The African Development Bank, Organized Hypocrisy, and Maternal Mortality

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ABSTRACT We draw on the theory of organized hypocrisy and examine how different forms of lending by the African Development Bank affect maternal mortality in Sub-Saharan Africa. We do so by using a two-way fixed effects model for a sample of 33 Sub-Saharan African nations from 1990 to 2010. We find that the bank’s structural adjustment lending in the health sector is associated with increased maternal mortality, and its reproductive health investment lending is associated with decreased maternal mortality, consistent with the organized hypocrisy approach. These findings remain stable and consistent even when controlling for World Bank lending and other relevant control variables. We conclude by discussing the implications of these findings for global health and development.

KEYWORDS maternal mortality, cross-national, African Development Bank
This line of research serves as the starting point for our study. However, we extend the research frontier in a novel way. We apply the theory of organized hypocrisy to the African Development Bank (AfDB), the regional lender, and carry out the first empirical evaluation of how its lending affects maternal mortality. The lack of research on the AfDB is surprising because it plays an important role in the region. The AfDB was established in 1963 by 35 African nations and provides Sub-Saharan African nations with structural adjustment loans designed to help nations resolve balance-of-payment issues by requiring the borrowing government to implement macroeconomic policy reforms. These are quite similar to the World Bank’s offerings, which, require cuts to public health spending, user fees, privatization, and trade liberalization (Babb 2009). The AfDB’s investment lending funds reproductive health projects such as maternity-ward construction, obstetrics training, family planning campaigns, and drug and equipment purchases, which may decrease maternal mortality (AfDB 2006).

In Table 1, we report trends in maternal mortality from 1995 to 2010 along with AfDB structural adjustment and reproductive health investment lending from 1990 to 2005. Maternal mortality declined during the period, from a high of 696 women dying during childbirth per 100,000 live births in 1995 to a low of 467 in 2010. AfDB structural adjustment lending peaked in 1990, which is not surprising as Sub-Saharan African nations were emerging from the debt crisis—see below. AfDB reproductive health lending peaked in 1995. AfDB structural adjustment lending outpaced its reproductive investment lending in this period.

Do AfDB lending instruments have contradictory impacts on maternal mortality? We seek to address this important question in the cross-national literature. We begin with a discussion of the theory of organized hypocrisy, which describes why organizations put contradictory policies in place. We then apply it to the AfDB. To empirically assess our hypotheses, we describe the data and variables we use in our analysis, provide an account of our methodology, and review the findings. We conclude this article by summarizing the findings and highlighting their theoretical and methodological implications, and then offering policy recommendations and potential directions for future research.
THE THEORY OF ORGANIZED HYPOCRISY

The theory of organized hypocrisy, which can be traced to Brunsson (1989), has been used by organizational sociologists to explain why institutions pursue contradictory agendas or display a gap between their “talk” and their “actions.” While Brunsson (1989) was the first to theorize the concept, Brunsson and Olsen (1993) went on to apply the theory to organizational reform. The theory draws on the literatures of institutionalism and resource dependency. Any organization depends on its external environment for financial support and legitimacy (Weaver 2008). However, external constraints in the institutional environment that do not align with the organization’s internal goals can create conflicting demands on the organization (Brunsson 1989). Organizations must be responsive to external demands to survive, while satisfying internal institutional mandates—and these two factors come together to bring about change.

Another source of conflict may emerge for an organization when external pressures exerted on it are constituted by “inconsistent expectations” (Weaver 2008). Weaver (2008:127) writes, “If the nature of the dependency is such that organizations must placate multiple masters to attain needed material resources and conferred legitimacy, neither acquiescence nor defiance is a viable option.” Rather, as Oliver (1991:134) contends, the most likely response involves an organization implementing “rules, guidelines, and procedures” that allow it to incorporate the inconsistent expectations into its operations and thereby “exhibit conformity with external demands.” This “hypocrisy” takes the form of incorporating contradictory mandates into its organizational structure, or what has been described as “paradigm maintenance” (Wade 1998).

Research on organized hypocrisy tends to focus on corporations and governments—see Brunsson and Olsen (1993), Oliver (1991), or Barnett and Coleman (2005). Weaver (2008) demonstrates how organized hypocrisy plays out at the World Bank. The author argues that organized hypocrisy theory is ideal to apply to the World Bank because the bank must act in a way “that reflects not only the interests of those that provide critical material resources but also prevailing international ideals and norms in the broader global development regime” (30).

Weaver describes how external pressure is exerted on the World Bank from private capital markets and the U.S. Treasury, which provide it funding. Thus, it pursues a “finance ministry agenda” by providing nations with structural adjustment and other development policy loans, which favor export-led growth, privatization, and trade liberalization (Wade 2002). These policies open a borrowing nation’s economy to investment by companies from wealthy donor countries. In return, the World Bank receives money during periods of capital replenishment from the U.S. Treasury and maintains a high bond rating from creditors (Weaver 2008).

