NATURAL RESOURCE TAXATION
IN THE ASIA-PACIFIC REGION
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Fiscal Regimes for Mining

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Main message

- Governments should design the mining fiscal regime to maximize the capture of resource rent which is one of the main benefits from minerals.

- But even an optimally designed fiscal regime may fail to mobilize expected revenues if:
  - mineral market conditions deter investment
  - the host country policy environment deters investment
  - poor implementation of the fiscal regime leads to tax avoidance and under-collection

- Put differently the taxes collected from the mining sector depend on a lot more than whether the tax rate is high or low.

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A region with rich mineral resources

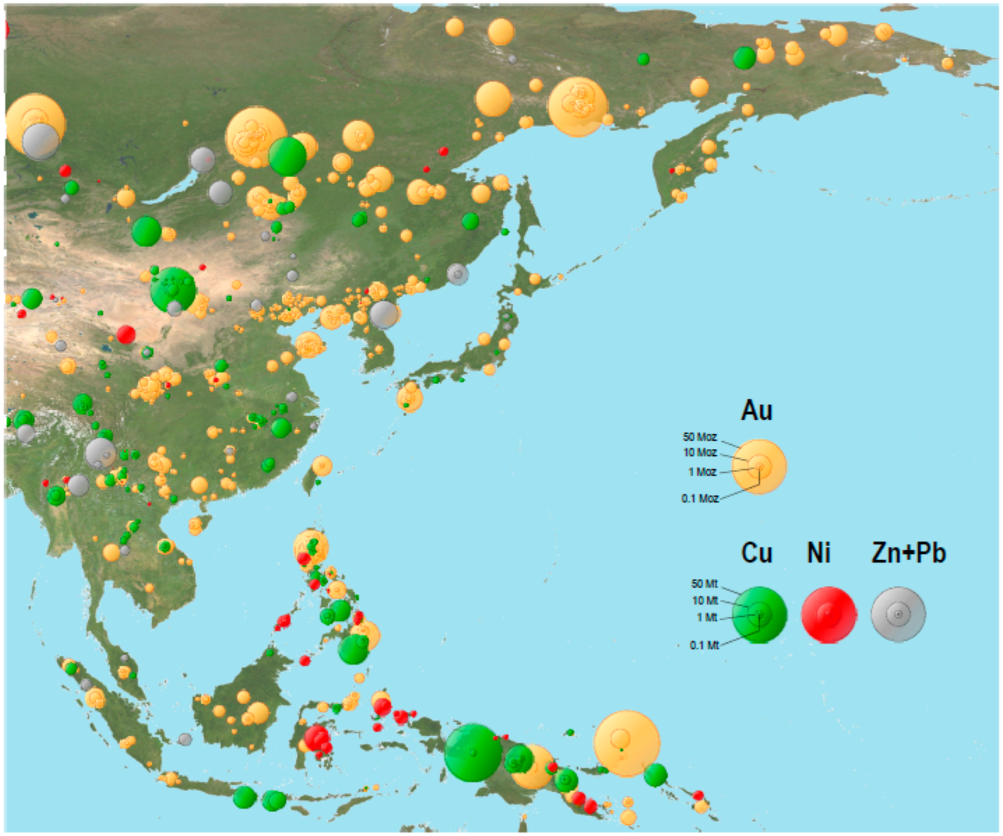
Significant gold and base metal deposits in East Asia

