Received: 22 November 2022 | Accepted: 23 December 2022

DOI: 10.1111/add.16146

DATA INSIGHT

ADDICTION SSA

Comparing taxes on alcoholic beverages in the Region of the Americas

Maxime Roche[1] | Rosa Carolina Sandoval[2] | Maristela G. Monteiro[2]

[1]Imperial College Business School, Centre for Health Economics and Policy Innovation, London, UK

[2]Pan American Health Organization, Washington, DC, USA

Correspondence
Maxime Roche, Imperial College Business School, Centre for Health Economics and Policy Innovation, South Kensington Campus, Exhibition Road, London SW7 2AZ, UK.
Email: m.roche21@imperial.ac.uk

Funding information
None.

Abstract

Background and Aims: Excise taxes represent one of the most cost-effective policies to reduce the harmful use of alcohol. Existing information about their design is limited and no standardized metric has been used to compare tax levels in the Region of the Americas. This study aimed to compare alcohol excise tax policies throughout the Americas, compare tax levels and consider opportunities to improve the impact of excise taxes on alcohol consumption and health.

Design and Setting: Descriptive analysis using a method developed by the Pan American Health Organization and adapted from the World Health Organization's tobacco tax monitoring. Data were collected by surveying ministries of finance and reviewing tax legislation in effect as of November 2020 in the Region of the Americas.

Measurements: Tax policy design indicators, taxes as a percentage of the retail price of the most-sold brand of beer, wine and spirits, including a weighted average indicator across beverage types, and tax levels per standard drink (10 g ethanol) in international dollars at purchasing power parity.

Findings: Thirty-three countries in the Americas (94%) apply excise taxes on alcoholic beverages, with Argentina and Uruguay not applying them to wine. There is significant heterogeneity in excise tax design across countries and beverage types. Only a third of amount-specific excise taxes are regularly adjusted to avoid erosion. Regional median excise taxes represent the highest share of the price for spirits (21.4%) and the lowest for wine (11.0%). The regional median consumption-weighted average excise tax share across all beverage types is 12.0%. Excise tax shares are generally higher in Latin America than in the Caribbean and Canada. Excise tax levels per standard drink are generally lower for spirits than for other beverages.

Conclusions: Alcohol excise tax policies vary significantly across the Americas, often reflecting national consumption patterns. To maximize their public health impact, tax rates could be increased and tax designs improved, particularly to ensure higher tax burdens on high-strength drinks.

KEYWORDS
Alcohol policy, alcohol taxation, fiscal policies, health economics, pricing policies, public health, tax design

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.
© 2023 Pan American Health Organization (PAHO/WHO) and The Authors; licensed by Society for the Study of Addiction. *Addiction* published by John Wiley & Sons Ltd on behalf of Society for the Study of Addiction.

INTRODUCTION

The World Health Organization (WHO) recommends increasing prices through excise taxes on alcoholic beverages as a 'best-buy' policy, one of the most cost-effective interventions to reduce the harmful use of alcohol and related harms [1]. The Region of the Americas has the highest prevalence of alcohol use disorder in women and second in men among WHO regions. Annual alcohol per-capita consumption (15+ years) is above the global average (8.0 l of pure alcohol versus 6.4 l) [2]. Although 33 of 35 WHO Member States apply excise taxes to alcoholic beverages in the Region [3], many have been historically driven by the purpose of generating revenue rather than discouraging unhealthy consumption.

It is important to comprehensively characterize the designs of alcohol excise taxes and assess them against international public health best practices. Given their heterogeneity, standardized indicators are required to compare tax levels among countries. It is possible to draw upon WHO's monitoring of tobacco taxation. Since 2008, WHO biennially collects tax and price data on tobacco products and publishes a tax share indicator, which measures the percentage of indirect taxes in the final retail price of a pack of the most-sold brand of 20 cigarettes in each WHO Member State [4]. Although such an indicator has limitations and other information is needed to assess the multiple dimensions of taxation policies, it has informed policymaking and enabled standardized comparisons of tobacco tax levels across countries and time, providing a powerful tool for advocacy [5].

The tax share indicator has previously been adapted to alcoholic beverages in Organization for Economic Co-operation and Development (OECD) countries [6]. Recently, it was also used to model the impact of introducing a minimum tax level on alcohol-attributable mortality in the WHO European Region [7]. The WHO Global survey on alcohol and health only collects limited qualitative tax design information, and alcohol tax levels are currently not systematically monitored at the global level [2].

