

BMJ Open How effective has tobacco tax increase been in the Gambia? A case study of tobacco control

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ABSTRACT

Objectives: The objective of the present study was to evaluate how effective tobacco tax increase has been in increasing price of tobacco products and reducing tobacco consumption in the Gambia. In addition, it tests the hypothesis that tobacco tax revenue grows while tobacco consumption decreases as a result of tax and price increase.

Setting: The study is designed at the macroeconomic level to examine the import of tobacco products and revenue collected from tobacco taxation in a low-income setting.

Participants: The participants of this study are the government officials employed in the Ministry of Finance and Economic Affairs (MoFEA), the Gambia and the Gambia Revenue Authority, who are in charge of planning and implementing the tobacco tax policy in the Gambia.

Interventions: The study includes 2 consecutive interventions in tobacco tax policy in the Gambia. The first intervention was moving the tax base for the uniform specific excise tax on cigarettes from weight to pack of cigarettes in 2013. The second intervention involved increasing the excise and the environmental tax on tobacco products in 2014.

Primary and secondary outcome measures: The primary outcome measures were the cost, insurance and freight value and the price of tobacco products. The secondary outcome measures included the import of tobacco products and tobacco tax revenue.

Results: In 2013–2014, the Gambia MoFEA raised the specific excise rate, which increased price, reduced consumption and generated significantly more government revenue from tobacco products. This is a clear evidence of the win-win outcome of raising tobacco tax. In addition, the Gambia has set the example of harmonising tax rates between tobacco products that reduces the substitution between tobacco products.

Conclusions: The Gambia presents the best practice in tobacco taxation. There is need for documenting more country-specific evidence on the win-win outcome of raising tobacco tax.

INTRODUCTION

The Gambia is a low-income country in West Africa, with land area 10 120 km², population

Strengths and limitations of this study

- This study examines the experience of the Gambia, a small low-income country in West Africa, in raising tobacco tax as an efficient and effective tobacco control measure.
- In achieving improvement in public health by discouraging tobacco consumption through tobacco taxation, the country presents a scenario of the global best practice by virtue of the implementation of a uniform specific excise on cigarettes and harmonisation of tax rates across cigarettes and other tobacco products.
- The evidence for increased tax revenue after a tobacco tax increase in the Gambia is also contrary to the standard tobacco industry argument against tax increase—that it will result in loss of government revenue.
- The study refers to a roadmap for implementing tobacco tax increase over 3 years from 2014 to 2016. However, the economic evaluation of the effects of tax increase in this paper is limited to 2014, the only year for which complete data are available. As such, this paper shows immediate impact of tax increase. The short-term to medium-term impact of the tax increase will be revealed after the completion of year 2016.

1.91 million, GDP US\$ 807 million and per capita GDP US\$423.¹ The Gambia ratified the WHO Framework Convention on Tobacco Control (WHO FCTC) on 7 September 2007. A needs-assessment exercise for implementation of the Convention was conducted jointly by the Government of the Gambia and the Convention Secretariat of the WHO FCTC in September 2012. The assessment reviewed the progress of implementation of the Convention, and identified existing gaps as well as possible actions to reinforce tobacco control and WHO FCTC implementation in the country. Under the Bill and Melinda Gates Foundation (BMGF) Africa tobacco control project, the WHO Regional Office for Africa (AFRO) in collaboration with the Centre for Tobacco Control in Africa (CTCA) has been

supporting the Gambia on request to take action in key priority areas in the domestic implementation of the Convention in non-tax and tax areas. This paper is concerned with the implementation and outcomes of tobacco tax policies in the Gambia since 2012.

According to the information provided by the Gambia Revenue Authority, the supply of tobacco products in the Gambia comes exclusively from imports from Senegal (39%), South Africa (22%), Swaziland (15%), Switzerland (14%), United Arab Emirates (6%), Nigeria (3%), the Netherlands (1%) and India (1%). The products meant for consumption within the country are taxed at the port of entry.

