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## Returns to work are lower in developing countries

Is it due to their sectoral and urban structure?



- In brief:**
- Developing economies have more workers in sectors or locations where there may be less scope for learning, thus, this brief asks whether their economic and urban structure could explain their lower levels of economic development?
  - This study obtains measures of returns to work experience across various dimensions using data from 23 million individuals in more than 1,000 household surveys and census samples for 145 countries.
  - The findings suggest services, cognitive occupations, the formal sector, and urban areas exhibit relatively higher returns than non-services, manual occupations, the informal sector, and rural areas, respectively.
  - Despite these “return gaps”, reallocating labour to the best sector, occupation, firm type, or location in the country does little to bridge the gap in aggregate returns between developed countries and developing countries.
  - The authors use cross-country data on income, economic and political institutions, and social norms, and find that countrywide characteristics appear to be the main drivers of aggregate returns.

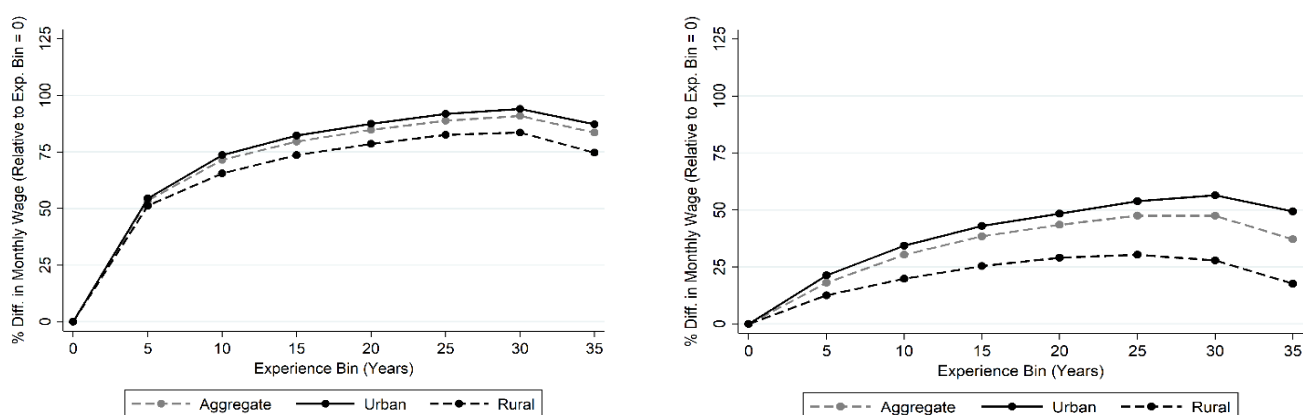
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## Overview of the research

We use our very large individual-level data set – the International Income Distribution Database (I2D2) of the World Bank - to obtain wage-experience profiles and estimate returns to experience for as many countries and as many dimensions as possible. In particular, we compare the profiles of various economic sectors (e.g., agriculture vs. non-agriculture), occupational types (e.g., manual vs. cognitive), firm statuses (e.g., informal vs. formal), and locations (e.g., rural vs. urban).

Figure 1 below shows the respective wage-experience profiles of developed countries and developing countries in our sample. As can be seen (see the grey dashed line labeled “Aggregate”), a worker with 30 years of work experience earns almost twice more than a worker with no experience in a developed country, but only 50% more in a developing country. Translated in terms of “returns”, these profiles imply that wages increase by 3.6% per extra year of work experience in developed countries vs. 1.9% in developing countries.

**Figure 1: Wage-experience profiles for developed (left) and developing countries (right)**



Wage-experience profiles are then flatter in rural areas than in urban areas, but even more so in developing countries than in developed countries. A worker with 30 years of experience earn only about 10 percentage points more in urban areas than in rural areas in developed countries. In developing countries, this gap increases to more than 25 percentage points. This suggests that the current global trend towards urbanisation – i.e. fast urbanisation in developing countries – could promote human capital accumulation at work and dramatically raise wages.