This data note aimed to review the design and current implementation of excise taxes on alcoholic beverages across the Americas, compare tax levels through the estimation of standardized indicators and consider opportunities to improve their impact on alcohol consumption and health.

METHODS

We used data from a survey of officially nominated Ministry of Finance practitioners conducted by the Pan American Health Organization (PAHO) (hereafter called PAHO alcohol tax survey). The survey ran between November 2020 and October 2021 and was completed by 30 PAHO/WHO Member States (except Barbados, Cuba, Dominica, Haiti and the United States). It collected legislation on indirect taxes applied to alcoholic beverages—including excise taxes, value-added taxes (VAT) or sales taxes, import duties and other indirect taxes as applicable—and information on tax policy and administration. In addition, we conducted a comprehensive search for legislation through existing PAHO/WHO monitoring tools and official government websites. The data presented are based on legislation in effect as of 30 November 2020 (unless otherwise specified).

Price and product information (e.g. volume size and alcohol by volume) were requested on the most-sold brand of beer and wine and the most-sold brand of the most-sold category of spirits. Survey respondents were asked to determine popularity based on national market share information and to collect non-promotional prices in hypermarkets/supermarkets or drink specialists if alcoholic beverages were not available for sale in the former. To assess differences in tax levels, two volume sizes were requested for beer, an individual bottle or can of 330 ml and a large bottle of 750 ml or a six-pack of individual bottles or cans (hereafter called 'small' and 'large' beer, respectively, referring to the container size). We converted nominal prices and taxes in US dollars and international dollars at purchasing power parity (PPP I$) using the International Monetary Fund's International Financial Statistics database and implied PPP conversion rates for 2020, respectively [8,9].

The estimation of the excise and total tax share indicators was based on the method developed by PAHO and adapted from the well-established method used by WHO to estimate the tobacco tax share indicator [4,10]. We estimated excise tax levels per standard drink (10 g of ethanol), using reported alcohol by volume and an ethanol density of 0.789 g/ml. Finally, following Wall *et al*., we also estimated an overall consumption-weighted average excise tax share to represent an indicator of countries' alcohol tax stance [11], using the latest WHO data on national-level shares of recorded alcohol per-capita consumption (15+ years) by alcoholic beverage type [2]. An in-depth description of the study design, methods and limitations is publicly available [10] (https://iris.paho.org/handle/10665.2/56743).

RESULTS

As of November 2020, 33 PAHO/WHO Member States (94%) imposed excise taxes on at least one type of alcoholic beverage, with the exception of Antigua and Barbuda and Cuba. Wine was exempted in Argentina and Uruguay.

Tax design

Twenty-one countries applied the same excise tax type to all alcoholic beverages. The most common excise tax type was unitary (i.e. according to the beverage volume; 13 countries for beer, 11 wine and eight spirits), followed by *ad valorem* (i.e. according to the value of the beverage; 10 beer, nine wine and nine spirits) and specific (i.e. according to the alcohol content of the beverage; three beer, three wine and seven spirits). Some countries also used mixed excise tax structures (seven beer, eight wine and nine spirits). The latter were more prevalent in Latin America, whereas unitary taxes were more prevalent in the Caribbean, Canada and the United States. *Ad valorem*

