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# Insight

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## How job creation fits into the broader development challenge

### Practical thinking on investing for development

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# Summary

## The context

**In recent years, development finance institutions (DFIs) have expanded their traditional mission of job creation to include impact in areas such as education, health, gender and the environment. Whilst these are all important objectives for DFIs, it is vital that job creation does not become overlooked. The creation of decent jobs is imperative to reducing poverty and improving quality of life in developing countries. And, because the market will not create enough decent jobs when left to its own devices, purposeful interventions are needed.**

At the same time, investing in job creation in Africa and South Asia presents a unique set of challenges. The full impact of investment on labour markets is hard to predict and measure, and creating jobs can conflict with the goal of raising productivity. We wrote this paper to explore how impact investors and DFIs should approach these problems, drawing on theory and evidence from economics.

## The key lessons

- In advanced economies, the goal of job creation is to reduce unemployment. In Africa and South Asia, where hardly anyone is unemployed, the goal of job creation is different. It is to replace informal, unstable jobs that pay poorly with formal, stable jobs that pay well. To that end, impact investors and DFIs should focus on creating more decent jobs in the formal sector and/or raising the quality of jobs in the informal sector.
- There can be a tension between creating jobs and productivity. Poverty reduction requires higher real wages which requires more productive economies. But when we make investments that raise productivity, we often reduce the need for labour. Economies grow by more productive firms adding jobs and less productive firms shedding them.
- Gross job creation – that is, the number of new jobs created before accounting for the number of old jobs destroyed – helps drive progress in two ways: it increases the total number of decent jobs in the formal sector and it replaces bad jobs with better ones. This makes it a useful results indicator for DFIs to report. By contrast, net job creation – that is, increasing the overall level of employment – is a less useful indicator in developing economies that are close to full employment.
- When a firm invests and expands, it adds demand for workers to the labour market. This extends beyond the firm itself as creating jobs in one firm can spur domino effects that result in other workers switching jobs. This in turn can increase productivity and improve worker conditions – for example if workers in the chain move from precarious self-employment to formal employment. But these domino effects are hard to predict and cannot be taken for granted.

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African citizens say that their highest development priority by far is Sustainable Development Goal 8: decent work and economic growth.

## Introduction

Since 2012 CDC Group has reported estimated job creation numbers as its main measure of development impact.<sup>1</sup> It is easy to understand why. Between now and 2030, Africa's working-age population is expected to grow by forty percent to 1 billion, which implies that the rate of job creation must increase by around 12 million jobs per year to prevent unemployment from rising.<sup>2</sup> When asked, African citizens say that their highest development priority by far is Sustainable Development Goal 8: "decent work and economic growth."<sup>3</sup>

But the emphasis that CDC has placed on job creation also raises questions. We know that very low-productivity economies must be transformed into higher productivity economies, capable of delivering a decent quality of life to all their citizens. Adding 'more of the same' jobs will not do enough to help an economy to escape poverty. According to the ILO, the extreme working poverty rate in sub-Saharan Africa and South Asia – the percentage of workers who live in households with consumption below \$1.90 per day – is the highest in the world, at 36% and 12% respectively, well above the 'emerging markets' average of 7%, with a further 24% and 28% respectively living in what the ILO calls 'moderate poverty', on below \$3.10 per day.<sup>4</sup>

There are two ways to increase the real incomes of the poor: redistribution and growth. Most of the countries that CDC invests in are so poor that complete redistribution – so that everyone received the average income per capita – would fall far short of the ambition of the SDGs. Productivity growth is essential. Yet productivity improvements can involve labour-saving investments which destroy jobs. How can development finance institutions (DFIs) such as CDC reconcile the objective of raising productivity with the objective of creating jobs? We also know that investments can create jobs in one firm but destroy jobs in others.<sup>5</sup> How should DFIs think about these displacement effects, and should the estimated job creation numbers they report attempt to incorporate these offsetting effects?

The purpose of this essay is to fit these pieces of the puzzle together and explain how job creation fits into the broader development agenda. This is a huge topic, and to keep it manageable the focus here will largely be on reconciling job creation with inclusive growth. There are important elements of this agenda, such as female economic empowerment and creating jobs that reach

## 1 billion

Between now and 2030, Africa's working-age population is expected to grow by forty per cent to 1 billion, which implies that the rate of job creation must increase by around 12 million jobs per year to prevent unemployment from rising.

- 1 CDC estimates the jobs supported by the companies that we invest in and interprets year-on-year change as an estimate of job creation across our portfolio, but we do not attribute that job creation to our investment. CDC's capital and non-financial support are merely two among many inputs to production, and employment levels are influenced by multiple outside influences.
- 2 African Economic Outlook, 2019.
- 3 This is based on a mapping of survey responses to SDGs. "Taking stock Citizen priorities and assessments three years into the SDGs" Massa Coulibaly, Kaphalo Ségorbahi Silwé, and Carolyn Logan, Afrobarometer Policy Paper No. 51, 2018.
- 4 ILO World Employment Social Outlook 2018.
- 5 The idea that economic growth happens via a process of 'creative destruction' is associated with the economist Joseph Schumpeter (who took it from Marx)

marginalised groups, which will only be touched on in passing here, but that deserve fuller treatment elsewhere. There is also much more to be said about job quality, especially the less tangible aspects, than there is space for here.<sup>6</sup>

The big difference between rich OECD countries and the low and lower-middle income countries that CDC invests in, is the size of the informal sector. The line between formal and informal employment is not easy to draw, but however you look at it, informal employment is the norm. According to the ILO 86 per cent of employment in Africa is informal.<sup>7</sup> In rich countries it makes more sense to think of the purpose of job creation as moving people out of unemployment into employment. But whilst developing countries do publish official unemployment statistics, it is more accurate to see unemployment as a luxury that only rich economies can afford. Feng et al. (2018) examine household surveys that record whether the respondent is working, and find that in the poorest quarter of countries, self-reported unemployment averages around 2.5 per cent. And within these countries, unemployment is much more common for highly educated workers. In the absence of a welfare state, the poor really cannot afford to be unemployed. So, in the context of development finance job creation is more about changing the jobs that people have, moving them out of precarious and low productivity informal employment, rather than out of unemployment.

There is surplus labour in many developing country (informal) labour markets – workers with a low marginal product, meaning that if they stopped working it would have very little effect on output.<sup>8</sup> The existence of large numbers of people that the labour market cannot productively absorb has stark implications for development policy. In an advanced economy it makes more sense for investment analysis to focus on efficiency and presume that when productivity improvements destroy jobs, those displaced workers will find employment elsewhere, raising overall output.<sup>9</sup> Cost-benefit analysis of investment in advanced economies treats jobs as a cost to be minimised. But as Robalino & Walker (2017) explain, when there is widespread underemployment the wage is no longer a good measure of opportunity cost.<sup>10</sup>

# 86%

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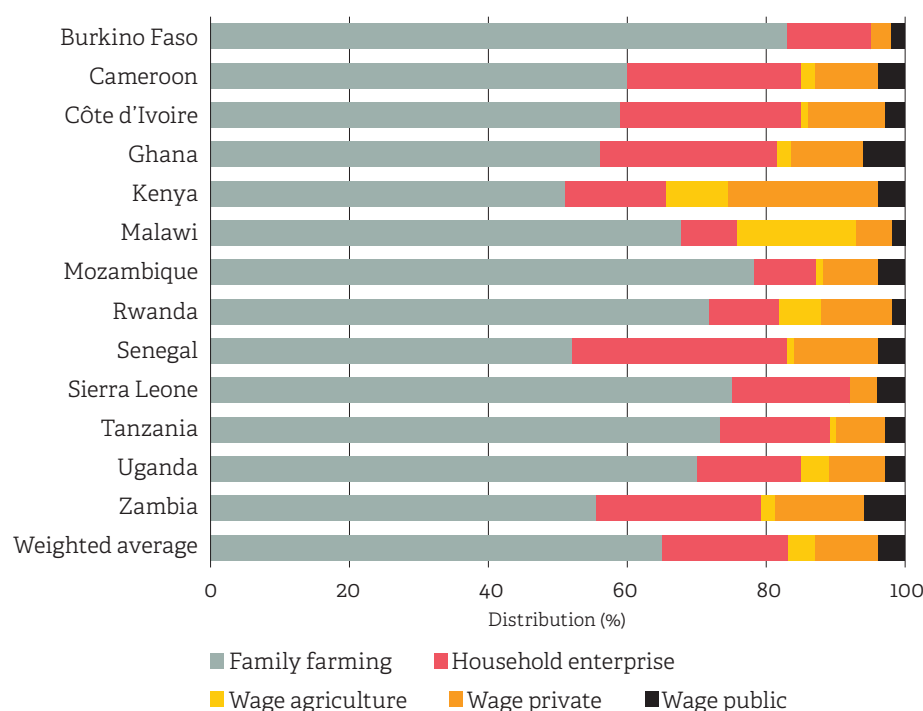


