

Natural Resource Wealth & Economic Development

Overview of Selected Issues

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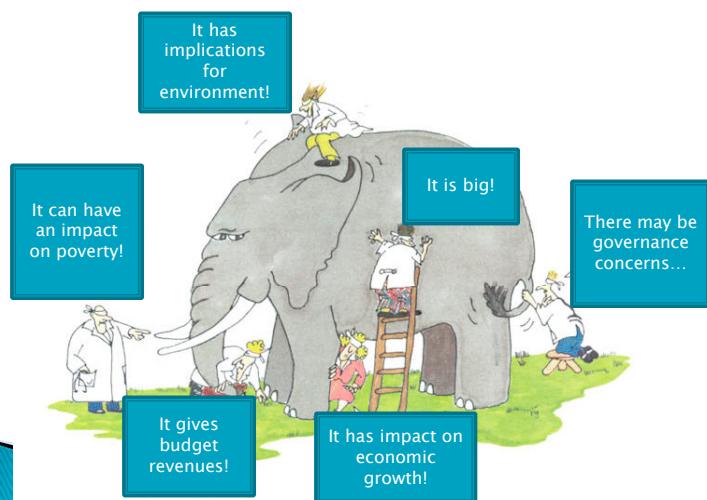
Overview

- I. Some Basic Issues
- II. Key Factors for the Role of Natural Resources in Development
- III. Macroeconomic Management of Natural Resource Inflows

I. Some Basic Issues

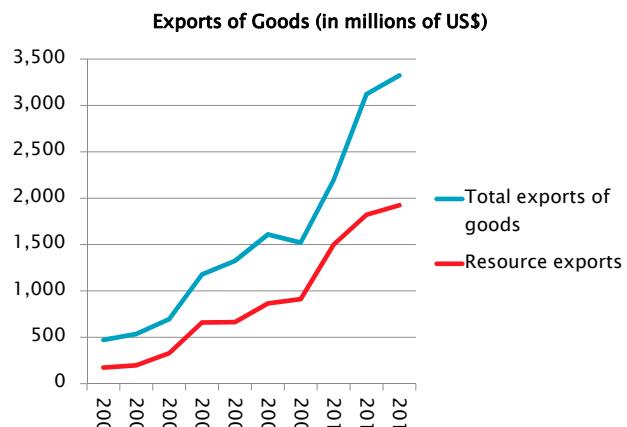
1. Why do natural resources matter?
2. Who owns them?
3. Are they a blessing or curse?

1. Why Do Natural Resources Matter?

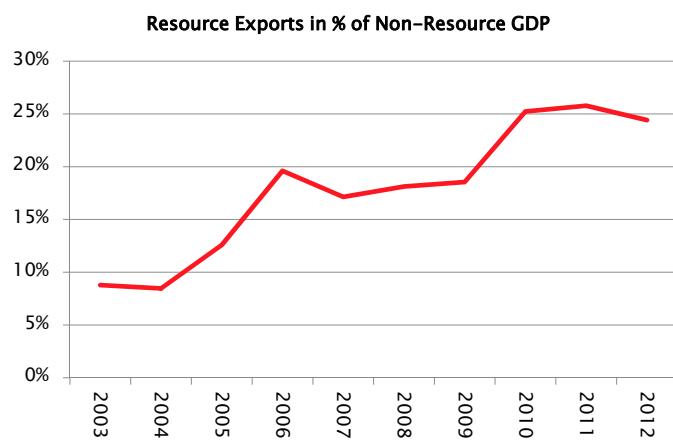


Resource Exports Are Important for Lao PDR

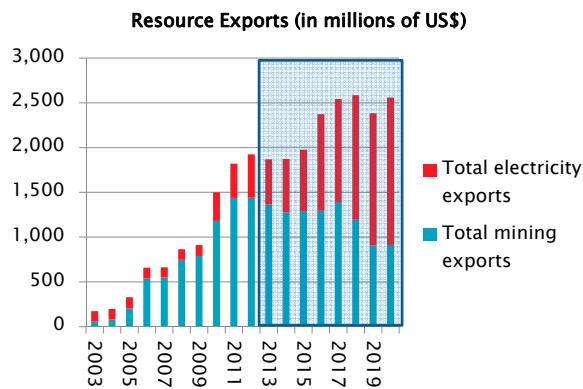
They are large both measured in terms of total exports ...



