Government Family Planning: Effects and Incentives

Jacqueline R. Kasun

Austrian economics has long understood that government subsidies of private activities distort incentives, encouraging recipients to use and/or provide more of the services than would otherwise be the case, and to devote resources to lobbying for the protection and promotion of the services (Hayek 1988; Rothbard 1978, pp. 140–70). An excellent example of these tendencies exists in the government-subsidized family-planning industry.

Since the mid-1960s, the government of the United States has played an increasingly intrusive role in the reproductive decisions of persons both in this country and abroad. The effort started as part of the War on Poverty. In 1967, Congress amended the Social Security Act to provide funds for "family planning" in maternal and child health programs; Title V, Title XIX, and Title XX of the Act became major vehicles for federal funding. In that same year, Title X of the Foreign Assistance Act provided financing for family planning and population control to countries receiving U.S. foreign aid (Kasun 1988). In 1970, Title X of the Public Health Services Act added to the flow.

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In 1978, the Adolescent Pregnancy Act called for government birth control to be dispensed through "children and youth centers . . . school and educational programs . . . recreation programs" and on and on. In the same year, the Foreign Assistance Act required all countries receiving U.S. foreign aid to take steps to reduce their rates of population growth (22 U.S. Code, sec. 2151-1, sec. 2151a). The contract with Costa Rica, for example, which provided $12,040,000 to that country from the U.S. Agency for International Development, set a "target" of 70 percent for "contraceptive prevalence" by 1992 and a "reduction in crude birth rate from 32/1000 to 28/1000" as well as "family planning included in curricula of medical and nursing schools" and "sex education taught in the schools . . . [and] disseminated to the non-enrolled school age population" (Contract 1988).

The Clinton administration has provided important additional funds and freedom of action for the family planning industry. As the activities of the industry have become more and more pervasive and its government grants larger and more conspicuous, it has met increasing resistance in Congress and the electorate. In response, spokesmen for the industry have disseminated elaborate statistical studies purporting to show the benefits flowing from the industry's activities, claiming public assistance cost savings of $4 to $12, or even higher, for every public dollar spent on birth control (Brindis and Korenbrot 1989; Forrest and Singh 1990a,b). These have enjoyed wide publicity in the media.

The statistical demonstrations have not relied on empirical observations, but rather on assumptions regarding the numbers of additional pregnancies that would presumably occur in the absence of government-subsidized birth control.

For example, one method of estimation assumes that, in the absence of publicly-funded family planning, women would use the same types and proportions of birth control, including no birth control, as reported by women of similar income who did not use publicly-funded clinics, and would experience the rates of pregnancy due to contraceptive failure associated with each of these methods

(Forrest and Singh 1990a,b). The estimate assumes that 21 percent of the women presently obtaining contraceptives from public clinics would stop using any method of birth control but would not otherwise change their behavior.

However, although all or almost all women who use public clinics are sexually active and are seeking to avoid pregnancy, this cannot be assumed regarding women who do not use such clinics. A significant proportion of such women may not be currently sexually active, but professional "family planning" parlance defines all women who have ever had intercourse as being "sexually active" ("Women at Risk," p.vii). Therefore, a comparison of these two groups is likely to give a falsely high estimate of the additional pregnancies that would occur if the clinics should lose their public funding.

A second method of estimation assumes that, in the absence of publicly funded clinics, women would shift to other types of birth control, including no birth control, in the same proportions as reported by women who stopped using the pill between 1979 and 1982, and would, as in the method described above, experience the rate of accidental pregnancy associated with each type of birth control (Forrest and Singh 1990a,b). It is assumed that 28 percent would use no method of birth control, but would not otherwise change their behavior. Here again, the control group is not restricted to women who are currently sexually active and are seeking to avoid pregnancy, as is the case with women who attend birth control clinics. Comparison of the two groups, therefore, leads to a falsely high estimate of the additional pregnancies that would occur if the clinics should lose their public funding.

Similarly, a third method is based on women's reports in 1979 of their contraceptive behavior prior to their first visit to a public clinic (Forrest and Singh 1990a,b). It assumes that 55 percent of the clinic clients would use no type of birth control, but would not otherwise change their behavior if the clinic services were no longer available. It is biased in the upward direction for the same reason as the first two methods of estimation, but to an even greater degree.

Finally, "Pattern IV" (Forrest and Singh 1990a,b) assumes that, if clinic services were no longer available, all of the women who are presently served would continue their current levels of sexual activity but none of them would make any effort to prevent conception. Pattern IV is chiefly useful in yielding an extremely high estimate of the pregnancies that are prevented by the clinics, with which an apparently more "reasonable" estimate (based on the first three methods which, as we have seen, probably yield exaggerated estimates of the cost savings) can be compared.

None of the estimates has taken account of the tendency of people to behave more circumspectly in situations where they face higher risk (Baumol and Blinder 1991, p. 257), and conversely, to behave more carelessly when they are "insured" against risk. Just as the person whose car is fully insured is less likely to be sure always to lock his car, the young couple who believe their publicly provided contraceptives are "protecting" them may be less likely to avoid sexual risks.

