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Medicine and democracy: The importance of institutional quality in the relationship between health expenditure and health outcomes in the MENA region

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ABSTRACT

Evidence suggests that the effect of health expenditure on health outcomes is highly context-specific and may be driven by other factors. We construct a panel dataset of 18 countries from the Middle East and North Africa region for the period 1995–2012. Panel data models are used to estimate the macro-level determinants of health outcomes. The core finding of the paper is that increasing health expenditure leads to health outcomes improvements only to the extent that the quality of institutions within a country is sufficiently high. The sensitivity of the results is assessed using various measures of health outcomes as well as institutional variables. Overall, it appears that increasing health care expenditure in the MENA region is a necessary but not sufficient condition for health outcomes improvements.

1. Introduction

The question of *whether (and to which extent) health outcomes are related to the countries' level of expenditure on health* has been extensively addressed in the context of developed countries (*e.g.*, [11,26]). Yet, addressing such a question in the context of developing countries with solid evidence is still in great demand. Indeed, such a question stands as one of the key issues in the current debate on reforms seeking to achieve Universal Health Coverage (UHC) [30]. UHC has been identified as an overarching goal to achieve all of the health-related Sustainable Development Goals (SDGs), reflecting the focus on equity issues in health [41].

Previous studies indicate that health outcomes across countries (*e.g.*, life expectancy, child mortality) are not *strongly* [5,6,15,42] or *directly* [14,31] associated with the level of expenditure on health, especially once other factors are accounted for. These *other* factors may include living standards, schooling, or individual behavior [32]. Particularly, frequent references are made to the *deterring effect* that contextual and institutional factors (*e.g.*, good governance, political unrest) may have on the achievement of the desired outcomes of health spending.

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In most cases, among countries with *good* health outcomes, the range of health expenditure is extremely wide. Such variation makes it difficult to get a conclusive answer regarding the impact of health expenditure on health outcomes (*e.g.*, [5] among OECD countries, [11] in Canada, or [26] in England). For instance, in a recent study among 30 European countries, Mackenbach and McKee [24] show that the quality of democracy and governance are positively associated with some indicators of health policy, while the distribution of power and political representation have few associations. Among sub-Saharan African countries, Ssozi and Amlani [34] find that health expenditure has a substantial effect on the proximate targets (immunization, malaria, HIV/AIDS, and nutrition), but has a lower impact on the ultimate goals (life expectancy, infant, and child mortality). This seems to suggest that the relationship between health expenditure and health outcomes is context-specific.

The present paper seeks to address the above questions in the particular context of Middle Eastern and North African (MENA) countries. The MENA, a middle-income region, has experienced a rapid population growth (36.8% between 1995 and 2012), while life expectancy increased by 6%. The mean life expectancy in the region was 74.4 years in 2012. Overall, MENA countries have some of the lowest levels of government spending on health care as percentage of GDP [38]. However, the region has witnessed a positive trend in per capita health spending over the past two decades, with a 78.8% increase between 1995 and 2012, as shown in Fig. 1(a). In parallel, there has been a rise in between-country health inequality in the MENA region since the mid-1990s. More precisely, from 1995 to 2012, health inequality (as measured by the Gini coefficient for national life expectancies) increased by 23%. Fig. 1(b) clearly shows that between-country health inequality has been increasing. Of that total increase in between-country health inequality, about 54% is attributable to changes in population shares (*i.e.*, the allocation effect), while 46% of the increase is due to cross-country differences in life expectancy growth rates (*i.e.*, the growth effect). Altogether, it seems that the rise in health expenditure in the MENA region over the past two decades had contrasting effects on health outcomes.

MENA countries are currently confronting a significant challenge due to escalating burden of ill-health [2], accompanied by a growing prevalence of non-communicable diseases [1]. In this respect, contrasting evolutions between MENA countries can be related to the significant differences in their epidemiological situations. Infectious diseases remain the main public health problem in low-income countries, with AIDS, tuberculosis and malaria epidemics leading to a decrease in global life expectancy. However, in most MENA countries, which are middle-income countries, the epidemiological transition toward non-communicable chronic diseases is already ongoing [28]. Coping with the rising burden of non-communicable diseases, and at the same time laying the ground for transforming the health system toward UHC, present the major challenge for health policy-makers in MENA countries. The limited resources and institutional capacity as well as the ongoing political unrest in some of these countries pose further challenges [4].

This study, therefore, attempts to provide policy-makers with some insights into the impact of health expenditure per capita on health outcomes over the last two decades, focusing on the MENA region. Data are taken from different sources including the World Health Organization [40], the World Development Indicators database [39], the Freedom House database [16], the Quality of Government database [12] and the Center for Systemic Peace database [25]. The main research question is apprehended using an elaborate econometric modeling (including instrumental variable fixed-effects and random-effects models). The sensitivity of the results is tested using various measures of health outcomes (life expectancy at birth and infant mortality) as well as institutional variables (political rights and civil liberties, the quality of government, and government effectiveness). The remaining of the paper is organized as follows. The data and the econometric methodology are detailed in Sections 2

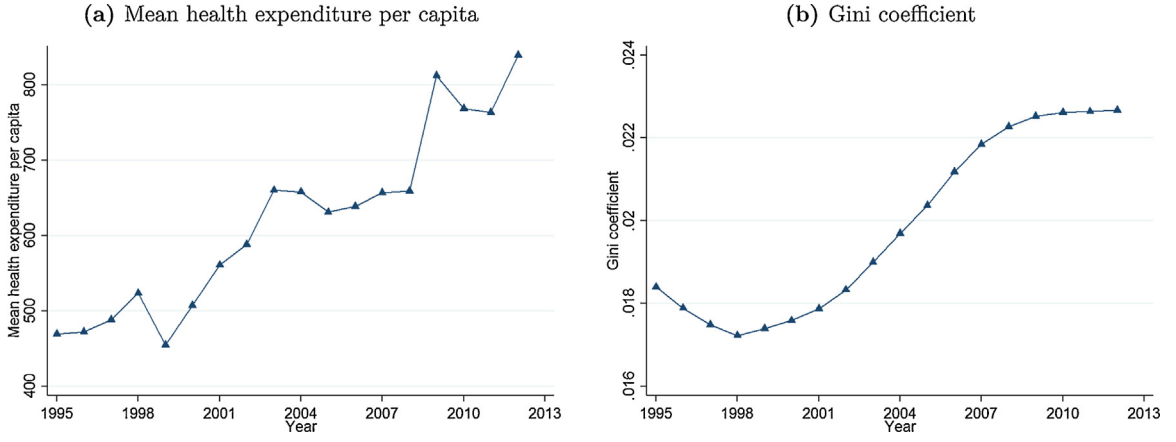

Fig. 1. Health expenditure and between-country health inequality in the MENA region, 1995–2012. Notes: The inequality measure is described in Appendix A. See Table A1 of Appendix B for the list of countries.