

---

# Comparison of mining taxation between Africa and Latin America: The case of copper

---

Yannick BOUTERIGE  
Isaac AMEDANOU  
Bertrand LAPORTE



FONDATION POUR LES ÉTUDES  
ET RECHERCHES  
SUR LE DÉVELOPPEMENT  
INTERNATIONAL

---

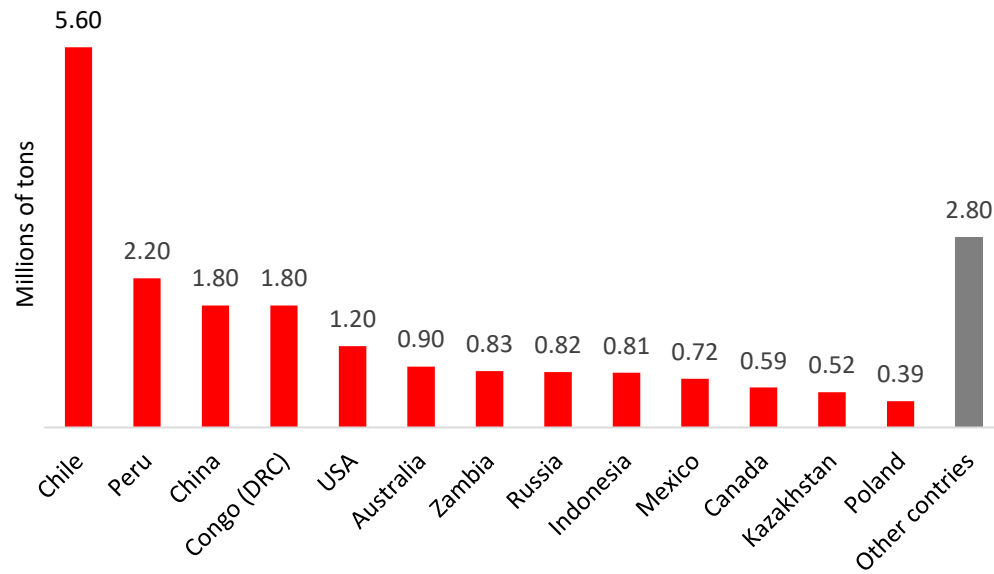
February 2nd, 2023



# 1. Context and method

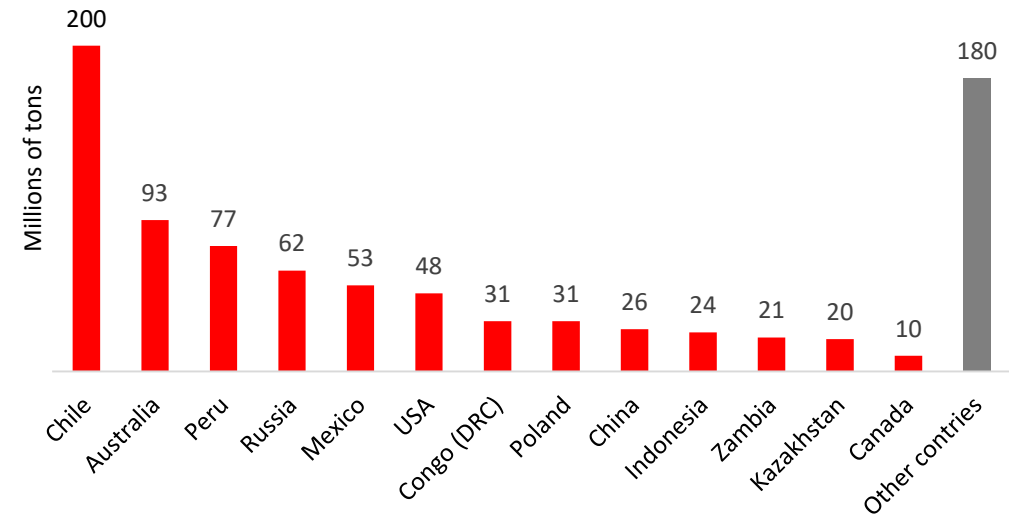
# 1. The importance of copper for several Latin American and African countries

