

Caring for Social Transformation – The Public and Private Costs of Caring for Under-Nourished Children in Africa

Takyiwaa Manuh* and Carlos Acosta**

Abstract

The paper begins with an overview of the economic and social trends in Africa over the last decade, noting that the current period of economic growth has not yielded commensurate improvements in key social indicators, such as poverty and child nutrition. It builds on the work carried out by The Cost of Hunger in Africa (COHA) studies that have estimated that between 70 and 90 per cent of the costs of care for malnourished children are borne by families and not by public health systems. The proportion of children who do not receive medical attention, particularly through births attended by skilled personnel, or access to maternal child health programmes, and therapeutic treatment for underweight children, are among the key drivers of the costs of caring for underweight children, in addition to the time dedicated by the primary caregivers in households. Yet, the issue of care, performed mainly by women, has not featured in overall policy discussions of actions and interventions. The paper also analyses trends in per capita investments in health and proposes a research agenda to inform policy makers on specific issues related to care.

Résumé

Cet article débute par un survol des tendances économiques et sociales en Afrique dans la dernière décennie et démontre que la croissance économique en cours n'a pas entraîné les améliorations escomptées sur les indicateurs sociaux tels que la pauvreté et la nutrition infantile. Il se base sur l'étude menée par Le Coût de la faim en Afrique qui estime qu'entre 70 et 90 pourcent des frais pour la prise en charge des enfants mal nourris sont à la charge des familles, mais pas des systèmes de santé publique. La

* Director, Social Development Policy Division, ECA, Addis Ababa. Email: Tmanuh@uneca.org

** Economic Affairs Officer, Social Development Policy Division, ECA, Addis Ababa.

proportion des enfants qui ne reçoivent pas de prise en charge médicale, à savoir l'assistance par un personnel qualifié lors des naissances ou l'accès aux programmes de santé maternelle et infantile et le traitement des enfants mal nourris, en plus du temps alloué aux soins primaires dans les foyers, constituent les facteurs principaux du coût élevé de la prise en charge de ces enfants. Pourtant, la question de la prise en charge par les femmes ne figure toujours pas dans les discussions sur la politique des actions et interventions. Cet article analyse aussi les tendances sur l'investissement par personne dans la santé et propose un programme de recherche pour informer les décideurs sur des questions spécifiques ayant trait à la santé.

Introduction

In this paper, we analyse the distribution of the burden of the public and private costs of care in selected African countries. The paper begins with an overview of the economic and social trends in Africa over the last decade, noting that the current period of economic growth has not yielded commensurate improvements in key social indicators, such as poverty and child nutrition. It builds on the work carried out in the *Cost of Hunger in Africa* studies (AUC, ECA and WFP 2014) that estimated that between 73 and 90 per cent of the costs of care for children are borne by families and not by public health systems. The proportion of children that do not receive medical attention, particularly through births attended by skilled personnel or access to maternal child health programmes and therapeutic treatment for underweight children, are among the key drivers of the cost of caring for underweight children, in addition to the time dedicated by the primary caretakers in the household. Yet the issue of care has not featured in overall policy discussions of actions and interventions. The paper also analyses trends in per capita investments in health, and proposes a research agenda to inform policymakers on specific issues related to care policies.

Economic and Social Dimensions of Africa's Recent Growth

In the past decade, Africa has experienced its most important period of economic expansion in thirty years, with GDP growth rates largely above the global average. Indeed, in 2014 five of the ten world's fastest growing countries, specifically Chad, Democratic Republic of the Congo, Côte d'Ivoire, Mozambique, Ethiopia and Sierra Leone were in Africa (IMF 2014). The expansion in economic growth has been driven by relatively high commodity prices and improved economic and political governance. However the restricted sources of growth and their capital intensity have resulted in 'enclave' economies that exclude large proportions of the population from

economic activity. This has exacerbated already existing inequalities, with the continent estimated as being home to seven of the most unequal societies in the world, most of them in Southern Africa (ECA 2013, 2014).

This is a clear indication that economic growth on the continent has not been translated into meaningful social progress. Indeed, while poverty rates have dropped, there are more people living in poverty and more undernourished children in Africa today than thirty years ago (UNICEF 2012). It is becoming evident that economic expansion is a necessary but insufficient condition to serve the poorest of the poor and that appropriate social policies must be put in place to ensure inclusive development for all.

