Abstract. Seven years ago, the removal of taxes and tariffs on insecticide treated nets (ITNs) was considered one of the easiest resolutions for most countries to implement among the targets agreed upon at the African Summit on Roll Back Malaria in Abuja, Nigeria, on April 25, 2000. However, seven years later, 24 of the 39 Abuja signatories continue to impose taxes and tariffs on this life-saving tool. Taxes and tariffs significantly increase the price of an insecticide treated net, reduce affordability, and discourage the commercial sector from importing insecticide treated net products. Consequently, Roll Back Malaria partners are engaged in advocacy efforts to remove taxes and tariffs on insecticide treated nets in malaria-endemic countries of Africa. This viewpoint summarizes key obstacles to the removal of taxes and tariffs that have been identified through a review of country situations. To achieve the goal of producing and supplying more than 160 million insecticide treated nets needed to reach the revised Roll Back Malaria Partnership targets by 2010, tax and tariff reforms are urgently needed. Such reforms must be accompanied by country-specific systems to protect the poor (e.g., through voucher systems for vulnerable groups and other forms of targeted subsidies).

INTRODUCTION

Potentially half a million child deaths could be avoided each year if insecticide treated nets (ITNs) were widely used in sub-Saharan Africa (SSA). For this reason, the African Heads of State at the African Summit on Roll Back Malaria in Abuja, Nigeria, on April 25, 2000 set a goal of 60% ITN coverage of children under-five and pregnant women by the end of 2005. Nearly all countries in the region, with the exception of Eritrea, failed to reach this goal. Paradoxically, in 2006 the Roll Back Malaria (RBM) Partnership revised the ITN target to 80% coverage of vulnerable groups by 2010. However, to meet this even more ambitious target, malaria-endemic African nations will require the production and supply of more than 160 million treated nets.

Market research has demonstrated that more than half of household ITNs are bought from local markets and that the price at which ITNs are sold greatly affects the number of people purchasing them. Until recently, in countries such as Kenya, Mali, Senegal, Tanzania, and Uganda, the commercial sector has been able to reach far more people with bed nets than all ITN programs that are funded through charity, central and local government budgets, Non Governmental Organizations, and bilateral donors combined. This home-grown solution to scaling up ITN coverage in Africa is often overlooked and greatly undermined by a range of trade barriers, especially high taxes and tariffs. Tax, which includes sales and value added taxes (VAT), is a compulsory payment collected by a central or local government from each bed net sold. Tariffs are taxes levied on ITNs traded across international borders and in most African countries are also called “import duties.” Tariffs or import duties are the traditional way of protecting domestic producers from foreign competition in those countries where ITNs are manufactured locally.

The potential gains from removing taxes, tariffs, and high trade transaction costs related directly and indirectly to such procedures are substantial. A combination of tariffs and taxes on ITNs for example, can increase the final price by 20–100%. This makes a relatively low-cost item too expensive for most African households to afford and creates a strong disincentive for the commercial sector to invest in the ITN industry. The opportunity cost of maintaining taxes and tariffs as well as inefficient trade practice is equally high. Above a certain price, people see ITNs as an unaffordable luxury item. Therefore, policies that increase the price of ITNs can significantly reduce their purchase and use. The existing data demonstrate explicitly the value to governments of expanding access to ITNs through all available means. The productive time lost to morbidity and the indirect economic costs of care seeking, care giving, or poor health and death in Sub-Saharan African countries accounts for a growth deficit in Gross Domestic Product (GDP) of 1.3% per year.