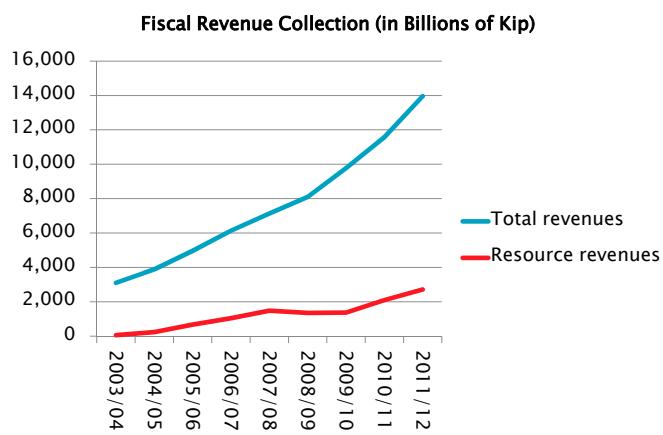
... and in terms of non-resource GDP.



Large increase in resource exports over past ten years has been driven by gold and copper exports, but electricity exports will become very important going forward:



The contribution of the resource sector to fiscal revenue collection has been sizeable:



2. Who Owns the Natural Resources?



Another quality mine listing from the
**Department of Land
Transfer Information**
PROTECTING AMERICA'S RESOURCES 'ONE MINE AT A TIME'

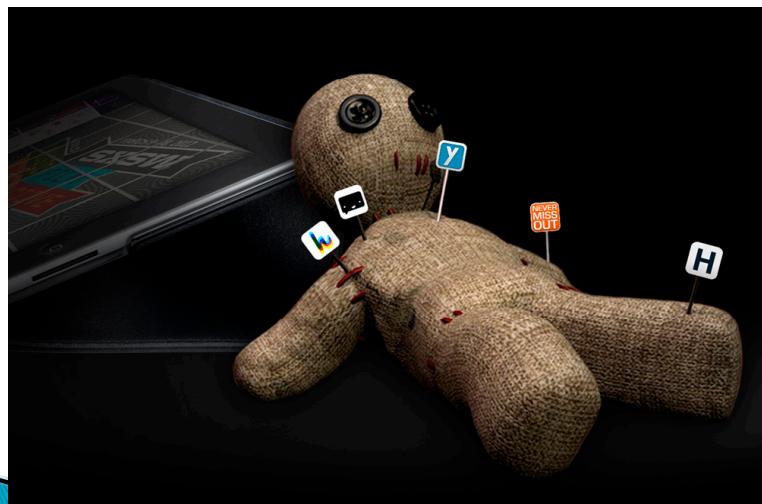
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3. Natural Resources: A Blessing?



... Or a Curse?



A Look at Other Countries' Experience

Table 1. Natural resource abundance and economic growth

Share of natural capital in national wealth (%)	Growth of GNP per capita per year 1965-1998, adjusted for initial income (%)							
	≤ -3%	-3% < ≤ -2%	-2% < ≤ -1%	-1% < ≤ 0%	0% < ≤ 1%	1% < ≤ 2%	2% < ≤ 3%	
≤ 5%	Jordan	El Salvador South Africa	Guatemala Morocco	Netherlands Switzerland Turkey U.K. U.S.	Austria Belgium Denmark Egypt France Greece Italy Portugal Spain	Japan Mauritius	Korea	
5% < ≤ 10%	Benin Ghana Haiti	Honduras Jamaica Kenya Peru Zimbabwe	Argentina Costa Rica Panama Philippines	Brazil Chile Colombia Dominican Rep. Mexico Pakistan Sri Lanka Uruguay Trinidad and Tobago Tunisia	Finland Ireland Norway	Malaysia Thailand	Botswana China	
10% < ≤ 15%	Nicaragua Malawi Mozambique	Congo The Gambia	Bangladesh Namibia Uruguay	Australia Paraguay	Canada	Indonesia		
15% < ≤ 20%	Côte d'Ivoire Senegal Togo Venezuela	Burkina Faso Burundi Nepal Papua New Guinea	Ecuador New Zealand	India				
20% < ≤ 25%	Mauritania Rwanda	Cameroon						
25% < ≤ 30%	Sierra Leone							
30% <	Central African Rep. Chad Guinea Bissau Madagascar Malta Niger Zambia							