Recent discussions on inclusive growth in Africa are moving from the quantity of growth per se to the quality of growth. Before the turn of the last century, it was proposed that Africa would need to grow at around 7 per cent per year in order for countries to halve the proportion of people living under the poverty line between 1998 and 2015 (ECA 1999). But between 2000 and 2012, average growth rates in Africa, fell short of the required rate¹ Nonetheless, several countries in the region have been able to effectively reduce poverty, as measured by the head count ratio under the national poverty line. Botswana, for instance, managed to reduce poverty rates from 30.6 per cent in 2003 to 19.3 per cent in 2010 (Government of Botswana 2003, 2010) while Cameroon cut poverty rates from 53.3 per cent in 1996 to 39.9 per cent in 2007 (Government of Cameroon 2007). Yet growth rates in these countries are still below the aspired 7 per cent with Botswana registering a rate of 3.5 per cent between 2003 and 2009 (Government of Botswana 2003, 2010), and Cameroon registering 4 per cent between 1996 and 2007 (Government of Cameroon 2007). These results underscore the importance of complementing macro-economic and fiscal stability with inclusive development strategies, including sectoral policies for job creation and adequate social programmes that reach those in need. But sustained social and economic growth will not be possible without addressing the pervasive social inequalities and the challenges of employment and human capital development.

Africa also faces an important challenge to ensure that the continent's growing youth population becomes an asset and adds a comparative advantage to its development process. This requires that timely education is provided in the formative years and skillsets are built to respond the changing demands of the context for Africa to harness the demographic dividend.² At the base of this is ensuring the very survival of persons by providing the proper nutritional requirements that allow the physical and cognitive development of children, particularly before they reach two years

of age. This must be a shared responsibility between public/state systems and households and families, yet in several African countries, the inadequacies of public health systems and social protection regimes have shifted care activities almost exclusively to households and families.

The care of persons, whether in looking after a sick child or providing services for the elderly, is often overlooked as a basic element of a complex structure of reproductive work that holds societies together, and also produces a healthy and skilled labour force for the economy (Tronto 2008, 1993; Hochschild and Ehrenreich 2003; Andersen 2000; Waerness 2001).³ Such work is often unpaid and absorbs a significant proportion of the time of caregivers, limiting their ability to maintain an active role in paid economic activities, thus often intensifying economic exclusion and dependency. Indeed, feminist theorists argue that unpaid care work is a pillar of the capitalist global economy that intensifies, particularly in periods of austerity (Budlender 2008; Hochschild and Ehrenreich 2003). As caregiving roles often fall on women and other groups who are lower in social hierarchies, important efforts need to be made in public and social policy to engender and value caregiving. Some work done by the ECA revealed, for example that women's responsibility for taking care of sick husbands led to a 60 per cent drop in agricultural activities, while households with ill members planted 13 per cent less on their farms, leading to significant reductions in economic activity and food security for such households (ECA 2004). The effects of caregiving activities were also skewed towards the poorer segments of the population, magnifying inequalities in access to and utilisation of public services (*ibid.*). However this unpaid care work remains neglected by economists and development actors, as Elson (2000) notes, and the challenge remains of getting it on to policy agendas, particularly in Africa, where it is assumed that women's time and resilience are infinitely inelastic.

Data and Methods

Drawing on ongoing work from the ECA, this brief paper reviews recent studies, both at national and sub-national levels, which analyse the private and public costs of care in Africa. The objective is to better understand the size of the burden that families, and especially women, carry in compensating for gaps in public health systems, and to assess the impact that this can have on productivity and opportunities for other income-generating activities. The main question of interest in this paper is whether the burden of care is considered in discussions around the agenda for social development in Africa.

The paper draws on the methodological work carried out by the ECA as part of the *Cost of Hunger in Africa: The Social and Economic Impact of Child Under-nutrition*.⁴ The Cost of Hunger in Africa (COHA) study is a multi-country project aimed at estimating the economic and social impacts of child under-nutrition.⁵ The COHA has been completed in Egypt, Ethiopia, Swaziland and Uganda, with additional studies in eight countries at different stages of completion.⁶ It is expected that the results of the study will become an important component of advocacy efforts toward creating policy frameworks in Africa that help avert unnecessary hunger-induced losses of human and economic potentials on the continent.