ABOUT THIS VIEWPOINT

The views and data presented in this article are drawn from a review of the status of taxes and tariffs on ITNs in African countries and a series of five workshops held between October 2004 and June 2006 in Johannesburg, Nairobi, Accra, Kinshasa, and Bujumbura. The review and these workshops were organized by the authors. Experts were convened from various parts of the continent to review the progress achieved toward the implementation of the Abuja Summit resolution on taxes and tariffs and discuss advocacy strategies to bring the issue to the forefront of the global public health agenda. Stakeholders representing the following countries and institutions participated in these workshops: Benin, Burkina Faso, Burundi, Cameroon, Democratic Republic of Congo, Ethiopia, Ghana, Kenya, Malawi, Niger, Nigeria, Sierra Leone, Togo, Tanzania, Uganda, and Zimbabwe, The Academy for Educational Development (AED), the East, Central, and Southern African Health Community (ECSA), the Africa Regional office of the World Health Organization (WHO-AFRO), the Economic Community of West African States (ECOWAS), United States Agency for International Development (USAID), and the West African Health Organization (WAHO).

BROKEN PROMISE?

At the Abuja Summit on Roll Back Malaria, African Heads of State recognized that taxes and tariffs imposed on ITNs
posed a barrier to their usage. They committed to “reduce or waive taxes and tariffs for mosquito nets and materials, insecticides . . . and other recommended goods and services that are needed for malaria control strategies,” so that at least 60% of the most vulnerable populations “benefit from the most suitable combination of personal and community protective measures such as insecticide treated mosquito nets.”

The removal of taxes and tariffs was considered a necessary precondition for stimulating the growth of a commercial ITN market that would provide ITNs to those who could afford one, while scarce public funds could help the poorest and most vulnerable groups.

Even though the removal of taxes and tariffs was considered the most straightforward strategy for countries to implement, 24 of the 39 Abuja signatories continue to impose taxes and tariffs on ITNs. Based on the discussion during the four workshops described before, three main reasons countries give for not reducing taxes and tariffs are: (1) protection of local industry in the few countries with a net manufacturing industry; (2) reluctance to lose a source of revenue; and (3) savings from reduced taxes and tariffs would not be passed on to the consumers.

With regard to protection of the local industry, Tanzania is the only country in SSA with a domestic net industry strong enough to supply the country’s needs. In almost all other countries, high-quality nets must be imported. Furthermore in those countries with high taxes and tariffs, the legal import of nets is discouraged and little revenue is gained by the government from such sales. A recent study of ITN trade in Uganda estimates the number of nets (all sizes, treated and untreated) sold from 1995 to 2000 at about 350,000 units. At an average cost of $6 per unit, the cost, insurance, and freight (CIF) value of these nets at the time would have been approximately $2.1. Assuming that a 38% tax rate was appropriately applied (this was the rate charged by the Uganda government at the time), this would have generated $0.78 million worth of revenue for the government over the 6-year period. Clearly, if the government had decided to eliminate taxes on these nets, any potential revenue loss to the government associated with taxes would have been at least partly off-set by the associated health gains (i.e., lives saved, disabilities averted, school absenteeism reduced, and productivity gains).

Regarding the notion that savings from reduced taxes and tariffs would not be passed on to consumers, the experience from the countries that have removed taxes and tariffs show that prices of ITNs are considerably reduced. In addition, the number of traders importing ITNs increases and the ensuing competition lowers the price. Table 1 demonstrates that in Zambia, Uganda, Senegal, and Ghana the prices of ITNs have been going down; all these countries have removed taxes and tariffs. In Uganda, an ITN in 2004 cost 3 times less than an untreated net in 2001. The price drop in these 4 countries ranges from $0.82 to $9.79. Even when they were adjusted for the rate of inflation over the 5-year period, the change is approximately $0.50 to $5.80, a profound drop in price over time.

### Table 1

<table>
<thead>
<tr>
<th>Country</th>
<th>Untreated net</th>
<th>Treated net</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>$7.14</td>
<td>$4.78</td>
<td>$2.36</td>
</tr>
<tr>
<td>Senegal</td>
<td>$8.00</td>
<td>$5.29</td>
<td>$2.71</td>
</tr>
<tr>
<td>Uganda</td>
<td>$14.29</td>
<td>$4.50</td>
<td>$9.79</td>
</tr>
<tr>
<td>Zambia</td>
<td>$5.39</td>
<td>$4.57</td>
<td>$0.82</td>
</tr>
<tr>
<td>Mean (Price)</td>
<td>$8.71</td>
<td>$4.78</td>
<td>$3.92</td>
</tr>
</tbody>
</table>

* These figures are not adjusted for inflation over the 5-year period. Sources: 2001 Prices: Ref 20. 2006 Prices: Ref 21.