II. Key Factors for the Role of Natural Resources in Development

- Natural Resources matter for institutions and governance, which in turn are critical for the long-run growth performance of an economy
- Natural resource revenue tends to be volatile, which can undermine growth
- A natural resource boom can lead to Dutch-disease effects that undermine long-term growth

Natural Resources, Institutions and Governance

Quality of institutions is thought to be one of the most critical factors for economic development

Three hypothesis how natural resource wealth may undermine quality of institutions:

- Strong, market-based institutions are more likely to arise in natural resource-poor economies
- Competition for natural resources emphasizes fault lines in society, potentially even leading to civil war
- Even in less extreme cases, competition for natural resources can lead to corruption that undermines institutions and governance, and thereby growth

Natural Resources and Institutions

Basic thesis: economic growth requires market-based institutions that are more likely to be fostered in natural resource-poor economies

Natural resource-rich economies induce political contest to capture ownership of these resources, leading to institutions that foster authoritarianism, state control and inequality

In natural resource-poor economies, government must motivate people to create wealth, leading to more market-oriented institutions



Fault Lines in Society

Basic thesis: political contest to capture ownership of natural resources brings fault lines in society to the fore

Example: Sierra Leone and blood diamonds—a large, young underclass was drawn into warring over control of artisanal diamond fields, arming them and plunging the country into a vicious civil war

The war spilled over to Liberia, which had its own class divisions that were amplified by blood diamonds



Natural Resources and Corruption

Basic thesis: corruption is a primary tool to capture ownership of natural resources, which in turn undermines institutions and governance

Substantial empirical evidence that “point source” resources such as oil, other minerals, plantation crops, coffee and cocoa undermine institutions and growth, with corruption being a key issue

Important remedy: transparency (e.g., Extractive Industries Transparency Initiative [EITI])

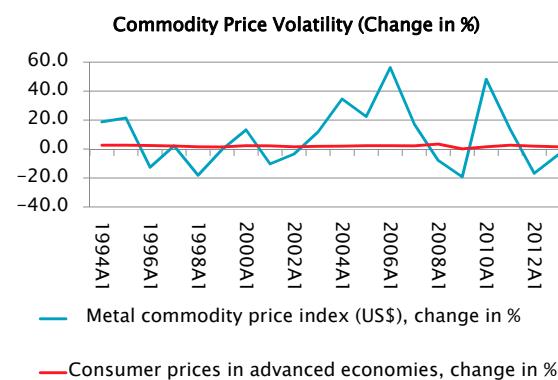


Volatility of Natural Resource Prices

Natural resource prices tend to be volatile, which can lead to boom-bust cycles.

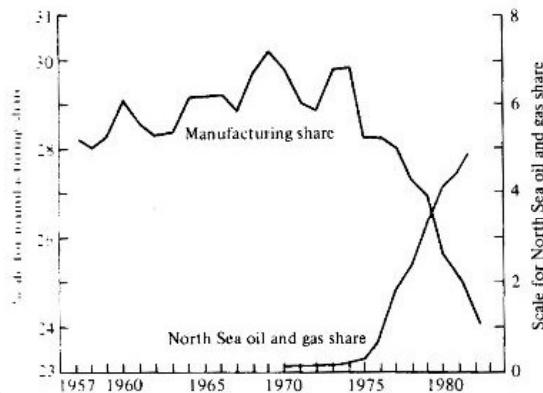
This matters for growth because

- volatility generates uncertainty, which is bad for growth
- economic upheaval during the bust-phase can have long-term negative consequences



Dutch Disease

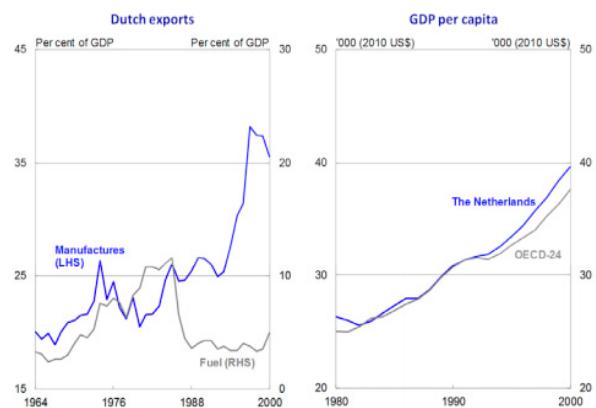
Natural resource boom is associated with de-industrialization, first observed in Netherlands, ...