The COHA analytical model estimates the additional cases of morbidities, mortalities, school repetitions, school dropouts and reduced physical capacity that can be directly linked to a person's under-nutrition before the age of five. The estimations are generated by a probabilistic model that utilises evidence-based risk factors, alongside economic, demographic, nutritional, health and educational data that are provided by implementing teams in each country. The goal is to estimate the associated economic losses incurred in health, education and potential productivity in a single year.

It is well established that under-nutrition during early childhood has negative life-long and intergenerational consequences, with under-nourished children being more likely to require medical care as a result of diseases and deficiencies related to under-nutrition (Ramachandran and Goplan 2009). This increases the burden on public social services and the health costs incurred by governments/public health systems and the affected families. Indeed, without proper care, underweight and wasting in children results in a higher risk of mortality (Black et al. 2013). During school years, stunted children are more likely to repeat grades and to drop out of school (Daniels and Ada 2004), thus reducing their income-earning capabilities later in life. Furthermore, adults who were stunted as children are less likely to achieve their expected physical and cognitive development, thereby impacting on their labour productivity. In this regard, the findings of the first phase of the COHA study revealed significant information about the impact that under-nutrition is currently having on society and the economy as a whole:

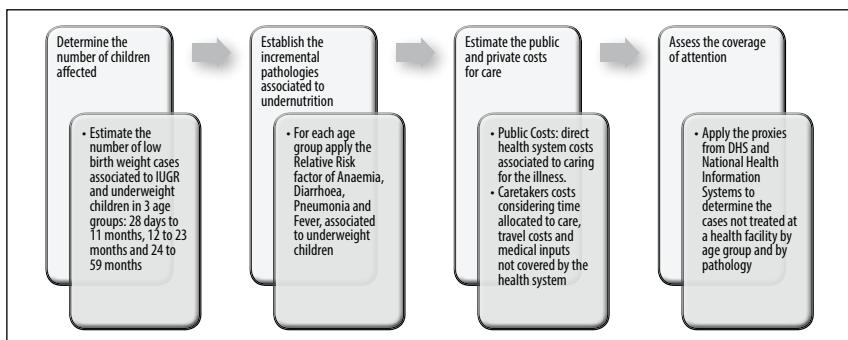
- From a health perspective, the study estimates that between 69 and 82 per cent of all cases of child under-nutrition are not properly treated, or are treated at home, with important implications for the balance between paid and unpaid work and the well-being of families. Additionally, most of the care costs associated with under-nutrition occur before the child turns one year old, and between 8 and 28 per cent of all child mortality is associated with the incremental risk of mortality that affects under-weight children.

- From the educational perspective, the study estimates that 7 to 16 per cent of repetitions in school are associated with stunting, and that under-nutrition is the underlying cause of the loss of between 0.2 to 1.2 years of schooling.
- From a labour productivity perspective, child mortality associated with under-nutrition has reduced the size of current workforces in the respective countries by between 1 and 8 per cent, while between 40 and 67 per cent of working age adults were affected by stunting as children, thus reducing their current productive capacity.
- The study estimates that the annual costs associated with child under-nutrition reach values equivalent to 1.9 to 16.5 per cent of Gross Domestic Product (GDP) in the four countries (AUC, ECA and WFP 2014).

Analytical Techniques: Unveiling the Hidden Costs of Care

From the findings highlighted above, it is clear that the time, efforts and opportunity costs expended by caregivers are severely under-estimated and not fully taken account of in public policy. Therefore the COHA study is helping to unveil these costs by estimating the episodes of child illnesses associated with under-nutrition that are not being treated at health facilities and, hence, are adding to the costs borne by families. The following schematic representation can be used to estimate household and macro-level costs of care:

Figure 1: Process of Estimation of Public and Private Costs in Health



Source: Based on Information from *Cost of Hunger in Africa* (AUC, ECA and WFP 2014).

The first step towards estimating the public and private costs of health is determining the size of the sphere of analysis. In the case of the health

costs for the COHA model, this is limited to all children under five years who are affected by under-nutrition in a given year, according to WHO growth standards (WHO 2006). To enhance the accuracy of the estimations, three different age-based cohorts were defined: ages 0 to 11 months; ages 12 to 23 months; and ages 24 to 59 months. For each of these cohorts, the prevalence of under-nutrition is recalculated, based on the most recent DHS data in each country, in order to estimate the number of children who are affected by under-nutrition. Once the sphere of analysis is defined, the second step is establishing the degree to which the children are incrementally affected by pathologies associated with under-nutrition,⁷ namely, diarrhoea, anaemia, pneumonia and malaria. For this, the COHA model utilises differential probabilities,⁸ in which the difference in the prevalence for each of these pathologies, and for each of the three different age groups, is estimated for both underweight and not underweight children. This methodology serves to separate the contextual elements that can influence the levels of prevalence for each of the illnesses, and to focus the analysis on the incremental cases that result from the higher risk faced by those children who are underweight.