Taxation is widely known as a highly effective measure of tobacco control.² Raising tobacco tax is referred to as a 'win-win' policy, as it generates extra revenue for the government while discouraging tobacco consumption through higher prices, thereby improving public health. Many low-income countries such as the Gambia have ample scope for increasing revenue by raising tobacco tax, as they have very low tax rates and price to begin with, and the demand for tobacco products is usually price-inelastic. This extra revenue can be available for development financing, in particular for health. To attain these goals, low-income countries are in need of an efficient tax administration running an effective tax policy.

In 2013, the Ministry of Finance and Economic Affairs (MoFEA) of the Republic of the Gambia formed a Technical Working Group (TWG) for tobacco taxation, comprising three officials from the Gambia Revenue Authority (GRA) and four officials from the MoFEA. The TWG observed that the Gambia's average price per pack of cigarette stood at US\$0.80 compared with the sub-Saharan African regional average of US\$1.24, which was also below the global average price of US\$2.15 in 2012 (US\$1 equivalent to GMD31.342).³ The low level of price can encourage high rates of smoking, which has negative health and economic consequences for the nation. The TWG agreed that the Gambia needs to reach at least the regional average price level within a short span of time. Keeping this target in view, the group undertook tax assessment based on the data provided by the GRA and developed a policy proposal for the 3-year window from 2014 to 2016. The proposal was accepted by the MoFEA in December 2013, and implementation began in January 2014. This paper documents the success story of the Gambia as a best-practice country in implementing this tobacco taxation policy. First, it presents the methods for data sourcing and the analytical approach. Then, it reports the effects of the tobacco tax policy change during 2003–2013 and 2014 on cigarette prices, tobacco consumption and revenue.

METHODS

Data

Tobacco consumption in the Gambia is based exclusively on imported tobacco products, such as cigarettes, cigars,

cheroots, cigarillos and unmanufactured tobacco. The paper presents a case study of tobacco taxation in the Gambia using national level data on market share, import volume, retail price and cost, insurance and freight (CIF) values of cigarette brands imported to the Gambia; import volume and CIF value of other cigarette products (eg, cigars, cheroots and cigarillos containing tobacco, tobacco not stemmed or stripped, tobacco partly or wholly stemmed or stripped); and tax revenue collected from excise tax, import duty, import sales tax or value-added tax (VAT), environmental tax, customs processing fee and Economic Community of West African States (ECOWAS) levy. The data for the analysis were provided by the GRA of the MoFEA. The data for the regional comparison of tax and prices came from the WHO Report on the Global Tobacco Epidemic 2013 database.

Analytical approach

In this paper, the effects of increase of excise and environmental taxes on price, import and revenue are evaluated only for the first year (2014) from the roadmap drawn for 2014–2016 for which data for the complete year are available. The WHO tax simulation model TaXSIM was the key tool used to assess the existing tobacco tax system and effect of tax increase on price of cigarettes. The model is based on the assumption that the cigarette market in the Gambia is segmented into premium brands (eg, Marlboro), midprice brands (eg, Camel, Regal, Piccadilly) and economy brands (eg, Bond Street, Monte Carlo, Royal Business, Sir). It is also assumed that the substitution or switching between the cigarette brands in response to the tax change is not significant, and that there is no tax avoidance or evasion by tobacco consumers or importers.

In this TaXSIM model, the price vector by brands is decomposed into CIF values (that includes the costs of production and producer's profit), excise and other taxes, and importers' and distributors' margin. The importers' and distributors' margin is estimated as the residual after subtracting the CIF value and tax components from the observed price. The ratio of excise tax per pack to retail price per pack and the ratio of total tax per pack to the retail price per pack are calculated to assess what proportion of the value of the product accrues to the government as revenue. The importer's and distributors' margin is used to calculate the volume of their profit vis-à-vis government's total revenue collection from this sector. The excise and total tax rate per unit of tobacco product is multiplied by the volume of the product to calculate the expected excise and total tax revenue from the product.

