



Abortion: Decrease of the U.S. Population & Effects on Society

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Introduction

Forty years of legal abortion has had a massive effect on the U.S. population, both socially and economically. Employing national data and the methodologically strongest econometric work available, this study determines just how much abortion has affected the population and, thereby, the U.S. workforce.¹ Via the effect on population, one establishes the negative economic impact abortion has now on the country because of its legalization. Abortion affects society on a massive scale, impacting the populace in ways reaching beyond the destruction of life. It is in the interest of public policy, including health policy and policy concerned with economic strength, to discourage abortion.

Background

In 1973, the Supreme Court addressed the issue of abortion in two cases, *Roe v. Wade* and *Doe v. Bolton*. The Court's holdings in *Roe* and *Doe* had the effect of legalizing abortion on demand through all nine months of pregnancy. Prior to the federal legalization of abortion, states had the authority

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¹See Henry Potrykus, *Causal Determination for Social Policy*, available at <http://marri.us/causality>, techreport (MARRI, 2013), for an elaboration on what is meant here by cause and effect and how these are determined for public policy actions.

to independently determine abortion's legality. Although states could still impose restrictions in the second and third trimesters of pregnancy, 1973 marked the year in which all states were required to legalize abortion.

There are in the range of 1.2 million to 1.5 million abortions per year.² This number is uncertain, largely because of inadequate standards and reporting requirements for this (serious) medical procedure. Given that each state maintains its own standards for the administration of abortions, there is no national standard for recording and reporting the number of unborn aborted each year. Some states do not require compiling this information. This range of values (1.2 million to 1.5 million abortions per year) thus reflects numbers deduced by statisticians.

Effect on Births

The effect of abortion on birthrate is not simply given by the raw number of abortions (1.2 to 1.5 million per year). Abortions reflect both births that would have otherwise taken place, and children that were only conceived because of how abortion changes society. The total number of births in the United States has been consistently around four million children per year since the 1970s.³ This basic demographic number will be described further below.

An assessment of the effect of abortion on a population must take into account that some of the children aborted would not have been conceived absent the legalization of abortion. How many of the aborted children would not have been conceived is the question central to understanding the effect of abortion on birthrate itself. Knowing the total number of abortions and subtracting the number of children that would not have been conceived absent the legalization of abortion yields the number of children that would otherwise have been born had abortion not been legalized. This difference (abortions minus 'new' conceptions) is inherently influenced by the change in sexual behaviors (including new conceptions) arising as a consequence of legalizing of abortion.

²Rebecca Blank, Christine George, and Rebecca London, "State abortion rates: The impact of policies, providers, politics, demographics, and economic environment," *Journal of Health Economics* 15 (1996): 513–553.

³U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. *Births: Preliminary data for 2011*, by Brady E. Hamilton, Joyce A. Martin, and Stephanie J. Ventura. National Vital Statistics Reports, 61, no. 5. Figure 2, "Live births and general fertility rates: United States, final 1920-2010 and preliminary 2011." <http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61.05.pdf> (accessed June 25, 2013).

How did legalizing abortion change conception (sexual) behavior? Absence of abortion serves as a deterrent for engaging in certain sexual behaviors. (Abortion encourages sexual behavior – in particular, out-of-wedlock sexual behavior – see below.) The expected consequence of conception, and, in particular, the possibility of out-of-wedlock birth, previously discouraged sexual behavior, particularly that outside of marriage: Analysis below demonstrates that an increased incidence of sexual (conception) behavior was a consequence of the legalization of abortion.⁴ When the consequence of a child is removed from conception behavior, individuals are more likely to engage in certain types of sexual behavior. The availability of a new option to abort one’s child has resulted in a greater number of children being conceived than there would have been had conception behavior retained the normal result of a child being born.

Since abortion has resulted in increased conception behavior, and hence in increased conception, one must isolate the number of pregnancies that *would not have occurred* but for the legalization of abortion. It is first necessary to determine the impact of abortion on total births. Then, by determining this impact of abortion, the percentage of aborted children that would otherwise not have been conceived can be determined.

