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Beyond Extraction: Value Capture in South America's EV Battery Sector

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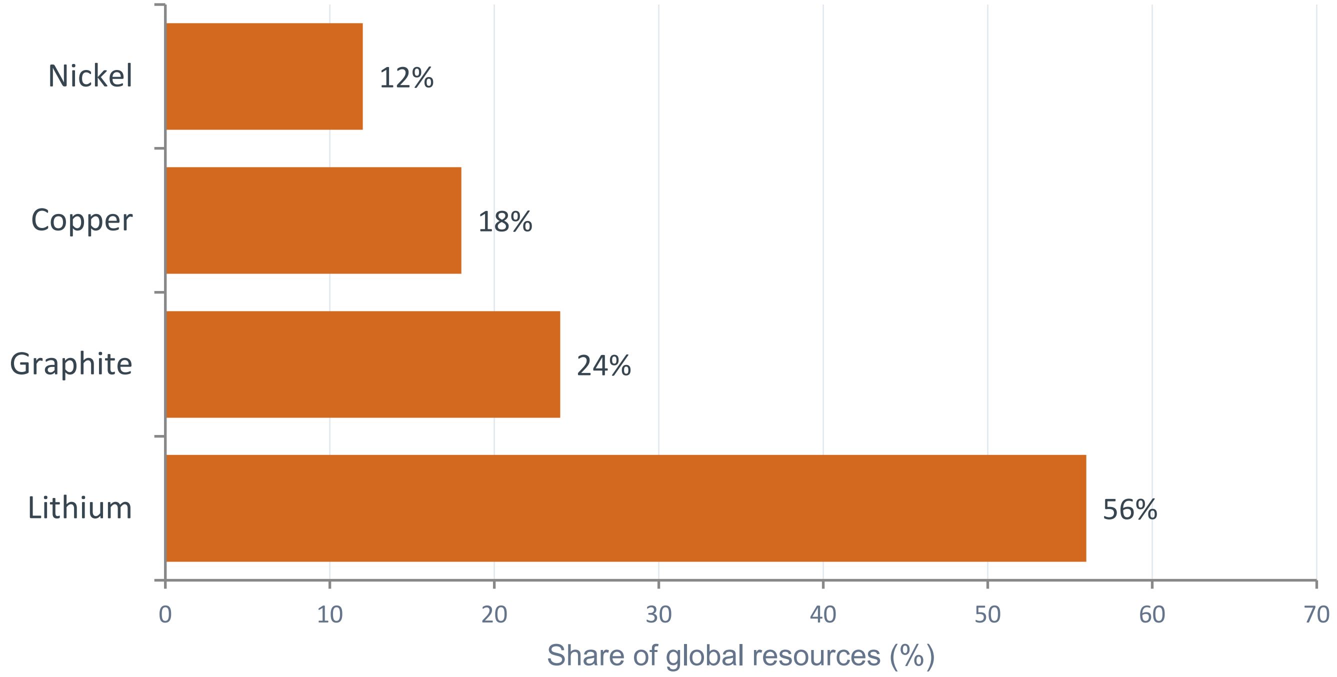
Who Captures the Value?

South America holds major resources of critical minerals that power the global energy transition.