However, the urban profile is flatter in developing countries than in developed countries, which implies that similarly experienced workers earn more (relative to unexperienced workers) in the cities of developed countries than in the cities of developing countries. This suggests that there may be less scope for learning in developing country cities.

Therefore, while current urbanisation trends in developing countries could possibly increase returns to work in the aggregate, the question is whether these effects can be large enough to bridge the gap in the returns between developing countries and developed countries.

To illustrate this point, we find that wages increase by 3.4% and 3.7% per extra year of experience in the rural areas and urban areas of developed countries vs. 1.3% and 2.0% per extra year of experience in the rural areas and urban areas of developing countries. While moving all workers to cities would

increase aggregate returns to 2.0% in developing countries, 2.0% is still much lower than 3.6%, the aggregate return to work experience observed in developed countries.

Our analysis of various policies consisting of moving workers across sectors and locations confirms that hypothesis. At best, only 20% of the gap in the aggregate returns between developed countries and developing countries can be explained by the sectoral and spatial structure of developing countries. Conversely, policies that give developing countries the dimension-specific returns of developed countries reduce the gap by at least 85%.

Finally, the small contribution of sectoral and spatial structure suggests that country-wide characteristics are the main drivers of aggregate returns, which we investigate for 145 countries using country-level data. We find that returns are correlated with economic development. Thus, workers in developed countries accumulate more human capital at work, and get rewarded for that. Conditional on income, returns are also higher in countries with better economic institutions as well as infrastructure and social values that may reduce labour market frictions.

## Policy motivation for research

Since the seminal work by Jacob Mincer in the 1970s, we know that earnings differentials are influenced by human capital investments that grow over the life cycle, initially in school and later at work. Mincer showed that the payoff of such investments can be measured in terms of increased earnings, or “returns”, stemming from an additional year spent in school or work.

Past studies have found that returns to work can be large. Thus, learning does not end in school. Students who move into jobs have an opportunity to continue to accumulate human capital, but they face particular obstacles in developing economies:

- Developing countries have large shares of their workers concentrated in the agricultural sector, manual occupations, the informal sector, and rural areas, where there may be less scope for learning than in the rest of the economy.
- Even if there are large gaps in learning opportunities for workers between different sectors, occupations, firms, and locations within a same economy, labour market frictions prevent workers to seize these opportunities. The modern sector and the cities of developing countries may not be as efficient and functional as the modern sector and the cities of developed countries. So they may offer less learning opportunities for workers than in the developed world. In other words, the gaps in learning opportunities may be large within developing countries, but not as large as the gaps in learning opportunities between developed countries and developing countries.

Thus, we believed that it was important to quantify returns to work across countries, but also across dimensions within these countries, with a specific focus on developing countries.

## Policy recommendations

- **Promote policies that facilitate and reward human capital accumulation at work.** People learn valuable skills at work. Therefore, governments should not see schools as the only venue where skills can be acquired. However, developing countries have lower returns to work than developed countries. Thus, there is relatively less scope for learning at work in developing countries. Lower market fluidity in these countries also prevents workers from moving up the ladder to better jobs that fit their skills profile. Also, labour market frictions must be reduced.

- **Question policies that incentivize individuals to move across economic sectors, occupational types, between the informal and formal sectors, or between rural and urban areas.** While labour market frictions must be reduced to allow workers to move more easily across sectors, occupations, firms, and locations, policies that go beyond by incentivising workers to move to specific sectors, occupations, firms, and locations may not have effects large enough to justify their costs. Our analysis suggests that there may be positive effects of “reallocation” policies, as non-agricultural sectors, cognitive occupations, the formal sector, and cities have relatively higher returns to work. However, these returns may still be too low in developing countries to bridge the gap in the returns to work between developed countries and developing countries.