ALL YEARS

Pac/SE Asia
N= 374

China
N = 403

Far East Russia
N = 187



Source: MinEx Consulting © March 2015

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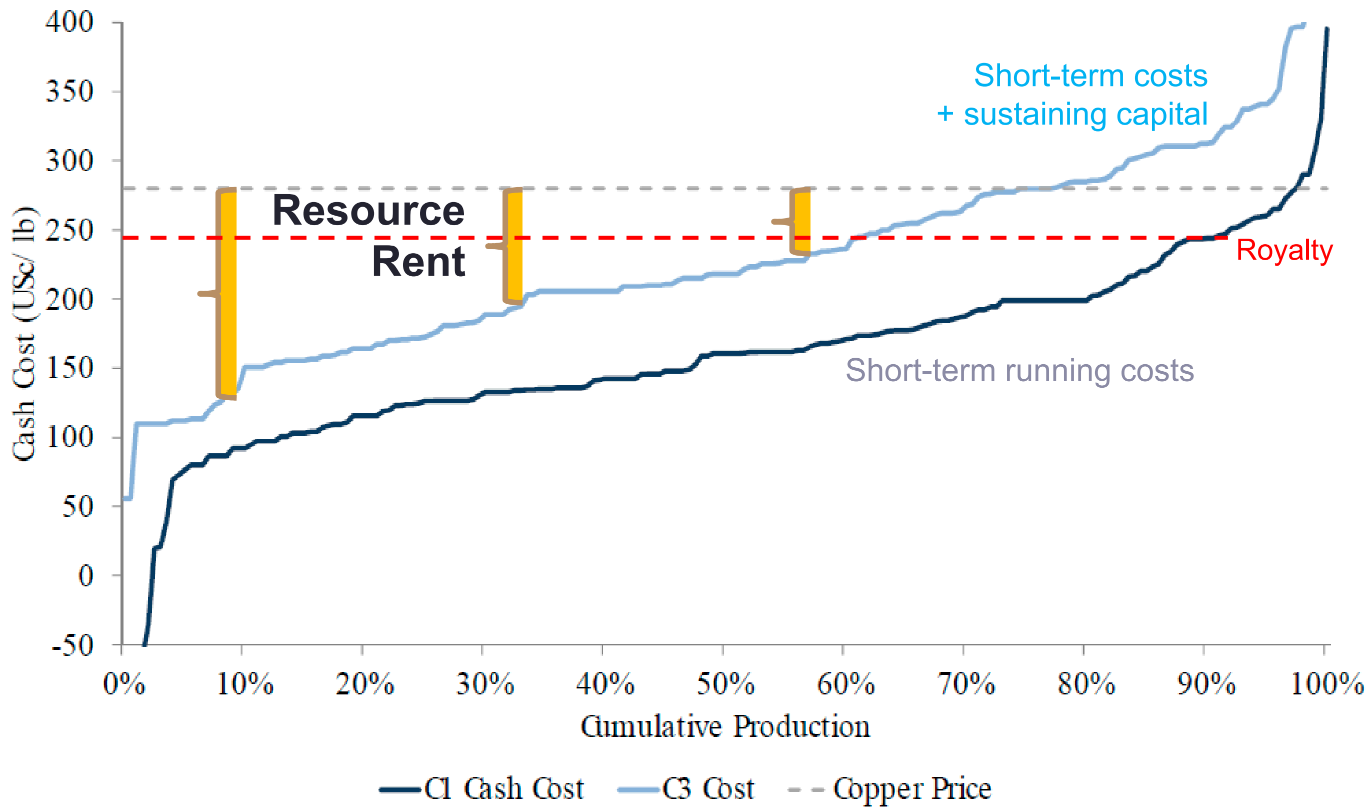
Optimizing fiscal regime design

- Principles are no different whether the non-renewable resource is oil, gas or minerals
- Main objective is to strike the right balance between the tax burden and the level of production and investment
- Key policy trade offs:
  - revenue today or revenue tomorrow (what is the government's discount rate?)
  - tax revenues or tax expenditures for i) wider economy benefits (spillovers) and ii) environmental and social benefits (social spending, environmental clean up)
  - rent capture through taxation or through participation
- Key fiscal regime design challenges:
  - inherent uncertainty about the resource base: quantity, quality and both discovery and depletion paths
  - significant rent potential distributed over rich, average and marginal deposits
  - market and technology induced volatility – affecting production and costs
  - long mine lead times and heavy upfront exploration and development costs