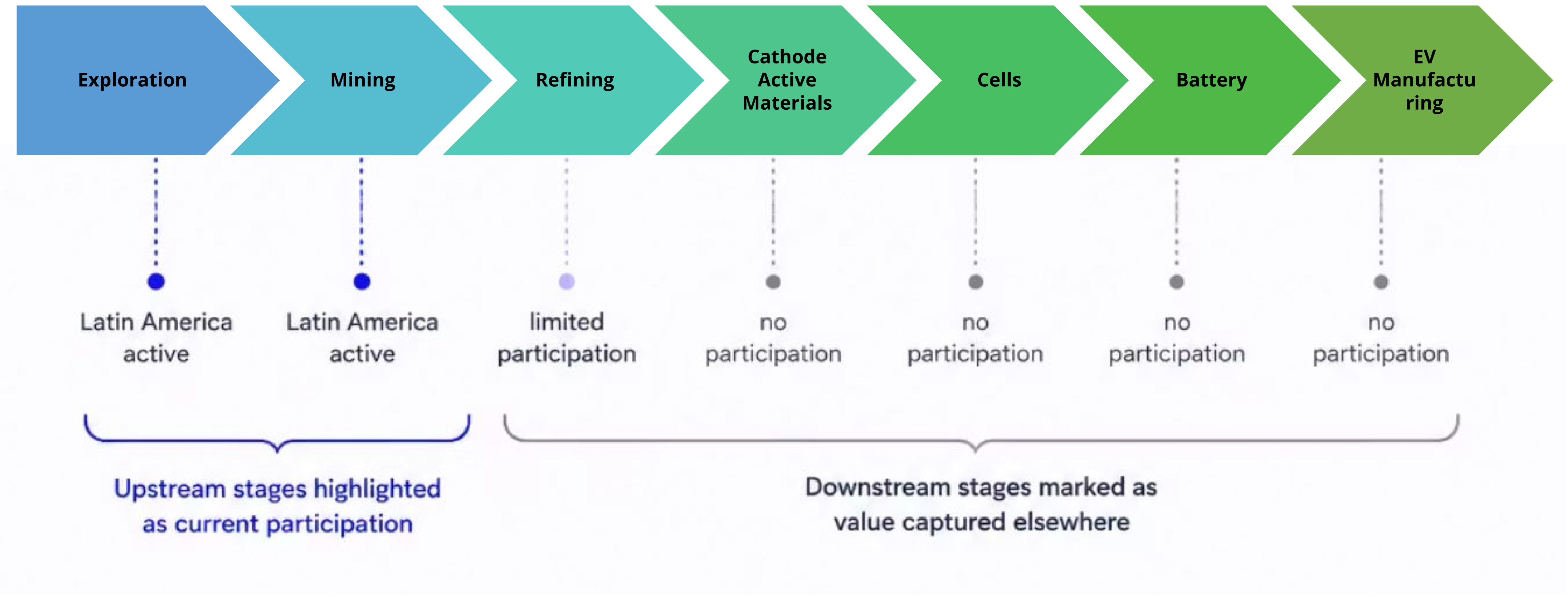
But who truly benefits?



Sources: USGS Mineral Commodity Summaries 2025–26. Lithium: Argentina + Bolivia + Chile. Copper: Chile. Graphite & Nickel: Brazil.

RESEARCH GAP

Resource Wealth, Limited Value Capture



Research Aim

How can South American countries expand value capture in the EV battery sector?

What opportunities exist?