Copper production, 2021



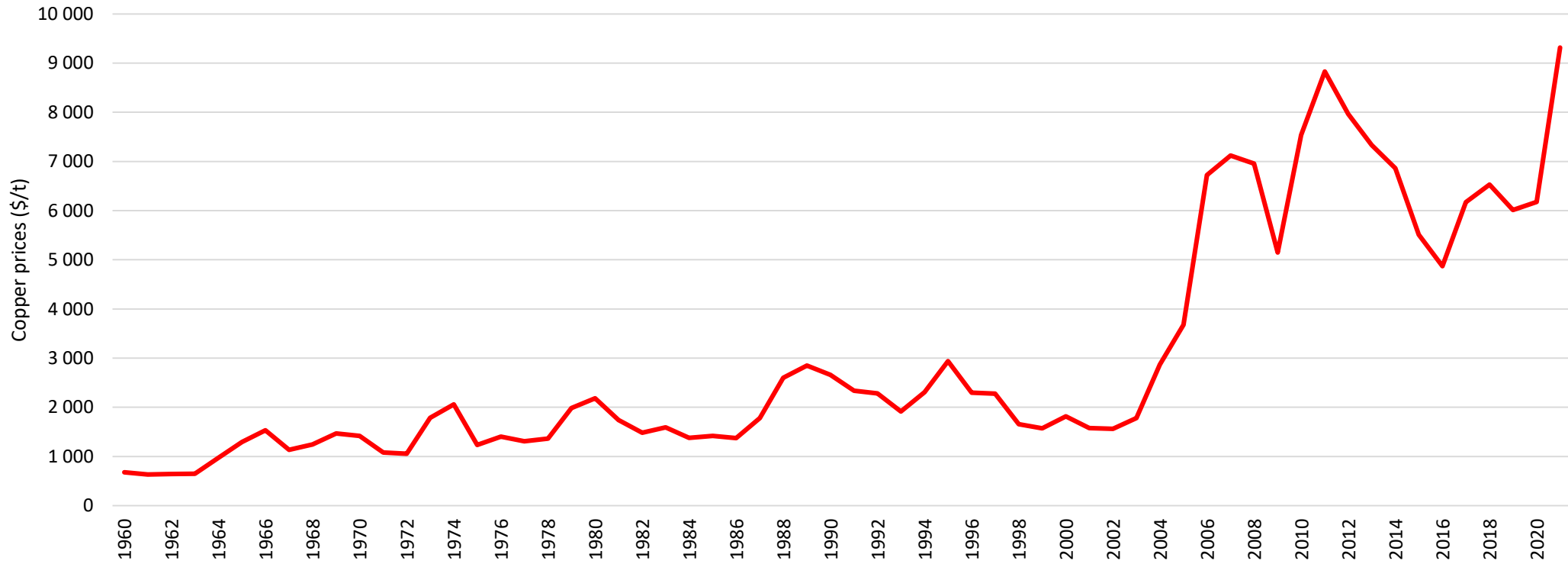
Source : United States Geological Survey (USGS), 2022.

Copper reserves, 2021



Source : United States Geological Survey (USGS), 2022.

## 2. Evolution of copper prices



Source : World Bank Commodity Prices.

## 3. Modeling rent sharing

### 6 Latin American countries:

- **Argentina** (2000-2021).
- **Brazil** (2000-2021).
- **Chile** (2006-2021).
- **Mexico** (2000-2021).
- **Peru** (2005-2021).
- **Venezuela** (2000-2021).

### 6 African countries:

- **DRC** (2002-2021).
- **Mauritania** (2000-2021).
- **South Africa** (2009-2021).
- **Tanzania** (2004-2021).
- **Zambia** (2000-2021).
- **Zimbabwe** (2010-2021).

### 8 fiscal and parafiscal levies:

- **Fees.**
- **Surface fee.**
- **Mining royalty.**
- **Corporate income tax.**
- **Additional profits tax** (Zimbabwe).
- **Withholding tax on interest.**
- **Withholding tax on dividends.**
- **State participation** (free equity for the State).