Resource rent

Copper Cost Curve 2014



Source: Wood Mackenzie, BMO Capital Markets

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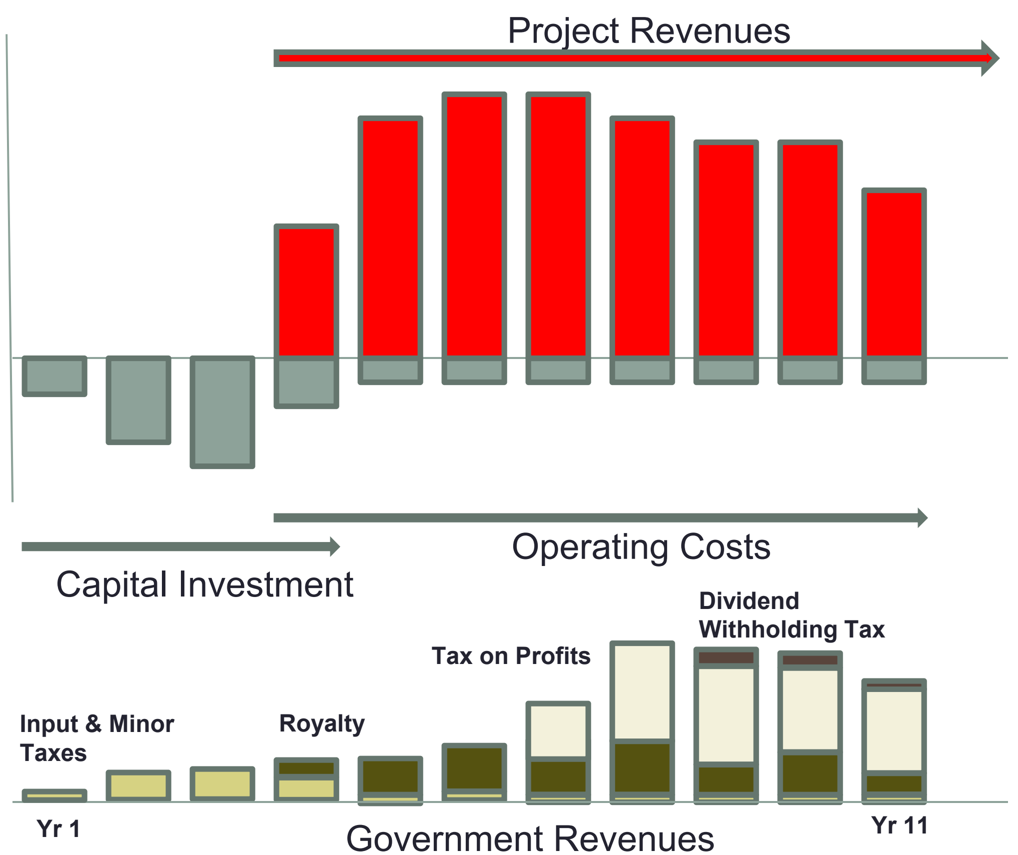
Instruments in a typical mining fiscal regime

	INPUTS	OUTPUTS	ASSETS	PROFITS	OTHER
Examples	Duty, VAT, Payroll Tax Withholding	Royalty	Bonus Rent Property Tax	Income Tax Resource Tax Withholding	Service Fees Environment Levy
Timing	Pre-production Production	Production	Pre-production Production	Upon profitability	Pre-production Production
Likelihood	Certain	Certain	Certain	Contingent	Certain
Relative Size	Low	Modest	Low	High	Very Low
Efficiency	Depends on deductions and credits	Regressive	Regressive	Neutral to Progressive	Regressive

Typical fiscal regime structure



Hypothetical Project Cash Flow and Government Revenues

Progressivity

- Progressive taxation, as it might be applied to, say personal income, relies on the principle of taxing in accordance with the ability to pay, with the rich bearing higher taxes.
- The merits of the latter principle may seem self-evident yet very few fiscal regimes for mining achieve this goal. Many fiscal regimes are quite regressive.
- The result is that marginally economic projects bear a heavy fiscal burden and may either be deterred altogether or curtailed prematurely. But when projects generate windfalls the lion's share of the windfall are kept by the investor, to the detriment of the host country.
- This can be seen in the earlier diagram, if a flat rate mineral royalty is assumed.

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Other fiscal regime design issues

- Although much of the focus of fiscal regime design is on calibrating the burden of taxation and its timing to the particular characteristics of mining projects, investment behavior is influenced by many other factors, both fiscal and non-fiscal.

- Other factors that underpin the performance of a fiscal regime include:

  - Predictability – can an investor, and indeed a tax collector, reliably model all the elements of the fiscal regime and how they will work?

  - Stability – even assuming the fiscal regime is predictable, will it remain the same and what provision, if any, has been made to adjust to changes?

  - Compliance – how much effort will it require to comply with the fiscal regime and, in the event of dispute, is there a reliable and fair method of resolving these?

- It is arguable that an investor would prefer a high tax burden in a fiscal regime that meets those three conditions over a low burden in a regime regime that does not.

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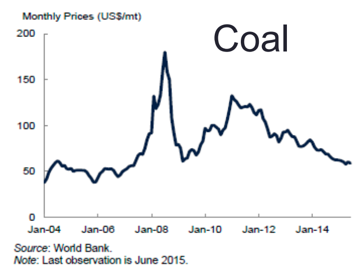
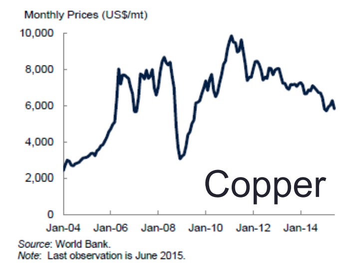
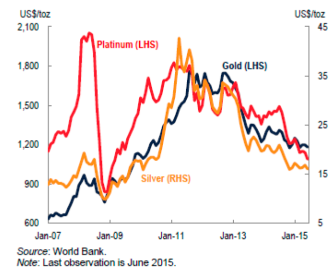
Turbulent mineral market environment

