FROM FISCAL STABILIZATION TO ECONOMIC DIVERSIFICATION:
A DEVELOPMENTAL APPROACH TO MANAGING RESOURCE REVENUES

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WORLD'S RICHEST LITTLE ISLE

A speck in the Pacific, Nauru is running out of the source of its huge income, phosphate rock, and in the next 10 years, the island will be unlivable.
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A speck in the Pacific, Nauru is running out of the source of its huge income, phosphate rock, and in the next 10 years, the island will be unlivable.
There will be many others ‘Fritz Habers’ to come.
More reasons why resource dependence is problematic:

Relative Income Decline

Taxonomy of Diversification strategies

- Financial Diversification (abroad)
- Upstream Diversification
  - Upstream production linkages
- Downstream Diversification
  - Downstream production linkages
  - Fiscal linkages
- Vertical Integration
  - Consumption linkages
- Commodity Value Chain
- Horizontal Diversification
  - (Degree of Relatedness)
  - Unrelated
  - Related

Knowledge, Technological and organisational skills
Goods with wide application for other sectors
Infrastructure
Lebdioui (2019c)
Taxonomy of Diversification strategies

Commodity Value Chain

- Upstream Diversification
  - Vertical Integration
    - Fiscal linkages
    - Backward production linkages
  - Consumption linkages
  - Transversal Capability Building
    - Knowledge, Technological and organisational skills
    - Goods with wide application for other sectors
    - Infrastructure
- Downstream Diversification
  - Forward production linkages
- Financial Diversification (abroad)

Unrelated

- Horizontal Diversification (Degree of Relatedness)

Related

Lebdoua (2019c)
Lebdioui (2019c)
Role of Commodities: Source of Capital

Financial Diversification (abroad)

Upstream Diversification

Vertical Integration

Commodity Value Chain

Downstream Diversification

Consumption linkages

Transversal Capability Building

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Horizontal Diversification (Degree of Relatedness)

Lebdioui (2019c)

Related
Options for resource revenue spending

Resource rents

Investment

Real assets
- Abroad: e.g. acquisition of foreign companies, technology, infrastructure
- Domestically: e.g. KWAN fund in Malaysia; Fonds de régulation des recettes in Algeria

Financial assets
- Domestically: e.g. bank lending or subsidised credit
- Targeted: Conditional credit upon certain activities (e.g. non resource tradable sector)

Consumption

Public spending
- Public sector: e.g. recurrent government expenditures
- Conditional transfer: e.g. citizen dividend schemes in Alaska or lowered taxes (MENA region and GCC countries)

Private spending
- Private sector: e.g. low-risk assets for savings purposes, e.g. bonds (as pursued by Botswana's Pula Fund, Chile's ESSF)
- High yielding assets: Investments in strategic assets to generate high returns. (e.g. Qatar Investment Authority, Norwegian Pension Fund)

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Domestically

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Private sector

General capabilities

e.g. Infrastructure, human capital, governance capabilities for investment efficiency

Specific capabilities

e.g. investments to promote the non resource tradable sector

General

e.g. bank landing or subsidised credit

Targeted

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Options for resource revenue spending

Neoclassical/Standard policy advice/ Permanent Income hypothesis

Emphasis on fiscal stabilisation to mitigate the effect of commodity price vulnerability (e.g. Rainy day funds’)

Living like a pensioner (e.g. Norway or Qatar)
Options for resource revenue spending

Resource rents
- Investment
  - Real assets
    - Private sector
    - Public sector
  - Financial assets
- Consumption
  - Public spending
  - Private spending

Real assets
- FISCAL INSTABILITY
  - Abroad
    - e.g. acquisition of foreign companies, technology, infrastructure
  - Domestically
    - e.g. KWAN fund in Malaysia; Fonds de régulation des recettes in Algeria

Financial assets
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- Conditional transfer
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Private sector
- ELITE CAPTURE
  - General capabilities
  - Specific capabilities
    - e.g. infrastructure, human capital, governance capabilities for investment efficiency
- WASTEFUL
  - General
  - Targeted
    - Conditional credit upon certain activities (e.g. non resource tradable sector)

Private spending
- Domestically
- Abroad

Public sector
- FISCAL INSTABILITY
- POPULISM

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Unlikely to stimulate productive domestic transformation

Needed to tackle deficit of O&M of existing capital stock

FISCAL INSTABILITY

MISJUDGING DURATION OF COMMODITY BOOM

ELITE CAPTURE

NEEDED TO STIMULATE EXPORT DIVERSIFICATION

Populism

FISCAL INSTABILITY

Private spending

Domestically

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General capabilities e.g. Infrastructure, human capital, governance capabilities for investment efficiency

Specific capabilities e.g. Infrastructure, human capital, governance capabilities for investment efficiency

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Specific capabilities e.g. Infrastructure, human capital, governance capabilities for investment efficiency

