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**Working Paper**

## From unpaid to paid care work: the macroeconomic implications of HIV and AIDS on women's time-tax burdens

Working Paper, No. 570

**Provided in Cooperation with:**

Levy Economics Institute of Bard College

*Suggested Citation:* Antonopoulos, Rania; Toay, Taun N. (2009) : From unpaid to paid care work: the macroeconomic implications of HIV and AIDS on women's time-tax burdens, Working Paper, No. 570, Levy Economics Institute of Bard College, Annandale-on-Hudson, NY

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**Working Paper No. 570**

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**From Unpaid to Paid Care Work: The Macroeconomic Implications  
of HIV and AIDS on Women's Time-tax Burdens**

by

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The Levy Economics Institute at Bard College

**July 2009**

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\* This work will also appear in the SSRC-UNESCO volume *The Fourth Wave: An assault on Women—Gender, Culture, and HIV/AIDS in the 21st Century*. We are indebted to editors and supporters of the SSRC-UNESCO effort. All views and errors are our own.

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**Abstract**

This paper considers public employment guarantee programs in the context of South Africa as a means to address the nexus of poverty, unemployment, and unpaid work burdens—all factors exacerbated by HIV/AIDS. It further discusses the need for gender-informed public job creation in areas that mitigate the “time-tax” burdens of women, and examines a South African initiative to address social sector service delivery deficits within the government’s Expanded Public Works Programme. The authors highlight the need for well-designed employment guarantee programs—specifically, programs centered on community and home-based care—as a potential way to help offset the destabilizing effects of HIV/AIDS and endemic poverty. The paper concludes with results from macroeconomic simulations of such a program, using a social accounting matrix framework, and sets out implications for both participants and policymakers.

**Keywords:** HIV/AIDS; Gender; Care Work; Unpaid Work; Community and Home-based Care (CHBC); South Africa; Expanded Public Works Programme (EPWP); Social Accounting Matrix (SAM); Employment Guarantee

**JEL Classifications:** B54, E24, H51, I30, J16, J22, O55

## I. INTRODUCTION

Macroeconomics and macroeconomic modeling are very useful tools for policymaking purposes. They summarize complex links between the many production sectors of the economy; they provide insights into the interactions of multiple social actors, such as producers and consumers, workers and business owners, and borrowers and lenders; and they neatly present us with information regarding income distribution, savings and investment, international trade, and financial transactions.

Above all, macroeconomic models serve as instruments that allow us to trace the impacts of both gradual and sudden changes on the economy. Such changes can take the form of food and gasoline price spikes, financial sector meltdowns, or natural or man-made disasters and so on, all of which induce economic adjustments. These “shocks” can also take the form of public health disasters, such as the HIV epidemic.

Depending on the question under discussion and the level of disaggregation, these models can trace the economic impact of such events on distinct sectors of the economy and on different groups of people: wealthy versus poor, wage earners versus capital owners, rural versus urban households, men versus women. There is, however, a caveat. It must be kept in mind that, in describing an economy, traditional economics has concentrated on the marketized sections of the economy.

This market focus is problematic, especially for developing countries. The production of the necessities of life does take place within markets, but not exclusively. Much of what is needed is actually produced through unpaid work, an area outside the strict boundaries of marketized transactions.<sup>1</sup> These informal, or nonmarket, activities include: (family/household) subsistence-crop cultivation; the collection of basic necessities, like water and fuel wood; caring for children and the elderly; transforming raw ingredients into consumable meals; cleaning and maintaining a sanitary environment in the household; and performing volunteer community work. Excluding the economic

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<sup>1</sup> Official estimates of the share of market production of unpaid activities range from 30 per cent to 60 per cent of gross domestic product (GDP). For a non-exhaustive sample see: Meena (1999), Bakker (1999), and Statistics Estonia (2006); for a good overview of estimation, sampling and other methodological issues, see: UN-DESA (2004).

activities and the social actors involved in unpaid work paints an incomplete picture of an economy.

The importance of unpaid work has been long recognized and the 1993 United Nations System of National Accounts (SNA)<sup>2</sup> has provided detailed guidelines on including unpaid work in their estimates of annual production to all member states. Yet economic models and macro-level analysis—with some notable exceptions—continue to use a lens that renders segments of the population invisible. The trouble is that where some people and their unpaid economic activities are missing from the models, we cannot decipher how they are affected by economic changes, such as the aforementioned “shocks”—the benefits and costs incurred remain hidden, the difficulties faced in securing a livelihood undetectable. An “out of sight, out of mind” attitude can lead to misguided policies and the partial or complete failure of interventions.

This is critical in the context of the HIV epidemic, where the intersection between unpaid care, gender, and poverty has yet to receive adequate policy attention. It is well known that home-based and community-based care have emerged as key policy responses to the epidemic in many countries in sub-Saharan Africa, as well as South Africa. An underlying characteristic of this response is a reliance on family members and volunteers to provide care without remuneration and with little training or support. The response is due in part to the pressures that the illness has placed on existing health care capacities and fiscal budgets (Haacker 2001; Oluwagbemiga 2007).<sup>3</sup> Shortages of qualified nurses and other health care workers, reinforced by brain-drain migration patterns from developing to developed countries, have exacerbated the situation. At the same time, governments in the region that have been pursuing neoliberal policies have not responded adequately to the health care crisis. For people living with HIV in poor

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<sup>2</sup> The SNA guidelines provide the conceptual framework that sets the international statistical standard for the measurement and classification of economic activities. They consist of an integrated set of macroeconomic accounts, balance sheets, and tables based on internationally agreed-upon concepts, definitions, classifications, and accounting rules that delineate the market economy. In addition, they provide a framework for constructing satellite accounts of unpaid work. For details see: <http://unstats.un.org/unsd/sna1993/introduction.asp> (accessed October 12, 2008).

<sup>3</sup> Current bed occupancy in public hospitals in Kenya by AIDS patients is 50–60 percent. To ease both financial constraints and congestion in public health facilities, the Kenyan government (following suggestions from the World Bank and other donor agencies) has promoted cost-sharing in Kenyan public health facilities, as well as home-based care for AIDS patients.

households, family members and community volunteers have become the primary source of day-to-day care. It is estimated that between 70 and 90 percent of care in developing nations takes place in the home (Akintola 2008; WHO 2000).