In order to examine the shifting of tax increase to price increase, price is simulated applying new tax rates on the baseline CIF values and importers' and distributor's margin. According to the information provided by the GRA, the nominal average CIF value increased by 43% between 2012 and 2013. Based on this observation,

the CIF values in 2014 are adjusted upward by 43% of the nominal CIF values reported in 2013. The difference between the simulated price and the observed price in a given year indicates the extent of price increase over and above the tax-induced price increase that is over-shifted to the consumers.

FINDINGS

Tobacco tax system in the Gambia: 2003–2013

Cigarette taxes in the Gambia include excise, import duty, import sales tax (VAT from 2013), environmental tax, customs processing fee and ECOWAS levy. Between 2003 and 2012, the excise tax was based on weight (kg), and was increased gradually (table 1). In the 2013 Budget Statement, government changed the base of specific excise tax on cigarettes from weight to number of packs. In consultation with the Convention Secretariat of the WHO FCTC and the World Bank, a specific excise of GMD5.00 per pack was proposed for 2013, with a further increase to GMD6.00 in 2014 and GMD7.00 in 2015. Note that only the 2013 excise rate was implemented. The proposed rates for 2014 and 2015 were replaced by higher rates, with the goal of reaching the regional average price in a short period of time, as discussed in the later section.

The import duty was raised from 18% to 20% of CIF value in 2006, and was maintained at that rate. The import sales tax was increased from 10% to 15% of CIF plus excise plus import duty in 2006, and was maintained at that rate. The environmental tax remained steady at GMD10/kg and the customs processing fee at 1.55% of CIF throughout this period. The ECOWAS levy was introduced in 2006 at 0.5% of CIF, and was increased to 1% in 2013.

Although the specific excise on cigarettes was raised at 3–4 years intervals during 2003–2013, it lacked annual adjustment for inflation and income growth, resulting in

a diminished effect on price increase and potential increase in the affordability of cigarettes. During this period, the annual average rate of inflation was 4.8%. The environmental tax, which is also a specific tax, was not adjusted for inflation at all, and lost value in real terms over time.

Until 2012, there was no excise tax on other tobacco products. In 2013, a weight-based specific excise of GMD37.5/kg was introduced (table 1). This excise tax was proposed to be raised to GMD150/kg by 2015. It is noteworthy that there was a wide discrepancy between the excise tax rates for cigarettes and for other tobacco products in 2013. Using a cigarette excise of GMD5/pack (weight ~ 20 g), the equivalent of cigarettes excise per 1 kg is GMD250, which is 6.7 times as high as the excise tax per kilogram of other tobacco products. Evidence suggests that this discrepancy in tax rates can give rise to wide divergence in the prices of cigarettes and other tobacco products, and in the event of tax and price increase induce cigarette smokers to switch to other tobacco products rather than quitting.⁴ Hence, the differential rate of taxation of different tobacco products has been viewed as detrimental to public health. The Article 6 Guidelines of the WHO FCTC recommend that all tobacco products be taxed in a comparable way, especially where the risk of substitution exists.

Similar to cigarettes, in 2006, the import duty on other tobacco products was increased from 18% to 20% of CIF value; the import sales tax was increased from 10% to 15% of CIF plus excise plus import duty; the customs processing fee remained unchanged at 1.55% of CIF and the ECOWAS levy was increased from 0.5% to 1% of CIF in 2013 (table 1). The environmental tax on other tobacco products was adjusted upward significantly in 2006 and 2010 and maintained at the same level as 2010 until 2013 (table 1). However, the rate of environmental tax on other tobacco products in 2013 was GMD75/kg, which was 7.5 times as high as the

Table 1 Cigarette and other tobacco product taxes in the Gambia, 2003–2013

	2003	2006	2010	2013
Cigarette				
Excise tax (GMD)	75/kg	150/kg	165/kg	5/pack
Import duty (% of CIF)	18%	20%	20%	20%
Import sales tax/VAT (% of CIF+excise+import duty)	10%	15%	15%	15%
Environmental tax (GMD/kg)	10	10	10	10
Customs processing fee (% of CIF)	1.55%	1.55%	1.55%	1.55%
ECOWAS levy (% of CIF)		0.5%	0.5%	1%
Other tobacco products				
Excise tax (GMD/kg)	NA	NA	NA	37.50
Import duty (% of CIF)	18%	20%	20%	20%
Import sales tax/VAT (% of CIF+excise+import duty)	10%	15%	15%	15%
Environmental tax (GMD/kg)	13.02	26.04	75.00	75.00
Customs processing fee (% of CIF)	1.55%	1.55%	1.55%	1.55%
ECOWAS levy		0.5%	0.5%	1%

CIF stands for cost, insurance and freight value. GMD stands for Gambian Dalasi, the local currency unit in the Gambia.