Figure 1: Types of employment in sub-Saharan African countries (Source: Figure taken from: "Creating Decent Jobs Strategies, Policies, And Instruments" AfDB Policy Research Document (2019))

- 6 CDC will publish a job quality strategy in the coming months.
- 7 Women and men in the informal economy: A statistical picture (Third edition) ILO (2018). Within the informal sector, a distinction must be made between informal firms, some of which are quite large, casual informal labour, which may be supplied to informal or formal firms, and the 'reluctant self-employed' who are essentially scraping a living for lack of better alternatives.
- 8 Dillon et al. (2019) use household employment decisions to test for surplus labour in African rural economies, and find evidence in four out of five African countries. Very roughly speaking, people are working on farms because they have nothing better to do.
- 9 That presumption is never going to be completely true – there is long-term unemployment in advanced economies – and technological advances have raised the possibility that automation will push people out of work faster than they can be reemployed.
- 10 One way to see how wages might not capture the opportunity cost to society of employing a worker is to suppose that the worker in question would otherwise be employed at a firm (or in a sector) alongside a number of other underutilised workers, who can 'step up' so that no output is lost when that worker moves to a new job. Explaining how this situation may arise is beyond the scope of this essay.

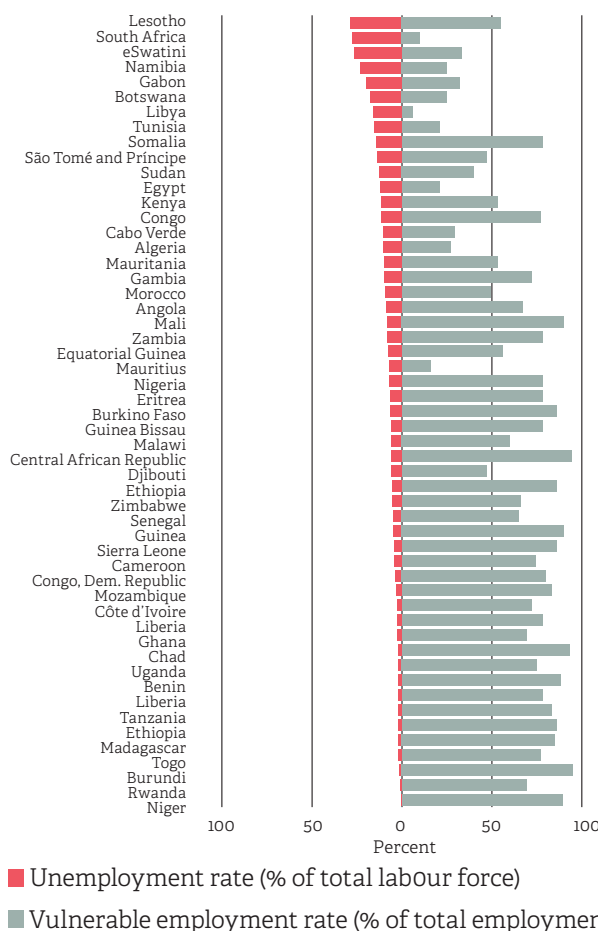


Figure 2: Rates of unemployment and vulnerable employment 2018 (Source: Figure taken from: “Creating Decent Jobs Strategies, Policies, And Instruments” AfDB Policy Research Document (2019))

The benefits to society from job creation will not be typically taken into account when firms take investment and management decisions – they are what economists call a positive externality. Standard economics tells us that in such situations, there is role for ‘Pigovian’ taxes or subsidies to correct the mispricing of good jobs. One could see development finance institutions such as CDC as subsidising investment, to create more jobs than the market would deliver if left to its own devices. But patient public capital with the ability to tolerate lower financial returns than commercial investors, or wait longer to receive them, could also allow firms to choose modes of production and management that involve the creation of more, higher-quality jobs.

Some of the biggest names in economics now see job creation as a global priority. Professor Dani Rodrik of Harvard University says that until recently industrial policy would have concerned itself with factors such as knowledge spillovers and export competitiveness, and left jobs to other areas of government policy (such as education). He now believes that the creation of good jobs should be foremost amongst policy objectives, and that the labour market is the greatest market failure of them all.<sup>11</sup> Rodrik and Sabel (2019) argue that good jobs are a source of positive externalities for society, analogous the better known example of environmental externalities: “We do not view this simply as a problem of inequality and exclusion, but also as a problem of gross economic inefficiency – a case of operating deep inside the production possibility frontier. That is because a shortage of good jobs is associated with a significant range of public ills.”

And because private firms do not take the benefits to society of good jobs into account when taking investment and management decisions, public interventions are called for. Professor Daron Acemoglu of MIT writes “the market has a natural tendency to undersupply good jobs”.<sup>12</sup> He argues that firms motivated solely by profits will sometimes choose to produce using low-wage

» Some of the biggest names in economics now see job creation as a global priority.

<sup>11</sup> This paraphrases parts of Professor Rodrik’s talk at a Centre for Economic Performance workshop on industrial policy, at the LSE on 24th of May 2019, and personal communication with the authors.

<sup>12</sup> Acemoglu (2019)



low-productivity workers and forgo the investment and improvement in wages and working conditions needed to create better jobs, but also that an increased supply of good jobs can create a virtuous circle of upwards pressure on wages throughout the economy driving investments in training and technologies that make workers more productive. He also blames the prioritisation of creating returns for investors above all else for depressing labour's share of production.

Labour markets with widespread under employment imply that less productive and more labour-intensive modes of production may sometimes be better for development than capital-intensive alternatives – if the social benefits of job creation compensate for the loss of productivity. It is not clear how DFIs should navigate between the objectives of raising productivity and creating jobs, when they are in tension. Robalino & Walker write: “the link between private sector investments, growth and jobs remains poorly understood. Policies that increase investment and maximise the returns to capital do not necessarily generate the type or distribution of jobs needed to address problems such as youth unemployment, low female participation rates, inequality or poverty”. Fox et al. (2017) observe that the development success stories of East Asia were achieved through the rapid expansion of manufacturing employment, which was so labour intensive that average labour productivity in industry declined relative to the economy-wide average.

Since 2012 CDC has used a development impact grid as a portfolio steering tool, which scores investments along two dimensions: what country or region they are in, and whether the sector has a high propensity to create jobs. This approach has exposed CDC to the criticism that job creation is an inadequate measure of development impact. Of course, there is much more to understanding development impacts than simply measuring job creation, which is why CDC supplements the grid score with bespoke assessments of the full expected development impact of individual investments. But as a broad-brush approach, putting a premium on job creation is very well motivated.<sup>13</sup>

The evaluation of anticipated development impact for individual investments at CDC is guided by a high-level framework that builds on work by the Impact Management Project, a community of investors that has the objective of building global consensus on how to measure and manage impact. This framework put the emphasis on the “what, who and by how much?” of impact, which in this context draws attention to the fact that the development impact of job creation cannot be fully understood without know who is benefiting (and potentially, losing out). That means prioritising jobs that raise the incomes of those who would otherwise be living in poverty, with a special emphasis on women and other marginalised populations.<sup>14</sup> And whilst moving workers into higher-quality formal employment is tremendously important, the sheer scale of the informal sector means that this cannot be the only margin to work on. DFIs can also explore ways to improve the quality of informal employment, such as raising standards in the informal supply chains of formal firms, or promoting e-commerce and ‘gig economy’ technologies and business models that have the potential to connect informal workers to more predictable and rewarding sources of income.<sup>15</sup> As Robalino & Walker (2017) put it, the objectives of investing for jobs are: “to accelerate job creation and productivity growth in the formal sector of the economy; to improve the quality of informal jobs; or to connect vulnerable groups (e.g. women, youth, the poor) to higher productivity jobs.”

