Taxing Multinationals in the Extractives Industry:

Formulary Apportionment for Developing Nations

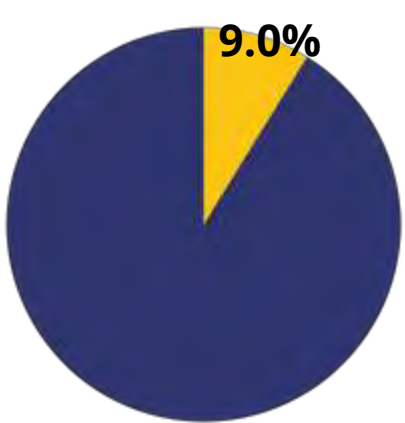Professor Kerrie Sadiq, Dr Rodney Brown,

& Dr Ashesha Weerasingehe

Justice and the Tax Base in the 21st Century
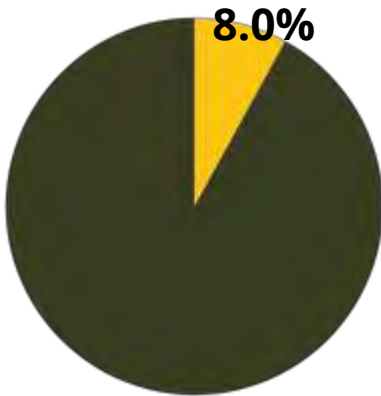*University of Melbourne Law School*

HOW BIG IS THE PROBLEM?

Global Tax Loss from All Sectors US $348 Billion

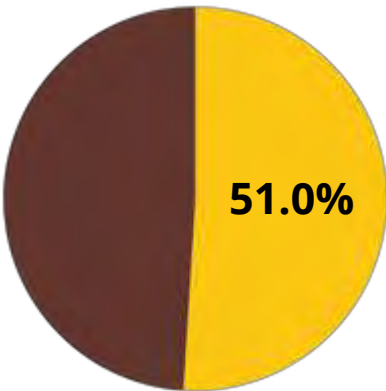**Global Tax Loss from Extractive Sector US $44 Billion**

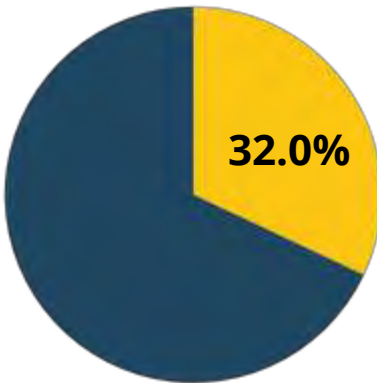**Mining Sector Contributions in Sub-Saharan Africa**