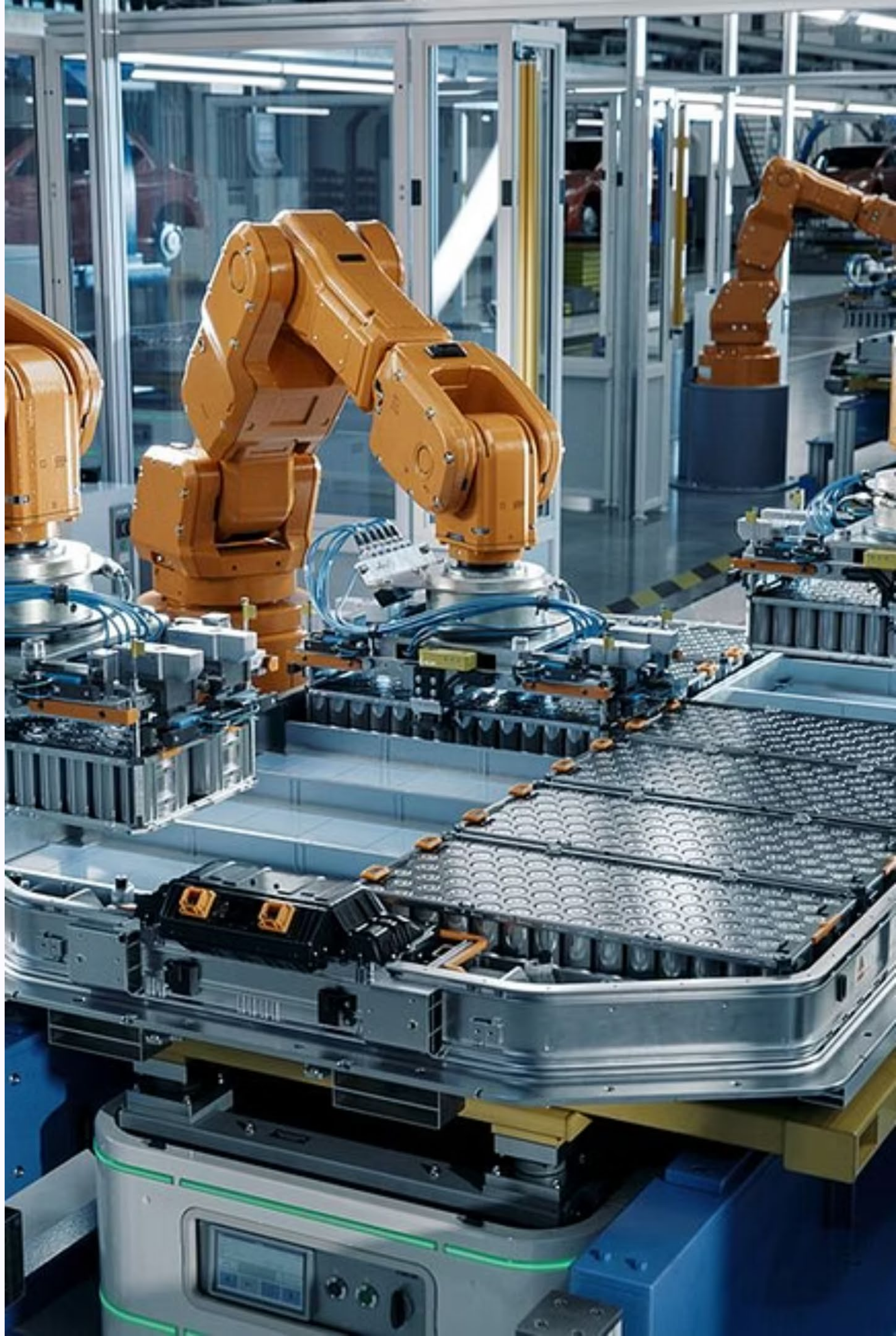
Identify pathways for downstream participation and industrial upgrading across the battery value chain.

What challenges must be addressed?

Assess institutional, economic, and governance barriers to value creation.

