



Do political factors matter in explaining under- and overweight outcomes in developing countries?

Elena Fumagalli^{a,*}, Emmanouil Mentzakis^b, Marc Suhrcke^{c,d}

^a Institute of Health Economics and Management (IEMS) and Department of Economics (DEEP), University of Lausanne, Switzerland

^b Economics Division, School of Social Sciences, University of Southampton, Southampton, UK

^c Health Economics Group, Faculty of Medicine and Health Sciences, University of East Anglia, Norwich Research Park, Norwich, UK

^d UKCRC Centre for Diet and Physical Activity, Institute for Public Health, Cambridge, UK

ARTICLE INFO

Article history:

Received 2 July 2012

Received in revised form 27 May 2013

Accepted 3 June 2013

JEL classification:

C25

D72

I12

I15

I18

Z13

Keywords:

BMI

Obesity

Developing countries

Generalized ordered response models

ABSTRACT

We construct a rich dataset covering 47 developing countries over the years 1990–2007, combining several micro and macro level data sources to explore the link between political factors and body mass index (BMI). We implement a heteroskedastic generalized ordered logit model allowing for different covariate effects across the BMI distribution and accounting for the unequal BMI dispersion by geographical area. We find that systems with democratic qualities are more likely to reduce under-weight, but increase overweight/obesity, whereas effective political competition does entail double-benefits in the form of reducing both under-weight and obesity. Our results are robust to the introduction of country fixed effects.

© 2013 Elsevier Inc. All rights reserved.

1. Introduction

The bulk of the public health and economic research on developing countries traditionally focused on communicable, maternal, perinatal, and nutritional conditions (Behrman et al., 2009), with under-nutrition generally considered to be the most important nutritional challenge in low- and middle-income countries. However, it has recently been acknowledged that the “obesity epidemic” has increasingly spread in developing countries (Monteiro et al., 2004; Popkin, 2001, 2008), while under-nutrition still continues to prevail, producing a “double burden of malnutrition” (Lukito and Wahlqvist, 2006; Prentice, 2006). Inspired by Besley and Kudamatsu’s (2006) work on political factors and mortality rates, we investigate the effect of political factors on body mass index (BMI),¹ a measure of the human body shape often used as a proxy for adiposity. To our knowledge, this is the first paper that examines the effect of political factors on the BMI distribution using

a rich micro-level dataset, controlling for a range of confounding factors and covering a large number of developing countries.

We construct a dataset of 47 developing countries from 1990 to 2007, containing individual socio-economic characteristics collected in the Demographic and Health Survey (DHS), as well as demographic and country specific information from different data sources. We use a categorical version of the BMI variable (i.e. under-weight, normal weight, overweight or obese), and analyze the entire BMI distribution not restricting our analysis to obese (e.g. Maennig et al., 2008) or underweight (e.g. Milman et al., 2005) individuals. By studying the top, middle and bottom parts of the distribution we are uniquely able to assess whether political factors affect over- and underweight in different ways.

Since several of the countries in our sample are facing a double burden of both over- and under-weight (especially in Asia and Africa – see Fig. 1), we exploit an econometric specification which allows for the identification of distinct links between the various points of the BMI distribution and the covariates of interest. Further, given the use of a cross country dataset, we allow for heterogeneity by geographical areas (i.e. modifying the estimator to fit a heteroskedastic specification), as the commonly used BMI definition for obesity (i.e., BMI > 30) might not be an appropriate measure of

* Corresponding author. Tel.: +41 21 692 33 92.

E-mail address: elena.fumagalli@unil.ch (E. Fumagalli).

¹ BMI is defined as $\frac{\text{weight (in kg)}}{\text{height (in metres)}^2}$.