13600443, 2023, 7, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/add.16146 by Imperial College London, Wiley Online Library on [06/07/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Country	Beer	Wine	Spirits
Antigua and Barbuda	-	-	-
Argentina	Ad valorem	-	Ad valorem
Bahamas	Ad valorem & Unitary	Ad valorem	Specific
Barbados[a]	Unitary	Unitary	Unitary
Belize	Unitary	Unitary	Unitary
Bolivia (Plurinational State of)	Ad valorem & Unitary	Unitary	Ad valorem & Unitary
Brazil[b]	Ad valorem	Ad valorem	Ad valorem
Canada[b]	Unitary	Unitary	Specific
Chile	Ad valorem	Ad valorem	Ad valorem
Colombia[c]	Ad valorem	Unitary & Specific	Unitary & Specific
Costa Rica	Ad valorem & Specific	Ad valorem & Specific	Ad valorem & Specific
Cuba	-	-	-
Dominica	Unitary	Unitary	Unitary
Dominican Republic	Ad valorem & Specific	Ad valorem & Specific	Ad valorem & Specific
Ecuador[d]	Ad valorem & Specific	Ad valorem & Specific	Ad valorem & Specific
El Salvador	Ad valorem & Specific	Ad valorem & Specific	Ad valorem & Specific
Grenada	Specific	Unitary	Specific
Guatemala	Ad valorem	Ad valorem	Ad valorem
Guyana	Unitary	Unitary	Unitary
Haiti[e]	Ad valorem	Ad valorem	Ad valorem
Honduras	Unitary	Ad valorem & Unitary	Ad valorem & Unitary
Jamaica	Specific	Specific	Specific
Mexico	Ad valorem	Ad valorem	Ad valorem
Nicaragua	Ad valorem & Specific	Ad valorem & Specific	Ad valorem & Specific
Panama	Specific	Specific	Specific
Paraguay	Ad valorem	Ad valorem	Ad valorem
Peru[f]	Unitary	Ad valorem OR Unitary	Ad valorem OR Unitary
Saint Kitts and Nevis	Ad valorem	Ad valorem	Ad valorem
Saint Lucia	Unitary	Unitary	Unitary
Saint Vincent and the Grenadines	Unitary	Unitary	Unitary
Suriname	Unitary	Specific	Unitary
Trinidad and Tobago	Unitary	Unitary	Specific
United States of America[b]	Unitary	Unitary	Specific
Uruguay[g]	Unitary	-	Unitary
Venezuela (Bolivarian Republic of)	Ad valorem	Ad valorem	Ad valorem

FIGURE 1 Excise tax type for beer, wine and spirits in the Region of the Americas in 2020 (based on legislation in effect as of 30 November 2020).

Source: Prepared by the authors using the study data.

Note: — = not applicable, no excise tax applied. [a]Barbados: for rum and tafia only, a specific excise tax per litre of pure alcohol is applied. [b]Brazil, Canada, United States: information only reported for the federal (national level) excise tax. [c]Colombia: for wine and spirits, the excise tax is structured as a mix of a specific tax and an *ad valorem* tax. This *ad valorem* tax applies on fixed tax base amounts—'precio de venta al público' (retail price)—per volume varying per beverage type and brand, effectively operating as a unitary tax and classified as such in this analysis. [d]Ecuador: the *ad valorem* component of the excise tax only applies if the producer or import price is higher than a fixed value per litre. The *ad valorem* rate then applies to the difference between the producer or import price and this threshold. [e]Haiti: the country did not participate in the Pan American Health Organization (PAHO) alcohol tax survey. From our search for legislation, we found 'Décret établissant le budget général de la république d'Haïti exercice 2020–2021' [Decree establishing the general budget of the Republic of Haiti], imposing an *ad valorem* excise tax on alcoholic beverages. However, the rates vary according to the origin of the beverage (i.e. locally produced versus imported). This could constitute a violation of national treatment, based on World Trade Organization's standards. [f]Peru: for wine and spirits, either an *ad valorem* excise tax or a unitary excise tax is applied, determined based on what results in the highest tax paid. [g]Uruguay: for beer and spirits, the excise tax is structured as an *ad valorem* tax applied on fixed tax base amounts—'precios fictos' (fictional prices)—per volume varying per beverage type, effectively operating as a unitary tax and classified as such in this analysis.

and specific taxes made up most of the mixed excise tax systems (Fig. 1).

For *ad valorem* excise taxes, the tax base is defined as the value of the taxed beverage, which may be assessed at different stages of the value chain, with important implications for their impact on tax retail prices. For locally produced beverages, the base was predominantly set close to the retail price, but eight countries used the producer's price whereas Nicaragua used the wholesaler's price, both representing lower tax bases. Most excise taxes on alcoholic beverages applied multiple rates (tiered design), as opposed to applying a

13600443, 2023, 7, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/add.16146 by Imperial College London, Wiley Online Library on [06/07/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