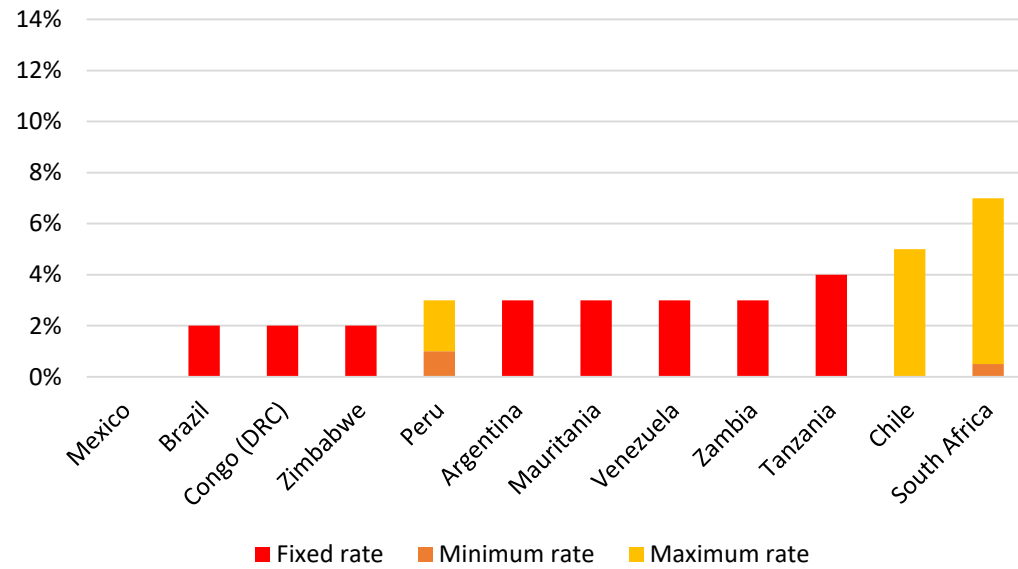
### A representative mine :

- **Open pit copper mine.**
- **Lifetime : 25 years.**
- **Production : 4 millions of tons.**
- **Copper price : \$7,000 /t.**
- **Total CAPEX : \$2.5 billions.**
- **Average OPEX : \$4,000 /t.**
- **Total OPEX : \$16 billions.**
- **Resource rent (10%) : \$3.2 billions.**
- **Internal rate of return : 44.2%.**



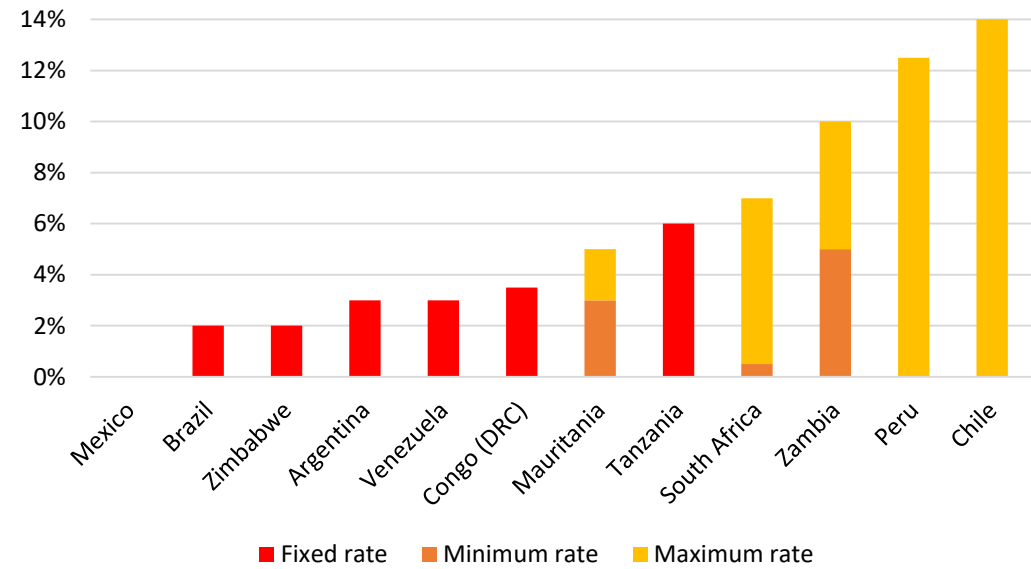
# 1. Mining royalty rates

Royalty rates for copper, 2010



Source : Research and calculation of authors, national legislations.