### **A. Unpaid Care Work**

Caring for the young, older people, and the ill has traditionally been women's work around the world. This gendered division of labor is typically replicated in the context of HIV and AIDS. Women feed and bathe the ill and provide counseling and emotional support. In addition, they perform two other activities that provide unpaid care for members of households whose age and ability precludes them from performing these tasks on their own: household maintenance and reproduction tasks such as cooking, cleaning up after meals, and washing and ironing clothes, and maintaining an overall sanitary and clean environment, as well as securing the necessary inputs for the aforementioned activities. The collection of water and fuel, for example, takes up to three full-time, unpaid work months per year (40 hour per week) in Benin and even longer in Bolivia (Kes and Swaminathan 2006; Charmes 2006). The amount of time dedicated to these tasks and activities is increased in the case of caring for chronically ill people—more water is needed for frequent bathing and cleaning, and more hours are spent for physical and emotional support.

On the surface, the fact that women and girl children perform this work disproportionately is a “private” matter. However, there now exists a vast literature that argues otherwise on a variety of levels. It is suggested that the increased burden of unpaid work affects women's ability to engage in paid work and subsistence production, limits their participation in community events and the political process, leaves women with less time to upgrade their skills and acquire new knowledge, and gives them less time for other necessary activities, including caring for themselves. As a consequence, patterns of unpaid work reinforce existing gender inequalities in labor force participation, wage differentials, and political representation, as well as in meeting basic needs (such as food security). The danger that young girls—and boys, albeit to a lesser degree—will be removed from school or spend long hours on household chores and on supervising younger children is cause for concern (Akintola 2004b and 2008; Anglewicz et al. 2005).

Unfortunately, comprehensive data on shifts in time allocation within households that include people living with HIV is unavailable and a coordinated international effort to gather such data is still lacking. Despite the overall dearth of information, fieldwork and small-scale studies provide adequate (if anecdotal) evidence of the effects of caring for people living with HIV (PLHIV) on women.<sup>4</sup>

## **B. Unemployment and Public Job Creation**

Paradoxically, at the same time that communities with a high proportion of people living with HIV spend long hours performing unpaid care work, other households suffer from enforced “idleness.” In the case of South Africa, labor force survey data (SSA 2007) reveals that overall unemployment in late 2007 stood at 23 percent; incorporating discouraged workers brings the rate to 36 percent.<sup>5</sup> While the official rate appears to be an improvement over the previous year, the figure masks the fact that many people are dropping out of the labor force. In fact, statistical releases prior to 2003 provided enough detail to calculate that among black women and youth in former homelands, unemployment reached a devastating 70–80 percent (SSA 2002).<sup>6</sup> Many are ready, willing, and able to engage in paid work, but simply cannot find jobs. In some cases, both situations are experienced simultaneously within a household: too much unpaid care work, too few employment opportunities. In this context, the very meaning of “volunteer” work has been contested. HIV/AIDS and poverty combine to reinforce one another in a vicious circle for all family members, including the patients themselves.

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<sup>4</sup> For a nonexhaustive list of such studies see: Anglewicz, et al. (2005), Kes and Swaminathan (2006), Mehta and Gupta (2005), Nkosi, et. al. (2006); Steinberg, et. al. (2002); and Taylor, Seeley, and Kajurac (1996).

<sup>5</sup> Our calculations are based on the labor force survey of September 2007, issued in March 2008, according to which there were 17,178,000 people in the labor force, of which 13,234,000 were employed and 3,945,000 were unemployed (official definition). If the 3,425,000 discouraged work-seekers are incorporated to these figures, the labor force totals 20,603,000 people and the unemployment rate is 35.77 percent (7.37 million divided by 20.603 million).

<sup>6</sup> Statistics South Africa (SSA) no longer reports figures for the ex-homelands, which are areas marred by rampant unemployment and indigence. Furthermore, discouraged-worker data are reported in such a way that it is no longer possible to recalculate the unemployment rate (using figures for those officially unemployed plus discouraged workers) by gender and race together, much less the paired data by age and region. The absence of such figures disguises some of the most telling socioeconomic and demographic trends in post-apartheid South Africa.

As joblessness and poverty are closely linked, public job creation has been used periodically by many countries as a policy intervention (Hirway and Terhal 1994; Antonopoulos 2007) to ameliorate the dire consequences and social ills that accompany them (Drèze and Sen 1989). In such cases, the government assumes the role of the “employer of last resort,” creating minimum-wage jobs for the unemployed in projects that create and maintain physical infrastructure, such as roads and public sector assets. Such initiatives can be traced back as far as the fourth century in India (Drèze and Sen 1989), where a scheme was introduced to avert famine. More recently, the New Deal was introduced by the United States government to mitigate the effects of the Great Depression. In the era of structural adjustment, laissez-faire government, and trickle-down economics, direct government job creation has, for the most part, fallen out of favor. However, there has been a recent revival of interest.<sup>7</sup> In 2005, India made a long-standing employment guarantee policy (EGP), which had been implemented in the state of Maharashtra since the 1970s, into a constitutional act. The National Rural Employment Guarantee Act (NREGA) entitles citizens residing in poor rural areas throughout the country to one hundred days of employment per year at the minimum wage. In many ways, such an entitlement provides a lifeline for poor people and runs against neoliberal thinking that adheres to limited government and deficit reduction as a panacea for growth and income generation.

South Africa also introduced a national public job creation program, the Expanded Public Works Programme (EPWP), in 2005, albeit on a much smaller scale. Despite the many challenges it faces, the program<sup>8</sup> is unique in that projects are designed for the environmental and social sectors of the economy, as well as for infrastructure. Two priority areas for job creation within the social sector have been identified: community and home-based care (CHBC) and early childhood development (ECD). Through these programs, the EPWP has created a policy space to make a transition from unpaid to paid work in the care of the ill and of young children, including those orphaned due to the HIV epidemic.

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<sup>7</sup> For case studies, see <http://www.economistsforfullemployment.org/> (accessed October 12, 2008), as well as Antonopoulos (2007).