9.0%

Gross Domestic Product

8.0%

Revenue

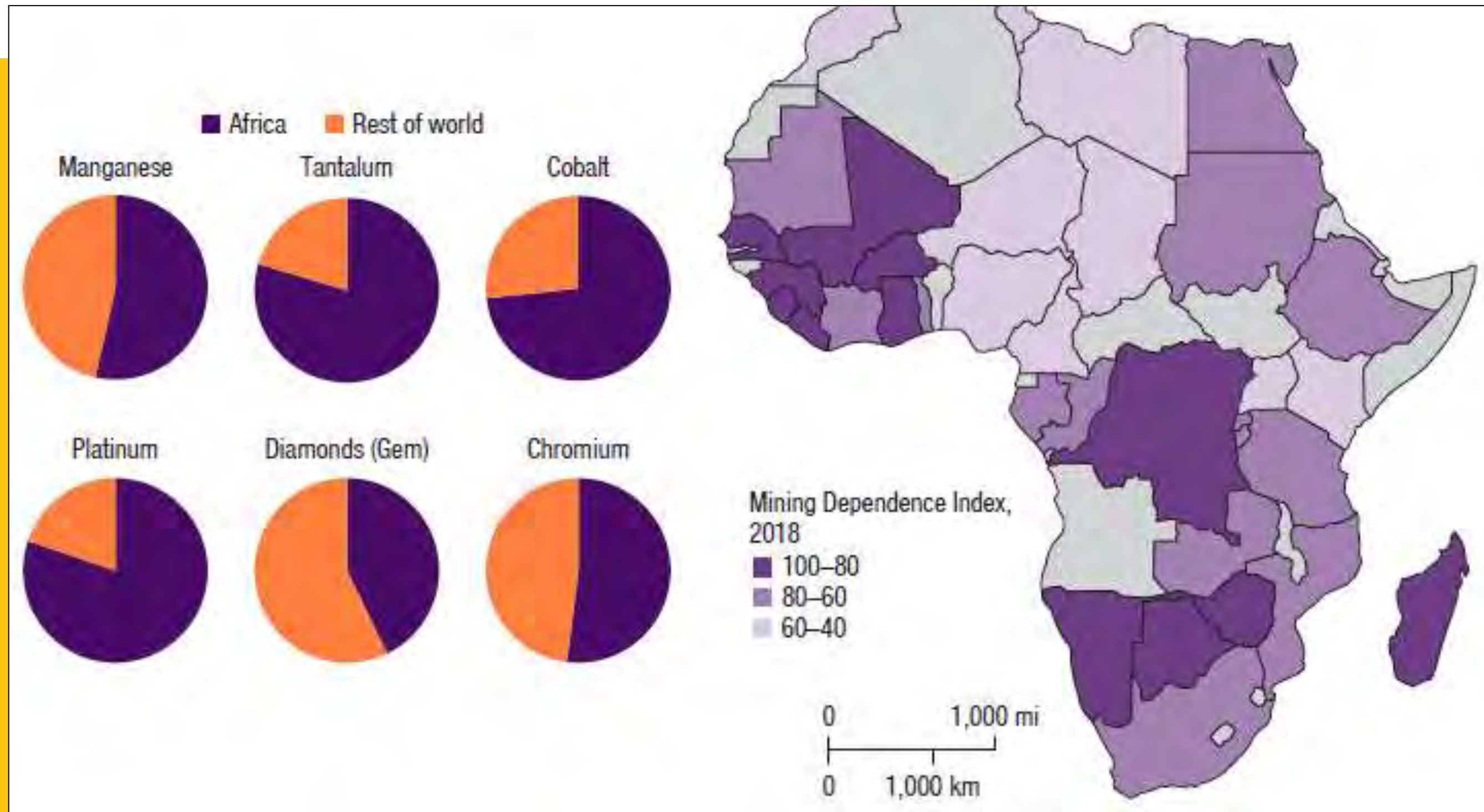51.0%

Foreign Direct Investments

32.0%

Exports

DEVELOPING COUNTRY EXAMPLES
MINERAL PRODUCTION IN AFRICA VS REST

MULTINATIONAL ENTITY (MNE) PROFIT - SHIFTING

Separate Entities for Tax Purposes requires Transfer Pricing at Arm's Length

Intangible Assets - Royalties

Related Party Commodity Transactions

Related Party Loans/ Debt Loading/ Thin Capitalisation

OECD TAX REFORMS

2021 - 2025 — *Pillar Two Program Implementation*

2021 — *135 Countries agreed to Pillar Two - Global Minimum Tax*

2020 — *Pillar One [timing unknown] and Pillar Two Blueprints*

2016 — *The Inclusive Framework Launch - 140 Members*

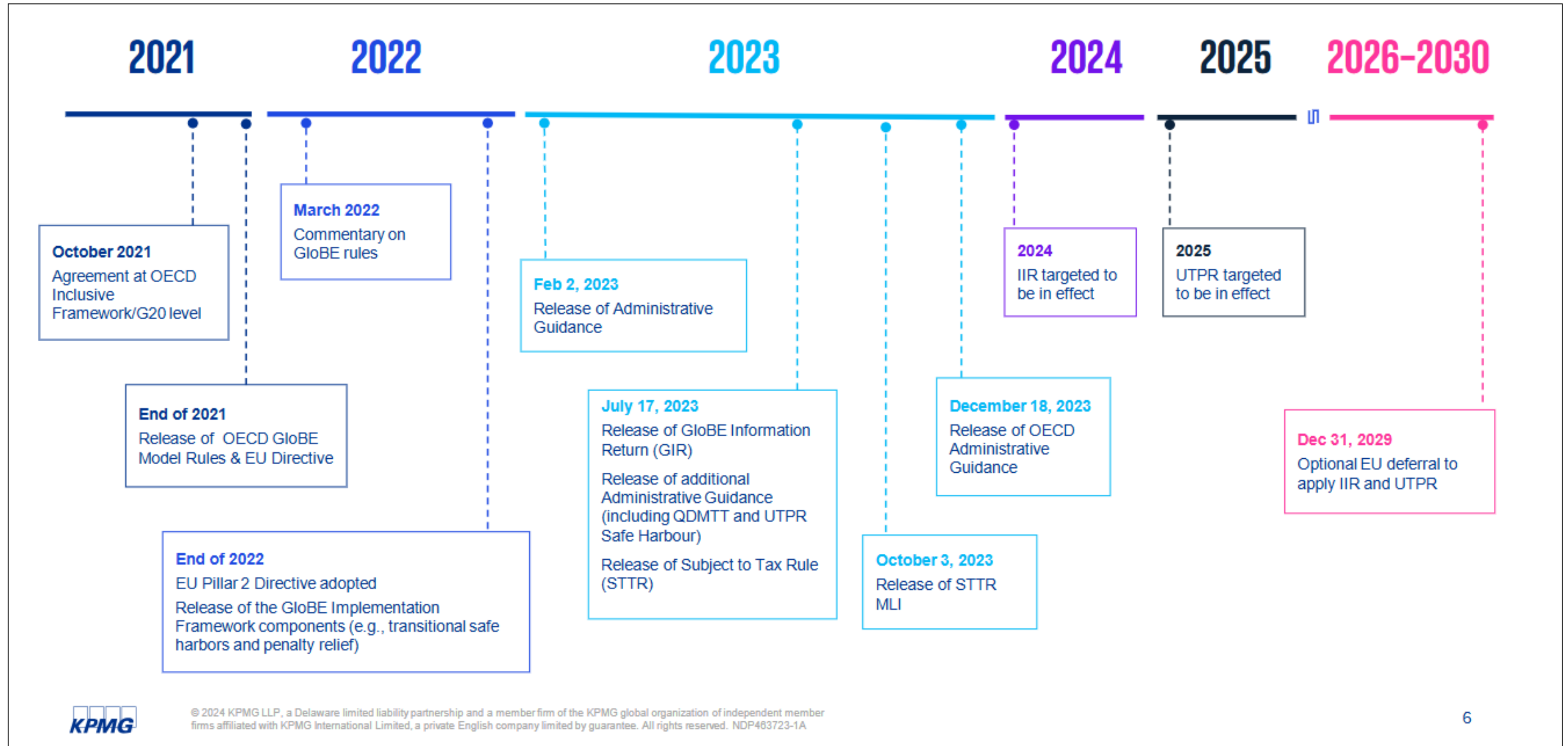**2015** — *Recommendations of 15 BEPS Action Plans*

2013 — *Base-Erosion & Profit-Shifting [BEPS) Program Launch*

OECD BEPS - PILLAR TWO

- *Global Minimum Tax at 15% for MNEs with a turnover of more than EUR750 million.*

2021 **2022** **2023** **2024** **2025** **2026-2030**

October 2021
Agreement at OECD Inclusive Framework/G20 level

March 2022
Commentary on GloBE rules

Feb 2, 2023
Release of Administrative Guidance

2024
IIR targeted to be in effect

2025
UTPR targeted to be in effect

End of 2021
Release of OECD GloBE Model Rules & EU Directive

End of 2022
EU Pillar 2 Directive adopted
Release of the GloBE Implementation Framework components (e.g., transitional safe harbors and penalty relief)

July 17, 2023
Release of GloBE Information Return (GIR)
Release of additional Administrative Guidance (including QDMTT and UTPR Safe Harbour)
Release of Subject to Tax Rule (STTR)

October 3, 2023
Release of STTR MLI

December 18, 2023
Release of OECD Administrative Guidance

Dec 31, 2029
Optional EU deferral to apply IIR and UTPR

OECD BEPS - PILLAR ONE

- *Pillar One aims to **reallocate** certain amounts of MNEs' taxable income to market jurisdictions*