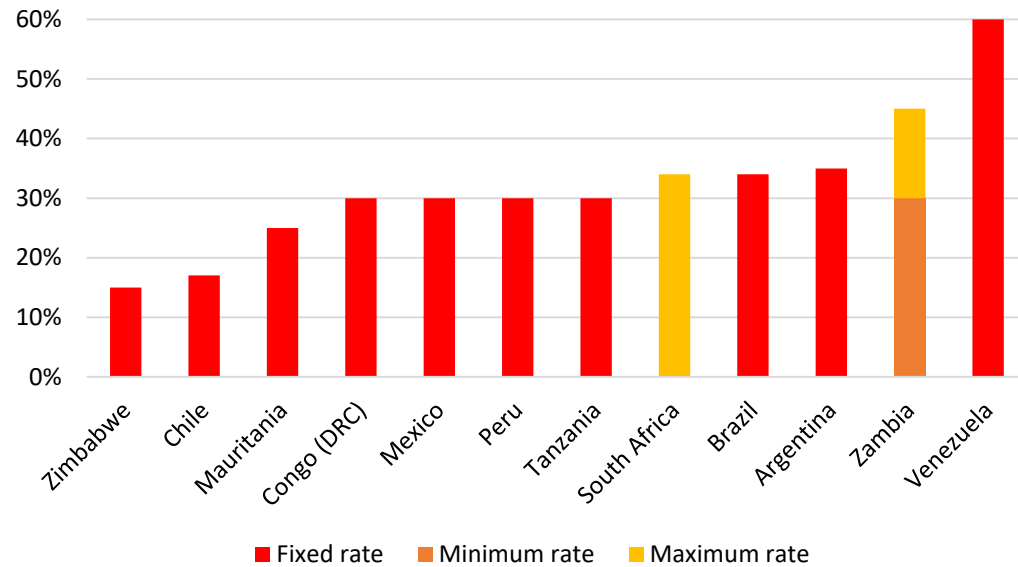
Royalty rates for copper, 2021



Source : Research and calculation of authors, national legislations.

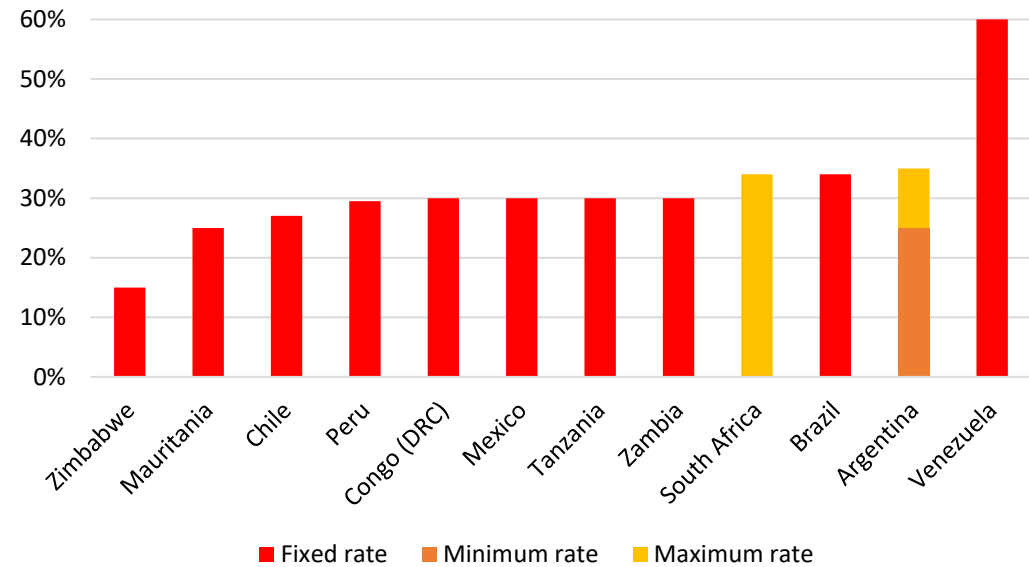
## 2. Corporate income tax rates

CIT rates for copper, 2010



Source : Research and calculation of authors, national legislations.

