

Abortion access and birth outcomes: evidence from Spain

Marco Cozzani¹, Gaia Ghirardi^{2*}, Miguel Requena³, Fabrizio Bernardi³

¹ University of Florence, Florence, Italy

² University of Bologna, Bologna, Italy

³ UNED, Madrid, Spain

* Presenting author

EPC 2026 Conference Application

Short Abstract

Women's reproductive rights, such as having the ability to access legal and safe abortion, are linked to improved women's reproductive health and socioeconomic well-being. Does different access to induced abortion have an impact on infant health? In this paper, we examine the impact of access to induced abortion (IA) on infant health. We leverage variation in IA across Spanish provinces and combine IA registers and birth certificates from 2011 to 2018. Preliminary results indicate that IA access, measured as the IA rate, does not affect any birth outcome. Further analyses will extend the current study by exploring population heterogeneities and investigating abortion access as proximity to a public clinic, in addition to AI rate.

Extended Abstract

Introduction

Access to safe and legal abortion is a crucial reproductive right, and it is closely linked to many maternal and child health and socio-economic outcomes. When women can control their reproductive choices, they are better able to manage the timing and circumstances under which they become parents, leading to better health, economic, and social outcomes for both mothers and children (González, Jiménez-Martín, Nollenberger, & Castello, 2021). Research has consistently shown that restrictions on abortion access are associated with an increase in unintended pregnancies, with higher risks of maternal morbidity and mortality, as well as negative impacts on child well-being, including increased risk of poverty and poor health outcomes (Eddelbuettel & Sassler, 2023; Gemmill, Margerison, Stuart, & Bell, 2024; Stevenson, 2021). Thus, ensuring comprehensive access to abortion services is fundamental to maternal and children's health.

However, access to abortion services remains highly unequal across different jurisdictions, even in countries where it is legal. In the United States, for example, the 2022 Supreme Court decision in *Dobbs v. Jackson Women's Health Organization* overturned the constitutional right to abortion, leading to significant variation in abortion access depending on state policies. This decision has had far-reaching consequences, with many women needing to travel across state lines to access abortion services or being unable to access them at all. Similarly, within Spain, abortion services are theoretically available, but practical access varies significantly depending on the region. In rural or conservative regions, such as Castilla y León and other provinces without clinics providing abortion services, women face significant obstacles, often requiring them to travel to other provinces or even neighbouring regions. These disparities highlight the ongoing challenges women face in exercising reproductive rights in Spain, echoing similar barriers faced by women in the United States.

In this study, we explore how varying abortion rates across Spanish provinces are associated

with birth outcomes such as low birth weight (LBW), whether the child was born alive, and whether the delivery required a c-section. To this aim, we combine continental Spain's monthly provincial-level induced abortion (IA) data with birth register data covering the period between 2011 and 2018.

Data & Methods

Data

We combine three data sources. First, we use microdata from the register of voluntary terminations of pregnancy (induced abortions – IA) provided by the Spanish Ministry of Health. This data contains information on pregnancy interruptions, the time of the procedure, and the maternal province of residence. We use pregnancy termination data to construct the numerator of the abortion rate. Second, we use province-year population figures provided by the Spanish Statistical Institute for the number of women between 15-44 years of age residing in a certain province in a given calendar year. These are used for the denominator of the abortion rate indicator. Third, we reconstruct birth outcomes, birth circumstances, and socio-demographic information, drawing from the birth certificates containing the universe of births in Spain. We combine these data to create a provincial-month panel (N=4,704 province-month observations). We assign the IA rate to birth data based on the month in which the conception happened, leading to the outcome.

Variables

Our main outcome variables are as follows: (1) the proportion of low birth weight (LBW) children conceived in a given month; (2) the proportion of conceptions resulting in stillbirth; and (3) the proportion of conceptions resulting in delivery via cesarean section. Our independent variable is the induced abortion rate, which we calculate as the number of abortions in a given month and province divided by the number of women aged 15 to 44 residing in that province in that year, then multiplied by one thousand. We include several control variables: the proportion of firstborns, the share of mothers with a university

education, average maternal age, and fixed effects for province, month, and year.

Analytical strategy

We compute regression models predicting birth outcomes as a function of abortion rate specified as:

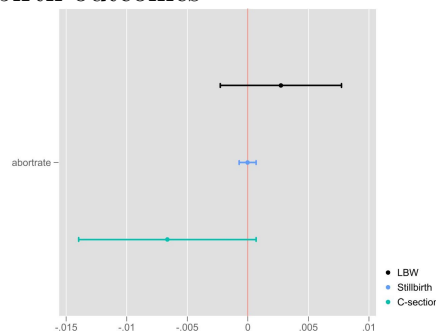
$$\hat{Y}(\text{BirthOutcome}_{\text{pm}\gamma}) = \alpha_{\text{pm}\gamma} + \beta_1(\text{IArate}_{\text{pm}\gamma}) + (\text{controls}_{\text{pm}\gamma})\delta + \text{month}_{\text{p}\gamma} + \text{year}_{\text{pm}} + \text{province}_{\text{m}\gamma} + \varepsilon$$

Where $\hat{Y}(\text{BirthOutcome}_{\text{pm}\gamma})$ is the birth outcome in a certain province p and month-year my . $\beta_1(\text{IArate}_{\text{pm}\gamma})$ is the change in the birth outcome Y for a unit change in the IA rate in a certain province and month-year. $\text{month}_{\text{p}\gamma}$, year_{pm} , and $\text{province}_{\text{m}\gamma}$ are the month, year, and province fixed effects, respectively.