Source: Gambia Revenue Authority, Ministry of Finance and Economic Affairs, The Gambia.

environmental tax on cigarettes. Again, it was necessary to remove this variation in the tax rate between different tobacco products as per the Article 6 Guidelines of WHO FCTC.⁵

Effects of tax increases in 2013

In 2013, after the implementation of the specific excise based on quantity in place of weight on imported tobacco products, the excise tax per pack of cigarettes went up by 52%, from GMD3.30 to GMD5/pack. As a result, cigarette imports decreased significantly, from 1048.94 to 597.94 thousand kg between 2012 and 2013 (table 2), suggesting a decrease in tobacco consumption in the Gambia in response to tax and price increase. The CIF value of total imports increased, however, indicating that the importers were overshifting the tax increase to price increase by declaring higher CIF values of their imports. Imports of other tobacco products also dropped by 65% from 71.86 thousand kg in 2012 to 25.39 thousand kg in 2013.

Excise collection on cigarettes almost doubled from GMD88.62 million in 2012 to GMD166.91 million by the end of 2013 (table 2). GMD3.06 million was collected as

excise tax on other tobacco products in 2013, which more than doubled from GMD1.28 million in 2012. The collection of total tax, including excise, environmental tax, import duty, import sales tax, customs processing fee and ECOWAS levy, increased for cigarettes. However, it was reduced for other tobacco products, mostly due to the reduction in environmental tax. While the import quantity of other tobacco products decreased significantly, the environmental tax rate remained steady from 2010 until 2013, so the decreased environmental tax revenue collection from these products was expected. This decrease in environmental tax revenue more than offset the increase in excise revenue, with net reduction in total revenue collection on other tobacco products.

The total taxes collected from all tobacco products in 2012 of GMD155.18 million represented 7% of total customs and excise revenue and 38% of total excise revenue collection for the year. In 2013, these ratios increased to 10% and 46%, respectively, indicating that the role of tobacco taxation in domestic revenue mobilisation in the Gambia has grown significantly in the recent past.

Notwithstanding the improvement in revenue yield from tobacco products in 2013 compared with 2012, the

Table 2 Import of and revenue from tobacco products in the Gambia, 2012–2014

	2012	2013	2014
Import ('000 kg)	1120.81	623.33	550.81
Cigarettes	1048.94	597.94	540.36
Other tobacco products	71.86	25.39	10.45
CIF value of import (million GMD)	141.88	145.04	158.83
Cigarettes	136.67	141.67	152.04
Other tobacco products	5.21	3.37	6.79
Excise revenue (million GMD)	89.90	169.97	261.82
Cigarettes	88.62	166.91	257.69
Other tobacco products	1.28	3.06	4.13
Import duty (million GMD)	27.87	28.54	31.45
Cigarettes	27.09	27.89	30.35
Other tobacco products	0.78	0.65	1.10
Import sales tax/VAT (million GMD)	24.96	51.19	67.76
Cigarettes	24.39	50.14	65.97
Other tobacco products	0.72	1.05	1.79
Environmental tax (million GMD)	9.54	6.62	61.21
Cigarettes	5.50	4.97	60.29
Other tobacco products	4.04	1.65	0.92
Customs processing fee (million GMD)	2.20	2.25	2.47
Cigarettes	2.12	2.20	2.36
Other tobacco products	0.08	0.05	0.11
ECOWAS levy (million GMD)	0.71	1.45	1.59
Cigarettes	0.68	1.42	1.52
Other tobacco products	0.03	0.03	0.07
Total revenue (million GMD)	155.18	260.02	426.30
Cigarettes	148.41	253.53	418.19
Other tobacco products	6.92	6.49	8.11
Total revenue (million US\$)	4.95	7.84	12.33
Cigarette	4.74	7.65	12.10
Other tobacco products	0.22	0.20	0.23

GMD stands for Gambian Dalasi, the local currency unit in the Gambia. The official exchange rates are US\$1=GMD33.34 for 2012, US\$1=GMD33.15 for 2013 and US\$1=GMD34.57 for 2014.

