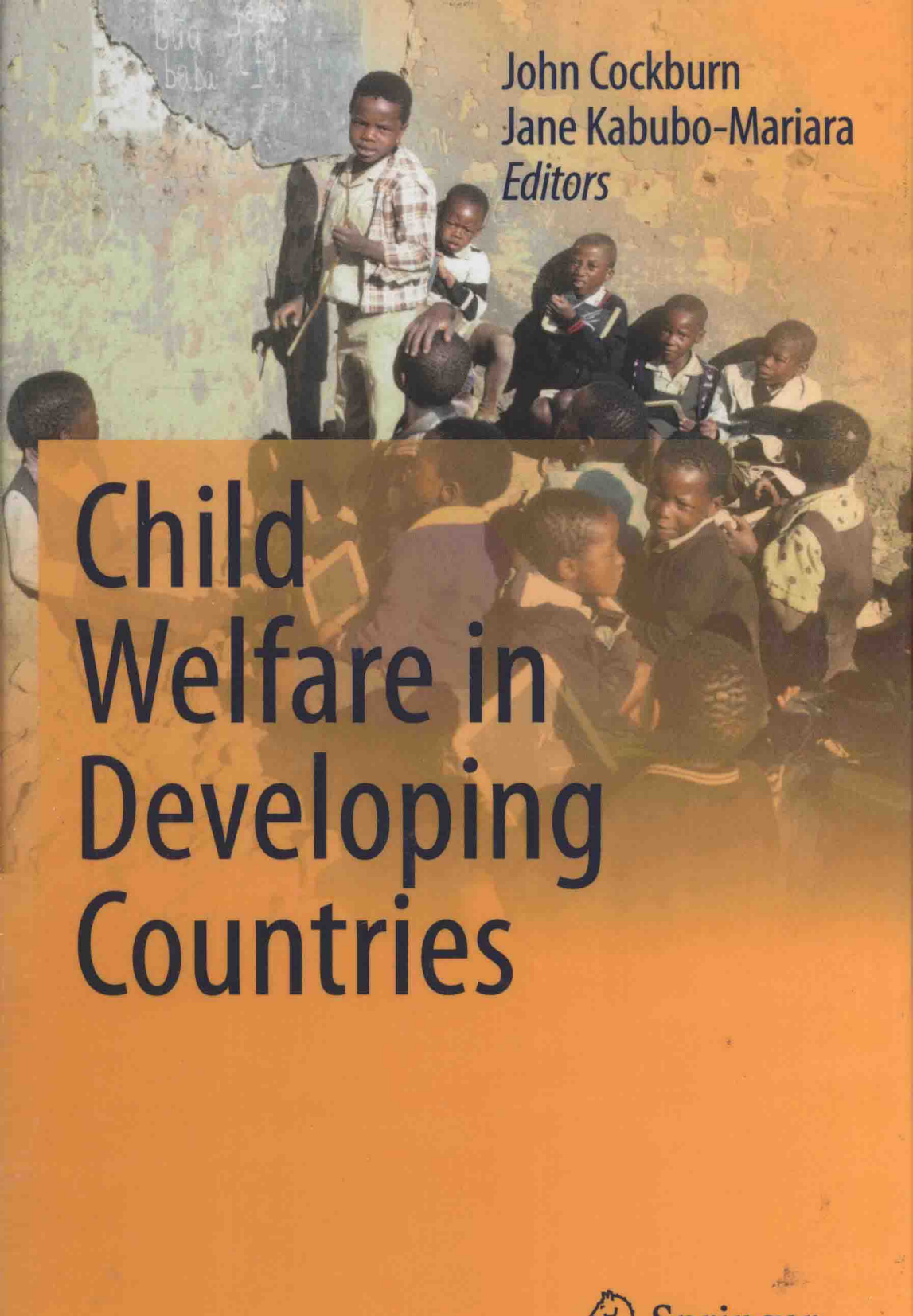

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Jane Kabubo-Mariara
Editors

Child Welfare in Developing Countries

Springer

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Editors
John Cockburn
Poverty and Economic Policy (PEP)
Research Network
Université Laval
Pavillon J.-A. DeSève
1025 avenue des Sciences Humaines
Québec City, QC Canada G1V 0A6

Jane Kabubo-Mariara
School of Economics
University of Nairobi
Harry Thuku Road
Gandhi Wing Room 210
P.O Box 30197
00100 Nairobi
Kenya

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About the Authors

Amélé d'Almeida is a research assistant at the Consortium of Research and Development in Togo. She completed a master's in economics at the University of Lomé in 2003. Her areas of specialization include development economic, child poverty, and the monitoring and evaluation of economic programs.

