



## **Exploring opportunities for regional industrialisation in the capital equipment sector: the case of Mozambique and South Africa**

Epifânia Langa and Maria Nkhonjera

[epifania.langa@iese.ac.mz](mailto:epifania.langa@iese.ac.mz); [mnkhonjera@uj.ac.za](mailto:mnkhonjera@uj.ac.za)

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# Structure

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# 1. Introduction

- Member states of SADC have placed industrial development at the core of the region's integrated development agenda.
- Research is informed by a number of factors.
  - Strong historical economic links that already exist between the two countries initially through labour and transport and later through trade and investment;
  - Both countries are experiencing deindustrialisation albeit with differing dynamics:
    - Mozambique's growth stemming from the capital-intensive mega projects has limited impact to the rest of the economy due to the underdeveloped productive, investment and technological capacities of domestic firms;
    - South Africa is experiencing early de-industrialisation with declines in sectors where the country had established advanced capabilities such as capital equipment.
- Within a context of regional integration, with the capital equipment sector being of high importance for both countries, there are opportunities to leverage South Africa's capabilities in capital equipment to build productive capacity and technology transfer in Mozambique.

# 1. Introduction

- Approach and methodology: qualitative and quantitative data
- Secondary data: included analysis of trade data, sub-sectoral FDI, macroeconomic data, company annual reports and policy documents
- Primary data analysis: administered through questionnaires and face-to-face interviews in Mozambique and South Africa.

Table 1: Interviews conducted

South Africa	Mozambique
<ul style="list-style-type: none"><li>• Total: 11</li><li>• South African/ International firms</li><li>• Department of trade and industry (the dti)</li><li>• Industrial Development Corporation (IDC)</li><li>• Export Councils (SACEEC and BEPEC)</li></ul>	<ul style="list-style-type: none"><li>• Total: 18</li><li>• Mega projects (Vale, Anadarko)</li><li>• Mozambican firms</li><li>• South African firms</li><li>• Foreign firms</li><li>• Private sector associations</li><li>• Government institutions (DNI, IPEME, CPI, IFPLAC, Bebeluane Industrial Park)</li><li>• UNIDO</li><li>• Independent vocational training institute</li></ul>

