

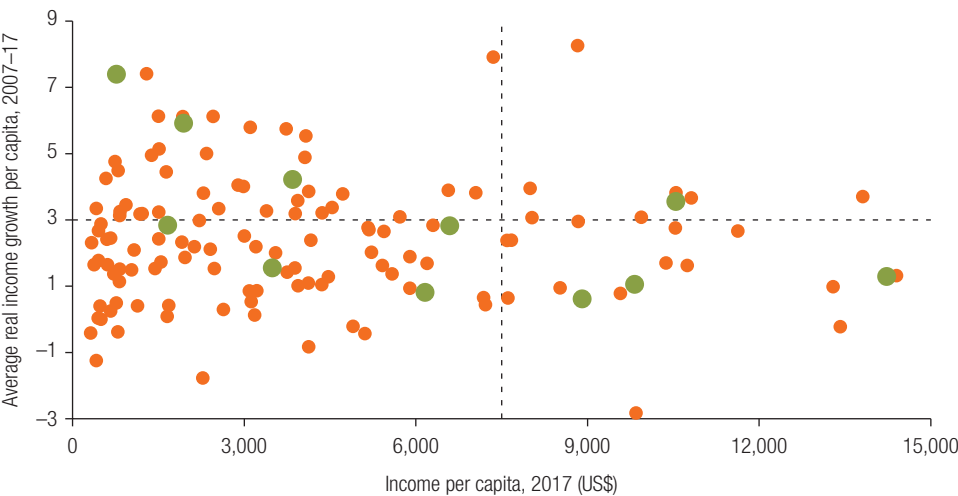
Executive Summary

The cover of this book features a painting by the Spanish surrealist artist Remedios Varo (1908–1963), *Papilla estelar* (*Celestial Pablum*, also known as the *Star Maker*). Stars, superstars, elephants, gazelles, gorillas, unicorns, and other monikers for high-performing firms abound in the economic and financial literature, as well as in popular discourse. Targeting such firms, in an effort to boost policy selectivity and efficiency, has become an increasingly appealing goal for policy makers in high-income and developing countries alike. Yet the making of stars, a process by which a venture capitalist or policy maker identifies high-potential businesses and puts in place processes and policies to accelerate firm growth, remains mostly art rather than science. This is particularly true for developing countries because the evidence base in this field has thus far been largely limited to high-income economies.

What difference do high-growth firms (HGFs) make to growth, productivity, and job creation in developing countries? How do they do it? And what is the appropriate role for public policy? Inspired by these questions, this book sets out to quantify the importance of HGFs for employment and output growth, considering both the dynamics within HGFs and their impact on other firms in the economy (chapter 1). It explores the key characteristics of HGFs, focusing particularly on those aspects that have been or can be used as filters for policy action (chapter 2). The book then discusses a range of likely correlates of the success of HGFs, including productivity, innovation, agglomeration and networks, skills and managerial experience, global linkages (trade and foreign direct investment [FDI]), and financial development (chapter 3). Finally, it reviews the public policies used in developing countries to support the creation and scaling up of HGFs and the evidence on the effectiveness of mechanisms to screen and identify high-potential firms, concluding with a blueprint for a reorientation of public policies aimed at facilitating firm growth (chapter 4).

The book's insights are based on detailed analysis of high-quality longitudinal data sets in Brazil, Côte d'Ivoire, Ethiopia, Hungary, India, Indonesia, Mexico, South Africa, Thailand, Tunisia, and Turkey. The selection of countries reflects in large part data availability, given that there are simply not many panel censuses or surveys of firms in developing countries, and accessing the existing ones is often a challenge. Even so, the data sets in this book cover all six World Bank regions as well as diverse income levels and very different growth performances (figure ES.1). Despite the heterogeneity of data sources and underlying country characteristics, the main findings and conclusions

FIGURE ES.1 Country Coverage of the Book



MAP ES.1 Countries Covered by the Book



tend to be quite robust across the various cases, supporting the general insights and policy recommendations developed in the last chapter.

Why Are High-Growth Firms Important?

HGFs are powerful engines of job and output growth. Although HGFs make up just 3–20 percent of manufacturing and services firms in the countries studied in this book, they create more than half of all new jobs and sales in these sectors taken together.

Another way to appreciate their disproportionate impact is to recognize that, in nearly all cases, the net change in employment and output would have been negative without the positive contribution of these firms (that is, in aggregate, non-HGFs destroy more jobs than they create, and decline rather than grow in terms of sales). These dynamics are similar to what has been previously observed across a range of high-income economies, such as Sweden, the United Kingdom, and the United States. To paraphrase Paul Krugman's famous quote, high-growth firms are nearly everything when it comes to determining an economy's overall performance.¹

In addition to their critical role in job and output growth, HGFs create positive spillovers around them. Whereas evidence for horizontal (same sector) spillovers is mixed—since HGFs may transfer knowledge or create networks, but also may raise competition and push down prices—the evidence on vertical spillovers is stronger. In the two countries where this book was able to follow HGF spillovers, being a buyer from or a supplier to an HGF improved firm performance across a wide range of indicators in Hungary and also, in some cases, in Turkey. These extraordinary abilities of HGFs are what make them an interesting subject for academics and an attractive target for policy makers keen to boost economic performance.