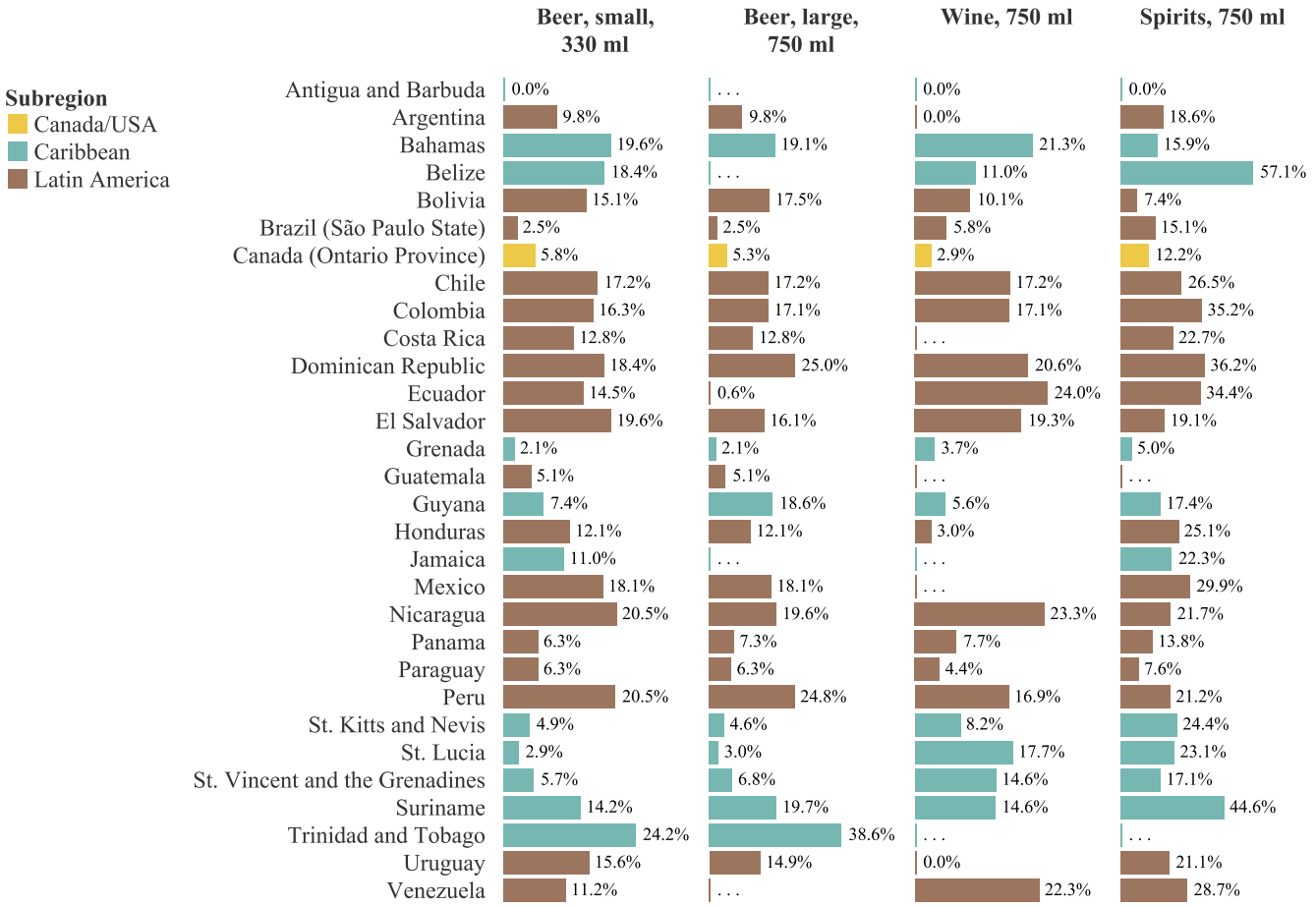

FIGURE 2 Excise tax share estimates for the most-sold brand of beer 330 and 750 ml, the most-sold brand of wine 750 ml and the most-sold brand of the most-sold category of spirits 750 ml, in the Region of the Americas 2020 (based on legislation in effect as of 30 November 2020).
Source: Prepared by the authors using the study data.
Note: … = no data available; ml = millilitres. Data only available for countries which completed the Pan American Health Organization (PAHO) alcohol tax survey, i.e. all PAHO Member States except Barbados, Cuba, Dominica, Haiti and the United States. Bolivia, Costa Rica, Dominican Republic, Paraguay and Suriname: price and tax data collected as of 31 March 2021. Brazil: retail price and tax data representing only the State of São Paulo. However, all indirect taxes applied on alcoholic beverages in Brazil are applied at federal level except the value-added tax, the rate of which varies by State. Canada: retail price and tax data representing only the Province of Ontario.

single rate to all alcoholic beverages (uniform design). Eleven countries based their tiers on alcohol content for at least one beverage type (Supporting information, Table S1).