Verónica Amarante is a researcher at Instituto de Economía, Universidad de la República (Uruguay). She obtained a degree in economics (Universidad de la Republica), a master of science in economics (Universidad Pompeu Fabra, Spain), and a Ph.D. in economics (University of Sussex, United Kingdom). She has done extensive research on poverty, inequality, and labor market in Uruguay. She teaches economics at the graduate and undergraduate level at Universidad de la República.

Rodrigo Arim is a researcher at Instituto de Economía, Universidad de la República (Uruguay). He holds a degree in economics (Universidad de la Republica) and he pursued postgraduate studies at Universidad Torcuato di Tella (Argentina) He has carried out research on poverty, inequality, and labor market in Uruguay. During 2007–2009 he has also been in charge of the Social Policy Unit at Oficina de Planeamiento y Presupuesto.

Yélé Maweki Batana holds a Ph.D. in economics from Université Laval, Québec, Canada, since 2008. Member of the African Economic Research Consortium (AERC), he spent 5 years (1997–2002) in teaching and research at Université de Lomé, Togo. He has also been a visiting fellow at OPHI, Oxford University, during summer 2008. His main areas include public economics, development economics, econometrics, and macroeconomics. He is currently a postdoctoral fellow at Université de Montréal, where he is working on health economics.

Sami Bibi is a Deputy Program Leader with the Poverty and Economic Policy (PEP, www.pep-net.org) research network. He holds a Ph.D. in economics from the Tunisia. He also took part of his postgraduate courses at the University of Laval in Canada. His fields of specializations are in the areas of public economics and applied microeconomics. He has several publications, such as Journal of Development Economics, International Tax, and Public Finance, Bulletin of Economic Research,

etc. He has also worked as an international consultant and a training officer with the World Bank and the UNDP.

John Cockburn is co-director of the Poverty and Economic Policy (PEP) research network and professor at Laval University in Québec. He completed a Ph.D. at Oxford University (Nuffield College and the Centre for the Study of African Economies) in 2001 on child labor and schooling in rural Ethiopia and the poverty effects of trade liberalization in Nepal. His areas of specialization include child poverty, macro- and micro-modeling, and trade policy analysis. He has been providing training and technical support to developing country researchers throughout the developing world since 1990 and is an associate editor of the International Journal of Microsimulations.

Massa Coulibaly is a professor of econometrics and research methods at the University of Bamako. He is a researcher at and executive director of the Groupe de recherche en économie appliquée et théorique (GREAT). His research deals with household surveys, international trade, and regional integration, local economies, as well as economic development and poverty reduction policies. He has conducted numerous national and international consultancies.

Ayawo Djadou is a statistical programmer. He is the supervisor of studies and processing at the General Directorate of Statistics of the National Accounting Office of Togo. He completed a bachelor's degree in data processing at the National Center for Data Processing in Togo (CENETI). His areas of specialization include data processing and child data management. He has been providing training and technical support to manage and analyze children data.

Gustave Kossi Agbeviade Djoke is a statistical demographer and researcher at the Consortium of Research and Development in Togo. He completed a DESS in demography at the Institute of Demographic Research and Training in Yaoundé, Cameroon, in 2004. His areas of specialization include development economics, child poverty, and the monitoring and evaluation of health programs. He has been providing training and technical support to developing country researchers. He is also a member of the Poverty and Economic Policy (PEP) research network where he led a study entitled "Profiling child poverty in four WAEMU countries: A comparative analysis based on the multidimensional poverty approach".