The alleged "cost savings" were, therefore, a weak reed on which to base an increase in public expenditures. With few exceptions, other studies have reported little to support the expectation of public savings from public outlays on birth control. Lundberg and Plotnick found that the likelihood of a first premarital birth on the part of young white women is higher in states which provide more liberal access to contraceptives, abortion, and AFDC benefits (Lundberg and Plotnick 1990). A study conducted in Ohio and Georgia showed that births, as well as pregnancies, declined among Medicaid-eligible women after the states stopped paying for abortions (Trussell, et al. 1980).

A study of 15 states with similar social-demographic characteristics and rates of teenage pregnancy in 1970 showed that the states with the highest expenditures on family planning had the largest increases in abortions and births out of wedlock among teenagers between 1970 and 1979 (Roylance 1981). A study of 1980–81 data for the 50 states shows that the states that spent less on family

planning also had lower rates of abortion and out-of-wedlock births on the part of white teenagers (Kasun 1987). Singh reported, "a significant and positive relationship between the percentage of women receiving AFDC payments in a state and the availability there of Medicaid funds for abortion" (Singh 1986, p. 216).

There is further evidence that restricting, rather than increasing, access to publicly-funded birth control is more likely to reduce dependency. Several states which have required that parents be notified when their minor children are given contraceptives or abortions have experienced reductions in their rates of adolescent pregnancy. In 1980, the state of Utah passed a law requiring parental consent for minors to be given birth control, and rates of pregnancy and abortion published by the state health department fell among girls aged 15–18 (United Families of America 1983).

Based on interviews with some 12,000 young people, Marsiglio and Mott concluded that teenagers who had sex education (which is one of the activities supported by government birth-control programs) were more likely to engage in sexual activity at an early age but no more likely to become premaritally pregnant than young people who had not had the instruction (Marsiglio and Mott 1986). Dawson, publishing in the same year, also found that young people who had sex education were more likely to engage in sexual activity at an early age, but that it was impossible to determine the effect on premarital pregnancy because of the underreporting of abortions, estimating that the young people responding to the survey reported no more than 33 percent of the abortions they had actually had, thus producing a spuriously low estimate of premarital pregnancies (Dawson 1986).

Concluding a study of the effects of the law requiring parental notification of minors' abortions in Massachusetts, Cartoof and Klerman wrote that "Massachusetts minors continue to conceive, abort, and give birth in the same proportions as before the law was implemented" (Cartoof and Klerman 1986). This conclusion, however, was at odds with the numbers they presented. They counted the

number of abortions performed on minors in the state before the law and in the state and five neighboring states after the law. They also counted the number of births to minors before and after the law.

They presented the following figures:

	1980 Before the law	1982 After the law	Change
Abortions, girls under 18	5113	3943*	-1170
Births, girls under 18	2471	2478	+7

*Including abortions performed out-of-state on Massachusetts minors

Clearly, there was a large reduction in abortions and a negligible increase in births to minors in Massachusetts. How much of this reduction in abortion is the result of out-of-state minors no longer coming to Massachusetts? The authors state that after the law "the number of minors who obtained out-of-state abortions jumped to 69, an increase of 130 percent over the average of the first four months of 1981" (p. 398). This would imply that about 30 Massachusetts minors per month had been going out of state for abortions prior to the law. They also state that "twice as many out-of-state minors came to Massachusetts for that reason" (p. 399). This would imply that about 60 out-of-state minor girls per month, or about 720 per year, had been coming to Massachusetts for abortions before the law. This leaves a net reduction of 450 (1170-720 = 450) abortions that must be attributed to the law's effects on Massachusetts minors. This is more than 10 percent of the number previously performed on them.

In 1981, Minnesota passed such a law. Figures published by the Center for Health Statistics, Minnesota Department of Health, showed that the abortion rate among girls 15 to 17 years of age fell by 21 percent between 1980 and 1985, the pregnancy rate fell by 15 pecent, and the fertility rate by 9 percent (Select Committee on Children, Youth, and Families 1986). Planned Parenthood filed suit against the state of Minnesota to have the law declared unconstitutional

(*Hodgson* v. *Minnesota* 1988). The law was upheld and took effect again in 1989.

A study published in 1994 again addressed the effects of parental involvement laws on adolescent abortion and fertility. It concluded that such laws do "reduce adolescent abortion rates and may, to a lessor (sic) degree, reduce adolescent pregnancy rates. Thus, the findings imply that enforcement of parental involvement laws will increase adolescent fertility rates" (Ohsfeldt and Gohmann 1994). The authors base this conclusion on multiple regression models, in one set of which the ratios of adolescent abortion rates to rates for older teens and adult women in several states are the dependent variables; in the other set, the dependent variables are the ratios of adolescent pregnancy rates to rates for older teens and adult women.

While their conclusion follows logically from the results apparently generated by their models, there are some problems with their models. In the first place, their models explain only one-fourth to one-third of the variation in pregnancy ratios. That is to say, the coefficients of determination are small, meaning that the standard errors of the estimates must be large and the significance of the findings correspondingly diminished. Second, the authors base their conclusions solely on point estimates rather than the confidence interval estimates that are normally used in such cases. The article contains no direct information on the standard error of the estimates or the standard errors of the partial regression coefficients. These are serious faults.

Another interesting feature is that the authors do not use birth data, which are readily available from official sources and provide direct, accurate information about fertility, but instead estimate fertility indirectly from privately estimated pregnancy data, which include privately estimated abortion rates. They then infer that an increase in fertility must have occurred when their model predicts a decrease in pregnancy that is smaller than the estimated decrease in abortion.