CIT rates for copper, 2021



Source : Research and calculation of authors, national legislations.



## 3. Additional profits tax

### Additional profits tax (Zimbabwe) :

- **Two additional profits tax**, in exchange for a reduction in the corporate income tax rate to 15%.
- **Tax base** = Net cash flow for the year + Accumulation of any previous negative cash flows × (1 + Inflation rate) × (1 + Revaluation rate).
- **Revaluation rate** = 15% for the first tax. 20% for the second tax.
- **Tax rate** = 31.176% for the first tax. 27.778% for the second tax.

### Special tax on additional profits (RDC) :

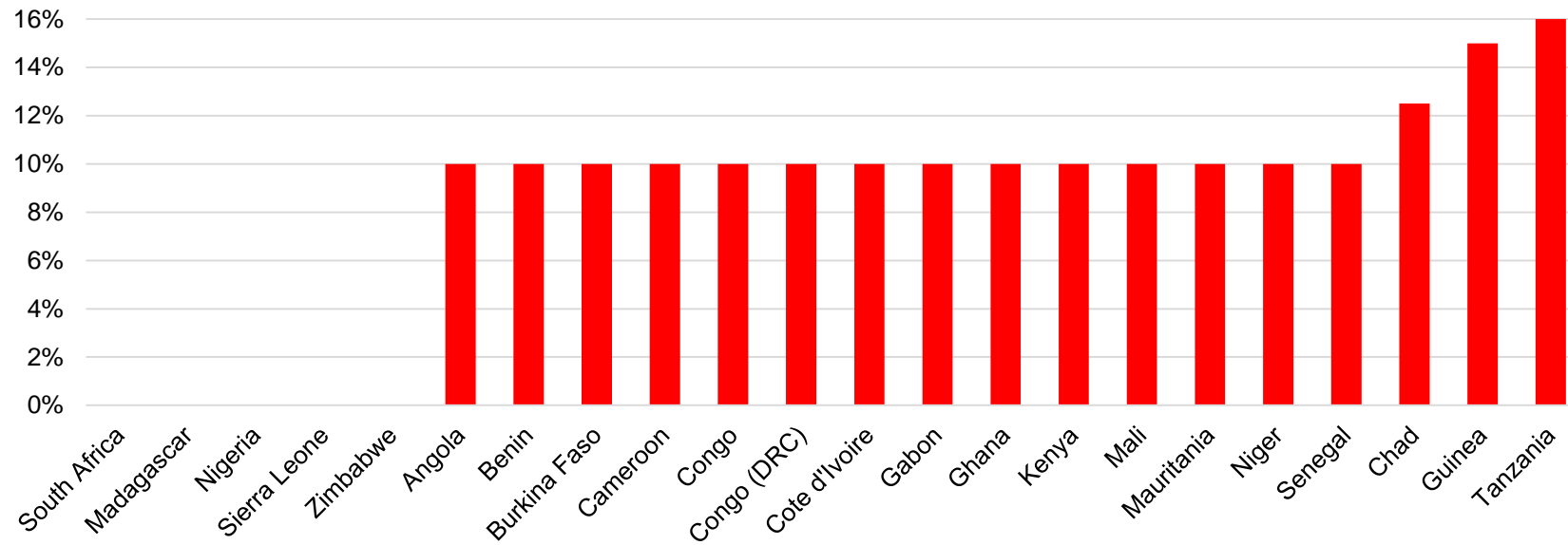
- Introduced during the **reform of the mining act in 2018**.
- **Tax base** = Difference in gross operating income (GOI) when the company's GOI is 25% higher than the one initially foreseen by the feasibility study.
- **Tax rate** = 50%.