## 2. Structural change and industrialisation

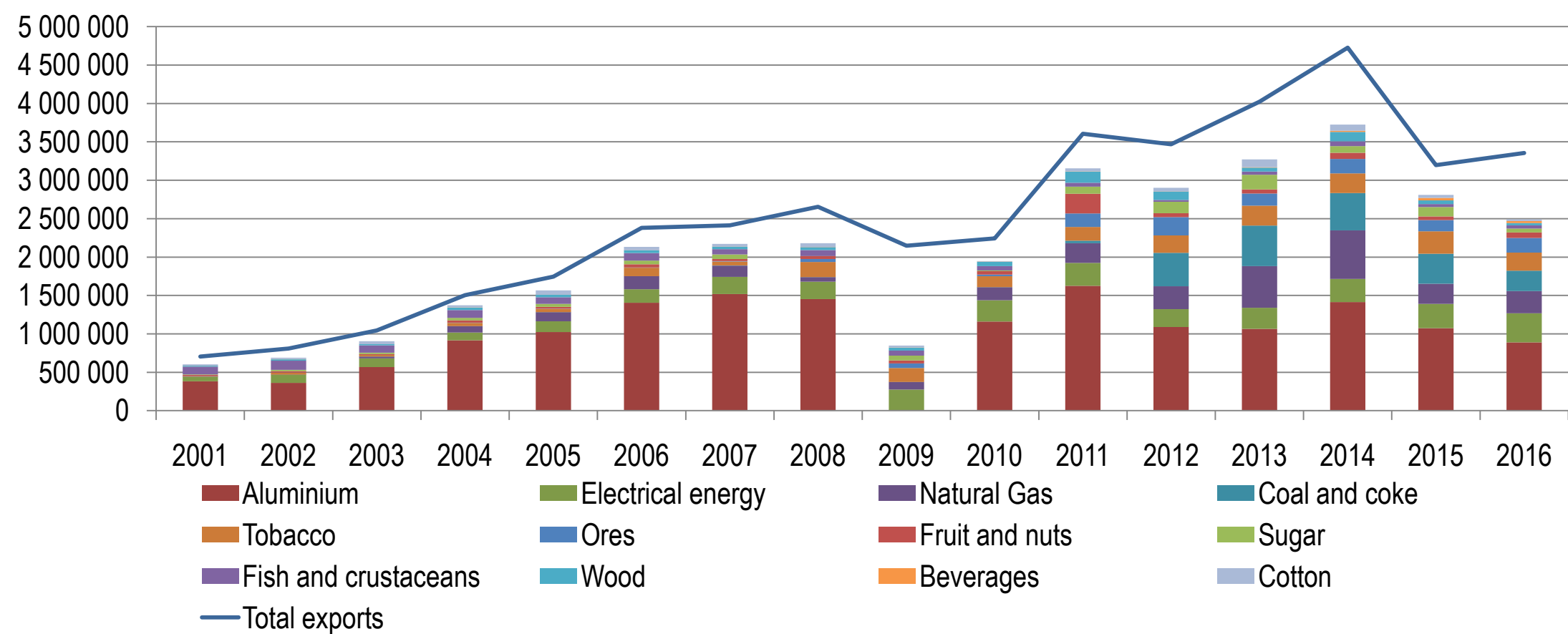
- Economic development is about structural change
- Structural change seen as a transformation of productive and technological structures:
  - Inter-sectoral transition (from low to medium and high productivity sector) and;
  - Intra-sectoral deepening (upgrading of technology and the resultant productivity improvements within a sector).
- Following successes of late industrialisers, economic literature identified linkages that lead to development and the agency of the state in bringing them to bear (Amsden, 1989; Lee, 1990, Wade, 1990; and Fine and Rustomjee, 1996).
- Therefore central role of agency: interests and the role of the state, particularly through industrial policy;

## 2. Structural change and industrialisation

- Challenge for most African countries has been how to develop on the basis of linkages to the mineral wealth of the continent.
- Study focuses on production linkages and lateral migration linkages due to its potential to multiply and diversify activities within the economy.
- The depth and breadth of these linkages has largely been shaped by:
  - Capabilities in the local economy - capabilities defined as personal and collective skills, productive knowledge and experience embedded in physical agents and organizations (Andreoni, 2013)
  - Government policies (e.g. local content policies);
- Little and varied degrees of success, (in terms of development of local firms through linkages to commodity sectors) but in activities outside of the key competencies of the lead firm;
- Thus, it is important to understand the dynamics and tensions emerging from the interaction between economic structures, agencies and the relationships with capability development in a context that is both local and regional.