A “natural experiment” among the states shows that abortion causally reduces births by around 10 percent.⁵ This value of 10 percent represents the children that would otherwise have been born but for the legalization of abortion, and is derived via an analysis of pre-*Roe v. Wade* state legislation:

⁴Elizabeth Oltmanns Ananat et al., “Abortion and Selection,” *The Review of Economics and Statistics* 91, no. 1 (2009): 124–136, p. 127 (first two full paragraphs, and succeeding analysis) gives an independent, parallel elucidation of this fact. The model developed in that paper also show that the *effect* on sexual behavior dealt with throughout this paper endures over the decades following the legalization of abortion. An independent demonstration of the relative consistency (and reversibility) of the sociological phenomenon investigated here (abortion legalization affecting human fertility) is found in the analyses of the Eastern European countries performed in the reference of the next footnote.

Note, too, the technically rigorous work referenced in this footnote also deals with assertions on abortion popularized in Steven Levitt and Stephen Dubner, *Freakonomics: A rogue economist explores the hidden side of everything* (William Morrow, 2005).

⁵Philip Levine, *Sex and Consequences: Abortion, Public Policy, and the Economics of Fertility* (Princeton University Press, 2007), figure 5.6 clearly and explicitly illustrates this impact of abortion legalization on birthrate.

Albeit likely, this number is somewhat higher than another figure used in the literature (somewhat above 6 percent). See the appendix for an analysis as to how using the lower figure (6 percent) modifies the findings that follow. In fact, all findings are robust to the uncertainty in this effect on birthrate: The numbers stated in the analysis to come are conservative.

Prior to the ruling in *Roe v. Wade*, states individually determined the legality of abortion. This phenomenon of these states individually legalizing abortion (at different times) creates the natural experiment: One finds that the greater the distance from the closest early legalizing abortion state, the less likely a woman is to abort her child. This natural experiment then shows that legalizing states experience a 10 percent decline in birthrate compared to non-legalizing states far away. Early legalizing states demonstrate the direct effect of abortion on birthrate. Non-legalizing states far away serve as a kind of control group for abortion's impact on birthrate.⁶

From the 1970s through the 2000s the number of live births averaged approximately four million per year. This value of four million births per year is roughly constant. While over this period the U.S. population has increased, the fertility rate (birthrate) in the U.S. has decreased per (fertile) adult. An increase in the U.S. population has compensated for the per adult decrease in fertility.

Given that abortion caused a 10 percent decrease in the number of children born, one determines that approximately a third of aborted children would be present today had abortion not been legalized.⁷ While 100 percent of successfully aborted children are clearly not alive, others would not have been conceived due to the exercise of self-restraint from engaging in sex. It is the remaining percent of those aborted that would have been contributors to the labor force (33 percent of all abortions, about 400,000 persons per year). The effect of abortion on birthrate can now be used to determine an economic impact of abortion on society.

The Economic Impact of Abortion

Legalizing abortion has a many times larger negative effect on the economy than any consumption-savings effect claimed by some. The assertion that by eliminating a population, one no longer has to spend money to feed or clothe that population, ignores the fact that one thereby destroys a population that will work. At a loss of over 400,000 persons per year (that would have otherwise become members of society), over 40 years, in total, about 15 million persons have been lost because of abortion's legalization. Hence, approximately 10 million workers have been eliminated

⁶This is done in the analysis in Levine. See Potrykus for an exposition of the concept.

⁷ $(4 \text{ million births per year}) \times (10\% \text{ decreased birthrate}) = 400,000 \text{ births (that would have been) lost to abortion. So, } 400,000 / 1.2 \text{ million annual abortions} = 33 \text{ percent of aborted children would be present today.}$

by abortion.⁸ Of these 10 million, approximately 5 million would be of age to actively participate in the labor force today. Without legalized abortion, over 5 million additional people would be part of the current labor force. This is a substantial fraction of the present labor force of 150 million workers.