<sup>8</sup> Details of the program can be found at the official website: <http://www.epwp.gov.za/>

The rest of this paper explores the economy-wide implications of a scaled-up CHBC intervention in the EPWP for the social sector. Section II presents evidence of how unpaid work and unpaid care provisioning are distributed unequally across gender, employment status, and income level in South Africa. Section III discusses the EPWP in the context of the opportunities and limitations it offers for community and home-based care. Section IV presents the economy-wide impacts of an enlarged social-sector intervention in CHBC. Section V concludes.

## II. “INVISIBLE” WORKERS

As described above, unpaid work activities include routine household maintenance work, such as cooking, cleaning, shopping, doing the laundry, caring for children, and other daily tasks. The time spent on such activities can be thought of as a “subsidy” to the economy, as a transfer, or a “gift” (Folbre 1994) from one institution—the household/family—to the market and the state (Folbre 2006; Budlender 2004). It has been argued that without unpaid work and the services it provides, wages would need to be higher to allow the population to purchase these services in the market or the public sector would have to provide them. It has also been suggested that it is women’s unpaid work that increases to fill the gaps, particularly during times of crisis when income and public goods decrease (Picchio 2003; Elson 2000). In the context of HIV and AIDS, women’s unpaid care work becomes both more essential and more taxing (Pradha and Sundar 2006).

The objective of this section is to describe how unpaid work is distributed according to factors relating to gender, unemployment, and poverty in South Africa. Previous work with time-use survey data (SSA 2001) for South Africa has produced estimates of the time spent on various unpaid activities in twenty distinct types of households.<sup>9</sup> This investigation highlighted patterns of unpaid time allocation by poor

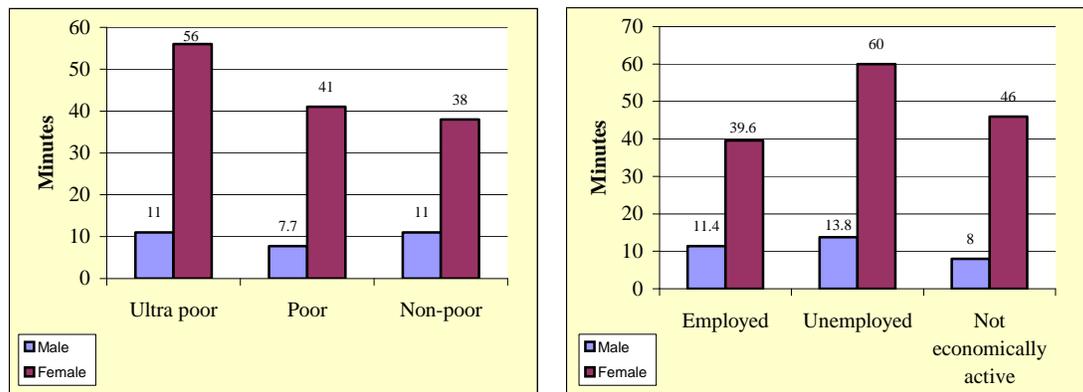
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<sup>9</sup> This analysis was part of a Levy project supported by UNDP, titled “Economy-wide implications of public job creation: poverty and gender equality implications.” The Statistics South Africa TUS 2001 we employed for this investigation covered all nine of South Africa’s provinces. Within each province, four different settlement types were visited: formal urban, informal urban, commercial farms, and other rural settlements. In total, 8,564 households took part and data was collected for 14,553 respondents in three rounds (in February, June, and October) so as to capture potential seasonal variations in time use.

versus non-poor households, the unskilled versus the skilled, men versus women, and the unemployed versus the employed. The statistical analysis provided clear evidence that unpaid time contributions in general, and to care activities in particular, are higher and statistically significant for: (a) women; (b) the unemployed; and (c) those individuals living in poverty (Antonopoulos 2008).

The graphs below summarize gender disparities in the daily time allocated to social care by income level and employment status (figure 1).<sup>10</sup>

**Figure 1. Average Time Spent on Social Care by Income and Employment Status**



Source: Antonopoulos (forthcoming)

The correlations are clear: across income level and employment status, women disproportionately carry unpaid work burdens.<sup>11</sup> Job opportunities, poverty, and alleviating the social costs of HIV and AIDS in South Africa are inseparable issues and necessitate the inclusion of gender considerations in the formulation of policy responses. To summarize again, three issues are of key importance for this paper: first, levels of

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Combining the data with background schedule information, we reclassified unpaid work activities for twenty distinct household types, which allowed us to see beyond averages and to reveal the tremendous inequalities in unpaid work in different households.

<sup>10</sup> Full documentation is provided in our “Technical Social Accounting Matrix Report,” which contains sections dedicated to the time-use accounts and is available upon request from the authors.

<sup>11</sup> We must stress here that correlation does not establish the direction of causality by any means (Folbre 2006). Is it the case that women who must devote more time to unpaid work are therefore unable to work for pay? Or is it that when women are unemployed, they do more unpaid work to compensate for the gaps that income poverty creates? We cannot answer this question, but what has emerged in other research is that being poor, unskilled, and unemployed exacerbates the inequality of women in relation to other women and men. The time-tax from women in such households spending more of their time performing unpaid work reinforces these inequalities.

unpaid care work are higher among those who cannot buy services and goods in the market due to lack of income; second, the unpaid work “time-tax” (a concept we will elaborate on shortly) is more pronounced among poor households and the unemployed; and third, when unpaid care work needs to increase, it is more than likely that women and girls will absorb the new demands placed on households (Opiyo, Yamano, and Jayne 2008).<sup>12</sup>

### **A. Adding Unpaid HIV and AIDS Care Work to Women’s Care Burden**

The added task of providing unpaid care in the home for the chronically ill or those in need of protracted treatment is largely the product of the shortened hospital stays dictated by the structural adjustment policies many developing nations undertook in the late 1980s (Loewenson 1993). This informalization of treatment is not anecdotal. It is estimated that in the next seven years roughly two million more people of working age will become unable to work because of care duties, i.e., the indirect impact of care can increase the direct impact of the illness when the burden of care falls on the household and the family (ILO 2004). These indirect costs of care and the time spent on caring activities often go overlooked and undervalued, as they are associated with less formal perceptions of work. Moreover, the burden of caring for people living with HIV is often borne in addition to traditional domestic duties, creating a further “time-tax” of unpaid work for caregivers. The increased time associated with care is referred to as a “tax” because it provides a subsidy to the social sector. If one views health care as a responsibility of the government, this cost is being shifted to the household in the context of HIV/AIDS, effectively taxing the time that individuals would devote to other efforts.