In addition, the authors say that they omit from their study all states "where reliable data on adolescent abortions are unavailable" as well as Alaska and Hawaii for undisclosed reasons. It is true that, as the result of lobbying by the government-funded "family planning" industry, abortion data throughout the nation are not collected as vital statistics such as births, deaths, and marriages. The federal government imposes no requirements for abortion reporting; nor do many, perhaps most, states. In California, for example, as in many other states, the state health department collects no information on abortions other than those paid for by MediCal. The department responds to requests for total abortion information by providing Guttmacher Institute estimates. The federal Centers for Disease Control publishes figures for some of the states from time to time, but the most widely used data by age and race for all states come from the Guttmacher Institute, a research agency created by Planned Parenthood, one of the principal promoters of government "family planning," at intervals of three to five years (Henshaw 1993), based on their surveys of all known abortion providers in the country.

Given the total number of abortions indicated by their surveys, the Institute estimates the proportion of abortions performed on teenagers, using information supplied by state health departments and the Centers for Disease Control. For some states, no such information or estimates exist. In order to publish figures on the age distribution of abortions for these states, persons at the Institute make estimates "based on the proportion of abortions obtained by women of the same age in neighboring or similar states" (Henshaw 1993). In 1988, this list numbered 10 states, including California, the most populous, and Illinois. What all of this means is that the sample used for the Ohsfeldt and Gohman models omits 26 percent of the population and the associated information without correcting for the bias thus produced. In their alleged effort to "avoid possible bias," they may have created more bias than originally existed in the figures estimated by the Guttmacher Institute.

In principle and for very good reasons, Austrian economics has serious reservations about statistical analysis. The Ohsfeldt and Gohmann article, as well as the others discussed above, shows that these reservations are well taken.

Finally, the proponents of government birth control have created school "clinics" to distribute contraceptives to school children, claiming miraculous success in reducing adolescent pregnancy (Zabin 1986). Subsequent evaluation, however, showed that the clinics either had no effect or significantly increased births to teenagers (Kirby 1993; Kirby 1991).

A serious question remains. Should government try to expand access to family planning information and services in the interests of controlling fertility among those who are or might become dependent on public assistance? To Austrian economic thought, it is obvious that public assistance must have a seriously adverse impact on behavioral incentives (Rothbard 1978), not only among the recipients, but among those who are forced to pay for the programs. But the narrower question is not whether public assistance should be abolished, but whether, given that it exists and is likely to endure for a variety of political reasons, government birth control can reduce the incidence of dependency. To put the question another way, does government birth control lessen the problem of dependency, or is it an example of wading deeper into the swamp?

Methods

Using data for the 50 states, this study employs multiple regression analysis to investigate the relationship between public expenditures on contraceptives, sterilizations, and abortions on the one hand, and rates of dependency on Aid to Families with Dependent Children on the other, while controlling for important other factors. It also investigates the statistical effects of such policy measures as providing government-financed abortions and requiring parental involvement in minors' decisions regarding abortion. The results will be examined to see whether they indicate that publicly-funded birth control

reduces or contains dependency, as is commonly claimed by supporters of such programs.

As shown in Table 1, rates of dependency on Aid to Families with Dependent Children in 1985 varied from 1.3 percent of state population in New Hampshire to 7.4 percent in Michigan. The factors contributing to the differences in the rates may include differences in state efforts to reduce unwanted pregnancy among low-income women. If government-subsidized birth control does indeed prevent unwanted pregnancy among such women, we should expect to find a negative statistical relationship between public expenditures for birth control and dependency rates when we isolate the effects of family planning from other factors affecting the rates of dependency.

There is also the problem of determining causation. Although statistical analysis in general can show association but not causation, there are some statistical tests for determining causation. To the extent possible, these tests are used in this study. In addition, to lessen the probability that the birth control expenditures are policy responses to a perceived problem of dependency, this study observes birth control expenditures two years prior to the year of the observed dependency rates. Table 1 shows that public birth-control expenditures per woman aged 15 to 44 in 1983 varied from $3 in Utah to more than $15 in California and $16 in Hawaii.

It is reasonable to believe that other factors having an impact on dependency may be unwed births, either as a proportion of total births or as a proportion of the population or some part of it; male unemployment, which renders fathers unable to support their children; the size of the average cash aid grant relative to other possible sources of income; race; the proportion of the population statistically defined to be in poverty; the age distribution of the population; and the rural–urban distribution of the population. Accordingly, this study investigates the impact which each of these factors has on dependency ratios. Table 2 presents a list of the variables.

