



Private versus social returns to human capital: Education and economic growth in India



Matthias Schündeln*, John Playforth

Goethe University Frankfurt, Grüneburgplatz 1, 60323 Frankfurt am Main, Germany

ARTICLE INFO

Article history:

Received 8 December 2011

Accepted 16 August 2013

Available online 8 November 2013

JEL classification:

O15

O40

H70

I25

Keywords:

Economic growth

Human capital

India

ABSTRACT

This paper investigates whether differences between private and social returns to education of government sector employees can contribute to an explanation of the “micro–macro paradox” in the literature on education and growth. We hypothesize that in India educated people find privately rewarding jobs in a sector in which social returns are low, namely the government sector. This could help explain high returns to education at the micro level and small or negative coefficients on education growth in growth regressions at the macro level. The empirical results, which are consistent with this hypothesis, are based on an analysis of state-level data from India spanning 40 years.

© 2013 Elsevier B.V. All rights reserved.

1. Introduction

A common prior of economists and policy makers is that education is an important promoter of economic growth. Indeed, it has consistently been shown that the level of education has a positive association with subsequent economic growth (e.g. Barro, 1991; Benhabib and Spiegel, 1994). But there remains a considerable debate about the effect of education growth on economic growth (e.g. Benhabib and Spiegel, 1994; Krueger and Lindahl, 2001; Pritchett, 2001; Temple, 2001; Pritchett, 2006). These findings generate a “micro–macro paradox” (Pritchett, 2001) in the empirical literature: studies at the micro level find throughout that more education is economically beneficial for an average individual (e.g. Psacharopoulos, 1994) and educated individuals also receive, on average, other private benefits, for example with respect to health, while at the macro level this is less clear, with some studies even finding negative effects of education growth on economic growth. A potential explanation for the micro–macro puzzle is that private and social returns to education differ. This might in particular be due to the role that the government sector plays as an important employer of educated people in many countries (e.g. Murphy et al., 1991; Pritchett, 2001).

Our goal in this paper is to contribute to this literature in several ways: First, we provide an in-depth study of the importance of this micro–macro puzzle for a large country in which it is particularly striking, namely India. We will study the time period 1961–2001, a period with, on average, a significant expansion of education. Second, we hypothesize and test via cross-state regressions a specific mechanism that may explain a divergence of micro and macro findings: The hypothesis is that educated people find privately rewarding jobs in a sector in which social returns are low relative to the private

* Corresponding author. Tel.: +49 69 79834796.

E-mail address: schundeln@wiwi.uni-frankfurt.de (M. Schündeln).

returns, namely the government sector. Third, because we use within-country variation for our empirical work we keep many important aspects of the economic and social environment constant and thus can be more confident than with cross-country work that unobserved differences across units of observation or parameter heterogeneity are not driving the results. Fourth, by using variation across Indian states and measures of educational attainment from the regularly conducted censuses, we can provide estimates that are not afflicted by the data comparability and data quality problems that typically exist in cross-country work and that may explain some of the existing findings of small growth effects (see [Krueger and Lindahl, 2001](#); [Cohen and Soto, 2007](#); [de la Fuente and Doménech, 2006](#)).

Social returns in the government sector may be low for at least two reasons, namely (a) through direct effects, because government sector employees work in unproductive positions, or (b) through indirect effects, because government sector employees exert negative externalities on the productivity of the private sector, e.g. through government regulations, licensing requirements, or individual rent-seeking activities. Particularly if these reasons are more likely to be relevant in countries with high educational growth and large government sectors, like India, this could explain why educational growth does not consistently show a significantly positive relationship with economic growth in cross-country regressions.

