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**Introduction to African Successes, Volume II: Human Capital, Edited by Sebastian Edwards, Simon Johnson, and David N. Weil.**

Volume I in this series deals with some fundamental issues for African development: will there be social peace; can government create (or at least not destroy) legitimate political, economic, and social institutions; is international aid effective; and how will the private sector develop? The issues in Volume II are just as important for economic growth, and arguably even more important for human development. Will there be major improvements in public health, reaching at least some minimally acceptable level? Will girls and women be protected and find opportunities as societies change? And can educational attainment be raised to a level commensurate with hoped-for economic growth?

The selection of papers in this volume was shaped by several different considerations. Part of our mandate, as reflected in the titles of the four volumes in this series, was to look for cases where things were working well in Africa. But we did not take this as our only criterion, and we certainly did not ask our researchers to spin their results to come out a certain way. Some of the papers described below look at interventions where the results are mixed, or at areas where it is too soon to tell if progress is likely. In one case (Chapter 8), the paper reports nothing but bad news. Our overriding goal was to support good research -- and good researchers -- addressing important topics. The studies in this book fit nicely within the great NBER tradition of uncovering new facts and helping to shift our understanding of how economies actually function.

## **Health**

According to UN estimates, the population of Sub-Saharan Africa was around 900 million in 2013. This will rise to around 2.4 billion by 2050 and, in the UN projections, to close to 4 billion by 2100.<sup>1</sup> Long-run projections should always be viewed with some skepticism, but it is striking that in the years after 2050, the UN's demographers think that African population growth will be

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<sup>1</sup> These numbers are from the UN's 2012 demographic projections, e.g., as presented in their Wall Chart: [http://www.un.org/en/development/desa/population/publications/pdf/trends/WPP2012\\_Wallchart.pdf](http://www.un.org/en/development/desa/population/publications/pdf/trends/WPP2012_Wallchart.pdf).

greater (in percentage terms and in terms of numbers) than anywhere else in the world.<sup>2</sup>

Whatever you think of the specific forecasts, as population growth in Asia and elsewhere slows in coming decades, the number of people living in Africa south of the Sahara seems likely to still be increasing at a rapid pace.

Will these Africans be healthy, experiencing long life expectancies and relatively low morbidity rates? Or will they struggle to gain access to decent healthcare? Tropical diseases, most notably malaria, have long burdened African societies; in the last several decades Africa has also become the focus of the global HIV epidemic.

Chapter 1, “Evaluating the Effects of Large Scale Health Interventions in Developing Countries: The Zambian Malaria Initiative,” by Nava Ashraf, Günther Fink, and David N. Weil, suggests some grounds for optimism. A broad approach to prevention and treatment of malaria appears to have made real headway over the past decade, with total deaths from the disease falling by half over an eight year period. The Zambian experience may offer lessons in terms of what works best, for example comparing the provision of insecticide treated mosquito bed nets and indoor residual spraying. At least along this dimension of health, the improvements are real and likely to be lasting.

HIV-AIDS could prove harder to bring under control, in part because it involves difficult taboo topics and, arguably, requires changing attitudes and behavior as well as government policy. At the same time, chapter 2 presents evidence – also from Zambia – that it is possible to reduce the transmission of the HIV virus from mother to child. Nicholas Wilson’s “Prevention of Mother-to-Child Transmission of HIV and Reproductive Behavior in Zambia,” explains the importance of this problem. He also lays out some ways in which progress has been made, while not underestimating the serious difficulties that remain to be overcome.

In keeping with our project’s attempt to encourage scholars to push hard at the research frontier that is relevant for practical problems in Africa, Wilson also emphasizes what can and cannot yet be established beyond a reasonable doubt. There is a great deal here to attract the attention of

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<sup>2</sup> See, for example, the UN’s World Population Prospects, The 2012 Revision: Volume I: Comprehensive Tables,

[http://esa.un.org/wpp/Documentation/pdf/WPP2012\\_Volume-I\\_Comprehensive-Tables.pdf](http://esa.un.org/wpp/Documentation/pdf/WPP2012_Volume-I_Comprehensive-Tables.pdf).

researchers and, hopefully, to inspire policymakers – as well as foundations and other sources of potential funding.

But we may also need to consider different and somewhat more controversial approaches that are complementary to traditional public health measures. In Chapter 3, “Stimulating Demand for AIDS Prevention: Lessons from the RESPECT Trial,” Damien de Walque, William Dow, Carol Medlin, and Rose Nathan report on their efforts in Tanzania to develop effective ways to change sexual behavior. Conditional cash transfers have proved effective in anti-poverty programs elsewhere, and the authors apply a version of this philosophy to reduce the kind of risk-taking that contributes to the spread of disease. The authors make a strong case for further study of incentive-based approaches to public health.