This shift in responsibility from formal to informal care is most clearly seen in the increasing reliance on community home-based care for the ill. An important distinction must be made here: “care in the home” and “home-based care” involve drastically different treatment programs, yet too often “home-based care” is used as a catch-all term for both formal treatment programs and the ad hoc care in the home largely provided by

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<sup>12</sup> Opiyo, Yamano, and Jayne (2008) find that women assume the responsibility for care and that when adult women fall sick, it is their female children who care for the ill persons in the household, not their husbands or male children.

untrained women and girls. The distinction is visible in Africa where home-based care access is limited, while care in the home by family members is widespread (Ogden, Esim, and Grown 2006; Nsutebu et al. 2001). Community home-based care, as we use the term, involves coordinated systems of care carried out by trained care providers and operated through nongovernmental organizations (NGOs), formal health care outreach efforts, and/or government programs.

Within the home, care for people living with HIV is usually given by family members and/or by “volunteer” caregivers recruited from the community (Akintola 2004a and 2006). As discussed, this work creates an asymmetric “time-tax” borne largely by women—especially poor women—and children in developing countries, which limits other aspects of their social engagement (Taylor, Seeley, and Kajurac 1996; WHO 2002a). In some cases, it reduces the time spent on self-employment or market participation (Akintola 2004a and 2004b). In others, it limits involvement in political processes, skills upgrading, and attending school or medical appointments. It also reduces leisure and time available for self-care and sleep. This unpaid work can therefore lead to social exclusion, time poverty, and the depletion of human capabilities.<sup>13</sup> In addition, caregivers often experience isolation, social stigma, psychological distress, and lack basic education about both caregiving and HIV/AIDS (Nkosi et al. 2006; Lindsey et al. 2003; WHO 2002b). This situation is exacerbated by poverty (Mehta and Gupta 2005).

The need for informal home care for people living with HIV combines with other disadvantages to further destabilize households. Many households face the multiple burdens of high levels of unpaid work, unemployment, and poverty. When HIV and AIDS and their associated care costs are added to the equation, the situation of already-fragile households becomes even more precarious (Schatz and Ogunmefun 2007; Steinberg et al. 2002). This multiplicity of disadvantages is particularly evident in South Africa.

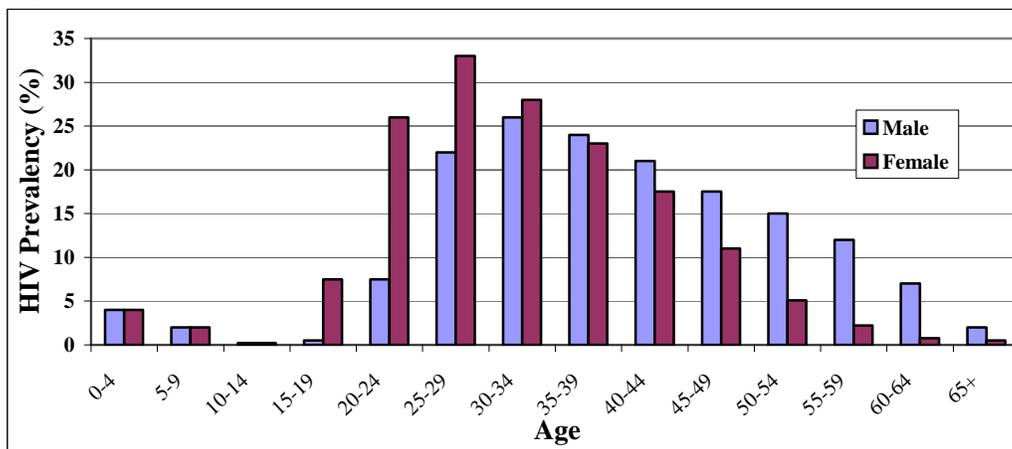
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<sup>13</sup> For documentation, see various reports at <http://www.levy.org/undp-levy-conference> (accessed October 12, 2008).

### III. SOUTH AFRICA AND THE EPWP

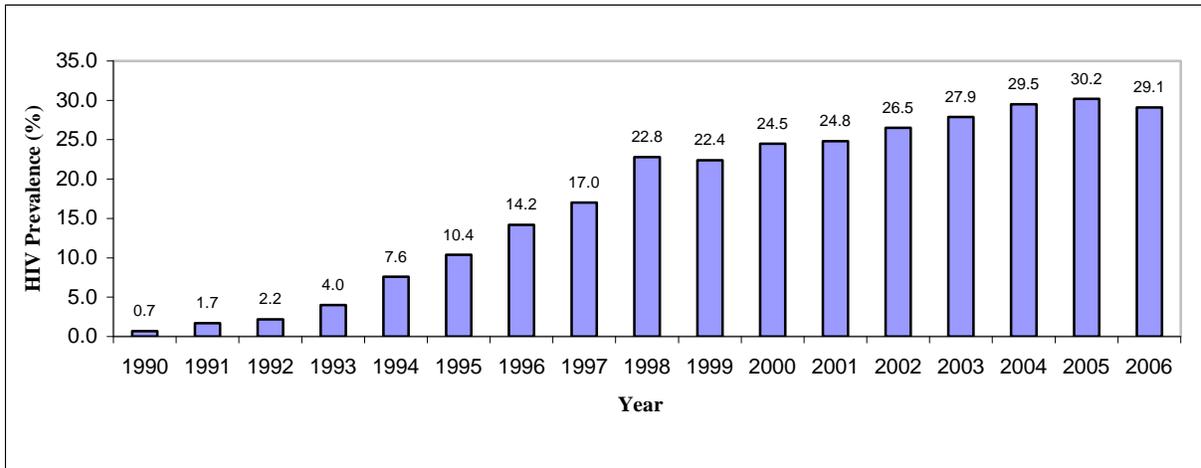
Although South Africa does not have the highest incidence of HIV globally—this unfortunate title is held by Swaziland—it does host the largest number of people living with HIV, estimated at 5.5 million (UNAIDS/WHO 2006). Prevalence rates among those of prime working age are staggering (figure 2). These high levels of infection sit largely atop the de facto system of home care. Thus, South Africa is shackled with the dual burden of rising national prevalence (figure 3) and a state health-care system under pressure, which increases home-care needs. This trend forces households and communities to shoulder the brunt of time and other costs associated with care, a burden that, as we have seen, is strongly gendered (Akintola 2008; Ogden, Esim, and Grown 2006; WHO 2002a).