The World Bank is also pressured to be deferential to issues raised by U.N. agencies, NGOs, and lawmakers of donor governments, who appropriate funding and are concerned with social issues (Weaver 2008). These actors push the World Bank to adopt a “civil society agenda” that takes the form of investment lending for projects in sectors including health, education, environment, and gender (Weaver 2008). The World Bank integrates project lending of this sort to ensure that funding is allocated by legislators and to maintain legitimacy on the international stage (Wade 2002).

The World Bank provides borrowing nations with structural adjustment and investment loans that can affect a country in different ways. Weaver (2008:32) writes, “The World Bank,
faced with the necessity of appearing responsive to both sets of demands, reacts by embracing both sets of agendas in its broad policy paradigm, leaving the inconsistencies and contradictions to be worked out in its daily operations.” As noted, Coburn et al. (2016) find that World Bank structural adjustment is related to more maternal mortality, while its investment lending is related to less maternal mortality. That study serves as the starting point for us, but we extend the analysis by examining the theory’s applicability to the AfDB. We now turn to a discussion of the AfDB’s structural adjustment loans and their potential impacts on maternal mortality, followed by a discussion of its investment lending for reproductive health.

THE AFRICAN DEVELOPMENT BANK’S FINANCE MINISTRY AGENDA AND WOMEN’S REPRODUCTIVE HEALTH

The debt crisis created a situation in which many Sub-Saharan African governments could not generate enough revenue to make payments on debt obligations and keep essential imports flowing across their borders (Peet 2003). The AfDB responded by providing governments with new loans to enable nations to keep importing essential goods and services (Mingst 2015). However, the new loans, known as structural adjustment, were designed to resolve a country’s balance-of-payment issues by increasing a government’s revenue while decreasing its spending. While this “earn more and spend less” model may help a government’s solvency, it can also impact the health of a country’s population. The links between AFDB structural adjustment lending in the health sector and maternal mortality are complex, but we review three common reasons why a relationship may exist.

First, AfDB structural adjustment loans require deep cuts in government spending to correct for budgetary imbalances (Rich 1994). The nature of these cuts varies from nation to nation, but a common theme has been smaller budgets and smaller staffs for health facilities, often leading to their closing (Bryant and Bailey 1997). The locations that remain open are understaffed and operate without essential drugs and supplies (Ismi 2004). To compensate for the lost revenue, governments may implement user fees, which creates a tiered system in which the poor are denied access to health services because they cannot afford the fees (Ismi 2004). Thus, many women forgo prenatal visits and thus contract diseases (e.g., malaria, cholera, HIV) that lead to complications during pregnancy (Ismi 2004).

Second, the AfDB often recommends that nations privatize government property and services (Bryant and Bailey 1997). The sale of assets generates cash for governments to pay off their debt. However, it reduces the ability of a country to generate revenues, impeding investments in health (Rich 1994). Further, when government services (e.g., health, education, water, sanitation, electricity) become privatized, the private companies often implement user fees that generate a profit, which, as noted above, adversely impacts pregnant women (Grusky 2001).

Third, structural adjustment requires governments to trim the public-sector labor force (Marphatia 2010). This occurs when the AfDB sets limits or ceilings on a government’s wage bill or the budget line associated with hiring public employees (Marphatia 2010). Governments are then not able to hire enough trained health professionals, especially doctors, nurses, and midwives with obstetrics training (International Labour Organization, 2007).
Buckley and Baker (2009) estimate that the proportion of births attended by a skilled health attendant in Uganda declined from fifty-two percent to thirty-eight percent following AfDB structural adjustment loans.

This discussion leads us to our first hypothesis, taken from the theory of organized hypocrisy. We expect that higher levels of AfDB structural adjustment, which is representative of a finance ministry agenda, are related to increased maternal mortality. We now turn to a discussion of the AfDB’s reproductive health investment lending and its potential effects.

PRESSURING THE AFRICAN DEVELOPMENT BANK TO REFORM

In 1987, Cornia, Jolly, and Stewart of UNICEF published *Adjustment with a Human Face*, which detailed how structural adjustment policies had “severely hampered the maintenance and expansion of health, education, safe water, sanitation, and housing” (6). The initial response by development banks included ignoring the report and attributing the health issues to corruption rather than structural adjustment (Jolly 1991). However, UNICEF was undeterred by this response and kept pressing the issue in several different ways.

First, Richard Jolly, the deputy executive director of UNICEF, delivered the Barbara Warm Memorial Lecture of the World Conference of the Society for International Development to an audience of several hundred members, including senior leadership at the AfDB (Jolly 1991). Second, NGOs worked with UNICEF to publish reports that highlighted other ways that structural adjustment was affecting people beyond Sub-Saharan Africa (Jolly 1991). Third, the NGOs arranged for leaders from Sub-Saharan Africa to meet with members of the U.S. Senate to convince the lawmakers to withhold funding from multilateral development banks. President Julius Nyerere of Tanzania appealed to U.S. lawmakers on the floor of the United Nations, asking “Must we starve our children to pay our debts?” and “If it was your children suffering second or third degree malnutrition, would you accept that the present form of adjustment was adequate?” (Jolly 1991:1818). This pressure led the AfDB to implement reforms.