Jean-Yves Duclos is professor of economics at Université Laval and program leader for the Poverty and Economic Policy (PEP) international research network. His areas of research are in public economics, econometrics, welfare economics, development economics, and labor economics. He is a past president of the *Société canadienne de science économique* and he is currently editor-in-chief of *Journal of Economic Inequality*, member of the editorial board of the *Review of Income and Wealth*, and member of the executive council of the Society for the Study of Economic Inequality and of the Canadian Economic Association.

Jane Kabubo-Mariara is associate director and senior lecturer at the School of Economics, University of Nairobi. Her research interests include poverty and income distribution issues, with emphasis on multiple dimensions of child poverty; the impact of climate change on agriculture; environment and natural resource economics. She has a wealth of research experience and has been project coordinator/leader in several collaborative projects at local, regional, and international levels. Currently, she is serving as a resource person with the African Economic Research Consortium (AERC) and the PEP Research Network. She holds a Ph.D. in economics from the University of Nairobi.

Margaret Karienyeh holds an MSc in agricultural economics from the University of Nairobi. She is currently teaching at Kenyatta University (Kenya), where she is also a doctoral student in agricultural economics. She has a wealth of experience in agriculture project development and management having worked in agriculture sector in Kenya for 10 years. She also has in-depth knowledge of principles guiding sustainable agricultural development both at policy and field levels. She has participated in forums influencing the direction of strategy of agricultural development. Her research interests are in poverty and agricultural development policy.

Gioia de Melo is a researcher at Instituto de Economía, Universidad de la República. She holds a degree in economics (Universidad de la Republica) and she is currently .pursuing postgraduate studies at Universitá di Siena (Italy). She has conducted research in the fields of poverty, inequality, and social policy.

Esther Mueni is a probation officer working with the Probation and Aftercare services department, Ministry of Home Affairs, Kenya. She holds both master and bachelor of arts degrees from the University of Nairobi and a postgraduate diploma in education from Kenyatta University. Her research areas include critical pedagogy, social justice in education and literacy for marginalized groups. She is currently pursuing a graduate degree in critical studies in literacy and pedagogy at Michigan State University.

Milu Muyanga is a research fellow at Tegemeo Institute (Egerton University) and currently Ph.D. research student at Michigan State University. He holds both master and bachelor of arts degrees in economics from the University of Nairobi. His research interests are broadly in socio-economic issues including household poverty and inequality, child poverty, and food security. Until 2004, he worked as an economist in the Ministry of Finance and Planning (public expenditure review unit) in Kenya. Milu was the first prize winner of the Global Development Network's medal on the best research on household exposure to risk theme in 2007.

Francis Mwangi lectures economics at Kigali Institute of Management, a business management university in Rwanda. He obtained a masters degree in economics from the University of Nairobi in 2008. His research interests include child poverty, urban poverty, and the determinants of poverty and inequality in Third World countries.

He has participated in several research projects in his areas of specialization. He has a wealth of experience as an advisor of the co-operative societies movement in Kenya, having served as a co-operative officer with the government of Kenya for several years prior to embarking on postgraduate studies.

John Olwande is a Research Fellow at Tegemeo Institute, Egerton University, Kenya. He holds a Master of Science in Agricultural and Applied Economics and Bachelor of Science degree in Agricultural Economics from Egerton University. Olwande's interest is in policy oriented research on rural poverty, agricultural productivity and technology adoption, and agricultural trade.

Rachidatou Ruffino is a development sociologist. She is a research assistant at the Consortium of Research and Development in Togo. She completed a master's degree in the sociology of development at the University of Lomé in 2002. Her areas of specialization include economic and social development, child poverty, and the monitoring and evaluation of developing programs.

Luca Tiberti has a Ph.D. in development economic from the University of Florence, Italy. His main research interests are in health care financing in developing countries, child poverty and social policy, income and health inequalities, and the social and economic impacts of HIV/AIDS, and economic crises. He joined the UNICEF International Research Centre (IRC) in February 2008 as a research consultant. He had previously worked on the World Income Inequality Database (WIID) hosted by UNU-WIDER and on a WHO-University of Ottawa commissioned project on the impact pathways of globalization on health determinants and outcomes.