- *Only affects **large MNEs with a turnover > $20 billion** & profitability > 10% of revenue*

- ***25% of the profits** > 10% of revenue are reallocated based on revenue generation*

- *The implementation requires a **Multilateral Convention** and the timing is **unknown***

- *Negotiations and discussions about these agreements are ongoing as of Jan 2025*

Industries, such as Extractives, regulated financial services, and defence, are excluded from Pillar One

*"This approach reflects the policy goal of excluding the economic rents generated from location-specific extractive resources that should **only be taxed in the source jurisdiction,** while not undermining the comprehensive scope by limiting the exclusion in respect of profits generated from activities taking place beyond the source jurisdiction, or later in the production and manufacturing chain" [OECD, 2022]*

Addressing Tax Base Erosion and Profit Shifting in the Mining Industry in Developing Countries

Mitigating financial risks, growing economies

BEPS IN MINING PROGRAMME

*To date, the release of three practice notes:*
- *Limiting the Impact of Excessive Interest Deductions on Mining*
- *Tax Incentives in Mining: Minimising Risks to Revenue*
- *Monitoring the Value of Mineral Exports: Policy Options for Governments*

The programme will cover the following issues:
1. Excessive Interest Deductions
2. Abusive Transfer Pricing
3. Undervaluation of Mineral Exports
4. Tax Incentives
5. Tax Stabilisation
6. International Tax Treaties
7. Offshore Indirect Transfers of Mining Assets
8. Metals Streaming
9. Abusive Hedging Arrangements
10. Inadequate Ring-Fencing

BEPS IN MINING PROGRAMME
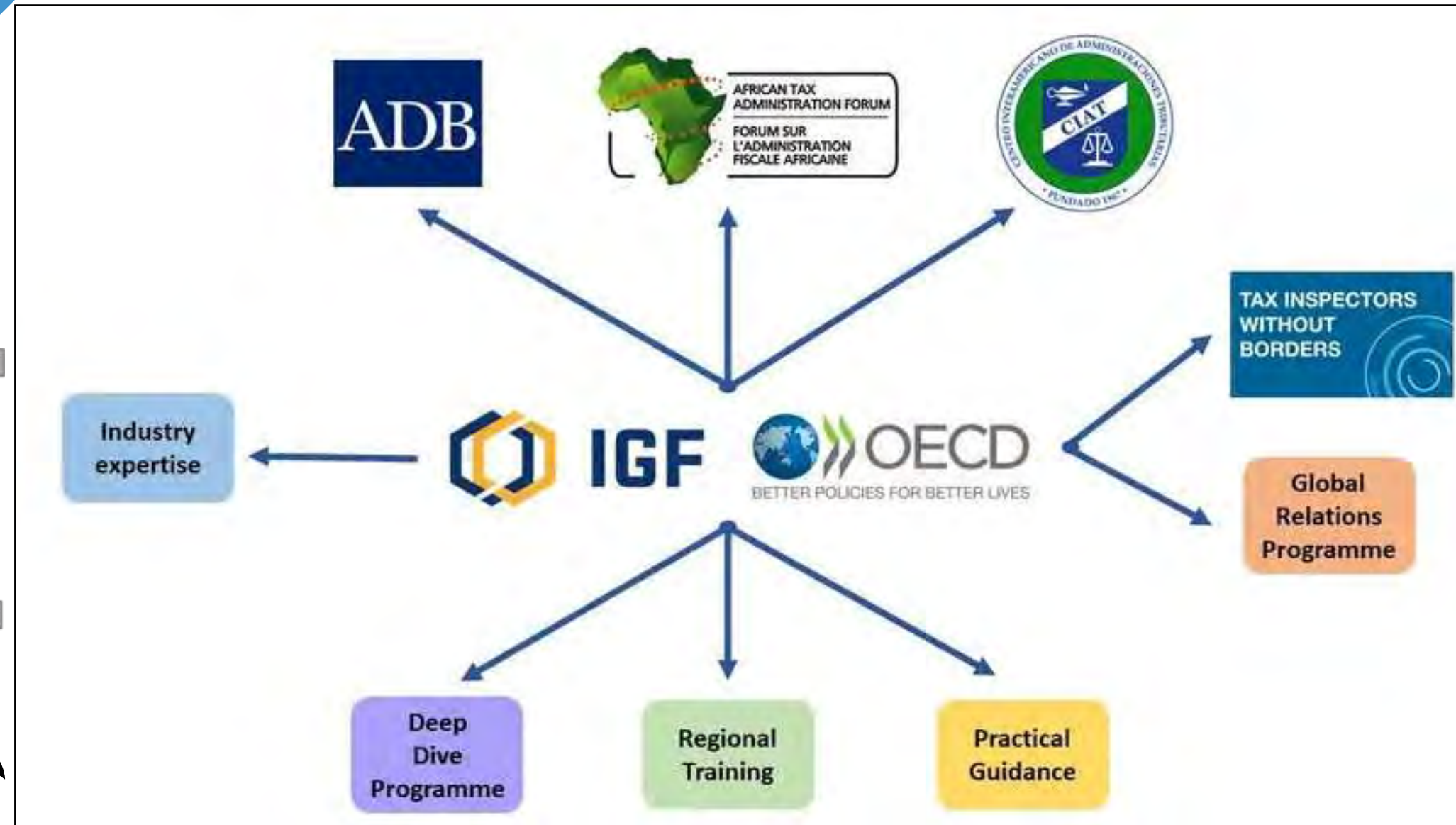
Ring-Fencing Rules

"A limitation on consolidation of income and deductions for tax purposes across different activities, or projects, undertaken by the same taxpayer" [International Monetary Fund, 2010)

