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Extractive Industries and Sustainable Job Creation

by

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The opinions expressed in this document are those of the author and do not necessarily reflect the views of UNCTAD.

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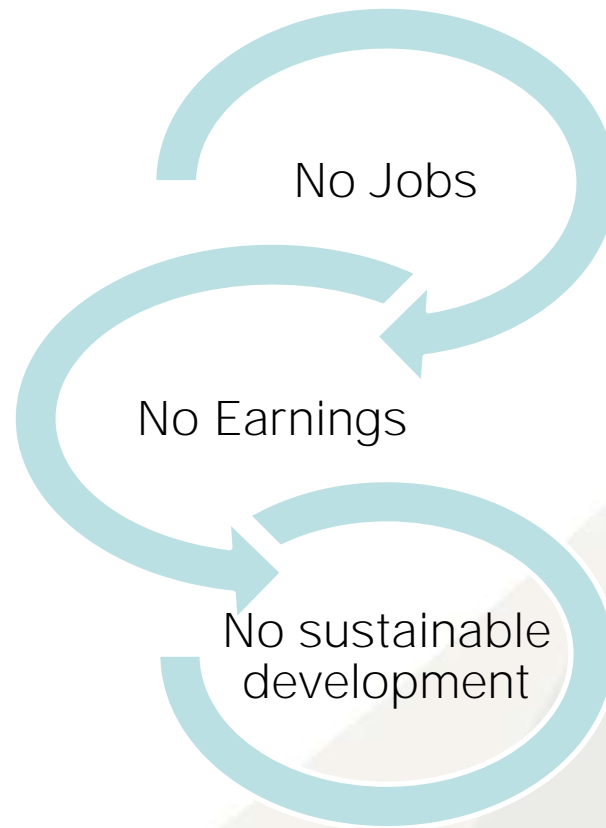
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Outline of presentation

- Motivation
- Concept: what is "sustainable job creation"?
- Channels of job creation in the extractive industries
- Factors contributing to job creation in the extractive industries
- Policies to enhance sustainable job creation in the extractive industries
- Concluding remarks

Motivation



Concept

- We conceptualize "sustainable job creation" as the process of generating jobs that promotes economic growth, social inclusion and environmental protection.

Three channels of job creation in the extractive industries (I)

- Direct channel: jobs created at the development or construction phase.
- A number of studies suggest that extractive industries have limited impact in generating direct employment, particularly when the mines and fields start operating.

World Bank (2013)

Country	Project (sector or resource)	Investment, % of 2010 GDP	Direct employment, number
Papua New Guinea	LNG Project (natural gas)	237.0	9,300 during construction; 1,000 afterward
Mongolia	Oyu Tolgoi (copper, gold)	74.2	14,800 during construction; 3,000 to 4,000 afterward
Botswana	Jwaneng Cut 8 Project (diamonds)	20.2	1,000
Papua New Guinea	Ramu Mine (nickel)	19.0	5,000 during construction; 2,000 afterward
Mozambique	Benga Mining (coal)	13.6	currently 150; 4,500 afterward
Tanzania	Mchuchuma (coal)	12.2	5,000
Namibia	Husab Mine (uranium)	11.9	5,200 during construction; 1,200 afterward
Zambia	Lumwana Mine (copper)	9.3	4,700 during construction
Pakistan	Reko Diq Mining (copper, gold)	4.0	2,500 during construction; 200 afterward
Peru	Conga Mine (gold)	2.6	6,000 during construction; 1,700 afterward

Source: World Bank Development Report 2013 team based on project information.

Note: GDP = gross domestic product; LNG = liquid natural gas.

Three channels of job creation (II) (III)

- Indirect channel: jobs created by distributors and suppliers within the value chain.
 - These are mostly jobs generated through the procurement of goods and services, or the transportation and distribution of goods.
- Induced channel: jobs created by the consumer spending of income earned either directly or indirectly from extractive industries.
 - The earned income from direct and indirect channels could be spent on consumer goods, education, health services which creates business opportunities, additional employment, earnings and spending multiplied throughout the economy.