THE AFRICAN DEVELOPMENT BANK’S CIVIL SOCIETY AGENDA AND WOMEN’S REPRODUCTIVE HEALTH

One such reform involved the AfDB formulating its first health-sector policy brief, in 1987. It included efforts to improve reproductive health among women to offset some of the harmful impacts of structural adjustment (AfDB 2006). Other priorities included improving access to reproductive health services, training medical professionals, procuring essential drugs, and constructing new health facilities (AfDB 2006). These goals were accomplished by offering investment loans (English and Mule 1996). Initially, less than five percent of the AfDB’s lending financed health projects, with an even smaller amount going to reproductive health and family planning (English and Mule 1996). The projects that were financed tended to support the construction or rehabilitation of maternity wards, along with the training of doctors and nurses (AfDB 1988). There was also a focus on improving hospital administration (AfDB 2006).
By 1995, the AfDB was revising its health policy to reflect the needs of member countries (AfDB 2006). Most of its lending financed vertically managed efforts (i.e., hospitals), which left the reproductive health needs unmet. The AfDB’s new guidelines, approved in 1996, addressed these problems by emphasizing access to reproductive health care, especially in rural settings. This included ramping up immunization campaigns, setting up clinics, improving access to contraception, and increasing prenatal and postnatal care for mothers. The AfDB also wanted more stakeholder participation in the preparation and implementation of the projects (AfDB 2000).

For example, Malawi received USD 20 million to improve access to health services in rural areas (AidData 2016). This involved setting up clinics that provided reproductive health services to women, along with supporting routine primary services for children. In Guinea, the AfDB invested USD 4.4 million in a similar project, which sought women’s help in planning, design, and implementation (AidData 2016). The emphasis was on improving nutrition, access to safe drinking water, and basic sanitation facilities, along with contraception (AfDB 2006).

These projects indicate the AfDB’s recognition that its health lending must go beyond infrastructure. The projects must increase the delivery of reproductive health and family planning services in rural areas while paying more attention to underlying causes of health issues (e.g., clean water and malnutrition) and fertility (e.g., female school enrollment) (AfDB 2006). During this period, the AfDB committed more resources to projects to limit the spread of HIV (AfDB 2010). It supported projects to improve access to anti-retroviral drugs, especially for pregnant women, provide rapid testing to diagnose the disease, make contraception widely available, and establish safer blood transfusion systems (AfDB 2001).

At the same time, many projects integrated gender into the planning, implementation, and evaluation because women are directly affected by maternal mortality. The AfDB contends that any attempt to improve women’s health must deal with the ways they are harmed by social customs and cultural traditions (Shen and Williamson 1999). In nations where gender inequality is pervasive, women marry at a young age, start childbearing too early, do not adequately space out births, and end childbearing too late—all of which are factors related to maternal mortality (Royston and Armstrong 1989). The AfDB seeks to delay the age at first marriage and childbirth by investing in “cross-sectoral” projects that not only support access to reproductive health services but also improve female school enrollment or economic opportunities outside of the household (AfDB 2001).

For instance, Madagascar and Mali received loans from the AfDB to establish safe blood transfusion systems, along with distributing condoms, to prevent the spread of HIV. There was also an educational campaign targeting girls that highlighted how to avoid contracting the disease (AfDB 2005). In Cameroon, a USD 5.2 million loan supported women’s access to not only contraception but also land, loans, and property to provide a livelihood other than prostitution (AidData 2016).

From this overview and the theory of organized hypocrisy, we hypothesize that AfDB reproductive health investment lending, representative of a civil society agenda, is related to less maternal mortality. We now turn to a discussion of the statistical model.
METHOD

We estimate a two-way fixed effects regression model with robust standard errors clustered by country to examine the effect of AfDB reproductive health investment lending on maternal mortality in 35 Sub-Saharan African nations. We carry out the analysis using the xtreg command in Stata (version 13), which employs a conditional fixed effects estimator. The general notation for the two-way fixed effects model is

\[ y_{it} = a + B_1 x_{i1} + B_2 x_{i2} + \ldots + B_k x_{itk} + u_i + w_t + e_{it} \]

where
- \( i \) = each country in the analysis,
- \( t \) = each time period in the analysis,
- \( y_{it} \) = dependent variable for country \( i \) at time \( t \),
- \( a \) = constant,
- \( B_1 \) to \( B_k \) = coefficients for each independent variable,
- \( x_{itk} \) = independent variables for country \( i \) at time \( t \),
- \( u_i \) = country-specific disturbance terms that are constant over time,
- \( w_t \) = period-specific disturbance terms that are constant across all countries, and
- \( e_{it} \) = disturbance terms specific to country \( i \) at time \( t \).

This is a commonly used model to deal with heterogeneity bias (Halaby 2004). Heterogeneity bias is the impact of unmeasured time-invariant factors that are omitted from the model. From the preceding equation, a two-way fixed effects model controls for omitted variables that are time-invariant but do not vary across cases by estimating unit-specific (\( u_i \)) and period-specific (\( w_t \)) intercepts for each case (Jorgenson, Dick, and Mahutga 2007). The unit-specific intercepts control for potential unobserved heterogeneity that is temporally invariant within countries, while the period-specific intercepts control for potential heterogeneity that is cross-sectionally invariant within periods.