Legalizing abortion causes a loss of between \$70 billion and \$135 billion of economic activity (valued work) each year in the United States.⁹ Suppose an income tax rate of 15 to 25 percent.¹⁰ Between \$10 billion and \$33 billion is lost presently in annual tax revenue. This is a significantly larger loss than the less than \$2 billion of public funds some estimate abortion “saves.”¹¹

⁸This is based on a standard labor participation rate of two-thirds, a rate that is largely valid over the last two decades.

⁹Assuming an average income of \$14,000 to \$27,000 per aborted worker per year times 5 million lost (persons who would be working now) gives \$70 billion to \$135 billion per year lost in valued economic activity (work). The median U.S. income per worker is around \$40,000 per year. \$40,000 is 150 percent of \$27,000. See the appendix for how this (much) lower value (median worker having income 50 percent higher than aborted worker) for the average aborted worker is obtained.

¹⁰In recent history, mandatory FICA taxes have alone been more than 15 percent of wages. A 15- to 25-percent tax rate represents a serious under-estimate of tax revenue from these workers that would otherwise be working now had abortion not been legalized.

For the lower quintiles, Brookings and the Urban Institute put average *household net* tax rates at something below 10 percent up to something around 20 percent in recent history. (Their web resource is available at <http://www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=456>.) The rough estimate above can be reconciled with these net historical levels by noting labor participation rates are about 66%. (10 percent is 66% of 15 percent. 20 percent tax on 66% of workers is obviously less than an average tax of 20 percent on households.) We wish to focus on the worker that would be alive.

Note moreover that net taxes (which for the lower quintiles lately dropped far below their historical rates) also include government transfers in them. See the appendix for how poverty and income distribution affect this tax calculation: The lately-occurring 10 percent average for the lower quintiles may be taken as a reasonable, lower bound for the tax rate that would be now be levied on these workers who are not alive. (The appendix quotes that at most a 20 percent shift – a shift down of one quintile class – is what is seen [albeit with great uncertainty] in the poverty classification of these workers.) See the next footnote for how this avoids the analytical issues with trying to deduce “savings” from abortion to federal program expense.

¹¹Jonathan Gruber, Phillip Levine, and Douglas Staiger, “Abortion Legalization and Child Living Circumstances: Who is the ‘Marginal Child?’” *The Quarterly Journal of Economics* 114, no. 1 (1999): 263–291.

This is a bit of an “apples and oranges” comparison – see the appendix for a discussion on this study. However, there is a yet more serious issue in deducing such “savings” to poverty programs, as the growth of poverty programs has been so explosive over the last two to three decades. Over that period, the programs have grown from less than \$200 billion to more than \$650 billion (2010 dollars). (The U.S. population expanded by

Legalizing Abortion Changes Sexual Behavior

Legalizing abortion is opening Pandora’s Box: It has a massive impact on sexual behavior society-wide. Abortion affects not only economics. It also affects sexual activity. The cumulative effect of abortion has been a sexual revolution of sorts, entailing consequences that go beyond the destruction of offspring:

According to the CDC, 15 percent of children aborted were the children of married mothers.¹² The remaining 85 percent of children aborted are the children of unmarried mothers. Eighty-five percent of abortions are by unmarried mothers. These unwed mothers changed their sexual behavior:

At most, all 15 percent of abortions by *married* mothers are conceptions that would not have occurred (had abortion not been legalized). Similarly, the abortion rate before legalization was roughly 10 percent of what it became after legalization.¹³ As noted above, 66 percent of abortions are conceptions that would not have occurred but for changed sexual behavior. This means *at least* 40 percent of abortions are conceptions by *unmarried* women that occur as a result of sexual activity that would not have occurred without abortion legalization (66 percent - 15 percent - 10 percent \simeq 40 percent).

less than 30 percent over that time.) The programs have expanded far beyond covering poverty-level individuals. (The programs regularly transfer money to those at 200 percent of the poverty threshold.) David Armor and Sonia Sousa, “Restoring a True Safety Net,” *National Affairs*, no. 13 (2012): 3–28.

