 and 1992-1995) and the ratio of abortions to live births (1993-1994 and 1994-1995).

Furthermore, the data used to calculate the "illegitimacy ratio" and the ratio of abortions to live births are subject to random fluctuations. It is not clear if these shifts are caused by actual changes in the number of nonmarital births and abortions or by data collection errors. Such fluctuations, which are not related to policy changes, will undoubtedly occur for the years relevant to the state bonus.

Whether the legislation will have any impact on nonmarital childbearing is highly questionable, both because of the formidable task of changing such behavior through monetary awards to states and because an award of \$20 million a year is very small in the context of a state budget—even if a state receives a bonus every year. Although the policy may be effective in encouraging states to experiment with new ways to reduce nonmarital childbearing, it may also legitimize ineffective or potentially harmful state policies. In sum, this effort to legislate the context of childbearing is based on flawed methods that make for ineffective policy and questionable results.

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\*Although the term "out-of-wedlock childbearing" was substituted for "illegitimacy"—a more stigmatizing term—in the final text of the legislation, "illegitimacy" remained in the title of the provision and the "illegitimacy ratio" was used to designate a demographic ratio relating to nonmarital childbearing.

†The regulations attempt to address this issue, stating that if a state changed its data collection methodology

regarding nonmarital births, it would have to submit additional detailed information about this change. The National Center for Health Statistics would then produce a correction factor to estimate what the number of nonmarital births would have been under the prior methodology. However, the regulations state that the "responsibility for certifying the validity of abortion data lies with the Offices of the Governors." (Source: reference 14.)

‡The Personal Responsibility Act provides an additional \$50 million per fiscal year (for 1998-2002) to states for conducting abstinence education programs (see reference 4, Sec. 912). The law also includes provisions on strengthening child support enforcement and paternity establishment as a condition of eligibility to receive assistance.

§For states that infer marital status, a mother is considered unmarried if a paternity acknowledgment is submitted, if the father's name is missing from the birth certificate or if the mother's surname is different from the father's. In addition, California infers the marital status of mothers by comparing the mother's and father's hyphenated surnames if the country of the parents' birth uses naming practices that can identify marital status. New York (excluding New York City) infers the mother's marital status by seeing if the father's date of birth is given, or if a paternity affidavit has been filed (see reference 1).

\*\*Texas added a direct question about the marital status of the mother on birth certificates following 1994. (Source: reference 1.)

‡ In 1995, California changed its method of calculating the marital status of women giving birth. Prior to this change, the number of nonmarital births was overestimated. Consequently, if this change could be taken into account for 1994-1995, California might not show a reduction in the illegitimacy ratio for that time period. (Source: reference 18.)