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# Health and political regimes: Evidence from quantile regression

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#### ABSTRACT

This study investigates how political regimes affect health conditions such as infant and child mortality rates and life expectancy using data from 180 countries observed between 1960 and 2013. Panel quantile regression is used to examine the effects at different intervals throughout the distribution of health outcomes. The estimation results indicate that democracy has significant positive effects on health outcomes and that its impacts are greater when health outcomes are worse. These results are robust to different democracy and health indices. The effects of different types of democracies and dictatorships are also considered, that is parliamentary, mixed (semi-presidential) and presidential democracies, and civilian, military and royal dictatorships. The parliamentary form of democracy has the largest positive impact on health outcomes at the worst quantile of health outcomes, although the difference in the impacts of the three types of democracies is not necessarily large. Furthermore, all types of dictatorships have a negative impact on health outcomes, with military dictatorship having the worst outcome when health outcomes are worse. Finally, the effects of democratization on health outcomes are significantly positive when the health outcomes are worse.

#### 1. Introduction

Economists and political scientists have investigated how political regimes affect economic development (e.g., Przeworski et al., 2000; Acemoglu and Robinson, 2006). Since the "Third Wave of Democratization" (Huntington, 1991), many dictatorships have turned into democracies. Health status is an indicator of the economic development and well-being of citizens in a country (Sen, 1998). As such, health status is likely to be improved by government intervention and is usually better in democratic countries than in dictatorial regimes because the former are more active in implementing policies to reduce poverty. In particular, mortality reflects the circumstances of the poor, who are the most vulnerable to economic and political conditions.

While the number of democratic countries has increased since the mid-1970s, since the mid-1990s the pace of democratization has been slowing down, and approximately 40% of the world's countries were classified as dictatorships in 2008 (Cheibub et al., 2010). Accordingly, some scholars argue that we should not regard dictatorships as a continuum of democracy, but as unique manifestations (e.g., Carothers, 2002). Therefore, examining the effects of political regimes on health outcomes is a timely research topic with rich policy implications.

While the literature has touched upon this topic, this study contributes to the existing research in several ways. First, most previous studies evaluate the "average" effects of political regimes. For example, Fig. 1 illustrates the distribution of infant mortality every 10 years from 1960 to 2010. The distribution is positively skewed and thus different from the normal distribution. Therefore, we employ the quantile regression method to measure the effects of political regimes at each quantile of

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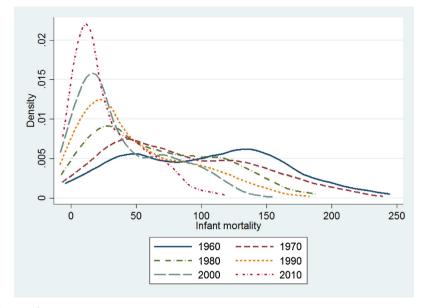


Fig. 1. Distribution of infant mortality.

Notes: This figure is created using the Epanechnikov kernel density estimation, based on the sample of 180 countries listed in Table A1 in the Appendix A.

the health outcome. Second, we examine how the subcategories of democracy and dictatorship affect health outcomes. Most studies focus on the effects of the democracy level, implying that the level of democracy is a one-dimensional variable, even if they use multichotomous or dichotomous democracy indices. Therefore, this type of research may be unable to capture the qualitative differences within democracies. Furthermore, although some studies have investigated the effects of various types of democracies such as parliamentary and presidential regimes, few have demonstrated the effects of dictatorship types, even though some, for example Carothers (2002), point out the importance of examining dictatorships. Third, this study examines the effects of democratization, which is a political transition from dictatorship to democracy. We cannot distinguish between the effect of a regime change and that of each regime's performance by using the score index of the democracy level. This is because the score index simultaneously represents the democracy level within the same regime and between different regimes, such as democracy and dictatorship. Focusing on democratization enables us to quantify its effects given the positive performance/consolidation of the associated institutions.

Annual data of 180 countries observed between 1960 and 2013 are used in this study. The main findings are that higher democracy levels significantly improve health outcomes and their impacts are greater when health outcomes are worse. These findings are robust when different indices of political regimes and health outcomes are used. Considering several types of democracies, such as parliamentary, mixed (semi-presidential) and presidential, parliamentary democracies are found to have the largest positive impact on health outcomes at the worse quantile of the health status, although the difference in impacts of the three types of democracies is not necessarily large. Furthermore, all categories of dictatorships, namely civilian, military and royal dictatorships, have negative impacts on health outcomes, with military dictatorships having the worst outcome when the health outcome is worse. Finally, democratization has a significant positive impact on health outcomes when health outcomes are poor.

The remainder of this paper is organized as follows. In Section 2, we present a brief review of the existing studies. We describe the estimation methodology in Section 3, introduce the data in Section 4, and discuss the estimation results in Section 5. Section 6 provides our concluding remarks.

#### 2. Related literature

While we empirically investigate the relationship between health outcomes and political regimes, this study is primarily based on the theoretical background of the relationship between public expenditure and political regimes (Boix, 2003; Acemoglu and Robinson, 2006). These studies are based on Meltzer and Richard's (1981) model and suggest that democratization extends the franchise to poor citizens, and, as a result, promotes redistribution policies. Therefore, the democratization and consolidation of democracy are likely to improve health outcomes due to government intervention.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> On the other hand, Ansell and Samuels (2014) focus on elite competition in a democratic transition and show that democracy decreases social spending when inequality is high. This finding is consistent with Keefer (2007), who demonstrates that the majority of new democratic governments from 1975 to 2004 were right-wing rather than left-wing.

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