Individuals may better invest revenues than government officials

Pushes benefits too far into the future

Neoclassical/Standard policy advice/ Permanent Income hypothesis

Short term fiscal stabilisation

needed to stimulate export diversification

needed to tackle deficit of O&M of existing capital stock

Neoclassical/Standard policy advice/ Permanent Income hypothesis

FISCAL INSTABILITY
Options for resource revenue spending

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- **Private sector**
  - e.g. investments to promote the non resource tradable sector

- **Long term export diversification**
- **Fiscal Stabilisation**

- Chile and Botswana: the other side of the coin
- Kicking away the resource-based development ladder
Various possible objectives of resource revenue management

- **Fiscal stabilisation**: to smoothen government expenditure
- **Domestic investment (specific)**: to promote economic diversification and reduce reliance on commodities for foreign exchange generation
- **Domestic Investment (general)**: To increase human capital & infrastructure
- **Saving for intergenerational equity**
- **Boost private consumption**: by redistributing resource rents to citizens
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**Neoclassical models**
*(the Permanent income hypothesis)*
Various possible objectives of resource revenue management

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**Neoclassical models**
*the Permanent income hypothesis*

**Structuralist and other models**
**Beyond the one-size-fits-all approach:**

Factors that influence the trade-offs between resource revenue management decisions

<table>
<thead>
<tr>
<th>Factors</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of commodity dependence</td>
<td>The more dependent a country is on a given commodity, the more urgent diversification becomes (e.g. Algeria, Angola, Saudi Arabia, Venezuela).</td>
</tr>
<tr>
<td>Savings rate to date</td>
<td>Current savings rate contribute to the ability of the country to invest domestically as it is already “insured” in case of a commodity price collapse (e.g. Chile).</td>
</tr>
<tr>
<td>Investment deficit</td>
<td>Investment deficits (include low spending on human capital, education or R&amp;D) increase the opportunity costs of resource revenue investments in financial assets overseas because funds would not be made available for domestic investment (e.g. Algeria, Botswana, Chile, Nigeria).</td>
</tr>
<tr>
<td>Degree of resource exhaustibility and anticipated price fluctuations</td>
<td>If resources are to be depleted on the long term, or if their value is to decrease due to changes in consumer demand or technological innovations, the urgency to diversify sources of revenues through the transformation of domestic productive structures increases (e.g. fossil fuel dependent economies).</td>
</tr>
<tr>
<td>Institutional capacity to invest</td>
<td>A government’s ability to spend revenues effectively is affected by the level of institutional development.</td>
</tr>
<tr>
<td>Degree of resource abundance per capita</td>
<td>The opportunity cost of investment in financial assets overseas are lower for very resource rich per capita countries (e.g. Kuwait, Qatar, UAE) than medium resource rich per capita countries (Algeria, Nigeria), where there is a need for employment generation outside of extractive sectors</td>
</tr>
</tbody>
</table>
Way forward?

• Beyond the “Norwegian solution” to managing resource revenues, which neglects the role of the diversification of productive structures.

• There is a need for dynamic approach to the trade-off between various types of investment, across space & time.
A different approach to managing resource revenues

In order to overcome **domestic structural constraints** (such as low technological sophistication, limited areas of competitive advantage …). While **mitigating economic risks** associated with domestic investments of resource revenues (*such as public investment inefficiency, absorptive capacity constraints, and Dutch disease*), the approach in Chang and Lebdioui (2020) is based on the following two features:

1. **The gradual scaling-up of domestic investments in real assets**
2. **The targeting of productivity enhancing assets for tradable sectors**
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**Diagram:**
- The share of resource revenues over time:
  - t0: Domestic investments in general and specific capabilities
  - t1: Savings in financial assets overseas
  - t2: (Long commodity boom, >10 years)
  - t3: (Short commodity boom, <5 years)
A different approach to managing resource revenues
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- **The gradual scaling-up of domestic investments in real assets**
- **The targeting of productivity enhancing assets for tradable sectors**

This approach is dynamic over time because it enables the gradual shift between short-term fiscal stabilisation and long-term accumulation of productive capabilities.

It takes account how certain patterns of resource-revenue investment can better contribute to increasing the institutional capacity to invest over time.

It has several benefits, such as:

- Reducing the cost of misjudging the duration of a commodity boom
- Taking into account the diminishing marginal utility of public spending and the issue of absorptive capacity
- Explicitly considering the opportunity costs associated with over-insurance through overseas financial investment of resource revenues.
Main takeaways

Bringing structural transformation back into the resource revenue management debate

- The suitability of different resource revenue management strategies is highly context-dependent.
- The standard policy advice has been dominated by short-termism and the lack of a perspective on economic development and structural transformation. Mainstream approaches have often addressed only the symptoms of commodity dependence (e.g. vulnerability to commodity price volatility) rather than its root causes (insufficiently diversified productive structures).