How Do Firms Grow?

A common view of a typical HGF is a small start-up in a high-tech sector that grows quickly over a sustained period through some favorable quality inherent to the firm, for example, a new advanced technology, a brilliant marketing innovation, or an extremely capable staff. Thus, the policy challenge is framed as determining which firms have the potential for high growth and providing these firms with access to financial and technical resources to realize this potential. However, the new analysis in this book, as well as the economic literature it surveys, shows that this view is a misconception.

First, while HGFs tend to be younger than the average firm, most will have been in business for at least a couple of years before embarking on a high-growth trajectory. HGFs are not necessarily small either; many already are larger than the average firm at the beginning of a high-growth episode and, depending on the definition, the average HGF is anywhere from 4 percent larger to six times as large as an average firm after three years of high growth. HGFs also do not appear in the same sectors across countries, and are not necessarily more common in high-tech industries. Finally, they operate across a range of locations, although proximity to infrastructure plays an important role in facilitating high growth.

Second, the achievement of high growth in one period does not mean that firms are more likely to grow rapidly in subsequent periods—evidence shows that HGFs mostly turn out to be “one-hit wonders.” As many as 50 percent of firms that experienced a high-growth event in the previous three years are likely to exit the market altogether in the following three to six years, while fewer than 15 percent are likely to repeat a

high-growth episode—illustrating the short-lived and episodic nature of firm growth. Some firms move in and out of high growth, while others achieve high growth after a decade or more of subpar growth performance. This evidence casts doubt on whether high-growth—or any growth at all—is a permanent characteristic of any firm and suggests instead that a “high-growth episode” is something that select few firms experience at some point in their life cycles. Because all of the benefits of HGFs take place only within these narrow windows, the fragile and elusive nature of high-growth events means that targeting them may be neither feasible nor advisable.

What Could Give Rise to High Growth?

The findings in this book show that innovation, agglomeration and network economies, managerial capabilities and worker skills, global linkages, and financial development contribute significantly to increasing the probability of a high-growth episode. For instance, evidence from India shows that the link between innovation and firm growth strengthens along the firm growth distribution, and operates via an interplay between innovation and accessing foreign markets. Agglomeration and network economies offer learning and specialization opportunities due to greater firm density, which in turn plays an important role in determining the likelihood of being an HGF. For example, Ethiopian plants located in or close to large urban centers have a greater probability of attaining high-growth status compared with ones located farther away, while in Thailand, firms that are more connected with others via ownership networks are also more likely to experience high growth.

External market linkages—measured by a firm’s own exporting status, share of exporters or FDI recipients in a given location or sector, or imports of technology—significantly increase the probability of a high-growth event for firms in India, Hungary, Mexico, and Tunisia. Firms that pay higher wages have a greater likelihood of subsequently attaining high growth, and reflecting the key role that human capital plays in firm performance. In particular, the contribution of founding managers and employees (as measured, for example, by experience in the formal sector, in a larger firm, and in management) is found to be critical in determining future firm growth in Brazil. Finally, the likelihood of attaining high growth also depends on firms’ ability to access finance, although given the large number of other potential distortions in the business environment, the link can only be robustly identified in countries with well-developed financial markets.

All these factors tend to be associated with higher firm productivity, and indeed analysis in several countries reveals a direct link between firm productivity and the likelihood of high growth. However, results from other countries are less encouraging, highlighting a false equivalence between high growth and high productivity. Firms may grow for a variety of reasons, reflecting high efficiency but also demand shocks, uncompetitive markets, or political connections (the second volume of the World Bank Productivity Project, Cusolito and Maloney [2018]), presents the latest advances in

productivity research). For example, data from Côte d'Ivoire indicate that there is little overlap between a set of “efficient” HGFs (those firms that would attain HGF status if resources across the economy were allocated according to firms’ productivity) and the observed HGFs. These results show that productivity-limiting distortions not only lower the overall incidence of high growth but also misallocate resources in a way that allows less efficient firms to attain high growth—obscuring the relationship between high growth and productivity. This offers a further nuance to the challenge of targeting high-potential firms: in the absence of real-time data on firm productivity, using past performance as a guide for supporting specific firms may exacerbate distortions rather than reduce them.

Where Should the Authorities Direct Resources to Support Firm Growth?

The search for the “right” firms to target is not new. However, the evidence presented in this book shows that most public initiatives to identify and target HGFs are likely to be misguided—buttressed by findings on the venture capital industry that show that even in the hands of professional investors, success is most often random and most projects lose money.