The method of multiple regression permits estimation of the separate impact in which each factor has on dependency independent of the

Table 1
AFDC Dependency and Public Birth-Control Expenditures Per Woman 15–44, by State, 1985

State	AFDC (1)	FPW (2)	State	AFDC (1)	FPW (2)
Alabama	3.7	$6.87	New York	6.2	11.69
Alaska	3.1	5.64	North Carolina	2.8	7.75
Arizona	2.3	4.95	North Dakota	1.9	5.04
Arkansas	2.8	6.87	Ohio	6.3	7.70
California	6.2	15.51	Oklahoma	2.6	6.58
Colorado	2.6	4.36	Oregon	2.9	5.55
Connecticut	3.7	7.27	Pennsylvania	4.9	10.23
Delaware	3.6	11.87	Rhode Island	4.6	3.56
Florida	2.4	3.19	South Carolina	3.8	10.71
Georgia	3.9	6.81	South Dakota	2.4	3.09
Hawaii	4.6	16.46	Tennessee	3.3	9.65
Idaho	1.6	5.26	Texas	2.4	8.36
Illinois	6.4	7.21	Utah	2.3	3.06
Indiana	3.0	4.37	Vermont	4.1	7.32
Iowa	4.3	6.01	Virginia	2.7	6.15
Kansas	2.7	4.10	Washington	4.3	7.09
Kentucky	4.3	8.03	West Virginia	5.9	6.33
Louisiana	5.3	12.18	Wisconsin	6.2	7.19
Maine	5.0	15.02	Wyoming	2.0	4.93
Maryland	4.5	5.20			
Massachusetts	4.1	7.04			
Michigan	7.4	9.71			
Minnesota	3.8	6.29			
Mississippi	6.0	12.69			
Missouri	3.9	3.46			
Montana	3.1	6.86			
Nebraska	2.9	4.15			
Nevada	1.6	5.94			
New Hampshire	1.3	5.02			
New Jersey	4.8	10.39			
New Mexico	3.5	8.69			

(1) AFDC5 = Number of persons, including children, dependent on Aid to Families with Dependent Children as a percent of the state's population, 1985, derived from *The Statistical Abstract of the United States*, 1987 and 1988, Tables 25 and 621.

(2) FPW = Total government expenditures on contraceptives, sterilizations, and abortions, by state, 1983, derived from Gold and Nestor, 1985, divided by number of women aged 15–44, by state, 1983, derived from National Center for Health Statistics, *Monthly Vital Statistics Report*, September 20, 1985.

Table 2
Variables

AFDC5 - the number of persons, including children, dependent on Aid to Families with Dependent Children as a percent of the state's population, 1985, derived from *The Statistical Abstract of the United States*, 1987 and 1988

AFDCR - the ratio between the 1985 average AFDC monthly grant per family and average annual pay in each state, derived from *The Statistical Abstract of the United States*, 1988

AVU - the average level of male unemployment in each state for 1983–85, derived from *The Statistical Abstract of the United States*

BHPC5 - percent of total population that is hispanic or black, 1985, derived from intercensal estimates by the U.S. Bureau of the Census

FA - a dummy variable which takes the value of 1 if the state provides free abortions for girls dependent on their families for support and for low-income women, and equals zero otherwise, from Gold and Nestor, 1985

FPW - total government expenditures on contraceptives, sterilizations, and abortions, by state, 1983, derived from Gold and Nestor, 1985, divided by number of women aged 15-44, by state, 1983, derived from National Center for Health Statistics, *Monthly Vital Statistics Report*, September 20, 1985

lnAFDC - ln AFDC5

lnAFD5 - ln AFDCR

lnAVU - ln AVU

lnFPW - ln FPW

lnUR3 - ln UR3

lnUR4 - ln UR4

M80 - percent of state population living in metropolitan areas, 1980, from *The Statistical Abstract of the United States*, 1993

PIPC5 - disposable income per capita, 1985, from *The Statistical Abstract of the United States*, 1993

POVA - average percent of population below poverty threshold, 1979–1989, from *United States Census*, 1980 and *The Statistical Abstract of the United States*, 1993

PW1824 - ratio between number of females aged 18–24 and total population, 1984, derived from the U.S. Bureau of the Census, *Current Population Reports*, P25–1106, "State Population Estimates by Age and Sex: 1980 to 1992," November 1993

TAP5 - the sum of births and abortions per 1,000 women of age 15–19 in 1985, from Henshaw and Van Vort, 1989

UB3 - number of unmarried births per 1,000 state population, 1983, derived from the National Center for Health Statistics, *Monthly Vital Statistics Report*, September 20, 1985, and the U.S. Bureau of the Census

UB4 - number of unmarried births per 1,000 state population, 1984, derived from the National Center for Health Statistics, *Monthly Vital Statistics Report*, July 18, 1986, and the U.S. Bureau of the Census

UB5 - number of unmarried births per 1,000 state population, 1985, derived from the National Center for Health Statistics, *Monthly Vital Statistics Report*, July 17, 1987, and the U.S. Bureau of the Census

UR3 - the 1983 ratio between births to unwed mothers and total births in each state, from the National Center for Health Statistics, *Monthly Vital Statistics Report*, September 20, 1985

UR4 - the 1984 ratio between births to unwed mothers and total births in each state, from the National Center for Health Statistics, *Monthly Vital Statistics Report*, July 18, 1986

UR5 - the 1985 ratio between births to unwed mothers and total births in each state, from the National Center for Health Statistics, *Monthly Vital Statistics Report*, July 17, 1987

URA - unmarried births as percent of total births in each state, average for 1983 and 1984, derived from UR3 and UR4

