**Title: The economic cost of homophobia among low and middle-income countries**

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**Abstract** (239 words)

Despite noticeable progress in the inclusion of people with differing sexual orientation and gender identity, homophobia, stigma and discrimination are still largely prevalent. This discrimination based on sexual orientation cost to the whole society: unemployment, denied promotion, poor mental health, suicide, and vulnerability to HIV infection. The objective of this study is to estimate the economic cost of homophobia at country level.

We built a model reflecting labour and health-related economic costs of homophobia. Labour cost considers the earnings differential between gay men and their heterosexual counterparts. Health-related cost is represented by the value of life-year loss due to homophobia. We calibrated the model for 158 countries based on their respective homophobic climate.

We found that the cost of homophobia amounts to USD126.1 billion [63.1-189.1] per year globally, representing 0.17% [0.06-0.26] of the gross domestic product. We also found that at country level, the economic cost of homophobia is a nonlinear function, with a cost elasticity of 1.17. This implies that the economic cost is disproportionately high as the environment is more stigmatising. Furthermore, efforts to reduce the level of homophobic in a very homophobic country generate proportionately higher economic returns. In other words, there is a greater economic incentive to promote inclusive society for countries with high levels of homophobia.

Our findings suggest that inclusion policies towards people with differing sexual orientation and gender identity are economically relevant. Moreover, inclusiveness does not imply higher costs for the society.

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none

Keywords

Cost, homophobia, stigma and discrimination, sexual orientation, MSM

**1. Introduction**

The term homophobia came in 1972. Weinberg, who first coined the term homophobia(1), used the suffix phobia because he believed the roots of homophobia was fear(2). For long, homophobia has been defined as the irrational fear(3) or dread of being in close quarters with homosexuals – and in the case of homosexuals themselves, self-loathing(1).Its meaning evolved to include any negative attitude, belief, or action toward homosexuals(4, 5) and the terminology “homonegativity”(6) would probably better translates these stigmatising attitudes or discriminatory behaviour, that occurs in many settings in all societies and often beginning as early as school(7). Homophobia, or homonegativity, encompasses sexual stigma and its meanings nowadays is closely imbricated with heteronormativity, which focuses on the structures and beliefs making heterosexual relationships the norm(8).

The AIDS epidemic has put gay men and other men who have sex with men (MSM) under additional strain, adding AIDS-related stigma to the deep-rooted homophobia that is prevalent in most of our societies.

Despite the recent improvement of social acceptance of Lesbian, Gay, Bisexual, Transgender and Intersex (LGBTI) communities, they still face discrimination, human rights violations and violence that affect the society and the economy as a whole.

*Homophobia and health*

stigma related to sexual orientation and gender identity have demonstrated negative impact on mental health(9-11), can lead to an increase of suicide attempts for sexual minorities(12-17) and could result into a shorter life expectancy(18).

Furthermore,. it has been showed that gay men who have enacted sexual stigma are more likely to engage in high levels of sexual risk behaviours(19, 20), less likely to adhere to their treatment(21) and have lower uptake to HIV testing services(21-26).

*Homophobia and labour productivity*

Homophobia and stigma against gay men and other MSM have negative impact on the economy. Recent works suggest a positive correlation between LGBT inclusion and economic development of a country(27). There is a demonstrated association between LGBT anti-discrimination policies in firms and their performance (28-32).

Despite these evidences, discrimination in the hiring process against gays(33-39) and transgender(40) still largely prevails. Moreover, there is an earning penalty experienced by gay men and other MSM compared to heterosexual men, even when adjusted for education and professional experience(41-47). The recent meta-analysis from Klawitter estimated that, overall, gay men earn 11 % less compared to their heterosexual counterparts(48).

There have been few studies harnessing the cost induced by homophobia (49-51) in a specific country. This study is aiming to provide a model to estimate the cost of homophobia applicable to all countries, with a particular focus on low- and middle-income countries.

**2. Methods**

We assess the economic cost of homophobia (CH) through two key components, the productivity cost (PC) and the health-related cost (HC) for each country (*i*).

(1)

For each country (i) we use the level homophobia given from the Homophobic Climate Index developed in an recent study(52) for 158 countries. The index considers both the institutional and the social homophobia. The first one is characterised by the laws and legislations recognising, protecting or criminalising homosexuality. Whereas social homophobia is represented by the level of acceptance and justifiability of homosexuality.

An important variable here is the estimated population of gay men and other MSM per country. Sound population size estimates are lacking in most low- and middle-income countries. Among the reasons, one can mention that sexual behaviour and sexuality evolve over time and from one setting to another(53). Moreover, cultural, moral and religious beliefs may prohibit gay men from coming out of the closet. Finally, in highly homophobic countries, individuals cannot disclose their sexual orientation without exposing themselves to prejudice. Based on latest evidence (54-57) we will assume here that, for each country, population of gay men and other MSM represents 1 to 3 percent of all 15-64 year old male population, providing realistic lower and upper bounds.