This approach is appropriate for cross-national research because unit-specific unmeasured factors (e.g., climate, geography) and period-specific unmeasured factors (e.g., economic shocks) may affect maternal mortality (Hsiao 2003). A two-way fixed effects approach provides a stringent assessment of the relationship between AfDB lending and maternal mortality because the associations between these variables are estimated net of unmeasured but constant unit-specific and period-specific effects (Brady, Kaya, and Beckfield 2007).

The data for all independent variables are from 1990, 1995, 2000, and 2005. We use maternal mortality from five years later. We build this temporal lag into our models because it takes time for the AfDB to disburse funds and complete projects. It also allows us to avoid reverse causality in the interpretation of our results. We also verify that univariate and multivariate outliers do not affect the results by examining residuals. Finally, we perform post-regression diagnostics of residual variance. As is common in models that use a differencing technique, residual variance was not homoskedastic, hence our choice to use robust standard errors clustered by country.

We now turn to a description of the variables used in the analysis. We provide summary statistics and a bivariate correlation matrix for the variables used in the analysis in Table 2.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
<th>Correlation (1)</th>
<th>(2)</th>
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<tr>
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<td>AfDB Health Structural Adjustment Loan</td>
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<td>AfDB Reproductive Health Loan</td>
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<td>2.974</td>
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<td>World Bank Health Structural Adjustment Loan</td>
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<td>8.469</td>
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<td>Debt Service</td>
<td>2.209</td>
<td>1.056</td>
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<td>Gross Domestic Product per capita</td>
<td>5.853</td>
<td>.793</td>
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<td>Female Secondary School Enrollments</td>
<td>3.661</td>
<td>2.130</td>
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<td>Democracy</td>
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<td>Conflict Presence (1 = Yes)</td>
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<td>.347</td>
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<td>Public Health Expenditures</td>
<td>18.675</td>
<td>29.710</td>
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<tr>
<td>Health International Non-Governmental Organizations</td>
<td>11.790</td>
<td>9.385</td>
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<td>Undernourishment Prevalence</td>
<td>28.871</td>
<td>14.597</td>
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<tr>
<td>Female HIV Prevalence</td>
<td>3.038</td>
<td>3.873</td>
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DEPENDENT VARIABLE: MATERNAL MORTALITY RATIO
The dependent variable is the maternal mortality ratio for a Sub-Saharan African nation: the annual number of deaths from pregnancy-related causes per 100,000 live births. A maternal death is defined as the death of a woman while pregnant or within 42 days of the termination of a pregnancy from any cause related to or aggravated by pregnancy (World Health Organization 2012). We take the square root of the variable to correct for its skewed distribution. We obtained the maternal mortality data online from the U.N.’s (2016) Millennium Development Goals portal.

INDEPENDENT VARIABLES
African Development Bank Health Structural Adjustment Loans
We use the amount of AfDB structural adjustment loans to the health sector in a country (per capita). The data on AfDB structural adjustment are from AidData’s (2016) online database (sector code 510 for general budget support). We code these loans from the detailed project descriptions, titles generated from this list, and the sub-sector codes. Per the theory of organized hypocrisy, we hypothesize that higher levels of AfDB structural adjustment in the health sector increase maternal mortality.

African Development Bank Reproductive Health Investment Loans
The other independent variable of interest is AfDB reproductive health investment lending per capita. These data are also from AidData’s (2016) database. We use AidData’s classification of projects in the sector for population policies/programs and reproductive health (code 130). Per the theory of organized hypocrisy, we hypothesize that AfDB reproductive health investment lending is related to less maternal mortality.

World Bank Health Structural Adjustment Loans
We want to model the impact of AfDB lending independent of other lenders, because research has found varied effects of World Bank loans on health spending and health outcomes. The World Bank is also the largest investor providing Sub-Saharan African nations with structural adjustment and investment loans. Therefore, we begin by including the amount of money allocated by the World Bank to support a structural adjustment loan in the health sector. We divide the loan amount by a country’s population to standardize the measure across nations. The population data are from the World Bank’s (2005) World Development Indicators database. The lending data are from the World Bank’s Projects and Operations database online.

World Bank Reproductive Health Investment Loans
Like the AfDB, the World Bank also provides nations with investment loans in the reproductive health sector. We also control for the amount of money allocated to a Sub-Saharan African nation by the World Bank as part of such loans. We again divide this amount by a country’s population in a specific year to standardize the measure. The lending data are from the World Bank’s Project and Operations database online.
Debt Service Ratio

In addition to the pressure to adopt macroeconomic policy reforms under structural adjustment, nations must service their foreign debt. Thus, we include the repayment of all long-term multilateral debt, measured as a percentage of exports of goods and services. The data are from the World Bank (2005). This variable is logged to correct its skewed distribution. We hypothesize that higher levels of debt service are associated with increased maternal mortality because it removes resources available for governmental investment in health, family planning, and reproductive services.

