

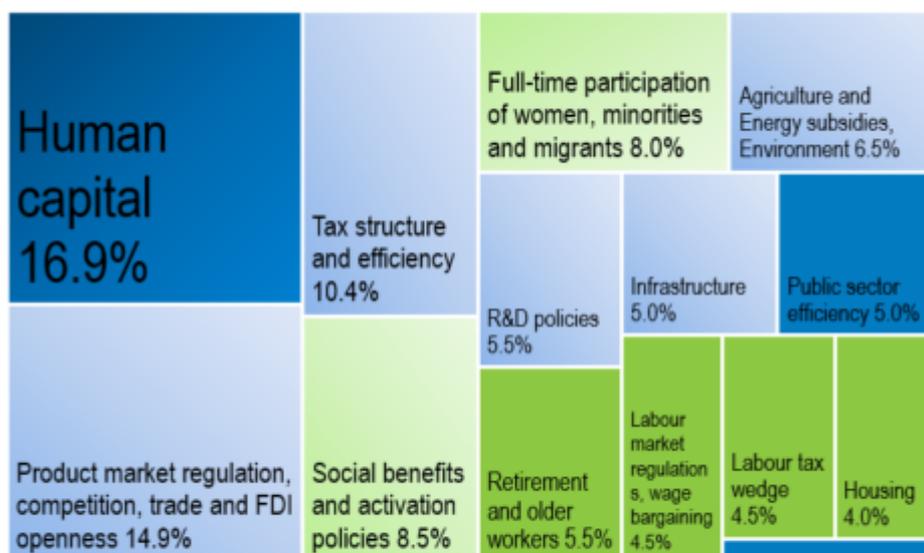
The human capital paradox: A measurement issue?

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Human capital is widely regarded as a fundamental input in the theoretical growth literature. Recommendations to boost it feature prominently among reform priorities for a great number of countries (Figure 1). Yet, paradoxically, quantifying the macroeconomic effects of human capital has often proven frustratingly elusive.

As this blogpost explains, in part this is due to the challenge of measuring human capital. A newly released OECD measure of human capital works well in productivity regressions, providing the “missing” link between growth and human capital.

Figure 1. Share of 2019 *Going for Growth* reform priorities by policy area (OECD)



Note: Based on benchmarking a country's economic and policy performance, OECD's flagship publication Going for Growth identifies every two years country-specific reform priorities to boost growth in an inclusive and sustainable manner.

Human capital can be defined as the stock of knowledge, skills and other personal characteristics of people that helps them

to be productive. Such knowledge is gained in formal education (e.g. early childhood care, compulsory schooling and adult training programmes) but also informally, via on-the-job learning and work experience. Health also influences one's productivity. Nevertheless, there is no widely accepted empirical measure that captures all these dimensions across many countries and over time.

The early macroeconomic growth literature used various quantitative measures of education as a proxy for human capital, including literacy rates or enrolment rates at various levels of education. More recent studies use mean years of schooling (average number of completed years of education of a country's entire population). However, the link of these proxies to macroeconomic outcomes has generally been poor. A meta-analysis of 60 studies published over the period of 1989-2011 found that around 20% of the reported coefficient estimates on human capital have the "wrong" (negative) sign (Benos and Zotou, 2014). In a dozen of papers by Robert J. Barro, based on similar specifications, techniques and datasets, only about a half of the coefficient estimates is positive and statistically significant. Recent OECD studies confirm the difficulty of finding a robust positive effect of human capital on income per capita or productivity levels when looking at the OECD countries (Botev et al., 2019; Guillemette et al, 2017, Fournier and Johanson 2016).

And, this is the paradox, the widely accepted importance of human capital, but the difficulty of finding an empirically relevant measure of it – which our recent work addresses. The OECD's newly released human capital measure combines an up-to-date dataset of mean years of schooling (the 2018 update of Goujon et al, 2016) with rates of return based on recent evidence on wage premia compiled mostly by the World Bank (Psacharopoulos and Patrinos, 2004; Montenegro and Patrinos, 2014). Unlike earlier studies, it applies different returns for five groups of countries and three periods. Including such

measure of human capital in various macroeconomic productivity regressions yields significant and positive relationships that economists have been looking for.

Find out more: <http://www.oecd.org/economy/human-capital/>

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