The informal nature of employment in Africa and South Asia also tells us that we need to think carefully about where to look for evidence of job creation in economic data. In advanced economies, fluctuations in economic growth translate into fluctuations in total employment. Economists call this Okun's law. However, in low and lower-middle income countries there is typically no correlation between economic growth and overall employment growth, because most of the working age population is self-employed, either in agriculture or informal service-sector activities. As Farole et al. (2017) put it these jobs “will not come and go in periods of economic growth and decline; rather, the adjustment to business cycles is likely to be observed through earnings, working hours, and/or shifts in employment within the formal sector”. Fields (2019) explains

13 The grid is a portfolio steering tool, not a way to assess the expected development impact of individual investments. CDC employs a team of embedded development impact professionals whose job it is to understand the expected the development impacts of individual investments along multiple dimensions, in context, which will be a function of the contribution the investment will make to outcomes. CDC will make high impact investments with low grid scores and rejects low impact investments with high grid scores. The grid works to push the overall portfolio in the right direction, because although individual scores can be inaccurate, the errors will cancel out so that on average a higher grid score will be associated with higher development impact across the portfolio.

14 CDC, along with other G7 DFIs, is part of the “2X Challenge” which aims to mobilize \$3 billion in commitments that provide women in developing country markets with improved access to leadership opportunities, quality employment, finance, enterprise support and products and services that enhance economic participation and access.

15 See, for example, the CGD note: “Let's Be Real: The Informal Sector and the Gig Economy are the Future, and the Present, of Work in Africa” by Amolo Ng'weno and David Porteous (2018). Fox et al. (2016) also document how Africa's youth overwhelmingly find informal ways of making a living, and urge policy makers to focus on raising informal productivity.

that employment growth in Africa simply tends to track population growth and argues that increasing the quantity of employment is the wrong target, it is the quality of employment that matters. This tells us that in lower income countries we should not expect to see jobs created by DFIs' investments show up in official overall employment data. Rather, we should be looking for positive impacts in two places: net growth in formal employment and higher quality informal employment. McCaig and Pavcnik (2015) show that economic growth in Vietnam was accompanied by growth of formal sector employment, and that happened because young people entering the labour market become more likely to find formal sector jobs, often by internal migration. A lack of good data means that evidence on the relationship between investment, growth and formal sector job creation in Africa and South Asia is scarce.

Because development requires replacing low quality, low productivity jobs with better ones, rather than looking at the overall change in employment (net job creation) it makes more sense to think about gross flows. This approach happens to chime well with contemporary labour economics, which is built on what are called 'search and matching' models. In these models, firms search for workers and workers search for jobs, and a job is created when a match is made.<sup>16</sup> In these models, workers will accept lower quality jobs if they are easier to find. This approach naturally draws attention to the distinction between stocks and flows: there is a stock of jobs (or equivalently, of employed workers) and a stock of unemployed workers. These stocks are added and subtracted to by two flows: from employment into unemployment and vice versa. The change in total employment (the stock of jobs) is also the net result of the two gross flows: job creation and job destruction.<sup>17</sup> When a DFI makes an investment that results in the firm hiring new workers, that is a contribution to gross job creation, but the impact on total employment in the economy will depend on what happens elsewhere in the economy.

16 There are flows from unemployment to employment, and vice versa, but also flows within employment: firm-to-firm transitions, where people who already have job find a new one.

17 An individual may move from unemployment into employment, without a job being created, if they are taking a job vacated by someone who is leaving the labour force (for example), and a job may be created without a change in unemployment, if it is taken by a worker who leaves another job and is not replaced. But in aggregate, the sum of job creation and job destruction (the net change in jobs) must equal the sum of movements into and out of employment, unemployment, and the labour force. Burgess et al. (2000) studies the links between worker and job flows.



# 01

## Creating better jobs

**This section introduces a simple “accounting” framework for evaluating the impact of job creation on an economy’s overall employment. Despite its simplicity, this framework is deeply rooted in current state-of-the art labour economics.**

**After introducing the framework, we will use it to discuss the consequences of a lack of job opportunities, and to guide us through other effects of job creation, which are perhaps less apparent at first sight. In the next section, we extend the analysis to job quality.**

### 1.1 A simple framework for understanding job creation

The evolution of total employment  $N_t$  over time can be written as the sum of employment in the previous period  $N_{t-1}$  and net job creation, or the difference between gross job creation and destruction  $JC_t - JD_t$ .<sup>18</sup>

$$N_t = N_{t-1} + JC_t - JD_t \quad (1)$$

Using (1), we can then express unemployment, or the number of people outside of formal employment, simply as  $U_t = L_t - N_t$ , where  $L$  is the labour force. In the context of developing economies, we would interpret  $U$  as composed of people in low productivity and precarious informal employment, rather than unemployment of the type that exists in rich countries with welfare states.

Importantly for our discussion, the labour force in developing countries is growing rapidly. We will capture that in our framework by a constant growth rate  $g$ , i.e.  $L_t = L_{t-1}(1+g)$ . Putting all these features together, we can write the following expression for the number of people outside formal employment

$$U_t = U_{t-1} + gL_{t-1} + JD_t - JC_t \quad (2)$$

Once again, the above expression is very intuitive. For the number of people outside formal employment to decrease, job creation must not only exceed job destruction, but also exceed the speed at which the population is growing.

<sup>18</sup> This is a simplification of the expression for the evolution of employment in so-called search and matching models, where employment evolves according to  $N_t = N_{t-1}(1-s_t) + M_t$ , where  $s_t$  is the rate at which employed workers move into unemployment and  $M_t$  is the number of newly hired workers. In our notation, this boils down to  $N_{t-1}s_t = JD_t$  and  $M_t = JC_t$ .



## Population growth and poverty

The notion that high rates of population growth may lead to increasing poverty dates back at least 1798 when Thomas Robert Malthus argued that population growth will depress living standards. Whilst we now understand that technological progress can overturn Malthus' dismal prediction, the data on high rates of working poverty in Africa and South Asia show there is still cause for concern.

There is a long-standing debate about the effect population growth has on economic development. Results from existing studies range from a negative impact (Ehrlich, 1971), no effect (Kuznets, 1967) to positive (Kelley, 1988). More recently, Headey and Hodge (2009) analysed existing evidence to make sense of these differing conclusions. They put the differences down to the types of countries considered, differing measures of population growth, the consideration of other drivers of growth and varying statistical methods used in the existing studies.

Headey and Hodge find first that growth of the adult population has a positive effect on economic growth, while growth of the overall population has no effect. This points to the possibility that growth of the young-age population can constrain economic growth. Second, and importantly for the context of African economies, population growth has a detrimental effect on economic development in conditions of land scarcity. We turn to this below. Finally, investment in education catalyses the positive effect adult-age population growth has on economic growth but worsens the negative impact of young-age population growth. This suggests that while education expenditures likely pay off in the long-run, they can be costly initially.

A somewhat different reason for a potential inverse relationship between population growth and economic development is the so-called "Demographic Dividend". When population growth slows, there is a relatively long period (lasting for five decades or more) during which the labour force grows at a faster rate than the dependent population (see e.g. Lee and Mason, 2006). This presents a window of opportunity to increase a country's investment into economic development or family welfare.<sup>19</sup>

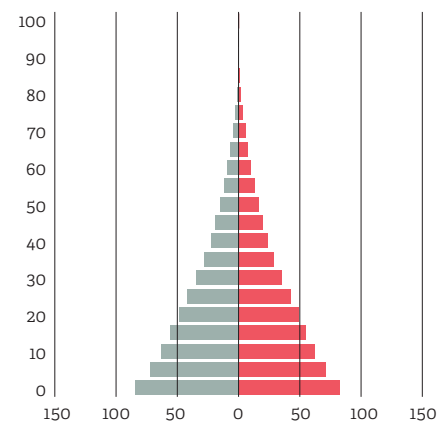
### Agriculture and rural-urban migration

An important channel through which population growth reduces living standards operates through its effects on agriculture and the availability of land. More than 70% of the poor in sub-Saharan Africa live in rural areas and derive more than half of their livelihood from farming (Muyanga and Jayne, 2014).