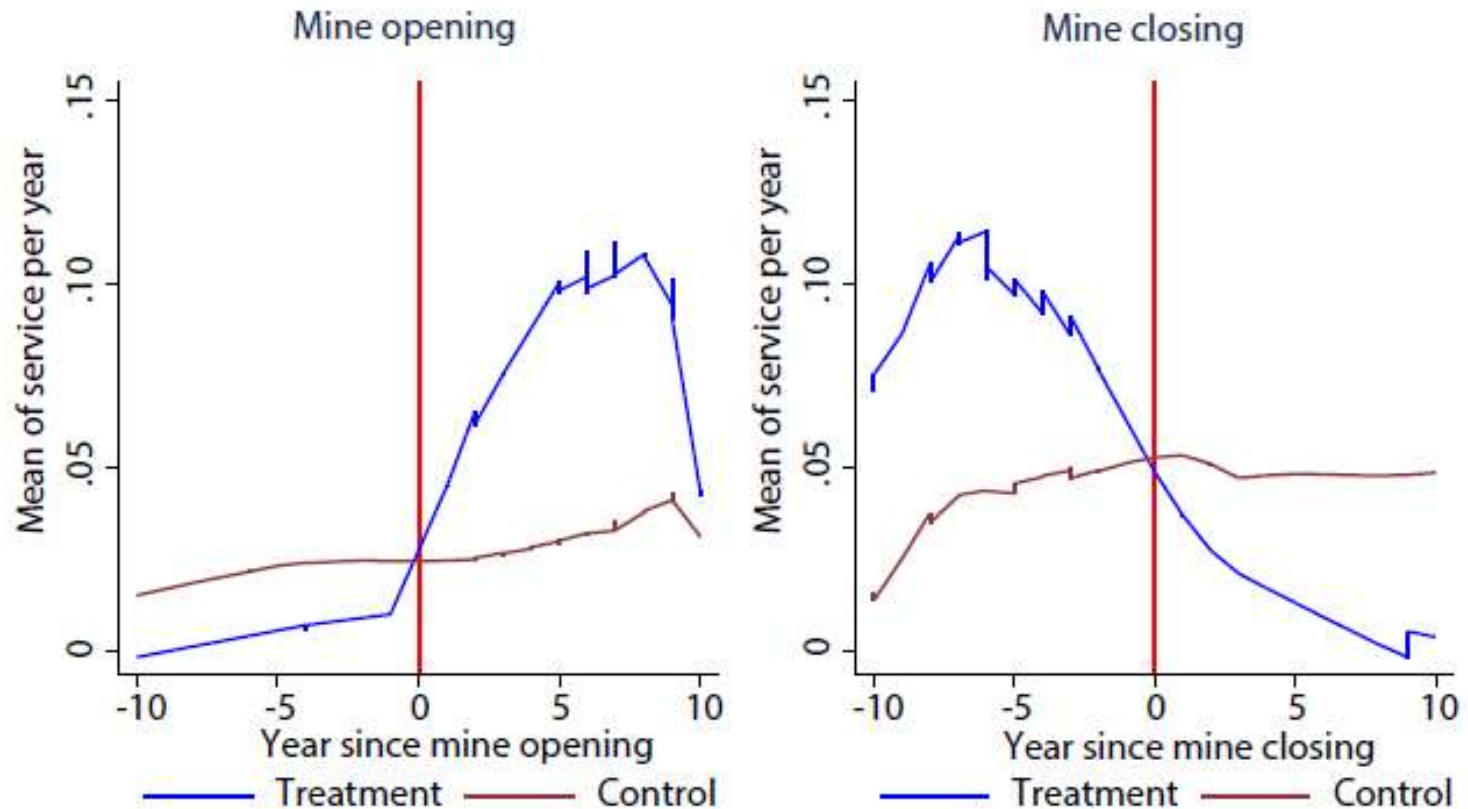
Multipliers

- The impacts of extractives on the local economy are often described in terms of linkages and multipliers (Aragon and Rud 2013).
- The linkages created by extractive industries with the broader economy provide an important channel for generating additional jobs.
- Multipliers describe the total number of jobs in an economy created per one direct job created in the extractive industries.
- If the multipliers are small, extractive industries have few linkages to the local economy; if the multipliers are large, extractive industries have strong linkages to the local economy.

IFC (2013)

Country	Mining	Oil & Gas
Chile	7.0	
Ghana	28	
Scotland	2.5	7.5
USA	5.0	13.4

Kotsadam and Tolonen (2015)



*Lowess smoothing. Negative values are before opening or closing

**The treatment group is within 20 and the control group is 20-200 kilometers from a mine



Factors contributing to sustainable job creation in the extractive industries

- Global economy;
- The size and location of extractive projects:
 - Artisanal mining or small-scale mining (ASM): In Africa, ASM is estimated to create about 8 million direct jobs and these jobs support over 45 million dependents (AMV).
 - Access to infrastructure:
 - The extractive industries often require substantial infrastructure development.
 - Investment in infrastructure generates more jobs (direct, indirect and induced).
- Technical capacities;
- Access to finance;
- Government policies.

Policies to enhance sustainable job creation in the extractive industries

- Macroeconomic policies;
- Local content policies:
 - Regulatory tools:
 - Local content in the labor force: e.g. BPMIGAS - Indonesia;
 - Domestic procurement of goods and services: e.g. Petronas - Malaysia;
 - Fiscal incentives: tax reduction, subsidized financing to encourage SMEs participate in the value chain;
 - Support programmes:
 - Investment in basic infrastructure;
 - Access to credit: e.g. Export Finance Intermediation Loans (EFILs) - Turkey, access to finance (A2F) - Angola, Brazil Development Bank BNDES - Brazil;
 - Education and training;
 - Research and development (R&D);
 - Business environment.
- Diversification and structural transformation.

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