### Table 2

<table>
<thead>
<tr>
<th>Costs</th>
<th>Family-size conical net with treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rates</td>
</tr>
<tr>
<td>Total CIF* for ITN</td>
<td>USS$</td>
</tr>
<tr>
<td>Tariff</td>
<td>+50%</td>
</tr>
<tr>
<td>Clearing and other taxes</td>
<td>+8.5%</td>
</tr>
<tr>
<td>Financing costs</td>
<td>+15%</td>
</tr>
<tr>
<td>Price in warehouse</td>
<td>5.09</td>
</tr>
<tr>
<td>Local assembly cost</td>
<td>0.15</td>
</tr>
<tr>
<td>Price to distributor</td>
<td>5.24</td>
</tr>
<tr>
<td>Distributor margin</td>
<td>25%</td>
</tr>
<tr>
<td>Wholesaler markup</td>
<td>10%</td>
</tr>
<tr>
<td>Price to retailer</td>
<td>7.20</td>
</tr>
<tr>
<td>Retailer markup</td>
<td>20%</td>
</tr>
<tr>
<td>VAT</td>
<td>15%</td>
</tr>
<tr>
<td>Price to customer</td>
<td>9.94</td>
</tr>
</tbody>
</table>

Note: change in bold.

* CIF, cost, insurance, and freight; VAT, value added taxes.

TAXES AND TARIFFS HAMPER THE SUPPLY OF INSECTICIDE TREATED NETS IN THE REGION

The case for reducing tax and tariff barriers is clear: cumulative taxes and tariffs on ITNs, untreated nets, and insecticides range from 5% to 100% in 24 of 39 malaria-endemic countries in sub-Saharan Africa (SSA). This is a substantial barrier to acquisition of ITNs by low-income households. As demonstrated in Table 2, the compounding effect of a 50% tariff, 15% VAT, and 8.5% clearance tax can potentially add US$4.53 to a family-size conical ITN, which would otherwise cost consumers about US$5.00. The table shows that the marking and distribution costs are compounded by taxes and tariffs, which raises the cost to consumers even beyond increases directly imposed by the government. Based on country reviews, an after-tax price of US$9.94 for an ITN is considered well out of reach for low-income households.

Nearly all of the countries where the average number of nets owned by household exceeds 1.0 in urban areas are those that have removed taxes and tariffs on ITNs (Figure 1). This appears to be an additional signal that high taxes and tariffs actually suppress the commercial market because traders are not willing to import large volumes of nets/ITNs when they know taxes and tariffs will make them unaffordable for most people.

High bed net coverage in urban areas in countries such as Ghana, Mali, Tanzania, and Uganda suggest that reducing or eliminating taxes and tariffs on ITNs result in 3 key changes: (1) commercial investment in marketing ITNs increases; (2)
ITN prices decrease; and (3) consumers purchase more ITNs. In sum, as the commercial competition increases, a wider range of ITN products become available and prices further decline. In Uganda, for example, the sales of ITNs increased 4-fold following the removal of ITN taxes and tariffs. As shown earlier, prior to the reduction of taxes and tariffs in Uganda, the quantity of ITNs imported remained low and thus, the revenue that governments gained from ITN imports was minimal. In this case, the government was not gaining substantial revenue and any gains were more than offset by the cumulative costs of days of work lost due to malaria, therapy, and hospital admittance from malaria-related morbidity for those without the protection of an ITN. Therefore, there is no economic justification for governments to continue to impose the taxes and tariffs on this life-saving commodity.

A more fundamental question therefore would be: if countries are suffering large economic costs of sickness and lower productivity due to malaria, why has this seemingly simple Abuja resolution not been implemented? What has gone wrong? Here are some of the key reasons identified in the five workshops and based on our own country experiences.