**Figure 2. PLWHA in South Africa (mid-2006)**



Source: Dorrington et al. (2006)

**Figure 3. Rising Prevalence<sup>14</sup>**



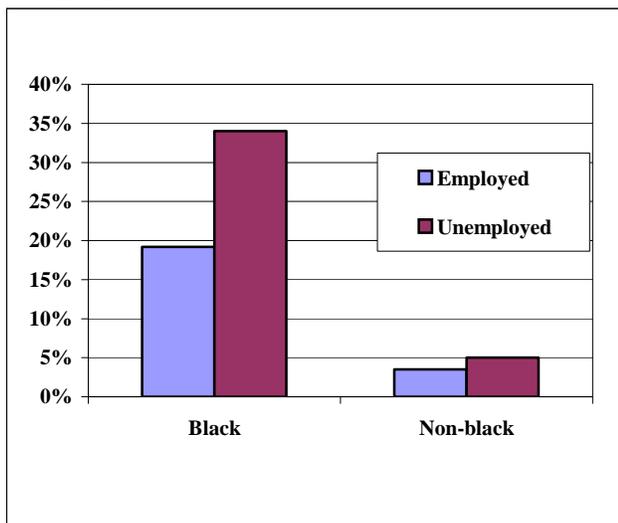
**Source:** Department of Health, South Africa (2007)

To make matters worse, South Africa's rampant unemployment and poverty rates still reflect the socioeconomic and demographic divides that characterized the apartheid era. These deep social fissures provide the context for the high incidence of HIV infection, which correlates with factors contributing to the incidence of poverty (figures 4 and 5). For example, shantytowns and isolated rural regions have the highest unemployment rates, the most poverty, and the highest HIV prevalence in South Africa (SSA 2002 and 2007; CADRE 2006).

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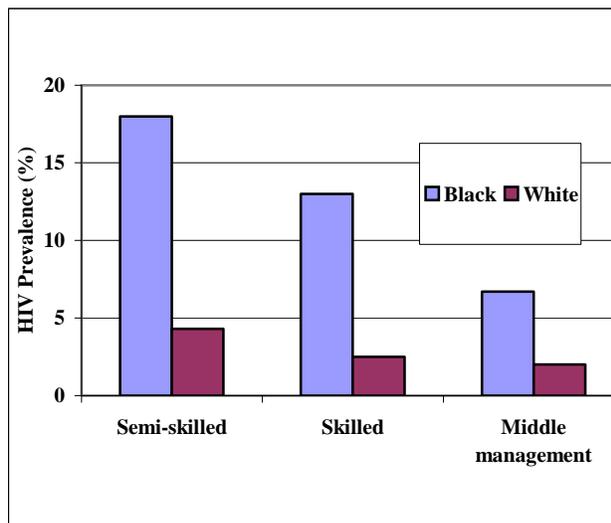
<sup>14</sup> It is widely acknowledged that the department of health figures overestimate the HIV prevalence for the total population. This is largely the result of relying on prevalence among women attending antenatal clinics as a proxy for the overall infection rates. Given the demographics of the virus disproportionately impacting young women, the proxy estimate itself is inflated. Despite this methodological caveat, the prevalence rates by any measure are staggering, especially among certain segments of the population.

**Figure 4. HIV Prevalence by Employment Status (2000)**



Source: Dorrington (2001)

**Figure 5. Prevalence by Job Category (2000)**



Source: Dorrington (2001)

To address these daunting inequities, the South African government created the Expanded Public Works Programme (EPWP). It is within this framework that we argue for an expansion of the EPWP community and home-based care (CHBC) program to help formalize the situation of the many unpaid workers performing care duties for people living with HIV.

In its current form, home care presents a host of problems, as primary carers and “volunteers” are often untrained, unfunded, and lack the necessary resources for adequate care provision. Apart from the individual strain this places on care providers and the opportunity costs of the time devoted to treatment, the lack of available resources and structured financial incentives encourages high turnover among “volunteers.” It is our suggestion that the government can create more jobs in CHBC through the EPWP, offering the training and logistical support to address many of the problems in both home care and existing CHBC programs.

The original EPWP/CHBC plan envisaged the full training of 19,616 practitioners with a minimum of ten CHBC workers per clinic, using the department of health’s norms and standards for care as a benchmark. This figure was to be increased based on geographic area and the socioeconomic status of the beneficiaries. A later audit showed that there was a need to develop 300 additional CHBC sites per year to cope with the

increasing incidence of HIV and other terminal illnesses. This was equated to a further 3,000 care workers to be trained per year (Friedman et al. 2007).

The targeted beneficiaries of the original EPWP/CHBC program were to be unpaid “volunteers” who were unemployed and often the adult dependants of terminally ill people and people living with HIV who were not beneficiaries of a state grant. The EPWP was therefore seen as a critical component of the effort to deliver holistic HIV/AIDS- and TB-related services. It represented a strategic opportunity to address key areas in interventions at that time and aimed to put in place the foundations for the roll-out of a community health worker (CHW) program by equipping thousands of unemployed people with the skills and experience to enter a CHW training program. The steps taken to date, however, have been insufficient to address the challenges.

The EPWP provides work opportunities that generate a monthly stipend and are accompanied by enrolment in “learnerships”<sup>15</sup> and other types of short courses that lead to accreditation. Skills development is therefore enhanced, as is the capacity to deliver quality services in areas with pressing need. The proposed EPWP/CHBC program will also provide accredited training, as well as an allowance and full-time work for existing volunteers. Beneficiaries of the CHBC program will be both current “volunteers” and the young men and women who will provide respite household maintenance services (including fetching water and fuel wood) for the households of terminally ill people and people living with HIV.