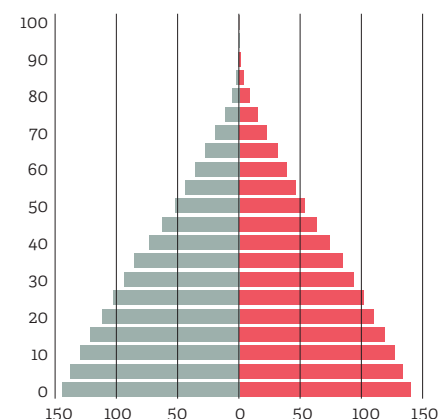
Across Africa, the typical (median) farm is getting smaller as land is subdivided, a problem compounded by deteriorating soil quality from intensive farming (Barrett et al., 2017). Increasing rural population density is associated with lower rural wages and higher food prices.<sup>20</sup> The relationship between farm size and productivity is complicated, and studies often find the smaller more intensively farmed plots have higher yields, but at some point farms become too small. Currently, about 15 percent of the sub-Saharan population resides in areas where farms have already become too small, as judged by yields (Muyanga and Jayne, 2014).

Because rural employment is growing slowly, continued population growth in already densely populated rural areas leads to increased rural-urban youth migration. Unless urban employment opportunities can keep pace with rural population growth, the youth are at risk of falling into precarious informal employment there too, with incomes barely above subsistence. Jedwab and Vollrath (2014) have identified Malthusian dynamics within poor megacities (over 12 million inhabitants) where living standards are low and stagnant. These cities are experiencing internal population growth, in addition to migration from rural areas, and negative congestion effects are outweighing the positive agglomeration effects that have historically meant urbanisation has led to higher living standards.

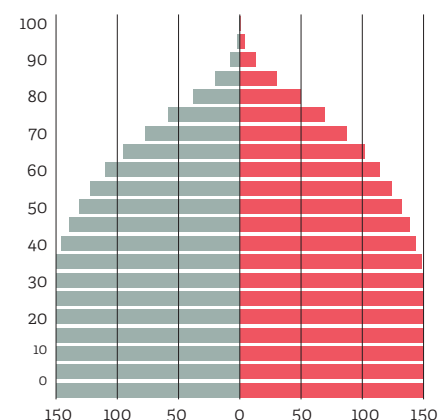
Africa 2010



Africa 2050



Africa 2100



Absolute numbers (millions)

Male Female

Figure 3: Population by age group and sex  
(Source: AfDB using data from United Nations – World Population Prospects)

<sup>19</sup> Mason (2005) estimates that even by 2050 the demographic transition necessary for the emergence of the demographic dividend will not be completed in most of the African economies.

<sup>20</sup> Ricker-Gilbert et al. (2014) provide detailed evidence from Malawi, for example.

## 1.2 The knock-on effects of job creation

This simple expression for the evolution of employment should not be interpreted as suggesting that gross job creation and destruction are independent variables, as if some firms create jobs and other firms destroy them, and there is no link between the two. Below we will use a simple framework to introduce some job displacement mechanisms, but for now a simple point can be made: supply-side constraints—the fact that there is only a finite number of workers—combined with the fact that gross job creation flows are large, implies the existence of mechanisms that connect job creation to worker reallocation and job destruction. To take the extreme case, in an economy at full employment it is impossible to create a job without another being destroyed elsewhere and creating one job may entail many workers switching jobs and reallocating across firms.

In economies with unemployment, the flow of gross jobs created each year is so large that unemployment would be quickly eliminated if it was not offset by job destruction.<sup>21</sup> It is perhaps not widely appreciated how large gross flows are, in comparison to net changes in employment.

Few countries in Africa and South Asia produce reliable labour force data, making it hard to put a scale on the size of these flows in the countries that CDC invests in, but we know that across countries gross labour market flows dwarf the net changes in employment. In Ethiopia, a country with a growing economy and rapidly growing labour force, Shiferaw and Bedi (2013) find rates of job creation in manufacturing firms of 14% (above the OECD average), with lower job destruction rates at around 10%, so net employment in the sector grew on average at around 4% per year.<sup>22</sup>

### Scars of youth non-employment

Rapid population growth creates a workforce highly skewed towards the young. The median age in Africa is just 19.4 years and the share of individuals younger than 15 years is an amazing 43 percent (United Nations, 2018). This compares to Europe's median age of 41.6 with 16 percent of the population younger than 15 years.

There is ample evidence from developed economies that youth unemployment has a long-term scarring effect (a lack of data prevents comparable research in low-income countries). For instance, Gregg and Tominey (2005) use survey data from the UK and find a large and persistent wage penalty from youth unemployment, after controlling for education, region and other characteristics, in the region of 13–21% lower wages at age 42.<sup>23</sup>

These persistent effects are shown to stem not only from lower initial earnings, but also from the acceptance of lower quality jobs (accounting for almost half of the earnings losses). These results may not map exactly onto developing economies, where most individuals cannot afford to be unemployed, but the idea that having to accept low-quality jobs when young, because of a lack of better alternatives, may have persistent effects seems plausible in developing economies. We will return to informality and its consequences in the next section.

Donavan et al. (2018) found 14 countries that produce labour force surveys that permit analysis of labour force churn, and although the poorest countries with data (Palestine, Nicaragua) are relatively wealthy in the context of Africa and South Asia, the results suggest that gross flows are much larger in less developed economies. They find workers in poorer countries have a 20 percent chance of switching employers in a *quarter*, workers in rich countries (here, just the United States) have less than a 5 percent chance. Part of that difference is explained by seasonal work being more common in poorer countries, and the absence of larger firms, where job tenures tend to be longer, seems to explain

21 For example, in the most recent year the UK ONS reported 3.8m movements into employment and 3.2m out of employment. At the end of the period the number of unemployed workers stood at 1.4m. These data are collected quarterly so some of these movements will be the same people moving repeatedly within a year, but clearly the rate of annual gross job creation is so great that it would erase unemployment within a year, were it not for offsetting job destruction.

22 The *job* creation rate is the average percentage change in the headcount among those firms that are adding workers, and the destruction rate is the average for firms that are cutting workers. Labour force churn - the gross flows of *workers* - will be much larger, because can workers leave and be replaced without any change in the overall number of jobs.

23 Similar results are found by Kahn (2010) in the USA and Oreopoulos, von Wachter and Heisz (2012) in Canada.

the remaining difference. In OECD countries, on average more than 20% of jobs are either created or destroyed each year, and around one-third of all workers are hired and or separate from their employer, whilst the rate of net job creation is essentially zero.<sup>24</sup> The findings of Donovan et al. suggest that in CDC's markets, average job creation and destruction numbers would be higher.

The following paragraphs use our baseline framework to describe how net and gross job flows differ and how job creation can spur a “domino-effect” resulting in large worker reallocation.

## Job creation and worker reallocation

Let us first focus on the fact that job creation may hide a much larger amount of worker reallocation. This is illustrated in the diagrams in Figure 4.

The differently-sized factories in panels indicate productivity differences. Larger firms are typically more productive and offer better working conditions, but there is great variation in productivity across firms of all sizes. The situation depicted in panel (a) shows job creation in the most productive firm. This job is likely to get filled by a worker from a different firm (for instance, about half of all created jobs are filled by job-to-job transitions in the U.S., see e.g. Falick and Fleischmann, 2004), this is shown in panel (b). In the same way, the poaching of a worker from the medium-sized firm prompts a reallocation from the small to the medium-sized firm (panel (c)). Finally, panel (d) suggests that the smallest, least productive, firm may be able to refill its position with a worker from non-employment.

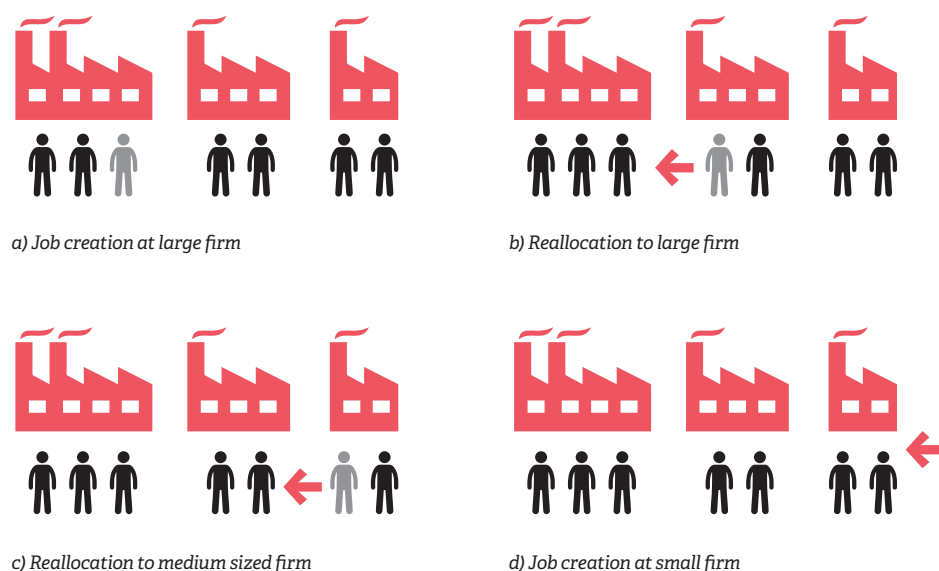


Figure 4: Job creation and worker reallocation

Notice that Figure 4 suggests that while there was a creation of one job, there were three workers reallocating. The more interconnected the economy, the larger is the potential for job creation to generate worker reallocation. In the next section, we will show that this process of worker reallocation alone can increase productivity and improve worker conditions, even if employment does not increase.

