

# Oil Dependence and Health Outcomes

Yuyun LI

The resource curse is a theory that explains the inverse relationship between non-renewable resources, economic growth, and democracy. Countries with an abundance of natural resources, like minerals and fuels, tend to have lower economic growth, less democracy, and worse development outcomes (eg. health outcomes) than countries with few natural resources (Calain, 2008). Health outcomes in a resource curse can manifest in at least three dimensions, including death rate, life expectancy, and infant mortality rate. These provide comprehensive indicators of health outcomes.

The resource curse hypothesizes that natural resource abundance is a source of growth by generating large revenues when those countries have stable political structures and strong social institutions. However, natural resource abundance is a potential source of conflict among those regions in the absence of sound social institutions. Even if the government is politically stable, resource abundance could tend to erode democratic institutions and promote more corruption in resource extraction industries (Marshall, 2014).

In my project, I will analyze how oil dependence (a measure of natural resource dependence) affects health outcomes. I consider death rates, life expectancy, and infant mortality rates as health outcomes. Since health expenditure is a potential endogenous variable of health outcomes, I use the Two Stage Least Squares (2SLS) method to identify their relationships splitting the sample into democratic and non-democratic groups. 2SLS is a method that includes two regressions, the base regression and an instrumental one. Health outcomes are treated as dependent variables in the base regression where health expenditure is an endogenous variable. In the instrumental regression (stage 1), health expenditure is the dependent variable and a function of per capita income, population structure, and disease patterns as well as oil dependence.

The project is separated into four elements. First, I gave a basic introduction and structure of this project. Second, I present a literature review that explains the resource curse and its relationship to democracy. I will also introduce some approaches related to oil dependence and health outcomes. Third, I will introduce my methodology (2SLS). Before explanation of 2SLS, I will explain the data and show Granger Causality results. I discuss the robustness and disadvantages. Finally, I will make a conclusion in my project.