*Health cost of homophobia*

There are several studies measuring specific health-related effect of homophobia but, to the best of our knowledge, the only nationwide study the health impact resulting from homophobia has been conducted for United States. Hatzenbuehler et al (18) considered more than 20.000 individuals spread in 156 communities, either metropolitan areas or counties, over all the territory of United States. The study found that, if for the country as a whole, loss in life expectancy due to homophobia does not statistically differ from zero year, sexual minorities living in the most homophobic decile of communities have a 12·6 years reduction in life expectancy compared to the rest of the country. Main factors of premature death are suicide, homicide/violence and cardiovascular diseases, which are consistent with other findings on the impact of stigma and homophobia on health (20, 58-66).

Furthermore, another study performed by Frisch et al(67) in Denmark found that, starting from the availability of antiretroviral therapy to all in 1996, the excess mortality among gay men and other MSM compared to their heterosexual counterpart was restricted to the first 1-3 years after a marriage. This result is further confirmed in a more recent national cohort study of 6.5 million Danes, which confirmed that mortality rates for gay men and other MSM are not different from their heterosexual counterparts for each marital status, whether married, unmarried or divorced(68).

We therefore assume that change in life expectancy due to homophobia does not statistically differ from zero in twenty-one countries with a score for social homophobia equal or lower than the one for United States, i.e. 0.3636. See annex 1. For countries above this threshold, let β*i* define the number of life-year loss due to homophobia for country *i* , adjusted for the country specific level of homophobia and the life expectancy at age 15 for male population . The health-related economic cost can then be defined as follow, where represent the number of gay men and other MSM as a share of male 15-64 year population representing, with a lower (1%) and an upper (3%) bound:

(2)

Where:

(3)

*Productivity cost of homophobia*

The productivity cost of homophobia is based on the estimated loss of earnings of gay men and other MSM compared to their heterosexual counterparts. Klawitter(48) conducted a meta-analysis among 34 studies on the earning difference among men in USA (69% of the studies), Australia, Canada, France, Greece, Netherland, Sweden and United Kingdom. The meta-regression shows an average earning penalty of 11 percent for gay men. We calibrate the earnings differential gay and other MSM are facing in other countries based on their respective homophobic climate (*δHCI* ) and estimate a dollar value by applying the earnings differential to the gross domestic product per capita (*GDPpci*). We use the gross domestic product per capita *(GDPpc)* as proxy for the yearly economic contribution of an individual for each country *(i)*.

We can then estimate the earning differential for each country based on its level of homophobia

where:

δHCI = HCIi/HCIusa

and δHCI (Australia, Canada, France, Greece, Netherland, Sweden and United Kingdom) = 0 07

**3. Results**

The overall results show that the economic cost of homophobia represents globally US$ 126.2 billion [63.1-189.3] per year, corresponding to 0.17% [0.09 - 0.26] of GDP. See table 1. Every year, homophobia costs US$74.8 [37.4-112.3] billion in all low and middle-income countries, representing more than half the budget for official development assistance for these countries(69).

**Table 1:** The economic cost of homophobia per region, in value and as a share of GDP

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Region | Homophobic Climate Index | Cost of homophobia |  |  | Share of GDP |  |  |
|  | regional average | (US$ million) | Lower bound  (US$ million) | Upper bound  (US$ million) | (%) | Lower bound | Upper bound |
| Africa - East and Southern | 0.7527 | 1,566.7 | 783 | 2,350 | 0.21% | 0.11% | 0.32% |
| Africa - West and Central | 0.7925 | 2,067.2 | 1,034 | 3,101 | 0.28% | 0.14% | 0.42% |
| Asia and Pacific | 0.6465 | 68,491.9 | 34,246 | 102,738 | 0.29% | 0.15% | 0.44% |
| Caribbean | 0.7261 | 263.8 | 132 | 396 | 0.26% | 0.13% | 0.38% |
| Eastern Europe and Central Asia | 0.6774 | 5,459.8 | 2,730 | 8,190 | 0.29% | 0.15% | 0.44% |
| Latin America | 0.4928 | 5,944.1 | 2,972 | 8,916 | 0.12% | 0.06% | 0.18% |
| Middle East | 0.7942 | 9,949.0 | 4,974 | 14,923 | 0.46% | 0.23% | 0.69% |
| North Africa | 0.8444 | 2,537.2 | 1,269 | 3,806 | 0.37% | 0.18% | 0.55% |
| Europe and North America | 0.3417 | 29,810.2 | 14,905 | 44,715 | 0.08% | 0.04% | 0.12% |
| Total | **0.6154** | **126,089.9** | **63,045** | **189,135** | **0.17%** | **0.09%** | **0.26%** |
|  |  |  |  |  |  |  |  |
| Income categories |  |  |  |  |  |  |  |
| Low income | 0.8082 | 1,037.6 | 519 | 1,556.5 | 0.29% | 0.14% | 0.43% |
| Lower middle income | 0.7104 | 15,517.9 | 7,759 | 23,276.9 | 0.27% | 0.14% | 0.41% |
| Upper middle income | 0.6377 | 58,219.2 | 29,110 | 87,328.8 | 0.30% | 0.15% | 0.44% |
| High income | 0.3978 | 51,315.1 | 25,658 | 76,972.7 | 0.11% | 0.06% | 0.17% |
| Total | **0.6154** | **126,089.9** | **63,045** | **189,134.8** | **0.17%** | **0.09%** | **0.26%** |

