Latin America healthcare system overview: A comparative analysis of the fiscal space in healthcare

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6 March 2020

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Outline

- Aims and objectives of the study
- Framework and report structure
- Methods
- Findings and discussion
- Conclusions and policy options

Study aims and objectives

1. To study whether the fiscal space in healthcare for the Latin American region can be broadened

2. To identify existing and potential sin or other taxes to support the creation of fiscal space

3. To provide benchmark conclusions that could support country-specific public policies

Framework and report outline

Conceptual framework and analytical aims	**RQ1** Mapping financial and organisational aspects of healthcare systems	+	**RQ2** Evaluating macroeconomic performance	+	**RQ3** Understanding necessity and political feasibility of key financing mechanisms	+	**RQ4** Calculating available fiscal gap in each country, contextualized in macroeconomic trends	+	**RQ5** Simulating the potential yield from increases in VAT and sin taxation	=	Benchmarked conclusions and recommendations for country-specific public policies (Section 9)
Methods	Literature review		Variable and indicator data collection		Survey of key sector stakeholders		Variable and indicator data collection		Simulation modelling		
Report output	Section 3		Section 4		Section 5		Section 6		Section 7		

Methods

1. Secondary data collection

- Data collection across variables for trend analysis
- Literature review

2. Primary data collection

- Survey

3. Analysis

- Healthcare and economic trend analysis
- Survey response analysis
- Fiscal gap analysis
- Simulation of indirect and ‘harmful goods’ tax increases
- Impact analysis of simulated results

Background

Fiscal space

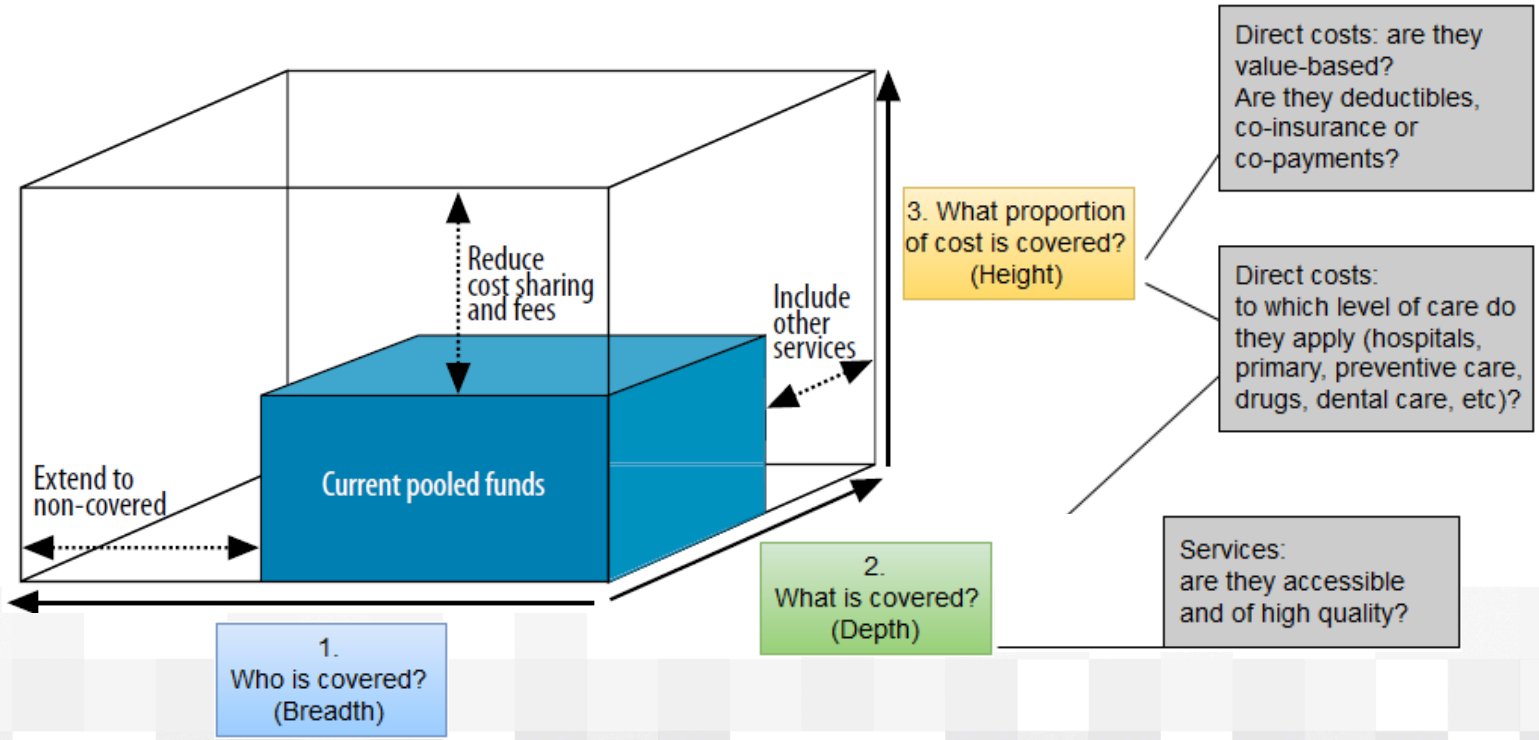
Capacity in a government's budget that can be used as a source of funds for a specific purpose without compromising its financial stability or position

(Heller, 2005)

The space between current levels of expenditure and maximum spending abilities

(IMF and World Bank, 2006)

Towards universal or increased health coverage (UHC)



Source: WHO 2010, p. 12

Sources of health care finance

Public

- *Taxation*
  - Local or/and national
  - Direct or/and indirect
  - General or/and earmarked
- *Social health insurance (SHI)*

Private

- *Private health insurance (PHI)*
- *Medical savings accounts (MSAs)*
- *User charges*
- *Informal payments*

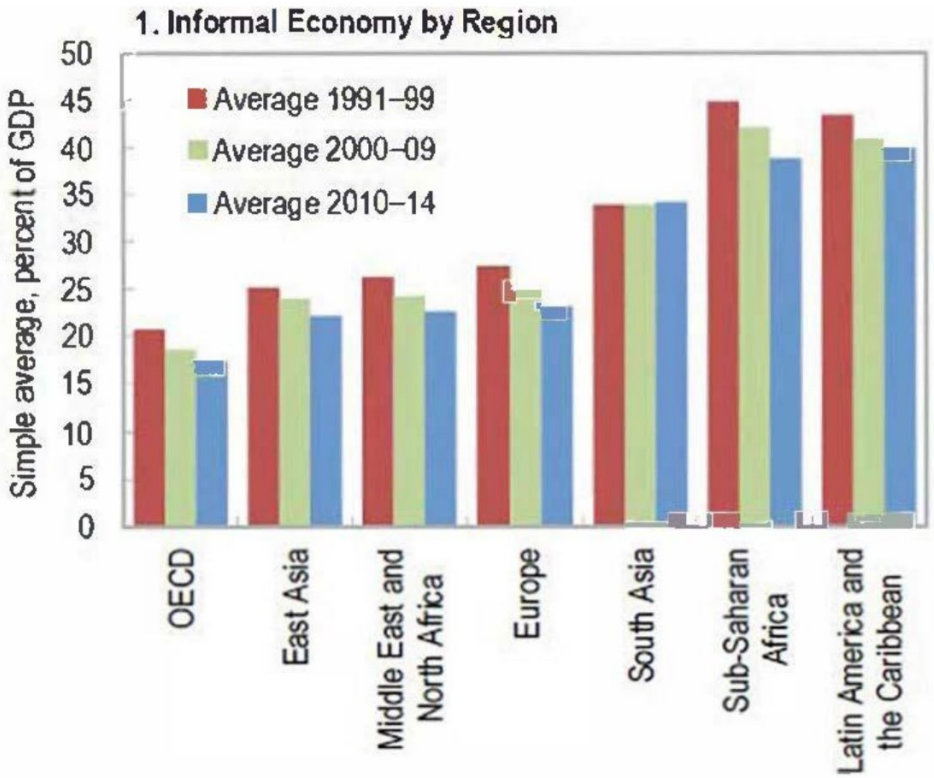
- Vary by extent of pooling and pre-payment
- Public detaches payment from health status
- Most systems draw on more than one source

Focus on indirect taxation

While indirect taxation may be more regressive, there are key elements which explain our focus:

- Limited potential of direct taxation to contribute to the creation of fiscal space, which is particularly salient across the geographic scope of the study
  - Increase in taxation can lead to tax avoidance or evasion
- Indirect taxation is easier in terms of collection than direct taxation, assuming good ability to collect taxation proceedings
  - Assumes good collection and 'delivery' mechanisms
- Captures (indirectly) income from the parallel/informal economy
- If focus is – in part – on "sin" taxes, other benefits may accrue, e.g. reduced consumption of "potentially harmful products" and positive impact on health outcomes (though this is a long-term benefit)

The impact of the informal economy as % of GDP



Source: IMF/OECD (2018)

- The graph shows the unweighted average share of informal economy during 2010-2014 in different regions of the world.
- In Latin America and Caribbean informal economy constitutes 40% of the GDP, the highest proportion in the world in 2010-14.
- These levels of informality have serious implications in terms of productivity and overall economic growth.
- Quality of regulation and the effectiveness of enforcement efforts play a major role on the extent of the parallel economy (OECD).
- Tax yield is low driven by high informal sector and weaker tax base