RING-FENCING

Project A - losses

Project B - Profits

Without Ring-Fencing

Project A - losses

Project B - Profits
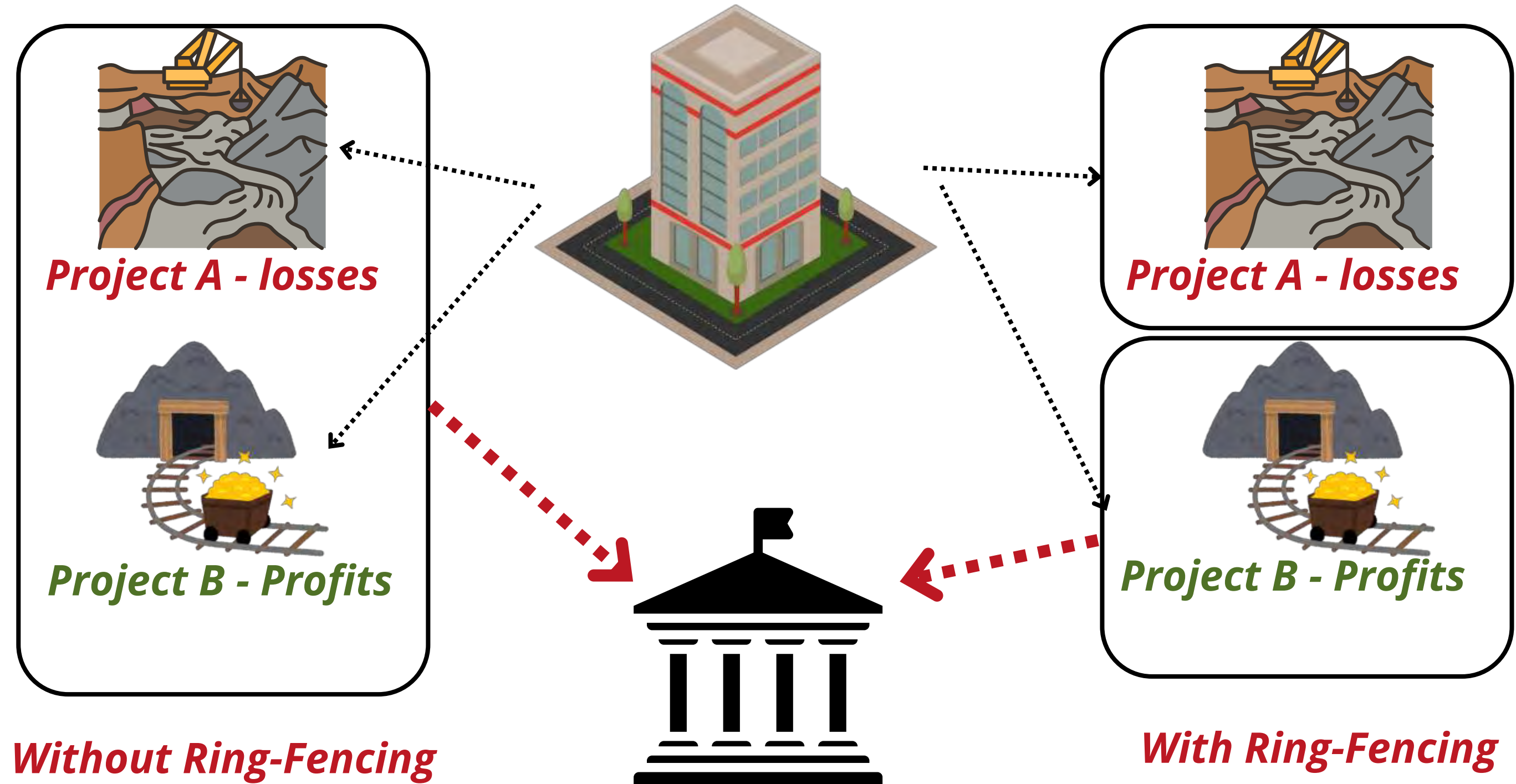
With Ring-Fencing

JURISDICTIONS WHERE SOME FORM OF RING-FENCING EXISTS
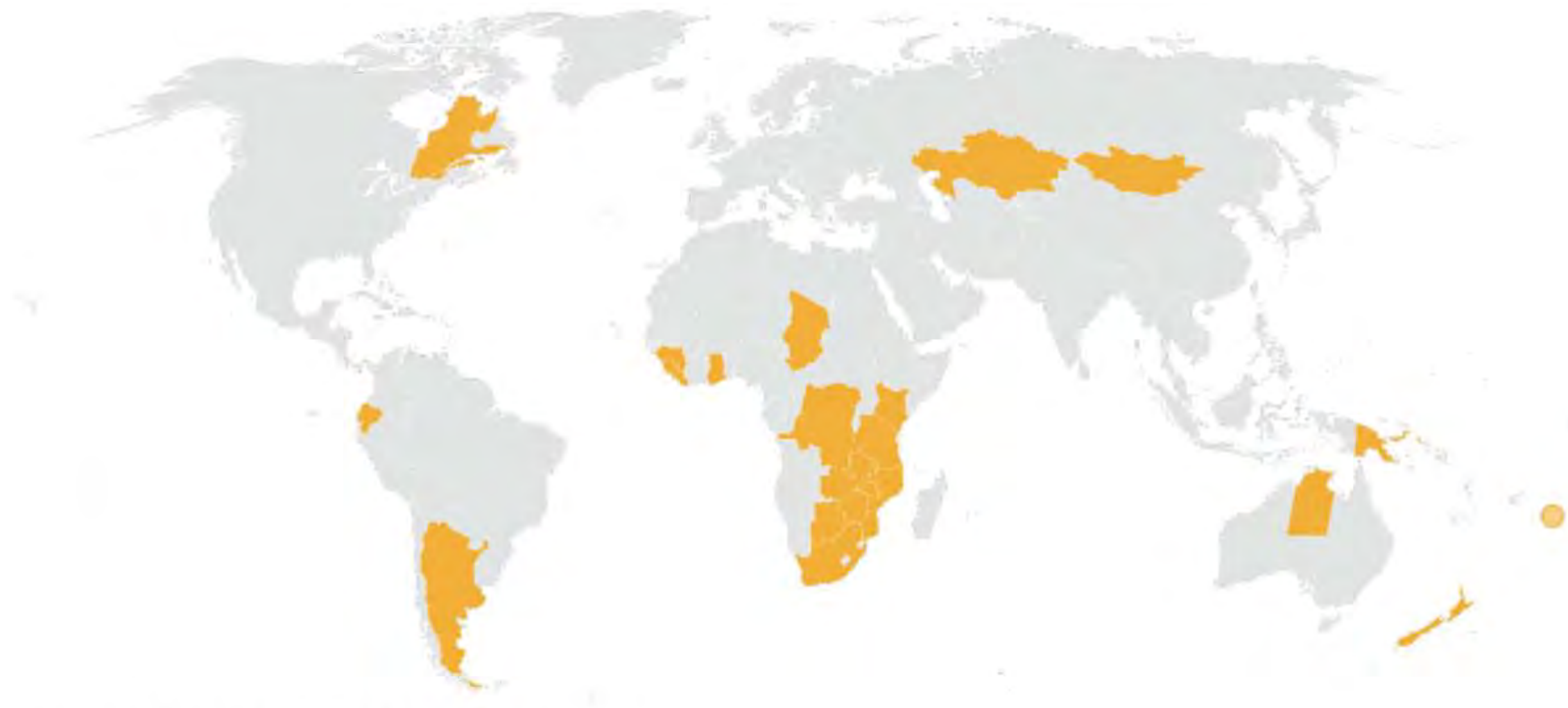
Jurisdictions where ring-fencing rules for mining exist