**LEGISLATIVE HURDLES UNDERMINE PROGRESS AT THE COUNTRY LEVEL**

Cumbersome procedures and difficult legislative systems in Africa undermine efforts to remove taxes on ITNs. Changing tax laws is a time-consuming process with no guaranteed outcome. In Ghana, for example, lobbying for the removal of taxes and tariffs by advocacy groups started in 1996, but tariff concessions were not implemented until March 2002 and VAT was not removed until December 2004, 8 years later. Also related but a separate problem to the lengthy process of obtaining tax concessions is that over time the bed net and ITN tax codes have become complex and confusing to importers and customs officials. This creates a range of application issues. The ITNs can be categorized under multiple definitions and codes: a finished untreated net; a factory treated net; and a net bundled with insecticide kit. These are considered different products and are charged differently. Yarn for making nets, which may have other uses, may also have entirely different tax codes. These various definitions coupled with non-tariff barriers such as import quotas, exchange controls, customs delays, government purchasing policies, customs calculations, valuation procedures, and boycotts of products from certain countries, create a profound problem of interpretation and make most systems vulnerable to corruption.

The situation gets even more bewildering when rebates under duty drawback schemes and VAT are used. Implementation of tax rebates takes a long time and ends up tying capital from ITN importers. They sometimes get less than the full amount of the rebate.

**REGIONAL ISSUES PRESENT A SPECIAL PROBLEM**

Beyond tax code issues at the country level, ITN classification systems in tariff books are not standardized across countries. Therefore, a zero-rated product code in one country that has a trade agreement with another may be identified as an entirely different product. This limited ITN trade among the African countries. Ironically, most of the countries in sub-Saharan Africa are members of regional trading blocks such as the Southern Africa Development Cooperation (SADC) and the Economic Community of West African States (ECOWAS) and should apply the “Harmonized Commodity Description and Coding System” to classify products introduced by the World Customs Office. This harmonization of codes is often not done and for most countries in Africa, nets are currently classified as textiles. Customs offices are reluctant to give exemptions to the whole range of products covered by the textile code, especially because most African textile companies are under severe pressure from Asian imports. This is clearly an area where the World Trade Organization (WTO) could help by providing the needed leadership. The WTO can make a difference by helping countries to establish clear, concise, and consistent classification of treated nets, untreated, nets and netting materials.
LACK OF EFFECTIVE ADVOCACY STRATEGIES LEAD TO FOOT DRAGGING

Public health professionals in most sub-Saharan countries have so far not been successful in articulating the case for the removal of taxes and tariffs on ITNs to the ministries of finance and legislature, nor in convincing them that high tariffs greatly reduce net imports and little is earned by a net tariff. Often advocacy efforts target the ministry of health instead of the ministry of finance that, for most countries in the region is responsible for establishing tax codes and system. In addition, public health officials do not understand the tax codes and lack an organizational platform or forum to hold governments accountable.

The situation may now be changing; to a greater extent, our improved understanding of the impact of ITNs in lowering malaria mortality and morbidity, and the resulting social, economic, and health gains allow us to model these relationships mathematically. One example of such a model is the MoreNets computer model developed by the Academy for Educational Development in 2004. MoreNets was developed to assist decision makers and planners mobilize support to take action to eliminate tariffs and taxes and to promote ownership and use of ITNs. MoreNets provides a framework for discussion of the benefits of removing taxes and tariffs on ITNs. Such modeling allows for solid quantitative, epidemiologic, and economic data from a multitude of sources in Africa to be used to convince policymakers to change the tariff situation. This model demonstrates to policymakers that the costs of providing medical services to treat malaria cases each year are far greater than the revenues generated by the taxes and tariffs on ITNs. Nonetheless, a more fundamental challenge for implementing the Abuja Summit resolution is the piece-meal exemption system at the country level that allows donors and non-governmental organizations to import nets duty free. With such systems in place, a claim that taxes and tariffs are imposed on ITNs to protect local manufacturers becomes difficult to understand.