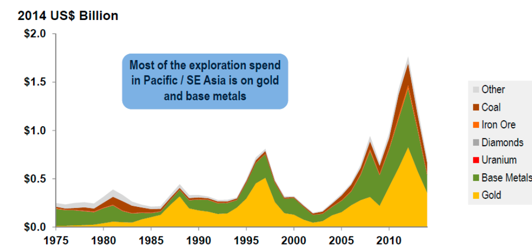
- Prices of all major minerals are into a fourth year of decline
- This is reducing the current and the future tax base
- Short term effect is mainly a price effect, with volumes of output relatively robust (few mine closures)
- But most new projects and mine expansions that had not yet reached FID have been put on hold
- Exploration spending in Asia-Pacific is sharply lower







Exploration expenditures: Pacific/SE Asia
by Commodity : 1975-2014



Source: MinEx Consulting estimates © March 2015, based in-part on data from SNL-MEG

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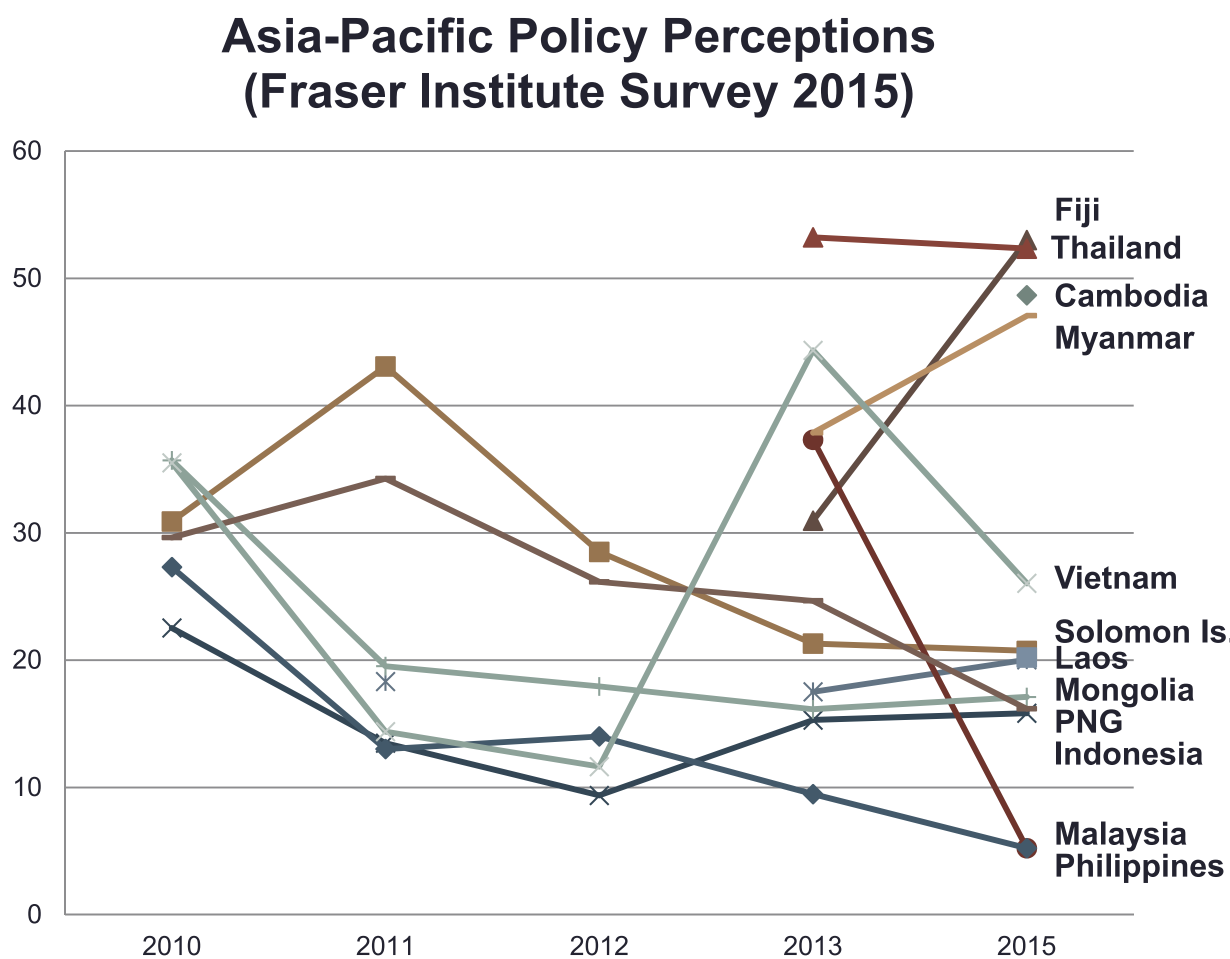
Uncertain policy environment in several countries in the region