Argentina	Botswana	Chad	Democratic Republic of Congo
Australia (Northern Territory)	Canada (Quebec)	Cook Islands	
Ecuador	Guinea	Kenya	Malawi
Ghana	Kazakhstan	Liberia	
Mongolia	New Zealand	Sierra Leone	Tanzania
Mozambique	Papua New Guinea	South Africa	
Zambia			
Zimbabwe			

RING-FENCING BENEFITS & RISKS

Benefits

1. **Early tax revenues** for local governments - reduced losses offset

2. Reduce **unrecoverable tax losses** for the government (protects the base)

3. Reduce MNE **misuse of non-mining** commercial losses against other projects

4. Discourage **expenditure inflation** by MNEs

5. Encourage **new entrants** as established MNEs do not gain cash flow advantages

Risks or Challenges

1. Increased administrative **complexity, risk, and cost -** e.g., basis of cost allocation

2. Discourage **new exploration & development** activities - e.g., large initial costs

3. Impact on extractive sector **growth**

4. **Long-term** revenue losses for governments

5. Encourage **MNE profit-shifting or cost-shifting** to or outside the fence

Domestic Transfer Pricing Abuse in the Context of Ring-Fencing

Mining investors might over-allocate expenditures to mature mining projects or profitable activities to reduce the profits of those projects or activities. Similarly, there might be cases where mining investors will shift profits from profitable projects to loss-making projects or to non-mining activities subject to a lower tax burden. This existing transfer pricing risk can be observed between separate legal entities, but equally, it may be demonstrated where different parts of the same entity are treated as separate taxpayers due to the application of ring-fencing rules.

Where ring-fencing is used and the different parts of the same legal entity are subject to different tax treatment or there is a risk of profit shifting between the ring-fenced activities, the transfer pricing rules should also apply to such internal transactions between separate parts of the same legal entity.

OECD'S APPROACH

- *OECD's approach to reforms is central to the **Separate Entity Concept & Arm's Length Pricing***

- ***Pillar One** takes a slightly different approach in reallocating some profits of MNE; however, **extractive industries are not** part of the program*

- *BEPS mining program aims to increase local tax revenue collection through potential **Ring-fencing rules***

- *Ring-fencing does not address MNE profit-shifting in extractive industries & rather could **encourage MNEs to profit shift***

- **Tax Scholars argue the need for a more holistic approach in addressing the root cause of MNE profit-shifting - Separate Entity Concept**

- **A Unitary Taxation approach, the Formulary Apportionment method has garnered greater attention in recent times.**

THE UNITED NATION'S PERSPECTIVE

- *The UN on future global tax reforms – new **Tax Convention***

- *A paradigm shift in global taxation, initiating a **'Democratised Approach'***

- *The Tax Convention aims to establish tax reforms aligned with **Sustainable Development Goals (SDGs)***

- *The approach indicates a greater focus on ensuring 'fair taxes' in **global South** countries*

- ***UN "Handbook on Taxation of the Extractive Industries 2021"***

- *The handbook details potential tax issues in the extractive industries with a comparison to the OECD's approach*