Sin taxes: Impact on consumption

Sugar Sweetened Beverages (SSBs) and unhealthy foods	▪ 12 studies, almost all focused on 2014 Mexico's SSBs tax (1 peso/L) or the 8% ad valorem tax on non-essential foods and energy foods with ≥275 kcal/100gr. ▪ Literature focused on Mexico due to the high levels of SSB consumption. Before tax implementation, Mexico had the highest worldwide soft drinks consumption (163 litres per capita) in 2011. ▪ After SSBs and non-essential foods tax introduction, there has been a reduction in SSBs and unhealthy foods purchases in the two years after the implementation, compared to the last two pre-tax years (2012-13). Reduction was generally higher in low socioeconomic groups (SES).
Tobacco	▪ 18 studies evaluated various aspects of tobacco use, i.e. the impact of tax implementation on consumer behaviour, the role of illicit tobacco product consumption, how price and income elasticity were shaped in each country and how elasticity could potentially change or was found to change following tax implementation. ▪ Data from 5 countries (Argentina, Colombia, Ecuador, Mexico, Peru) analysed price elasticity of demand and income elasticity of tobacco consumption. ▪ With a 10% increase in the final price of tobacco products, decrease in consumption is lower than 10%. Price elasticity: *Argentina*= -0.28; *Ecuador*= -0.87; *Mexico*= 0.52; *Peru*= -0.70; *Colombia*= -0/78. ▪ Income elasticity results demonstrated that with an increase in income, tobacco consumption increased more than proportionally.
Alcohol	▪ Only 1 study (Chavez, 2016) analysed alcohol consumption and the effect of price elasticity of demand for tobacco and alcohol. ▪ The study reported a higher price elasticity of demand for tobacco (-0.87) compared to alcohol (-0.44). ▪ The study also assessed the elasticity compared to total expenditure based on the quantity and quality of the goods, finding that the elasticity of alcohol consumption relating to total expenditure was 0.41 (compared to 0.5 for tobacco consumption), meaning that the variation in the quantity of consumed alcohol was relatively inelastic compared to the tobacco when total expenditure increased.

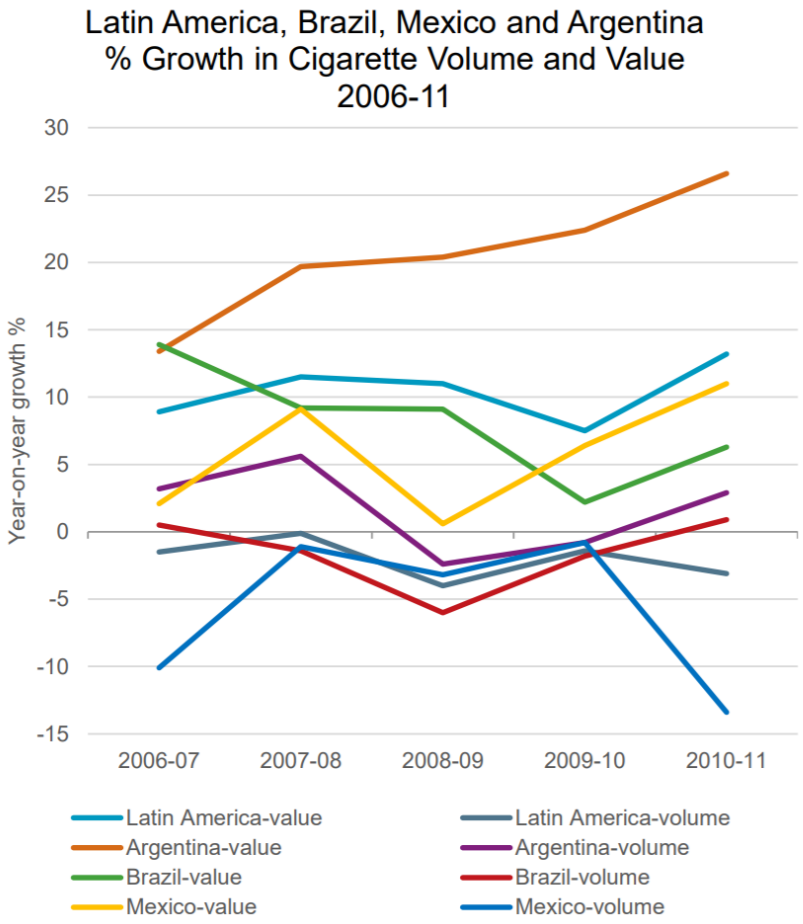
Sin taxes: Impact on revenue generation

Sugar Sweetened Beverages (SSBs) and unhealthy foods	▪ The only study (Sanchez-Romero et al, 2016) addressing the SSB impact simulated how a potential reduction in SSB intake would impact on direct diabetes healthcare costs in Mexico in terms of potential savings generated (rather than contributing the tax revenue generation). ▪ Simulation results reported that, with a 10% reduction 983 million international dollars would have been saved in a time span of 9 years, while a 20% reduction would have led to a saving of 1.9 billion international dollars
Tobacco	▪ of 8 studies included for the revenue endpoint, 7 focused on revenues from tobacco taxation ▪ According to a simulation study (Goodchild et al. 2017) a 50% tobacco tax increase across the Latin American region would raise weighted average tobacco product prices by 28%, generate US$ 7 million revenue (+32%), and reduce the volume consumed by 7%; this trend would be traced in nearly all Latin American countries ▪ Based on the Laffer point, in Mexico a 100% price increase of tobacco tax in a low-revenue scenario would be beneficial for revenues and sustainable for the market (Kostova et al, 2014) ▪ Brazil tobacco tax reform led to a double-up of revenue collection from 2006 to 2013 albeit there was an increase in the illicit market, both in absolute terms and proportionally to the legal market (illicit daily tobacco consumption moved from 16.6% in 2008 to 31.1% in 2013)

Sin taxes: Impact on health improvement

Sugar Sweetened Beverages (SSBs) and unhealthy foods	▪ Effects of SSBs taxation on health were analysed in three studies (Sanchez-Romero et al, 2016; Cominato et al, 2018; Iglesias et al, 2016), all related to Mexico. ▪ Mexican population suffers from high rates of diabetes, excess weight and obesity, and cardiometabolic problems, all of which are strongly associated with increased SSB intake. ▪ Sanchez-Romero et al, (2016) simulated the effects of two scenarios, a 10% and a 20% reduction in consumption, both with a 39% calorie compensation, and their impact after 10 years. Results showed a significant reduction in people affected by diabetes, strokes or heart attacks and an overall reduction in deaths, particularly in the age group 35-49. The results were proportionally similar in the second scenario ▪ front-of-package labels and awareness programs have a significant effect on the prevention of childhood obesity in the Latin American region (Cominato et al, 2018)
Tobacco	▪ 8 studies assessed the impact of tobacco on health outcomes with a focus on five countries (Peru, Argentina, Mexico, Panama and Colombia) ▪ In Peru it was estimated that in 2015 31% of total deaths (approximately 16,833 out of 54,301) in the country were associated with tobacco consumption. With a 25% price increase in tobacco through taxation could reduce the number of deaths by 6,695 over a period of ten years; while a 50% increase would potentially avoid 13,391 deaths, and with a 100% price increase in tobacco taxation, the avoided deaths in the next ten years would quadruple to 26,782 (Malik et al, 2013). ▪ A simulation model was developed to assess how tax increases in the retail price of tobacco would impact avoidable deaths in Argentina (Ferrante et al, 2007). With an 85% increase, 7,581 deaths per year would be avoided until 2034 ▪ Simsmoke model was developed to estimate that the implemented policies in Mexico (taxation, health warnings, smoke-free air laws, advertising restrictions), contributed to avoid 3,000 deaths in 2013, and an overall reduction in the death rate by 10,800 in the 2002-2013 period ▪ With regards to Colombia (James et al, 2019), the authors simulated how the 2016 average price increase on cigarettes would result in additional years of life gained (YLG). In 20 years, the authors expected about 191000 YLG, of which the 50% would come from the two groups with poorest income quintiles, and only 28% from the group with the highest income quintiles.