## **B. Community and Home-based Care (CHBC) and the EPWP: An Unfulfilled Need**

We propose that the EPWP/CHBC program be revised and expanded to improve its impact on the care burden of women and others. We suggest first a scaling-up in the order of an additional 110,000 jobs that would provide services to poor households in underserved areas by creating a cadre of community health workers, nutrition and food-

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<sup>15</sup> A “learnership” combines work-based experience with structured learning and results in a qualification that is registered within the National Qualifications Framework (NQF) by the South African Qualification Authority (SAQA). A person who completes a learnership will have a qualification that signals occupational competence and is recognized throughout the country. Each learnership consists of a specified number of credits and takes at least one year to complete. It may consist of a number of NQF-aligned short courses that make up the learnership curriculum. A learnership requires that a trainer, a coach, a mentor, and an assessor assist the learner.

security workers, directly observed therapy and voluntary counseling and testing practitioners, and TB and malaria officers. Those employed should not necessarily be the current care providers in the affected households; rather, they should be professionals who complete a graduated program in home-based care and training in the provision of physical and emotional support for people living with HIV and their families.

Although the wage structure in our proposal is similar to that of the current EPWP for the social sector, we have expanded the list of job types. Most importantly, it also extends the duration of enrolment for beneficiaries to two consecutive years per job, with employment for eleven months or 220–240 days per year. As mandated by the EPWP objectives, these proposed work opportunities should include dedicated time for workers/trainees to attend seminars and workshops that lead to certification or accreditation. It is proposed that 111,556 full-time EPWP jobs be created across the various job categories (including supervisory roles) at a projected annual cost of about 1.6 billion South African rand. This cost includes payments to EPWP workers, as well as all other necessary input costs, allowances for workers' transport expenses, and educational certification expenses. The job categories and number of jobs we propose, as well as the associated budgetary allocations we simulate, were developed through separate models for each job by a team of researchers under Dr. Irwin Friedman's directorship at the Health Systems Trust in Durban (Friedman et al. 2007).

Detailed knowledge of South African institutions and constituents was needed in order to estimate the number of jobs required. This knowledge was complemented by demographic data, community survey data, and health and educational data from a variety of South African survey documents. Several assumptions were extrapolated from this data, on the basis of which each model established the number of jobs required to extend service delivery and build local capacity. These results were then used as the raw data for the modeling simulations that will be discussed in the following section. Table 1 presents a summary of the estimates for all the job categories in the area of community and home-based care; these were derived from the individual models for each job.

**Table 1. Number and Types of Jobs for Community and Home-based Care; Estimated Number of Households Served and Total Cost of Service Delivery**

Number of community health workers employed	15,797
Number of community caregivers employed	19,746
Number of TB /DOTS supporters employed	23,695
Number of community-based counseling and treatment workers	51,012
Number of malaria workers	1,305
<b>Total number of community-based health workers (CHWs)</b>	<b>111,556</b>
Number of supervisory jobs created	1,856
Total number of households served by CHWs (education, nutrition)	3,949,233
Total number of vulnerable households receiving home nursing care	197,462
Total number of TB patients receiving DOTS support	236,954
Total number of HIV-positive people receiving counseling/ART support	510,124
Total number of households involved in malaria control	652,648
Percent of population targeted (vulnerable households)	50%
Estimate of average household size	6
Percent of households in target population needing a dedicated community caregiver for CHBC	10%
<b>Grand Total of All Costs (in rand)</b>	<b>1,616,018,754</b>

Although we propose specific jobs as outlined above, it should be stressed that this is only a suggested framework for illustrative purposes and is not intended to constrain the program. The flexibility of certain programs to provide a variety of services has been the key to successful community-based care elsewhere. While people in one area may greatly need counseling and bereavement support, others elsewhere may require help with gathering water or washing linens—or these needs may exist alongside one another. Only local knowledge can lead to informed decisions about the tasks to be performed by community health workers. Local staff must be given the freedom to change the roles and duties of caregivers. It should also be kept in mind that certain jobs are often gendered and/or stigmatized. While these are important issues to account for and discuss, they are beyond the scope of our proposal.

### **C. The Benefits of Scaling-up**

This proposed revised and expanded structure of training and job guarantees for CHBC workers addresses many of the shortcomings of the existing system. In a survey of community-based care, for example, Naidu (2005: 7) found that “more than 50 percent of CHBC programs in KwaZulu Natal [a South African province] did not have any full-time, paid staff members. Only 25 percent of such programs had 30 or more full-time, paid staff members.” Another important way to improve the quality of care in households is to provide better training and support for caregivers:

“Receiving preparatory information, continued training and support from the health workers might be important components influencing coping and provision of quality care among home-care providers.” (Mohammad and Gikonyo 2005: 4)

With guaranteed jobs in a broader EPWP for CHBC, impoverished workers could gain access to useful training and provide a much-needed service in areas with inadequate health infrastructure. Paid workers who used to be unpaid volunteers have the added advantages of local knowledge and a stake in the community and also require little to no transport. Furthermore, promoting CHBC through an employment guarantee program (EGP) would serve to remedy many of the problems facing existing volunteers by providing freedom from income constraints, reducing turnover, and counteracting social stigmas. It would also relieve the increased burden of care activities within the household, freeing women and girls for other care activities, while offering formal training that translates into employable skills. In remote areas, it would also help to reduce rural-to-urban migration, a trend that places migrants at greater risk of both HIV infection and poverty (CADRE 2006).

Previous EGPs have demonstrated the benefits of top-down financial and technical support when paired with upward linkages and local input by NGOs and community-based organizations. Other authors have also argued in favor of linking CHBC with public employment guarantee programs. Hunter (2005), in particular, also argues that the EPWP in South Africa can provide the resources and administrative logistics to extend CHBC to remote areas.

We should raise here the important caveat that we are not arguing that CHBC is the ideal method of addressing the HIV epidemic in South Africa. South Africa is faced with a pandemic that requires a multifaceted response. Addressing TB, orphan care, cultural practices, childcare, social stigma, and issues surrounding formal and informal health care are just a few of the many crucial aspects of a holistic response to the crisis. Furthermore, many people remain undiagnosed and outside the scope of prevention, treatment, and support efforts (WHO 2008). However, community home-based care is the most viable option available for many people living with HIV due to the inaccessibility and high cost of hospital care (Mohammad and Gikonyo 2005). The shift toward home-based care has been so pronounced in some areas that it is most sensible to devote efforts to improving this type of care—even if it is not ideal.