TRANSFER PRICING FOR THE EXTRACTIVES INDUSTRY

Diagram of vertically integrated mining operation, including relationship with service provider hubs.[b]
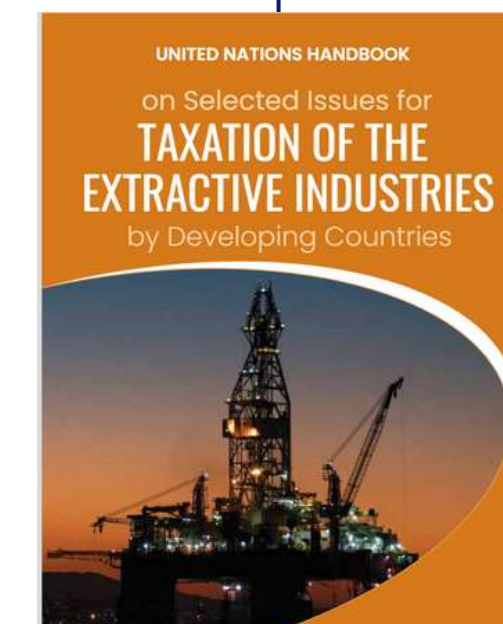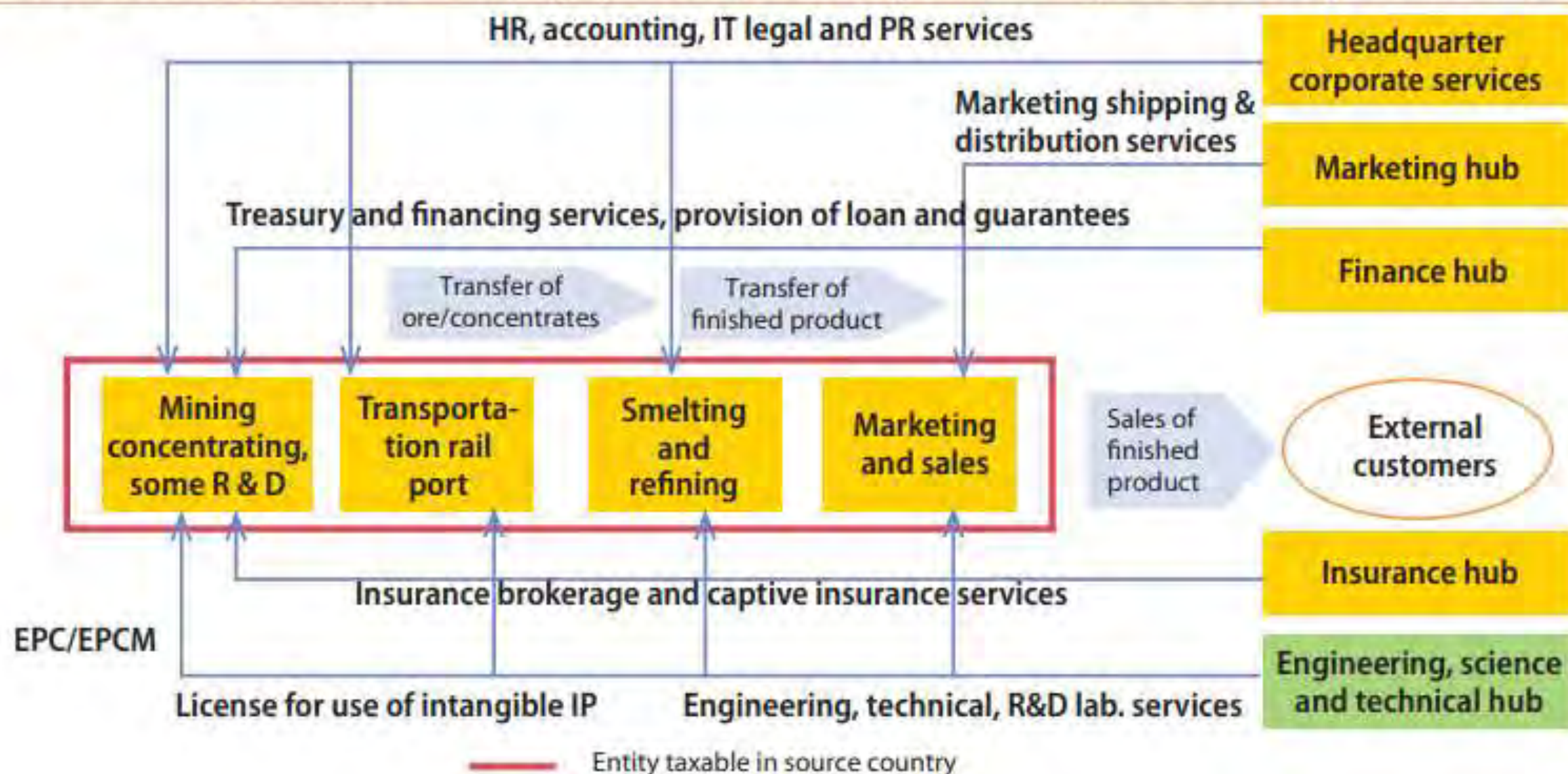
UN TAX CONVENTION - GLOBAL AGREEMENT

125 Countries voted in favor, 9 countries opposed, and 48 countries' abstentions

THE UN TAX CONVENTION

Tax Convention Timeline 2022 - 2027

May 2022
The African Union publishes a resolution that calls on the UN to begin negotiations for an international convention on tax matters.

November 2022
Second Committee of the General Assembly approved draft resolution.

December 2022
GA resolution 77/244 adopted by the General Assembly.

February 2023
The Secretary-General invites written inputs to his report.

May-August 2023
Informal briefings and consultations on the Secretary General's report.

August 2023
The UN Secretary General publishes report advocating for enhancing the UN's role in tax norm shaping and rule-setting.

February 2024
Formation of Ad Hoc Committee taking into account gender and geographical balances at the Organizational Session. Call for inputs by the Ad Hoc Committee.

December 2023
General Assembly adopted resolution 78/230, establishing an Ad Hoc Committee to develop draft terms of reference for a Framework Convention.

November 2023
Adoption of a Second Committee resolution calling for a two-step process to negotiate a UN Framework Convention.

October 2023
Opening of Second Committee Discussion began on agenda item.

September 2023
Opening of 78th Session of General Assembly.

February 2024
Start of Substantive Sessions to develop a draft terms of reference led by the Ad Hoc Committee, encouraging participation of all Member States.

May 2024
First Session of the Ad Hoc Committee to develop draft terms of reference held at the United Nations Headquarters in New York.

July 2024
The Second Session of the Ad Hoc Committee is held from 29 July to 16 August at the United Nations Headquarters in New York.

August 2024
The Ad Hoc Committee approves the Terms of Reference with 110 votes in favor, incorporating human rights principles into the framework.

November 2024
The United Nations General Assembly approved the Terms of Reference (ToR) for the UN Tax Convention.