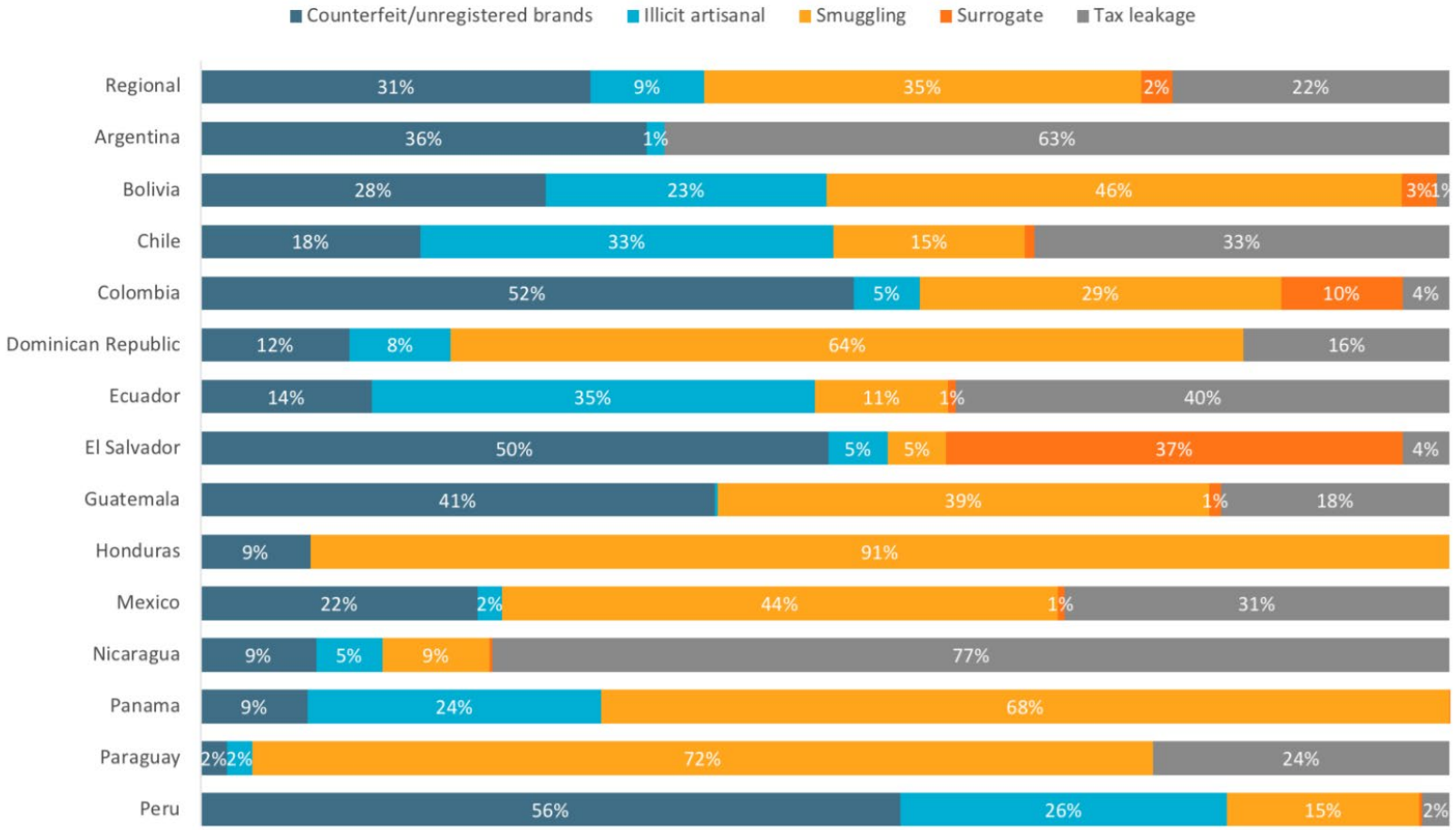
Cigarette volume and value in Latin America



Source: Euromonitor (2013)

- Latin America accounted for 9% of global illicit trade in cigarettes, while the global share of legal cigarettes was 4% in 2011 (Euromonitor).
- In the same year (2011), illicit sales increased by 7% in the region, in view of a 2% illicit sales increase at a global level.
- Price increases caused by tobacco tax implementation in Brazil and Mexico contributed to this shift.
- Price can impact on the illicit market share, however lax controls on the borders and the ready availability of counterfeit and smuggled goods from some Latin American countries have a relevant impact as well (Euromonitor).

Illicit alcohol volume consumed in Latin America by category (2017)



Source: Euromonitor International (2018)

- **Smuggling** turns out to have the greatest share of illicit alcohol volume in the region
- **Mexico** has the largest illicit alcohol market in volume in the region
- **Surrogate**: Alcoholic beverages legally manufactured in the country, but for which required taxes have not been paid
- **Tax leakage**: Alcohol not meant for human consumption but diverted to the market for alcoholic beverages (e.g. pharmaceutical alcohol, mouthwash, perfume)

OECD: Wasteful spending on health

- *One in ten patients in OECD countries is unnecessarily harmed at the point of care.*
- *More than 10% of hospital expenditure goes to correcting preventable medical mistakes or infections that people catch in hospitals across a range of OECD countries.*
- *One in three babies in OECD countries is delivered by caesarean section, whereas medical indications suggest that C-section rates should be 15% at most. They are above 35% in seven OECD countries and close to 15% only in Iceland, the Netherlands, Finland and Israel.*
- *The market penetration of generic pharmaceuticals ranges between 10-80% across OECD countries.*
- *Australia, Belgium, Canada, France, Italy and Portugal report at least one in five emergency department visits as inappropriate.*
- *The costs of administering health systems represents on average 3% of health spending but varies in a ratio of one to seven across OECD countries, with no obvious correlation with health system performance.*
- *On average, the loss to fraud and error is more than 6% of health expenditure and one third of OECD citizens consider the health sector to be corrupt or extremely corrupt (45% globally).*

Leading causes of inefficiency in health systems

Ten leading causes of inefficiency in health systems

Medicines
- underuse of generics and higher than necessary prices for medicines
- use of sub-standard and counterfeit medicines
- inappropriate or ineffective use of medicines

Products and services
- oversupply and overuse of equipment, investigations and procedures

Health sector workers
- inappropriate or costly staff mix, unmotivated workers

Services
- inappropriate hospital admissions and length of stay
- inappropriate hospital size (low use of infrastructure)
- medical errors and sub-optimal quality of care

Leakages
- waste, corruption, fraud

Interventions
- inefficient mix or inappropriate level of strategies

Source: WHO (2010).

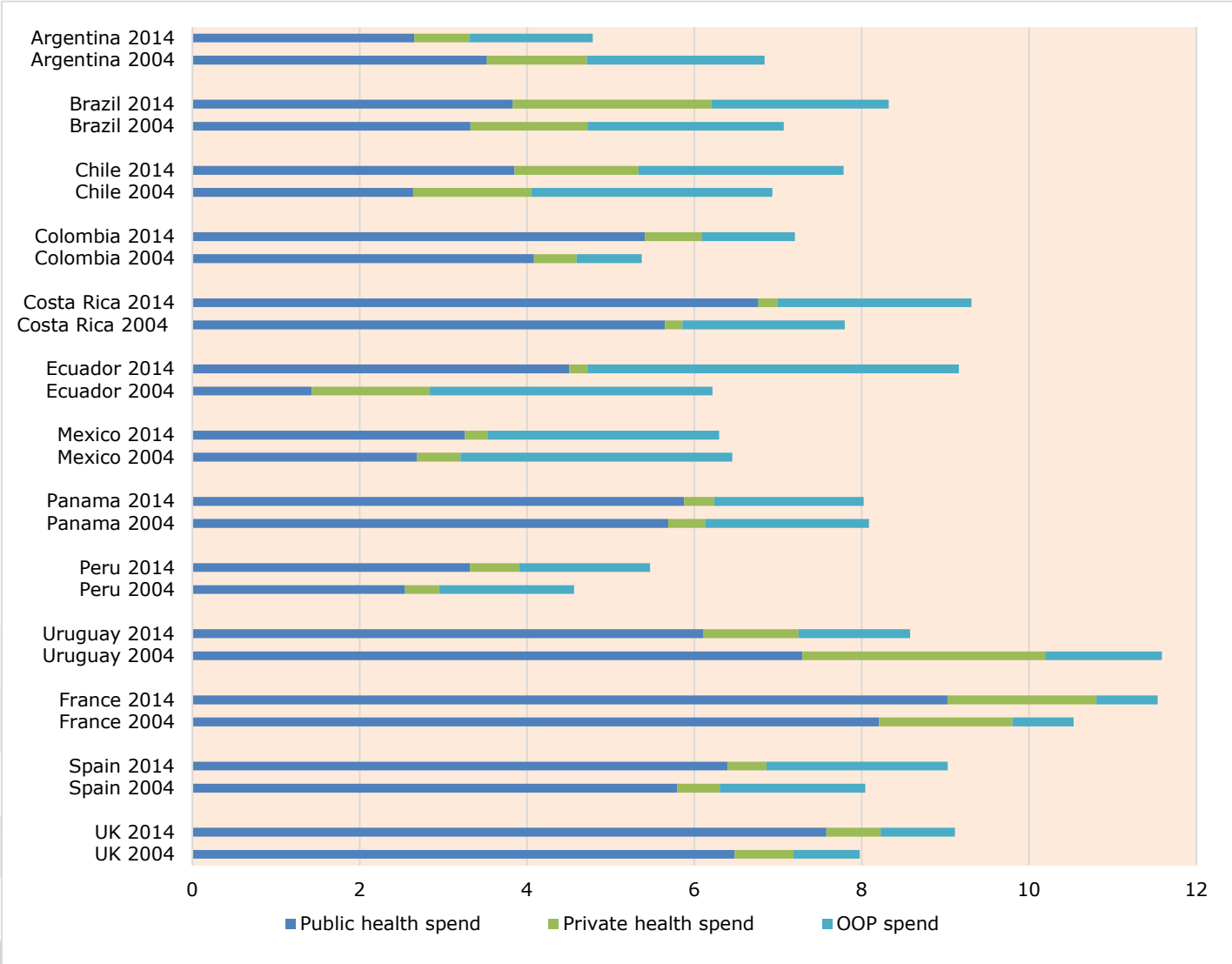
Research Question 1:

Key organizational and financial factors in each healthcare system?