Tax level

The regional median excise tax share was higher for spirits (21.4%), followed by 'large' beer (13.8%) and 'small' beer (12.5%) and finally wine (11.0%). Excise tax shares were generally higher in Latin America than in the Caribbean for all beverage types, whereas Canada had significantly lower excise tax shares than the median in both subregions (Fig. 2).

Supporting information, Figs S1 and S2 show consumption-weighted average excise tax share estimates across beverage types. The regional median was 12.0%. Using PPP I$, Fig. 3 compares excise tax levels per standard drink (10 g of ethanol). Estimates varied by a 13-fold difference for 'large' beer to a 30-fold difference for spirits between the highest and lowest countries.

Finally, Supporting information, Tables S2–S6 and Figs S3–S6 provide a more detailed presentation of tax share results, including the shares of each type of indirect tax and retail prices. The regional median total tax share was higher for spirits (35.9%), followed by wine (30.8%) and finally beer ('small' 28.0% and 'large' 28.6%). At the regional median, VAT was found to represent the highest share of prices for wine and second after excises for beer and spirits.

DISCUSSION

Our analysis illustrates that in the absence of a common regional legal framework mandating excise tax design, as in the European Union (EU) [12], the design of alcohol excise taxes is highly heterogeneous in the Americas. From a public health perspective, *ad valorem* taxes,

13600443, 2023, 7, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/add.16146 by Imperial College London, Wiley Online Library on [06/07/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