<sup>24</sup> OECD Employment Outlook. Job re-allocation rates (the sum of job destruction and job creation rates) vary greatly across countries, reflecting not only variation in the industries that employ most workers in each country, but also labour market regulations that constrain how easy it is to fire and hire.



## What this means for DFIs

The fact that labour markets exhibit a great deal of worker reallocation highlights the need for a more complex view of the effects of job creation. It tells us that the impact of an investment will extend beyond those individuals hired by the firm, many of whom might have come from a similar job and therefore experience a small change in their own quality of life. Impact evaluation exercises that confine themselves to studying the effect of job creation on workers hired by the firm a DFI has invested in will miss the full impact. Most impact evaluation methods look for an “effect of treatment on the treated” and it is much harder to gather evidence on the general equilibrium impact of individual investments at the market level. The presence of spillover effects also suggest that many more workers may sometimes benefit from an investment if it creates the opportunity for them to move up the job-quality ladder. That result emerges from formal models of labour markets in low income countries, such as Basu et al. (2018), which finds that increasing high wage employment reduces the number of workers stuck in involuntary low productivity self-employment.

Higher quality jobs can also be associated with more on the job learning and creation of transferable skills, and workers gaining experience then leaving to set up their own business can also be an important indirect effect of creating more jobs at top of the employment ladder.

What type of firm should a DFI with the objective of poverty reduction invest in? DFIs could seek out firms that will hire workers from the poorest and most marginalised communities directly, or they could invest in more productive firms that are likely to mostly hire relatively well-educated or experienced workers, but which will create these knock-on effects that could indirectly cause people to move from precarious self-employment on to the first rung of the jobs ladder. Investments at the bottom of the ladder, so to speak, may benefit fewer people if they do not initiate this process of reallocation.

Increasing the number of more productive firms offering better jobs seems necessary to transform poor low-productivity economies, but on the other hand we cannot be confident these positive spillovers will always reach the poorest.<sup>25</sup> We know that whilst economic growth is associated with poverty reduction on average, it is by no means sufficient.<sup>26</sup> Beyond a few generalities, such as that investment in the extractive industries has little impact on poverty, there is little evidence to guide DFIs on this question.<sup>27</sup> It is difficult to trace the spillovers from individual investments, empirically. But we can say for sure that the question of whether DFI investments are reducing poverty is not always answered by looking to see whether the firms that they invest in are hiring poor people.

DFIs face a similar dilemma when it comes to job quality: should they invest in the expansion of firms that offer higher quality jobs, or target firms that offer poor quality jobs (which are more likely to employ poor people) and try to raise their quality? The answer will depend on the strength of positive spillovers, and the ability of DFIs to work with firms to raise standards. Because DFIs might have more impact by working to improve conditions offered by low quality employers, evaluating the performance of DFIs with respect to job quality will require more than looking across DFIs’ portfolios and counting the proportion of jobs that are rated as decent.



*The impact of an investment will extend beyond those individuals hired by the firm, many of whom might have come from a similar job and therefore experience a small change in their own quality of life.*

<sup>25</sup> These debates are not helped by imprecise terminology – how do positive spillovers (emphasised by leftwing economists such as Joseph Stiglitz) differ from “trickle-down economics”, associated with the political right? We need to distinguish between the uncontroversial idea that there are linkages between markets and sectors, so that people may benefit indirectly from investments that are remote from them, with the discredited idea that helping the wealthy is the best way to help the poor. Trickle-down economics sometimes refers to the benefits of tax cuts for the wealthy, which is a distinct concept from spillovers from investment.

<sup>26</sup> Dollar et al. (2016) confirm that it is growth that reduces poverty, on average. Clementi et al. (2019) expose polarisation of the income distribution in Africa, which has meant growth has not translated into poverty reduction as strongly as it has in other regions.

<sup>27</sup> The weight of evidence is probably that growth in agriculture is most important for poverty reduction, but some studies find manufacturing is more important, some services.

## Job creation and job destruction

We have seen how job creation can spur large worker reallocation. But we cannot assume that 'knock-on effects' will always reach down and lift the least productive. Labour markets can be segmented, either geographically or by skill level, and these spillover effects may peter out. There is relatively little empirical evidence on the circumstances that determine the strength of "trickle-down" effects. Research that estimates growth-poverty elasticities shows how the relationships between investment and poverty reduction in aggregate vary across space and time. A study by the WTO (2009) found that economic growth arising from openness to trade could not be relied upon to automatically pull workers out of the informal sector. However, the fact remains that the informal sector does tend to shrink as countries grow. La Porta & Shleifer (2014) argue the process of development amounts to growth in the formal sector leading to the decline of the informal sector in relative and eventually absolute terms. They show few informal firms convert to formality, but more generally they disappear because they cannot compete with the much more productive formal firms.

These aggregate results tell us something about what to expect on average, but they do not give much insight into when and why job creation in one place will initiate chains of reallocation that eventually benefit the worst-off sections of society. The evidence from more microeconomic studies is mixed. Again, data availability constrains which questions it is possible to answer, so most relevant studies are in advanced economies. Hornbeck & Moretti (2018) use very rich data from the USA to show that local productivity growth in manufacturing reduces local inequality, as it raises earnings of local less-skilled workers more than the earnings of local more-skilled workers. However, it is the local housing market that really determines who benefits: landlords tend to capture rising wage from renters. On the other hand, Lee and Rodriguez-Pose (2016) find no such effect of high-tech growth on poverty in US cities.<sup>28</sup>

Because trickle-down effects may often run dry, Figure 4, panel (d) might be overly optimistic. Instead, if markets are segmented or there are other barriers to the reallocation of resources, that job creation chain could stop prematurely. This, in turn, means that job creation naturally creates offsetting job destruction within the formal sector. If in Figure 4, the smallest firm does not manage to fill its position which was vacated by the hiring from the medium-sized firm, net formal sector job creation is zero (despite there being two workers reallocating across jobs).

Market segmentation and broken chains are not the only mechanisms that connect job creation to destruction. The first mechanism that links job creation to destruction that most economists would probably think of is the effect of investment on wages. To an economist, higher real wages are the main benefit of investment and economic growth. Here we have focussed only on the knock-on effects of individuals moving from job to job, but adding demand to a labour market should also increase the wages of those already employed, as firms seek to retain workers.<sup>29</sup> Indeed, Fritsch and Mueller (2008) find that after a period of "direct" positive effects of new job creation there is a phase of job destruction when a fraction of incumbent firms discover they are unable to compete with the newly created jobs either on wages or quality. From a development perspective, higher wages are a good thing, as is the exit of less productive firms. Upwards pressure on the wages of incumbent workers is another potential positive spillover from investment, alongside worker reallocation. But again, although we know that over the long run investment and productivity growth is the only way to push up real wages and for countries to escape poverty, it would be extremely difficult for a DFI to demonstrate empirically the impact of an individual, productivity-improving investment on rising real wages across an economy.

<sup>28</sup> We can also get a sense of how unreliable positive spillovers can be from the voluminous literature on spillovers from FDI, where a common finding is that positive spillovers are more likely in the presence of contextual factors such as a stronger financial sector or more educated workforce. But the mechanisms at work are much more complex than simple 'knock-on' effects considered here, and include backwards and forwards supply chains linkages, learning, technology transfer and human capital transfer. Some useful examples are Gorodnichenko et al. (2014), Reyes (2017), Havranek & Irsova (2011) and on the more negative side, Herzer & Donaubauer (2018).