# 3. Industrial development: Export patterns in Mozambique

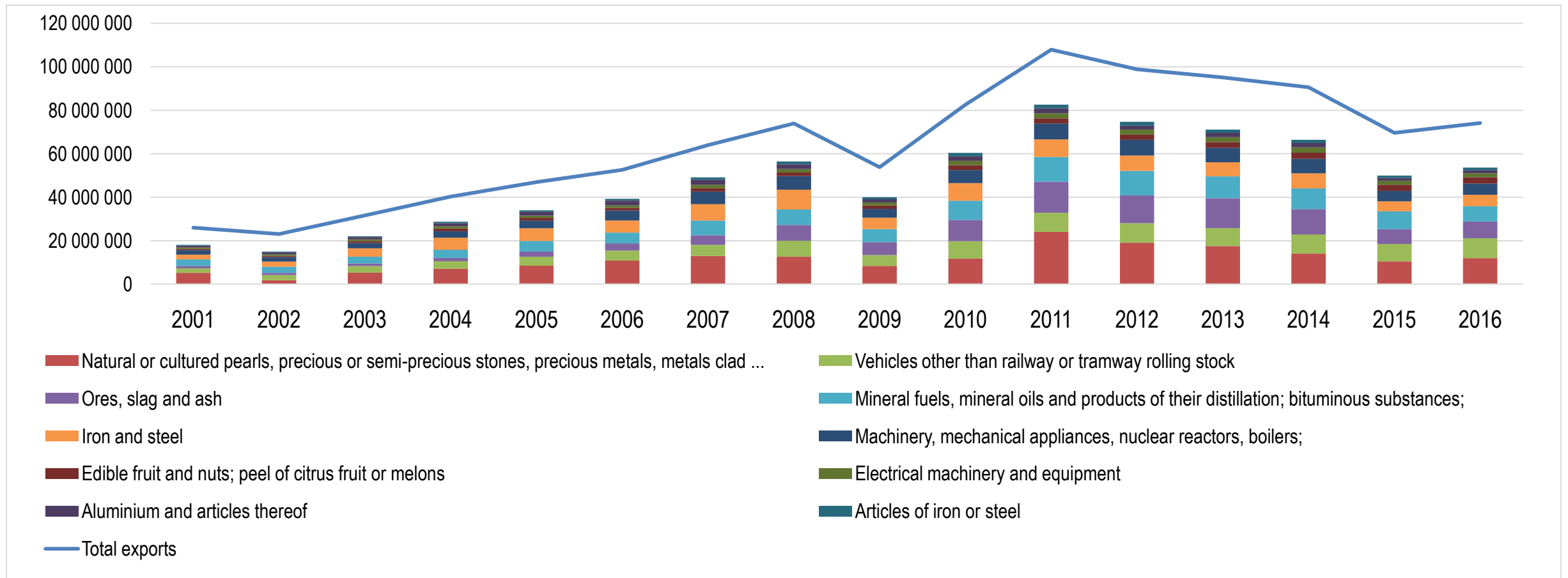
Figure 1: Mozambique's total exports 2001-2016, US\$ '000



Source: Trademap

### 3. Industrial development: Export patterns in South Africa

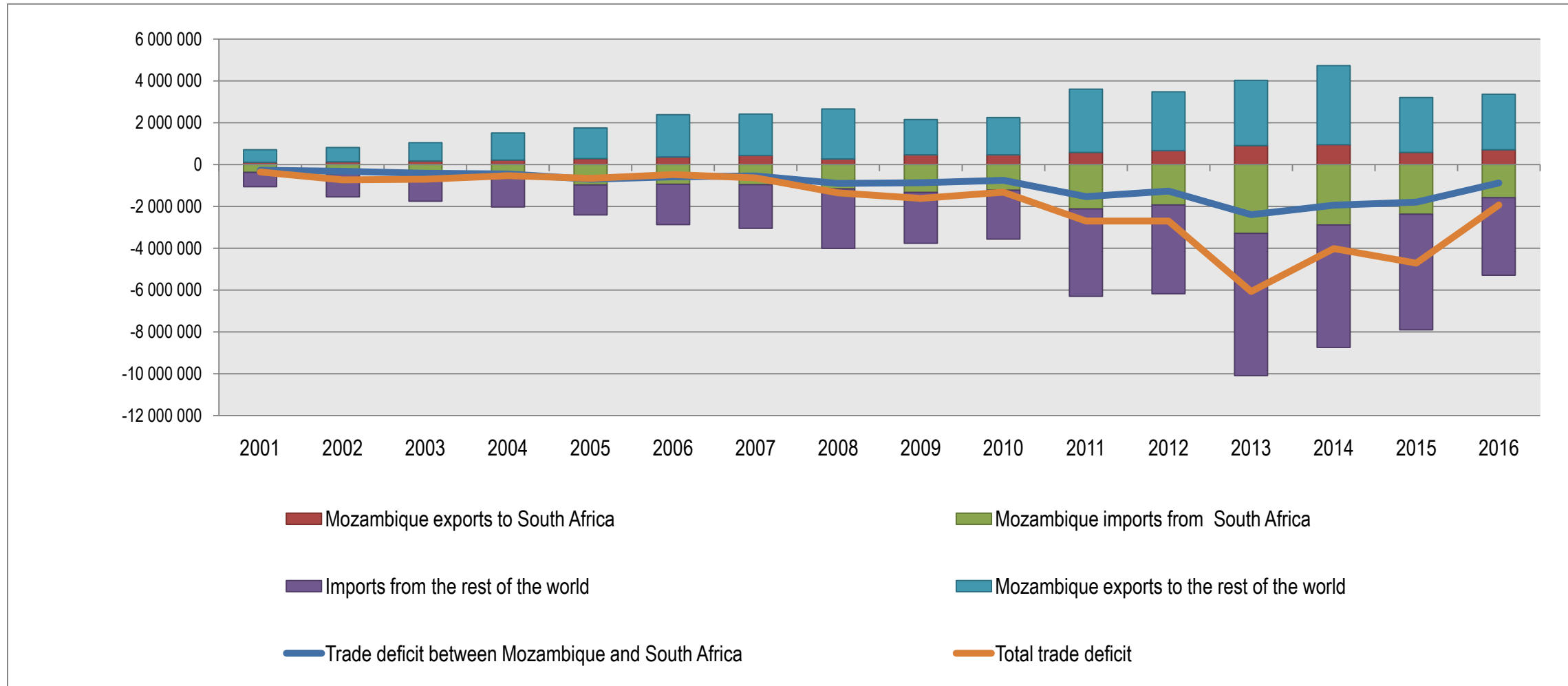
Figure 2: Composition of South Africa's top 10 exports, 2001-2016