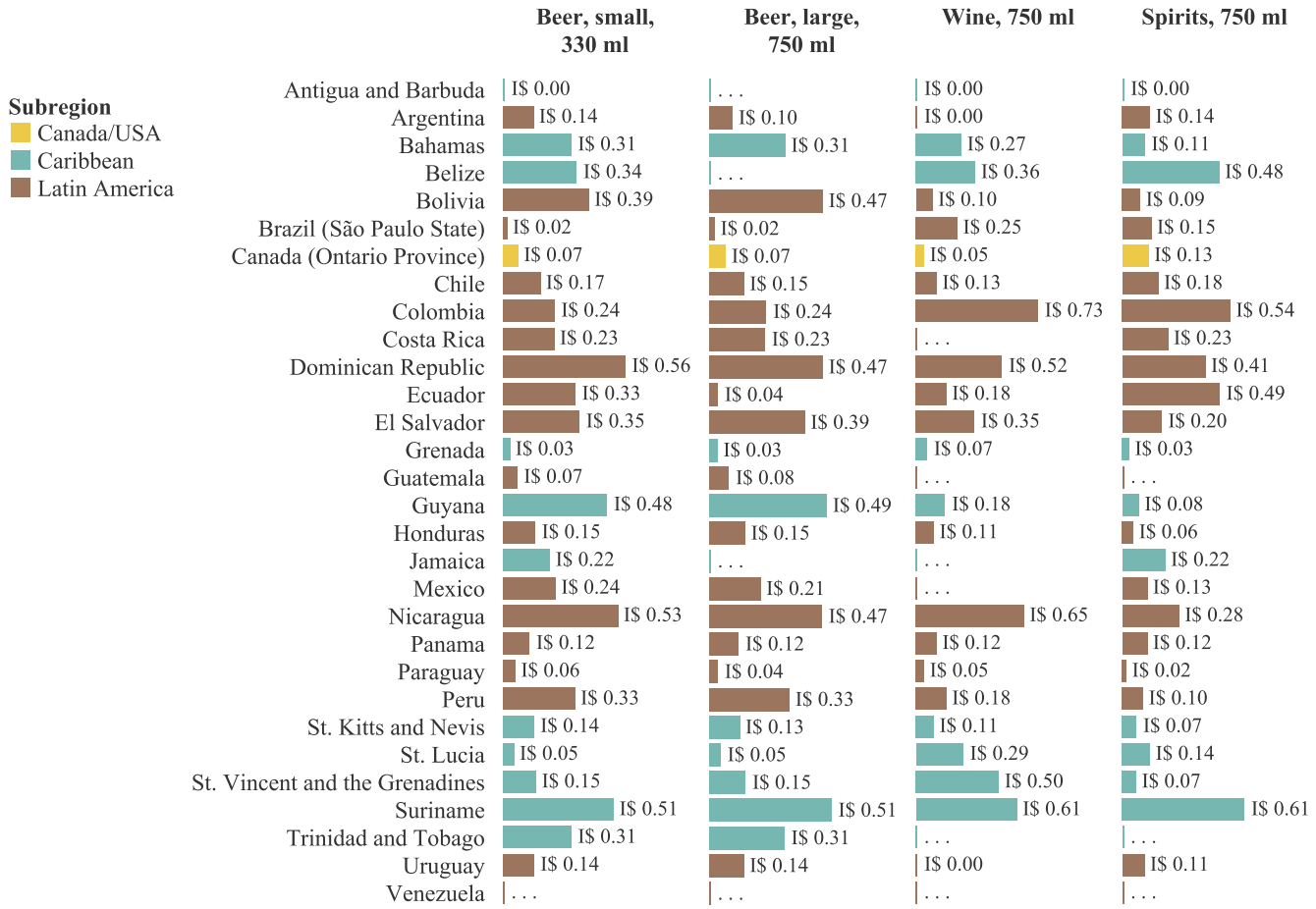

FIGURE 3 Excise tax per standard drink (10 g of ethanol) for the most-sold brand of beer 330 and 750 ml, the most-sold brand of wine 750 ml and the most-sold brand of the most-sold category of spirits 750 ml in the Region of the Americas 2020, in international dollars at purchasing power parity (based on legislation in effect as of 30 November 2020).

Source: Prepared by the authors using the study data.

Note: . = no data available; ml = millilitres; I$ = international dollar at purchasing power parity (PPP). Data only available for countries which completed the Pan American Health Organization (PAHO) alcohol tax survey, i.e. all PAHO Member States except Barbados, Cuba, Dominica, Haiti and the United States. Venezuela was excluded, as it represented an outlier due to its high 2020 PPP converter. Bolivia, Costa Rica, Dominican Republic, Paraguay and Suriname: price and tax data collected as of 31 March 2021. Brazil: retail price and tax data representing only the State of São Paulo. However, all indirect taxes applied on alcoholic beverages in Brazil are applied at federal level except the value-added tax, the rate of which varies by State. Canada: retail price and tax data representing only the Province of Ontario.

which represented a significant share of excise tax types in the Region, are not recommended, as they participate in widening the price dispersion, incentivizing consumers to switch to cheaper brands. Where alcohol consumption and the prevalence of drinking are high, specific taxation is likely to lead to larger reductions in harmful drinking by discouraging the consumption of high-strength drinks. Nevertheless, specific taxation may encourage drinking initiation among youths as they tend to consume low-strength beverages. Excise tax systems defined as *ad valorem* with a specific floor could contribute to reducing alcohol consumption among heavy drinkers as well as preventing drinking initiation among youths [13].

The legislation in two-thirds of countries applying an amount-specific component (either a unitary or specific tax) did not stipulate the periodic automatic adjustment of the tax for inflation or income growth, thus their real value is at risk of diminishing over time. For *ad valorem* excise taxes, countries applying tax rates on a base set closer to the final retail price had significantly higher *ad valorem* excise tax shares. Although from a public health perspective, tiered excise tax systems should be defined by alcohol strength, most relied upon beverage type or tariff codes. We also found evidence that tax designs may reflect national consumption patterns as Argentina and Uruguay exempted wine and some excise tax systems applied discounted tax rates on low-volume brewers (e.g. Canada and the United States) or the preferred national spirit category (e.g. rum in several Caribbean countries and pisco in Peru).

At least eight countries earmarked some portion of revenues from excise taxes on alcoholic beverages towards health programs, most commonly financing health promotion and sports. Although hard earmarking has been viewed as limiting flexibility in the allocation of revenues, soft earmarking of some portion of revenue for health

13600443, 2023, 7, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/add.16146 by Imperial College London, Wiley Online Library on [06/07/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

programs or other public goods may complement the intended health impact of alcohol taxes and increase their public support [14].