<sup>29</sup> One striking piece of evidence that indirect effect of creating jobs are important comes from Muralidharan et al. (2017) who study the impact of jobs created by the Indian rural employment guarantee programme NREGS. It found "the general equilibrium impacts of NREGS through the open market appear to be a much more important driver of poverty reduction than the direct income provided by the program". That result isn't about indirect job creation but stems from tighter labour markets driving up wages across the economy.



## 02

### Creating better firms

***“The fundamental impulse that keeps the capital engine in motion comes from the new consumers’ goods, the new methods of production and transportation, the new markets... [The process] incessantly revolutionizes the economic system from within, incessantly destroying the old one, incessantly creating a new one. This process of Creative Destruction is the essential fact of capitalism.”***

***Joseph Schumpeter***

The previous section finished on a somewhat sombre note that formal sector job creation may be offset by job destruction, implying that it will not always pull people out of precarious informal employment. In this section we move away from analysing the transitions that workers make to looking at the Schumpeterian process of creative destruction at the firm level and how this process affects overall productivity in the economy. There are unproductive firms in both the informal and formal sectors that need replacing.

#### 2.1 Firm churn and productivity growth

Going back to our Figure 4, we can immediately see that even in the “bad-case” scenario when the lowest productivity firm does not manage to refill its vacant job, the economy is still better off. And the reason for this is that the composition of existing jobs (recall that in this case the number of jobs has not changed, and net job creation is therefore zero) has shifted towards more productive firms.

This consideration would provide a motivation for supporting job creation at high-productivity firms, but we must ask the question of who benefits. Again, we cannot simply assume that such investments will create inclusive growth. It is an incontrovertible fact that in some countries the benefits of investment and growth have flowed to the better-off, with most workers suffering from stagnant real incomes over protracted periods. The introduction of new labour-saving capital investments or automation may tip the scales towards job destruction and the net overall effect may be negative. That said, existing evidence suggests mainly that the introduction of process innovations has a positive overall effect on employment (see e.g. Baffour et al., 2016 for evidence on Ghana).<sup>30</sup>

<sup>30</sup> “Cirera and Sabetti (2016) use a sample of over 15,000 firms in Africa, South Asia, Middle East and North- Africa and Eastern Europe and Central Asia and find that innovation is associated with employment growth at the firm level, although that does not necessarily translate into general equilibrium outcomes.



## A few stylized facts

Research on developed economies has brought about several “stylized facts” which are associated with the process of creative destruction (see Bartelsman, Haltiwanger and Scarpetta, 2004). These include:

- a) The probability of survival tends to increase with firm size and age. However, conditional on survival, larger and older firms tend to grow less.
- b) There is a high pace of output and input reallocation across firms with entry and exit of firms accounting for a substantial share of this reallocation.
- c) This reallocation process is not random, but rather productivity enhancing.

It is not obvious, however, whether these facts also remain to hold in developing economies where firms typically have a harder time expanding, even if they manage to survive market pressures. For instance, Aterido et al. (2019) show that the South African economy is extremely sclerotic, dominated by large firms lacking in dynamism. Rijkers et al. (2014) show that small firms in Tunisia stagnate and grow considerably less than their counterparts in developed economies. More importantly still, there is only a very weak correlation between productivity, profitability and job creation. This suggests that the productivity-enhancing process of creative destruction may be obstructed by certain factors. Hsieh and Klenow (2009) suggest that a lack of dynamism and consequent inefficient allocation are related to constraints on obtaining financing. Bloom and van Reenen (2007) relate them to management practices, poor legal institutions and the high prevalence of family-owned businesses. As a result, compared to developed economies, small firms are more plentiful and the primary source of job creation in poor countries (see Figure 5 and 6).

Indeed, the idea that start-ups and small firms are the engines of growth is not so straightforward. Recent research suggests that the vast majority of small firms do not grow and the overall growth prowess of young firms rests on the shoulders of only a small share of high-growth firms, so called “gazelles” (Haltiwanger et al., 2014).



*Recent research suggests that the overall growth prowess of young firms rests on the shoulders of only a small share of high-growth firms, so called “gazelles”.*



Figure 5a: Employment shares across country income groups (Source: Ayyagari et al. (2011))

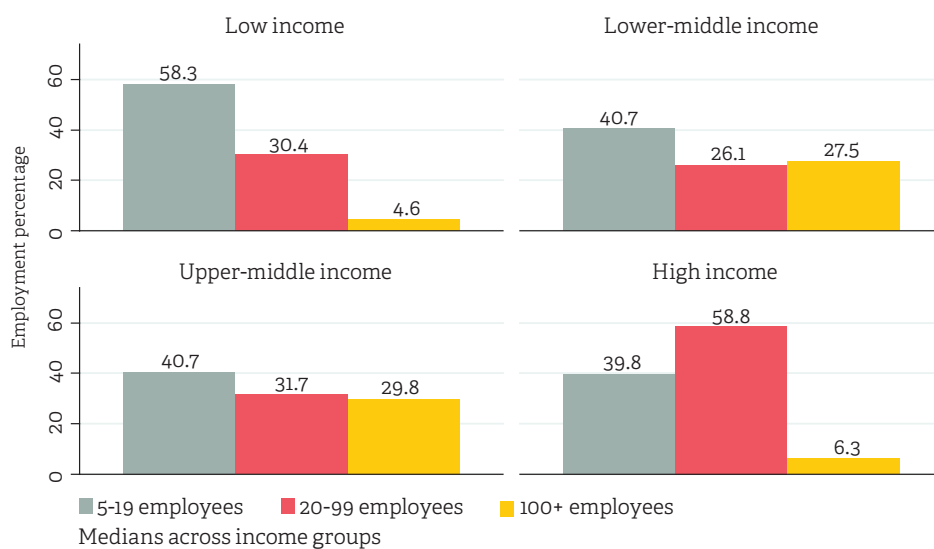


Figure 5b: Job creation shares across country income groups (Source: Ayyagari et al. (2011))

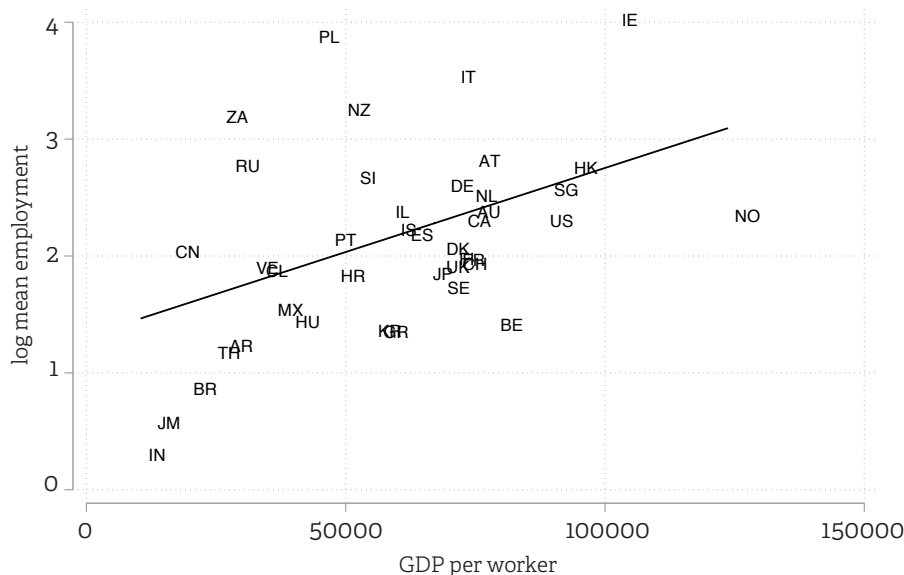


Figure 6: Firm size distribution and income across countries (Source: Poschke, (2018))

## The role of firm entry and exit

With the proviso that this process of creative destruction seems to be somewhat weaker in developing economies, it remains true that firm entry and exit accounts for a large share of productivity growth.<sup>31</sup>

Figure 7 shows the relative productivity levels of different types of firms in the US. The impact that firm entry and exit has on overall productivity growth is evident – exiting firms are those with below-average productivity levels, while surviving young firms are those that are productivity leaders.