Nor are we arguing that the EPWP in its current form is either a panacea or unproblematic. There has been criticism that the EPWP is an initiative that functions more to address cyclical poverty than the chronic indigence that plagues South Africa (McCord 2005). Higher wages, prolonged periods of employment, and additional institutional supports have been proposed as necessary amendments to the EPWP if a sustainable reduction in poverty among participating households is to be achieved (McCord and van Seventer 2004). At the same time, however, the EPWP does have the potential to address even its own shortcomings through relatively minor adjustments. Moreover, the program has already been politically sanctioned, creating the space to scale-up current efforts. In the next section we model a theoretical version of a gender-informed public employment program, enlarged to meet the needs of South Africa. First, however, we highlight the gender implications of the proposed program.

#### **D. Gender Dimensions of the EPWP for the Social Sector**

As discussed earlier, time-use data indicate that women shoulder the majority of the burden of taking care of the ill. Although we do not have sufficiently disaggregated time-use information regarding HIV and AIDS, studies have shown that this pattern is repeated for TB, malaria, and other chronic illnesses (WHO 2002a). Women's care burden is particularly disproportionate in ultra-poor and poor households in the former homelands

and informal settlements in urban centers. For these women, CHBC is extremely important, especially in the context of the high HIV prevalence.

An expanded CHBC program would therefore benefit women in a variety of ways. First, it would alleviate some of women's unpaid care work, as EPWP/CHBC workers would provide services (while in training) for their own communities. Second, it would benefit ultra-poor women with minimal educational attainment by providing them with jobs that do not require much immediate training, as well as with adult education classes provided by those EPWP workers who are among the more educated members of the community. Increasing educational attainment has a strong impact on the wages of African women, as staying in school until the GET (grade ten equivalent) doubles their monthly incomes and closes the female-male gap by 12 percent (Antonopoulos 2008). A well-designed EPWP can benefit low-skilled women of working age—but in order to achieve this outcome, the program must be sustained for two years in order to allow enough time for advancement. Providing women with training, certification, work experience, and income can be instrumental for their participation in the mainstream economy. Third, an expanded CHBC program could mean that women will find formal jobs in the highly feminized sectors of health and education without facing too many barriers to entry once they have received certification. The feminized nature of these sectors may also mean that women are more likely than men to recognize and take advantage of the opportunity presented by EPWP employment. Previous experience in this area suggests that public employment programs follow strongly gendered lines, depending on the tasks associated with the jobs. We provide an estimate below of the percentage of positions to be filled by women, but intend neither to sanction nor challenge the gendered nature of care work. Social norms and gender roles are not discussed here due to space constraints and the policy focus of this paper. Furthermore, while it is vital to address these issues, the EPWP is not an appropriate avenue through which to tackle issues embedded within cultural norms. Instead, the program offers incentives and training that may help to narrow inequalities (related to income, race, gender, and so on) in South African society.

#### IV. MACRO MODELING

Current modeling exercises offer insight into the macroeconomic impact of HIV and AIDS by measuring the loss of national output, taxes, investment, and so on as a consequence of deaths caused by AIDS<sup>16</sup> (Ojha and Pradhan 2006; Bell, Devarajan, and Gersbach 2003; Bollinger, Stover, and Seyoum 1999). As they focus on the marketized part of the economy, they highlight three consequences in particular: (i) the fall in output and productivity caused by human capital loss and higher hiring and training costs due to AIDS deaths and/or the increased absenteeism of workers living with AIDS; (ii) the lower efficiency of HIV-positive workers; and (iii) shifts in household and government spending towards health care. An additional virtue of some models is that they reveal details of the sectoral impacts of the epidemic (Ojha and Pradhan 2006: xvi).

We divert from this general trend to provide insights into the potential macroeconomic impacts of turning unpaid, unrecognized, and “volunteer”<sup>17</sup> work into paid work. The lack of attention to unpaid caregivers in mainstream economic analysis and public discourse has also rendered them invisible in macroeconomic inquiry into and analysis of HIV and AIDS, as measurements revolve around the formal sectors of the economy. By contrast, we aim to trace the changes that will result if the EPWP for the social sector is scaled-up in terms of CHBC. In other words, we investigate the impacts on the economy should the South African government decide to hire workers, exclusively from poor households, to deliver care to households in need while in training.

When the government hires new workers under the EPWP, this spending represents an injection of capital into the economy in the form of wages and payments for other costs of the program (transportation, trainers, food production, and so on). The

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<sup>16</sup> The underlying feature of many of these models is that they rely on formal household and expenditure data, often treating HIV and AIDS as a negative externality or “shock” for worker productivity due to absenteeism and death. The absence of productive workers creates a drain on production that is often discussed in terms of the skill-intensity of certain sectors and/or overall GDP shortfalls against a “no AIDS” baseline forecast (Barnett and Whiteside 2006). The “cost” of HIV and AIDS is presented by such models primarily as lost streams of future income and output resulting from the effects of HIV and AIDS in terms of illness and death.

<sup>17</sup> To refer to many of these unpaid laborers as “volunteers” is euphemistic in the sense that many of the workers would readily move to paid positions if the opportunity was present. Volunteering then is really just a forced alternative to idleness in areas with endemic poverty and high rates of unemployment.

expenditure of these wages will create increased demand for output from other economic sectors. Increased expenditure and income will be generated throughout the economy, in a process commonly referred to as the multiplier effect. This is the result of a new stimulus or increased demand in the economy, which will respond quite predictably by producing more output.

In other words, in addition to expanding much-needed services, such an intervention will bring about positive changes in employment, growth, and poverty reduction for participating households. As we will see, it will also result in higher overall tax receipts, which will serve to partially offset the cost of the program. Even more importantly, from our perspective, such an intervention will lead to: (a) the reduction of unpaid work burdens for those who currently perform such work; (b) an earned income for those who will be replacing them, accompanied by training and certification; (c) skill creation and accreditation for those who participate in the program—who may or may not be the same people who currently provide unpaid care work; and (d) recognition within the world of paid work of hitherto undervalued care work.