The economic loss calculated above is concrete and conservative, based upon an empirically deduced counterfactual (how many would be alive and working now had abortion not been legalized). “Savings” cannot be so estimated, not because a counterfactual cannot be found (it is uncertain in its estimate), but because the programs of interest show no reasonable fiscal definability over the past decades. Program function may not be based upon a status like “poverty” but on political general equilibrium (wealth transfer) concerns. See David Autor and Mark Duggan, “The Rise in the Disability Roles and the Decline in Unemployment,” *Quarterly Journal of Economics* (2003), for a proof supporting this other line of reasoning.

¹²U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. *Abortion Surveillance – United States, 2009*, by Kim D. Burley et al. Surveillance Summaries, 61, no. 8. Table 17, “Reported abortions, by known marital status and reporting area of occurrence – selected states, United States, 2009.” <http://www.cdc.gov/mmwr/pdf/ss/ss6108.pdf> (accessed June 25, 2013).

¹³The number of illegal abortions may be estimated by a method pioneered in Levine and used in Oltmanns Ananat et al. The calculation is available upon request. It compares retrospective questions in NSFG Cycle 3 (a 1982 survey containing questions concerning 1965 through 1968) and NSFG Cycle 5 (a 1995 survey containing questions concerning 1978 through 1981).

Legalizing abortion increases sexual behavior outside of wedlock. Around 600,000 children – 40 percent of 1.5 million abortions, and around 15 percent of the *total* number of births (4 million) – are now destroyed annually on account of being conceived out of wedlock because abortion was legalized. This is a massive social and ecological effect abortion has on sexual behavior: Legalizing abortion creates a massive amount of new out-of-wedlock conceptions that will then be destroyed.

Abortion Causes Venereal Disease

The sexual behavior resulting from legalizing abortion has other consequences. Legalizing abortion creates more venereal disease. The availability of abortion removes the immediate consequence (conception) that previously discouraged engaging in sexual behavior outside of marriage, as established above. Increased sexual activity outside of marriage led to a significant increase in venereal disease:

Similar to the natural experiment showing the impact of legalizing abortion on birthrate, a natural experiment may also be studied in the rise of venereal disease because of abortion’s legalization.¹⁴ The incidence of sexually transmitted diseases (reported and treated) in states legalizing abortion is compared to the incidence in non-legalizing states. Once again, early legalizing states (subsequent to their legalizing abortion) show an increased number of gonorrhea cases (a “step up” in cases). Non-legalizing states show an increase in gonorrhea cases, but the rate of increase is significantly more modest (no “step up”). This difference persists until 1973 (the date of universal abortion legalization), when the difference disappears.

Legalizing abortion creates other social costs, by venereal disease transmission, by changing sexual behavior. Epidemiological costs, including those of short-term and ongoing treatment, are not included in the economic loss calculated above (which was a labor loss), but are an added consequence of legalizing abortion. Nearly *a quarter* of gonorrhea and syphilis cases are being created by legalized abortion *alone*.¹⁵

Depending on specific pathology, this spread occurs as well in other sexually transmitted diseases. These diseases have their own social and medical costs.

¹⁴Jonathan Klick and Thomas Stratmann, “The Effect of Abortion Legalization on Sexual Behavior: Evidence from Sexually Transmitted Diseases,” *Journal of Legal Studies* 32 (2003): 407–433.

¹⁵Ibid.

Conclusion

In 1973, Justices Warren Burger, Harry Blackmun, William Douglas, William Brennan, Potter Stewart, Thurgood Marshall, and Lewis Powell legalized abortion in the United States. Since their decision, abortion has destroyed roughly 50 million unborn. Calculations by government sponsored agencies and groups, such as affiliates of Planned Parenthood, assert an associated savings of public funds. Those studies consider only immediate consumption (demand) decrease. Such arithmetic fails to take into account the long-run economic impact of abortion on society (through production): More than \$10 billion is lost per year in tax revenue and much more (around \$100 billion per year) is lost each year in valued labor. But the effect of abortion is not limited to lost labor.