Andrea Vigorito is a researcher at Instituto de Economía, Universidad de la República. She obtained a degree in Economics (Universidad de la Republica) and a master of science in economics at the London School of Economics (United Kingdom). She has undertaken research on income inequality, poverty, social policy, and international migration.

Stella Wambugu is a research fellow at Tegemeo Institute, Egerton University, Kenya. She has a master of science in agricultural and applied economics and bachelor of science degree in agricultural economics from the University of Nairobi, Kenya. Her research areas of interest include natural resource management, food security, and collective action among rural communities.

Tassew Woldehanna is an associate professor in economics at Addis Ababa University, Principal Investigator for Young Lives in Ethiopia at the Ethiopian Development Research Institute. Completed a Ph.D. in Economics from Wageningen University, Netherlands, where he has lectured as a visiting assistant professor in household economics and econometrics since 2000. His Ph.D. thesis was on economic analysis of on and off-farm employment in Ethiopia. His areas of research include poverty, inequality, child poverty including education and health.

Contents

Child Welfare in Developing Countries: An Introduction

John Cockburn and Jane Kabubo-Mariara

Abstract Child poverty is of urgent concern, yet understudied. This introduction outlines the importance of this issue before providing an outline of the papers included in this book. A first set of papers pushes traditional income-based poverty analysis to focus on the issue of identification and measurement of child poverty in a multidimensional framework. The second set of papers evaluate the impact of selected policy interventions on child welfare in developing countries using a variety of new techniques.

Keywords Children · Welfare · Poverty · Multidimensional · Impact evaluation · Africa, Uruguay

JEL Classification C68, H53, I10, I28, I32

1 Introduction

Child poverty entails fundamental deprivations as a result of which children grow up without access to economic, social, cultural, physical, environmental and/or political resources that are vital to their development and well-being. Most childhood material deprivations may have lifelong irreversible consequences and may contribute to high rates of disability, illness, and death. They also affect the long-term physical growth and development of children, and may lead to high levels of chronic illness and disability in adult life. Some forms of deprivation may also jeopardize future economic growth by reducing the intellectual and physical potential of the entire population.

It is widely recognized that poverty rates are much higher among children than among adults in developed and developing countries alike. In most developing countries, poverty rates remain high in spite of government commitments to providing

J. Cockburn (✉)
Poverty and Economic Policy (PEP) Research Network, University of Laval, Québec, Canada
e-mail: jcoc@ecn.laval.ca

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basic services to children. Tackling childhood poverty requires a nuanced anti-poverty strategy based on a real understanding of the relationships between childhood poverty and conditioning factors. Research on the extent, nature, causes, and consequences of child poverty in developing countries is therefore invaluable in efforts to identify the poor among children, design adequate targeting and social protection policies to protect children from the worst consequences of poverty, seek long-term solutions to childhood poverty, and contribute to economic growth.

The papers selected for this volume address crucial issues related to child welfare in developing countries. The key issues in child poverty analysis concern, first, the proper identification of poor children and the extent of their poverty and, second, the design of efficient policies that deliver the greatest possible impact per dollar.

The first set of papers focuses on the issue of identification and measurement of child poverty and does so by adopting a multidimensional approach. Multidimensional poverty comparisons are considered superior to unidimensional measures in two respects. First unidimensional analysis can only lead to a partial understanding of poverty, and often to unfocused or ineffective poverty reduction programs that fail to capture many aspects of deprivation and their interactions. Second, the inclusion of non-monetary measures in multidimensional poverty analysis helps to reveal complexities and ambiguities in the distribution of well-being that income-based poverty analysis cannot capture. Multidimensional poverty analysis has gained popularity since the seminal work of Sen (1985). The popularity of multidimensional over unidimensional poverty comparisons rose further with the establishment of the Millennium Development Goals (MDGs), which focus attention on deprivation in multiple dimensions.

The first paper in this section conducts multidimensional poverty comparisons for Kenya based on a composite poverty indicator and the probability of child survival. The second paper complements the first by making multidimensional poverty orderings of four West African Economic and Monetary Union (WAEMU) countries using a composite poverty indicator. The final chapter of this first section extends the work in the previous two chapters by carrying out statistical multidimensional dominance tests in six WAEMU countries. The analysis is based on child nutritional status and a composite poverty indicator. The three papers concur that first, child poverty is more pronounced in rural than in urban areas; second, there are pronounced regional differentials in child poverty; and third, based on the first two papers, results point to the need to boost health care provisions in order to improve the welfare of children in Africa.

The second set of papers focuses on the evaluation of the impact of selected policy interventions on child welfare in developing countries. In particular, it seeks to isolate changes in the well-being of individuals, households, or other entities that can be attributed to a particular project, program, or policy. These impact evaluations must thus attempt to separate out what would have happened to those receiving an intervention in its absence. To do so, it is important to identify a counterfactual group that is as similar as possible to those receiving the intervention, but which does not benefit from the intervention. By comparing appropriately those who receive the interventions (treatment group) and those who do not (control group), it is possible

to establish impact, attributing observed changes in welfare to the intervention, while identifying key factors of success. Impact evaluations are aimed at providing feedback to help improve the design of programs and policies. They also provide greater accountability and a tool for dynamic learning, allowing policymakers to improve ongoing programs and ultimately better allocate funds across programs. Such a causal analysis is essential for understanding the relative role of alternative interventions in reducing poverty.

The papers in this section again adopt a variety of techniques. The first two impact evaluation studies employ propensity score matching to establish, ex-post, a valid control group to assess the impact on child schooling outcomes among beneficiaries of various interventions in Kenya and Ethiopia. The third chapter carries out an ex-ante evaluation of alternative cash transfer programs on child school attendance in Uruguay. The final paper further carries out in-depth macro-modeling and micro-regression analysis to simulate the impacts of the food crisis and various policy responses, including food subsidies and cash transfers, on various dimensions of child poverty in Mali. Though using different approaches, the studies are generally in agreement concerning the positive impact of the cash transfer program on child schooling and labor market outcomes. The studies from Kenya and Uruguay both find that the schooling interventions are progressive. Both the Ethiopian and Uruguayan papers concur that cash transfer programs increase school attendance through an income effect, but find no evidence of a negative substitution effect, which may make child labor more attractive than schooling.

All of these papers were conducted directly or in close collaboration with the Poverty and Economic Policy (PEP) research network. PEP provides financial and scientific support to teams of developing country researchers conducting studies on poverty. Indeed, five of the seven papers are fully authored by researchers who live and work in the countries they study, whereas the other two are partly co-authored by researchers who live or have lived in developing countries. PEP receives funding from the Government of Canada through the International Development Research Centre (IDRC) and the Canadian International Development Agency (CIDA), and from the Australian Agency for International Development (AusAID).

2 Multidimensional Poverty Analysis

The papers on multidimensional poverty analysis focus on Kenya and several WAEMU countries. The paper by Kabubo-Mariara, Karienyeh, and Mwangi applied the capability approach to poverty measurements to study child survival against a background of worrying trends of infant and child mortality in Kenya since the late 1980s. The objective of their work is threefold. First, they carry out multidimensional poverty and inequality comparisons of child survival ranked by an asset index. Second, they analyze the determinants of childhood mortality. Finally, based on the mortality results, they simulate the impact of relevant policy variables on child survival and assess the implications of these on the achievement of economic recovery strategy and Millennium Development Goals (MDG) targets in Kenya.

The work presented in this chapter marks an important departure from previous studies on poverty in Kenya, which have concentrated on money metric measures of poverty. They remind us that, as postulated by Amartya Sen, the ability to avoid early death is a basic capability and an important indicator of well-being worthy of further study.

The authors show that in Kenya, for the period under study, about 28% of children in rural areas were poor, compared to 19% in urban areas. Further, the relative contribution of rural areas to overall child poverty is found to be 89% while the contribution of urban areas was only 11%. Another interesting message from the chapter is that children from households that did not experience mortality tended to be better off, in terms of the asset index, than children from households that experienced mortality. In particular, children with the lowest probability of survival were from households with the lowest level of assets. Furthermore, the authors find that there is less asset inequality among children facing mortality than among those that did not experience mortality. They conclude that there is a strong need for regional targeting and for anti-poverty policies to improve child survival probabilities.

On the policy front, the authors conduct simulations to show that maternal education significantly lowers the risk of mortality; it is important to reduce teenage births as they are positively correlated with childhood mortality; mortality is highly responsive to wealth, measured by household assets; use of modern contraception has a large significant impact of reducing the risk of mortality; provision of decentralized health care services are important factors for lowering the hazards rates of mortality; there are unexplained macroeconomic variations that reduced the risk of mortality at a diminishing rate between 1978 and 2003. The authors close by calling for policy efforts geared toward improving household well-being, universal primary and secondary education for women, access and utilization of modern contraception, and other health care services. They however caution that in order to substantially improve health care service provision in clusters and districts with very low coverage, issues of access and equity in service provision, information asymmetry, socio-cultural, and other barriers would need to be addressed. They also caution that even with the suggested policy measures, there will still be challenges in the achievement of MDGs in Kenya unless other complementary policies are pursued.

Djoke, Djadou, d'Ameida, and Ruffino conduct a comparative analysis of multidimensional poverty among children under the age of five in four West African Economic and Monetary Union (WAEMU) countries: Côte d'Ivoire, Niger, Guinea-Bissau, and Togo. The study further analyzes inequality in the distribution of the level of child poverty by place of residence and at the national level. The multiple correspondence analysis approach is adopted to construct a composite welfare indicator on which the multidimensional poverty analysis is based. For each country, Multiple Indicator Cluster Surveys (MICS) data are used.

The authors find that there are two sets of factors that are associated with child well-being in the five WAEMU countries: first, access to vitamin A and iodized salt, breastfeeding, immunization against polio, diphtheria, measles, and yellow fever; second, the occurrence of diseases, such as diarrhea, cough, fever, and breathing

difficulties, and lack of immunization or an immunization card. Vaccination was found to be the factor most closely associated with a reduction in the composite welfare indicator, while infant vitamin A supplements and other diseases increased it. Child poverty affects a significant portion of children in WAEMU countries with the countries ranked in increasing order of multidimensional child poverty as Togo, Cote d'Ivoire, Guinea-Bissau, and Niger. The authors found large regional disparities in child poverty across the WAEMU countries. Geographically remote areas were found to experience higher levels of child poverty than less remote areas. In addition, they find that household standard of living is a major factor in explaining the level of multidimensional child poverty.

The study further shows that there are significant inequalities in child welfare and well-being in the WAEMU countries and that children in urban areas are less poor than those in rural areas. Regional disparities in inequality within each country are also noted. Further, differences in vaccination are found to be the most significant factor associated with inequalities in child poverty. The authors stress the need for the government, NGOs, and other stakeholders to lay more emphasis on preventing childhood ailments other than nutritional deficiency and polio. This would have an important effect in reducing child poverty in WAEMU countries. They also stress the need to reduce regional inequalities in child well-being and welfare, which they note would require effective local institutions to support local health service provision for child poverty reduction.

The chapter "Multidimensional Poverty Among West African Children: Testing for Robust Poverty Comparisons" by Batana and Duclos applies a new approach for conducting multidimensional poverty comparisons: statistical multidimensional dominance tests. Dominance tests seek to verify the robustness of poverty rankings between various population subgroups over a range of poverty lines when the exact level of the latter is open to debate. The authors note that stochastic dominance has mostly been analyzed in the framework of unidimensional poverty analysis and that formal statistical tests have not been applied empirically to multidimensional comparisons. In sub-Saharan Africa, where child poverty is highest in the world, there is a death of empirical tests for poverty dominance, especially using data that are readily comparable across countries and time. Batana and Duclos apply the new approach to test the robustness of unidimensional and multidimensional poverty orderings for children in six West African Economic and Monetary Union (WAEMU) countries: Benin, Burkina Faso, Côte d'Ivoire, Mali, Niger, and Togo.