Source: Gambia Revenue Authority, Ministry of Finance and Economic Affairs, The Gambia.

analysis of the current taxes on the product using the WHO tax simulation model TaXSiM indicated that the importers and distributors of tobacco products were making significantly higher profit estimated at GMD564.58 million in 2013, more than doubling from GMD270.54 million in 2012. This high level of profit for the importers and distributors resulted from significant increase in the price per pack across all brands of cigarette sold in the country. The estimated increase in the average retail price level for cigarettes far exceeded the increase in the excise tax rate in 2013—compare the increase in average price per pack from GMD18.69 in 2012 to GMD26.66 in 2013 with the specific excise tax increase from GMD3.30 to GMD5.00/pack. This price increase is above the inflation of the CIF value during this period that also accrued higher profit margin to the producer in the exporting countries, provided that there was no significant increase in the cost of production.

The excise tax of GMD5.00/pack only represented 18.8% of the retail price of cigarettes, which was lower than the regional average of 23% and far below the WHO-recommended share of 70%. Even including all other taxes, the total tax as a share of the retail price of cigarette was estimated at 30.2% in 2013.

The analysis of the existing tax system on tobacco products clearly indicated that the government still had room to further increase taxes on tobacco products without compromising revenues, while at the same time promoting healthy living through reduced tobacco consumption in the country.

The roadmap for tobacco tax policy changes in the Gambia, 2014–2016

Using the WHO tax simulation model TaXSiM, the TWG tested two different scenarios. The first scenario maintained the 2013 budget statement of increasing excise tax on cigarettes and other tobacco products to GMD6.00/pack and GMD75.00/kg, respectively. The second scenario projected the tax increase required to raise the average price level of cigarettes in the Gambia close to the regional average for Africa (US\$1.24/pack, equivalent to GMD38.86 in 2012 prices).

Under the second scenario, the TWG observed that to approximate the regional average price for Africa, the excise tax on cigarettes in the Gambia need to increase up to GMD15.00 pack. This target could be achieved gradually, over a 3-year period. With this target in view,

the TWG proposed that the excise tax per pack be raised from GMD5.00 in 2013 to GMD9.00 in 2014, to GMD12.00 in 2015 and to GMD15.00 in 2016 (table 3).

The TWG also noted that the environmental tax on cigarettes (GMD10.00/kg or GMD0.20/pack) is too low compared with the environmental tax on other tobacco products (GMD75.00/kg). Moreover, the environmental tax on cigarettes remained the same since 2003. Considering the erosion of real value due to inflation and the level of similar tax on other tobacco products, the TWG proposed increasing the environmental tax on cigarettes to GMD100.00/kg (equivalent to GMD 2.00/pack) in 2014, GMD 110.00/kg (or GMD2.20/pack) in 2015 and GMD120 (or GMD2.42/pack) in 2016. The gradual increase by 10% annually takes into account projected 5% inflation and 5% growth rate in per-capita GDP to keep the affordability of tobacco products from increasing. The projection of the inflation rate at 5% is based on the historical rates of inflation at 4.3%, 5.7% and 5.6%, respectively, in 2012, 2013 and 2014.

The excise tax on the other tobacco products introduced in 2013 at GMD37.50/kg was also low compared with the excise tax on cigarettes. The TWG considered increasing the excise tax on other tobacco products to GMD150.00/kg in 2014, GMD200.00/kg in 2015 and GMD300.00/kg in 2016.