Gross Domestic Product

We employ a measure of GDP per capita at purchasing power parity. We log this variable because it is skewed. We obtain the data from the World Bank (2005). We expect that a higher GDP per capita corresponds to less maternal mortality. This relationship is expected because more wealth tends to bring higher standards of living, advanced medical technology, and demographic changes that lower maternal mortality (Shen and Williamson 1999; Buor and Bream 2004).

Female Secondary School Enrollment

We use female enrollment in secondary school per capita to control for the impact of education on maternal mortality. These data are from the World Bank (2005). We log this variable because it is skewed. We expect that higher levels of female education correspond to less maternal mortality because it promotes economic growth and improved living standards, along with wider use of contraception, prenatal care, longer birth spacing, and reduced prevalence of child marriage. These are all factors related to lower maternal mortality (Filmer and Pritchett 1999).

Democracy

We use the Polity IV (2010) measure of democracy to control for the level of democracy in each nation (Marshall, Jaggers, and Gurr 2010). This index ranges from −10 (autocracy) to 10 (democracy). We hypothesize that higher levels of democracy correspond to lower maternal mortality because democratic nations respond to popular demands for health services through political activism and electoral accountability (Wickrama and Mulford 1996).

Conflict

We control for the impact of conflict in a Sub-Saharan African nation in a given year. The data and coding are from Gleditsch et al. (2002). The indicator variable captures major conflict, which is defined as more than 25 battle deaths in a given year. The reference category indicates that a nation is not experiencing any conflict and is coded with a value of zero. We expect that nations experiencing conflicts will have higher maternal mortality because conflict often disrupts the delivery of health services (Jenkins, Scanlan, and Petersen, 2007).

Public Health Expenditures

We measure the fiscal capacity of a nation to deliver health services by including public health expenditures in thousands of dollars per capita. These data are from the World Bank.
(2005) and are logged. We expect more public health expenditures to be associated with less maternal mortality because of increased government investment in hospitals, family planning, prenatal care, and postnatal care (Austin, DeScisciolo, and Samuelsen 2016).

Health NGOs
We also include the number of health NGOs per capita in a nation. The data may be obtained from Inoue and Drori (2006), who gathered it from The Yearbook of International Organizations. This publication collects information on international organizations (e.g., location, history, goals, activities, finances, and structures) and classifies them by subject. Inoue and Drori collected the counts of international NGOs in each nation that are classified by the Union of International Associations under the “health” category. Per the Yearbook, an international NGO has operations or members in two or more nations. We take the square root of this variable because of its distribution. We expect that higher numbers (per capita) of health NGOs in a country are correlated with lower maternal mortality because these organizations fund health projects (Sattler and Shandra 2012).

Undernourishment
This variable measured the percentage of a country’s population that is undernourished. The data were collected from the Food and Agriculture Organization (2010). We expect that greater undernourishment is associated with increased maternal mortality. This is because women who do not eat a balanced diet and maintain proper levels of iron are more likely to have weakened immune systems and suffer complications during pregnancy (Shen and Williamson 1999).

Female Human Immunodeficiency Virus
We include the female prevalence of HIV for each Sub-Saharan African nation. This is the percentage of a country’s female population, ages 15 to 49, who are infected with HIV and are alive at the end of the year specified. We hypothesize that higher female HIV prevalence is associated with increased maternal mortality because mothers experience complications during pregnancy or birth as a result of opportunistic infections due to a weakened immune system (Noble and Austin 2014).

RESULTS
In Table 3, we present the two-way fixed effects regression estimates of maternal mortality in Sub-Saharan Africa. In every equation, we include World Bank health structural adjustment lending, World Bank reproductive health investment lending, multilateral debt service, GDP, female secondary school enrollment, democracy, conflict, public health expenditures, health NGOs, undernourishment, and female HIV. In equation (3.1), we include AfDB health structural adjustment lending. In equation (3.2), we include AfDB reproductive health investment lending. In equation (3.3), we include both AfDB lending variables together.

We begin with the AfDB lending variables and the implications for the theory of organized hypocrisy. First, we find that AfDB structural adjustment in the health sector, which represents the finance ministry agenda, is related to increased maternal mortality. In equation (1), the coefficient for this variable is positive and statistically significant. We also find