Table 3
Selected Entries from the Correlation Matrix

Variables	Correlation	Variables	Correlation
AFDC5, AVU	0.4308404	FA, TAP5	0.4852161
AFDC5, FPW	0.5676144	FPW, TAP5	0.4536160
AFDC5, UB4	0.3427625	FPW, UR4	0.4544095
AFDC5, UR4	0.4644188	M80, PIPC5	0.5791413
AFDC5, BHPC5	0.2434798	M80, TAP5	0.6147671
AFDCR, BHPC5	-0.5960336	M80, UR4	0.3694605
AFDCR, FA	0.3581167	PIPC5, TAP5	0.6150294
AFDCR, POVA	-0.6315263	POVA, TAP5	-0.1529815
AFDCR, UR4	-0.4565581	POVA, UB4	0.5012709
AVU, POVA	0.4121163	POVA, UR4	0.4196748
AVU, TAP5	-0.1061478	PW1824, UB4	0.2469489
AVU, UR4	0.0977951	PW1824, UR4	0.4196748
BHPC5, FPW	0.4093050	TAP5, UB4	0.6189787
BHPC5, M80	0.3752346	TAP5, UR4	0.6251695
BHPC5, POVA	0.5039383	UB4, UR4	0.8904237
BHPC5, TAP5	0.5769857	UR3, UR4	0.9943451
BHPC5, UR4	0.7910626		

other factors. In cases where such factors are statistically correlated, or intertwined, with each other, it is not possible to estimate the separate influence of each factor on the dependent variable. This is called the problem of multi-collinearity. Table 3 presents selected elements of the correlation matrix for the proposed independent variables. It shows, not surprisingly, that teenage pregnancy, race, and poverty are correlated with unwed births. It is appropriate, therefore, to omit some of these from the analysis, recognizing that the remaining one incorporates the effects of the others and that nothing is added to the predictive capability of the model by including the others. Also, the method of two-stage least squares is appropriate in situations where one or more of the independent variables may depend on some of the others. This method, which is used in this study, in effect regresses such variables first on the others and then regresses the dependent variable on all of the independent variables.

Finally, a problem in statistical estimation can arise when the residuals from the regression are correlated with one or more of the independent variables. When this occurs, the estimates are still unbiased, but the tests of significance lose some of their reliability (Gujarati, chap. 11). This problem of "heteroscedasticity" arises in this investigation. It can be lessened or corrected by using the method of weighted least squares or by transforming the variables into logarithmic form, both of which are used in this study.

Results

Table 3 shows that dependency is correlated with male unemployment, family-planning expenditures, the unwed-birth ratio, race, and (moderately) with the ratio between the average cash grant and average pay in the state. It also shows that unwed births are correlated with race, poverty, teenage pregnancy, family-planning expenditures, metropolitan status, and unwed births in preceding years. Teenage pregnancy is correlated with race, free abortions, metropolitan status, and higher per-capita income, but not with male unemployment or poverty.

Table 4 gives regression results for unwed births, as a proportion of all births and relative to the total population of the state, showing that family-planning expenditures for 1983 are a significant factor in the unwed-birth ratio for 1984 and 1985, but free abortions are not. Table 4 also shows that poverty, race, and teenage pregnancy are significant factors in unwed births, but free abortions and unemployment are not.

Table 5 shows that teenage pregnancy is significantly and positively associated with free abortions, less so with family-planning expenditures, and negatively associated with male unemployment and the size of the average AFDC benefit relative to average pay. It also shows that teenage pregnancy is associated with higher levels of per-capita state income. Almost 80 percent of variations among states in teenage pregnancy are statistically explained by variations in per-capita income, race, and the availability of free abortions.

Table 4
Regression Results, Unwed Births

Dependent Variable	1 Coefficient UR4	t-value	2 Coefficient UR4	t-value	3 Coefficient UR4	t-value	4 Coefficient UR5	t-value
Intercept	70.7047	2.6870	121.9942	10.6259	249.5284	7.4430	128.8992	3.0630
FPW	5.3683	2.5022	1.8976	1.1671	6.8878	3.7088	4.2802	2.4638
FA	19.5674	1.2465	14.2123	1.3447	27.5210	1.9387	-8.3938	-0.5793
POVA	5.8143	3.0620						
BHPC5			3.6120	7.8250				
AVU					-2.7754	-1.0847	0.8970	0.3850
AFDCR					-5832.1860	-4.7983	-3785.9880	-3.3547
TAP5							1.5119	3.9400
PIPC5								
Adj. Rsq.	0.2979		0.6375		0.4293		0.5566	

Table 4 (Continued)
Regression Results, Unwed Births

Dependent Variable	5 Coefficient URS	t-value	6 Coefficient UBS	t-value	7 Coefficient UBS	t-value
Intercept	140.1615	4.6773	2.1679	2.06	3.7253	6.1799
FPW	4.4288	2.6398	0.1167	3.5718	0.1128	3.3776
FA	-6.8505	-0.4967	0.0414	0.1505	0.2504	0.9809
POVA						
BHPCS						
AVU			0.0114	0.2435	-0.0120	-0.2618
AFDCR	-3949.0230	-3.8112	-88.0602	-4.0648	-81.3979	3.7244
TAPS	1.4640	4.0718				
PIPCS			0.0001	1.7876		
Adj. Rsq.	0.5650		0.3656		0.3346	