As among OECD and European countries [6,7], we found high heterogeneity in excise tax levels and lower tax burdens applied to wine. Regional median excise tax shares were lower than in the WHO European Region for spirits (21.4 Americas versus 30.6% Europe), but significantly higher for wine (11.0 versus 0.8%) and comparable for beer (12.5 versus 10.8%). For wine, this was also true for regional medians across countries with non-zero excise taxes (14.6 versus 8.2%) [7]. As for cigarettes, excise tax shares were found to be lower in the Caribbean than in Latin America. However, the regional median weighted average alcohol excise tax share was significantly lower than for cigarettes in 2020 (12.0 versus 36.7%) [4]. Evidence from the WHO European Region indicates that a minimum alcohol excise tax share as low as 25% could avert more than 40 000 deaths annually [7].

As expected, given the significant number of *ad valorem* excise taxes applied, we found lower excise tax levels per standard drink for larger beers. Argentina, Canada (Ontario Province), Grenada, Guatemala, Honduras, Panama, Paraguay, Saint Kitts and Nevis and Uruguay exhibit particularly low excise tax levels across all beverage types (lower than PPP I$ 0.15 per standard drink), participating in making alcohol consumption more affordable. Excise taxes per standard drink were generally lower for spirits than other beverage types. This result differs from previous findings in the EU, and is concerning from a public health perspective [12]. Excise taxes per standard drink should increase with alcohol strength or at least apply equivalently across beverage types [13].

Our study has important limitations. Price data only rely upon most sold brands. When national market share data were not available, survey respondents were asked to consult vendors. However, prices were collected in stores in the capital city and thus may not be nationally representative. When the volume size requested was not available, prices were adjusted to selected standardized volume sizes assuming linear transformations. This may have altered our estimation of tax levels. Finally, as some indirect taxes vary at the subnational level in Brazil and Canada, only the most populated State of São Paulo and Province of Ontario were surveyed.

Despite these limitations, this study represents the first region-wide review of the design and level of alcohol excise taxes in the Region of the Americas. Results show that alcohol excise taxes remain an under-utilized public health measure. Current tax designs could be improved to align with public health goals and tax levels raised to lower the affordability of alcohol. Our analysis can help to inform policymaking and foster a dialogue between health and finance authorities on excise taxes for policy coherence. We suggest periodic systematic monitoring of prices and taxes applied to alcoholic beverages regionally and globally.

AUTHOR CONTRIBUTIONS

Maxime Roche: Conceptualization (equal); data curation (lead); formal analysis (lead); investigation (equal); methodology (equal); validation (equal); visualization (lead); writing—original draft (lead); writing—review and editing (equal). **Rosa Carolina Sandoval:** Conceptualization (equal); investigation (equal); methodology (equal); supervision (equal); validation (equal); writing—review and editing (equal). **Maristela G. Monteiro:** Conceptualization (equal); investigation (equal); methodology (equal); supervision (equal); validation (equal); writing—review and editing (equal).

ACKNOWLEDGEMENTS

We would like to thank and acknowledge the valuable contributions of the Department of Noncommunicable Diseases and Mental Health at PAHO and the Fiscal Policies for Health team at WHO. We particularly thank Guillermo Paraje for his support and contributions to the development of the alcohol tax indicators presented in this manuscript. The authors also thank Guerric L'Huiller for assistance with data cleaning. Comments received on the methodology from the following individuals are greatly acknowledged: Colin Angus, Aveek Bhattacharya, Timothy Naimi, Guillermo Paraje, Mark Robinson and Tim Stockwell. Comments from conference participants at Alcohol Policy 19 are also gratefully acknowledged. Special thanks to all Ministry of Finance officials who participated in the PAHO alcohol tax survey and PAHO country offices staff who facilitated their participation. No funding was required for this study.

DECLARATION OF INTERESTS

The authors have no conflicts of interest to disclose. R.C.S. and M.G.M. are staff members of PAHO/WHO. The authors hold sole responsibility for the views expressed in the manuscript, which may not necessarily reflect the opinion or policy of PAHO/WHO.

DATA AVAILABILITY STATEMENT

The nominal retail price data collected through the PAHO alcohol tax survey are available in the Supporting Information. Tax information was derived from publicly available national legislation documents. A detailed description of the study design and methods is available (https://iris.paho.org/handle/10665.2/56743).