This is exactly the approach reported in Chapter 4, “Alternative Cash Transfer Delivery Mechanisms: Impacts on Routine Preventative Health Clinic Visits in Burkina Faso,” by Richard Akresh, Damien de Walque, and Harounan Kazianga. The authors explore the effects of changing the degree of conditionality regarding transfers, as well as the household member (mother vs. father) who receives transfer. They find that the former has a large effect on outcomes, but not the latter. The work contributes to a better understanding of household decision making as well as improving the design of health interventions.

## **Gender Issues**

The empowerment of women is in itself an aspect of human development, but it is also an important input into several dimensions of human capital accumulation, including child health, education, and the spread of HIV. For this reason, we have grouped together several papers that specifically address the role of women in Africa.

Continuing in the vein of program design explored in Chapters 3 and 4 is “Girl Power: Cash Transfers and Adolescent Welfare. Evidence from Cluster-Randomized Experiment in Malawi,” (Chapter 5). Here Sarah Baird, Ephraim Chirwa, Jacobus de Hoop, and Berk Özler examine how best to empower and otherwise help adolescent girls. The authors examine a range of important outcome variables, including access to financial resources, improved schooling outcomes,

decreased teen pregnancies and early marriages, and better health. They pay particular attention to the status of these young women, how they are treated, and the extent to which they have access to resources within their households. The bottom line is that well-designed programs can make a significant difference at the individual level.

In Chapter 6, Radha Iyengar and Giulia Ferrari examine whether microfinance and associated counselling can also help women. In “Comparing Economic and Social Interventions to Reduce Intimate Partner Violence: Evidence from Central and Southern Africa,” the authors flag the importance of finding ways to reduce domestic violence. This is a difficult issue on which to make progress but the authors appear to be on their way to some important findings. We are very pleased to have been able to support the development of this potentially high impact line of research.

The definite gains available through well-designed programs, particularly those focused around health and microfinance, stand in contrast to frustrations that often arise from attempts to simply change the law in ways that would help women and children. Edward Kutsoati and Randall Morck report (in Chapter 7), that despite seemingly plausible changes in inheritance law, conventional practices with regard to widows and children can still predominate. “Family Ties, Inheritance Rights, and Successful Poverty Alleviation: Evidence from Ghana” carefully assesses whether formal law matters much in this important area. Traditional norms, which are often complex, can be hard to change.

## **Education**

Education is the most traditionally measured form of human capital, and three of the papers in this volume focus on it directly.

Perhaps the most sobering paper in this volume and arising from our broader research project is Chapter 8, “The Surprisingly Dire Situation of Children’s Education in Rural West Africa,” by Peter Boone, Ila Fazzio, Kameshwari Jandhyala, Chitra Jayanty, Gangadhar Jayanty, Simon Johnson, Vimala Ramachandrin, Filipa Silva, and Zhaoguo Zhan. The authors implemented a baseline study of education in Guinea-Bissau, one of the poorest countries in the world. The

goal was to find pockets of success and to use careful observation of those experiences to design an intervention that would aim to make formal education more effective. Shockingly, the authors found a pattern of literacy and numeracy that is uniformly bad. There simply is no success story for this issue in this country. Undaunted, this research team is nevertheless pressing ahead to assess some specific changes and forms of outside support that could make a difference. The baseline is well-established and quite dismal. The question now is: what will make a difference?

Education matters for development – in Africa, as elsewhere – and this is evident both from very specific, focused data, as well as from broader assessments. In chapter 9, “Success in Entrepreneurship: Doing the Math”, Michael Kremer, Jonathan Robinson, and Olga Rostapshova assess the math skills of small-scale retail entrepreneurs in Western Kenya. Even a little bit of math – elementary or perhaps middle school level – makes a big difference, in part because it leads to better management of the business. It is hard to grow without profits, and it is hard to make money without at least a reasonable amount of elementary formal education.

Chapter 10, “The Returns to the Brain Drain and Brain Circulation in Sub-Saharan Africa: Some Computations Using Data from Ghana,” should be read alongside the two previous chapters. Chapters 8 and 9 stress the importance of primary education; Chapter 10 is about the social benefits that can accrue from building up a university system. Yaw Nyarko takes into account the flows of highly educated people out of the country – i.e., the “brain drain” – but also the remittances they send back to the country. There are some fascinating questions here, including Professor Nyarko’s central issue: Is the brain drain all bad, or could it be considered part of the solution – at least along the current plausible path of development for many African countries?

## **Conclusion**

Africa’s human capital deficit, measured in terms of either health or schooling, is daunting. The papers in this volume explore the importance of human capital for growth more generally, as well as shining light on what leads to successful human capital accumulation. Africa’s unique health environment, characterized by both historical tropical diseases and the new scourge of

HIV, poses particular challenges. And because state action is often required for human capital development, dysfunctional governments can cause great damage in this arena. At the same time, as several of the papers in this volume show, relatively new techniques of targeted transfers and other forms of individual-level incentives demonstrate great promise in terms of encouraging individuals to make greater investments in their own -- and their family's -- health and education.

Subsequent volumes in this series offer complementary insights into African development. Volume III focuses on specific aspects of modernization, including finance and its interaction with mobile telephony. Volume IV examines whether African growth will prove sustainable.