Comparative Scope

Argentina · Brazil · Bolivia · Chile



Mixed -methods approach

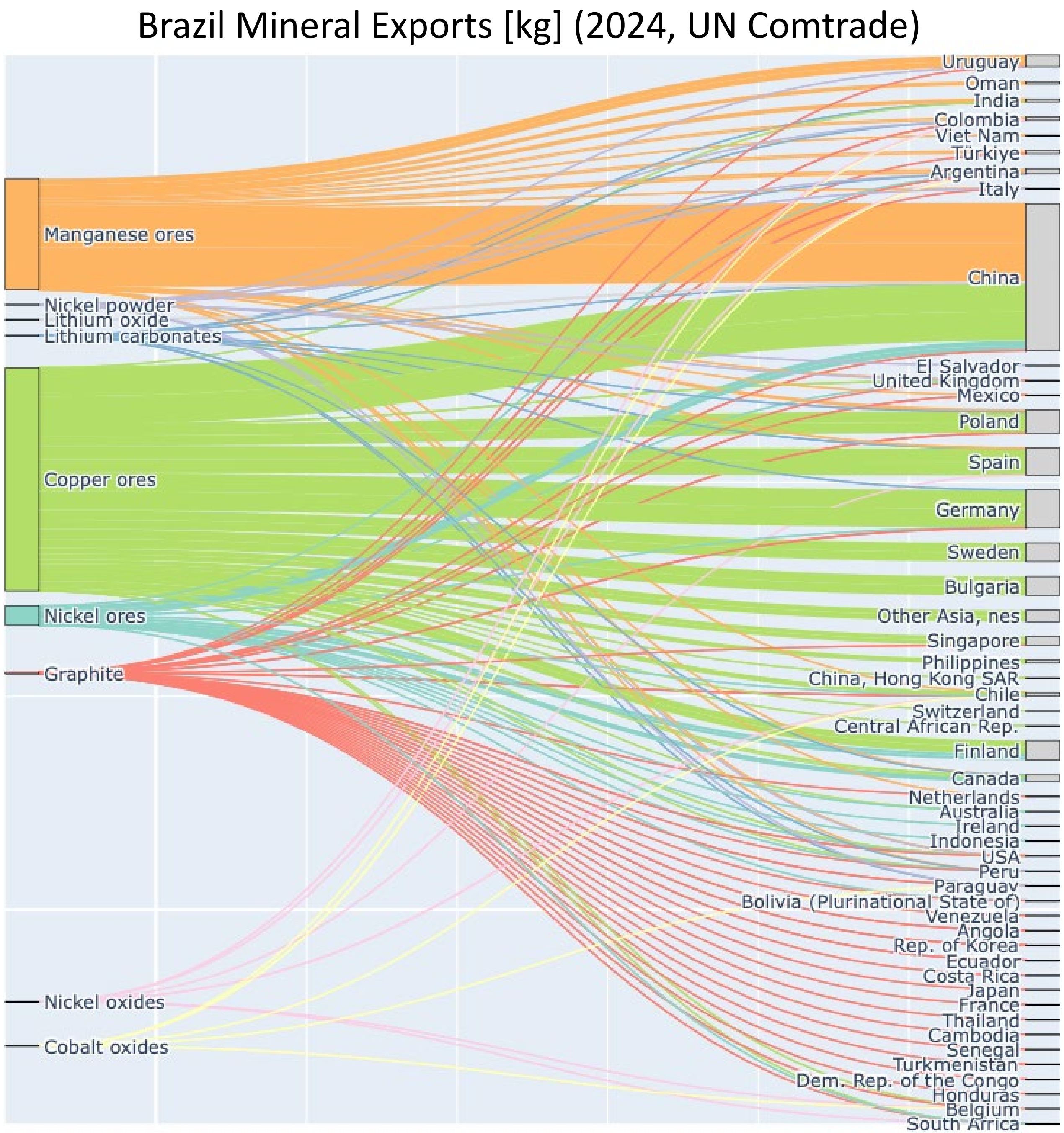
Quantitative methods

- Bilateral trade flow data of mining and battery mineral
- GDP and economic metrics
- Value-chain positioning matrix
- UN Comtrade data

Qualitative methods

- Semi-structured expert interviews
  - 16 interviews
  - From government/academia/industry
- Content analysis:
  - Policies
  - Academic literature
  - Industry reports

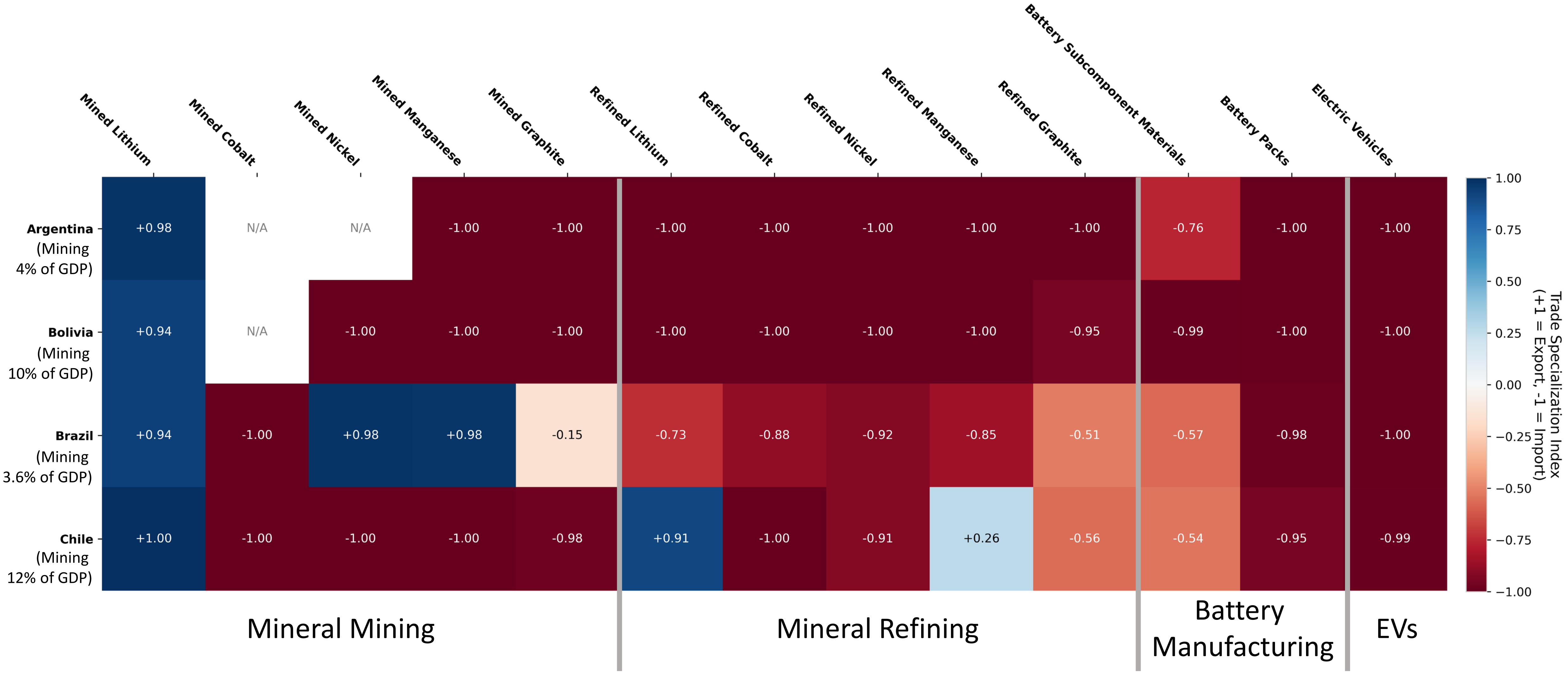
Understanding the South American Context