(Total) Health spending in context

	Health spend	Military spend	Education spend	Social pension spend
	% GDP	*% GDP*	*% GDP*	*% GDP*
ARGENTINA	4.88	0.81	5.88	0.50
BRAZIL	3.81	1.35	5.95	0.50
CHILE	4.91	1.92	4.90	2.90
COLOMBIA	4.13	3.08	4.48	0.10
COSTA RICA	6.19	0	7.06	N/A
ECUADOR	4.24	2.51	5.00	0.30
MEXICO	3.06	0.56	5.33	2.30
PANAMA	4.32	0	3.19	0.20
PERU	3.25	1.30	3.81	0.10
URUGUAY	6.44	1.88	4.36	0.50
FRANCE	8.73	2.33	5.52	13.80
SPAIN	6.51	1.13	4.28	11.40
UK	7.94	1.81	5.63	6.10

Health spending as % GDP, 2004-2014



Progress towards UHC in LatAm countries, 2018

	Services	Costs		Population Coverage
		OOP expenditure	Catastrophic expenditure	
Argentina	X	X	X	.
Brazil	✓	X	X	.
Chile	X	X	X	-
Colombia	X	X	X	✓
Costa Rica	X	-	X	-
Ecuador	X	X	X	.
Mexico	X	-	-	.
Panama	X	-	✓	-
Peru	✓	-	-	X
Uruguay	✓	X	X	X

Note on methods and sources:
- For *services*, the WHO / World Bank UHC service coverage index was used;
- For *costs*, OOP spending rates and catastrophic cost rates (10% of income);
- For *population coverage*, the most recent available rates of insurance coverage.

Research Question 2:

What is the macroeconomic performance in the study countries and how sustainable is it over the longer term? What is the balance of investment in health vs investment in other human services?

Indicators – financial stability

- The financial stability of a country, in turn influencing fiscal space, is reviewed through the following indicators:

  - GDP growth
  - Fiscal deficit
  - Sovereign debt
  - Inflation
  - Current account balance
  - Sovereign debt credit ratings

Health spending in context: Key macro-economic indicators

	GDP growth	Fiscal balance	Debt	Inflation	Current account balance
Argentina	✓	x	x	n/a	x
Brazil	x	x	x	x	–
Chile	–	–	–	–	–
Colombia	–	–	x	x	x
Costa Rica	✓	–	x	–	x
Ecuador	✓	x	-	–	–
Mexico	✓	–	✓	–	–
Panama	✓	–	–	–	x
Peru	✓	✓	✓	–	–
Uruguay	✓	x	x	x	✓

Note on methods and sources:
- For *GDP growth*, the benchmark of 2-3% was utilised, and evaluated as good over 2%, average at 1-2% and poor under 1%.
- For *fiscal balance*, we evaluated as good a surplus, average 0-3% deficit, and poor over 3% deficit.
- For *debt*, the debt-to-GDP ratio of 40% for developing countries was used, and evaluated as good below 30%, average at 30-40% and poor over 40%.
- For *inflation*, the benchmark of 2-2.5% was utilised, and assessed as good 2-2.5%, average 2% above/below 2-2.5%, and poor more than 2% above/below 2-2.5%.
- For *current account balance,* we evaluated as good a surplus, average 0-3% deficit, and poor over 3% deficit.

Credit-ratings

Country	Credit-worthiness
Argentina	✗
Brazil	✗
Chile	✓
Colombia	✓
Costa Rica	✗
Ecuador	✗
Mexico	✓
Panama	✓
Peru	✓
Uruguay	✓
France	✓
Spain	✓
United Kingdom	✓

Research Question 3:

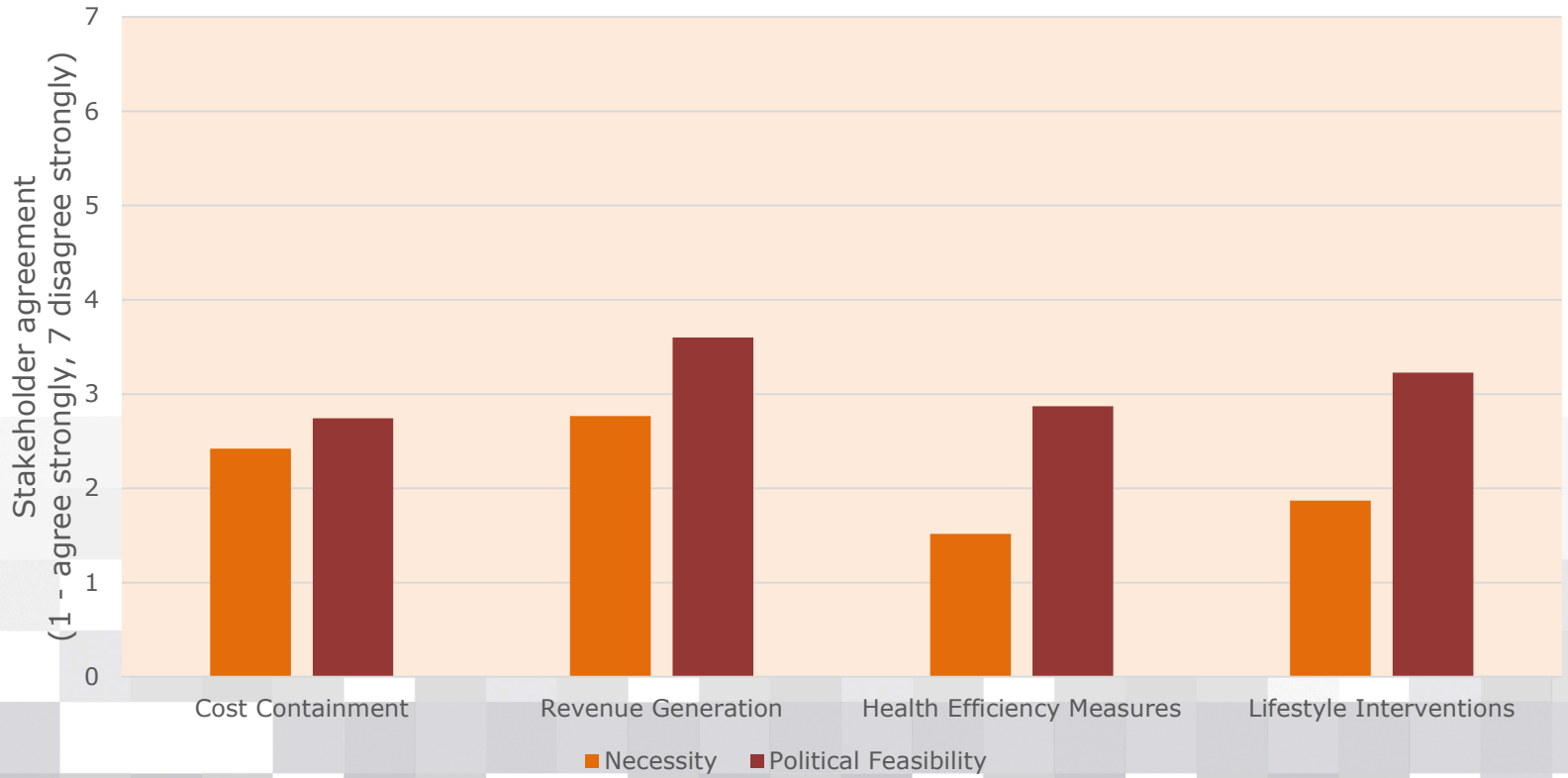
How are key financing mechanisms perceived by policy-makers & stakeholders in terms of political feasibility and necessity?

Survey on healthcare financing preferences

Variable	Total respondents	Percentage
Affiliation (n=673)		
Academia	88	13%
Government decision-making	222	33%
Provider	40	6%
Private sector/Industry	209	31%
Other (health professionals, think-tanks, NGO)	114	17%
Country (n=673)		
Latin America	458	68%
Argentina	*66*	*14%*[1]
Brazil	*117*	*26%*
Chile	*31*	*7%*
Colombia	*47*	*10%*
Costa Rica	*13*	*3%*
Ecuador	*19*	*4%*
Mexico	*101*	*22%*
Panama	*14*	*3%*
Peru	*27*	*6%*
Uruguay	*23*	*5%*
Comparator countries (France, Spain, UK)	215	32%
Gender (n=673)		
Male	384	57%
Female	289	43%