## 4. Patterns of integration between South Africa and Mozambique: Investment, trade, production dynamics and capability development

Figure 3: Trade relations between Mozambique and South Africa and the rest of the world 2001-2016, US\$ '000



## 4. Patterns of integration between South Africa and Mozambique: Investment, trade, production dynamics and capability development

Table 2: Mozambique's main imports from South Africa in 2002 and 2015, US\$ '000

		Values		Share on imports		Annual Growth Rate
		2002	2015	2002	2015	
Capital Equipment and related industries	Machinery, accessories and parts	39,508	442,442	9%	19%	25%
	Electrical machinery, equipment and parts	21,212	179,444	5%	8%	21%
	Metals	43,932	300,797	10%	13%	19%
	Food products	40,504	348,421	9%	15%	22%
	Electricity	30,752	178,470	7%	7%	17%
	Vehicles and parts	103,220	298,483	23%	13%	10%
	Total imports from South Africa	448,810	2,380,229			16%

Source: Trademap

## 4. Patterns of integration between South Africa and Mozambique: Investment, trade, production dynamics and capability development

Table 2: South Africa's market share in Mozambique's imports of capital equipment and related products, 2001-2016

Product cluster	2001	2003	2005	2007	2009	2011	2013	2016	Average
Machinery and equipment	36%	37%	41%	46%	47%	37%	39%	36%	43%
Iron and steel	85%	84%	76%	76%	74%	72%	61%	60%	73%
Articles of iron and steel	60%	54%	60%	53%	58%	42%	44%	41%	54%

*Source: Trademap*

## 4. Patterns of integration between South Africa and Mozambique: investment, trade, production dynamics and capability development