To implement this policy, new government spending of 1.6 billion South African rand is required. The immediate impacts of this spending include the creation of jobs and income, as well as increased delivery of CHBC services. Three more changes are expected to take place as a result of the intervention. First, in addition to the employment directly created by the program, more workers will be hired elsewhere in the economy to fulfill the increased demand for output. Second, as general income levels increase it is possible that some forms of fiscal contributions will end up increasing government revenues, which will partially offset the initial budgetary impact of this new initiative. Finally, as most of the workers will come from poor households, there may be important consequences for poverty reduction, at least in those households whose members become EPWP/CHBC workers.

We summarize below the economy-wide implications of our suggested intervention, at a cost of 1.6 billion South African rand.

- *This capital injection will create new full-time, year-round EPWP jobs in the social sector. Roughly 107,000 (96 percent) of the 111,556 jobs will be allocated*

to unskilled members of poor households and the remaining to skilled supervisory workers.

- *In addition to direct job creation, about 37,000 more jobs will be created indirectly elsewhere in the economy.* We have estimated that for every three jobs the EPWP creates in CHBC, another job will be created somewhere else in the economy.
- *It is expected that almost 60 percent of these jobs will be undertaken by women.* The intervention will generate 62,471 (55.99 percent of the total jobs created directly by the program) new positions for unskilled women at monthly wages of 500 South African rand for most workers and 1,000 South African rand for those in jobs with higher skill requirements. It is expected that women will undertake an additional 3,252 skilled jobs (2.9 percent of the total jobs created directly by the program).
- *The 1.6 billion South African rand corresponds to a meager 0.6 percent of government expenditure at 2000 prices or 0.2 percent of GDP.* The budget we propose covers all labor payments, as well as all other costs associated with service delivery and human capital development, supervisors' fees, training and certification expenses, etc.
- *The total impact on GDP growth is in the order of 1.8 percent or 2.7 billion South African rand, with an implied multiplier equal to 1.7 (2.7B ÷ 1.6B).*
- *The resultant growth is pro-poor.* The overall incremental change of income will be 9.2 percent for ultra-poor households, 5.6 percent for poor households, and 1.3 percent for nonpoor households.
- *All ultra-poor households participating in the EPWP will move above the ultra-poor poverty line and poverty will be reduced by 60–80 percent. Poor households*

*previously located above or around the ultra-poverty line will be lifted above the poverty line.* Our results indicate a need for the careful consideration of targeting. It may be the case that job rationing is required to favor the selection of ultra-poor households.

- *New direct and indirect taxes will be generated equal to about 500 million South African rand, which will reduce the overall cost of the intervention by one-third (assuming there are no unanticipated leakages).*

### **A. Beyond the Multiplier Analysis**

We have considered the economy-wide impacts of the proposed intervention and examined its poverty dimensions. The types of jobs we have recommended are in social care and they will therefore alleviate women's unpaid work burdens, especially for those poor and ultra-poor women who, as we have seen, contribute disproportionately to the provision of social and health care for their families and communities. Beyond the multiplier analysis, however, other aspects of the proposed program are expected to yield benefits for all participants, and women in particular.

- *Accreditation.* The work opportunities we have proposed include on-the-job training and dedicated time for attending seminars and workshops that lead to accreditation. Increased levels of certification and acquisition of human capital may lead to better job prospects in the formal markets and within the government sector at the provincial or municipal level.
- *Service delivery.* The most vulnerable households with members living with HIV will receive home-based care, counseling, and better nutrition.
- *Generation of self-employment.* The potential asset accumulation resulting from EPWP employment, in combination with other government interventions that support and promote community-based development, may lead to the creation of

new small businesses. It will be extremely important for community revitalization that earned income is spent on purchases from local shops and neighbors.

- *Participants will experience increased dignity within their communities, as well as a sense of fulfillment and self-worth.* Ours is a hypothetical policy scenario, which limits our ability to conduct a study of this aspect of the proposed intervention. However, other EPWP-related project evaluations, even those conducted by critics of this initiative, have shown that participants report a strong and positive association with the reduction of non-income poverty.

## V. CONCLUSION

The proposed EPWP intervention will affect the labor market income of different types of households through an increase in wages from both direct and indirect employment. In terms of the direct impact, our proposal will primarily result in income growth for poor and ultra-poor households.<sup>18</sup> In many ways, the efforts and resources currently devoted to this sector are not adequate enough to combat South Africa’s unemployment and poverty. In addition, poverty is multifaceted and people living in poverty face a variety of deprivations. Income alone can bring individuals above the poverty line, but multiple deprivations require multiple interventions. Above all, it is our view that community revitalization and empowerment through local planning that promotes regional- and municipal-level development is what is truly needed. We have presented viable improvements to the existing de facto system of care for people living with HIV in South Africa, improvements that are achievable in the short term and have positive economic consequences—not to mention tolerable costs. Furthermore, under our proposed program, skill mismatch will no longer serve as a political scapegoat—the skills are there if the political will is there to create a new public sector to facilitate them.

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<sup>18</sup> Although what we propose is not a “targeted” program, the anticipated self-selection due to the low wages would replicate the effects of targeting. There is a strong assumption here that the reservation wage is pretty much the same across both poor and ultra-poor households, which implies the same supply of labor response to wage movements across the board. Future uses of our model and methodological approach for policy simulations may be able to further refine this assumption.

While one size never fits all in terms of policy proposals, our recommendations are specific to the historical context and current situation in South Africa. Similar efforts to link community needs with government employment guarantee programs elsewhere should place local knowledge at the forefront of policy design. At the same time, our research relies on the widely applicable concept that unpaid work is often ignored and undervalued in economic analysis. If “invisible” workers are not brought into the policy discussion, researchers and policymakers alike run the risk of further marginalizing them through inattention and/or ignorance. In addition, without interventions designed with the gender asymmetries of unpaid work in mind, a huge part of the equation for addressing the social and economic toll of HIV and AIDS is missing.

While CHBC is not a solution to the South African HIV epidemic in and of itself, it does present one of the best opportunities for increasing the quality of care for people living with HIV. CHBC must become one part of a cohesive and far-reaching effort that brings together the government, international donors, NGOs, faith-based organizations, and others that have an interest in addressing the pandemic that threatens to derail an entire continent. The problems arising out of the intersections between unemployment, HIV/AIDS, and socioeconomic inequalities in South Africa are already evident in the crime rates, racial tension, and surges in violence against immigrants. We present a small, but feasible, part of the equation for South Africa in the hope of generating discussion and action on an issue of unprecedented urgency.

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