QUANTITATIVE FINDINGS

Source: UN Comtrade (2024 data); CEPALSTAT (2024 data)

Mapping the EV Battery Value Chain



Key insight:. Countries occupy different positions within battery supply chains and therefore face different value-creation opportunities.

QUALITATIVE FINDINGS

Comparing Argentina, Brazil, Bolivia & Chile

Dimension	Argentina	Brazil	Bolivia	Chile
Target minerals	Lithium	Rare Earth Elements (REEs)	Lithium	Lithium, Copper
Governance model	Public-Private Partnership	Public-Private Partnership	State-Owned Enterprise	Public-Private Partnership
Strategic materials declaration	Provincial	National	National	National
Value-creation initiatives	UniLib Battery Plant (Y-TEC / UNLP) – LIB cell development	MagBras – Integrated REE magnet value chain	La Palca Research Center – Cathode and battery technology development	BYD Cathode Plant – LFP cathode material production
Key policy	RIGI Investment Framework (2024)	National Policy for Critical and Strategic Minerals (2024)	Law 928 – YLB Creation (2017)	National Lithium Strategy (2023)

Key insight: No single model dominates — countries pursue different pathways to value creation.

FRAMEWORK

A Broader Framework for Value Creation

Findings suggest the original research question should be reframed. For policymakers navigating the energy transition, three interconnected questions offer a practical framework.

① For What?

Clarify **the purpose**:
market growth, innovation, social welfare, or development.

② For Whom?

Identify **beneficiaries**:
communities, governments, firms, investors, and future generations.