- Fraser Institute annual investor survey
- Generally worse than average and falling perceptions of the policy environment for the region
- Reasons vary but are not primarily fiscal



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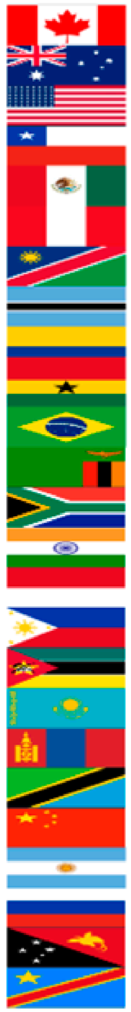
Another industry perception survey

Behre Dolbear
Minerals Industry Advisors
Annual Survey 2015



INVESTMENT RANKINGS

	2015	2014	2013	
1	Canada	Canada	Australia	1
2	Australia	Australia	Canada	2
3	United States	United States	Chile	3
4	Chile	Chile	Brazil	4
5	Mexico	Mexico	Mexico	5
6	Peru	Brazil	United States	6
7	Namibia	Peru	Colombia	7
8	Botswana	Botswana	Botswana	8
9	Colombia	Namibia	Peru	9
10	Ghana	Ghana	Ghana	10
11	Brazil	Colombia	Mongolia	11
12	Zambia	Zambia	Tanzania	12
13	South Africa	Tanzania	China	13
14	India	South Africa	Namibia	14
15	Indonesia	Philippines	Argentina	15
16	Philippines	China	India	16
17	Mozambique	India	Philippines	17
18	Kazakhstan	Indonesia	Indonesia	18
19	Mongolia	Kazakhstan	Zambia	19
20	Tanzania	Argentina	South Africa	20
21	China	Papua New Guinea	Kazakhstan	21
22	Argentina	Mozambique	Papua New Guinea	22
23	Russia	Mongolia	D.R. Congo	23
24	Papua New Guinea	Russia	Mozambique	24
25	D.R. Congo	D.R. Congo	Russia	25

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Sources of policy uncertainty

The broad banner of "resource nationalism" is widely used but is not very helpful

The issues in Asia-Pacific are not unique

- Questions about when and where mining should be allowed to proceed
- Unresolved boundaries of between state / private sector functions – regulation vs participation
- Encouragement of greater local value addition – domestic market obligations; tax incentives for beneficiation
- Infrastructure ownership and access rights: public/private funding; multi-user, multi-use transport rights; self-supply vs grid power
- Balancing national and sub-national roles and benefit sharing: devolved licensing and fiscal rights;

Some notable policy shifts in Asia-Pacific region

- Licensing moratoria: Mongolia 2010-14; Philippines 2012-? pending new fiscal regime; Laos 2012-?
- Land/seabed use jurisdiction: Mongolia "Law with Long Name"; uncertainty around access to seabed
- State participation: Myanmar SOE reform; Mongolia re-evaluation of equity in strategic deposits; Indonesia status of expiring COWs
- Beneficiation: Indonesia export taxes and ban; Vietnam export ban on selected ores
- Sub-national powers: Indonesia licensing devolved since 2009

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Tax implementation challenges

- Special characteristics of mining requiring specialized skills and access to information:
  - Multiple commodities and pricing arrangements
  - Hugely varied project capital and operating costs
  - Diverse participants through the exploration, development and extraction cycle
  - A prevalence of multi-national corporations, globalized value chains and complex project financings, with high use of affiliate transactions.

- Complexity of administering non-standard fiscal regimes comprising multiple instruments:
  - mining specific statutory adjustments
  - tax incentives for mining, mineral processing or both
  - project specific negotiated terms
  - grandfathered older terms through stabilization clauses.

- Fragmented revenue administration:
  - jurisdiction over direct, indirect and resource specific taxes held by different agencies
  - auditors from the tax authority may depend crucially on information that is held only by the sector regulator or state mining company, especially related to physical verification of products produced, transported and sold and both tangible and intangible assets used in the production process.

- A combination of these three sets of challenges can result in a situation in which revenue agencies lack the knowhow, access to information and resources necessary to assure compliance and combat avoidance.

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Conclusion

- The key to meeting resource revenue expectations is to design the fiscal regime with a realistic assessment of all factors that drive resource production and investment decisions and make sure that the system for administering taxation does not allow taxes that could have been collected to be avoided.