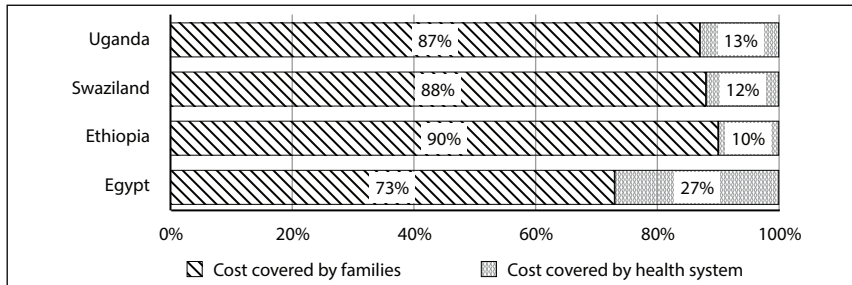
Thirdly, the individual public and private costs of caring for each episode of the selected pathologies and each age group are estimated. The public costs are based on two major elements: the costs of medical inputs, such as medicines and tests, and the unit cost per attention for the health system, such as the time of physicians, and the overhead costs to the medical centre. These costs have to be separated to avoid duplications, as one episode of any pathology might require several follow-up visits, but only one full set of medical inputs. For the private costs, the main costs considered are transportation costs to and from the health centre, the opportunity cost of waiting time, and the medical inputs not covered by the health system. These costs are also calculated differently for ambulatory care, and for in-patients who require hospitalisation, for each pathology and age group.

Finally, the model also takes into account the large proportion of cases which are tended to at home and which do not obtain formal health treatment. For this estimation, the model utilises information based on the DHS surveys, complemented by information gathered from field visits to the health centres, interviews with experts, and information from national health systems. As there is very little information on the actual costs and time allocation of home care for underweight children who present compounding illnesses, a shadow cost equivalent to the per unit treatment of each episode is set for the treatment of each pathology, and associated to those cases that did not receive formal medical attention. This, however,

does not consider the inefficiencies and complications that can arise from non-formal home treatment and might lead to the under-estimation of the real costs of home care.

Based on this four step process, the COHA model estimates that the health burden associated with child under-nutrition and carried by caregivers in the four pilot countries far outweighs the costs covered by the public health systems. This is shown in Figure 2.

Figure 2: Distribution of Costs Covered by Families and by Public Health



Systems

Source: The Cost of Hunger in Africa: Social and Economic Impact of Child Under-nutrition in Egypt, Ethiopia, Swaziland and Uganda. Addis Ababa: ECA, 2014.

As is clear from Figure 2, a higher proportion of the costs of care are consistently borne by caregivers, but the drivers of this distribution vary considerably, depending on the particular context. Ethiopia has the highest disproportion of these costs, with the model estimating that 90 per cent of the health costs associated with under-nutrition are being borne by families. This distribution of costs is highly driven by the low proportion of births – one out of every three – that are attended by skilled health personnel (CSA Ethiopia 2011), thus increasing the costs to families, and contributing substantially to infant mortality, particularly for children of severe low birth weight (Black et al. 2008).