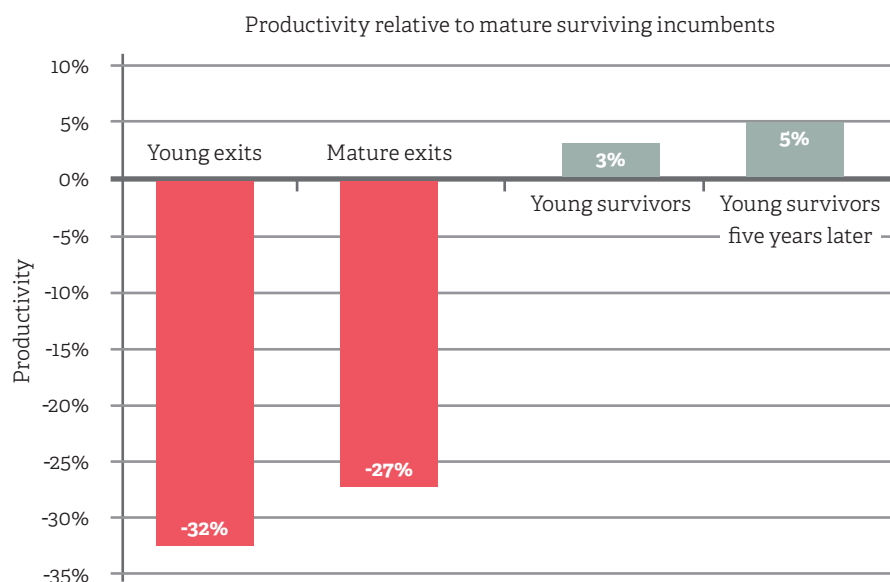


Figure 7: Relative productivity of entrants and exiting firms

While similar patterns are true also for developing economies, they are a bit more nuanced (Ayiagari et al., 2011). Unlike in developed economies, micro-enterprises and small firms are the dominant job creators but small fast-growing firms, “gazelles”, are extremely rare. Instead, “mice” and “elephants”, i.e. firms that enter small/large and remain small/large, are the dominant animals in the business landscape (see e.g. Li and Rama, 2013). This, in turn, means that most job creation happens on the extensive margin, i.e. through new firm entry.

But it would be a mistake to jump from the fact that very few small firms grow to be large to the conclusion that the growth of small firms is unimportant for development. There are very many small firms, and few large ones. The stock of large firms in an economy would be either replaced or be growing at a much faster pace if two in every thousand small firms grow large, than if only one in every thousand do. If interventions by DFIs, especially those aimed at relaxing financing constraints faced by small enterprises, produce a few more gazelles each year, that could have a big impact on the overall dynamism of any economy.

## 2.2 Economic transformation

Thus far we have shown how DFIs can contribute to creative destruction by investing in more productive firms, setting off a chain of events that ends with the least productive firms exiting, or workers ceasing the least productive activities (informal self-employment).

Replacing unproductive units with more productive ones is certainly a contribution to economic transformation, but some investments may also have more transformation effects with impacts that ripple out across the economy.

If we think of an economy as a production network, we could think of a non-transformative investment as affecting a small part of the network – a single chain of worker reallocation, or one firm entering and another exiting. At the other extreme, an investment that meaningfully reduces transportation costs across the economy, for example, could cause the entire network to rearrange itself, many firms to enter and others exit, and new connections to be made.

<sup>31</sup> The relative contributions of within-firm productivity growth, as opposed to entry and exit, remains disputed even in the data-rich environment of the USA. See for example “Comments on “The Reallocation Myth” by Chang-Tai Hsieh and Peter Klenow” available on John Haltiwanger’s website.



The example of transportation hints at how investments can be transformative: if they produce intermediate goods that are used by many other firms in the economy. Jones (2011) has argued that the huge productivity gap between rich and poor economies can be explained by linkages and complementarities in production networks. When investments are complements – the productivity of one is increasing in the productivity of the other – economies can be held back by the ‘weakest link in the chain’. If DFIs’ investments can fix these crucial weak links, we can contribute to economic transformation.

A clear example of how investment can spur investment by stimulating a wave of creative destruction comes from a study of the expansion of the electricity grid in Indonesia. Kassem (2018) combined grid extension data with a manufacturing census and showed that electrification markedly increased employment in the region, but that was only half the story. Grid access also sharply increased the rates of firm entry and exit, causing churn in the labour market that would not be visible from changes in total employment. This churn created new industrial activity (as opposed to merely changing its location). Higher turnover rates led to higher average productivity and induced reallocation towards more productive firms in electrified areas. This is consistent with electrification lowering entry costs, increasing competition and forcing unproductive firms to exit more often. The pace of creative destruction sped up.

The extension of a country’s financial infrastructure can have a similar effect on the pace of creative destruction. Bazzi et al. (2017) linked extraordinarily rich data on credit access with longitudinal employment records for the universe of formal firms in Brazil between 2003 and 2014. They study the effects of a large increase in the supply of credit for SMEs, created by the national development bank BNDES, and find that it had a large impact on the rate of firm entry and exit in the economy, but these flows cancelled out in aggregate, leading to no change in overall local employment (over the short run). However, by changing the composition of firms each period, the greater availability raised the quality of firms operating in the formal sector.

Reducing the price or increasing the availability of intermediate goods and services, including finance, is only one mechanism by which DFIs can hope to be transformational. Another important channel is the creation of knowledge and capacity building (which can extend to regulatory reform and other policy interventions). DFIs place great value on pioneering investments that will have a ‘demonstration effect’ so others will follow in their footsteps. One of the best documented examples of a pioneering firm is Desh Garments, in Bangladesh, which almost single-handedly founded the sector in that country. Desh was a joint venture with the Korean firm Daewoo, and sent workers to Korea to learn modern production techniques. Mustafa and Klepper (2018) show that more than a decade later a disproportionate number of the largest factories in Bangladesh had managers trained through the Desh-Daewoo venture. But the Bangladeshi experience also reveals the need for concerted efforts to raise job quality. Garment workers have been subjected to various forms of mistreatment.

Finally, we should remember that poverty reduction does not only happen through the creation of better jobs paying higher wages. Poverty declines when the nominal wages earned by poor people rise faster than the prices of the goods and services that they buy. Better jobs pay higher wages, but the other side of that equation is that investments which raise productivity, whether new by entrants or incumbents will – if markets are competitive – reduce prices.<sup>32</sup> Again, this mechanism may be weaker in developing countries when markets are often not competitive. World Bank (2016) shows how the markets for many commodities in Africa are in the hands of a few companies, and as a result citizens pay substantially more than they should for basic staples. This is another huge topic that would take us too far astray but suffice to say that much of the potential development impact of DFI investments arises through their impact on prices, not just on jobs.

32 This does not always mean reduce prices in absolute terms, what matters is the rate of increase relative to wages.



## 03

### What this means for how DFIs report job creation numbers

With careful planning and research design, and a bit of luck, conceivably DFIs could obtain an estimate of the causal impact of an investment on job creation.<sup>33</sup> But it would not be easy – the fundamental problem of knowing how employment would have evolved in the absence of investment by a DFI is hard to solve for a one-off event.<sup>34</sup> In any case, DFIs certainly cannot undertake studies of that nature for every investment that they make. But what they can do is report how many workers are employed by each of the firms that they invest in. Each year CDC reports that number and interprets the annual change as job creation by firms in our portfolio, without attributing that to our investments. This may fall short of what we would ideally want to know (job creation that can be attributed to our investments) but if you are willing to accept that DFIs provide growth capital to firms they would not otherwise obtain, you may regard these numbers as containing some indication of contribution.

We also use data from investees on their costs of goods sold, combined with input-output modelling and country and sector-specific employment intensity data, to construct estimates of jobs supported indirectly, downstream in supply chains, from wages being spent, and through forward effects from the supply of loans and electricity.

All these numbers are estimates of gross job creation. We can see how employment has changed in a firm we have invested in, but we cannot so easily observe whether jobs were lost at firms we have no connection to, as a result. Input-output modelling captures how demand cascades through an economy but does not incorporate supply-side constraints or price mechanisms that could generate offsetting job destruction.

<sup>33</sup> Direct job creation in a greenfield project, if you are prepared to accept it would not have happened without funding from a DFI, is straightforward to measure. Beyond that, the problem of identifying causal effects can quickly become intractable.

<sup>34</sup> We want to know what would have happened if that same firm had not obtained an investment from a DFI. One cannot simply compare outcomes against similar but 'untreated' firms because observationally identical firms will face different investment opportunities and have financing options, which influence whether they receive funding from a DFI, or not. There is a 'selection on unobservables' problem.