... but in the longer term the Dutch manufacturing sector bounced back and overall growth period was strong.

Chart 4: Dutch and Dutch disease

Hence, Dutch disease may not be fatal, with treatment options available.

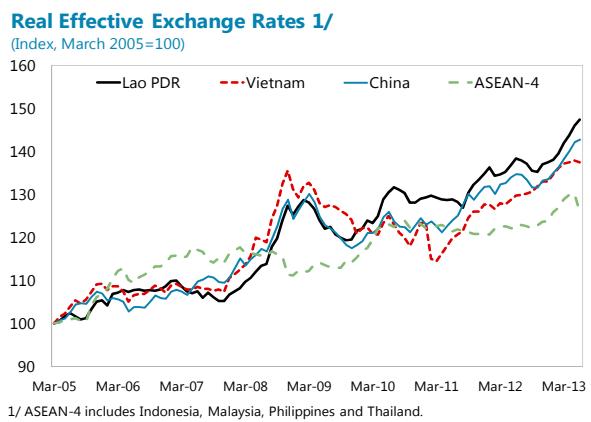


Source: Statement 4, Budget Paper No. 1, Budget 2011-12.

Symptoms of Dutch Disease

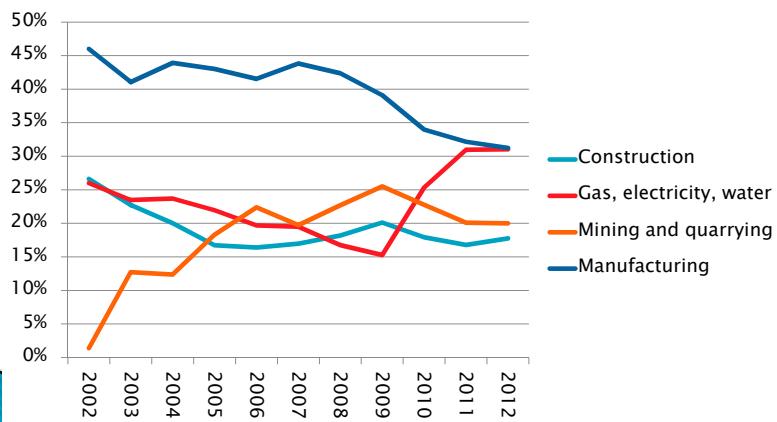
- Real exchange rate appreciation

IMF Lao P.D.R
Article IV
consultations:
*“Sharp real
exchange rate
appreciation
threatens to
erode external
competitiveness
further.”*



- Crowding out of non-natural resource exports and decline in tradable sector production
- Long-term negative impact on growth?

Composition of Industry Value-Added (% of GDP, 2002 Prices)



What Is the Harm?

- Decline in tradable sector reflects change in sectoral composition of the economy: natural resource boom leads to demand for non-tradables, especially services, that cannot be imported and must be produced locally—this in itself is not harmful!

Harm arises when decline in tradable sector

- has large negative social impact, and/or
- when tradable sector is a special source of growth (industrialization)

III. Macroeconomic Management of Natural Resource Inflows

- Insulating economy from volatility of the natural resource sector
- Addressing Dutch-disease effects

Managing Natural Resource Volatility

Main responsibility for insulating economy from natural resource volatility falls on fiscal policy.

- Fiscal spending of natural resource inflows is often the single-most important link between the natural resource sector and the rest of the economy
- Consequently, delinking fiscal expenditures from natural resource revenue inflows goes a long way to insulate economy from natural resource revenue volatility
- Alternative: countercyclical fiscal and monetary policies



Stability–Oriented Fiscal Policy

In reality, achieving stability–oriented fiscal policy is hard due to political pressures to spend inflows.