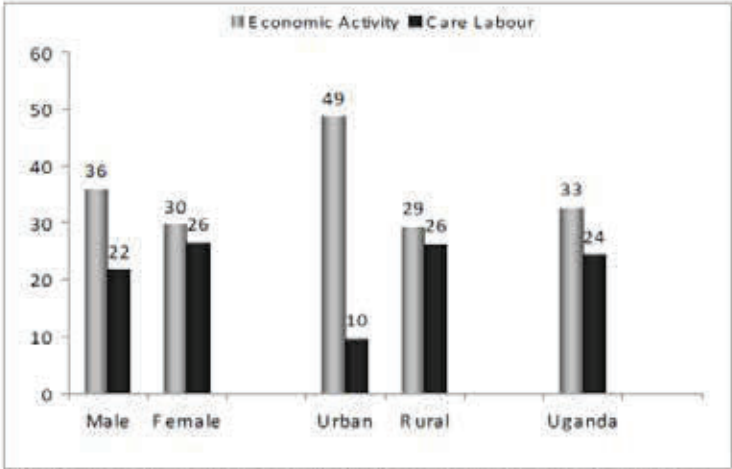
On the other hand, in Egypt, where the health system has a wider coverage, and 71 per cent of all births are attended by skilled personnel, the drivers of the costs of care are different (El-Zanaty and Way 2009). Results show that underweight children in Egypt, particularly during the first year of life, have in fact a 21 per cent higher prevalence of anaemia, which is commonly used as a proxy for iron deficiency anaemia (Davidson and Nestel 2002). Iron deficiency anaemia affects not only cognitive development but also the stress response system, which impacts on the ability of children to

cope with stressful situations (Grantham-McGregor et al. 1999).

In the case of Swaziland, the low coverage of treatment of severely malnourished children, estimated by experts at around 20 per cent, is the highest driver of the cost distribution between caregivers and the public system (AUC, ECA and WFP 2013). However, in Uganda, the drivers of costs seem to be associated with the treatment of diarrhoea and malaria. After a specific data collection process was carried-out in two health facilities that included interviews with health providers and experts, it appeared that home treatment for diarrhoea and malaria are common (AUC, ECA and WFP 2013). Nonetheless, the data collected indicated that proper care was sought for a higher proportion of the episodes of acute respiratory infections in children (UBOS 2007).

Assessing the burden of care is also an issue that is being explored in household surveys. A recent survey in Uganda (UBOS 2010) enquired into the time-use balance between care and economic activity, finding important gender and rural/urban disparities in the time allotted to productive and care activities. On average, Ugandan women spent 18 per cent more time in care giving activities than men, and 17 per cent less time on productive activities. These disparities are further heightened in rural/urban settings, as in rural areas the time allocated to care labour is 1.6 times higher, and time allocated to productive activities is 40 per cent lower, than in urban settings (ibid.).

Figure 3: Average Time Spent on Economic and Care Labour Activity per



* Care Labour activities include: looking after children and caring for the sick, fetching water, firewood and cooking, own construction or repairs, food processing for own consumption

Week by Sex and Residence (hours), Uganda, 2009/10

Source: UBOS 2010.

Increasing the Quantity and Quality of Social Investments in Africa

Understanding the challenges that limit access to health and improvements in health outcomes must be at the forefront of the social policy agenda in Africa. Increasing investments in the health sector is a critical element for addressing the barriers that caregivers face in accessing medical attention, reducing exclusion, and establishing more equitable development. As shown in Table 1, Africa ranks as the second lowest region in the world measured in per capita health expenditure, at US \$108.52, only above South-East Asia. However, since 1995, per capita investments in health in the South-East Asia region have increased by 274 per cent, while in Africa per capita investments increased by 163 per cent. At this rate, by the year 2025, Africa will have the lowest per capita expenditure on health in the world.

Table 1: Per Capita Total Expenditure on health (PPP I\$)

Regions	1995	2000	2005	2010	2012	% change 1995-2012
South-East Asia	22.15	27.01	40.19	62.35	82.93	274
Africa	41.30	44.10	65.62	89.99	108.52	163
Eastern Mediterranean	71.26	102.03	129.26	185.05	227.85	220
Western Pacific	209.40	243.96	319.61	514.38	663.11	217
Europe	862.54	934.88	1,463.84	1,966.54	2,127.82	147
Americas	1,148.16	1,406.34	1,957.17	2,554.70	3,036.56	164
Global	362.62	414.58	582.65	783.93	916.97	153

Source: Constructed from Data from the WHO Global Health Observatory, 1995 to 2012.

The efficiency and efficacy of public spending and thus its quality are important determinants of the distribution of the burden of care activities between public systems and households and families. The reduction of the high burden of care on households, with a potential increase in time dedicated to paid productive activities, is dependent on well-functioning health systems, undergirded by the trust and confidence that citizens have in such systems, and where inputs to the health system result in maximum outputs and improved health outcomes. However, given the strong financial constraints in this process, priorities need to be established at policy level.