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Equation (3.1)</th>
<th>Equation (3.2)</th>
<th>Equation (3.3)</th>
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<tbody>
<tr>
<td>AfDB Health Structural Adjustment Lending</td>
<td>.160**</td>
<td>.169**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.049</td>
<td>.051</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.065)</td>
<td>(.068)</td>
<td></td>
</tr>
<tr>
<td>AfDB Reproductive Health Lending</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-.062**</td>
<td>-.067**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-.141</td>
<td>-.153</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.025)</td>
<td>(.022)</td>
<td></td>
</tr>
<tr>
<td>World Bank Reproductive Health Lending</td>
<td>-.122*</td>
<td>-.118*</td>
<td>-.115*</td>
</tr>
<tr>
<td></td>
<td>-.106</td>
<td>-.102</td>
<td>-.100</td>
</tr>
<tr>
<td></td>
<td>(.069)</td>
<td>(.056)</td>
<td>(.058)</td>
</tr>
<tr>
<td>World Bank Health Structural Adjustment Lending</td>
<td>.041</td>
<td>.051*</td>
<td>.049*</td>
</tr>
<tr>
<td></td>
<td>.047</td>
<td>.059</td>
<td>.057</td>
</tr>
<tr>
<td></td>
<td>(.027)</td>
<td>(.028)</td>
<td>(.027)</td>
</tr>
<tr>
<td>Total Debt Service</td>
<td>.352</td>
<td>.372</td>
<td>.445*</td>
</tr>
<tr>
<td></td>
<td>.067</td>
<td>.069</td>
<td>.083</td>
</tr>
<tr>
<td></td>
<td>(.248)</td>
<td>(.304)</td>
<td>(.245)</td>
</tr>
<tr>
<td>Gross Domestic Product Per Capita</td>
<td>2.998</td>
<td>3.346</td>
<td>3.364</td>
</tr>
<tr>
<td></td>
<td>.432</td>
<td>.482</td>
<td>.485</td>
</tr>
<tr>
<td></td>
<td>(2.381)</td>
<td>(2.382)</td>
<td>(2.431)</td>
</tr>
<tr>
<td>Female Secondary School Enrollment</td>
<td>-2.303***</td>
<td>-2.472***</td>
<td>-2.402***</td>
</tr>
<tr>
<td></td>
<td>-.810</td>
<td>-.869</td>
<td>-.845</td>
</tr>
<tr>
<td></td>
<td>(.386)</td>
<td>(.874)</td>
<td>(.376)</td>
</tr>
<tr>
<td>Democracy</td>
<td>-.058</td>
<td>-.074</td>
<td>-.067</td>
</tr>
<tr>
<td></td>
<td>-.050</td>
<td>-.064</td>
<td>-.058</td>
</tr>
<tr>
<td></td>
<td>(.046)</td>
<td>(.050)</td>
<td>(.050)</td>
</tr>
<tr>
<td>Conflict Presence (1 = Yes)</td>
<td>-2.325**</td>
<td>-2.236**</td>
<td>-2.273**</td>
</tr>
<tr>
<td></td>
<td>-.117</td>
<td>-.113</td>
<td>-.114</td>
</tr>
<tr>
<td></td>
<td>(.782)</td>
<td>(.874)</td>
<td>(.803)</td>
</tr>
<tr>
<td>Public Health Expenditures Per Capita</td>
<td>-.014</td>
<td>-.021</td>
<td>-.021</td>
</tr>
<tr>
<td></td>
<td>-.108</td>
<td>-.160</td>
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</tr>
<tr>
<td></td>
<td>(.020)</td>
<td>(.022)</td>
<td>(.022)</td>
</tr>
<tr>
<td>Health NGOs</td>
<td>-.351**</td>
<td>-.389**</td>
<td>-.371**</td>
</tr>
<tr>
<td></td>
<td>-.521</td>
<td>-.577</td>
<td>-.550</td>
</tr>
<tr>
<td></td>
<td>(.117)</td>
<td>(.126)</td>
<td>(.123)</td>
</tr>
<tr>
<td>Undernourishment</td>
<td>.109*</td>
<td>.123**</td>
<td>.113**</td>
</tr>
<tr>
<td></td>
<td>.256</td>
<td>.289</td>
<td>.265</td>
</tr>
<tr>
<td></td>
<td>(.046)</td>
<td>(.048)</td>
<td>(.044)</td>
</tr>
</tbody>
</table>

(continued)
that AfDB reproductive health lending, representative of a civil society agenda, is related to decreased maternal mortality. In equation (2), the coefficient for this variable is negative and significant. In equation (3), where we include both measures, the coefficients maintain their signs and significance. These findings are stable while controlling for World Bank structural adjustment and investment lending. The coefficients for World Bank structural adjustment health lending are positive and significant in two models, while the coefficients for World Bank reproductive health investment lending are negative and significant. Taken together, the results support the theory of organized hypocrisy, not just at the World Bank but also at the AfDB.

We can contextualize the impacts of each variable in relation to one another by comparing the magnitude of their standardized coefficients or betas. This effect size can be interpreted as a one standard deviation increase in the variable being associated with a beta standard deviation change in maternal mortality. In equation (3), the beta for the AfDB reproductive health investment lending variable is about twice as large as the standardized