### Other surtaxes in Africa :

- **Sierra Leone** : Mineral resource rent tax, 2018.
- **Chad** : Mineral resource rent tax, 2018.
- **Mali** : Progressive and overproduction royalty, 2020.

## 4. State participation in Africa

Required rates for free equity, 2019



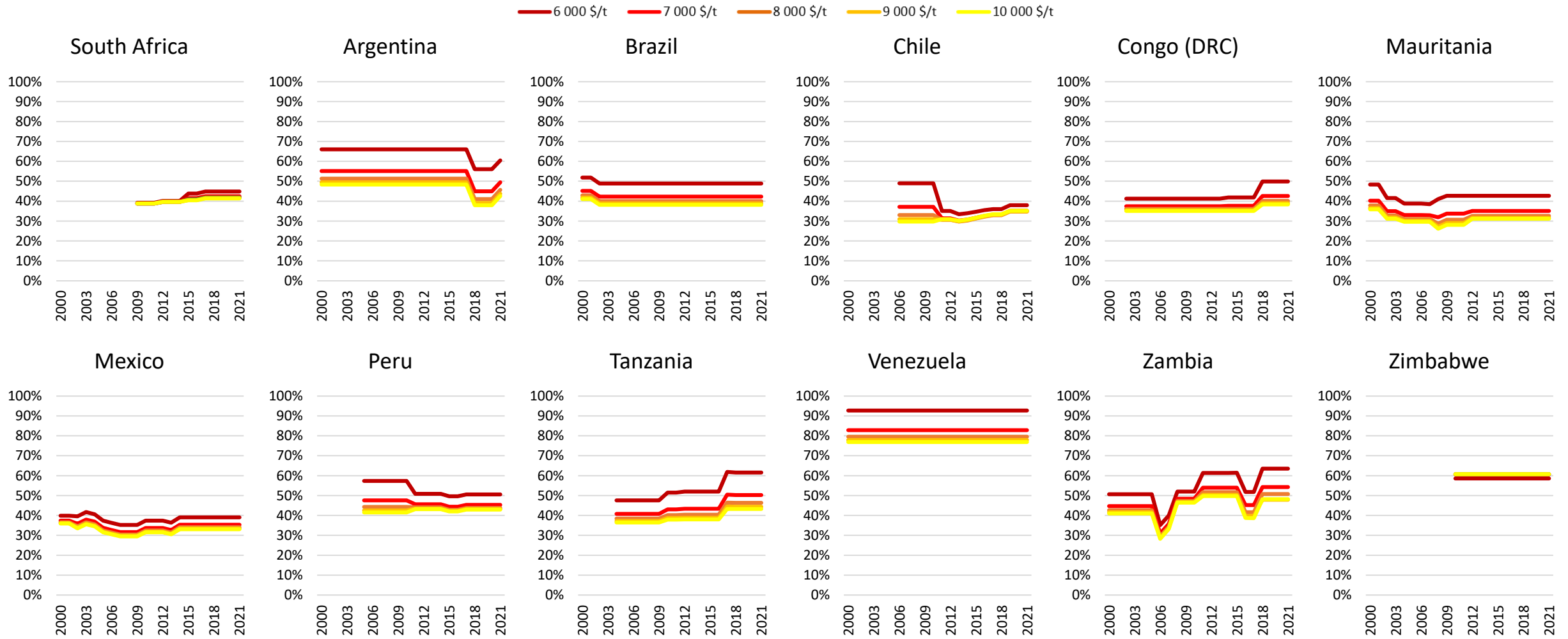
New countries :

- Mauritania, 2009.
- Cameroon, 2010.
- Gabon, 2015.
- Kenya, 2016.
- Tanzania, 2017.
- Chad, 2018.

Source : Research of authors, national legislations.