2025 - 2027
Member State representatives will meet 3 times a year to negotiate a reference text for international tax cooperation, aiming for completion by September 2027.
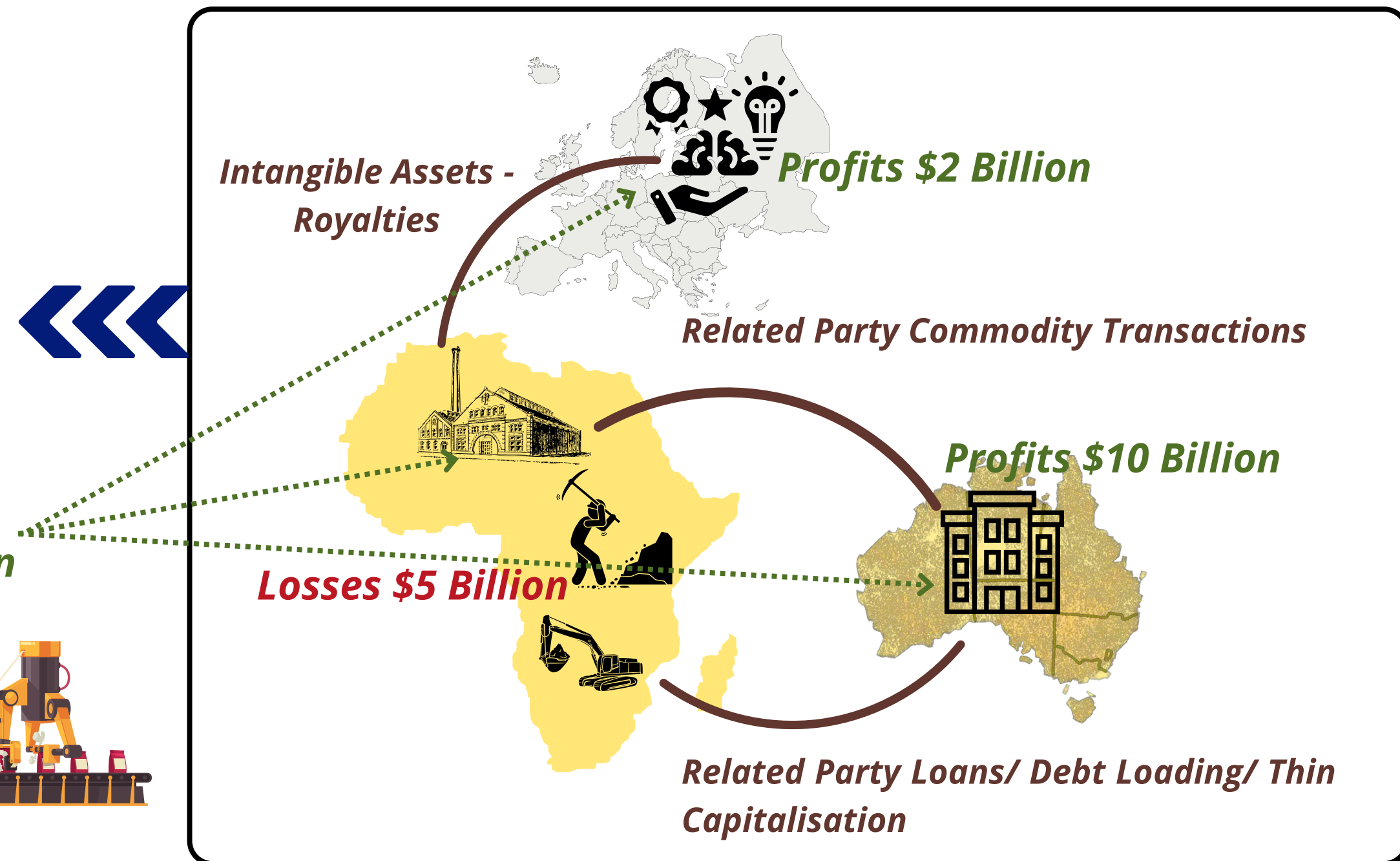
FORMULARY APPORTIONMENT

- *Formulary Apportionment treats MNE as a single global entity and reallocates consolidated profits into jurisdictions based on real economic activity - e.g., Sales, Employees, & Assets*

Single Global Entity

Intangible Assets - Royalties

Profits $2 Billion

Related Party Commodity Transactions

Consolidated Profits = [$10 + $2] - $5 = $7 Billion

Profits $10 Billion

Losses $5 Billion

Related Party Loans/ Debt Loading/ Thin Capitalisation
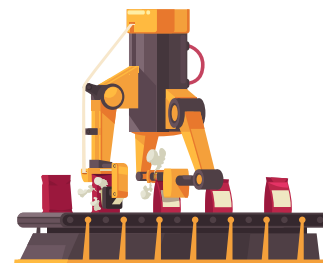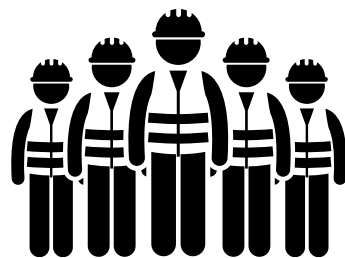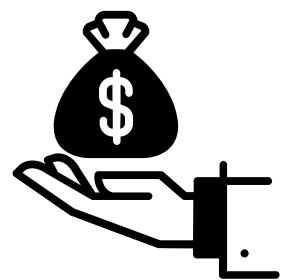
FA EXAMPLE APPLICATION

Countries	Profit/Loss (before tax) $	Revenue $	Number of Employees	Tangible Assets $
Mongolia	-1,188,452, 818	1,666,570,403	4,700	14,155,948,330
Australia	12,797,804,164	35,568,033,654	24,369	31,979,143,059
Singapore	2,241,461,551	13,603,414,178	469	1,111,489,866
Consolidated	13,850,812,897	50,838,018,235	29,538	47,246,581,255

Profit Before Tax = ⅓ * Revenue + ⅓ * Number of Employees + ⅓ * Value of Tangible Assets

Countries	Revenue %	Employees %	Tangible Assets %	PBT - Rev ⅓	PBT - Emp ⅓	PBT - TA ⅓	PBT Reallocated
Mongolia	3%	16%	30%	151,352,312	734,633,586	1,383,319,784	2,269,305,682
Australia	70%	83%	68%	3,230,169,050	3,808,996,992	3,125,003,019	10,164,169,061
Singapore	27%	2%	2%	1,235,416,270	73,307,054	108,614,830	1,417,338,153
Total	100%	100%	100%	4,616,937,632	4,616,937,632	4,616,937,632	13,850,812,897

FORMULARY APPORTIONMENT FOR EXTRACTIVE SECTOR

Benefits

1. Recognise **economic activity** in the supply & demand sides
2. Focus on **value creation** rather than Permanent Establishment concepts
3. The **separate entity concept** is redundant - consolidation of profits
4. Reduce the **opportunity** for MNE BEPS activities
5. Less complex and costly for administration - application of the formula

Risks or Challenges

1. Requires **global agreement** on what constitutes 'Taxable Presence'
2. Determining the most suitable pre-tax profit **allocation keys** - e.g., employees vs sales
3. The benefits are theoretically justified - However, **empirical evidence** is less
4. **Unknown** whether FA benefits developing nations

DATA & METHOD

Sample

- **15 firms** in the extractive industries from **2018 to 2023**

- The sample is driven by the voluntary adoption of **OECD Action 13 or GRI 207** - Country-by-Country-Reporting **[CbCR]**

- **66 CbCRs & 2,866 firm-year-country observations**

- Consist of members - European Business Tax Forum, B Team Endorsing, and early GRI adopters

- Only CbCRs with reconciliation between PBT and income statement [+/- 10%]

