

Please cite this paper as:

Korinek, J. and I. Ramdoo (2017), "Local content policies in mineral-exporting countries", *OECD Trade Policy Papers*, No. 209, OECD Publishing, Paris.
<http://dx.doi.org/10.1787/4b9b2617-en>



OECD Trade Policy Papers No. 209

Local content policies in mineral-exporting countries

Jane Korinek, Isabelle Ramdoo

JEL Classification: F1, F13, O24, O33, Q32, Q37, Q38, R11

OECD TRADE POLICY PAPERS

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LOCAL CONTENT POLICIES IN MINERAL-EXPORTING COUNTRIES

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Resource abundance does not always bring sustained economic growth and development. Moreover, the mining sector generally provides little direct employment in the regions where extraction occurs. In an attempt to derive greater benefits from their resource endowments, and increase linkages with other parts of the economy, some minerals-rich countries have instituted local content and procurement policies (LCPs). The benefits sought include employment generation, supply chain development and technological and knowledge transfers. Measures that aim to increase local content and procurement in the extractive industries are common, including in many OECD countries.

This study examines local content policies in 10 minerals-rich countries and provides some observations about their efficacy and the desirability of their use. A wide range of measures are examined, from industry-wide, mandatory quantitative targets to voluntary initiatives undertaken at the firm level, encompassing diverse policy objectives and implementation strategies. The range of countries covered is broad including OECD countries, developing countries and least developed countries. The study does not recommend a “one size fits all” policy mix but guards against the distortions created by overly prescriptive, mandatory local content requirements.

JEL codes: F1, F13, O24, O33, Q32, Q37, Q38, R11.

Key words: Local procurement, performance requirements, mining, extractive industries, supply chains, technology transfer, Australia, Canada, Finland, Brazil, Ghana, Papua New Guinea, Peru, South Africa, Liberia, Mozambique.

Acknowledgements

This paper was authored by Jane Korinek of OECD’s Trade and Agriculture Directorate and Isabelle Ramdoo, formerly Deputy Head of Programme on Economic Transformation at the European Centre for Development and Policy Management (ECDPM). It was reviewed by officials in Australia, Canada, Finland, Brazil, Ghana, Peru, South Africa and Mozambique. Valuable comments and guidance were received from the Member delegations and participating countries to the OECD Working Party of the Trade Committee. Comments were gratefully received from Ken Ash, Frank van Tongeren, Julia Nielson, Przemysław Kowalski and Joachim Pohl from OECD and Perrine Toledano of the Columbia Centre for Sustainable Investment (CCSI). Valuable assistance was received from Dan Lui and Karim Karaki of ECDPM.

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EXECUTIVE SUMMARY

Use of local content, procurement and capacity building measures in the mining sector is widespread, including in many OECD countries. This is partly because mineral resources are generally the property of the State and many governments aim to extract additional benefits for local populations, beyond tax and royalty revenues. Another specificity of the extractive industries is that economic activity is primarily determined by geology. In some cases, mineral resources attract high levels of investment that host countries are not always well equipped to absorb and to regulate. Some mining firms consider that capacity building policies are needed to create a pool of competent and competitive suppliers and a workforce with the required skill level close to their operations. Some also consider that local content policies (LCP) are associated with a social license to operate within the country.

This paper suggests that mandatory, quantitative LCPs are not the most efficient or effective way to achieve the objective of leveraging natural resources for broader economic development. Policies that impose quantitative requirements on local content introduce distortions in various sectors of the economy. Such measures generally have a negative impact on productivity, including in the mining sector itself, thereby producing the opposite effect to that pursued. Policies that affect the profitability of companies also reduce both their incentive to re-invest and the amount of taxes that they pay to host country governments.

When considering the impacts of LCPs, economy-wide effects must be taken into account. Government-mandated preference to use local inputs raises costs for the extractive industries and has knock-on effects for industries using mining products and inputs. The net effect of an LCP depends on the interplay and relative price changes across all sectors of the economy.

Imported intermediate goods and services play a key role in the functioning of global value chains, and are an important channel to increase productivity. Government-mandated requirements to supply the extractive sector in domestically-produced intermediate goods thus have a particularly negative affect on productivity. Indeed, one way in which governments can reduce their technology gap is to encourage, rather than discourage, the use of foreign intermediate imports where they have a higher level of embedded technology.

Creating an open and supportive trading environment for both extractive industries and their suppliers can help to increase productivity and foster transfer of technology and innovative business practices. Today, three quarters of international trade takes place in intermediates: firms buying inputs and investment goods or services that contribute to the production process. Protectionist measures against such imports increase costs of production and reduce a country's ability to compete, both at home and abroad, and to participate in global value chains. Eliminating export restrictions on products of the extractive industries and reducing import tariffs on investment and intermediate goods and services can help both the extractive industries and their suppliers to be more competitive. Moreover, providing access to export markets can provide opportunities for local firms to pursue needed economies of scale.

The scope of local content measures examined in this paper is broad. It includes both mandatory requirements and “best endeavour” policies. The policies examined include both quantitative targets and qualitative measures. They range from numerical targets for local procurement and employment in the extractive industries to voluntary suppliers' development programmes to public-private consortia for skills development. A classification of measures is proposed, according to the policy objective, the market or

policy failure it aims to address, if any, the scope of the measure, the voluntary or mandatory nature of the measure, and its monitoring and enforcement.

A number of implications can be drawn from this review of ten countries' experiences with local content and capacity building measures.¹

The importance of creating a business friendly environment to stimulate the development of the local private sector cannot be overstated. This includes reducing administrative red tape to business establishment and simplifying procedures, including approval procedures to obtain permits and licenses. Necessary enabling conditions also include addressing both soft and hard infrastructure and energy deficits as well as ensuring access to finance, in particular for SMEs, at competitive cost.

Education and training are the cornerstones to participation in any economic activity. In order to ensure that the labour requirements of the mining sector are met and to address existing gaps and mismatches, some governments have undertaken specific skills development and training programmes. This requires working closely with universities and technical centres, ideally in partnership with extractive firms, to develop specific types of skills.

Some policies have been quite effective in upgrading or increasing local inputs into production processes in the extractive industries. Some local and regional entities aim to reduce information and capacity gaps that diminish local firms' chances of responding to extractive firms' tender. These can include offering technical or business assistance to SMEs; keeping databases on supplier firms; tailoring the size and scope of contracts to a level that may be more easily captured locally; aiding suppliers in obtaining necessary certifications to respond to the needs of extractive firms; and ensuring timely payment facilities for SMEs with limited cash flow.

Successful suppliers' development programmes, for example, have helped to create clusters of firms that service the mining sector. Such programmes can increase capacity and employment in local SMEs, create deep linkages, and foster innovation, transfers of technology and business process knowledge. Increased capacity near the mine site can also substantially reduce delays and costs for the extractive industries.

Overall, policies are more likely to deliver on their expectations if they are (i) guided by a comprehensive understanding of firms' procurement needs, strategies and capabilities, (ii) targeted to respond to clear objectives in the local context and (iii) cognizant of the factors that may impact policy effectiveness and the potential unintended consequences of such measures.

1 . The full case studies can be consulted at <http://oe.cd/rawmaterials>.

SUMMARY OF CASE STUDIES

The local content and procurement policies of ten countries as they apply to the mining sector have been analysed. Three OECD countries are included —Australia, Canada and Finland – as are five developing countries — Brazil, Ghana, Papua New Guinea, Peru and South Africa – and two-least developed countries—Liberia and Mozambique. These case studies demonstrate a wide range of approaches given the different objectives of local content policies, the place and history of the mining sector, and the overall level of development. The policies reviewed provided the backdrop to the classification of local content measures and can be consulted at <http://oe.cd/rawmaterials>. This section provides a brief summary of each case study.

Australia

Local content policies in the mining sector are defined at the national as well as the State level in Australia. The key principle in Australian policies is to offer ‘full, fair and reasonable’ access to employment and tendering opportunities to Australian firms and individuals. Alongside this is a relatively soft requirement for firms to implement the “fair, full and reasonable” principles for procurement and employment, there is a strong reporting requirement on the measures taken to recruit and procure locally. The monitoring component of Australia’s policies is also key to ensuring public accountability. There is a clear focus on supporting supplier firms at a crucial point in the supply chain which was deemed to be the contract tendering process, with a “hands-on” approach to bring suppliers to a position where they are informed of, and can compete, in industry tenders. The mining equipment, technology and services (METS) sector has been highly developed and now comprises 7% of Australia’s GDP and 7% of its employment, much more than mining itself. Although development of the sector happened organically due to demand for such services from mining firms, some policies to foster the sector were implemented, for example, by ensuring alignment of its education system with the demands of the industry through public-private partnerships. The Australian government has also aimed to support the sector by removing overly burdensome regulations, improve engagement between industry and research, facilitate access to global supply chains and improve the management and workforce skills in the sector. A number of more interventionist policies such as Buy Australia or duty-free imports for firms that develop and implement a local content plan in the context of an Australia Industry Participation plan, have been phased out since 2014. The full case study can be consulted at <http://oe.cd/rawmaterials>.

Canada

The local content measures specific to the mining sector outlined here are heavily focused on supporting Indigenous peoples as a key target group. This approach offers insights on targeting and benefiting distinct or specific groups that might otherwise be marginalised or disenfranchised by mining activity in or near their communities. It should be noted however that the government of Canada does not consider these policies to be local content policies per se. Local content policies are rooted in requirements to consult with local communities over mining development that may impact asserted or established Aboriginal or Treaty rights and are focused less on prescribed and formal tools instilled in legislation and instruments, and more on ad hoc, practical “partnership approaches” to negotiated agreements with stakeholders. The approach is thereby flexible, caters to different circumstances, and allows for revision

over time. Such an ad hoc approach is necessarily strongly influenced by the negotiating strategy and strength of local communities and may also imply less comprehensive enforcement and monitoring of agreements. The Investment Canada Act requires that large foreign investments or acquisitions undergo a review to determine if they create a “net benefit” to Canada. In order to obtain approval, firms may be obliged to ensure that a majority of senior management is Canadian, maintain certain levels of employment or commit to an R&D budget. Canada also provides incentives to firms to establish or relocate R&D facilities within provinces in order to receive tax incentives or other forms of support. The full case study can be consulted at <http://oe.cd/rawmaterials>.

Finland

Mining has been a prominent part of Finland’s economic history but the extractive industries are today dwarfed by the contribution of mining services and suppliers of technological solutions. The sector has successfully managed to evolve from a raw materials based industry towards higher value added and knowledge intensive activities. Today, Finland positions itself as a “solutions” provider able to offer tailor-made packages that respond to the specific needs of mining firms. Policy priorities in Finland shifted to strengthen its position as a world-class supplier of goods and services to the mining sector, with a particular focus on innovation and technology. Capacity development was prioritized, in particular by hiring foreign experts, training Finnish engineers abroad and “learning-by-doing”. Finland also prioritized the role of investment in technology creation, including through state subsidies. The Finnish government favoured a cluster strategy and changed its role from that of a driver to that of a facilitator, in particular to provide a better business environment. The full case study can be consulted at <http://oe.cd/rawmaterials>.

Brazil

The mining sector in Brazil is a mature industry and policies have evolved with the realities and demands of the sector. Local content measures include national employment requirements that are not particularly stringent but that are augmented in some regions by additional obligations that may include local employment targets. Suppliers’ development programmes have been used extensively by large mining firms operating in Brazil. Given their deep understanding of realities on the ground, mining firms helped to conduct diagnoses to identify opportunities for suppliers and potential gaps in local capabilities. One suppliers’ development initiative aiming to build capacity among SME suppliers and provide greater transparency of information about opportunities has been managed by a business association funded by 15 firms operating in diverse sectors such as mining, energy and agri-business. This may be a particularly efficient mechanism for increasing capacity among potential suppliers as some inputs and skills are portable across sectors. It may also support a move toward diversification and adaptability for suppliers. There is no monitoring mechanism in place in Brazil to objectively assess to what extent certain policies have worked and it is therefore difficult to ascertain the effectiveness of different approaches. Nonetheless, many mining firms report positive impacts of their suppliers’ initiatives in the communities in which they operate. Vale, one of the largest mining firms which is based in Brazil, itself indicates that its local procurement has increased substantially since its suppliers’ development programmes were implemented. In April 2015, Vale estimated that more than 90% of its purchases were from local Brazilian suppliers and that local content increased in its main Brazilian operations from 54% in 2012 to 63% in 2014. The full case study can be consulted at <http://oe.cd/rawmaterials>.

Ghana

Mining in Ghana has traditionally centred on gold mining which has often been small-scale. The Ghanaian government has sought to increase mining activity in recent years, and to increase its contribution to the economy. In particular, it has set very high mandatory employment targets: all unskilled labour must be Ghanaian and at least 90% of senior management (increased to 94% after three years). These rigid requirements include some flexibility, for example if sophisticated machinery is used that needs more

specialized skills than can be found locally. Procurement requirements are closer to “best effort” although tenders with the highest level of Ghanaian participation are to be selected where they are price-competitive. Eight products have been deemed promising for local procurement to the mining industry and suppliers in these areas have been supported through development programmes and increased access to finance and technical assistance. Ghana has instituted strong monitoring and enforcement mechanisms with severe penalties for non-compliance with employment targets, and even for non-compliance with reporting requirements. The full case study can be consulted at <http://oe.cd/rawmaterials>.

Papua New Guinea

At present, the local content policies in Papua New Guinea are largely expressed in Benefit Sharing Agreements (BSAs) between different stakeholders including national and provincial governments, mining firms and local communities. A key feature of these agreements is that they are broad in scope and can include policies that are generally implemented at the national level such as royalty rates and payments. Since the BSAs are negotiated between mining firms and key stakeholders in remote areas of PNG, these agreements tend to be context-specific, and there is little or no harmonization among agreements at the national level. Despite the general perception that some benefits have been delivered, most notably in terms of local employment, enforcement has proved challenging, in part because outcomes tend to be poorly monitored. The community-level BSA model may, however, be a pragmatic way to find consensual agreement with relevant local stakeholders, given the history of mining in PNG. The full case study can be consulted at <http://oe.cd/rawmaterials>.

Peru

Peru does not have local content or procurement targets that apply specifically to the mining sector although mining firms agree to prioritize local hiring and procurement and report on their progress. There are, however, local employment quotas that apply to all firms: not more than 20% of jobs and 30% of total payroll can be accorded to non-Peruvians. Some mining firms active in Peru have implemented suppliers’ development programmes similar to those in place in other countries in the region such as Brazil and Chile. In particular, processes in which suppliers are invited to offer solutions to recurrent problems and suppliers’ training programmes in which they increase their skills and can obtain new certifications seem to have produced benefits for both local suppliers and large mining firms. The full case study can be consulted at <http://oe.cd/rawmaterials>.

South Africa

South Africa has among the most detailed and complex local content and procurement legislations and frameworks. The local content requirements include employment quotas at all levels of the firm, ownership requirements, procurement targets, mandatory expenditure on training and suppliers development. Local content provisions represent an attempt to increase the participation of local actors in the mining industry, correcting at the same time historical imbalances due to the apartheid period. The targeted populations are the Historically Disadvantaged South Africans (HDSA) who make up about 90% of the population. Procurement targets are not as much an attempt to localize purchases from abroad as to ensure a representation among targeted populations. An assessment of procurement and enterprise development targets showed that large firms have made significant efforts to source from local HDSA suppliers. Similarly, employment equity targets were largely met, although further increases in local employment at senior and middle management levels will need to be linked to scaling up skills in order to meet the competency requirements. However, these targets are highly complex, complicated and difficult to understand for mining firms as well as for the beneficiary target groups, leading to differences in interpretation. Additionally, they have led in some cases to capture by certain groups within the targeted population, prompting the South African government to institute a Code of Good Practice for the South

African Mineral Industry to define ethics of conduct and prevent abuses such as fronting practices and opportunistic behaviours. The full case study can be consulted at <http://oe.cd/rawmaterials>.

Liberia

In Liberia, investment in large mining projects is very recent and the design of mining frameworks is still in progress. Over the last few years, exploration has been underway and a number of larger-scale mining projects are currently nearing the end of the development phase. Under current legislation, many aspects of local content policies can be described as “best endeavour”. In terms of procurement, for example, many mining development agreements suggest that preference should be given to Liberian suppliers if they are competitive in terms of price and quality. Investment provisions provide additional incentives to firms that include over 60% of Liberian content in their production processes. In terms of employment requirements, there is an obligation to hire Liberians for all unskilled positions. For skilled positions, many recent agreements state that firms must submit a plan to ensure that 30% are filled by Liberians after five years, and 70% after ten years. Some evidence suggests that compliance mechanisms are not fully operational and that firms may not meet these obligations. The full case study can be consulted at <http://oe.cd/rawmaterials>.

Mozambique

Despite Mozambique’s rich resource endowment, large-scale industrial mining activities are fairly recent. This is reflected in the recent evolution of the legal framework, which is only starting to clearly define objectives and the means to achieve them. Recent regulatory reforms have adopted a relatively flexible approach, and seek to gradually increase the participation of Mozambicans in the mining sector, but without obliging firms to adhere to numerical targets to meet this objective. One area where Mozambique has imposed targets is in equity participation: mining firms are obliged to have between 5 and 20% of their equity held by Mozambicans. There have been some suppliers’ development programmes instituted in Mozambique with varied success. The challenges, however, are immense: one study estimated that 99% of Mozambican firms had sufficiently flawed performance that they would have difficulty supplying globally competitive mining firms. The full case study can be consulted at <http://oe.cd/rawmaterials>.

Introduction

Many minerals-rich countries have put in place, at one point or another in the course of their development paths, specific policy instruments that aim to increase the mining sector's use of domestically available factors of production, in an attempt to derive more benefits from their resource endowments. The resurfacing of local content policies (LCPs) has been particularly strong in countries where the capital-intensive mining sector has developed as an enclave, with few links to the wider economy, and has not been successful in creating sustainable economic benefits. The benefits sought are potentially diverse and include employment generation, supply chain development and technological and knowledge spillovers. However, addressing economic concerns is not always the main motivation for instituting such policies. In many cases, political considerations weigh significantly due to pressure to be seen to be distributing the gains from the exploitation of natural resources more widely.

Measures that aim to increase local content and procurement in the extractive industries are pervasive, including in OECD countries. Contrary to common perception, local content measures are not imposed solely by traditionally closed economies (Stone et al., 2015). It is estimated that over 90% of resource-rich countries have at least one form of LCP as regards their extractive industries, 50% of which are quantitative targets or requirements (McKinsey, 2013). Although these figures refer to both mining and hydrocarbon sectors, they suggest a relatively ubiquitous phenomenon.

There are a number of reasons why local content and procurement measures are particularly prevalent in the extractive sector. One important difference between the extractive industries and other sectors of economic activity is that in most countries, sub-soil resources belong to the State or to its citizens. Resource exploration is therefore subject to licensing and authorisation. Firms that aim to extract and develop sub-soil resources require authorisation that often takes the form of a concession. Many governments put certain conditions on mining firms' ability to obtain a concession or license. In some cases, these include local content or capacity building measures.

Since extractive firms are accessing non-renewable sub-soil resources that belong to the State or its citizens, and selling them for a profit, many governments introduce policies that aim to compensate for the exploitation of this public good. Most minerals-exporting countries, for example, charge royalties for the extraction of their minerals. Many also aim to capture some of the gains from extraction of their non-renewable resources through job creation in and around the extractive firm, increased business opportunities and capacity building that, it is hoped, will generate broader economic development. The use of LCPs with the aim of increasing linkages with the host country may be even more prevalent in the case that exploitation is undertaken by foreign multi-national firms which are often perceived to have greater recourse to imported inputs and foreign workers.

Another specificity of the extractive industries is that economic activity is primarily determined by geology, not by the business climate or macro-economic fundamentals. Some countries do not have the capacity to exploit their natural resources domestically and seek investment from large, multi-national firms. In some cases, mineral resources bring a level of investment that the host country lacks the capacity to absorb and even to regulate. Another aspect of economic activity being determined by geology is that mining usually takes place in regions which disregard national boundaries. Neighbouring countries are often competitors in resource-rich regions, suggesting that regional approaches to capacity development could bring benefits.

The mining sector, by its nature, creates social and environmental impacts that are often larger than other industries. When exploitable deposits are found, local people may be uprooted or, conversely, a "gold rush" phenomenon occurs, whereby natural resources act as a strong pull factor for internal immigration. Landscapes may be significantly affected. Although progress has been made, emissions from the production process can be significant. The need for government intervention in environmental permitting

and licensing is also larger than in the case of some other industries. Similarly, there is increased need for government intervention in occupational safety and health, as mining is generally a hazardous occupation. Some mining firms associate developing local content with a social license to operate within the country.² Many firms consider that capacity building policies are needed to create a pool of competent and competitive suppliers or a workforce with the required skill level.

Many of the specificities of the mining sector outlined above increase the potential for market failures. In addition, there often exists an asymmetry of information between mining firms and the governmental bodies that regulate them. Mining firms have a better understanding of the potential benefits they can obtain from their investments than regulators who often have access to lower quality geological information. This phenomenon is exacerbated in resource-rich countries with weaker institutions.

This paper reviews the approaches implemented by a number of minerals rich countries that aim to stimulate the development and use of local factors of production and the participation of the domestic labour force. This study includes only policies that target the upstream portion of the mining value chain, i.e. inputs into the extractive industries or the extractive process. It reviews a sample of ten countries with differing levels of economic development, importance of resource endowments and maturity of the mining industry. The purpose is to examine the policy choices taken and instruments used to meet the common objective of maximising local economic benefits that the mining sector can offer.

The scope of local content and capacity building measures examined in this paper is broad. It includes mandatory requirements, “best endeavour” and voluntary policies. They range from numerical targets for local procurement and employment in the extractive industries to voluntary suppliers’ development programmes to public-private consortia for skills development. A classification of measures is suggested, according to the policy objective, the market or policy failure it aims to address, if any, the scope of the measure, the voluntary or mandatory nature of the measure and its monitoring and enforcement.

Stone et al. (2015) estimate the impacts of some local content requirements that were applied following the onset of the recent economic and financial crisis. They model the impacts of a set of quantitative and mandatory local content requirements in a general equilibrium setting. Such an exercise will not be attempted here, not least because the scope of policies examined here is very broad, including non-mandatory targets and those that aim to develop capabilities to create an enabling environment for investment. However, this paper draws some observations regarding policy effectiveness and considerations for policy makers in resource-rich economies that aim to maximize benefits from their mining sectors and ensure that their regulatory and business environments attract sustainable foreign investment while minimizing trade and macro-economic distortions. Although this paper examines one sector of activity, some of the observations drawn from decades of experience with local content and capacity building policies the mining sector are relevant for other sectors.

This document is organised as follows. First, a definition of local content is given. Second, local content and capacity building policies are classified according to their policy objectives, their level of requirement and mode of implementation. Third, some of the risks and opportunities of LCPs are outlined. Finally, some observations are made about the potential economic effects of local content and capacity building policies and their applicability in different contexts; implications for policymaking are included here. The ten country case studies that inform this study can be found at <http://oe.cd/rawmaterials>.

2. A mining firm’s social license to operate can be defined as a minimum and broad-based level of legitimacy, trust, acceptance and support of local stakeholders (including the host community, local leaders and civil society organizations) that a mining company requires for the operation of a mine (IISD/CCSD, 2016).

Definition and scope of local content policies

There is no agreed definition of what constitutes *local* or *content*. However, the way in which they are defined strongly impacts the scope of measures and policy design.

Defining local: scope and target population of measures

The term “local content” is often used to describe measures to foster the development of domestic industries and the use of inputs available locally, to create employment opportunities and more generally, to generate “spillover” effects in the domestic economy through consumption linkages.³ The terminology *local* has been used and interpreted in different ways:

1. Some countries have adopted a narrow definition whereby *local* relates to the immediate vicinity surrounding mining activities. In that sense, local employment refers only to jobs available for people originating in that particular area. Similarly, suppliers would be deemed to qualify if they originate from the community directly impacted by mining activities. These are generally expressed as requirements that mining firms adhere to in order to obtain permits to mine from sub-national governments. Sometimes, firms themselves define the interpretation of local in a narrow way for certain categories of inputs in order to increase their visibility with the local population.

From an administrative point of view, this approach is difficult to monitor. For example, “migrants” coming from other regions are often recognised as local if they are registered at the local municipalities, therefore challenging the purpose of targets set regarding local employment or procurement. Similarly, firms registered in a particular location for tax purposes may qualify as local, even if the firm is foreign-owned and does not undertake substantial economic activity with local or regional stakeholders.

2. Other countries do not specifically define *local* or if they do, have adopted a broader definition. Local may be interpreted as referring to any stakeholder that is a national of the resource-rich country or whose business is headquartered or registered in the country. In this case, any citizen or supplier based anywhere in the country would be considered as local.

Within this broad definition, the question of ownership is sometimes a key requirement. Countries may consider that local content requirements are fully met when goods or services provided by firms are owned or controlled by domestic capital. Some countries therefore impose minimum ownership or joint venture requirements, notably through equity participation. This gives rise to various scenarios where firms may be considered as local if they are locally based but foreign-owned, locally based and locally owned or locally owned but foreign based.

While a broad definition of *local* provides more flexibility and choice for firms to meet stated policy objectives, there are nevertheless some challenges in assessing to what extent the policy actually creates spillovers for the national economy. For example, studies have shown that many mining firms report a relatively high percentage of local sourcing for their procurement needs while in reality, there were few local linkages because a large proportion originated from imports by local firms (Morris et al., 2011) or were mainly local representatives of foreign supplier firms (Larsen et al., 2009; ICMM, 2014).

3. Consumption linkages are associated with the demand for outputs produced by other economic sectors resulting from expenditures incurred by the extractive sector.

Box 1. How is *local* defined in practice?

In **Brazil** legal frameworks generally do not expressly define the scope of *local*. There are however two notable exceptions, namely for firms engaged in activities in border zones or inside Indigenous protection areas. In these cases, firms must be controlled by Brazilians (i.e. an ownership requirement) with national capital of at least 51% of capital stock of firms. Within indigenous protection areas, indigenous communities have the right to reject projects. In the case of the ferronickel mine in the region of Onça Puma, the local authorities required firms to comply with compulsory social obligations in order to obtain environmental licenses. These included reaching 70% local employment in two years, and 100% in seven years (ICMM, 2013).

In **Ghana**, there is no officially agreed definition of local. To improve its relationship with local communities, the multi-national firm Newmont has given priority to "*local local*" firms, i.e. are businesses situated in the vicinity of its mining operations.

In **Australia, Canada and South Africa**, specific provisions address concerns of particular Indigenous communities. *Local* is therefore understood to mean policies that are targeted to respond to the concerns of certain ethnic groups and to develop the socio-economic conditions of historically disadvantaged citizens.

Defining content: Key policy objectives of local content and capacity building measures

The definition and scope of what constitutes *content* is even more complex because the concept attempts to respond to different policy objectives. In addition, some local content and capacity building measures are put into place for a variety of overlapping objectives. The key policy objectives of local content and capacity building policies are:

- The **development of upstream supply chains** at the domestic level to respond to procurement needs of firms in core and non-core⁴ goods and services. This is often one of the key priorities of countries that aim to foster linkages between the mining industry and local industries or services suppliers.
- **Workforce development** at different stages of the value chain and pertaining to different levels of competencies. This includes creating domestic employment opportunities as well as the enhancement of local capabilities through training of local workforce, skills and expertise development and knowledge transfers.
- **Transfer of technology** is another important element of local content policies, in particular towards SMEs and local firms, given the capital-intensive nature of the industry. Some countries require that investors use the latest technology available and that mining firms work with local institutions and experts in their operation.
- **Research and development and innovation** are also important dimensions of local content policies. These policy aims are more prominent in advanced economies or in countries with more mature mining industries, where the priority is to maintain the competitiveness of the industry or of the suppliers network or to foster technology absorption. Some countries require that mining firms contribute to R&D and innovation funds.
- Finally, local content policies are sometimes put in place to foster downstream **value addition** (sometimes also called **beneficiation**). Measures take the form of a specific percentage of mining products that must be transformed locally. This policy objective is beyond the scope of this paper.

4. Core refers the goods and services that are essential for the running of mining operations; non-core refers to goods and services that are not directly utilized by the mining industry operations. Examples of the latter include laundry services and catering services.

A classification of local content and capacity building policies

Local development policies are generally articulated in policy frameworks (guiding principles, national development plans, policy statements, country vision documents, etc.) that set the broad orientation in governing the extractive sector. They are codified in related legislative and regulatory instruments, policy tools, contracts and licensing agreements. Table 1 summarises some of the policy objectives and the market failures that they aim to address, if any, that have generated the use of local content and capacity building policies. As mentioned, these measures may be mandatory or may rely on best efforts of firms to give preference to local factors of production, as specific conditions allow.

Table 1. Policy objectives that motivate the use of local content and capacity building measures

What policy objectives?	Market or policy failures to be addressed	Types of measures taken by some countries to achieve the stated objective
Workforce development	Lack of opportunities for local workforce;	<p>Extractive firms are required or encouraged to:</p> <ul style="list-style-type: none"> ➤ Meet numerical targets for local employment per type of jobs and level of competencies, or report on measures taken to hire locally; ➤ Publish job vacancies ➤ Recruit local staff provided requisite skills and competencies are met ➤ Oblige firms to maintain certain employment or production levels.
	Inadequate or insufficient skills and capabilities;	<p>Extractive firms are required or encouraged to:</p> <ul style="list-style-type: none"> ➤ Provide training to employees; ➤ Fund capacity development programmes; ➤ Engage with public sector or academic institutions to ensure appropriate skills development. <p>Governments and academic institutions:</p> <ul style="list-style-type: none"> ➤ Create engineering and technical curricula in conjunction with extractive firms' stated and future needs ➤ Engage participation of extractive firms' seasoned employees in academic institutions.
Suppliers development	Reduce information gaps between buyers and suppliers;	<p>Extractive firms are required or encouraged to:</p> <ul style="list-style-type: none"> ➤ Publish tenders on given websites and in media; ➤ Set up or use existing networks of suppliers; ➤ Conduct training programmes for employees of procurement entities to understand needs and required standards of extractive firms; ➤ Conduct awareness campaigns about key procurement opportunities. <p>Governments or regulators:</p> <ul style="list-style-type: none"> ➤ Set up networks of suppliers and extractive firms ➤ Provide forums for match-making between local suppliers and extractive firms to engage.
	Prepare suppliers to respond to industry's demand;	<p>Extractive firms are required or encouraged to:</p> <ul style="list-style-type: none"> ➤ Provide training and capacity support to suppliers; ➤ Aid suppliers to obtain certifications; ➤ Source a share of procurement locally, or report on measures taken to procure locally; ➤ Give preference to local suppliers in tenders; ➤ Unbundle procurement contracts to allow local SMEs to respond successfully to tenders; ➤ Provide letters of intent to supplier firms to assist in financing, or engage with mining firms' banks to facilitate financing for suppliers; ➤ Engage closely with local SMEs to encourage innovation in responding to firm's needs; ➤ Pay for supplies from local firms more expediently.

		<p>Governments and regulators:</p> <ul style="list-style-type: none"> ➤ Provide incentives to create suppliers development programmes ➤ Give incentives to local SMEs and extractive firms to link up , in the form of loans, setting up of special economic zones and clusters, tariff concessions; subsidies, etc.; ➤ Provide technical assistance and business training at a needed step in the procurement process, e.g., bidding for tender.
	Sub-optimal access to and transfer of technology R&D and innovation	<p>Extractive firms are required or encouraged to:</p> <ul style="list-style-type: none"> ➤ Invest in or finance R&D and innovation; ➤ Work with local research and academic institutions; <p>Governments:</p> <ul style="list-style-type: none"> ➤ Provide financial incentives to mining firms that undertake R&D with local institutions; ➤ Create technology centres to support local industries. ➤ Encourage suppliers' development programmes which provide financial incentives to SMEs adapting technologies to local conditions or demands.
Maintain competitive edge of suppliers and local mining operations	Need to improve climate for innovation	<p>Governments:</p> <ul style="list-style-type: none"> ➤ Funds are made available to promote R&D and innovation ➤ Duty and/or tax concessions for suppliers who invest in innovation and latest technologies ➤ Facilitate access to global supply chains through open trade policies and trade facilitation reforms ➤ Identify regulations that are unnecessarily or overly burdensome
Increase transfer of technology and research undertaken locally	Difficulty moving into higher value-added products and processes	<p>Firms encouraged or required to:</p> <ul style="list-style-type: none"> ➤ Fund local research centres ➤ Train local hires in technologies used by the firm ➤ Use cutting edge technologies in their operations ➤ Firms asked to allow up to two professionals (geologists, engineers, surveyors, etc.) to participate in technical operations, one of whom is locally hired <p>Governments:</p> <ul style="list-style-type: none"> ➤ Offer tax incentives to firms that relocate or open research facilities in the mining region ➤ Ensure that public and private R&D expenditure is complementary
Increase local ownership	Insufficient financial participation of local actors	<p>Firms required or encouraged to:</p> <ul style="list-style-type: none"> ➤ Provide equity participation to local partner; ➤ Create joint venture with local partner; <p>Governments:</p> <ul style="list-style-type: none"> ➤ Provide incentives to domestically registered firms to access financial benefits such as access to credit at reduced rates.

Local content measures enacted in legal frameworks, policy documents, tender protocols or contracts, can be mandatory in nature or rely on “best efforts” from firms to grant preferences to local stakeholders. These different approaches have vastly different implications for the extractive firms:

A **“requirement-based” approach**, where policies expressly require investors to take certain measures or abide by certain requirements. In many cases they are of a mandatory nature but can also rely on “best efforts” of firms. For example, governments may impose quantitative targets on firms to source a certain percentage of their procurement spending through domestic suppliers or require mining firms to give preference to local firms during tendering processes in an attempt to stimulate the development of upstream supply chains. Similarly, they may impose limits on the number of foreign nationals that can be employed by mining firms.

An **“incentives-driven” approach**, where the government acts as a facilitator, providing incentives to firms to increase their use of local factors of production, their transfer of technology, or the capacity development or training for local staff. These can take the form of financial support, fiscal incentives,

tariff exemptions, or reduced interest rates, which are only available to firms that meet local content policy objectives. Strategic partnerships with mining firms and other relevant stakeholders such as research institutions and chambers of commerce also form part of this approach.

Local content and procurement measures can be further classified in two categories:

First, policies that impose *quantitative* requirements on firms in the form of legally binding targets, generally in terms of *volume* (for example the number of local staff to be employed or number of contracts to be awarded to local suppliers) or *value* (i.e. a percentage of spending on local procurement). In their strictest form, quantitative requirements are mandatory with sanctions for non-compliance.

Second, policies that are of a *qualitative* nature are, for example, reporting requirements on the share of local procurement or employment, transfer of technology and knowledge or the training of staff. They generally do not have specific quotas but can nonetheless be binding. For example, countries may be requested to publish their procurement needs or report their local to foreign employment ratios although the ratios themselves are not imposed.

Another way to classify local content policies is whether or not compliance with the measure affects firms' *access to the market*. In the case of a requirement for a given share of equity by local or national shareholders, for example, which is a pre-condition for obtaining an extractive license, the LCP determines the market access of a firm. Some LCPs include a requirement to report on their targets, and justify any deviance from them, but market access is not directly affected.

Also important to the impact of LCPs are their *reporting requirements and enforcement mechanisms*. In some instances, it is the fact that firms report on their local capacity building policies that is enforced, rather than quantitative targets. The extent of the reporting requirements and their enforcement mechanisms contribute strongly to the impact of such measures. Such requirements are often missing from countries' policies. This also makes it more difficult to ascertain the impact of such measures.

Box 2. Examples of requirements-based and incentives-driven approaches

Examples of "requirement-based" approach

Ghana has placed a strong focus on LCPs since 2009. Eight specific categories of products that are used in the mining industry, which account for up to 60 percent of all items purchased by mining firms, are reserved for local suppliers. Firms must also submit procurement plans to the Minerals Commission. Ghana has set very high mandatory employment targets: all unskilled labour must be Ghanaian and at least 90% of senior management (increased to 94% after three years).

The scope of LCPs in South Africa covers participation, in the form of ownership, and employment with a particular focus on historically disadvantaged groups. There are specific procurement targets that foreign firms must allocate to historically disadvantaged groups, including 40% local procurement expenditure, 50% of purchase of local consumable goods and 70% of local services.

Examples of "incentives-driven" approach

The comparative advantage of Finland lies in its expertise and its technologically advanced, internationally competitive suppliers of goods and services. It has established a reputation in providing innovative "solutions" and specialised goods and services in all areas of the mineral utilisation value chain. The 2011 Minerals strategy provides numerous investment incentives for firms to continue to remain ahead of the curve, with a particular focus on Finnish firms and those that establish affiliates in Finland. A 30 million euro fund was established to provide financing opportunities and loan guarantees for firms operating in the mining industry. Finland invests heavily in education, training programmes geared to the needs of the mining industry, as well as public expenditure on R&D.

Australia has adopted different approaches over time, providing a range of incentives, which include financial support or tariff concessions on imports conditional upon developing and implementing local content or industry participation plans.

In Brazil, the Bigger Brazil plan offers tax incentives on production factors with a focus on strategic sectors for competitiveness, technological innovation and productive development.

Source: Local Content Policies in Minerals-exporting countries, Case studies (<http://oe.cd/rawmaterials>).

Table 2. Classification of local content requirements: from quantitative requirements to incentives-based approaches

Requirements	Examples of requirements
Quantitative requirements	
Requirements based on numerical targets	Compulsory requirement to employ a percentage of local labour
	Specific categories of procurement reserved for local suppliers
Requirements based on monetary value	Spending requirements regarding technological transfer
	Requirements regarding R&D spending locally
	Value of wages paid to foreign staff not to exceed a share of the total payroll
	% of local procurement spending to be attributed to local suppliers
	Preferential price premium exclusively for local suppliers
	Ownership requirement: Compulsory state participation or joint venture with local firms to obtain licenses
Qualitative requirements	
Reporting & justification	Mining firms to report and justify hiring foreign labour or sourcing inputs from abroad
Information sharing	Requirement to advertise job vacancies or publish tenders and procurement requirements
Capability & knowledge development	Requirement to train local labour or certify local suppliers; Firms encouraged to engage with academic institutions or training centres to align curricula to needs of the extractive sector
R&D contribution and transfer of technology	Firms required to transfer technology to local firms; Firms required to carry out some levels of R&D locally
Preferential treatment	Firms to hire local labour or source inputs from domestic suppliers only if available on a competitive basis

Source: Adapted from Ramdoo (2015b).

Relationship with international trade and investment commitments

By their nature, local content policies require that mining firms give preferential treatment to local suppliers of goods, services providers and employees and that certain activities, such as technology transfer or research and development are conducted in the country where mining operations take place. Such measures can have distortionary effects (Hufbauer et al., 2013) and some, in particular mandatory requirements that dictate stringent numerical targets, may therefore contravene certain commitments that countries have taken at the bilateral level, in preferential trade or investment agreements, or at the multilateral level at the World Trade Organization (WTO).

Measures seeking to impose numerical obligations to foster local sourcing of inputs have been the subject of WTO disciplines, with some degree of flexibility for developing countries, in particular for least developed countries. Various WTO agreements, notably the General Agreement on Tariff and Trade (GATT), the Agreement on Trade-Related Investment Measures (TRIMs), the Agreement on Subsidies and Countervailing Measures (ASCM) and the General Agreement on Trade in Services (GATS) all contain rules that condition the use of certain types of measures. Annex I summarizes the disciplines included in WTO and some international investment agreements regarding local content measures.

Despite clear rules that prohibit certain forms of LCPs, such as mandatory numerical targets, many countries maintain them or have introduced new ones in recent years. While these are discussed in the WTO TRIMs committees, which require countries to notify or discuss such measures, the WTO

surveillance mechanism is not strongly implemented.⁵ There is no known dispute settlement case relative to local content requirements in the extractive sector that has been brought to the WTO.

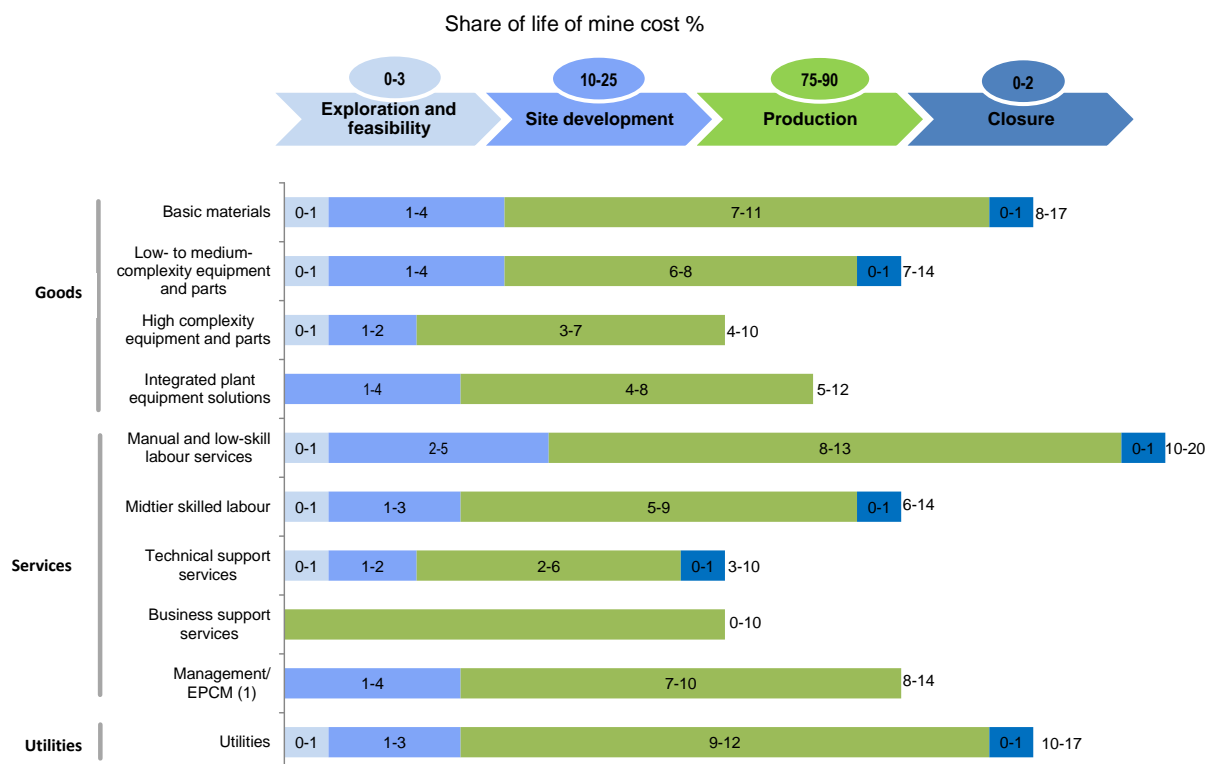
Countries that joined the WTO after 1995 have been subject to closer scrutiny and tighter obligations. During their accession negotiations, some countries have agreed to remove many local content policies. The most recent case is the accession of Kazakhstan to the WTO in 2015, which contains a number of commitments to phase out its quantitative local content requirements applicable to sub-soil users by 2021, with a commitment that future contracts would not contain such requirements.

Risks and opportunities provided by local content and procurement and capacity building measures

Where are the opportunities?

Various types of inputs are needed at different stages during the life cycle of a mining project, spanning from the exploration phase to the closure of mines. Figure 1 illustrates the average share of expenditure across the various stages of mining operations. The production stage offers the largest opportunities for upstream linkages and local content development as firms spend between 75% and 90% of total expenditure during this phase (McKinsey, 2013).

Figure 1. Share of spending by mining firms by stage of production



Notes: 1. Engineering, procurement, and construction management.

Analysis based on expert interviews and quantitative estimates of capital and operational expenditure over the life of a mine. Figures are subject to variation according to the specific metal and type of mine considered. The totals shown for each element of the mine life cycle will therefore not necessarily equal the sum of the individual items below.

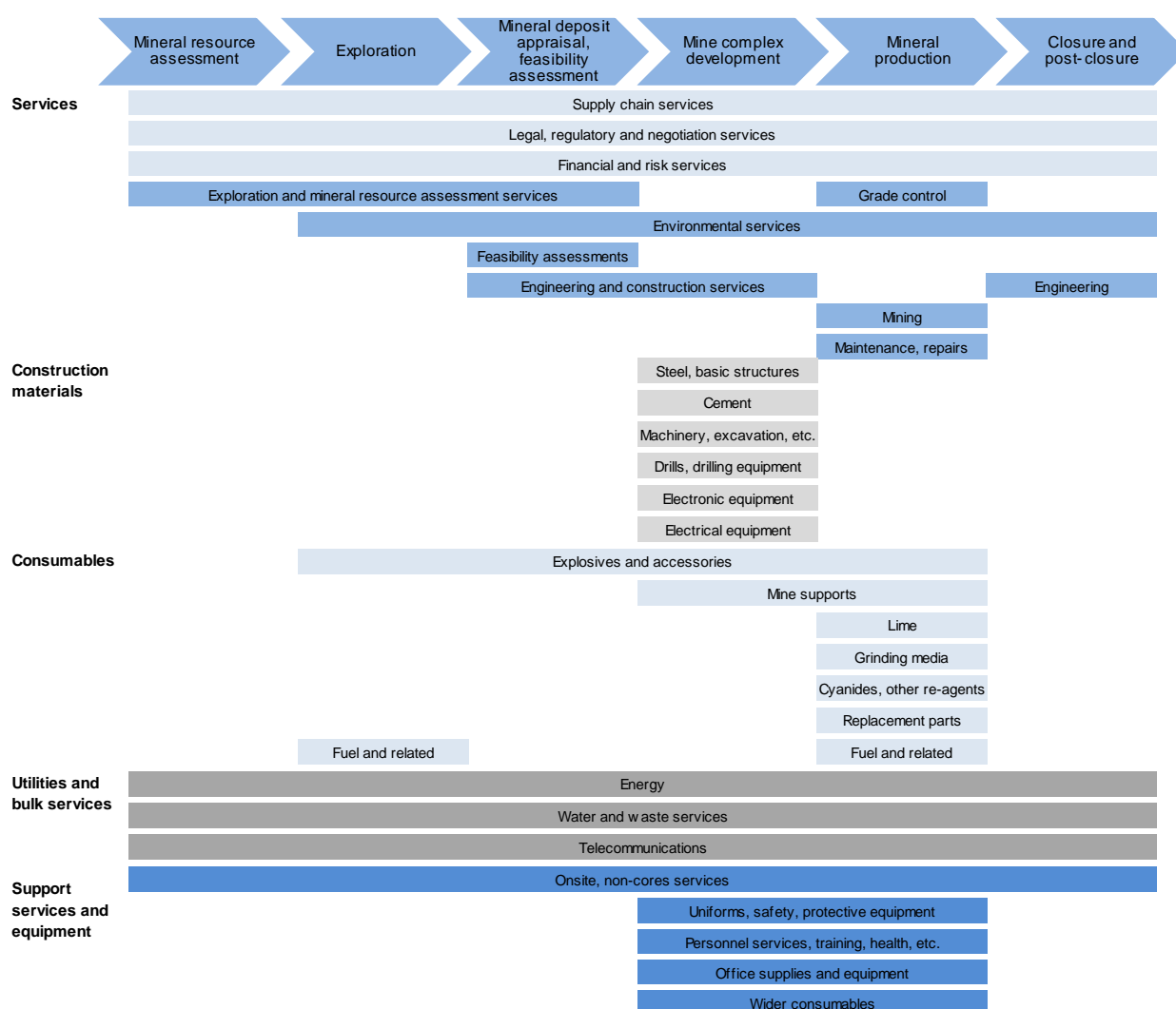
Source: McKinsey Global Institute Analysis (2013).

5. For more details see www.wto.org/english/tratop_e/trims_e.htm

It is necessary to have a deep and detailed knowledge of the resources supply chain in terms of revenue, opportunities for businesses and potential for employment creation in order to inform the strategic orientation of government policy. Governments also need to be clear about the specific market failure they are trying to address through local content and capacity building policies. Measures can then be designed with a view to responding to the underlying market failures, such as unexploited economies of scale or a mismatch of supply and demand for skilled labour. If local content measures are put in place for this purpose, it is important that they are instituted with a sunset clause.

In-depth information on the gaps between the needs of the extractive sector at different stages of its activity and the existing skills and capacities at the domestic level is key to assessing to what extent governments can support firms in building their capabilities to join the supply chain. An overview of the types of inputs required during various phases of the mining life cycle can be found in Figure 2.

Figure 2. Mining phases and key inputs



Source: IFC LPP Guide (2011).

Some developing countries struggle to develop supply chains that are cost competitive. Key cost drivers are energy, wages, poor logistics, thick borders and poor cross border trade facilitation services (McKinsey, 2013). These are not generally areas that benefit from local content and procurement policies. The cost structure of mining is largely dependent on well-functioning transport, energy, water and business service networks. The World Bank notes that the estimates for the impact of infrastructure on economic growth vary, but the median of recent estimates indicates that a doubling in the level of infrastructure could increase GDP by 10% (World Bank, 2010).

The level of local inputs in a given production process varies significantly across countries as a result of a number of factors such as the type of resource, the level of industrialisation, availability of skills and the country's unique aspects such as location or proximity to international markets. In countries with low levels of development and a weak industrial base, little expenditure by mining firms occurs locally. Even basic amenities are often imported and outsourced.

LCPs are not sufficient to address the challenges or foster the development of local supply chains or employ more local labour, nor are they necessarily the best policies to address market failures or insufficient capacity. Building capacity and harnessing the substantial opportunities provided by the mining sector can be advanced through a broad set of policies that target market failures and inefficiencies throughout the economy. These include:

- ***Horizontal measures*** to create a business friendly climate. These policies should address constraints to growth such as infrastructure deficits, access to finance, high costs of doing business and trade and investment barriers. They also include a sound education policy that delivers a labour force with appropriate skills. The importance of the general macro-economic and business climate cannot be overstated: they will allow economies to expand along areas of comparative advantage while allowing for development of new growth areas.
- ***Sector-specific policies*** to tackle key market failures that inhibit the development of the local economy. In low-income countries for instance, where there are few buyers (large mining firms) and not enough suppliers due to weak local enterprises, policies may target identified parts of the supply chain, for example by readying supplier firms to respond to tenders. Similarly, policies may be implemented to reduce barriers to information on existing opportunities provided by mining firms thereby increasing the potential for local procurement and employment.

What are the risks associated with certain forms of local content policies?

Given that LCPs are often seen as a fiscally neutral way to promote domestic industries and employment, it is not surprising that resource rich countries have used them, in particular as the extractive industries generally do not create much employment relative to more labour-intensive sectors and do not always form strong linkages with the rest of the economy. Local content requirements can create immediate employment opportunities and quickly reduce imports of inputs, but the risk is that they potentially undermine these objectives in the long term. Additionally, governments must weigh the cost of government oversight against its potential benefits. Some of the specific risks associated with local content measures are outlined below. They apply in particular to mandatory local content and procurement policies.

Risks of breeding inefficiencies

Local content measures have a cost which must be measured against any potential benefit it is hoped they provide. First, they may lead to an increase in production costs which will raise output prices, in the mining sector in the first instance. The increased prices in turn raise costs for producers further down the value chain, reducing competitiveness of downstream industries and ultimately hindering the development of the wider economy (Grossman, 1981). The size of these efficiency losses in the market place will be proportional to the additional costs associated with purchasing required domestic inputs due to the policy, over their cost on international markets (Stone et al., 2015). A review of mandatory, quantitative local content requirements found that in all but one case, the prices of products in affected sectors increased

(Stone et al., 2015, p. 8). In addition, such measures can reduce the amount of taxes collected by the government if they negatively affect the profitability of companies, and hence shrink the tax base.

Experience suggests that governments should not attempt to select priority sectors, in particular in the presence of highly imperfect markets. This “picking winners” strategy has often been unsuccessful (see, for example, Pack and Saggi, 2007). Policies can instead lead to a situation where “government intervention fails to correct failures in the free market” and therefore contributes to further deepening the problem instead of addressing it (Warner, 2011). An example of such a situation would be measures that seek to give preferences to local suppliers in order to correct perceived unfair competition by international suppliers, but which end up creating production inefficiencies which make local suppliers even less competitive vis-à-vis foreign suppliers (Warner, 2011, p.22). Targeting potential sectors or industries for supporting policies can also create substantial rents. Firms may engage in rent-seeking behaviour thereby distorting the allocation of resources (e.g. Krueger, 1974; 1990).

Impacts throughout the supply chain

Reducing trade in intermediates in particular threatens to lower productivity and reduce connectivity across the globe. Using mandatory, quantitative requirements to develop internationally competitive industries runs counter to the importance of engaging in global value chains and the role trade plays in their development. There is evidence that imported intermediate goods increase productivity in an economy (Shepherd and Stone, 2013). Conversely, government-mandated requirements to supply the extractive sector in intermediate goods domestically may particularly negatively affect productivity. Indeed, one way in which governments can reduce the technology gap is to encourage, rather than discourage, the use of foreign intermediate imports that have a higher level of embedded technology (Stone et al., 2015).

Box 3. Examples of economy-wide effects of binding LCPs: Argentina and Kazakhstan

Stone et al. (2015) analyze binding local content requirements in the mining industries in Kazakhstan and Argentina in a general equilibrium context. Argentina requires that all transport services used by that industry must be locally sourced. The requirement affects both water transport and other transport services.

The effects from the Argentinian local content requirement are small but act as expected. Imports of transport services into the mining sector fall. The gap in supply is met through increased production and a substitution of domestic transport services into the mining sector and away from the other industries. There is an increase in imports of transport services into these other sectors caused by the increase in the price of transport.

Kazakhstan requires that 16% of the inputs of goods, and 85% of inputs of services into the mining sector are locally sourced. In Kazakhstan, motor vehicle, insurance and other business service inputs into the mining sector are affected by the local content requirement. The effects of the local content requirement in Kazakhstan cause production in the sector to decrease slightly, by 0.1%.

The change for the motor vehicle and insurance sectors is significant. The domestic supply of these inputs into the mining sector is found to increase by over 407% and 51%, respectively, albeit from a low base. This increase in domestic supply can be met by increasing production or shifting inputs from other sectors into the mining sectors. In this case, domestic production in the motor vehicle industry increases by 3% and 0.7% in insurance. While motor vehicle and insurance inputs into the mining sector increase dramatically, they fall across every other sector, leading to an overall decrease of 2.7%.

The motor vehicles and insurance sectors expand by attracting factors of production and other intermediate inputs through higher relative prices, as do other sectors that supply inputs into the motor vehicles and insurance sectors. These are primarily services sectors, but also include textiles and food products. Indeed, services expand production by 0.11%, increase imports by 1.06% and decrease exports by 0.14%.

The impact of a local content requirement is complex and its impact on different sectors and on trade in products quite different from those targeted can be substantial.

Source: Stone et al. (2015).

In addition, when considering the impacts of local content measures, economy-wide effects must be taken into account. Imports are affected through at least three distinct channels: imports of the commodity produced in the targeted sector (e.g. nickel); imports of commodities supplied to the sector (e.g. electricity); and imports of sectors supplying the input commodity to the targeted sector (e.g. coal to the electricity sector). The net effect on imports is the interplay and relative price changes across all of these channels (Stone et al., 2015). To avoid the increase in domestic costs due to a local content requirement, non-targeted industries, such as those downstream of the nickel sector in the example, have the ability to substitute away from now more expensive domestic production to comparatively cheaper nickel imports. This is shown to, in some cases, completely offset the original intent. Box 3 illustrates the complexity of multi-sector impacts of mandatory, quantitative local content requirements affecting the extractive sectors in Argentina and Kazakhstan.

Insufficient domestic capabilities

Local content measures are not sufficient to address the challenges or foster the development of local supply chains or employ more local labour, nor are they necessarily the best policies to address market failures or insufficient capacity. Countries that have not been active in the extractive industries over the long term generally suffer from a shortage of senior, or even mid-level, professionals with strategic and functional supply chain management capabilities. Building such capabilities takes time and policies that set numerical targets are not the best way to respond to such challenges.

Potential for capture of rents

Effectiveness of policies also requires ensuring that they do not lead to capture by a group of stakeholders with strong vested interests or that are politically affiliated. In South Africa, for example, one of the criticisms of the local content policy is that they have benefited only a few individuals, distributing opportunities to a small group within the historically disadvantaged population.

Implications for policymaking

Research suggests that mandatory, quantitative local content requirements often introduce distortions and inefficiencies. These are exacerbated when quantitative targets are far from the employment or procurement situation that exists without the local content requirement in place. Some countries place greater priority on implementing a balanced tax and royalty system to ensure benefit sharing of their natural resources. Many countries consider that extraction of State-owned natural resources should be compensated by royalty payments that can then be used to finance programmes that promote diversification, capacity development, and a broad spectrum of social and economic policy goals.

Nonetheless, the country-specific experiences outlined in the Case Studies⁶ illustrate that local content and capacity building measures are very prevalent in the mining sector, including in OECD countries. Almost all countries surveyed have implemented policies that condition the extraction of sub-soil resources or otherwise attempt to stimulate the use of local factors of production. In Australia, for example, all large projects undertaken must implement a plan to offer “full, fair and reasonable” opportunities to Australians and Australian firms. In Canada, overseas investors will be approved if they are deemed to create a “net benefit to Canada” which is determined by factors such as the level of employment and resource processing, and the participation of Canadians in the proposed business. In Brazil and Peru, there is a maximum limit on the number of foreign employees that firms can hire and on their share of the total payroll. In Peru, not more than 20% of the workforce and 30% of the total payroll cost may go to foreign employees. In Brazil, the figure is 1/3 of the workforce and 1/3 of the payroll. In addition, in Peru, mining firms must meet minimum annual production targets by the sixth year of activity; otherwise, they are

6. <http://oe.cd/rawmaterials>.

subject to fines and eventually may risk losing the mining concession that they have been attributed. Approaches to increasing local contributions to the sector have taken various forms, ranging from an assertive, mandatory approach to an approach designed to facilitate, rather than force, the development of local business and employment opportunities.

The motivations behind local content measures differ widely among countries examined. Some countries, like Canada, South Africa, and to a lesser extent Australia, aim to provide better access for distinct groups within their societies to the gains from mining firms which are often domestically-headquartered. Other countries aim to obtain a share of the gains beyond taxes and royalties of the mining firms which are largely headquartered outside their countries; this is the case of Mozambique, Liberia, Papua New Guinea and Ghana. Others, most prominently Finland, aim to increase the innovation and productivity of the cluster that has grown up around mining activities. Some countries—Peru, Brazil, South Africa and Ghana—aim to increase linkages with the mining sector in order to capture more value added within their economies.

The policies used by the ten countries in an attempt to achieve their policy objectives differs significantly. In Finland, for example, measures clearly target the development of mining services and capital goods and, in particular, innovation within those sectors. Liberia also aims to promote technology transfer and in order to do so and to help increase skills, firms can be asked to allow up to two professionals such as geologists, mining engineers or surveyors, to participate in all aspects of technical operations. The policy mix used to pursue the objective of increasing innovation and use of advanced technologies is different in these two examples.

Building capacity to respond to the needs of the mining sector cannot be obtained by decree. It must include a wide-ranging, integrated set of policies that addresses political and economic bottlenecks that hinder the engagement of industry actors with local suppliers and populations. Some of the main areas affecting a country's potential to engage in the extraction of its resources include:

- The level and quality of education of the workforce. Education and training are the cornerstone to participation in any economic activity. In order to ensure that the labour requirements of the mining sector are met and to address existing gaps and mismatches, some governments undertake specific skills development and training programmes. This requires working closely with universities and technical centres, ideally in partnership with extractive firms, to develop specific types of skills. Finland has been particularly successful in developing public-private partnerships to support upgrading of skills and capabilities. Australia has sought to align its education system to the needs of the mining industry through partnerships and close links. This has contributed to Australia's success in developing its mining equipment, technology and services (METS) sector which now employs many more Australians than the mining sector itself.
- Creating a business friendly environment is a critical condition to stimulating the development of the local private sector. This includes reducing administrative red tape to business establishment and simplifying procedures, including approval procedures to obtain permits and licenses, without compromising environmental and occupational safety and health protections. Australia has undertaken a programme in 2016/17 to identify regulations that are unnecessary or over-burdensome and suggest possible reforms in its METS sector, among others. In addition, predictability is essential: frequent changes in regulations can lead to additional operating costs and delays thereby reducing the competitiveness of firms.
- Necessary enabling conditions include addressing infrastructure and energy deficits, which contribute to a large extent to the cost of mining operations. The cost structure of mining is largely dependent on well-functioning transport, energy, water and business service networks. Infrastructure investment incorporating both transport infrastructure (roads, rail, air and sea ports) as well as information and communications networks and utilities lowers costs to producers and helps attract investors, thereby increasing domestic production and employment.

- Creating an open and supportive trading environment in which both extractive industries and their suppliers can engage. Today, three quarters of international trade can be characterized by firms buying inputs and investment goods or services that contribute to the production process. Protectionist measures against such imports increase costs of production and reduce a country's ability to compete in export markets and to participate in global value chains. Eliminating export restrictions on products of the extractive industries and reducing import tariffs on investment and intermediate goods and barriers to trade in services can help both the extractive industries and their suppliers to be more competitive. Moreover, one of the rationales for using local content and capacity building measures is to ensure necessary economies of scale for local firms. Providing access to export markets will help to further strengthen domestic capabilities.
- Investing in research and development to foster innovation can help enable local firms to move up the value chain and increase their competitiveness. The case of Finland underlines the prominent role of investments in technology, in particular through policies supporting R&D, in increasing the competitiveness of Finnish firms and their expansion to global markets. Canada also encourages firms to invest in R&D. In some provinces this is done through tax credits. In others, research grants are made available under specified conditions.

Policies that mandate highly prescriptive local content requirements have a risk of introducing economic inefficiencies that are greater than those they aim to offset. Imposing quotas on the share of employment or goods and services procured by the extractive firm domestically may hamper the competitiveness of the mining sector. The inefficiencies of stringent quantitative requirements are greater and more widespread, the farther away the economy is from achieving such targets. Raising costs in the extractive sector due to stringent local content requirements also implies lower revenue for firms and therefore lower taxes paid. Additionally, the cost of government oversight must be weighed against any perceived benefits of local content and procurement policies.

Imposing mandatory targets for procurement or employment when local capacity cannot properly respond to them can be counter-productive: the mining sector will suffer and will not attract investment from the best performing firms with the most advanced technologies. A needs assessment undertaken in Mozambique estimated that 99% of goods and services produced by local firms lacked the necessary quality to supply an aluminium smelting firm which was setting up in the country. In this case, programmes and incentives to develop suppliers' capacity are a necessary prerequisite to their entrance into the market.

Giving preferential treatment to certain groups can generate distributional issues among the target population and can produce rent-seeking behaviours. In Canada, it was found that in some cases, benefits were kept in their majority in the hands of those in charge of community governance structures. In South Africa, it has been necessary to establish a Code of Conduct in an attempt to counter fraudulent practices where individuals and businesses have leveraged their status as members of historically disadvantaged populations without any real economic benefit flowing to the community. It has even been observed that the procurement of goods by the mining sector has shifted from those that are locally produced (by firms that do not qualify as historically disadvantaged in terms of ownership) to imports that have been purchased abroad by firms that qualify as historically disadvantaged. This outcome contradicts the objective of the policy which was to increase local inputs in the production process.

Any policies that aim to increase local capacities should target areas where the resource-rich country, or extracting region, has a comparative advantage. Inputs into mining range from low-skilled to highly sophisticated jobs and business processes. At the very least, a resource rich country's comparative advantage lies in its proximity to the extractive process. Subsequently, supply chains offer opportunities for upskilling and upscaling.

In order to ascertain potential for insertion into the supply chain, it is necessary that governments have detailed knowledge and understanding of the supply chain they are trying to promote. A detailed analysis of procurement needs of mining firms along the supply chain should be undertaken, ideally in close

conjunction with the firms themselves, as was done by Finland, Canada and Australia. Important information that informs this process includes:

- The type of procurement opportunities that are available in each major mineral project and for each phase in the life cycle of the project;
- Assessment of capabilities of domestic suppliers and the workforce to respond to the needs of specific projects; and
- The gaps that need to be filled to enable suppliers to take advantage of opportunities, both in terms of skills and workforce potential and in terms of institutions that are needed to accompany local content development.

In Australia, for example, support for supplier firms has targeted a specific point in the production chain - the contract tendering process - where some firms have been deemed to fall short of full competitiveness. Canada, Finland and Peru have accompanied suppliers to obtain necessary certifications that allow them to respond to complex tenders launched by mining firms.

Developing public-private partnerships between governments, mining firms and local SME suppliers is critical to ensuring implementation and ownership. Mining firms are better placed to advise governments because they have a profound understanding of their sourcing needs. In addition, they may be better placed to assess the availability of capabilities at the local level and the extent to which local industries need to be accompanied and scaled up to meet the standards and requirements of the mining sector. Evidence from Brazil, Chile, Peru, Mozambique and South Africa has shown that private-led initiatives have delivered efficient results when mining firms have put such strategies at the core of their business model. Partnership also reinforces the coherence with overall economic and political objectives of governments.

Extractive firms, in conjunction with local or regional governments, can reduce the frequent barriers to entry into tender processes for procurement contracts in the mining sector. Some local and regional entities offer technical assistance to SMEs to respond to tender and aid them in the procurement contract process. Some local or regional governments keep databases of supplier firms in order to reduce information gaps and require mining firms to consult these databases. Some contracts are for a broad variety of goods for which it is unlikely local firms can supply the entire range. In some cases, large contracts can be un-bundled so that local SMEs may provide a smaller portion of the total contract tendered. Others require firms to demonstrate specific capabilities like adhering to high safety and environmental standards. Extractive firms, in conjunction with government, sometimes aid suppliers in obtaining necessary certifications to respond to the needs of the extractive firms. Supporting potential suppliers can be costly. In Brazil, mining firms partnered with firms in other sectors such as energy and agro-food to support potential suppliers with business process and technical assistance. The programme to build capacity among potential suppliers was managed by a business association.

Another barrier to entry of SMEs in procurement processes of mining firms can come from the manufacturers of the sophisticated machinery used in the mining sector. In some cases, this machinery comes with a warranty that specifies that all parts used to repair the equipment must be manufactured by firms endorsed by the brand. In some cases this extends to procurement goods that are recurring inputs into the production process such as tires and oil. In this case, no procurement can take place locally without endangering the warranty coverage.

There are other ways in which the procurement process can be more inclusive. One major problem of local SMEs is that they have limited cash flow. In some cases, mining firms accept to pay local SMEs more quickly than they would normally. Examples include firms that agree to pay for locally sourced products within 30 days of product delivery. Other examples include agreements between mining firms, their financial institutions and certain small and medium-sized local goods and services providers. Banks in some cases are more likely to extend short-term credit to such suppliers if they can provide a copy of a purchase order from the extractive firm.

Some of the most positive capacity building stories come from mining firms' suppliers' development programmes. When firms take them seriously, such programmes can increase capacity and employment in local SMEs, create deep linkages, and foster innovation and transfers of technology and business process knowledge. Some of the more successful suppliers' development programmes have been designed to include some of the following aspects:

- Mining firms identify needs within their supply chain that may be met by local SMEs.
- Governments, mining firms and local stakeholders identify barriers to entry for potential local suppliers.
- Mining firms undertake skills transfer and training, including in the tender process, and business management skills.
- Mining firms undertake the rapid payment of suppliers in order to support small firms with less cash flow.
- Mining firms “un-bundle” large contracts in order to make some aspects of their procurement accessible to smaller local firms.
- Some programmes aid suppliers by supporting them to obtain certifications necessary to respond to tenders or compete for contracts.
- Suppliers' development funds invest in SMEs or provide finance to start-ups.
- Some tenders are set to be filled exclusively by firms from disadvantaged groups or some groups are given extra time to respond to the tender.
- Partnerships and joint ventures between new firms and traditional suppliers are encouraged.
- Some suppliers' development programmes have prioritized goods and services that can be used in other sectors outside mining; one example is solar energy technology. This provides particular benefit as it promotes not only development but potential diversification.

Measuring policy impact relies on well-functioning enforcement and monitoring mechanisms. Only some countries have these in place. In Australia, for instance, strong reporting mechanisms on firms' “best efforts” to source and hire locally serve to make firms more committed to engage locally. Despite no numerical targets having been set, strict reporting requirements oblige firms to demonstrate the efforts they made to procure locally. Ghana has implemented very strong enforcement of the reporting requirements associated with local content policies, with strong penalties if firms do not file their local content and procurement plans and assess their targets. The Australian and Ghanaian cases suggest interesting implementation mechanisms: the monitoring mechanism is enforced, rather than actual local content targets or requirements.

In some other instances, the monitoring of such agreements is limited. This is the case particularly when local capacity development measures are implemented at the project level, as is the case in Canada and Papua New Guinea. When agreements are reached between mining firms, local populations and local governments, and these agreements are confidential, there is little external oversight and monitoring of results. It is difficult to ascertain therefore the impact of such agreements, or even to what extent they are being adhered to.

In some cases, a regional approach is necessary to create economies of scale. Building capacity and training opportunities may require supporting regional training centres rather than creating numerous smaller facilities. Building capacity regionally, however, requires mutual recognition of professional skills in occupations such as geologists, engineers and technicians. Economies of scale in the procurement of goods and services may also be elusive at the national level but could be more efficient in an integrated region. Trade barriers are often a key issue for firms looking to source regionally, however, as are transport costs. Tackling such issues in order to build regional capacity requires a concerted approach. An example of a regional approach can be found in the Australian incentives to source and build capacity within

Australia and New Zealand. It should be noted that a strong, integrated regional trade agreement between the two countries, ANZCERTA, creates a conducive environment to such cooperation.

Policies that are more likely to deliver on their expectations are (i) guided by a comprehensive understanding of firms' procurement needs, strategies and capabilities, (ii) based on a thorough understanding of the local capacities and bottlenecks to their enhancement and (iii) cognizant of the factors that may impact policy effectiveness and the potential unintended consequences of such measures.

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ANNEX I. PROVISIONS RELATED TO LOCAL CONTENT IN INTERNATIONAL TRADE AND INVESTMENT AGREEMENTS

Measures seeking to impose numerical obligations to foster local sourcing of inputs have been the subject of disciplines at the WTO, with some degree of flexibility for developing countries, in particular for least developed countries (LDCs). Various WTO agreements, notably the General Agreement on Tariff and Trade⁷ (GATT), the Agreement on Trade-Related Investment Measures⁸ (TRIMs), the Agreement on Subsidies and Countervailing Measures⁹ (ASCM) and the General Agreement on Trade in Services¹⁰ (GATS) all contain rules that condition the use of certain types of measures.

Employment conditions for services providers are disciplined through the GATS but these are limited to the extent that countries have made specific commitments in the sectors in which they seek to impose local content requirements. Table A.1 highlights the most relevant WTO provisions that affect the design and implementation of LCPs.

7. The consistency of local procurement requirements is defined according to the following three criteria, as laid down in *Article III:4* (i) whether the imported products are accorded *less favourable treatment* compared to local suppliers; (ii) whether the imported goods and the domestic products are considered as *like products*; and (iii) whether the measures are inscribed in *laws, regulations and requirements*. Government procurement is excluded from the application of the provision of national treatment (Article III:8) and is subject to the obligations of the plurilateral Government Procurement Agreement (GPA), which addresses discriminatory treatment in favour of local suppliers regarding tendering procedures for contracts above a certain financial threshold. The GPA only applied to its 43 signatory countries.
8. The TRIMs Agreement complements Article III of the GATT regarding treatment accorded to *investment*. Host countries are required to provide no less favourable treatment to foreign investors compared to their national investors. TRIMs provide an illustrative list of potential measures that may contravene the Agreement. These are assessed on two considerations: (i) investment measures must be *trade-related* (although *goods only*); and (ii) measures must fall within the *scope* of the illustrative list, must be *mandatory* in the domestic law, must be in the form of *performance requirements* (i.e. mandatory local procurement of parts and components), and which are required in order to obtain an advantage.
9. The ASCM is relevant to LCRs in two cases: (i) if measures to support local content are used as export subsidies; or (ii) if they are subject to the use of local products over imports, as provided by Article 3.1 (b) of the Agreement. Article 3.1 (b) of the ASCM Agreement in particular prohibits the use of “subsidies contingent, whether solely or as one of several other conditions, upon the use of domestic over imported goods”.
10. The GATS contains provisions regarding market access and national treatment that may affect foreign suppliers. Article XVI covers investment measures related to services relevant to local content, such as (i) requirements to use domestic service suppliers; (ii) limitations on the number of service suppliers; (iii) limitations on the total value of service transactions or assets; (iv) limitations on the total number of service operations or quantity of service output; (v) Limitations on the total number of natural persons permitted; (vi) restrictions on or requirements for certain types of legal entities (e.g. joint venture requirements); and (vii) imposition of domestic equity.

Table A.1. Consistency of local content policies with WTO Provisions

Measures	Relevant WTO provisions	Consistency with WTO
Measures affecting sourcing of inputs		
<i>Local procurement requirements</i>		
Quota related to local sourcing	A percentage of value added or specific volume of intermediate inputs to be purchased locally	TRIMs illustrative list para. 1 (a). Quotas or specific percentages prohibited
Trade balancing requirements	Imports of one product linked to export performance to other products	TRIMs illustrative list 1 (b) for internal measures; 2 (a) for border measures Prohibited
Manufacturing requirements	Certain products are required to be manufactured locally	TRIMs illustrative list Prohibited
Limitations on imports	Amount of goods and services that can be imported for the production process is limited	GATT Art. III.5; GATT Art. XI.1; TRIMs illustrative list, para. 2(a) Prohibited
Foreign exchange restrictions	Restrict the inflow of foreign exchange attributable to an investor to constrain the amount of imported intermediate goods	TRIMs illustrative list, para 2 (b), Exception for developing countries GATT Art XII and XVIII:B Prohibited
Preference for local substitutes	Investors to purchase local substitutes for imports if "like product" is manufactured locally	GATT Article III.4 (national treatment) if (i) imported products are accorded less favourable treatment compared to local suppliers; (ii) imported goods and the domestic products are considered as like products; and (iii) measures are inscribed in laws, regulations and requirements. Prohibited
<i>Ownership requirements</i>		
Local equity participation	Some proportion of equity must be held locally	GATS Art XVI for market access restrictions and Art. XVII for national treatment, in schedule of commitments Prohibited only if countries have taken commitments in their services schedules. Otherwise not disciplined.
<i>Employment requirements</i>		
Local employment targets	Specified employment targets have to be met	Prohibited only if countries have taken commitments in their services schedules. Otherwise not disciplined.
Quotas for foreign employment	A maximum number of expatriate staff is specified	GATS Art XVI for market access restrictions and Art. XVII for national treatment, provided in schedule of commitments Prohibited only if countries have taken commitments in their services schedules. Otherwise not disciplined.
National participation in management	Certain staff has to be nationals or a schedule for "indigenization" of management has to be set	Prohibited only if countries have taken commitments in their services schedules. Otherwise not disciplined.
<i>Technology transfer requirements</i>		
R&D requirements	Investors should commit to investment in R&D locally	GATS Art. IV; TRIPs Arts 3, 7 and 8; SCM Agreement Arts 2 and 8 Prohibited
Technology transfer	Specified foreign technology be used locally	Not disciplined
Measures affecting production		

	Measures	Relevant WTO provisions	Consistency with WTO
Minimum export requirements	Certain percentage of production have to be exported	GATT Art. III.5; GATT Art. XI.1; TRIMs Illustrative List, para. 2(a)	Prohibited
Trade balancing requirements	Imports have to be a certain proportion of locally produced exports, either in terms of volume or in terms of value	TRIMs illustrative list 1(b) for internal measures; 2 (a) for border measures	Prohibited
Domestic sales requirements	Certain product may not be exported	GATT Art. III.5; GATT Art. XI: 1; TRIMs illustrative list 2(c)	Prohibited
Market reserve policy	Some markets are reserved for local production	GATT Art. III.4	Prohibited
Product mandating requirements	Some products to be exported by the hosting country only	GATT Art. III.5; GATT Art. XI: 1; TRIMs illustrative list 2(c)	Prohibited
Licensing requirements	Investors to obtain license for production in the host country	GATT Art. XI.1	Prohibited
Technology transfers	Investors are committed to a specified embodied technology	TRIPS Arts 3, 7 and 8; SCM Agreement Arts 2 and 8	Disciplined
Other measures relevant to LCPs			
State trading enterprises	Foreign firms to enter in joint venture with SOEs	Article XVII of GATT, applicable when STEs enter into commercial operations.	Provision does not regulate obligations of foreign firms to enter into joint venture with SOEs
Subsidies to support local suppliers	Governments give financial incentives to local suppliers to favour local products over imports	ASCM Art. 3.1(b)	Actionable if specific, otherwise non-actionable
Subsidies to R&D and innovation	Government policies support R&D and innovation	ASCM Art. 8.2	Actionable if specific, otherwise non-actionable
<i>Exceptions for developing countries: Developing countries are permitted to retain TRIMs that constitute a violation of GATT Article III or XI, provided the measures meet the conditions of GATT Article XVIII, which allows specified derogation from the GATT provisions for the economic development needs of developing countries.</i>			

Source: Adapted from Greenaway (1992); Mc Culloch et al., (2001).

While the TRIMs agreement provides the general framework to discipline national treatment and local content requirements, it applies principally to investment measures that have an effect on *trade* and may not be sufficient to discipline impacts on productivity or competitiveness of industries.

Furthermore, the GATT, TRIMs and the GATS all contain various flexibilities for developing countries under special and differential treatment (SDT) provisions and under other Agreements that make specific cases for developing countries and in particular for low income countries. For instance, Annex F of the 2005 Hong Kong Ministerial Declaration introduced temporary TRIMS-related SDT provisions for LDCs, which are set to expire in 2020.¹¹ Table A.2 summarises measures that are not prohibited by WTO rules. These measures are valid for all WTO members, irrespective of their level of development.

11. First, LDCs were allowed to maintain TRIMs-inconsistent measures for another period of seven years, if notified by 18 January 2008. Second, this transition period may be extended by the Council for Trade in Goods. Third, LDCs were given the right to introduce new TRIMs-inconsistent measures for five years, if notified within six months after their adoption.

Table A.2. Measures not prohibited by WTO rules

Measures	Remarks
Measures affecting imports	
Tariff measures	WTO does not prohibit tariffs. Countries must bind their tariffs and can modify their tariff rates within the range if bound tariffs are different to applied tariffs.
Non-tariff measures (of a quantitative nature)	Generally prohibited (QRs, licensing etc.) but with the exception for imposition of import quotas for BOP purposes (Art. XVIII:B). This is temporary in nature.
Measures to support to enterprises	
Exchange rates	No WTO agreement deals expressly with exchange rates, although GATT Art. XV concerns exchange arrangements
Government procurement	Permitted, except if a country is member of the GPA
Export finance/ insurance/ guarantees	Allowed but may be considered as export subsidy if they are granted at premium rates insufficient to cover long-term operating costs and losses.
Production subsidies	Allowed if non-specific ¹
Trade finance	Not prohibited
Measures to promote technology	
Technology-related requirements for FDI (e.g. technological transfer)	Not prohibited
Support to R&D/ innovation	Unless specific, otherwise permitted
Human capital development	Not prohibited
Employment of local labour	Not prohibited
Regional assistance	Not prohibited
Investment incentives	
Export performance requirement as a condition for investment	Not prohibited
Equity requirement by FDI	Not prohibited
Measures subject to disciplines under specific circumstances	
Credit subsidies	Not prohibited, provided they are not product or sector specific
Tax subsidies/ holidays	Not prohibited, provided they are not product or sector specific
Clusters/ EPZ/SEZ	Not specially regulated by a particular WTO Agreement ² but may be subject to disciplines when measures contravene other WTO disciplines (e.g. subsidies, NT, etc). Fiscal facilitation provided in SEZ is not prohibited.
Contingency measures	
Safeguard measures	These measures allow countries to apply import restrictions in particular circumstances, provided they can prove their economy/ economic actors are affected by (i) a surge in imports (safeguard); (ii) a product that is being sold below their normal price on the domestic market by an exporting country (dumping); and (iii) a distorting effect of a subsidy by a foreign government.
Anti-dumping measures	
Countervailing measures	

Notes: 1. The WTO Agreement on Subsidies and Countervailing Measures disciplines the use of subsidies. The disciplines only apply to "specific subsidies", that is, to subsidies available only to an enterprise, industry, group of enterprises, or group of industries in the country that gives the subsidies. They can refer to domestic or export subsidies.

2. SEZ is mentioned in a footnote to GATT article XVI and in SCM, excluding from the definition of a subsidy one of the fiscal facilitation provided by SEZ, namely an exemption from import duties and taxes on goods exported from SEZ.

Source: Ramdoo, (2015c), adapted from Angelini et al. (2010).

Despite clear rules that prohibit certain forms of LCPs, many countries nevertheless maintain them or have introduced new forms of LCPs in recent years. While these are often discussed in the WTO TRIMs committees, which require countries to notify or discuss those measures, the WTO surveillance mechanism is not strongly implemented.¹² There is no known dispute settlement case relative to local content requirements in the extractive sector that has been brought to the WTO.

Countries that joined the WTO after 1995 have been subject to closer scrutiny and tighter obligations. During their accession negotiations, some countries have had to remove many local content policies, including by giving a clear timetable to eliminate those measures. The most recent case is the accession of Kazakhstan to the WTO in 2015, which contains a number of commitments to phase out its specific quantitative local content requirements applicable to sub-soil users by 2021, with a commitment that future contracts would not contain such requirements.

In addition to WTO commitments, preferential trade agreements (PTAs) also contain legal obligations that may affect the use of LCPs. Their scope and coverage vary widely. By definition, PTAs seek to be more ambitious than WTO rules generally and therefore countries take deeper commitments than those taken within the multilateral framework (so-called “WTO plus” commitments) or go well beyond, to jointly commit on issues that fall outside the scope of the WTO (so-called “WTO beyond” commitments).

Disciplines on local content requirements are also contained in International Investment Agreements (IIAs). These agreements, which may be bilateral or multilateral and may be standalone investment agreements or part of broader Preferential Trade Agreements (PTAs), may contain restrictions on the imposition of local content requirements, pre- (rare) or post-establishment (more common). Today, several thousand bilateral relationships are covered by IIAs, some of which contain rules on local content.

At present, the number of IIAs that constrain the use of local content requirements by host states – the state in which the investment is located – is low. Treaty language that addresses the issue directly can be found essentially in a number of IIAs signed by the United States, including NAFTA, but other countries have also occasionally included such language in their agreements. Further constraints on the use of local content requirements may stem from clauses that allow investors to benefit from provisions contained in other treaties concluded between the treaty partners. The interpretation and use of clauses regarding LCP in IIAs is not settled, given essentially the low number of treaties that contain such clauses.

Extending and further expanding United States treaty practice on provisions on LCPs, the Trans-Pacific Partnership (TPP),¹³ finalized in October 2015, illustrates the type of provisions that has been included in IIAs. The TPP contains an extensive list of prohibited performance requirements such as local content or technology localization requirements, and these restrictions apply to *all investors* and not only to nationals of the treaty Parties, which implies that those countries agree to eliminate certain forms of local content requirements on a multilateral basis, not only vis à vis other signatory countries. It should be noted that the provisions in TPP are not representative for IIAs in general. Box A.1 summarises commitments taken in the TPP regarding local content requirements.

12. For more details see www.wto.org/english/tratop_e/trims_e.htm.

13. TPP signatories are United States, Canada, Brunei, Chile, New Zealand, Singapore, Australia, Japan, Malaysia, Mexico, Peru and Viet Nam. The timeline for entry into force of the TPP is dependent on the pace of ratification by signatory countries.

Box A.1. The Trans-Pacific Partnership: innovations in performance requirements

Article 9.10 of the TPP Investment Chapter regulates “performance requirements”. It applies to the “establishment, acquisition, expansion, management, conduct, operation, or sale or other disposition of an investment of an investor of a Party or of a non-Party in its territory”. In terms of coverage, it therefore pertains to any investor, including those not party to the TPP.

The following performance requirements are **prohibited**:

- to export a given level or percentage of goods or services;
- to achieve a given level or percentage of domestic content;
- to purchase, use or accord a preference to goods produced in the territory of a TPP Party, or to purchase goods from persons in that territory;
- to relate the volume or value of imports to the volume or value of exports or to the amount of foreign exchange inflows associated with the investment;
- to restrict sales of goods or services in a Party’s territory that the investment produces or supplies by relating those sales to the volume or value of its exports or foreign exchange earnings;
- to transfer a particular technology, a production process or other proprietary knowledge to a person in a Party’s territory;
- to supply exclusively from the territory of the Party the goods that the investment produces or the services that it supplies to a specific regional market or to the world market;
- to oblige a Party to purchase, use or accord a preference to technology from its territory or to prevent the purchase, use or the give preference to a particular technology;
- to adopt (a) a given rate or amount of royalty under a licence contract; or (b) a given duration of the term of a licence contract.

The Chapter also prohibits countries to put any particular conditions on investments or investors to operate in their territories, and in particular to comply with any particular requirement:

- a) to achieve a given level or percentage of domestic content;
- b) to purchase, use or give preference to goods produced in its territory, or to purchase goods from persons in its territory;
- c) to relate in the volume or value of imports to the volume or value of exports or to the amount of foreign exchange inflows associated with the investment; or
- d) to restrict sales of goods or services in its territory that the investment produces or supplies by relating those sales to the volume or value of its exports or foreign exchange earnings.

With regards to the appointment of senior management, the Agreement ensures that investors have the ability to appoint senior managers without regard to nationality, and ensures that any nationality-based restrictions on the appointment of board members do not impair an investor’s control over its investment.

However, the Chapter does not prevent a Party from “conditioning the receipt or continued receipt of an advantage, in connection with an investment of an investor of a Party or of a non-Party in its territory, on compliance with a requirement to locate production, supply a service, train or employ workers, construct or expand particular facilities, or carry out research and development, in its territory”.

Source: USTR, 2015.