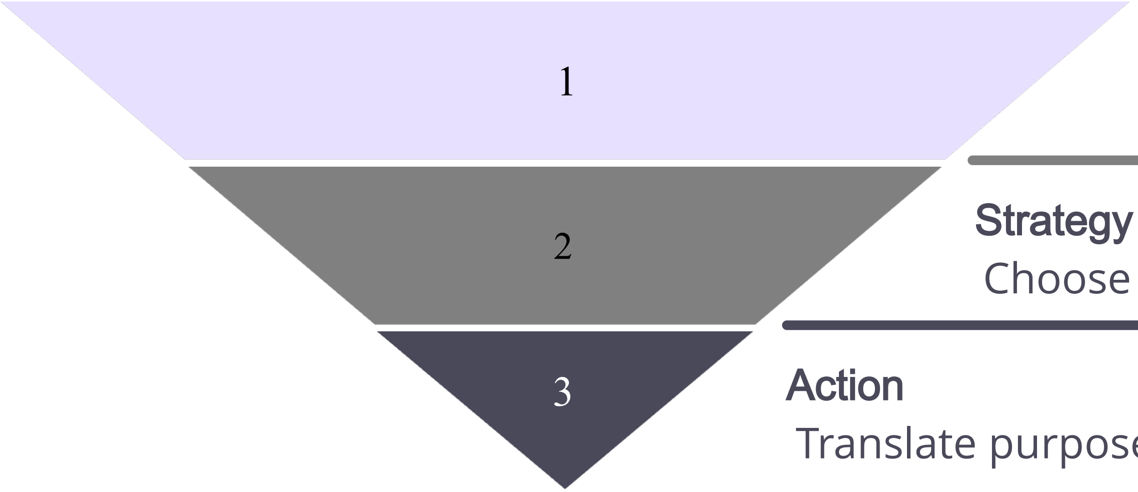
③ How ?

Choose **pathways**:
product, mineral, market, and broader economic strategies.

FRAMEWORK

① Value creation for **what** ?

The answer to **“for what?”** shapes the strategic pathway—the **“how?”**—needed to achieve the desired outcome.



Purpose
Define the goal: market, technology, or welfare.

Strategy
Choose governance, investment, and industrial pathways.

Action
Translate purpose into policies, partnerships, and institutions.

Market Opportunities
Export growth, competitive advantage, and economic returns.

Technological Innovation
R&D, industrial upgrading, and domestic technological capacity.

Social Welfare & Development
Community benefits, job creation, and sustainable development.

FRAMEWORK

② Value creation for **whom** ?

The **governance model** chosen for mining and energy transition determines who captures value, who bears the costs, and which institutions are needed to manage trade-offs.

Foreign Investment-Focused Governance

Prioritizes company benefits over community welfare.

stakeholder tensions, time pressures, short-term vs long-term thinking

Nationalization-Oriented Governance

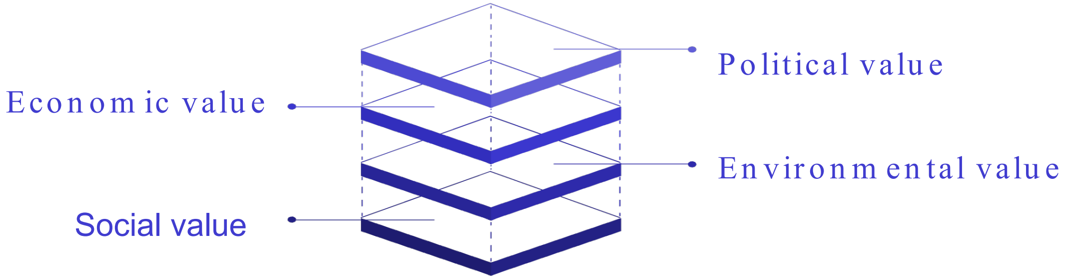
Promotes state control and national interests.

vulnerable to corruption and institutional failures.

Shared Benefits Governance

Balances benefits among communities, the state, and private actors.

competing interests, power imbalances, long-term commitment



Resources should generate value for the country and its people

FRAMEWORK

③ How can value be created?

Value creation depends on **choosing a strategic approach** and pairing it with the **right policy tools**. Together, they shape where benefits are captured, how capabilities are built, and which sectors gain long-term momentum.

Product-based approach

Focuses on *emerging battery technologies, chemistries, and supply chain development.*

Mineral-based approach

Builds value from *strategic minerals and upstream/midstream development opportunities*.

Market-based approach

Targets *EVs, automotive, energy storage, regional battery markets, and domestic capabilities*.

Broader economic approach

Develops *complementary sectors in parallel, including tourism and other local industries.*

TOOLS

Taxes and royalties

Capture benefits and share them with communities.

