

## Accepted Manuscript

### Counting rotten apples: Student achievement and score manipulation in Italian elementary Schools

Erich Battistin, Michele De Nadai, Daniela Vuri

PII: S0304-4076(17)30101-X

DOI: <http://dx.doi.org/10.1016/j.jeconom.2017.06.015>

Reference: ECONOM 4394

To appear in: *Journal of Econometrics*



Please cite this article as: Battistin, E., De Nadai, M., Vuri, D., Counting rotten apples: Student achievement and score manipulation in Italian elementary Schools. *Journal of Econometrics* (2017), <http://dx.doi.org/10.1016/j.jeconom.2017.06.015>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

# Counting Rotten Apples: Student Achievement and Score Manipulation in Italian Elementary Schools\*

Erich Battistin

Queen Mary University of London, CEPR, IRVAPP and IZA

Michele De Nadai

University of New South Wales<sup>†</sup>

Daniela Vuri

University of Rome Tor Vergata, IZA, CESifo and CEIS

May 2017

## Abstract

We derive bounds on the distribution of math and language scores of elementary school students in Italy correcting for pervasive manipulation. A natural experiment that randomly assigns external monitors to schools is used to deal with endogeneity of manipulation, as well as its mismeasurement in the data. Bounds are obtained from properties of the statistical model used to detect classes with manipulated scores, and from restrictions on the relationship between manipulation and true scores. Our results show that regional rankings by academic performance are reversed once manipulation is taken into account.

*JEL classification:* C14; C31; C81; I21; J24.

*Keywords:* Measurement error; Non-parametric bounds; Partial identification; Score manipulation.

---

\*We are indebted with the Editor and two anonymous referees for constructive comments on previous versions of this manuscript. Special thanks go to Patrizia Falzetti, Roberto Ricci and Paolo Sestito at INVALSI for providing the achievement data used here and to INVALSI staffers Paola Giangiacomo and Valeria Tortora for advice and guidance in our work with these data. Our thanks to Joshua Angrist and Enrico Rettore for helpful discussions and comments and to seminar participants at the 2015 SOLE meeting, the 2015 Laax Labor Economics Workshop, the 2016 IAAE Conference, the 2016 Australasian Meeting of the Econometric Society, the University of Florence, the University of Rome Tor Vergata and the University of Maryland for helpful comments. This research was supported by the Fondazione Bruno Kessler. The views expressed here are those of the authors alone.

<sup>†</sup>Corresponding author: UNSW Business School UNSW Sydney, NSW 2052. Telephone: +61 2 9385 3367. E-mail: m.denadai@unsw.edu.au.

Download English Version:

<https://daneshyari.com/en/article/5095454>

Download Persian Version:

<https://daneshyari.com/article/5095454>

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