Legalizing abortion massively changes sexual behaviors outside of marriage. The consequent revolution increases conception out of wedlock and causes venereal disease. In a country of a few million births per year, these increases themselves approach the millions. The additional disease transmission vector comes with a cost of around \$300 million annually, paid collectively by individuals and through taxes.¹⁶

The magnitude of these behavioral changes, and the overall social and economic burdens of the changes created through legalizing abortion eclipse any claimed benefits of the practice. Abortion does not benefit society. The act undermines the economy, causes disease, and warps society's most important relationship.

¹⁶Klick and Stratmann. If legalizing abortion can be presumed to have a similar (causal) effect on the transmission of other sexually transmitted diseases, legalizing abortion creates treatment needs costing something around \$4 billion annually.

Technical Appendix

Estimating the income of aborted workers

It is a difficult matter to estimate the lower income (if lower at all) of the grown-up child who would otherwise be alive if abortion had not been legalized. The study which is strongest methodologically on this is Oltmanns Anant, Gruber, Levine, and Staiger.¹⁷ That study finds no determinable difference in poverty or labor force status for these grown-up children. (The study's indeterminate estimates – maybe between a 2 percent to 20 percent higher occurrence of poverty for these grown-up children – are far smaller than the percentage used later below.) And, these grown-up children (children who would be grown-up had abortion not been legal), if anything, would have been *more* employed than their cohort who were not aborted.¹⁸

This indeterminate study, however, is in contradistinction to the study by Gruber, Levine, and Staiger.¹⁹ (The two studies use similar data sets and similar econometric techniques.) That study finds these children would have about a 50 percent higher chance of growing up in single-parent homes. This study also finds, for the young child, single-parent homes are the determinant reason for these young children's higher representation in impoverished households. That creating broken homes creates poverty is an established fact.²⁰

These two analyses can be reconciled if abortion itself creates broken (single-parent) homes. We digress into an exposition of this:

As is shown in the second part of this paper, abortion creates out-of-wedlock sexual activity, massively, across the population. This sexual activity can be created by 1) increased sexual activity (much occurring out of wedlock) or 2) a proportionate decrease in sexual intercourse between the sexes in marriage (a kind of erosion of marriage). Clearly these are similar and may both obtain (they are complimentary).

If (2) is sufficiently common, legalizing abortion creates broken households (proportionately less intercourse between the sexes in marriage). These broken households would not exist but for the legalization of abortion.

¹⁷Oltmanns Ananat et al.

¹⁸There is a theoretically sound reason for why abortion undermines labor force participation, independent of the demographic effects we have investigated in this paper.

¹⁹Gruber, Levine, and Staiger.

²⁰Jonathan Gruber, "Is Making Divorce Easier Bad for Children? The Long-Run Implications of Unilateral Divorce," *Journal of Labor Economics* 22, no. 4 (2004): 799–833.

Marianne Page and Ann Huff Stevens, "The Economic Consequences of Absent Parents," *Journal of Human Resources* 39, no. 1 (2004): 80–107.

The (uncertain) measurements of Anant, Gruber, Levine, and Staiger, showing that there is no determinable difference in poverty or labor force status for these grown-up children, may thus be in part attributed to the creation of these households simultaneous with the abortion of the children themselves. Children form a basis for marriage.

This is the proposition suggested by Nobel Prize economist George Akerlof.²¹ We do not rely on this (more provisional) conclusion for the more determinate work of this paper.

Nonetheless it is worth continuing the digression and noting that this conclusion (from (2)) becomes all the more likely (all the more pronounced) as the percentage effect of abortion legalization on birthrate decreases. Abortion then more massively affects sexual behavior. (To see this, repeat the calculations given in the paper, but replace 10 percent of 4 million births with 8 percent of 4 million births.) Levine, in particular, estimates a smaller number than our limiting 10 percent change in birthrate from abortion legalization (he estimates 8 percent).

To conclude the digression, there is stability to the estimates in the main text. (A canceling of errors of sorts occurs:) Suppose this smaller percent effect on birthrate obtains (8 percent). The labor force lost to abortion's legalization may be scaled down (e.g., by a factor of 8/10), but the sexual effects of abortion become more massive (more single households were created that would not otherwise be impoverished, by the consideration above of the asked-for repeated calculation). Such is the nature of the sexual activity (revolution) under investigation.