Indeed, in many developing countries the government sector is large, particularly as an employer for the educated. [Gelb et al. \(1991\)](#) provide a theoretical explanation that is consistent with theories of rent-seeking behavior, in which governments hire in response to unemployment, which leads to surplus labor in the government sector. [Jaimovich and Rud \(2012\)](#) provide a model in which bureaucrats' rent-seeking behavior leads to an equilibrium with low aggregate output and low levels of entrepreneurship. At the same time there is significant anecdotal evidence for the importance of rent-seeking in these large government sectors, which implies both the direct and indirect reasons for low productivity in the public sector suggested above. For example, [Murphy et al. \(1991\)](#) note that in "many African countries in this century, government service, with the attendant ability to solicit bribes and dispose of tax revenue for the benefit of one's friends and family, was the principal career for the ablest people in the society" ([Murphy et al., 1991](#), p. 505). [Pritchett \(2001, p. 384\)](#) cites the case of Egypt where government guarantees of employment led to a government sector that, in 1998, employed seventy percent of university graduates. [Gelb et al. \(1991\)](#) put together data for 14 developing countries to show that government employment not only constitutes a significant share of all non-agricultural employment in these countries but that it was also growing more rapidly than wage-employment in the private sector over the 1960s and 1970s.

Regarding India, [Banerjee \(2006, p. 1021\)](#) states that "[...] highly qualified engineers, educated at great public expense [...] cooled their heels as minor functionaries in the overfilled bureaucracies of large public companies". In the appendix we provide additional evidence at the micro level that supports the above-mentioned anecdotal evidence and that suggests a specific mechanism that leads to our findings at the macro level: India's public sector paid substantially above private sector wages and, presumably in part because of this public-sector wage premium, attracted many of India's well-educated individuals.¹ In addition, it is often argued that India's bureaucracy created a mass of regulations whose effect was to inhibit India's economic growth. In sum, the attributes of India's public sector have allowed a critical mass of workers in that sector to be the well paid, but relatively unproductive, professionals that are at the core of the hypothesis of this paper.

India presents a paradigmatic case of the effect that is described in some of the empirical papers cited above: a country with substantial educational growth (despite still low absolute levels of education) yet relatively paltry economic growth, in the period before the reforms of the 1980s and early 1990s. We estimate, based on data from [Barro and Lee \(1993\)](#), that the worldwide average of the annual growth rate of average years of schooling (as a proxy for educational capital), was 2.6 percent between 1960 and 1985. India's growth rate of the population's average years of schooling during this period was 3.4 percent. Over the whole period, this suggests that India's educational capital increased by a factor of 2.3; whereas, worldwide educational capital increased by a factor of 1.9. At the same time, India's annual average growth rate of per capita real GDP over this period was just over 1.8 percent, compared to a world average of 2.3 percent. Thus, India was an underperformer in economic growth despite its relatively impressive educational capital growth.

The paper is not trying to argue against government generally. Indeed, a certain number of government employees is required to provide a sufficient institutional framework; the government also provides other important services and public goods. In a transition process, it might also be beneficial to have a significant number of government employees working in state-owned enterprises. However, we hypothesize that in the particular case studied, a share of India's government sector employment led to a wasteful diversion of human capital and that India's bureaucracy undermined the potential of India's education growth to contribute to economic growth because of its particular attributes. The suggestion that India's bureaucracy has had limited success in promoting economic growth in the time period that we study is neither unique nor particularly controversial. Especially the role of its complicated set of regulations is studied extensively in the literature (e.g. [Aghion et al., 2005, 2008](#); [Besley and Burgess, 2004](#); [Sivadasan, 2003](#)). Previous research has also shown that the long-run level of income in Indian states is positively affected by levels of education ([Trivedi, 2006](#)). What is new is the connection that we suggest and test between the bureaucracy and the role of education as a promoter of economic growth.

¹ The workings of the labor market and the methods of promotion in the public sector also suggest that productivity was not commensurate with wages. [Blaug et al. \(1969\)](#) suggest the existence of a queue system, where public sector jobs, for which the supply was too large because the wage was set above market levels, were – at least to some extent – allocated by waiting times. Further, employment was often secured not by added qualifications or even time but rather by means of personal contacts. Indeed, this was the most often cited means of securing a job in a study of graduates of Delhi University in 1960 ([Blaug et al., 1969](#)).

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات