

Shared Value in Mining

How International Mining Companies can Benefit
from Local Supplier Development

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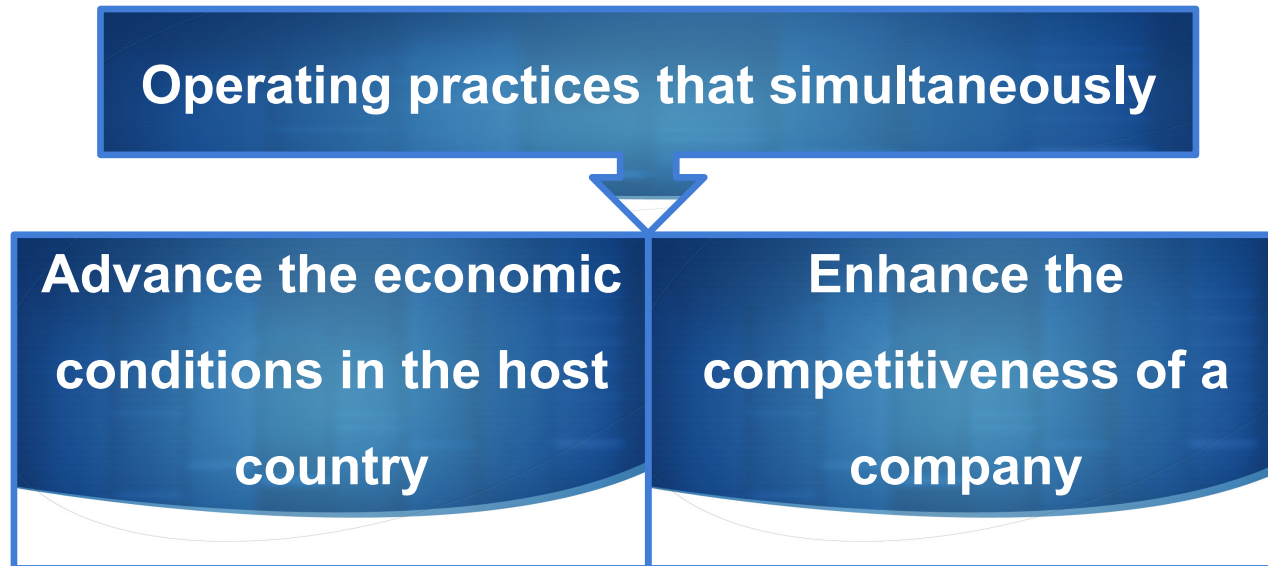


Columbia Center
on Sustainable Investment

A JOINT CENTER OF COLUMBIA LAW SCHOOL
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Shared Value

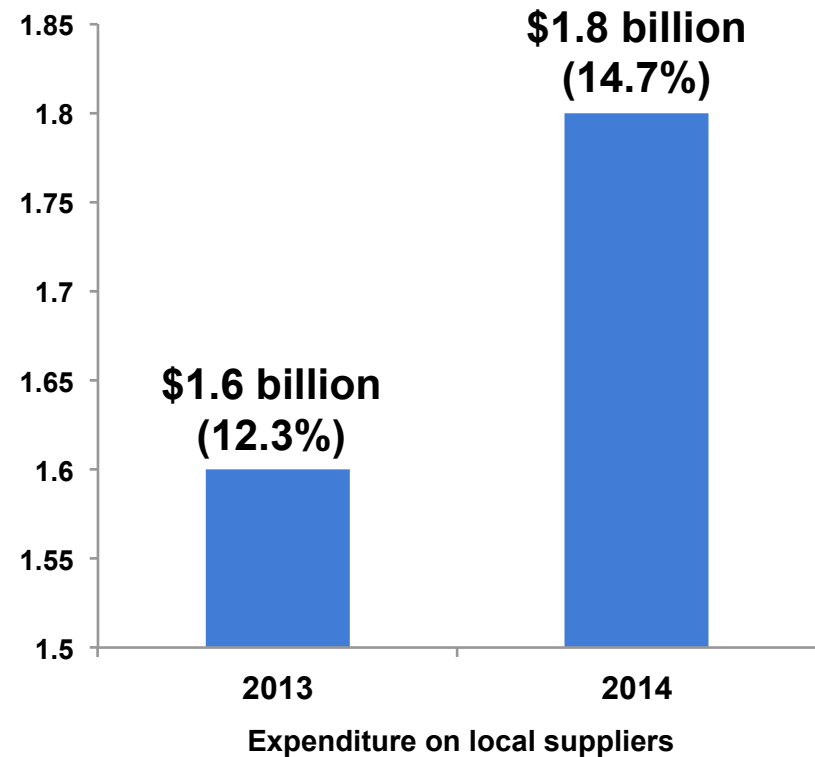
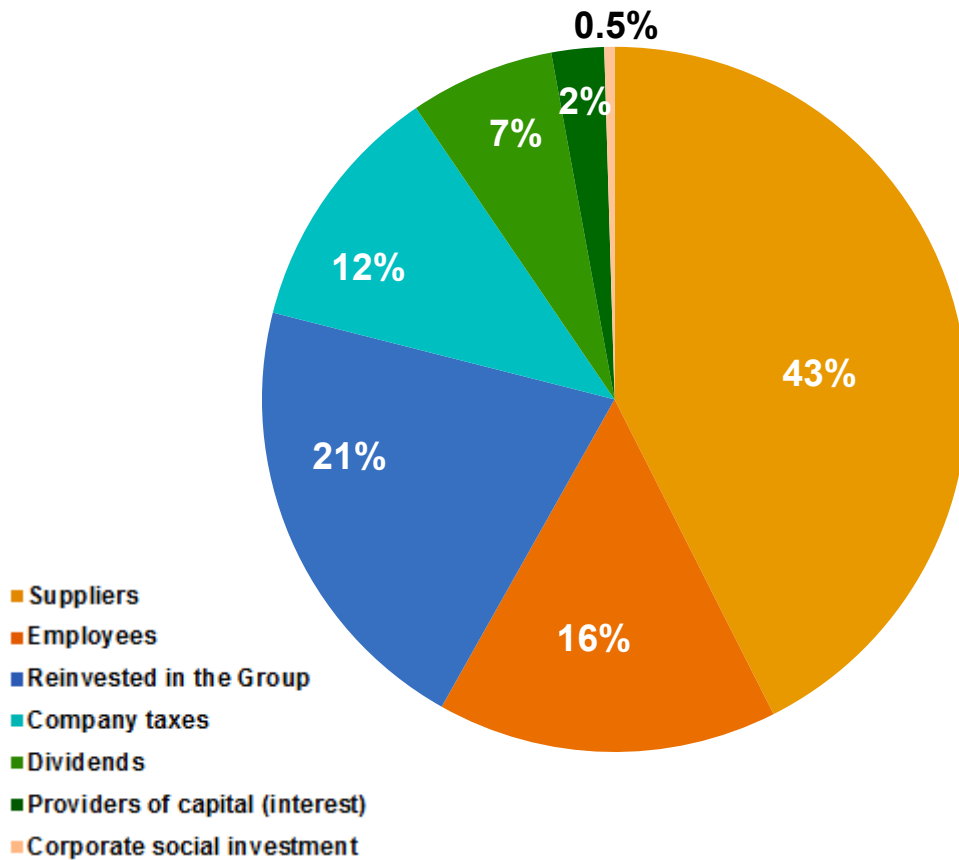
(Porter and Kramer, 2011)



Local Sourcing



Local Sourcing



Source:
Anglo American sustainable development report 2014



Lose-lose situation

“Window dressing” local sourcing

local intermediaries
e.g. 80% of local sourcing in
Zambia (*Hidalgo et al. 2014*)

- **Higher cost for companies**
- **No local value added**



Win-win situation

**Local manufacturing and
local service delivery**

**Faster delivery; lower transport
and inventory costs; lower
risks; reputation building**

- **Reduce long-run input cost**
- **Local value added**



Broadening access to local suppliers



Newmont in Ghana

Broadening access to local suppliers



**Formal
registration by
suppliers**

**Supplier
open days**

open tendering

**Advertises
available
contracts**

**Preference for
locally
producing
suppliers**

**Publishes local
spending data
on quarterly
basis**



Investment

ANGLO ZIMELE - SOUTH
AFRICA



Anglo Zimele in South Africa

Investment in local SMEs

Equity stake (20 percent)
Finance up to \$470.000

Provide board member
to protect investment

Capital dependence
reduced over time

72% of firms survived
eight years or longer



Collaboration in Research & Development (R&D)



World-Class Supplier Program BHP Billiton Chile

**Solutions in mining
desired by BHP Billiton**

**Collaborate with local
suppliers
to find solutions**

**Invested
> \$50 million**

**Savings (est.)
\$121 million**



Biohydro.cl

Automating the wetting phase in copper leaching process

- Minimize exposure of operators to acid mist
- Reduce variability of the wetting phase process

Solution by Biohydro.cl

- Reduced variability of the wetting phase from 7% to less than 1%

- Reduced water consumption

- Increased mineral recovery



Prodinsa

**Snapping of
shovel cables**



**40 percent increase shelf
life cables**



*Source: BHP Billiton Copper 2013 Presentation:
World-class suppliers to the global mining Industry*



Research Consortia

Mining Sector South Africa (2002-2008)

Research Collaboration

- Public research centers
- Clients and suppliers

Process Innovations

Table 1
Probit regression new production methods

Variables	Coefficients	Standard Error
R&D_Coop_vert & pub_res_inst.	1.899**	0.8713
Continuous R&D	2.432***	0.7398
Size	0.351	0.3883
Size_sq	-0.025	0.0343
Cost	0.514	0.1617
Incoming_spillovers	-2.059	1.1947
Export	1.069**	0.4480
Year08	-0.309	0.3780

* Significant at 10 percent

** Significant at 5 percent

*** Significant at 1 percent



Financial Valuation Tool for Sustainable Investment

International Financial
Corporation (IFC)



FV Tool

Net Present Value (NPV) back to the company from sustainability investments



Compare different sustainability investments

Quantitative analysis

- Risk evaluation methods
- Financial valuation
- Monte Carlo Simulations

- Value protected through risks mitigated
- Value created through added benefits



Recommendations

Local Sourcing

- Identify product categories
- Identify local SMEs
- Bite size tenders (unbundle contracts)

Investment

- Training of suppliers (business, financial, and technical skills)
- Reduce capital dependency overtime

R&D collaboration

- Identify bottlenecks
- R&D collaboration with local suppliers and knowledge institutes

Valuation tools

- Business value of investments
- Compare NPV different projects



References

- BHP Billiton (2013). Case study: Building human and enterprise capacity: making a positive contribution to society.
- BHP Billiton Copper 2013 Presentation: World-class suppliers to the global mining Industry
- Anglo American sustainable development report (2014) Focus: effective partnerships.
- Porter, M. E. (2014). Clusters and shared value: drivers of competitiveness. Presentation at: Bogota Chamber of Commerce, Bogota, Colombia.