Experience from Mongolia:

“ ... this macro-fiscal management is made harder by the intense lobbying and electoral cycle in an increasingly oligarchic and populist democracy as Mongolia, given the legal and institutional weaknesses.”

“Therefore, ensuring optimal degree of saving and investment calls for additional, more effective arrangement of institution buttressing.”

Institutional Arrangements

Institutional arrangements help to lock in commitment to stability-oriented fiscal policy.

- Budget rule, e.g., aim for (i) stable non-mining deficit in percent of non-mining GDP or (ii) stable growth rate of real expenditures
- Institutionalize savings of natural resource inflows through Sovereign Wealth Fund, with a rule for stable outflows to finance budget expenditures



Addressing Dutch–Disease Effects

Main issue is how much of the natural resource revenue inflows are to be spent and how much to save.

- The spending decision drives the real appreciation, which in turn leads to the other aforementioned Dutch-disease effects.
- Hence, addressing Dutch-disease effects is again mostly a fiscal policy issue; composition of spending matters as well.
- In principle, monetary policy can neutralize effect of fiscal spending on real appreciation, but this would lead to private-sector crowding out.



Why Is Spending of Natural Resource Inflows Associated with Real Appreciation?

A numerical example

Refresher: $\text{GDP} = \text{Consumption} + \text{Investment} + \text{Exports} - \text{Imports}$
 $\text{Absorption} = \text{Consumption} + \text{Investment}$

Starting point:

- No inflow of natural resource inflows
- Public absorption: \$20
- Private absorption: \$80

Public
Spending /
Absorption

Private absorption

Numerical example (continued)

Scenario 1: Natural resource revenues of \$10 flow in to the government, which spends those entirely.

Assumptions:

- No supply response (i.e., GDP is unchanged)
- No change in non-resource exports or imports [and no change in exchange rate!]

Remember that $\text{Absorption} = \text{GDP} - (\text{X} - \text{M})$

- Total Absorption is unchanged
- Public absorption can increase only if private absorption declines: private sector crowding out

Private
absorption

Public
Spending /
Absorption

Increase in
expenditures

Numerical example (continued)

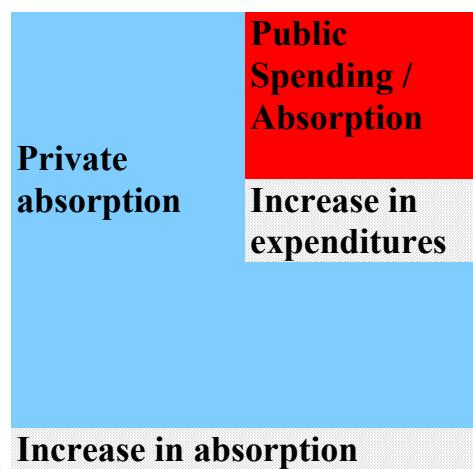
Scenario 2: As before, natural resource revenues of \$10 flow in to the government, which spends those entirely. In addition, non-resource trade deficit widens in line with natural resource inflows.

Assumptions:

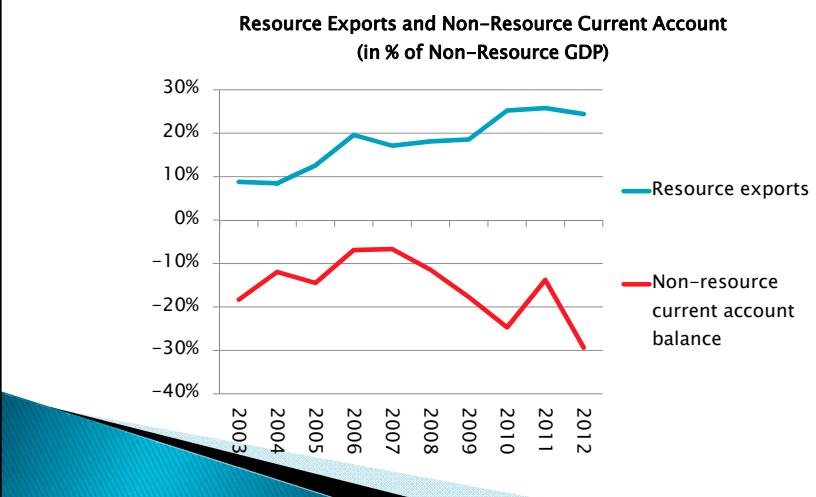
- No supply response (i.e., GDP is unchanged)
- Non-resource trade deficit widens by \$10

→ Total Absorption increases

→ No more crowding out of private sector



The resource boom in Lao P.D.R. went indeed along with a widening of the non-resource current account deficit:



Numerical example (continued)

Widening of non-resource trade deficit in scenario 2 allows increase in public expenditures without crowding out private sector expenditures.