Two measures of well-being are adopted: nutritional status and assets. The asset index is constructed using two alternative approaches: multiple correspondence analysis and factorial analysis. Furthermore, they carry out statistical inference for multidimensional poverty comparisons using a multivariate extension of an empirical likelihood ratio test proposed for univariate distributions. The authors point out that, as the test statistic used is asymptotically pivotal, they are able to perform bootstrap tests that yield more satisfactory inference than tests that are based solely on analytic asymptotic distributions.

In both unidimensional and multidimensional poverty comparisons, child poverty is robustly more pronounced in rural than in urban areas. The study

also establishes statistically significant dominance relationships between almost all (80%) possible pairs of the six countries. Côte d'Ivoire is found to dominate all other countries (i.e. have lower rates of child poverty), followed by Togo, which dominates Benin, Burkina Faso, and Niger. Benin and Mali also dominate (have lower poverty than) Burkina Faso and Niger. Higher-order dominance tests, focusing instead on the poverty gap or severity rather than on the headcount index, rank Mali and Niger respectively dominating Benin in the second order and Burkina Faso in the third order.

Batana and Duclos find considerable heterogeneity in the rural–urban gaps among the different countries, such that country rankings vary considerably depending on whether the focus is solely on urban or rural areas. Burkina Faso, the poorest in rural multidimensional poverty, exhibits lower urban poverty than Niger and Benin. Furthermore, Burkina Faso is only dominated in multidimensional poverty by Côte d'Ivoire. Benin is also inferred to be urban-wise poorer than all other countries. The authors caution us that since the distribution of welfare across socio-economic groups may differ significantly across countries, cross-country comparisons of national poverty can hide important discrepancies within countries. Since uncovering these discrepancies helps understand the context-specific sources of national poverty, they advise that it would be useful and informative to disaggregate multidimensional poverty comparisons within countries before proceeding to country-wise comparisons of welfare.

3 Impact Evaluation Studies

The papers on impact evaluation deal with Kenya, Ethiopia, Uruguay, and Mali. Muyanga, Olwande, Mueni, and Wambugu's study evaluates the impact of a Free Primary Education (FPE) program in Kenya using propensity score matching methods. These methods involve matching participating and non-participating individuals based on observable characteristics such that non-participating individuals can be used to estimate the counterfactual – what would have happened in the absence of the program – for their participating counterparts. They further carry out average benefit incidence analysis to establish the monetary value of the benefits of the FPE program for each household in order to determine whether the program is progressive (pro-poor). The study is based on the premise that this intervention has led to enhanced access to education by children from poor backgrounds. The authors further explore the factors that determine grade progression and secondary school enrolment.

Children from regions with high agricultural potential experienced better education outcomes compared to those from the lowlands. However hunger, famine, and geographic traps in lower-potential regions limit household ability to meet children's schooling and other basic needs, leading to low education outcomes. Other factors significantly limiting both school enrolment and grade progression include chronic illness, high dependency ratios, and orphanhood. Since children can only benefit from FPE if they enroll in schooling, the above factors also influence whether

or not children benefit from the program. They remind us that orphans and adopted children are more likely to be out of school and less likely to proceed to and complete secondary schooling.

A key finding of the study is that FPE has significantly improved primary school enrolment. The primary education sensitization campaign that accompanied the FPE program played a significant role in improving primary school enrolment. Increased secondary school enrolment is attributed to increased graduation from primary schools, as a result of the FPE program, as well as several secondary school bursary schemes targeting poor and vulnerable households that were introduced alongside the FPE program. However, the study also finds that grade progression has worsened. This could be a pointer to declining quality of primary education as a result of congestion, lack of teachers, and insufficient primary school infrastructure.

From the benefit incidence analysis, the authors conclude that government spending on FPE program is progressive, with the 20% poorest households capturing more than twice as much of the benefits as their counterparts in the 20% wealthiest households. They argue that even though the program was not targeted, by default poorer households happen to have more children and therefore, the poor are likely to have more children enrolled in primary schools when financial setbacks are alleviated.