<table>
<thead>
<tr>
<th></th>
<th>Equation (3.1)</th>
<th>Equation (3.2)</th>
<th>Equation (3.3)</th>
</tr>
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<tr>
<td>Female HIV</td>
<td>.291***</td>
<td>.280***</td>
<td>.305***</td>
</tr>
<tr>
<td></td>
<td>.179</td>
<td>.172</td>
<td>.187</td>
</tr>
<tr>
<td></td>
<td>(.075)</td>
<td>(.075)</td>
<td>(.076)</td>
</tr>
<tr>
<td>Year = 1995 (1 = Yes)</td>
<td>−.619</td>
<td>−.513</td>
<td>−.565</td>
</tr>
<tr>
<td></td>
<td>(.372)</td>
<td>(.397)</td>
<td>(.371)</td>
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<tr>
<td>Year = 2000 (1 =Yes)</td>
<td>−.666</td>
<td>−.242</td>
<td>−.662</td>
</tr>
<tr>
<td></td>
<td>(.663)</td>
<td>(.722)</td>
<td>(.623)</td>
</tr>
<tr>
<td>Year = 2005 (1 =Yes)</td>
<td>−1.008</td>
<td>−.586</td>
<td>−.772</td>
</tr>
<tr>
<td></td>
<td>−.150</td>
<td>−.087</td>
<td>−.115</td>
</tr>
<tr>
<td></td>
<td>(.042)</td>
<td>(.997)</td>
<td>(.946)</td>
</tr>
<tr>
<td></td>
<td>(13.973)</td>
<td>(13.702)</td>
<td>(13.108)</td>
</tr>
</tbody>
</table>

|                      | .863           | .859           | .869           |
| Number of observations| 101            | 101            | 101            |
| Number of countries  | 33             | 33             | 33             |
| Sargan-Hansen test statistic | 47.255*** | 118.805*** | 93.736*** |

* p < .05, ** p < .01, *** p < .001, one-tailed test
Notes:
a) The first number is the unstandardized coefficient, the second is the standardized coefficient, and the third is the clustered robust standard error.
b) The reference year for the analysis is 1990.
coefficient for AfDB structural adjustment health lending. Because these two variables have opposite signs, this finding indicates a larger beneficial effect of investment lending compared to the harmful effects of structural adjustment. A similar pattern emerges for the World Bank lending variables when examining the standardized coefficients. In sum, multilateral lending institutions may be helping reduce maternal mortality in Sub-Saharan Africa. However, these gains are being eroded by structural adjustment.

We find a few other factors to be related to maternal mortality. First, greater female secondary school enrollment corresponds to decreased maternal mortality. The coefficients that represent female secondary school enrollment are negative and significant. Second, the coefficients that represent conflict intensity are negative and significant in all three equations. Third, greater numbers of health NGOs are related to less maternal mortality in a Sub-Saharan African nation. The coefficients are negative and significant in the three models. Fourth, we see two health measures related to maternal mortality: the coefficients for undernourishment and female HIV prevalence are positive and significant across Table 3.

There are several factors not related to maternal mortality. These include debt service, GDP per capita, democracy, and public health expenditures. The coefficients for all these variables fail to reach statistical significance.

DISCUSSION AND CONCLUSION

Sub-Saharan Africa has the highest levels of maternal mortality in the world. Coburn et al. (2016), finding support for the theory of organized hypocrisy, note that the World Bank may be contributing to this issue because its structural adjustment lending in the health sector increases maternal mortality, despite its reproductive health investment lending being correlated with less maternal mortality. We add to this literature by applying the theory of organized hypocrisy to the AfDB, and find additional support for the theory there.

Why might the effects of AfDB lending on maternal mortality be similar to the effects of the World Bank lending? The AfDB was established in 1964, with membership limited to nations in Africa. The creation of an exclusively African institution was a demonstration of the continent’s ability to promote development without support from abroad and an effort by members to rid themselves of their colonial legacy (English and Mule 1996). The AfDB also claimed that it was better suited than other multilateral donors to make loans in the region because it had a better understanding of the economic challenges unique to the continent (Babb 2009).

However, there are several reasons why AfDB lending is associated with higher levels of maternal mortality. First, the earliest AfDB loans for infrastructure, which carried interest rates and repayment schedules similar to commercial loans, did not produce sufficient revenue for the organization. This was due to most member nations not being able to qualify for such loans. Without a steady source of revenue, the AfDB was perpetually underfunded, and in danger of collapsing (Mingst 2009). Second, many nations were already in arrears on their AfDB subscriptions because their resources were expended to deal with other matters, including famine and conflict (Babb 2009). Third, the AfDB accumulated additional bad
debt during the recession of 1987, which led many borrowers to economic stagnation and sinking deeper into arrears (Babb 2009). Standard and Poor’s then downgraded the AfDB’s bonds from AAA to AA+ (English and Mule 1996).

In response, non-regional donors, especially the United States, delayed financial support for the AfDB’s seventh replenishment (Babb 2009). Ultimately, the United States agreed to finance the AfDB—contingent on non-regional donor countries having veto power over loan decisions. There would also be greater collaboration with the World Bank when lending. Babb (2009:106) writes that “the Treasury was reporting that the United States had accomplished its major policy objectives in the AfDB and, consequently, agreed to a USD 3.5 billion increase in funding,” with U.S. Treasury Secretary Nicholas Brady concluding that “the bulk of the AfDB’s resources will now be allocated to countries that are providing an economic environment conducive to development and growth” (i.e., structural adjustment). This has important implications for our understanding of global health and development financing. Regional institutions, which were potentially more responsive to local needs, have succumbed to similar pressures as their global counterparts to put into place policies representative of a finance ministry agenda.