Table 5
Regression Results, Teenage Pregnancy

Dependent Variable	1 Coefficient TAP5	t-value	2 Coefficient TAP5	t-value	3 Coefficient TAP5	t-value	4 Coefficient TAP5	t-value	5 Coefficient TAP5	t-value
Intercept	79.7733	7.1115	20.2705	1.9960	-41.7569	-1.7316	-13.7801	-0.6583	-17.9878	-1.9315
AVU	-1.9694	-2.3003								
FPW	1.7662	2.8422	1.3551	2.2869	1.4439	3.0053	0.7103	1.6954	0.7006	1.7101
FA	20.2636	4.2661	11.0458	2.5827	7.7981	2.1460	8.3535	2.7156	8.3758	2.7959
AFDCR	-1098.3520	-2.7007			-745.8603	-1.9643				
M80			0.4060	4.6884	0.1871	2.3157	0.0214	0.2616		
POVA			0.4008	0.7246	1.2590	1.7825	-0.1228	-0.1774		
PIPC5					0.0066	4.8691	0.0050	4.0746	0.0054	7.0923
BHPC5							0.8673	4.4718	0.8660	7.4922
Adj. Rsq.	0.4018		0.5190		0.7019		0.7783		0.7873	

Table 6 presents the results of regression analysis of AFDC dependency. It shows that dependency is very significantly and positively associated with male unemployment. Dependency is also significantly and positively associated with the size of the average cash grant relative to average pay in the state and with unwed births. It is more closely associated with unwed births as a proportion of total births than with unwed births as a proportion of total state population. This may reflect the influence of the age distribution of the population; when the proportion of the population that consists of females between the ages of 18 and 24 is added as an explanatory factor (see Equation 4 in Table 6), the adjusted R-squared increases but unwed births become insignificant, probably because of multicollinearity between unwed births and the age distribution.

Free abortions have no significant effect on dependency, a result which contradicts widely-publicized claims (Torres et al. 1986), nor does teenage pregnancy directly, but teenage pregnancy affects unwed births, which increases dependency. Family planning expenditures per woman of reproductive age are positively and significantly associated with dependency.

Almost 90 percent of the variation among states in dependency rates are statistically explained by variations in male unemployment, the unwed-birth ratio, the size of the average cash grant relative to average pay in the state, public expenditures on family planning, and other factors represented by the intercept. This appears in Equations 6, 7, 9, and 10, which are weighted to correct for heteroscedasticity. The results of unweighted two-stage least-squares testing (Equation 8) are not greatly different from those of ordinary least squares (Equation 5); and the results of weighted two-stage least-squares testing (Equation 9) are not much different from those of least-squares weighted (Equation 6), suggesting that the model is not much affected by multi-collinearity among the explanatory variables.

The intercept term in Table 6 is negative and statistically significant, which may suggest that not all determinants of dependency are included in the models. Data by states on non-cash benefits to AFDC

Table 6
Regression Results, AFDC Dependency

Method	1 LS		2 LS		3 LS		4 LS		5 LS	
Dependent Variable	Coefficient AFDC5	t-value	Coefficient AFDC5	t-value	Coefficient AFDC5	t-value	Coefficient AFDC5	t-value	Coefficient AFDC5	t-value
Intercept	-5.1055	-5.0045	-4.4407	-4.0109	-2.7415	-2.4498	-10.9260	-4.2857	-4.9613	-5.3510
AVU	0.3065	5.8047	0.2698	4.8402	0.2671	4.2110	0.3382	5.6736	0.3034	5.8840
FPW	0.1024	2.3686	0.1129	2.5512	0.1602	3.0872	0.1492	3.2342	0.1010	2.3694
FA	-0.1071	-0.3559	0.2384	0.6862	0.2147	0.6033				
AFDCR	164.1564	5.3919	153.2260	5.0724	109.0560	3.1270	125.0637	4.3709	159.1475	5.9529
UR4	0.0162	5.3327							0.0159	5.5017
UB4					0.4705	2.2359	0.3754	1.9838		
UR5			0.0184	5.1139						
TAP5			-0.0153	-1.4324						
PW1824							126.0618	3.3670		
Instruments										
Weight										
Adj. Rsq.	0.6868		0.6806		0.5369		0.6288		0.6928	

Table 6 (continued)
Regression Results, AFDC Dependency

Method	6 LS(W) Coefficient	t-value	7 LS(W) Coefficient	t-value	8 TSLS Coefficient	t-value	9 TSLS(W) Coefficient	t-value	10 TSLS(W) Coefficient	t-value
Dependent Variable	AFDC5		AFDC5		AFDC5		AFDC5		AFDC5	
Intercept	-5.2575	-4.3781	-5.4127	-4.9665	-4.8915	-5.2511	-5.2361	-4.3430	-5.3746	-4.9098
AVU	0.3398	6.3488	0.3488	7.2378	0.3028	5.8699	0.3397	6.3501	0.3484	7.2253
FPW	0.0887	2.0370	0.1289	2.3026	0.1034	2.4188	0.0894	2.0464	0.1306	2.3250
FA										
AFDCR	161.5980	5.4123	158.6257	5.1883	157.6556	5.8816	161.1250	5.3795	157.8051	5.1480
UR4	0.0162	4.5096	0.0151	4.2198	0.0156	5.3488	0.0161	4.4437	0.0149	4.1357
UB4										
UR5										
TAP5										
PW1824										
Instruments					UR3		UR3		UR3	
Weight	AFDC5, predicted		AVU				AFDC5, predicted		AVU	
Adj. Rsq.	0.8875		0.8516		0.6928		0.8872		0.8516	

recipients are not available, and probably significantly affect the decision to apply for public assistance.