Preliminary results

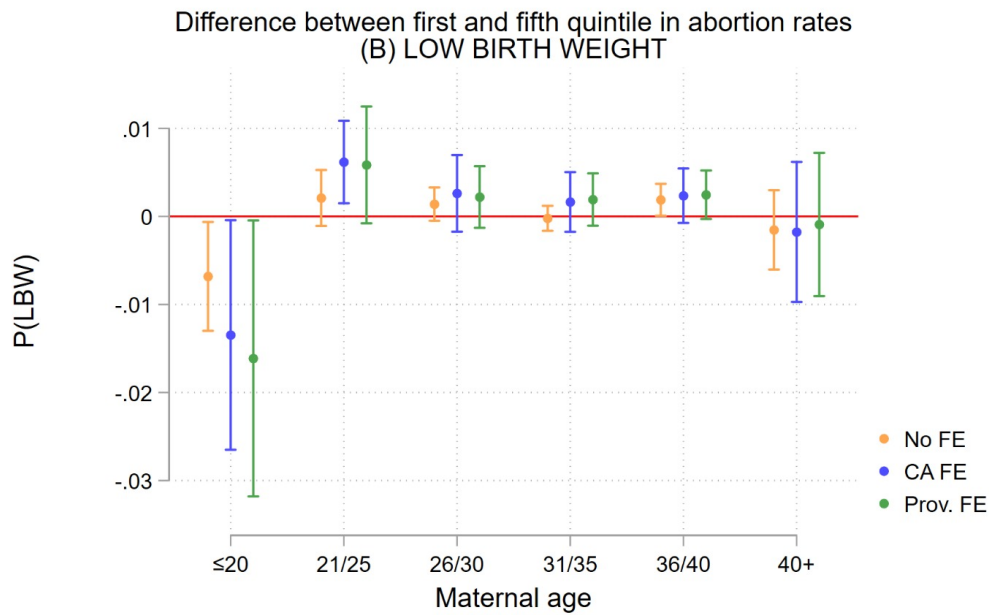
Figure 1 below reports the preliminary results. Each point estimate is obtained from a separate regression model that predicts the outcome defined in the legend of the figure. Overall, the preliminary results suggest limited effects of the IA rate on most outcomes. However, Figures 2 and 3 indicate that the impact of abortion rates is concentrated among younger women, who show worse birth outcomes when IA rates are lower. Next steps include extending the analysis to additional child outcomes and maternal characteristics (e.g., education, age) and instrumenting IA access based on proximity to a public clinic.

Figure 1. Effect of IA rate on birth outcomes



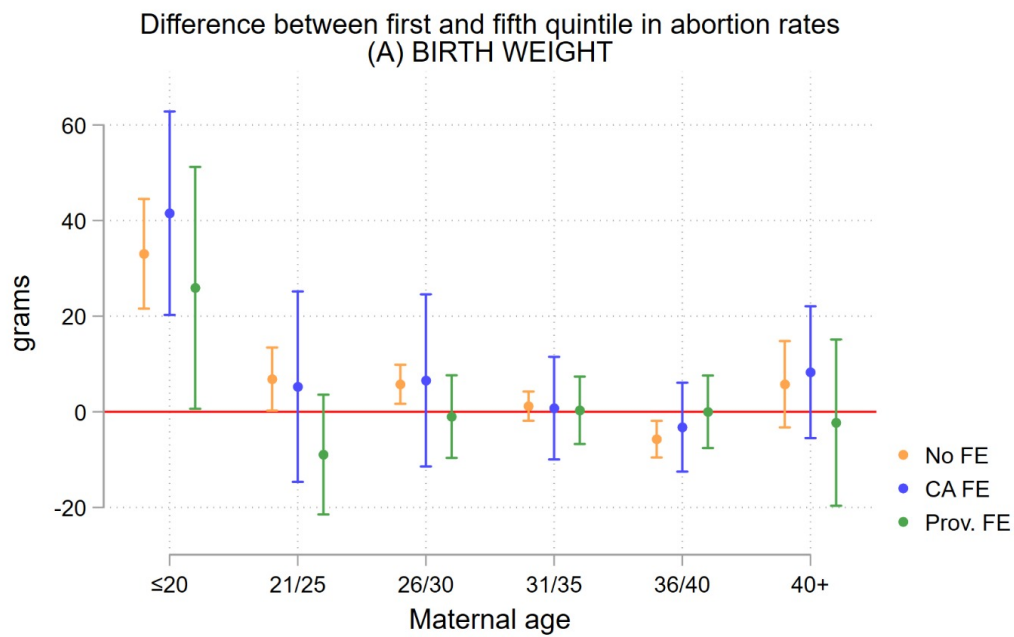
Source: own elaboration of Spanish birth certificates and induced abortion registers.

Figure 2. Effect of IA rate on the probability of low birth weight, by maternal age



Source: own elaboration of Spanish birth certificates and induced abortion registers.

Effect of IA rate on average birth weight, by maternal age



Source: own elaboration of Spanish birth certificates and induced abortion registers.

References

- Eddelbuettel, J. C., & Sassler, S. (2023). State-Level Abortion Policy Hostility and Unplanned Births in the Pre-Dobbs Era. *Demography*, 60(5), 1469-1491.
- Gemmill, A., Margerison, C. E., Stuart, E. A., & Bell, S. O. (2024). Infant deaths after Texas' 2021 ban on abortion in early pregnancy. *JAMA Pediatrics*, 178(8), 784-791.
- González, L., Jiménez-Martín, S., Nollenberger, N., & Castello, J. V. (2021). The Effect of Access to Legal Abortion on Fertility, Marriage, and Long-term Outcomes for Women **x**.
- Stevenson, A. J. (2021). The pregnancy-related mortality impact of a total abortion ban in the United States: a research note on increased deaths due to remaining pregnant. *Demography*, 58(6), 2019-2028.