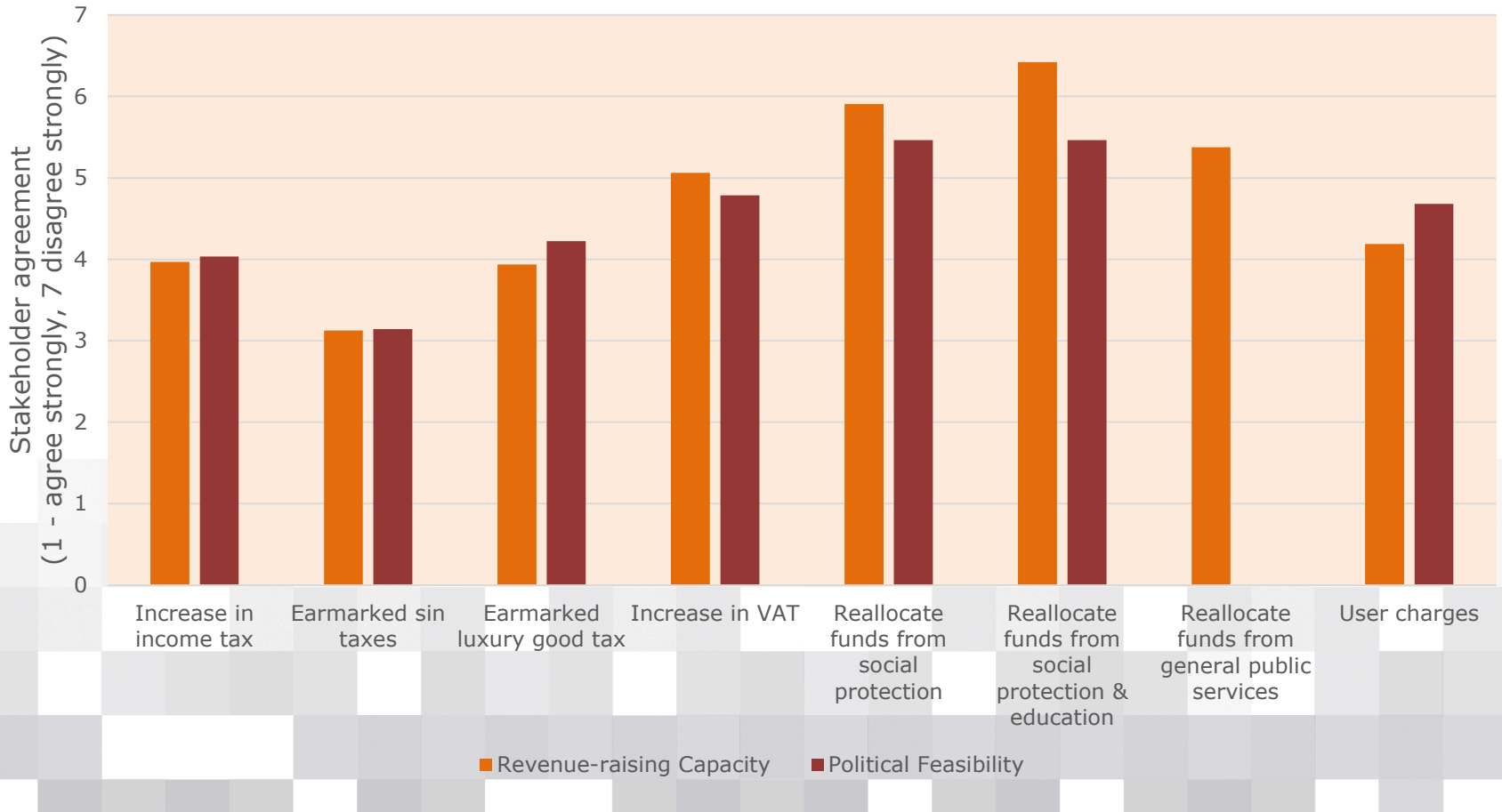
Stakeholder input via the survey: Necessity & Political feasibility of certain financing mechanisms

Perceived necessity and political feasibility of major mechanisms for sustainable financing: Stakeholders in Latin American countries strongly agree or agree on the necessity and political feasibility of introducing measures to improve efficiency, increase revenue and contain the rate of cost increases



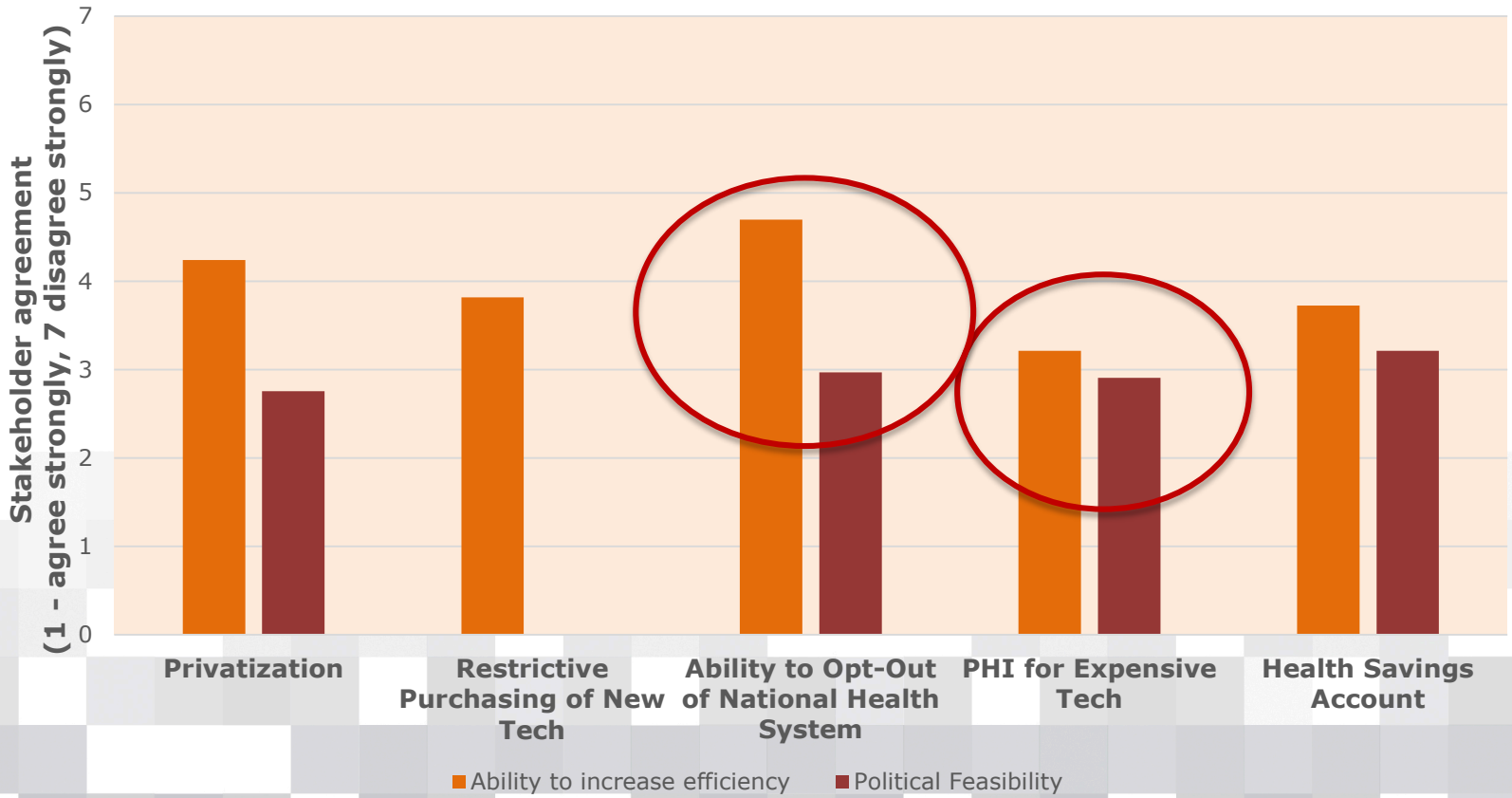
Stakeholder input via the survey: Revenue generation mechanisms

Stakeholders agree that earmarked taxes, VAT and income tax are better in terms of revenue-raising capacity and political feasibility compared with other forms of taxation (e.g. income tax) or re-allocation from other human/social services



Stakeholder input via the survey: Health efficiency mechanisms

Stakeholders do not believe that opting out of national health care systems is not necessarily going to improve their efficiency, but having some form of top-up insurance for expensive technologies or procedures would be desirable from an efficiency and a political feasibility perspective