Beyond these events, there are other reasons why AfDB and World Bank lending are so similar, and therefore why their loans have similar effects on maternal mortality. In its early years, the AfDB lacked the expertise to design and monitor structural adjustment and investment loans in the health sector. It relied on the World Bank for guidance (Mingst 2015). This dependence was heightened by the fact that member countries were reluctant to release their few development specialists to staff a regional bank, while uncompetitive salaries at the institution made it difficult to attract African citizens working elsewhere (Mingst 2015). More recently, formal coordination has AfDB staff members participating in the World Bank’s Joint Africa Institute. The World Bank offers training to the attendees that draws on best practices from World Bank lending experiences in Sub-Saharan Africa (Feinstein and Khattri 2005).

There are theoretical implications here for cross-national researchers studying global health. Until recently, theory from organizational sociology has largely been ignored in cross-national research. Such research has focused on factors from political economy, such as the sequelae of structural adjustment policies. But ideas from organizational sociology apply to the AfDB in that this institution experiences external pressure from various sources, leading it to put reforms in place that translate into contradictory policies (Weaver 2008). By considering insights from the theory of organized hypocrisy, we arrive at a more complete understanding of how the AfDB impacts maternal mortality by incorporating ideas from both the finance ministry and civil society agendas. We also reiterate past calls by scholars to integrate gender into cross-national research (Burroway 2012). By taking these theoretical considerations seriously, sociologists will attain a better understanding of the factors shaping women’s reproductive health.

We offer the following methodological insights. It is typical for research to include a fixed effect (i.e., indicator variable) for the region of the world in which a country is located.
as an independent variable in a regression analysis. This helps control for findings that may arise out of geographical variation or historical circumstances that cannot be accounted for by independent variables in the models. There are often significant differences among regions but no further consideration of why. For instance, Shandra, Shandra, and London (2010) find that Sub-Saharan African nations have greater maternal mortality, but they only speculate why that may be the case. This research advances our understanding of Sub-Saharan Africa, but we agree with calls by Noy (2011) and Noy and McManus (2015) to extend research on health challenges to other regions to determine whether these findings are generalizable (and to what extent) across regions. This is strengthened by the understanding that the World Bank has regional bureaus but also because of the centrality of regional lending banks like the AfDB (Noy 2015).

In terms of policies, we argue that the AfDB and the World Bank should increase their reproductive health investments. They should focus on projects that reduce the female prevalence of HIV and address malnutrition. If the AfDB and the World Bank are to be effective in reducing maternal mortality, however, they should make sure their reproductive health investments emphasize improving female educational attainment. This is because expanding female education both improves the use of reproductive health services and reduces the spread of HIV (Burroway 2012). Such services may best be delivered via NGOs (Austin, DeScisciolo, and Samuelsen 2016).

Nevertheless, we can criticize such recommendations as “reformist” because they do not address the fundamental causes of high rates of maternal mortality, mainly structural adjustment (Bryant and Bailey 1997). If the AfDB and the World Bank continue to provide nations with such loans, then they are undermining the efforts to reduce maternal mortality via their reproductive health investment loans. Thus, we agree that reproductive health investment lending by the AfDB and the World Bank may be “serving more of a political purpose” by diverting attention from how they keep nations under adjustment and, in turn, maintain “the appearance of having a human face” (Oxfam 1993:25).

We call on health NGOs and social movements to lobby AfDB and World Bank officials to cease structural adjustment loans. There should also be a focus on grants to help nations improve women’s reproductive health and keep nations from going more into debt, which is why nations end up with an adjustment loan. Because the AfDB and the World Bank receive a large portion of their funding from the United States, attention could be given to lawmakers there to bring about change if African member nations appear unwilling (Babb 2009).

We conclude with limitations and possible ways forward. We use data for a sample of Sub-Saharan African nations from 1990 to 2010 due to data-availability issues (i.e., health NGO data only available up to 2005). There is a need for more cross-national research and case studies to see whether the patterns found here appear across different times and regions. We have suggested several pathways by which AfDB structural adjustment and investment lending may impact maternal mortality. While we use structural adjustment and investment lending, which are sector-specific and thus an improvement over previous variables, cross-national researchers should consider carrying out a multilevel mediation analysis when additional data become available.
REFERENCES


NOTES

The articles in this special issue on global health and development are Noy (2019); Harris and White (2019); Sommer, Shandra, Restivo, and Reed (2019); Jafflin (2019); Angotti, McKay, and Robinson (2019); and VanHeuvelen and VanHeuvelen (2019).

Corresponding author. The authors are listed reverse alphabetically and contributed equally to the paper. We thank Dr. Shiri Noy for her guidance during the revision process. Thanks to the anonymous reviewers for their helpful comments.


2. To determine whether two-way fixed effects models are more appropriate than a random effects estimator, we calculate Sargan-Hansen test statistics for each model. The null hypothesis of the test is that the random effects estimator produces more efficient tests of statistical significance than the fixed effects estimator. In our models, the chi-squared statistics reach statistical significance in every model of Table 2, indicating that the fixed effects estimator is preferable because the country-specific error terms are correlated with the independent variables included in the models (Baum 2006).