This essay has shown how gross job creation is an input to the processes of creative destruction and worker reallocation that drive development and is therefore a useful indicator of development impact. Changes in overall total employment are not the relevant margin in an economy where almost everyone is occupied somehow. But because what matters are changes in the composition of employment, ideally DFIs would be able to say more about how investments translate into increases in total (net) employment in the formal sector, and better jobs in the informal sector.

One good measure of success for DFIs would be growth of formal sector employment, which could be measured by the net increase in the total wage bill of the formal sector. That would combine how many people are employed with how much they are paid – we want to see increases along both dimensions. Changes in the total wage bill of a firm after a DFI invests could be an informative indicator of impact, that adds more information than a simple headcount.<sup>35</sup>

On the basis that DFIs can confer benefits either by increasing employment or by increasing productivity (or both), a high capital-output ratio could be regarded as a sign of success. A high ratio could reflect a large number of workers, or highly productive workers; either would be good.

DFIs could obtain and publish more information about the quality of the jobs at the firms that they invest in, including hours worked and wages paid, and the characteristics of workers, such as gender and age, although as we have seen that information would be hard to interpret – would a portfolio in which most jobs are high quality be better or worse? One avenue would be to keep better records (or make better use of existing records) of the work done by DFIs' environmental, social and governance (ESG) teams, before and after investment, to promote compliance (and beyond) with ILO Core Labour Standards or IFC Performance Standards. This could provide some measure of the quality of jobs created and the impact of DFIs' interventions. It is crucial to recognise that DFIs affect job quality not only through their choice of investment—creating new jobs of a given quality—but also through working with firms to raise standards across their workforce. In this way DFIs could demonstrate the difference that they make, as opposed to merely presenting a static picture of job quality across investments.

Gathering information about the socio-economic status of the workers that firms employ would provide only a partial picture of impact, because it would miss the indirect impact of worker reallocation and other spillovers, such as upwards pressure on wages across a labour market. CDC publishes a development impact thesis for each investment that we make, which explains the rationale for making it. In some cases, the main motivations are direct effects (who the firms employ, who they sell goods and services to), in which cases surveys of workers or customers would be informative. In other cases, the development impact thesis is more long-run and indirect, and survey tools become less useful.

Existing methods used by DFIs to estimate indirect job creation effects could be augmented with information about average job quality in different sectors of the economy, which would provide some guidance about the quality of jobs created through demand multipliers, but these would be very crude estimates. To supplement aggregate results reporting methodologies, which are designed to be applied across a portfolio of investments, DFIs could also hope to produce case studies of individual investments. But obtaining evidence of the knock-on effects of individual investments (general equilibrium outcomes) would be a huge challenge. For large investments, and with enough data (perhaps including geocoded luminosity data), it could perhaps be done. CDC and DFID have established a multi-year learning and evaluation programme, with the goal of generating evidence here.<sup>36</sup>



*One good measure of success for DFIs would be growth of formal sector employment, which could be measured by the net increase in the total wage bill of the formal sector. That would combine how many people are employed with how much they are paid.*

<sup>35</sup> Thanks to Neil Gregory for this suggestion.

<sup>36</sup> See <https://www.cdcgroup.com/en/news-insight/insight/articles/cdc-and-dfid-evaluation-learning/>





# 04

## Conclusion

**To recap, this is what we are trying to achieve: we start in a situation where most jobs in an economy pay badly, and we want to replace them with well-paid jobs.**

We can plot the income that people earn: development means moving that distribution to the right. Figure 8 shows how the distribution of real income in China shifted right, as the economy grew and poverty fell.<sup>37</sup> We know how China did it: by accelerating investment.<sup>38</sup> We know that this process entails high levels of job creation and destruction, as the economy undergoes structural change.<sup>39</sup> We know that rapid development and poverty reduction has often involved the active use of the tools of public economics, including the use of patient public capital and subsidies (industrial policy).<sup>40</sup> This is the basic case for using development finance as a tool of development cooperation with the ultimate goal of eliminating poverty and creating a decent standard of living for all.

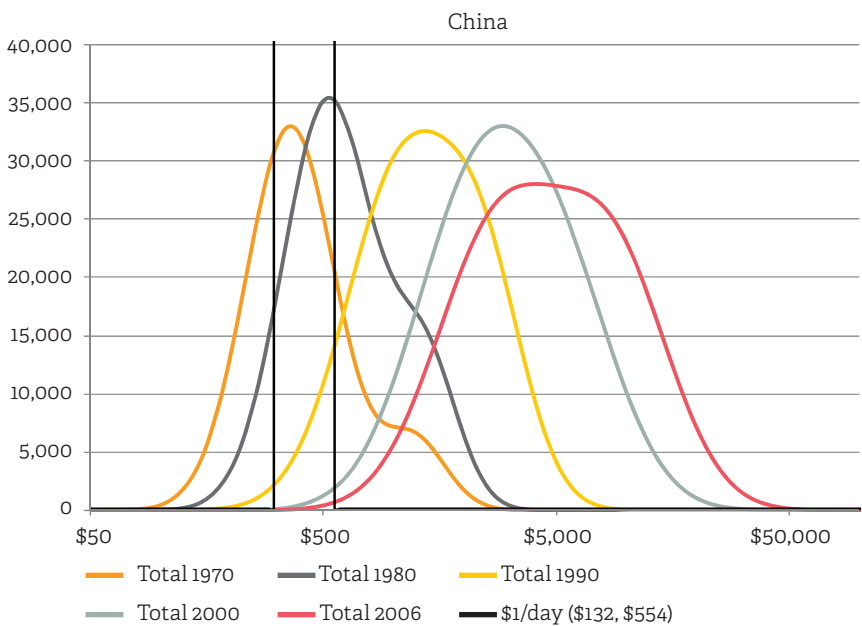


Figure 8: Chinese income distribution 1970-2006

» *Some investments may have economic transformation effects with impacts that ripple out across the economy.*

37 Taken from Pinkovskiy & Sala-i-Martin (2009).  
38 See Ang (2016) for an account of how the Chinese state encouraged local administrations to attract investment. This is not to suggest that investment is the only thing required for development. Effective government provision of public services such as health and education, and the introduction of comprehensive social protection systems are also vital. Many of the poorest people are outside the labour force, so their standard of living must be supported by other means. Investment and economic growth, combined with equitable and efficient tax policy and administration, generates taxes to pay for transfers and public services.  
39 Duarte & Restuccia (2010)  
40 Cherif & Hasanov (2019)



The goal of this essay has been to explain how job creation fits into the wider development agenda, and how the objective of development finance is a blend of increasing the number of decent jobs (net job creation in the formal sector) and replacing bad jobs with better ones (job creation and destruction). This implies that gross job creation is a useful results indicator for DFIs to report, because it is the driver of both processes. The existence of knock-on impacts via worker reallocation and creative destruction at the firm level implies that the impacts of investment extend far beyond the firm in which a DFI has invested, although it is hard to know how far, and who ultimately benefits. The nature of labour markets in developing economies implies that the impact of investments on total employment (net job creation) is not a sensible measure, although net job creation in the formal sector would be, if it could be measured. The onus is on DFIs to learn more about how investments contribute towards improvements in job quality, directly and via knock-on effects, although the latter is a tremendously difficult question to answer.

We have also seen that the objectives of job creation and productivity improvement can be in tension, and that in a labour market with large numbers of people in precarious and very low productivity employment, less efficient but more labour-intensive production could be preferable, and that in principle poverty could be alleviated either by investments that create jobs directly for the poorest citizens, or indirectly via worker reallocation and general equilibrium effects such as wage increases. It is not obvious how DFIs should decide between these options, and as far as we are aware, existing evidence from economics research provides little guidance.

Thankfully, DFIs do not have to make either/or decisions and can make investments that will contribute to development in different ways. CDC's investment decisions are guided by a set of sector strategies that have identified where development finance can make the greatest contributions to development in context. In some cases that means prioritising investments that will create jobs directly for the poorest and most marginalised people, or reduce the prices of goods and services that they purchase. In others it is about raising productivity and making investments with knock-on effects that will contribute to poverty reduction via accelerating economic transformation.



*The objective of development finance is a blend of increasing the number of decent jobs and replacing bad jobs with better ones.*

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