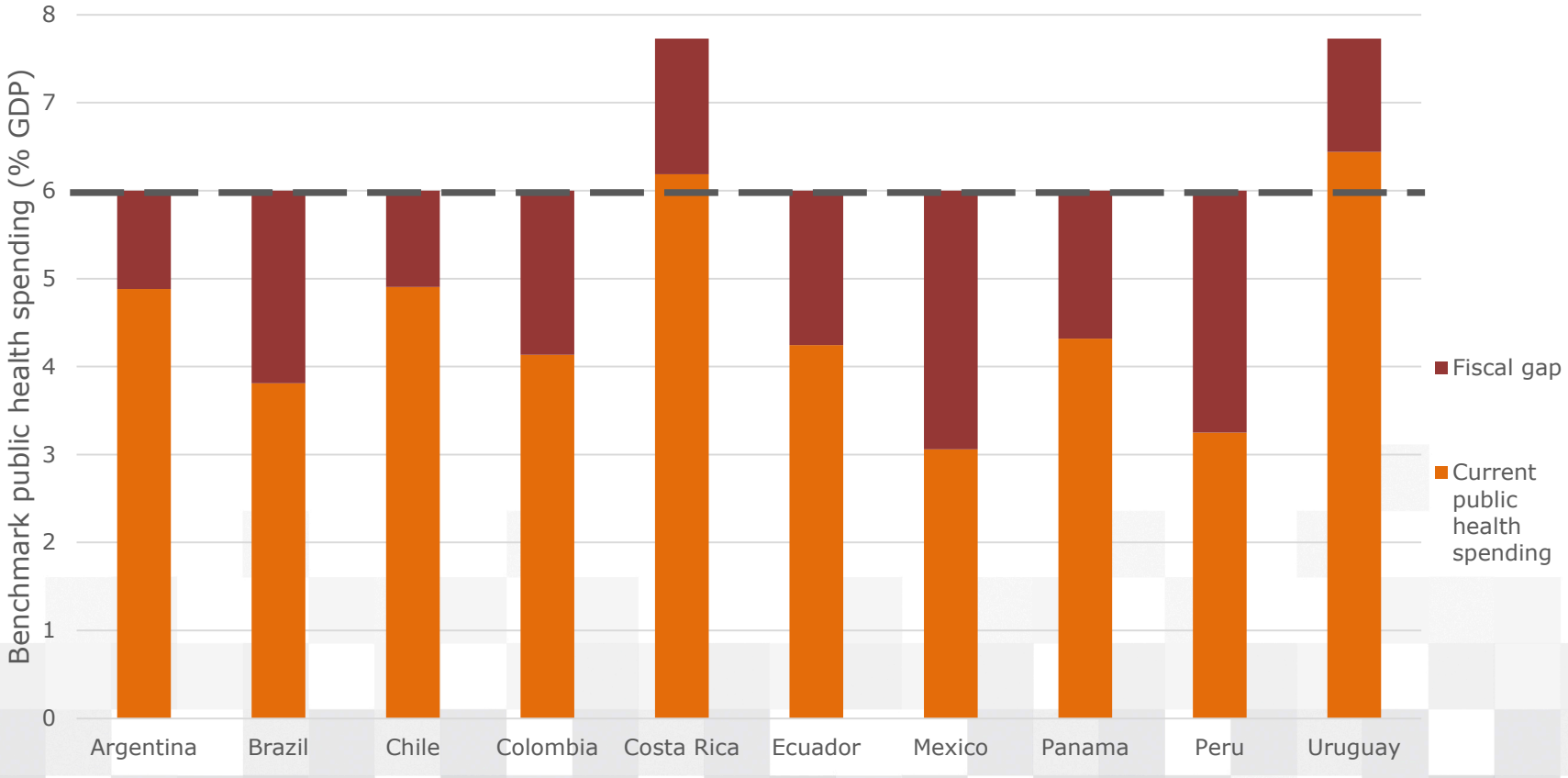


Research Question 4:

How large is the fiscal gap in healthcare spending in the countries?

Fiscal gap in health care spending

Fiscal gap in health care is the distance between “actual” and “desirable” health spending based on the WHO benchmark of health spending being equal to 6% of GDP



Note: Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Panama and Peru benchmarked against 2014 PAHO benchmark of 6% of GDP; Costa Rica and Uruguay benchmarked against the average public spend on health across the three comparator countries (7.73% of GDP)

Cost of increasing public healthcare financing and resources needed

	Cost of increasing public healthcare financing (% GDP)	Cost of increasing public healthcare financing ($, billions)
Argentina	1.12	9.89
Brazil	2.19	70.62
Chile	1.09	4.43
Colombia	1.87	12.44
Costa Rica	1.54	1.16
Ecuador	1.76	3.25
Mexico	2.94	63.82
Panama	1.68	1.48
Peru	2.75	10.82
Uruguay	1.29	0.93

Research Question 5:

How can increases in existing, or implementation of new, VAT or earmarked sin taxes fill the fiscal space?

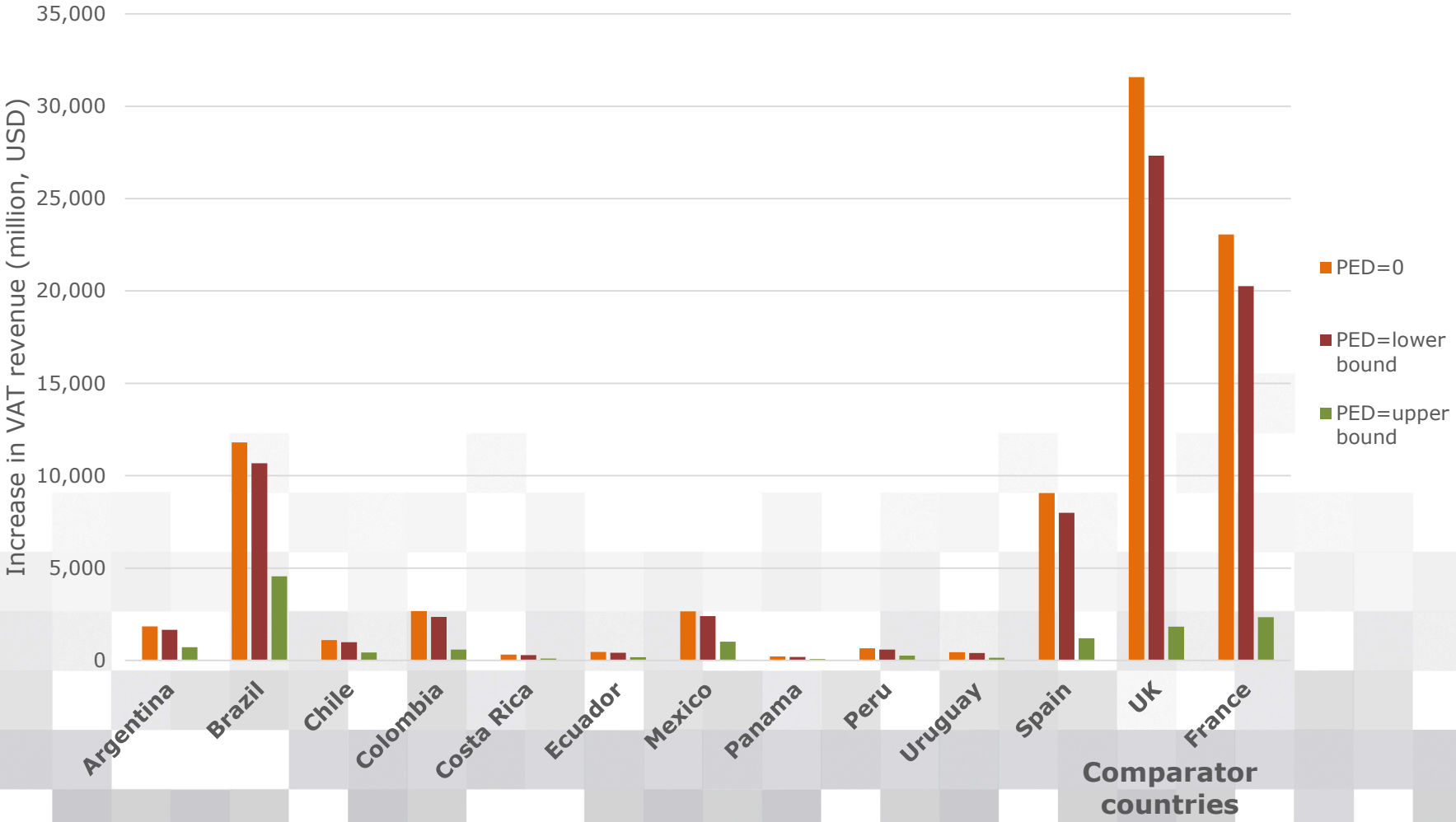
VAT: Maximum achievable increase in VAT revenue (USD million)

1% increase in VAT

can raise a maximum of between

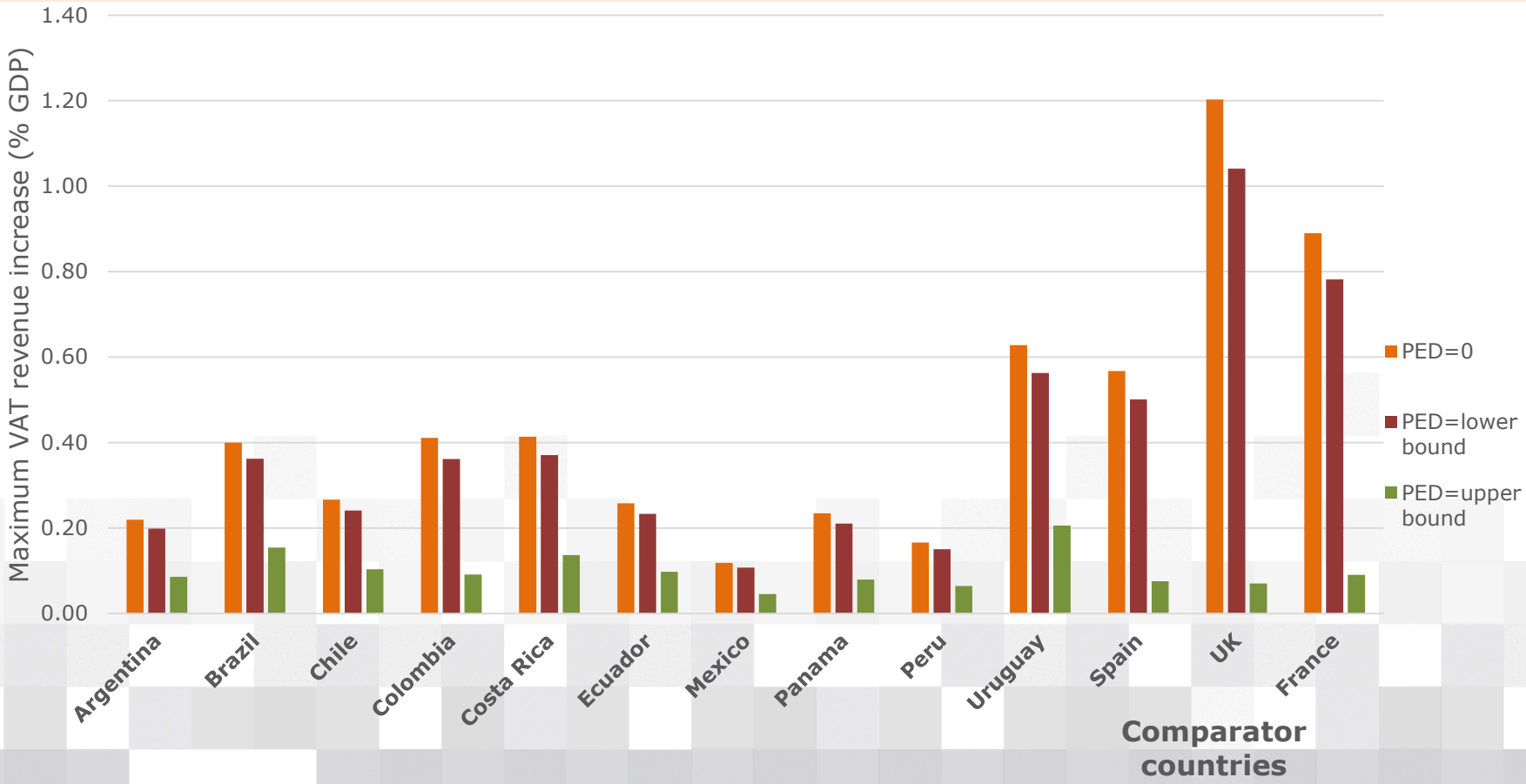
$214m (Panama) – **$11,805m** (Brazil)