A key element to address for improvements to occur is the coverage of ante-natal care, which will have an impact on the reduction of child and maternal mortality. Currently, Africa also presents the lowest levels of

coverage of key ante-natal care services, including care visits. Only 43 per cent of individuals are able to access the four recommended visits, less than half of all births are attended by skilled personnel, and one out of every four families disclose an unmet need for family planning (WHO 2010).

As may be recalled, the World Health Assembly in 2005 issued a call to action that encouraged governments to ‘develop their health systems, so that all people have access to services and do not suffer financial hardship paying for them’ (WHO 2005). Recent efforts of several governments in Africa, including Rwanda, Ghana and Kenya, to establish and strengthen universal health coverage (UHC) schemes, seem to indicate that there is the political will to develop these systems as an element of success for the post-2015 development agenda. Indeed, universal health coverage should be seen as an essential public good and a moral imperative for promoting access to high-quality services for better health outcomes, prevention, treatment, rehabilitation, palliation and financial risk protection (WHO 2013). Arguably, universal health coverage is a powerful tool for reducing inequality and inequity between those who can afford to pay for health services (including care and treatment) and those who cannot – thus promoting social and economic justice in society. While the financial implications for a full UHC package are immense, its benefits far outweigh the costs as a healthy population is a productive resource for economic growth and development.

The scale of the recent and ongoing outbreak of the Ebola Viral Disease (EVD) in West Africa, and the seemingly low national and regional capacity to respond effectively, has revealed basic weaknesses in health systems, reinforcing the need to position effective health care at the centre of the development agenda. Ebola is both a cause and an outcome of weak institutional and infrastructural capacity to effectively deploy human and other resources to emergency situations in affected countries and beyond. The lost hours in labour productivity and the opportunity cost of tending to household members in the affected communities have to be quantified in monetary terms. Only then can the real impact of Ebola be fully appreciated at micro- and macro-economic levels. And notwithstanding the fact that Liberia, Sierra Leone and Guinea are fragile states still reeling from the lingering effects of past civil wars, the current EVD outbreak in these countries portends wider systemic problems in the general delivery of social services across Africa. Unless the current causal and predisposing factors are clearly isolated and understood, history is bound to repeat itself with severe consequences on affected communities and households. Therefore, one way to forestall future occurrence of EVD and similar pandemics is to increase and sustain the quantity and quality of investments in the health sector while, at the same time, building resilience of communities.

Conclusion

The need to address care activities borne by households is a necessity, due to direct and indirect costs not only to the household itself, but to the overall economy. The magnitude and costs of caregiving activities must serve as an imperative to design and implement effective public interventions, and care has to become an integral part of social protection systems in Africa. Establishing a public policy response that reduces the costs to families, and women in particular, should lead to better policy formulation and create more opportunities for caregivers to engage in paid productive activities or have more leisure, at the same time as specific policies are developed to support those who need public assistance and the building of their capacities.

Research agendas in Africa should also be framed within the context of current health dynamics that include the care economy in order to effectively respond to the broad policy challenges. More precisely, efforts should be made to interrogate and address the specific determinants of the high burden of care at national and household levels. The COHA studies provide an important glimpse into the dimensions of costs, which can contribute to bringing attention to the issue. However, stronger advocacy and specific policies must be developed towards recognising this as a true cost element for inclusive development. Africa has the opportunity to build a component of interventions that address care needs as countries establish and expand social protection programmes at the same time as they explore financial compensation mechanisms for caregivers. As Africa develops the agenda for evidence-based policymaking, the role of credible data and statistics in assessing the magnitude and true costs of care must also be enhanced by ensuring that household surveys and other national mechanisms include or maintain an emphasis on the implications of not caring.

At the national level, the determinants associated with increasing the effective coverage of health services, particularly ante-natal care, assisted births and early child nutrition, must be further analysed. This includes actions from both the demand side, such as conditionality in cash transfer programmes to access basic health care, as well as enhancements in the supply side, such as improved service delivery and expansion of coverage.

As Africa prepares its development agenda towards 2063, we must ensure that the care economy is accounted for in strategic discussions, and that all stakeholders, including non-state actors, research agencies, development partners and policymakers, build synergy and work together to ensure that Africa's next bid for development is truly transformational and inclusive.

Acknowledgments

The authors are grateful for critical comments and feedback from staff of the Employment and Social Protection Section, SDPD, ECA.