The intercept may also indicate that the relationship between dependency and the independent variables is not linear throughout. In the very unlikely event that all of the independent variables had zero value, then dependency might be zero but could hardly be negative.

Using the model in Table 6, Equation 9 to predict dependency for California in 1985, given that AVU, average male unemployment in 1983–1985, was 8.2 percent; that FPW, total government expenditures on contraceptives, sterilizations, and abortions per woman aged 15–44 in 1983 amounted to $15.51; that AFDCR, the ratio between the 1985 average AFDC monthly grant per family and average annual pay, amounted to 0.0245; and that UR4, the 1984 ratio between births to unwed mothers and total births amounted to 238.4 per thousand; AFDC5, the percent of the population receiving AID to Families with Dependent Children should have been 6.7 percent, compared to the actual rate of 6.2 percent.

Again, using the model in Equation 9, if FPW, family-planning expenditures, had been $1 more per woman, predicted dependency would have been 6.8 percent instead of 6.7 percent. If male unemployment had been 9.2 percent instead of 8.2 percent, predicted dependency would have been 7.1 percent instead of 6.7 percent. If the monthly cash grant had amounted to 3 percent of average annual pay in the state instead of the actual 2.4 percent, this would have increased predicted dependency to 7.6 percent. Taking account of the effects of family planning expenditures on unwed births as shown in Table 4, Equation 3, if FPW had been $1 more per woman, predicted unwed births would have amounted to 7 more per thousand, increasing dependency by a tenth of a percentage point.

Using the model in Equation 9 of Table 6 and 1992 data on government birth-control expenditures per woman aged 18–44 in California (Daly and Gold 1993) and data for 1992 and 1993 on male unemployment, the unwed birth ratio, and the monthly cash grant relative to average pay (*Statistical Abstract*, 1994, 1995), the model

Table 7
Regression Results, Ln AFDC5

Method	1 LS		2 LS		3 TSLS	
Dependent Variable	Coefficient LnAFDC5	t-value	Coefficient LnAFDC5	t-value	Coefficient LnAFDC5	t-value
Intercept	-2.0748	-3.2495	-2.4167	-3.4258	-2.0165	-3.1452
LnAVU	0.5610	4.5763	0.5363	4.3216	0.5588	4.5573
LnFPW	0.2220	2.3513	0.2299	2.3991	0.2278	2.4082
LnAFDCR	0.6035	5.3161	0.5915	5.1444	0.5969	5.2484
LnUR4	0.8244	5.7081			0.8066	5.5439
LnUR5			0.8768	5.4853		
Instrument					LnUR3	
Adj. Rsq.	0.6571		0.6457		0.6570	

predicts that AFDC dependency in 1993 should have been 8.5 percent of the state population, compared with an actual rate of 8.3 percent.

Table 7 presents the results of logarithmic transformation of the variables, another procedure recommended for dealing with heteroscedasticity. The same relationships appear. A useful feature of logarithmic transformations is that they permit the estimation of elasticities. Thus, the results indicate that a one percent increase in male unemployment increases the dependency rate by more than 0.5 percent; a one percent increase in the average cash grant relative to average pay increases the dependency rate by 0.6 percent; a one percent increase in the unwed birth ratio increases the dependency rate by 0.8 percent; and a one percent increase in family planning expenditures per woman of reproductive age increases the dependency rate by about 0.2 percent.

There is, thus, a clearly positive relationship between dependency, unwed births, and teenage pregnancy, on the one hand, and government family-planning programs on the other. There is no evidence that the government birth-control programs reduce the problems which they claim to address. It is, nevertheless, possible that the programs represent efforts to control long-standing problems, and

that, even though they appear in statistical models to be unsuccessful, the problems would be worse in the absence of the programs.

There are some statistical tests of causality that can be used to help resolve such ambiguous cases (Gujarati 1988, pp. 541–43). They proved not to be helpful in this study, however. What they chiefly showed is the very high year-to-year correspondence in state ratios of unwed births, rates of teenage pregnancy, and public expenditures on birth control. What they suggest is that public budgeting for "family planning" is the result of an embedded political process that continues to finance programs whether or not they correct problems and that the problems continue and increase despite the publicly funded programs ostensibly aimed at control.

The models in Table 6 were expanded to test for the effect of parental involvement laws, which require parental notification or permission for minors' abortions. Using a dummy variable to represent the existence of such a law, the results indicated that such laws do tend to reduce dependency, but the coefficients were not statistically significant. This is not surprising, since the girls under age 18 to which such laws apply accounted for only 15 percent of the total births to unmarried women in 1985 (13 percent in 1993) and only a fraction of these became dependent on public assistance. Even if regression analysis were to show a significant effect of such laws, this would leave unanswered the question as to their effects on surrounding states. That is, it may be that the chief effect of such laws is, as some have said (Cartoof and Klerman 1986), to send young girls out of state for their abortions.