Comparing the potential of revenue gain and reduction in tobacco consumption consequent on the deemed policy change, the TWG proposed the second scenario as the possible roadmap for the following 3-year period from 2014 to 2016. The roadmap as shown in table 3 was presented by the Minister of Finance and Economic Affairs Kebba S Touray in the budget speech on 20 December 2013 and was approved by the National Assembly. The planned tax rates for 2014, 2015 and 2016 have already been implemented.

Effects of tax increase in 2014

The increase in excise and environmental tax in cigarettes and other tobacco products in 2014 brought forth several outcomes. First, price increased by a much greater value than the tax-induced increase (table 4). The difference between the actual market price and the simulated price based on the TaXSiM is particularly pronounced for the expensive brands (eg, Marlboro, Camel and Regal), which are mostly consumed by high-income people who are normally relatively price-insensitive as

Table 3 The roadmap for tobacco tax policy changes in the Gambia, 2014–2016

	2013	2014	2015	2016
Cigarettes				
Excise tax rate (GMD/pack)	5.00	9.00	12.00	15.00
Environment tax rate (GMD/pack)	0.20	2.10	2.20	2.42
Other tobacco products				
Excise tax rate (GMD/kg)	37.50	150.00	200.00	300.00
Environment tax rate (GMD/kg)	75.00	100.00	110.00	120.00

Table 4 Prices of cigarette brands in the Gambia, 2012–2014

Brand	Market share in 2012 (%)	Market price 2013	Market price 2014	Simulated price 2014
Premium				
Marlboro	4.5	40	60	50.53
Midprice				
Camel	0.7	35	60	45.53
Regal	0.3	35	60	43.05
Piccadilly	24.8	30	40	40.35
Economy				
Bond Street	7.6	25	40	34.44
Monte Carlo	54.9	25	40	34.41
Royal Business	2.9	20	30	28.89
Sir	4.3	20	30	27.57

Simulated price is calculated from the WHO TaXSiM model applying the new tax rates effective in 2014.

Source: Gambia Revenue Authority, Ministry of Finance and Economic Affairs, The Gambia.

the global evidence suggests.^{6 7} It offers incentive to the importers and distributors to reap larger profit margins at the upper end of the price distribution by increasing price by a higher amount for higher-priced brands, while the tax liability is the same for all brands under the specific excise system. The market is, however, dominated by two brands, Monte Carlo and Piccadilly, which together occupy 80% of the market share. For Monte Carlo, the differential between actual price increase and tax-induced price increase from 2013 was moderate. For Piccadilly, the actual price approximately matched the tax-induced price.

Second, imports of cigarettes and other tobacco products fell (table 2) reflecting lower consumption of tobacco and improved public health. Third, the CIF value of cigarettes increased, which means the base of import duty, import sales tax, customs processing fee and ECOWAS levy increased, increasing the revenue collection from these taxes. Fourth, the environmental tax revenue increased 15-fold for cigarettes due to the significant jump in the environmental tax rate from GMD0.20/pack to GMD2.10/pack from 2013 to 2014. Fifth, the excise tax collection increased significantly, from GMD169.97 million to GMD261.82 million. However, for cigarettes, while the reported quantity of imports warranted excise revenue of GMD288.05 million, the actual revenue collected was GMD257.69 million. Thus, potential revenues of GMD30.35 million could have been generated from the reported imports, presumably through improved tax administration. Weak tax administration is, however, a partial reason for the divergence between the expected and actual revenue. It has been observed in this study that the actual price is greater than the simulated price. It implies that the increase in the non-tax component was greater than that assumed in the model, causing a greater-than-predicted decrease in consumption with adverse effect on revenue. Sixth, the importers' and distributors' margin came down from an estimated GMD659 million to GMD499 million. Thus, there was a resource transfer from the business profit to the government exchequer. Finally,

the excise tax share in retail price increased from an average of 18.8% in 2013 to 22.3% in 2014, and the total tax share increased from 30.2% to 38.1% over the same period.

DISCUSSION

According to the Pigouvian principle,⁸ excise tax is meant to be levied on the products or services that are socially undesirable (ie, social costs are higher than private costs). Environmental tax, which is designed to equal the marginal damage caused by environmental pollution from the production, distribution and consumption of a product or a service, is one of this kind. In the Gambia, excise tax on tobacco products has been distinguished from environmental tax to attribute damage to public health to tobacco consumption over and above the environmental externalities it causes.

