Reproductive Health Laws, Contraceptive Use and Fertility Trends Around the World

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Abstract

In this paper we examine the effect of changes in reproductive health laws on contraceptive use and fertility outcomes around the world. We develop an index of abortion, contraception, and voluntary sterilization laws around the world dating from 1970 to the present. Merging this with data from the Demographic and Health Survey, we analyze how changes in the laws affected contraceptive use, and then how the laws and uptake of abortion, contraception, and sterilization affected the fertility rate over time and across countries. Using data from the 76 DHS countries merged with the reproductive health index, we find that more liberal abortion, contraceptive, and sterilization laws are associated with higher contraceptive prevalence and lower fertility rates. However, religion and a country's legal origins play key roles in explaining the heterogeneous relationship between the law, use, and fertility trends across countries and over time.

Introduction

In this paper we examine the effect of changes in reproductive health laws on contraceptive prevalence and fertility outcomes around the world. Much work initiated in the 1970s and 1980s considered the decline in unsafe illegal abortions (Potts, Diggory and Peel 1977), the liberalization of contraception laws (Stepan and Kellogg 1974), and voluntary sterilization laws and acceptors (Ross, Hong and Huber 1985). The aim of this study is to conduct panel study of the relationship between laws, use and fertility outcomes across the different reproductive health technologies, across countries, and over time from 1970 to the present in 76 low and middle income countries.

Through this analysis we aim to shed light on the role of the laws in helping or hindering various trends across countries in: legal abortion (compared to unsafe abortion) rates; contraceptive prevalence and unmet need; and trends in sterilization

acceptors. Understanding the role of the law in shaping these trends in reproductive health technology prevalence may guide us in understanding wide differentials in unmet need for contraceptive around the world. We then take the analysis further in exploring variation in fertility trends around the world and the role of the laws in determining changes in fertility rates. Preliminary results indicate that more liberal reproductive health laws led to lower fertility rates for young women in urban areas of lower and middle income countries, but did not affect older women, or women in rural areas. Moreover, religion and a country's legal origins play a part in explaining cross country variation in prevalence of reproductive health technologies and fertility trends.

Reproductive Health Laws Index

In a unique endeavor we develop and index of abortion, contraceptive pill, condom, IUD, and voluntary sterilization laws around the world. To construct the abortion law index we use information on national abortion legislation compiled by the United Nations Population Division (United Nations Population Division 2002). The data contain detailed information on the legal availability of abortion over time. We use the United Nations' system to classify current laws. This system classifies seven legal reasons for an abortion: to save the life of the woman; to preserve her physical health; to preserve her mental health; consequent on rape or incest; fetal impairment; economic or social reasons; and available on request. Our data contain indicator variables for each of these seven categories. A "1" indicates that abortion is available for the given reason, and "0" means that it is not. When an abortion is available on request, we assume availability for any of the other reasons if this is not explicitly stated.

We construct an index summarizing the availability of abortion. A country gets a score of zero if abortion is not legal for any reason. One is added to the score for each circumstance in which abortion is available, with a maximum score of 7. In Bloom, Canning, Fink and Finlay (2009) we explain why we use an index rather than use each law separately.

Worldwide, abortion is a common method of ending a pregnancy (Henshaw, Singh and Haas 1999), and this is also the case in developing countries (Anarfi 2003).

The contraceptive (pill, condom, IUD) data are sourced from the Law and Population Monograph Series (Stepan and Kellogg 1974) published by the Fletcher School of Law and Diplomacy at Tufts University. Efforts to collate the contraceptive laws around the world were then taken over by Annual Population Review at Harvard Law School in 197? when the Tufts Law and Population Programme was discontinued. The Annual Population Review is now hosted at Harvard School of Public Health.

In the 1974 publication (Stepan and Kellogg 1974), the collation of data on the contraceptive laws around the world is comprehensive and systematic. Categories detailing legality of import, manufacturing, sale, and advertising of the pill, condom and IUD are outlined for over 60 countries. Information collected from 1974 in the Annual Population Review is in a different format, with short excerpts from legal documents

giving details of any changes to the law relating to contraception. The 1974 source offers a standardized reference point, with information often going back to 1920. Information regarding changes in the laws after 1974 are collated from the Annual Population Review which is a summary of legal documentation from the relevant countries. Data in 1974 are much more comprehensive that subsequent data in the Annual Population Review, thus the sample size is reduced due to lack of information after 1974.

The laws for the contraceptive pill, condom and IUD are broken into various categories to identify the nuances of the legal changes. The contraceptive pill index is broken into five components relating to sale purpose, sale location, prescription requirement, subsidy, and commercial advertising. The condom is in three components: sale purpose, subsidy, and commercial advertising. IUD is defined into two categories: legal or not; and whether a doctor is required to install the device. Sterilization is simply categorized as legal, or not. To create and index, we sum across the various sub-categores.

One of the key distinctions that is made in the legal data is the availability of the pill, condom and IUD as a contraceptive versus a prophylactic. Thus information from other sources may indicate that contraception is available, it may be that it is just available as a prophylactic and not as a contraceptive. When coding the laws, we take information from the laws, rather than access and use, and thus there may be disparities between use and the law.

Contraceptive laws have liberalized at varying times across countries, and contraceptive use is widely variable around the world. The timing of the liberalization of the contraceptive and voluntary sterilization laws have affected contraceptive use.

Contraceptive Use and Fertility

Data for contraceptive use and fertility are taken from the Demographic and Health Survey (DHS). The DHS subsumed the World Fertility Survey in 1985 and is administered by Macro International. The survey is designed to detail information on maternal and reproductive health. It has detailed child history information, employment status, and education history of both the respondent and her partner along with other demographic and household characterisitics. Surveys are issued to women between the ages of 15 and 49. There are 76 low- and middle- income countries in the survey, with up to four surveys over time within a country. The DHS is not a panel, and surveys are randomized at the cluster level where clusters changed between surveys. We merge all the DHS surveys across years and countries. For this project we recoded the regions as there were inconsistencies within a country across the different years. The variable indicating the respondent's religion was also recoded as the labeling of religion is inconsistent across countries and across survey waves.

Preliminary Findings

With a sample of more than 1.8 million women, we merge the data from all DHS individual recode surveys on contraceptive use and birth histories with the reproductive health laws indices.

We construct a hazard model, to determine the role of the reproductive health law in fertility decisions of the respondent. By using the birth histories in the DHS we map the timing of the laws to the timing of the births, thus creating panel from the cross sectional data. Information regarding contraceptive use is contemporaneous, but variation across survey years is exploited to observe changes within countries over time and how changes in the reproductive health laws affected contraceptive use.

In preliminary analysis, we find that more liberal abortion, contraceptive, and sterilization laws are associated with higher contraceptive prevalence and lower fertility rates. Religion and a country's legal origin play key roles in explaining the heterogeneous relationship between the law and use across countries.

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