Existing efforts to support HGFs—identified through a review of 58 interventions in 17 developing countries—are constrained by weak empirical foundations, poorly articulated logical frameworks, and largely absent monitoring and evaluation systems (including impact evaluations and cost-benefit analyses). Evidence also shows that it is difficult to consistently identify high-potential firms before or at early stages of a high-growth episode: the strike rate of predicting success for any set of methodologies, including scoring by judges, predictive models, and machine learning approaches, is between 2 and 12 percent. And the few characteristics that have some explanatory power in predicting high growth, for example, age, gender, and IQ scores, can lead to investment strategies that select the already better-off beneficiaries and may widen rather than reduce existing inequities.

This book’s findings therefore suggest an important reorientation of policies to support firm growth from searching for high-potential firms toward the **ABCs** of growth entrepreneurship: improving **A**llocative efficiency, encouraging **B**usiness-to-business spillovers, and strengthening firm **C**apabilities. A large body of existing literature shows that interventions aimed at supporting these ABCs are positively correlated with furthering desirable outcomes such as firm productivity, while the evidence presented in this book shows that they are also associated with a greater likelihood of a high-growth episode. Policy makers wishing to reap the benefits of high firm growth may therefore find greater returns in policies that support and encourage good practices such as healthy firm entry, exit, and resource reallocation; improved access to finance and flexible labor markets; better flows of knowledge across firms through tighter linkages to

external markets, denser networks, and agglomeration; and stronger firm capabilities, including innovation, managerial, and entrepreneurship skills.

In order to improve *allocative efficiency*, policy makers may wish to structure the issue in terms of the standard productivity decomposition approaches, which consider the three margins of entry, exit, and reallocation. Policies along the *entry* margin seek to improve allocative efficiency by making it easier for new, potentially more productive firms to enter the market. Conversely, policies along the *exit* margin seek to ensure that less productive firms release their resources for more efficient use. Finally, policies along the *reallocation* margin seek to improve the ability of existing firms to access resources through more flexible factor and product market policies. For example, flexible labor market policies that facilitate the ability of employees to bring their experience from one firm to the next, as well as further steps in the financial reform agenda, can have important positive implications for the ability of more efficient firms to grow.

To facilitate *B2B spillovers* through positive agglomeration economies, spatial policies can encourage more efficient land use, while transport policies can help reach spatially optimal outcomes. Similarly, policies to attract high-quality FDI and connect firms to export markets can encourage learning and quality upgrading, leading to a greater likelihood of high firm growth. Direct instruments to facilitate knowledge spillovers—such as science and technology parks, clusters, and network initiatives—can also enhance the benefits of such connections for firm growth.

Policies to strengthen *firm capabilities* help firms innovate (which in the majority of developing-country firms occurs in the absence of formal research and development), improve managerial practices and access to technology, and acquire soft skills that are being increasingly recognized as critical to firm success (even more so than core business skills). Several types of instruments have been used to support the accumulation of these capabilities, with varying success. *Financial incentives* include direct instruments, such as vouchers, grants and matching grants, equity financing, and public procurement, and indirect interventions, such as fiscal incentives and loan guarantees. *Inducement instruments and recognition awards*, for example, prize competitions, are nonmarket mechanisms to encourage efforts by firms and entrepreneurs to address specific challenges. Government can offer various kinds of *extension advisory services* to strengthen firms' use of technology or to provide advice on business issues, including the well-known examples of the Manufacturing Extension Partnership in the United States, Fraunhofer Institutes and Steinbeis Centers in Germany, Japan's Kohsetsushi Centers and Productivity Centers, and SPRING and A*STAR agencies in Singapore. Finally, *incubators* and *accelerators* provide access to physical space, advisory services, mentorship, and perhaps access to finance at an early stage of a firm's life cycle.

Given the wide menu and complexity of the available instruments, a key factor determining success is the ability to match the instruments with the needs of firms and the ability of public institutions to deliver these programs. In the first volume of the

World Bank Productivity Project, Cirera and Maloney (2017) develop the concept of the “capabilities escalator,” which helps match policy challenges with firm and institutional capabilities, and provide some examples of practical applications of such an approach.

In addition, three cross-cutting themes are a necessary condition to the success of the ABCs of policy interventions. First, given the critical importance of accurately measuring productivity and other variables that matter for policy choices, this book is also a call for improving the quality and accessibility of firm-level data to enable evidence-based decision making in developing countries. Second, there is an urgent need to radically expand the use of rigorous evaluations of policy interventions. Despite the large number of initiatives underway to support firm growth, very few programs—whether in developing countries or advanced economies—have undergone rigorous impact evaluations or cost-benefit analyses. Embedding impact evaluations into program design and implementation is critical to ensuring that public resources achieve the desired outcomes efficiently and effectively. Third, institutional capabilities to implement policies need to be strengthened. In line with the “capabilities escalator” approach, countries and agencies should gradually build their institutional capabilities to match the ambition of policy instruments, which are currently often taken from high-income countries without adaptation to local context. Ensuring that the relevant institutions have the necessary human and financial resources and the right mandate, and communicate effectively in implementing the ABCs of growth entrepreneurship, will be critical to the success of the new generation of policies to support firm growth.

Note

1. “Productivity isn’t everything, but in the long run it is almost everything” (Krugman 1994, 11).

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