Notes

1. Calculated by the authors, based on data from UNSTATS 2014. The average growth rate of GDP for the period from 2000 to 2012 was 4.7 per cent, reaching as high as 6 per cent in 2006 and 2007.
2. The demographic dividend can be defined as the benefit that accrues to a country when there is a marked and rapid decline in fertility levels that temporarily leads to an increase in the number of people of working age relative to the dependent population (children under 15 years and the elderly). This can influence development positively by raising capital/labour ratios and enabling governments and families to increase their investment in each dependent and strengthen human capital in general. For the benefit to be realised for development, countries have to make investments in the creation of new jobs, and in the education and health of children, adolescents and youth.
3. Feminist theorists have been at the forefront of work on the care economy which is posited as the third component of economies, after the formal and informal economies. See for example, Joan Tronto, 2008, 'An Ethic of Care', in A. Cudd and R. Andreassen, *Feminist Theory: a philosophical anthology*, Malden: Blackwell Publishing; Virginia Held, 2006, *The Ethics of Care: Personal, Political and Global*, New York: Oxford University Press; Arlie Hochschild, 1995, 'The politics of culture: traditional, cold modern and warm modern ideals of care', *Social Politics: International Studies in Gender, State and Society* 2 (2): 331–46; N. Noddings, 1984, *Caring*, Berkeley: University of California Press. Among UN agencies, UNRISD has also led on work in this area.
4. The information for this section is derived from the publication, *The Cost of Hunger in Africa: The Social and Economic Impact of Child Under-nutrition* (ECA, AUC and WFP 2014).
5. The COHA is led by the African Union Commission (AUC) and the New Partnership for Africa's Development (NEPAD) Planning and Coordinating Agency, and is supported by the ECA, and the UN World Food Programme (WFP).
6. These are Burkina Faso, Ghana, Malawi, and Rwanda that are completed; Chad that is in process; and Botswana, Cameroon, Kenya, and Mauritania that are yet to begin.
7. The selection of pathologies can vary, based on their relevance in each country context, and the availability of data to determine the prevalence of both groups.
8. Probability differences (P): this corresponds to the difference between the probability of occurrence of a consequence (i) among those suffering from under-nutrition (Pu) and those not suffering from under-nutrition (Pnu).

References

- Anderson, B., 2000, *Doing the Dirty Work? The Global Politics of Domestic Labour*, London: Zed Books.
- AUC, ECA and WFP, 2013, *Social and Economic Impacts of Child Under-Nutrition in Swaziland*, Addis Ababa: AUC, ECA and WFP.
- , 2014, *The Cost of Hunger in Africa: The Social and Economic Impact of Child Under-Nutrition in Africa*, Addis Ababa: AUC, ECA and WFP.
- Black, R., Victora, C. and the Maternal and Child Nutrition Study Group, 2013, 'Maternal and Child Under-Nutrition and Overweight in Low-Income and Middle-Income Countries', *Lancet* 382: 427–51 (August).
- Black, R. et al., 2008, 'Maternal and Child Under-Nutrition: Global and Regional Exposures and Health Consequences', *Lancet* 371, No. 9608: 243–60.
- Budlender, D., 2008, 'The Statistical Evidence on Care and Non-Care Work across Six Countries', UNRISD Papers on Gender and Development. PP GD-4. Geneva: UNRISD.
- Central Statistical Agency (CSA Ethiopia) and ICF International, 2012, *Ethiopia Demographic and Health Survey 2011*, Addis Ababa and Calverton, MA: Central Statistical Agency and ICF International.
- Daniels, M. and Ada, L., 2004, 'Growth in Young Filipino Children Predicts Schooling Trajectories through High School', *Journal of Nutrition* 134: 1439–46.
- Davison, L. and Nestel, P., 2002, 'Efficacy and Effectiveness of Interventions to Control Iron Deficiency and Iron Deficiency Anemia', Statement, Washington, DC: INACG Secretariat (February). Available from [http://www.unsystem.org/scn/Publications/AnnualMeeting/INACG efficacy and effectiveness.pdf](http://www.unsystem.org/scn/Publications/AnnualMeeting/INACG%20efficacy%20and%20effectiveness.pdf)
- Elson, D., 2000, *Progress of the World's Women: UNIFEM's Biennial Report*, New York: United Nations Development Fund for Women.
- El-Zanaty, F. and Way, A., 2009, *Egypt Demographic and Health Survey 2008*, Cairo and Washington, DC: Ministry of Health, El-Zanaty and Associates, and Macro International.
- ECA, 1999, *The Challenge of Poverty Reduction and Sustainability*, Economic Report on Africa, Addis Ababa: ECA.
- , 2013, *Making the Most of Africa's Commodities: Industrializing for Growth, Jobs and Economic Transformation*, Economic Report on Africa, Addis Ababa: ECA.
- , 2014, *Dynamic Industrial Policy in Africa: Innovative Institutions, Effective Processes and Flexible Mechanisms*, Economic Report on Africa, Addis Ababa: ECA.
- ECA, UNAIDS and WHO, 2004, *Scoring African Leadership for Better Health*. Policy Report, Addis Ababa and Geneva: ECA, UNAIDS and WHO.
- Government of Botswana, 2004, *Household Income and Expenditure Survey 2002/03*, Gaborone: Central Statistics Office.
- Government of Botswana, 2013, *Botswana Core Welfare Indicators Survey (BCSWIS) 2009/10. Main Report, Vol. 1*, Gaborone: Statistics Botswana.