Empirical Analysis

- The **monetary effects** for economies under different Apportionment Formulas

- **Four formulas** - equally weighted and without **Sales key (Keys: Sales, Number of Employees, Assets)**

- **World Bank & United Nations** country classifications

- **World Bank** - High Income, Upper Middle Income, Lower Middle Income, & Low Income

- **United Nations -** Developed, In transition, & Developing

SAMPLE DETAILS

MNE	HQ	CbCR Years	Firm-year-country observations	%
AngloAmerican	U.K.	2018-2023	270	9.4%
BHP	Australia	2020-2023	105	3.7%
BP	U.K.	2019-2023	370	12.9%
Canacol	Canada	2020-2023	11	0.4%
Eni Group	Italy	2017-2023	490	17.1%
Evraz	U.K.	2020-2021	17	0.6%
Hess	U.S.A.	2020-2023	42	1.5%
Newmont	U.S.A.	2021-2023	28	1.0%
Nordgold	U.K.	2020	4	0.1%
Repsol	Spain	2018-2023	250	8.7%
Rio Tinto	Australia	2018-2023	280	9.8%
Shell	U.K.	2018-2023	582	20.3%
South32	Australia	2020-2023	52	1.8%
Teck Resources	Canada	2019-2022	76	2.6%
Total Energies	France	2019-2022	289	10.1%
Total	15		2,866	100.0%

EMPIRICAL ANALYSIS

- **Four apportionment formulas are used to allocate pre-tax profits to examine differential monetary effects on economies**

Equation 1 | Profit Before Tax = ⅓ * Revenue + ⅓ * Number of Employees + ⅓ * Value of Tangible Assets

Equation 2 | Profit Before Tax = ½ * Revenue + ½ * Number of Employees

Equation 3 | Profit Before Tax = ½ * Revenue + ½ * Value of Tangible Assets

Equation 4 | Profit Before Tax = ½ * Number of Employees + ½ * Value of Tangible Assets

EMPIRICAL RESULTS

PBT Reallocation under 4 Formulary Apportionment Equations - World Bank Classification

Economy		EQ1	Taxes 15%	EQ2	Taxes 15%	EQ3	Taxes 15%	EQ4	Taxes 15%
High Income	To	194,240		225,046		205,113		177,079	
	From	-142,458		-157,484		-142,722		-151,689	
	Net	**51,782**	**7,767**	**67,562**	**10,134**	**62,391**	**9,359**	**25,390**	**3,809**
Upper Middle Income	To	24,235		19,352		24,317		33,807	
	From	-44,687		-50,104		-52,146		-36,582	
	Net	**-20,452**	**-3,068**	**-30,752**	**-4,613**	**-27,830**	**-4,175**	**-2,776**	**-416**
Lower Middle Income	To	27,625		27,658		21,254		34,697	
	From	-34,667		-41,428		-34,549		-28,758	
	Net	**-7,042**	**-1,056**	**-13,770**	**-2,066**	**-13,295**	**-1,994**	**5,939**	**891**
Low Income	To	3,332		2,151		3,894		5,112	
	From	0		-1,162		0		0	
	Net	**3,332**	**500**	**990**	**149**	**3,894**	**584**	**5,112**	**767**

Note: All values are in Euro Millions

EMPIRICAL RESULTS

PBT Reallocation under 4 Formulary Apportionment Equations - The UN Classification

Economy		EQ1	Taxes 15%	EQ2	Taxes 15%	EQ3	Taxes 15%	EQ4	Taxes 15%
Developed	To	174,294		189,001		168,172		168,043	
	From	-105,005		-119,676		-107,145		-90,526	
	Net	**69,289**	**10,393**	**69,325**	**10,399**	**61,026**	**9,154**	**77,516**	**11,627**
In Transition	To	1,711		1,827		1,099		3,370	
	From	-12,917		-19,568		-11,199		-9,148	
	Net	**-11,206**	**-1,681**	**-17,741**	**-2,661**	**-10,099**	**-1,515**	**-5,778**	**-867**
Developing	To	73,425		83,379		85,306		79,282	
	From	-103,890		-110,934		-111,073		-117,355	
	Net	**-30,465**	**-4,570**	**-27,554**	**-4,133**	**-25,767**	**-3,865**	**-38,073**	**-5,711**

Note: All values are in Euro Millions

EMPIRICAL RESULTS

PBT Reallocation under 4 Formulary Apportionment Equations - The UN Reclassification

Economy		EQ1	Taxes 15%	EQ2	Taxes 15%	EQ3	Taxes 15%	EQ4	Taxes 15%
Developed	To	194,414		225,226		205,282		177,253	
	From	(142,456)		(157,482)		(142,720)		(151,687)	
	Net	**51,957**	**7,794**	**67,744**	**10,162**	**62,562**	**9,384**	**25,565**	**3,835**
In Transition	To	1,711		1,827		1,099		3,370	
	From	(12,917)		(19,568)		(11,199)		(9,148)	
	Net	**(11,206)**	**(1,681)**	**(17,741)**	**(2,661)**	**(10,099)**	**(1,515)**	**(5,778)**	**(867)**
Developing	To	53,306		47,155		48,195		70,072	
	From	(66,439)		(73,127)		(75,498)		(56,194)	
	Net	**(13,133)**	**(1,970)**	**(25,973)**	**(3,896)**	**(27,303)**	**(4,095)**	**13,878**	**2,082**

Note: All values are in Euro Millions

CONCLUSION

- **High Income** and **Developed** countries **benefit** in all 4 formulas
- **Upper Middle Income** & I**n Transition** countries have net **losses** in all 4 formulas
- **Low Income** countries (WB classification) have **net gains** in all 4 formulas
- Tax benefits estimates for Low Income group are approximately between **Euro 150 to 800 million** and significantly low compared to the gains of High Income group (between **Euro 3,800 to 10,200 million**)
- However, **Developing** countries are better off in **Equation 4** in the UN reclassification analysis
- Developing countries have **Euro 13,878 million net gain** of profit distribution and a corresponding **tax of Euro 2,082 million** (applying the global minimum tax of 15%)

Developing countries do not gain the most benefit from the Formulary Apportionment unless the apportionment is through the Number of Employees and Tangible Assets