Why would non-resource trade deficit widen?

- Trade balance depends directly on consumption and investment spending (income effect)
- Trade balance depends on real exchange rate (price effect)

Response of Trade Balance to Spending of Natural Resource Inflows: Income Effect

Government spends directly on imported goods (imported equipment, fuel, etc):

- Trade deficit rises
- but extent of increase in trade deficit depends on import share of government spending

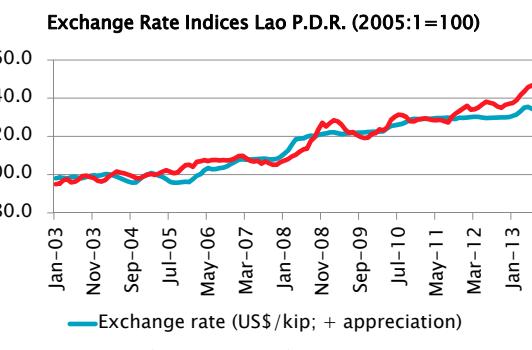


Response of Trade Balance to Spending of Natural Resource Inflows: Price Effect

Case 1: Flexible exchange rate

Central bank sells all of the natural resource foreign exchange inflows to the market:

- Nominal (and real) exchange rate appreciates
- Imports become cheaper and exports more expensive
- Tradable production declines & non-tradable production increases



→ Trade deficit increases

Response of Trade Balance to Spending of Natural Resource Inflows: Price Effect (continued)

Case 2: Fixed exchange rate

Government spending raises demand for non-tradables, leading to increase in inflation:

- Real exchange rate appreciates
- Imports become cheaper and exports more expensive
- Tradable production declines & non-tradable production increases



→ Trade deficit increases

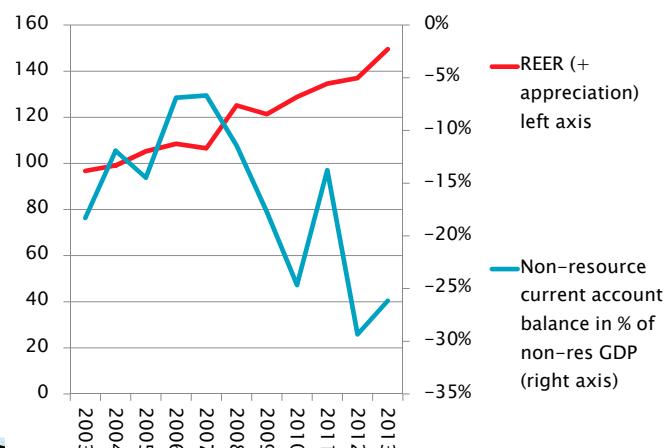
Response of Trade Balance to Spending of Natural Resource Inflows: Bottom Line

Government spending of natural resource revenues will lead approximately to a similar increase in the non-resource trade deficit:

- Partly this happens directly through the import content of government spending,
- Partly this happens through a real appreciation, which takes place either under a flexible or fixed exchange rate regime *unless* the central bank actively tries to prevent the *real* appreciation from taking place

Widening of non-resource current account deficit in response to real appreciation is clearly visible in Lao:

REER and Current Account Balance in Lao P.D.R.



Policy Options to Prevent Real Appreciation

If policy makers come to the conclusion that they want to prevent the real appreciation because of the loss of competitiveness this entails for the tradable sector, discussion above suggests following options:

- Don't spend all of the natural resource revenues, save some!
- If you have to spend them, aim for a high import content of spending
- Consider using public investment to bolster competitiveness, thereby offsetting some of the effect of the real appreciation
- Finally, central bank can pursue a tight monetary policy stance that offsets demand expansion, but this comes at the cost of significant private sector crowding out.

Thank You!