Simulated effect of a 1% increase in VAT in USD mn, alongside the impact of the price elasticity of demand (PED)



VAT: Maximum achievable increase in VAT revenue (% GDP)

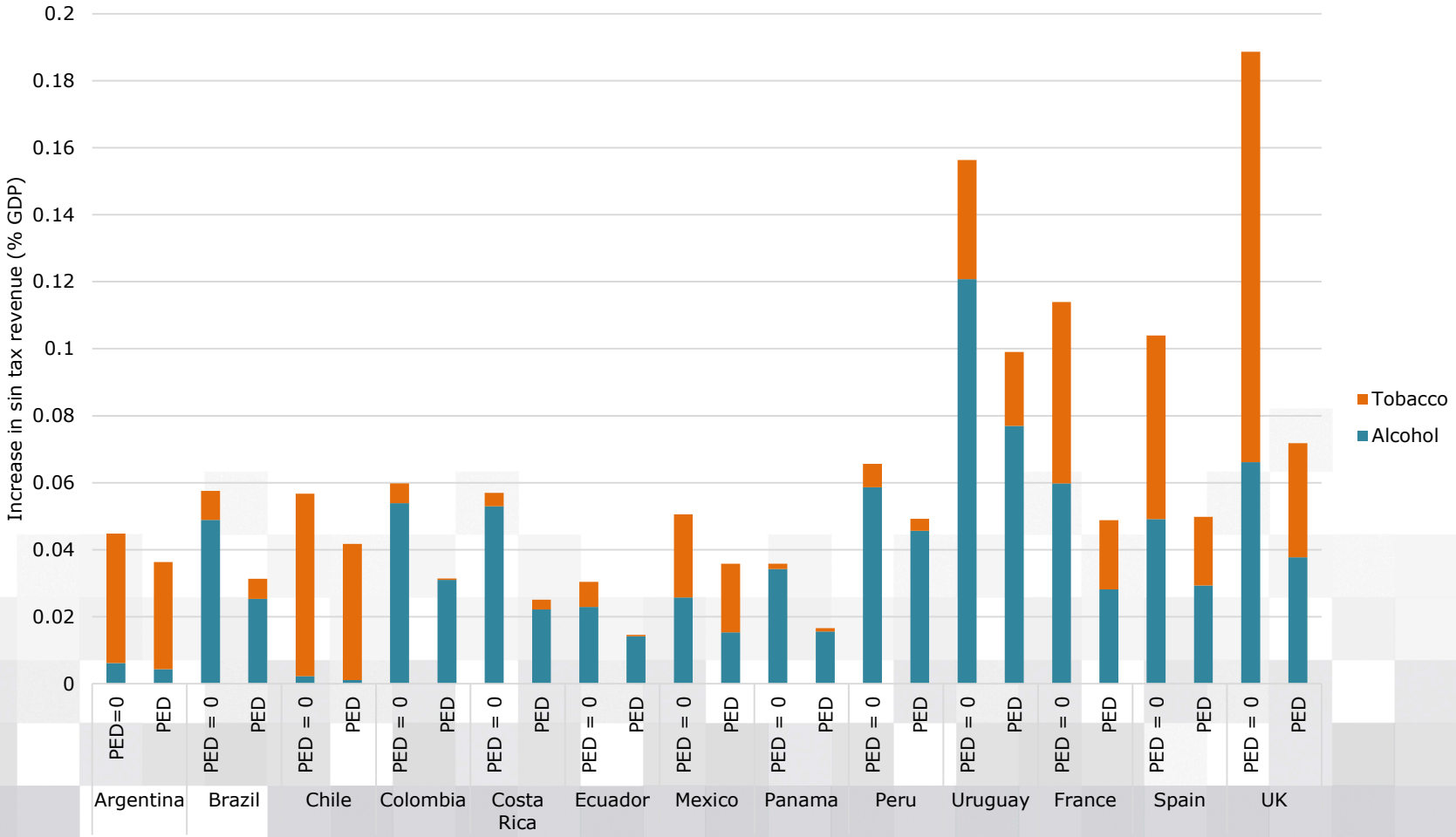
Simulated effect of a 1% increase in VAT as % of GDP alongside the impact of the price elasticity of demand (PED)



Earmarked taxes on 'harmful goods': increases in revenue (% GDP)

5% increase in alcohol and tobacco taxes
can raise a maximum of between
$31m (Panama) – **$1,675m** (Brazil)

Simulated effect of a 5% increase in alcohol and tobacco tax as % of GDP



“Sin” taxes: effects per country

Alcohol taxes

Highest increase in revenue in **Brazil** and **Uruguay**

Least effective in raising additional revenue in **Chile**

*Simulation exercise where Price Elasticity of Demand equaled zero (0)

Tobacco taxes

Highest increases in revenue in **Argentina**, **Chile** and **Mexico**

Least effective in raising additional revenue in **Colombia, Costa Rica,** and **Panama**

*Simulation exercise where Price Elasticity of Demand equaled zero (0)

Modelling results: potential increases in taxation

Potentially feasible increases in taxation

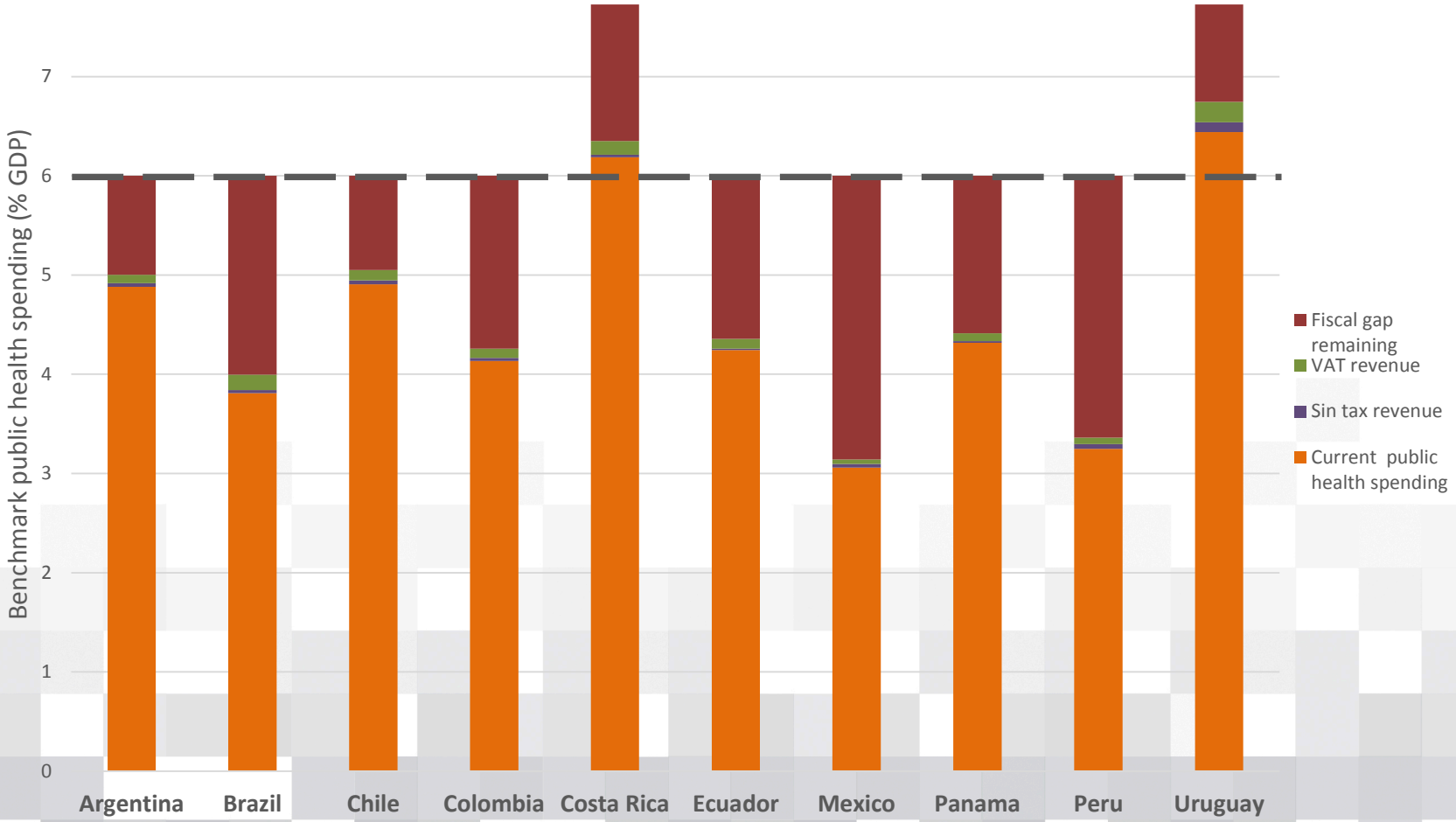
COUNTRY	POSSIBLE % VAT INCREASE	POSSIBLE % HARMFUL TAX INCREASE
COSTA RICA, ECUADOR, PANAMA	3%	>>5%
MEXICO, BRAZIL, PERU	2%	>>5%
ARGENTINA, CHILE, COLOMBIA, URUGUAY	1%	>>5%

Scenarios:

How can the fiscal yield from increased taxation be allocated or used?