Workforce training

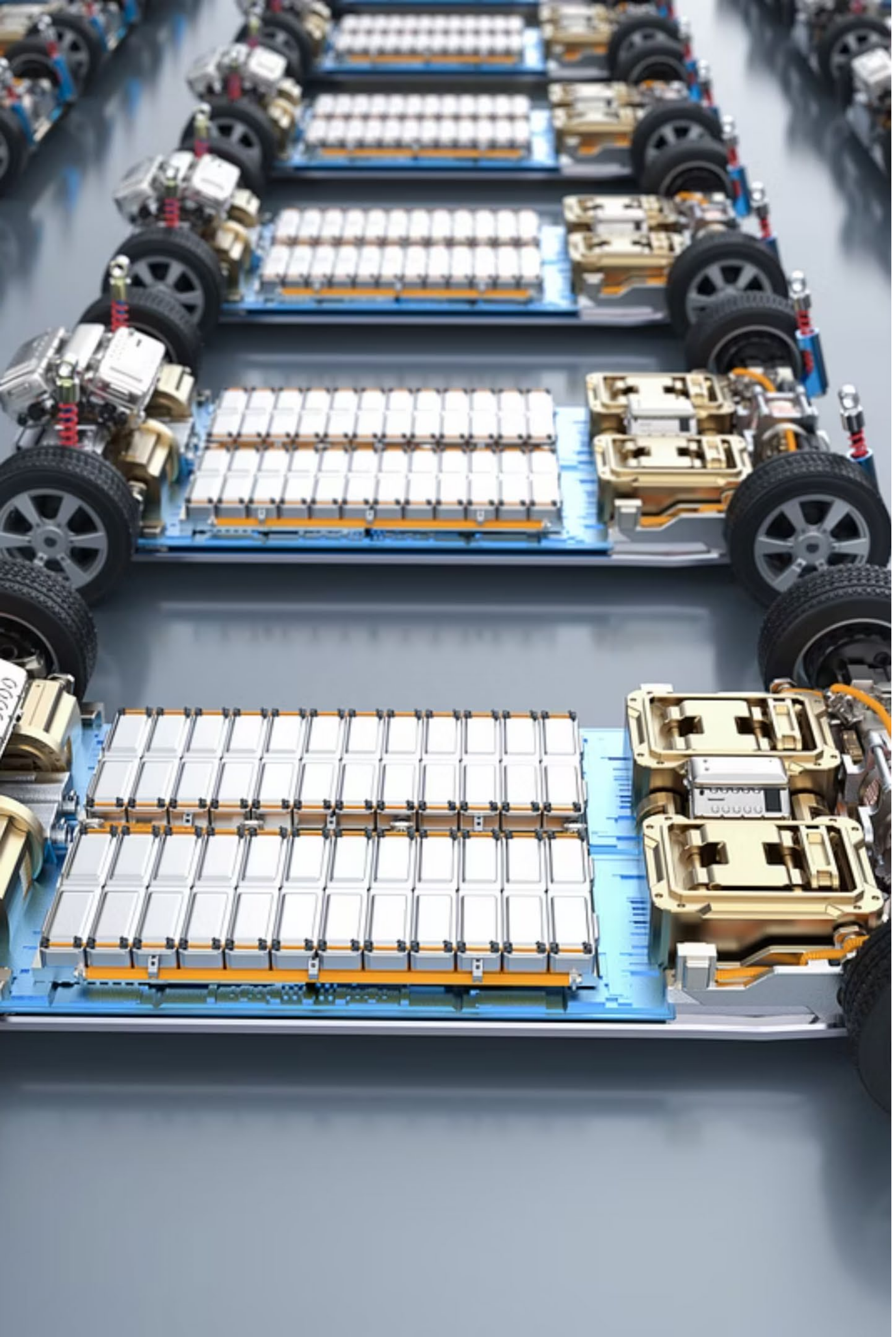
Develop knowledge, skills, and local expertise.

Research and Development

Support startups, pilot plants, and incentives.

Domestic sourcing requirements

Use local content rules and adequate export restrictions.



Key Takeaways

1 **Resource abundance alone does not guarantee value capture.**

Institutional capacity, governance, and strategic intent determine outcomes.

2 **Different countries require different value-creation strategies.**

Capabilities and institutional contexts vary — no single model applies universally.

3 **Long-term strategic planning is urgently needed.**

South America must act now to leverage critical minerals for sustainable development and explore potential *cross-country collaboration*.

> The energy transition creates a unique opportunity for South America — but capturing value requires moving **beyond extraction.**

Thank you!

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