This paper brings forward concrete evidence on the outcomes of increase in excise and environmental tax in the Gambia, a low-income country in Africa. It bears strong positive implications for tobacco control through taxation globally and in low-income countries in particular. Tobacco tax increase often faces opposition on the basis of the concern that it will lead to revenue loss from decreasing legal sale of tobacco products.⁹ This argument especially concerns the government, as the primary reason for taxation for any government is revenue generation. This is particularly relevant to the Gambia, which is a resource-constrained country that generates 10% of its customs and excise revenue from tobacco taxes alone. However, theory predicts that under inelastic demand conditions and low tax share in price, tax increase can lead to revenue gain, at least in the short to medium term.¹⁰ The MoFEA and the Gambia Revenue Authority fully appreciated this revenue potential, along with the power of tax increase in reducing tobacco demand, and proceeded to implement the tax increase following the WHO FCTC Article 6 Guidelines. The decrease in tobacco product import and the spectacular growth in tax revenue collection in

two consecutive years of tax increase proved the prognosis of economic theory to be correct, and the concerns about revenue loss to be unfounded. The findings of this paper indicate to the countries facing similar decisions about tax increase for tobacco control that the fear of revenue loss is a myth.

The Gambia further established two best practices in tobacco taxation. First, it increased the specific excise tax on an annual basis, keeping pace with inflation and income growth, with a view to decreasing the affordability of tobacco products. The global trend shows that cigarettes have become more affordable over time in developing countries.^{11 12} In order to reverse this trend, low-income countries must raise taxes such that real price increases do not fall short of income growth. Second, it harmonised the tax rates between cigarettes and other tobacco products in order to prevent substitution between tobacco products in the case of tax and price increase. A number of studies have shown that smokers may switch to cheaper tobacco products (eg, roll-your-own or smokeless tobacco) in response to a change in the relative price or tax.^{5 13–17} Thus, the Gambia not only stands as an interesting case study of the public health and revenue impact of tax increase, it adds to the evidence base of best practices in tobacco taxation in a small low-income setting.

In addition, this study identifies tobacco industry response to the increase in tax under the uniform-specific excise system. First, the industry tends to over-shift the increased burden of tax to consumers, as has been documented for the USA and South Africa.^{7 18 19} Second, under a uniform-specific system, the excise tax liability for brands of all price categories is the same. When the tax rate increases, the industry has the incentive to increase prices more for the higher-priced brands where demand is relatively price insensitive and market share is low.^{20 21} They extract more profit margin from the high end while paying the same amount of tax irrespective of the price of brands. They tend to keep the profit margin low for the brands that have relatively larger market share. A uniform-specific excise system thus allows the suppliers to cross-subsidise the price of popular brands with higher price increases for expensive brands that have low market share.

CONCLUSION

The Gambia employs a uniform specific excise system on tobacco products, an excise system that has proven to be administratively simple and effective in raising price and reducing consumption of tobacco products. However, the specific excise needs to be adjusted for inflation and income growth every year to prevent the real price from falling and the affordability of tobacco products from increasing. In 2013–2014, the Gambia Ministry of Finance and Economic Affairs raised the specific excise rate, thus increasing price, reducing consumption and generating significantly larger amount of

government revenue from tobacco products. This is a clear evidence of the win-win outcome of raising tobacco tax. In addition, the Gambia has set the example of harmonising tax rates between tobacco products that eliminates the substitution between tobacco products. Thus, the Gambia presents the scenario of best practice in tobacco taxation as per the Article 6 Guidelines of the WHO FCTC.

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Contributors NN planned the study and wrote the manuscript. YM collected the data from Gambia Revenue Authority and did the analysis. BK and BJ provided all the necessary information from the Ministry of Finance and Economic Affairs and contributed equally to the analysis. AEOO, NT-K and EHB contributed to the country-level intervention from WHO in conducting the study and in the revision of the manuscript.

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