In general, there is a lack of an effective regional platform for putting pressure on governments renegotiating on their promises. Using regional policy forums such as ECOWAS and SADC, a concerted effort from ministries of health could influence national parliaments and ministries of finance. However, arguments have not been well articulated and ministries of finance and legislature, nor in convincing them that high tariffs greatly reduce net imports and little is earned by a net tariff. Often advocacy efforts target the ministry of health instead of the ministry of finance that, for most countries in the region is responsible for establishing tax codes and system. In addition, public health officials do not understand the tax codes and lack an organizational platform or forum to hold governments accountable.

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Finally, it is in the African government's best interest to create an enabling environment that encourages multiple approaches for providing ITNs, including the development of a sustainable market for ITNs. However, the private sector alone would not be able to adequately reach the poor and most vulnerable; additional components such as targeted subsidies are needed to ensure that those who are unable to afford an ITN are also covered. As an integral component of these multiple approaches, is being recommended by RBM to attain rapid coverage of vulnerable populations provision of ITNs through clinics or vaccine campaigns paid for in full by governments and donors. As suggested in a recent study, the time has come to see these differing strategies as complementary rather than as competing alternatives—from promotional activities strongly developed by private sector marketing programs to improving utilization rates of health services through integrated delivery of ITNs at the clinic level.

THE WAY FORWARD?

Taxes and tariffs limit ITN imports and availability and lead to needlessly high rates of infection. There is therefore an urgent need for a 6-part advocacy strategy that can be systematically implemented by all groups active in malaria control. The components of such a strategy should include:

1. Assessing the status of malaria ITN taxes and tariffs in each country and outlining the main issues to provide comprehensive evidence for advocacy efforts;
2. Defining the steps to be taken (e.g., understanding the tax code, drafting legislation that would define ITNs as medical commodities and remove taxes charged) to decrease or remove existing barriers and identifying the key people in each country who control each part of the process;
3. Developing an advocacy strategy using all available tools and computer models such as MoreNets to show the potential impact of widespread ITN use on public health and economic productivity, compared with the small income derived from current ITN taxes and tariffs;
4. Engaging key local spokespersons to lead the advocacy effort for each country. Country-specific information is critical to accurately identify the effect of these market distortions on the availability of ITNs. Such data will also form a key component of any integrated malaria control strategy envisioned by African governments and the Roll Back Malaria Partnership;
5. Accompanying tax and tariff reforms with country-specific systems to protect the poor (e.g., through voucher systems for vulnerable groups and other targeted subsidies) and;
6. Monitoring the implementation of tax and tariff reforms on an ongoing basis to address the adherence problem in many countries that have recently changed tax and tariff policies.

Received August 15, 2006. Accepted for publication October 8, 2007.

Acknowledgments: We are thankful for the support from our colleagues, especially Ms. Janice Solomon of the National Institutes of Health, and Renata Seidel, Celeste Marin, and Sheila Somashekhar of the Academy for Educational Development who provided critical comments to the manuscript. We also are thankful for the funding from the Academy for Educational Development (AED) and the United States Agency for International Development (USAID) in preparing the manuscript.

Financial Support: The USAID's Regional Economic Development Services Office for East and Southern Africa (REDSO/ESA) and The USAID’s West Africa Regional Program (WARP) provided funding that enabled the authors to organize the Johannesburg, Nairobi, Accra, Kinshasa, and Bujumbura workshops on taxes and tariffs. These sponsors had no other role in the writing of this manuscript or the decision to submit for publication.

Disclaimer: The views expressed in this article are those of the authors and do not reflect the official position of either Academy for Educational Development (AED) or the United States Agency for International Development (USAID). Martin Alilio, Halima Mwenesi, Malick Diara, David McGuire, Roshelle Payes and Will Shaw work...
for the Academy for Educational Development under the United States Agency for International Development’s NetMark Africa Regional Malaria Program. NetMark is an 8-year project designed to reduce the impact of malaria in sub-Saharan Africa through the increased use and sustainable supply of insecticide treated mosquito nets.

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