Based on the findings, Muyanga and co-authors recommend the improvement of infrastructure and employment of more teachers. They further argue that the low secondary school enrolment rate, especially among the poorer households in the sample, is an indication of a need for more government intervention at the secondary level. The authors also tell us that poorer households have the potential to benefit a lot from the program, but pragmatic interventions are required to deal with other constraints beyond direct schooling costs that keep them from enrolling their children in school. They recommend further research to uncover the key obstacles to primary school enrolment and to facilitate the design and implementation of effective policies and interventions.

Woldehanna's study assesses the impacts of Ethiopia's Productive Safety Net Program (PSNP) and Agricultural Extension Program (AEP) on the allocation of time between work and schooling, as well as on the highest grade completed, among 12-year-old children. The PSNP was developed by the government of Ethiopia, non-government, and donor organizations with the aim of reducing vulnerability of poor households to drought. It involves two sub-programs: a public work program (PWP) and a direct support program (DSP). The author uses data for the older cohort in the 'Young Lives' survey, which was conducted in two rounds in the last quarter of 2002 and 2006. The Young Lives Survey seeks to record changes in child poverty over a 15-year period by tracking cohorts of children over time. The study uses propensity score matching techniques to estimate the impact of the PSNP and AEP on child welfare measured by time allocated to various types of work, schooling, and studying.

Woldehanna finds that direct support from the PSNP was effective in reducing child work in paid and unpaid activities and in increasing grade completion among boys in rural and urban areas. In rural areas, the time spent by boys in unpaid work

outside the home and by girls in childcare and household chores declined significantly. For urban areas, the amount of time spent by girls in paid work and by boys in both paid and unpaid work declined substantially. Grade completion rates for boys in urban areas increased marginally. The author concludes that the direct support component of the PSNP has strong impacts on child schooling in Ethiopia.

However, he points out that the public work program part of the PSNP has not been very effective in reducing children's involvement in paid work, highest grade completed, and time children spent on studying at home. He cautions that since the program was only a year old at the time of the survey, it may have been too early to capture its full impact.

A substantial number of households have participated in agricultural extension programs in Ethiopia in order to get expert advice on sustainable land management practices, which have potential to increase farm income and labor use. The income effect is expected to lead to children working less and spending more time in school and studying. However, if households are unable to meet the increased demand for labor, this may lead to just the opposite; increased work participation and reduced schooling and studying. For Ethiopia, Woldehanna shows that the income effect of the agricultural extension program dominates, reducing child paid and unpaid work and increasing hours of schooling time by about 1 h per day.

Amarante, Arim, de Melo, and Vigorito carry out an ex-ante evaluation of *Asignaciones Familiares*, a conditional cash transfer (child allowance) program for children in Uruguay. The main objectives of the program are to increase school attendance at secondary level, given almost universal primary school attendance in Uruguay, and to decrease poverty and extreme poverty. The authors evaluate the effects of the program on secondary school attendance, poverty, inequality, and labor supply. Focusing on children aged 14–17, the authors evaluate the decision of a child either to go to school, to work, or to carry out both activities, and how receipt of the transfer affects these choices.

The study finds that secondary school attendance rates increased by between 6 and 8% as a result of the child allowance program. The increase in school attendance is progressive, with a near doubling of attendance rates among the poorest decile, and that the effect is higher for females than for males. The authors attribute the changes to increased overall household income and a direct incentive from the conditionality of the transfer on the teenager's school attendance. The reform also slightly reduces poverty incidence and income inequality, although it substantially reduces extreme poverty. The program also slightly decreases adult labor supply.

The researchers go on to explore two alternative regimes with the same overall budget. In the first, there is no reduction in the allowance per child according to the number of children in the household and the premium for children attending secondary school is increased. The impact on secondary school attendance is larger. Even stronger impacts on teenage school attendance rates are observed among the poor – more than doubling for the poorest – and the nationwide rate rises a further 2%. Results for adult labor, poverty, extreme poverty, and inequality are not different from the first scenario.