**4. Discussion**

This is the first study of the economic costs of homophobia covering more than a single country(49-51). Countries and regions showing more inclusion of sexual minorities face the lowest cost of homophobia in terms of share of their revenue. This is particularly striking for Europe and North America, as well as Latin America. To the contrary, countries with high level of homophobia face higher burden as a share of their revenue. This is the case for Middle East and North Africa where the economic cost of homophobia represent up to half a percentage point of the gross domestic product. This suggests that inclusion policies towards people with differing sexual orientation and gender identity are economically relevant. Moreover, it shows that inclusiveness does not imply higher costs for the society.

We found a positive and greater than unity (1.17) cost elasticity of homophobia. This implies that reduction in the level of homophobic in a homophobic country generates proportionately higher economic returns. Said differently, there is a greater economic incentive to promote inclusive society for countries with high levels of homophobia. This can intuitively be seen from figure 1. Countries engaging in reducing the level of homophobia are moving downward along the curve, with largest gain in terms of share of GDP being generated by countries in the top-right corner and lower additional gain as countries get closer to the bottom-left corner.

Figure 1: Cost of homophobia as a share of GDP and in value, per region, per year

For example, a reduction of 10% of the level of homophobia in countries like Indonesia (HCI=0.706) and Saudi Arabia (HCI= 0.926) would translate into a gain of respectively 22.1% and 23.1% in terms of share of GDP, diminishing the cost of homophobia of US$190 and US$151 million per year respectively.

At the other end of the spectrum, a country like Uruguay (HCI=0.188), one of the top-ten most inclusive country, harvests positive but proportionately smaller additional gains when lowering its level of homophobia. Achieving a 10% reduction of the level of homophobic would translate into a reduction of 3.7% in terms of share of GDP, or US$ 2 million per year.

**5. Conclusion**

We built a model to estimate the economic cost of homophobia in low- and middle-income countries, using two key components: i) a human capital component, measured in term of opportunity cost generated by stigma and discrimination against gay men and other MSM. ii) a health-related cost, which is measured by change in life expectancy due to homophobia. We found that the cost of homophobia against gay men and other men who have sex with men represents US$126 [63-189] billion per year. This sexual orientation and gender identity related stigma represent a substantial share of the income of a country, representing ranging from 0.04 % of the GDP in Uruguay, one of the top ten most inclusive country to 0.48% of the GDP in Saudi Arabia, one of the bottom ten most homophobic country.

One particularly encouraging findings is the positive and above unity (1.17) cost elasticity of homophobia. This implies, for countries with a high level of homophobia, a more than proportional return on investment aiming to promote societies that are more inclusive. This finding is of particular importance, bringing to communities and decision-makers an economic argument in addition to the public health and human rights ones.

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**Conflicts of interest**

None declared

**Research Highlights**

* Homophobia costs $126.1 billion yearly, mainly in low and middle-income countries
* Increased homophobia is associated with more than proportional cost for the society
* Sexual orientation and gender identity inclusion policies are economically relevant

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**Table 1: The economic cost of homophobia per region, in value and as a share of GDP**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
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| Total | **0.6154** | 126,089.9 | 63,045 | 189,135 | 0.17% | 0.09% | 0.26% |
|  |  |  |  |  |  |  |  |
| Income categories |  |  |  |  |  |  |  |
| Low income | 0.8082 | 1,037.6 | 519 | 1,556.5 | 0.29% | 0.14% | 0.43% |
| Lower middle income | 0.7104 | 15,517.9 | 7,759 | 23,276.9 | 0.27% | 0.14% | 0.41% |
| Upper middle income | 0.6377 | 58,219.2 | 29,110 | 87,328.8 | 0.30% | 0.15% | 0.44% |
| High income | 0.3978 | 51,315.1 | 25,658 | 76,972.7 | 0.11% | 0.06% | 0.17% |
| Total | **0.6154** | 126,089.9 | 63,045 | 189,134.8 | 0.17% | 0.09% | 0.26% |