- Grantham-McGregor, S.M., Fernald, L.C., Sethuraman, K. et al., 1999, 'Effects of Health and Nutrition on Cognitive and Behavioural Development in Children in the First Three Years of Life. Part 1: Low Birth weight, Breastfeeding, and Protein-Energy Malnutrition', *Food & Nutrition Bulletin* 20 (1): 53–75 (March).
- Haddad, L.J and Bouis, H.E., 1991, 'The Impact of Nutritional Status on Agricultural Productivity: Wage Evidence from the Philippines', *Oxford Bulletin of Economics and Statistics* 53 (1): 45–68 (February).
- Hong, R. and Ruiz-Beltran, M., 2008, 'Low Birth Weight as a Risk Factor for Infant Mortality in Egypt', *La Revue de Santé de la Méditerranée Orientale* 14 (5): 992–1002.
- Hochschild, A. and Ehrenreich, B., 2003, *Global Woman: Nannies, Maids and Sex Workers in the New Economy*, New York: Metropolitan Press.
- International Monetary Fund, 2014, *World Economic Outlook Database*, Washington, DC: IMF.
- Ramachandran, P. and Gopalan, H., 2009, 'Under-Nutrition & Risk of Infections in Preschool Children', *Indian Journal of Medical Research* 130: 579–83 (November).
- République du Cameroun, 2008, *Tendances, profil et déterminants de la pauvreté au Cameroun entre 2001-2007*. Institut national de la statistique. Troisième Enquête Camerounaise auprès des Ménages (ECAM3). Yaoundé, Cameroun.
- Tronto, J.C., 1993, *Moral Boundaries. A Political Argument for an Ethic of Care*, New York: Routledge.
- , 2008, 'The Ethics of Care: Personal, Political, and Global' by Virginia Held' [Review], *Hypatia* 23 (1): 211–17.
- Uganda Bureau of Statistics (UBOS), 2010, *Uganda National Household Survey 2009/10*. Kampala, (November).
- UBOS and Macro International Inc., 2007, *Uganda Demographic and Health Survey 2006*, Calverton, MA: UBOS and Macro International Inc.
- UNICEF, WHO and World Bank, 2012, UNICEF-WHO-World Bank Joint *Child Malnutrition Estimates*, New York, NY, Geneva and Washington, DC: UNICEF, WHO and World Bank.
- UNRISD, 2010, 'Why Care Matters for Social Development', Research and Policy Brief 9, Geneva: UNRISD.
- Waerness, K., 2001, 'Social Research, Political Theory and the Ethics of Care', *Research Review (NS)* 17 (1): 5–16.
- WHO, 2005, 'Sustainable Health Financing, Universal Coverage and Social Health Insurance.' Ninth Plenary Meeting, 25 May, Committee A, Eighth Report, Geneva: WHO.
- , 2006, *Child Growth Standards. Length/Height-for-Age, Weight-for-Age, Weight-for-Length, Weight-for-Height and Body Mass Index-for-Age Methods and Development*, Geneva: WHO.
- , 2010, *Global Health Observatory of the World Health Organization*, Geneva: WHO.
- , 2013, *Research for Universal Health Coverage-The World Health Report 2013*, Geneva: WHO.