ORCID

Maxime Roche https://orcid.org/0000-0002-2797-7984
Maristela G. Monteiro https://orcid.org/0000-0001-9527-0967

REFERENCES

1. Chisholm D, Moro D, Bertram M, Pretorius C, Gmel G, Shield K, et al. Are the 'best buys' for alcohol control still valid? An update on the comparative cost-effectiveness of alcohol control strategies at the global level. J Stud Alcohol Drugs. 2018;79:514–22.
2. World Health Organization. Global Status Report on Alcohol and Health 2018 [internet] Geneva, Switzerland: World Health Organization; 2018 [cited 2021 Dec 23]. Available at: https://apps.who.int/iris/handle/10665/274603
3. World Health Organization. Assessing national capacity for the prevention and control of noncommunicable diseases: report of the 2019 global survey [Internet] Geneva, Switzerland: World Health Organization; 2020 [cited 2021 Dec 23]. Available at: https://apps.who.int/iris/handle/10665/331452

13600443, 2023, 7, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/add.16146 by Imperial College London, Wiley Online Library on [06/07/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

4. World Health Organization. WHO report on the global tobacco epidemic, 2021: addressing new and emerging products [Internet] Geneva, Switzerland: World Health Organization; 2021 [cited 2021 Aug 23]. Available at: https://apps.who.int/iris/handle/10665/343287
5. Sandoval RC, Roche M, Perucic AM, Alvarado M, Belausteguigoitia I, Galicia L, et al. Monitoring and measuring health taxes. In: Lauer JA, Sassi F, Soucat A, Vigo A, editorsHealth Taxes: Policy and Practice [internet] London, UK: World Scientific; 2023 [cited 2022 Nov 22]. doi: https://doi.org/10.1142/q0365
6. Ngo AP, Wang X, Slater S, Chriqui JF, Chaloupka FJ, Yang L, et al. Alcohol excise taxes as a percentage of retail alcohol prices in 26 OECD countries. Drug Alcohol Depend. 2021;219:108415.
7. Neufeld M, Rovira P, Ferreira-Borges C, Kilian C, Sassi F, Veryga A, et al. Impact of introducing a minimum alcohol tax share in retail prices on alcohol-attributable mortality in the WHO European Region: a modelling study. Lancet Reg Health. 2022;15:100325.
8. International Monetary Fund (IMF). Implied PPP Conversion Rates [internet] Washington, DC: IMF; 2021 [cited 2021 Sep 25]. Available at: https://www.imf.org/external/datamapper/PPPEX@WEO/OEMDC
9. International Monetary Fund (IMF). International Financial Statistics [internet] Washington, DC: IMF; 2021 [cited 2021 Sep 25]. Available at: https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b
10. Pan American Health Organization (PAHO). Calculating standardized tax share and other price and tax policy indicators for alcoholic beverages in the Region of the Americas: methodological note [internet] Washington, DC: PAHO; 2022 [cited 2022 Nov 22]. Available at: https://iris.paho.org/handle/10665.2/56743
11. Wall M, Casswell S, Callinan S, Chaiyasong S, Viet Cuong P, Gray-Phillip G, et al. Alcohol taxes' contribution to prices in high and middle-income countries: data from the International Alcohol Control Study. Drug Alcohol Rev. 2018;37:S27–35.
12. Angus C, Holmes J, Meier PS. Comparing alcohol taxation throughout the European Union. Addiction. 2019;114:1489–94.
13. Sornpaisarn B, Shield KD, Österberg E, Rehm J. Resource tool on alcohol taxation and pricing policies [internet] Geneva, Switzerland: World Health Organization; 2017 [cited 2021 Aug 23]. Available at: https://apps.who.int/iris/handle/10665/255795
14. Ozer C, Bloom D, Martinez Valle A, Banzon E, Mandeville K, Paul J, et al. Health earmarks and health taxes: what do we know? [internet] Washington, DC: World Bank; 2020 [cited 2021 Aug 23]. Available at: https://openknowledge.worldbank.org/handle/10986/34947

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Roche M, Sandoval RC, Monteiro MG. Comparing taxes on alcoholic beverages in the Region of the Americas. Addiction. 2023;118(7):1389–95. https://doi.org/10.1111/add.16146

13600443, 2023, 7, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/add.16146 by Imperial College London, Wiley Online Library on [06/07/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License