Divining the level of corruption: a Bayesian state-space approach

Samuel Standaert

PII: S0147-5967(14)00058-4
DOI: http://dx.doi.org/10.1016/j.jce.2014.05.007
Reference: YJCEC 2399

To appear in: *Journal of Comparative Economics*

Received Date: 20 December 2013
Revised Date: 15 May 2014

Please cite this article as: Standaert, S., Divining the level of corruption: a Bayesian state-space approach, *Journal of Comparative Economics* (2014), doi: http://dx.doi.org/10.1016/j.jce.2014.05.007

Divining the level of corruption: a Bayesian state-space approach[☆]

Samuel Standaert

SHERPPA and Department of Economics, Ghent University
Tweekerkenstraat 2, 9000 Ghent, Belgium

Abstract

This paper outlines a new methodological framework for combining indicators of corruption. The state-space framework extends the methodology of the Worldwide Governance Indicators (WGI) to fully make use of the time-structure present in corruption data. It is estimated using a Bayesian Gibbs sampler algorithm.

The state-space framework holds many advantages from a practical, an estimation and a theoretical point of view. Most importantly, it significantly expands the period for which the index can be computed while at the same time addressing the selection bias issues that trouble the Corruption Perceptions Index (CPI). In addition, its estimates are more stable and have smaller confidence intervals than both CPI and WGI. Because the estimation is transparent and data is entered without any manipulations, the estimation procedure is more objective.

Keywords: Corruption perception, State-space model, Bayesian econometrics, Worldwide Governance Indicators
JEL: C43, O17, O57, P16, P26

1. Introduction

Researchers looking at the effects or determinants of corruption are faced with the difficulty of having to choose one out of the more than 70 individual indicators available. Each indicator differs in availability in time, countries covered, exactly what it is trying to measure, and where or with whom it was collected. Because that one indicator that meets all requirements often proves elusive, most studies resort to aggregated indicators of corruption. The two most

[☆]I am vastly indebted to Aart Kraay, Glenn Rayp, Gerdie Everaert and José-Louis Figueroa-Oropeza for their invaluable help in writing this paper. Any errors or ommisions are of course mine. Funding provided by the Fund for Scientific Research Flanders and the Belgian Natinonal Bank

Email address: Samuel.Standaert@UGent.be, (+32) 9 264 89 72 (Samuel Standaert)