# 3. Results of the modeling

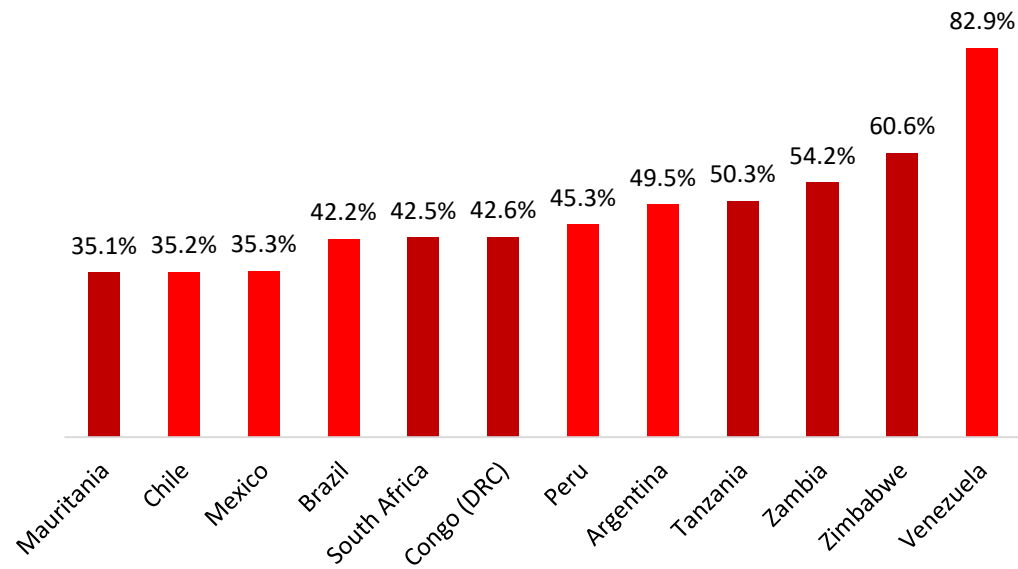
# 1. Level and evolution of the sharing of the mineral resource rents



Source : Calculation of authors, national legislations.

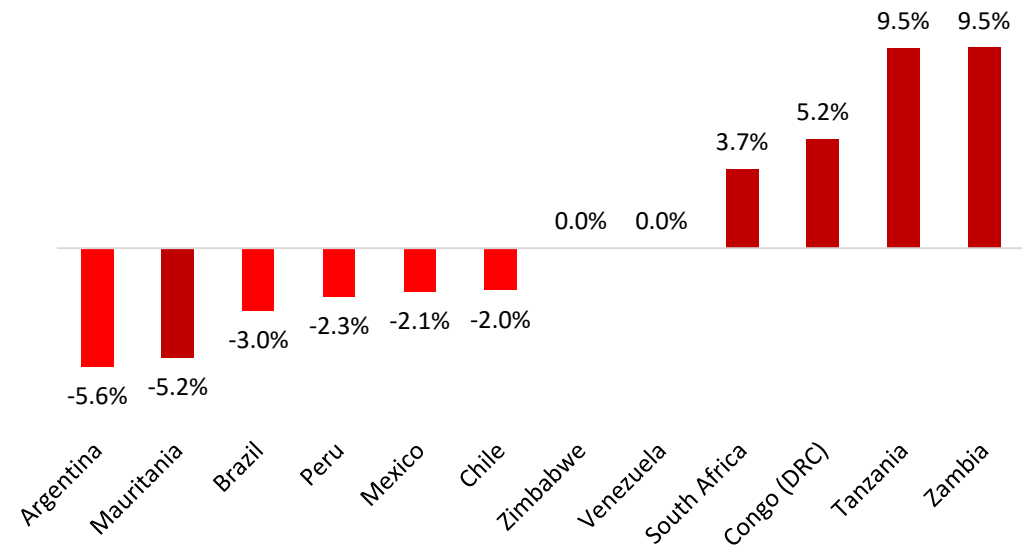
## 2. Level and evolution of the sharing of the mineral resource rents

AETR by country, 2021



Source : Calculation of authors, national legislations, \$7,000 /t.

Evolution of AETR by country, 2000-2021



Source : Calculation of authors, national legislations, \$7,000 /t.

---

Thank you for your attention!

---