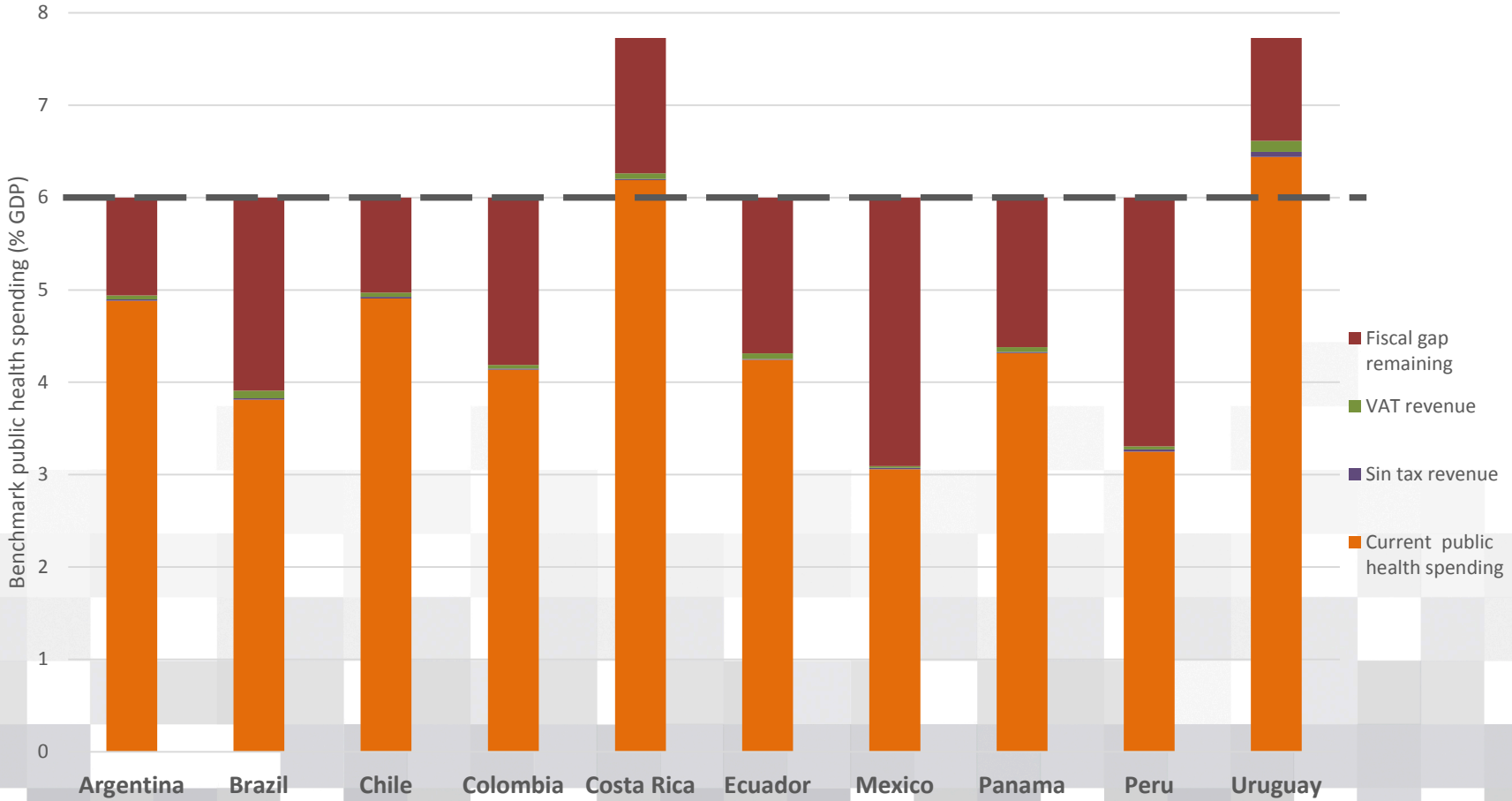
Scenario 1: “Prioritizing health”

- Based on this scenario, the health care sector receives all revenues from VAT and harmful goods increases
- Breakdown of benchmark public health spending (% GDP) following increase in VAT (by 1%) and earmarked taxation of ‘harmful goods’ (by 5%)



Scenario 2: “Health as one of the priorities in human services”

- Based on this scenario, the health care sector receives revenues from VAT and harmful goods increases proportionately and in relation to its weight in the overall human services
- Breakdown of benchmark public health spending (% GDP) following increase in VAT and earmarked taxation of ‘harmful goods’



Scenario 3: “Improved efficiency”

- Based on this scenario, the health care sector receives revenues from VAT and harmful goods increases proportionately and in relation to its weight in the overall human services
- Breakdown of benchmark public health spending (% GDP) following increase in VAT and earmarked taxation of ‘harmful goods’

- Healthcare reforms aimed at improving resource allocation efficiency:
  - Improvement in access to primary care
  - Adoption of HTA for deciding the value of new pharmaceuticals, and the promotion of generics
  - Reimbursing hospitals based on a prospective payment system such as diagnostic-related groups (DRGs)
  - Improved data systems

Conclusions and policy options (1)

A. Fiscal space and macroeconomics

- Macroeconomic performance in Latin American countries is not ideal, but manageable from a macroeconomic perspective; some countries worse than others in macro performance
- In principle, there may exist fiscal space in Latin American countries to enable the further financing of health care services, without necessarily jeopardising the overall macroeconomic outlook for the economies in the region and the long-term sustainability
- **Tax burden as a % of GDP in Latin American countries is (significantly) lower than that in mainstream OECD countries, and so is tax yield**
- **Direct taxation has low yield in terms of contribution to GDP, indirect taxation contributes far more**
- **When thinking of raising additional resources from indirect taxation, it is important to consider their regressive nature;**
- **Earmarking may be important in that context in terms of social acceptability and political feasibility**

Conclusions and policy options (2)

B. The health care sector in Latin America

- **All countries in the region subscribe to the principle of Universal Health Coverage, yet the health care system remains significantly underfunded with high or very high out-of-pocket (OOP) expenses for key services**
- With the exception of Costa Rica and Uruguay **publicly** funded health spend as a % of GDP in all other countries falls well below the 6% level
- The fiscal gap in public health spend ranges between 1.1% (Chile) – 2.94% (Mexico) of GDP
- Survey research suggests that
  - Stakeholders in Latin American countries strongly agree or agree on the necessity and political feasibility of introducing measures to **improve efficiency**, **increase revenue** and **contain the rate of cost increases** in their health care systems
  - Stakeholders agree that earmarked taxes and VAT are better in terms of revenue-raising capacity and political feasibility compared with other forms of taxation (e.g. income tax) or re-allocation from other human/social services
  - Stakeholders **do not believe that opting out of national health care systems** is necessarily going to improve their efficiency, but having some form of top-up insurance for expensive technologies or procedures would be desirable from an efficiency and a political feasibility perspective

Conclusions and policy options (3)

C. Raising revenue from indirect taxation and its simulated effects

- VAT as the main method of indirect taxation and as the main contributor to budget financing in Latin American countries has been used in simulation analysis (fiscal effect of 1% rise)
- Taxes on harmful products (tobacco, alcohol, sugar), known as sin taxes can also be used as a source of funding; the attraction is earmarking (estimate the fiscal effect of 5% rise in each)
- Modest increases in VAT and excise taxes can generate significant amounts of resources, up to 1% of GDP in the study countries that can be used to reduce the fiscal gap
- Additional resources can be used to fund health services w/o jeopardising long-term fiscal sustainability
- Simulated effects can be calibrated on a country by country basis taking into consideration local dynamics, industrial policies, overall need and sensitivities relating to local production and consumption patterns
- A stepwise increase is recommended over several years rather than a steep increase over one year

Conclusions and policy options (4)

D. Raising revenue from indirect taxation and its simulated effects

- **Difficult to predict whether collection mechanisms are effective and whether increase in indirect taxation will generate sustainable effects**
- It is assumed that investment in health is a significant priority in Latin American countries considering the rising prevalence of NCDs and the pledge to achieve UHC
- It is **difficult to announce taxation increases and not allocate resources to other areas of social policy, esp. education and social security/pensions**
- Simulated effects of indirect taxation increases suggest that
  - If all additional resources are allocated to health, the impact in reducing the fiscal gap can be significant
  - If resources are allocated to health on a proportional basis to other human services, the effect can also be significant
  - **In any case, any additional investments in health will need to be supplemented with efforts to improve efficiency in resource allocation**
  - Regardless of the resource allocation formula, priorities will need to be established in order to maximise the impact from the additional resources, whilst at the same time ensuring optimal spend and discouraging frivolous use
  - Countries need to define priorities for reform, where further funding can be channelled (hospitals, primary care, essential medicines, specialty medicines, etc.