Table 8 addresses these questions. It compares birth rates and abortion rates among teenagers in 1980 and 1988 for states having parental involvement laws in 1988 with the rates in surrounding states and in other states. The rates are weighted averages for the states in each of the three groups, the weights being the number of young women of age 15–19 in each state. The table shows that birth rates as well as abortion rates declined in the states having parental involvement laws, that there was no increase in the rates for surrounding states, and that

Table 8
Weighted Average[1] Birth and Abortion Rates per 1,000 Women of Age 15–19 in States with Parental Involvement Laws, Surrounding States, and Other States, 1980 and 1988

	1980 Rate[4] of		1988 Rate[5] of		1980–88 Change in Rate of	
	Birth	Abortion	Birth	Abortion	Birth	Abortion
States with Parental Involvement Laws 1988\2\	55	33	51	32	-4	-1
Surrounding States\3\	55	40	54	40	-1	0
Other States	49	50	51	53	2	3
U.S.	53	43	53	43	0	0

[1]Weighted by numbers of women 15–19.
[2]Laws in force in 1988: Alabama, Indiana, Louisiana, Massachusetts, Missouri, No. Dakota, Rhode Island, and Utah.
[3]Arizona, Arkansas, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Iowa, Kansas, Kentucky, Michigan, Minnesota, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New York, Ohio, Oklahoma, So. Dakota, Tennessee, Texas, Vermont, Wyoming.
[4]Singh 1986.
[5]Henshaw 1993.

both rates increased in other states. These results strongly suggest that families provide better guidance for young people than do state-subsidized birth controllers.

Conclusions

This study has found no evidence that public subsidies for contraceptives, abortions, and sterilizations reduce the incidence of public assistance, contrary to much-publicized claims. Quite the opposite, the results indicate that higher expenditures on government-subsidized birth control are associated with higher ratios of unwed births, higher rates of teenage pregnancy, and higher levels of dependency, while restrictions on access, in the form of parental-involvement requirements for minors' abortions, are associated with reductions in unwed pregnancies, births, and abortions.

The results also suggest that the higher the public-assistance benefit is relative to average pay, the higher the rate of dependency, which probably reflects the economic rationality of the recipients of

public assistance, as well as the adverse-selection effect familiar to economists (that is, high public-assistance benefits attract immigrants).

The high and significant correlation between male unemployment and dependence on public assistance suggests that the most effective way of combating the so-called "welfare problem" may be to improve labor markets—that is, to free them from the prevailing government restrictions—rather than to subsidize birth control. Many economists have called attention to the government's major role in producing unemployment (Rothbard 1978; Williams 1982; Vedder 1993; Lindbeck 1995).

This study has demonstrated the futility of trying to reduce dependency by means of yet another public intervention—government-subsidized birth control. Austrian economics has shown the diverse ways in which government-transfer programs distort incentives, both among those who receive the transfers and those who pay the taxes to finance them (Rothbard 1978, pp. 142–70). A moment's reflection shows why this should be so in the case of government birth control. One reason may lie, as some authors have suggested, in the "moral hazard" effect—that is, the encouragement which public "family planning" programs give to sexual risk-taking which would not occur to the same extent in the absence of the programs (Baumol and Blinder 1991, p. 257). Also, the operators of public-birth control programs need a measure of their "productivity" to justify the continuation and growth of their subsidies. The number of "acceptors" of contraceptives, sterilizations, and abortions serves as this measure. Hence, recruitment of customers for such subsidized services is essential. Such recruitment efforts will be most effective when concentrated among those not already served by private providers—that is, among the unmarried, young, and inexperienced, and those with little income of their own. High school and college students provide an ideal market, and the very large efforts at sex "education" and recruitment of these potential customers should come as no surprise. These activities will obviously

tend to increase the problems which they propose to correct, as the evidence indicates (Marsiglio 1986). The recruiters, however, will argue that the problems would be much worse in the absence of their efforts, as we have seen.

In addition, the subsidies constitute an incentive to inflate the reported number of users of the "services." For example, performing "abortions" on non-pregnant clients appears to be common (Rhomberg 1980, p. 63).

Finally, the recipients of subsidies have the means and the motive to engage in heavy lobbying of government officials and courting of the media to ensure the continuation and growth of their largesse, and to plead that the reason their programs do not produce the promised results is that they do not yet have enough financing. Government-financed Planned Parenthood operates its own research agencies, publishes its own journals, and engages in extensive litigation to promote government birth control. Through its research arm, the Alan Guttmacher Institute, the agency distributed its highly influental glossy booklet *11 Million Teenagers: What Can Be Done about the Epidemic of Adolescent Pregnancies in the United States* to government officials, newspaper writers, parent–teacher organizations, churches, youth organizations, and other creators of public opinion throughout the nation (Kasun 1988, p. 117). A typical Planned Parenthood clinic, which derives most of its income from government sources, spends tens of thousands of dollars annually on lobbying government officials, and on travel for that purpose (Six Rivers Planned Parenthood 1994). In addition, clinic personnel play an active role in party politics.

Politicians, therefore, face a watchful, committed, government-financed special interest group, ready to administer swift punishments and rewards for their actions, while the general public remains largely indifferent.

Obviously, none of these activities can be expected to reduce the incidence of sexual risk-taking and the unmarried births and dependency to which it leads. On the contrary, they should be expected

to increase it, as indicated by the results of this study. The results, therefore, confirm Austrian economic reasoning and, indeed, what common sense would suggest.

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