Be all that as it may, this study still requires an estimate of the lower income (if lower at all) of the grown-up child who would otherwise be alive if abortion had not been legalized. A third, non-U.S. study, by Pop-Eleches, shows abortion legalization does have a (quite small, determinable) influence on poverty and labor force status of the affected population.²² None of these studies serves as sure ground for estimating the (lower) income of interest.

However, a rough bound may be found by propagating to adulthood the higher chance of these children being in poverty (around 50 percent higher chance). This goes against the first paper mentioned, and, more importantly, is an over-estimation of the income difference of the grown-up child who would otherwise be alive if abortion had not been legalized:

²¹George Akerlof, "Men Without Children," *The Economic Journal* 108 (Mar. 1998): 287–309.

²²Cristian Pop-Eleches, "The Impact of an Abortion Ban on Socioeconomic Outcomes of Children: Evidence from Romania," *Journal of Political Economy* 14 (2006): 744–773.

First, it assumes the perfect correlation of adult poverty with child poverty. Though this correlation be high, poverty, by definition, is at one extreme of the income distribution (the lower extreme).²³ Thus, there must be a “regression to the mean”: For these persons, there must be a movement towards higher incomes. This is simply because of mixing and redistribution of the population as their lives evolve: The losingest sports team, after replay and replay, won’t always stay the losingest. How much movement there is, is what the two studies referenced above sought to uncover (not concerning sports).

Second, such an over-estimate also goes against distributional income effects. Consider the shape of the bell curve (or any tapering-off distribution): Moving the whole population 50 percent down in income increases by much more than 2 times those now in poverty. This is because those in poverty are a small fraction (the tapered end of the income distribution) of the whole population: Moving a large fraction (the non-impooverished mass of people) into the tapered end (small fraction) increases that smaller tapered end by much more mass than it had previously had.

Relatively small changes down in income, across the whole population, will cause relatively larger changes in the fraction impooverished.

Thus, a 50 percent higher probability of being in poverty translates to less than a 33 percent decrease in income (across the population), given distributional effects.²⁴

This number may serve as our (gross) bound. The other (yet lower) bound used in the text (\$14,000) is a yet lower adjustment for the fact that the 10 percent reduction in birthrate might be considered too large. A lower bound taken from available studies (referenced throughout the text) – 5 percent reduction in birthrate – corresponds to the lower total cost of labor lost set by this lower income figure.²⁵

²³15 percent of persons are in poverty.

²⁴Shifting incomes in the distribution down 33 percent shifts (more than) 50 percent more persons into poverty. Shifting income by 50 percent would halve the income and (more than) double the number of persons in poverty.

²⁵There is another effect on the *currently experienced* lost labor which derives from abortion being legalized “only” 40 years ago. Older persons’ work is valued more highly than younger persons’. See Henry Potrykus and Patrick Fagan, *The Divorce Revolution Perpetually Reduces U.S. Economic Growth*, available at <http://marri.us/productivity-divorce>, techreport (MARRI, 2012). Other things being equal, in the long run the average age of workers (those 20 to 65 years old) who have been aborted will be that of all workers. Now, however, those who have been aborted are somewhat younger than the average worker. A steady relationship between the ages of aborted workers and those of all workers will be reached by around 2040 (2038 - 1973 = 65 years). Moreover, since workers who are older than 55 see real wages decline (wages

However, this part of the analysis is not complete with this income effect. Impoverished households use government services more. Fortunately, the first studies above estimate these costs: These estimates are quoted in the main text and are elaborated upon in adjoining footnotes.

peak at around 55 years of age),²⁶ the relative youth of those who have been aborted will only influence labor contribution rates until the 2020s. At that point those who have been aborted would briefly have been more productive than the average population. Because these population distribution effects are temporary, we eschew adding this additional dimension of complexity to quantifying the annual amount of labor lost: We prefer parameters determined at the steady state. Such concerns do modestly affect the *cumulative* toll of abortion up to this point.