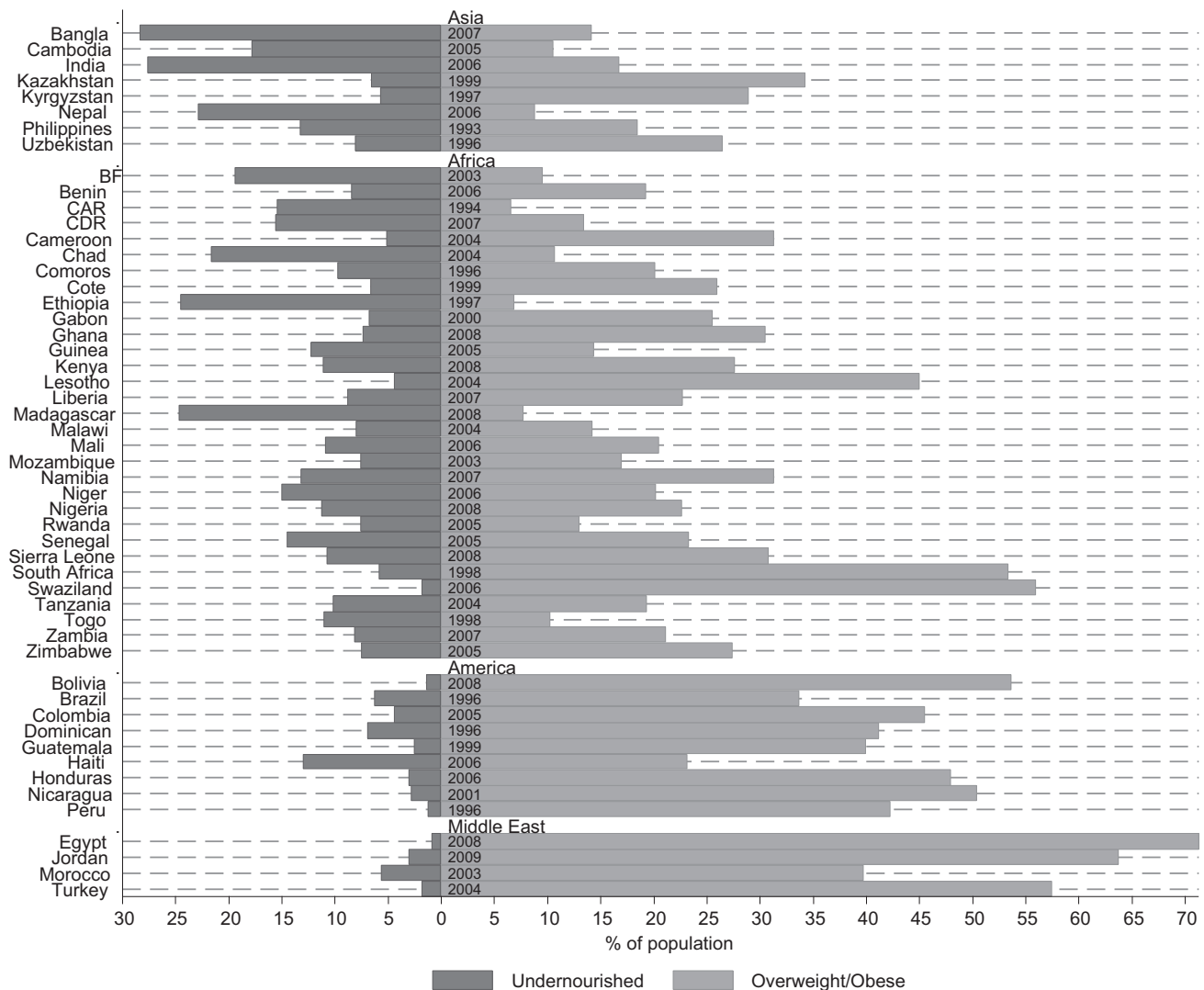


Fig. 1. The prevalence of under- and overweight/obesity in 47 countries of the DHS (women, aged 18–49).

fatness for all ethnic groups (Barba et al., 2004). We further introduce country and time fixed effects in the estimations to account for unobserved country specific factors, time invariant characteristics and macro time-specific shocks.

In short, we find that political characteristics are important in determining BMI status, even after controlling for relevant covariates as well as country fixed effects. In particular, we find that systems with democratic qualities are more likely to reduce under-weight, but increase overweight/obesity, whereas effective political competition does entail double-benefits by reducing both under-weight and obesity (increasing the chances of being normal weight). The heteroskedastic specification suggests a significant difference in the variance of BMI across geographical areas, with Asian countries showing the lowest variability.

The paper is structured as follows. In Section 2 we present the background of the research. Section 3 describes the data and Section 4 the econometric specification. Finally, Sections 5 and 6 contain the description of the results and the discussion.

2. Background

Ecological studies have shown that political freedom (Alvaro et al., 2004; Franco et al., 2004) and democratization (Kudamatsu, 2012) are positively associated with different measures of health,

e.g. maternal and infant mortality. Similarly, Vollmer and Ziegler (2009) find a positive association between democratization and human development (measured by literacy and life expectancy), and Klomp and De Haan (2009) establish a positive relationship between democracy and a composite individual health index. By contrast, Young (1990) fails to find empirical support for Owens' hypothesis (Owens, 1987) that populist authoritarian regimes increase physical quality of life more than "false democracies"² do. Besley and Kudamatsu (2006) find that the relationship between life expectancy and democratization is not robust to the inclusion of country fixed effects, suggesting that political variables might capture some unobserved country level factors and not just the effect of democratization itself. Such concerns are reinforced in light of the fact that – with the exception of Kudamatsu (2012) – all of the above studies investigate the impact of political characteristics on health outcomes at the aggregate country level.

While the above-described body of evidence does not focus on BMI outcomes, potentially relevant insights may still be inferred for the present paper. There are multiple channels through which political characteristics might in principle affect health. First,

² According to Owens, in false democracies political rights are ensured, while economic and social ones are not (Owens, 1987).

Download English Version:

<https://daneshyari.com/en/article/7370596>

Download Persian Version:

<https://daneshyari.com/article/7370596>

[Daneshyari.com](https://daneshyari.com)