The best fiscal stabilisation is economic diversification

- The state has a key role to play in shaping the accumulation of productive capabilities related to the emergence of new exports by reinvesting a share of resource revenues.
- The failure to engage in creative imagination of alternative realities may inevitably lead to maintaining the status quo, where the risks are serious and tangible.
- The alternative resource revenue management model that we propose is more suited to the context of commodity-dependent developing countries. It also enables the alignment of the dual objectives of short-term stabilization and long-term diversification.

The context of climate change and COVID-19: Reinvesting non-renewable resource revenues in green industries?

- Divestment from fossil fuels has started... Low carbon innovation is on its way. What will happen to fossil fuel economies if no serious action is taken?
- Fossil fuel-dependent economies need to undergo a sustainable structural transformation. Investing fossil fuel revenues in renewable energies leads to a “virtuous circle” of diversification.
- Clean energy deployment is a necessity as demand will focus on goods with low carbon production processes.
Latin American exports are intrinsically linked to climate change because of a dependence:

- **on fossil fuels** that are at risk of becoming stranded assets

- **Agro-commodities**, where productivity is vulnerable to fluctuations in temperature and precipitation (e.g. salmon farming in Chile, coffee in Colombia, and cacao in Ecuador).

- **So-called minerals of the future**, that are still dominated by high levels of uncertainty and risks of technological disruption.

Source: UNCTAD
Anticipating changes in sustainability standards

Latin American firms will have to adapt as consumer demand shifts towards more sustainable products in key markets.

- Green Deal proposals in the USA & EU may bring regulatory changes that will reshape consumption patterns.

- Developing countries need to anticipate these “green” trade regulations by shifting their productive capabilities towards greener goods and services that will enjoy long-term access to the largest consumer markets.
Renewable energy employment in 2018 (in thousand jobs)

- Solar Photovoltaic: 3,605
- Liquid Biofuels: 2,063
- Hydropower: 2,054
- Wind Energy: 1,160
- Solar Heating/Cooling: 801
- Solid Biomass: 787
- Biogas: 334
- Geothermal Energy: 94
- Municipal and industrial waste: 41
- CSP: 34
- Tide, Wave and Ocean Energy: 1

In total, 11 million people were employed across the renewables sector in 2018.

Source: IRENA (2019)
Geographic distribution of renewable energy employment in 2018

- **China**: 4,078
- **EU**: 1,235
- **United States of America**: 855
- **Brazil**: 1,125
- **India**: 719
- **Japan**: 267
- **Rest of Africa**: 227
- **North Africa**: 29
- **South Africa**: 66

**Total jobs**: 11 million

**Source**: IRENA jobs database.

**Disclaimer**: Boundaries and names shown on this map do not imply any official endorsement or acceptance by IRENA.
The case for a green recovery in post-COVID Latin America

- Growth and employment
- Resilience to health problems
- Achieve climate goals

Green Recovery
(Low carbon) R&D levels remains very low

- The acquisition of innovative and productive capabilities requires skilled human capital and **R&D support**.

- The region’s average R&D expenditure (as a share of GDP) is already amongst **the lowest in the world**, falling well below other regions (1/3 of the world average).

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**Expenditure on Research and Development by World Region (%GDP)**

- **World**
- **European Union**
- **East Asia**
- **Latin America**
- **North America**

*Source: WDI*
Towards Latin American Green Deals?

**Imperative**
- High vulnerability to climate change as a result of export dependence on agriculture and fossil fuels
- High need for economic diversification across Latin America
- High inequality rates and the need for a alternative development model for decent jobs creation
- Anticipated shift in consumer demand towards sustainable products

**Opportunities & potential**
- Increasing demand for electricity and renewable energy deployment, with potentially high socio-economic benefits
- Biodiversity endowment (Amazon region)
- Endowment in the ‘minerals of the future’ (e.g. lithium and copper)

**Obstacles**
- A considerable mobilisation of resources will be required.
- Political obstacles to regional integration
- Issues of regime continuity (regional vs national?)
- Countries starting from a different standpoint in terms of productive capabilities (Brazil vs the rest).

**The current situation**
- Very low R&D spending compared to other regions (1/3 of the world average),
- Lack of policy complementarity
- Regional clusters and supply chains?
- Low carbon innovation ecosystems

**Future area of investigation**
- A Latin American green new deal
Thank you for your attention

Contact me at: a.a.lebdioui@lse.ac.uk

Access the full study on resource revenue management at:

Access the post on the green recovery in Latin America:

English: https://blogs.lse.ac.uk/latamcaribbea...recovery-in-post-covid-latin-america/

Portuguese: https://blogs.lse.ac.uk/latamcaribbea...recovery-verde-apos-a-covid-19/

Updates on the Canning House Research Forum on the future of trade in Latin America:
https://www.lse.ac.uk/lacc/research/canning-house-research-forum