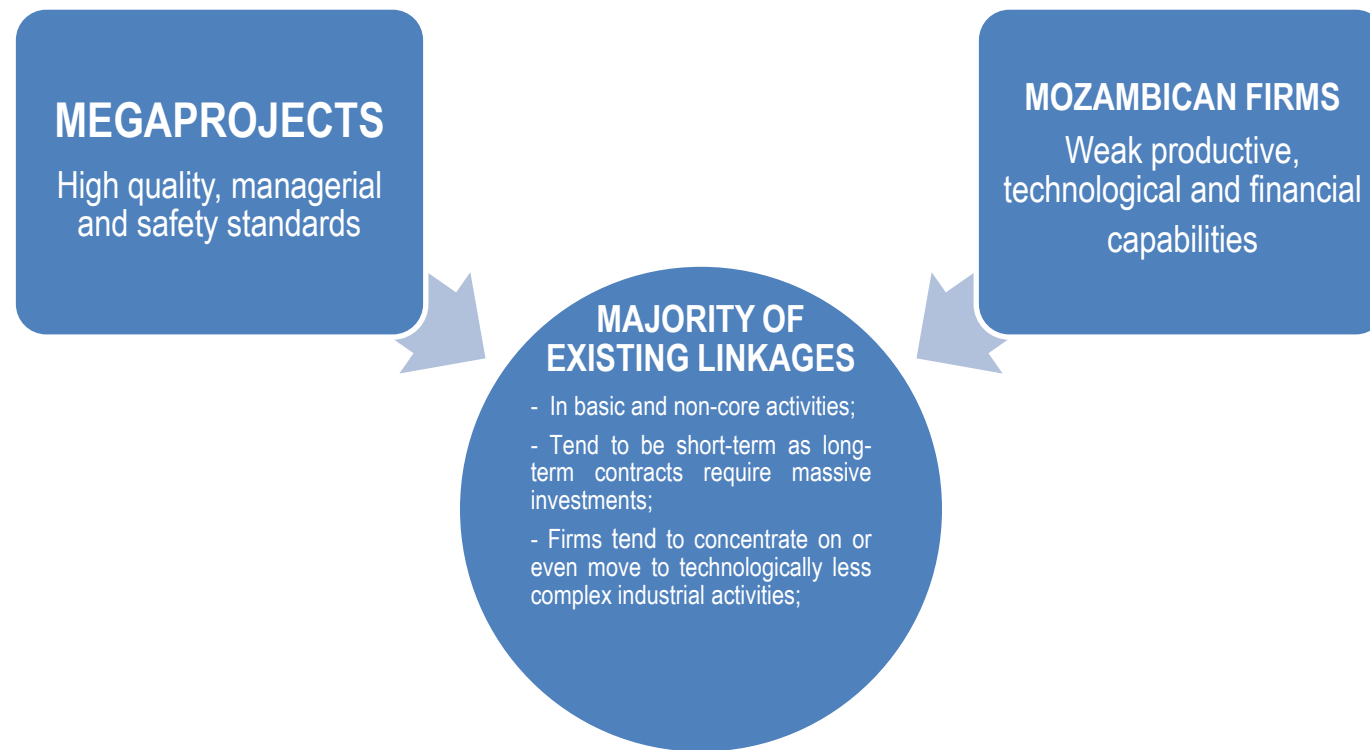
- Given this importance of capital equipment for both countries and within a perspective of strengthening regional integration, South Africa's capabilities in capital equipment offer an opportunity for the development of productive capabilities in Mozambique:
  - The industry is characterised by the importance of technological innovation;
  - Mozambique's significant increase in imports of capital equipment means that the market for aftermarket services and the sale of replacement parts represent an opportunity for Mozambican firms;
  - There is also potential for coordinating demand across multiple sectors (agriculture, construction and infrastructure) in order to further develop Mozambique's firm capabilities;

## 5.1 Opportunities and challenges for building linkages in the capital equipment sector

- There is a growing market for after sales and maintenance services in capital equipment and related industries across large investments in several sectors including industry, mining, construction, port and rail infrastructure and agriculture;
- Some firms are expanding from maintenance services into the manufacturing of spare parts;
- Yet, as mentioned by previous studies (Castel-Branco and Goldin, 2003; Langa & Mandlate, 2015; Langa 2015; Pretorius 2005) and confirmed by the fieldwork, the main subcontractors of large FDI projects for capital equipment goods and related services have been foreign, particularly South African, firms:
  - Very few Mozambican firms have been able to maintain long-term and growing maintenance contracts with Mozal and other megaprojects. The research found only two firms doing metalworking maintenance services for Mozal for the past 18 years and have grown and diversified to other megaprojects;
  - From the eight Mozal subcontractors for metallurgical and mechanical maintenance services established at the Bebeluane industrial park free trade zone (with an average of 70% of their revenues coming from Mozal and/or other free trade zone established megaprojects), only one firm is originally Mozambican;

# 5.1 Opportunities and challenges for building linkages in the capital equipment sector

The situation is explained by the specific challenges the structure of the economy poses for linkages development between SMEs and megaprojects:



## 5.2 Views on local content policies

### **Proponents of 'indirect measures' of local content promotion:**

- Government intervention has to first develop local capabilities using 'indirect measures' such as supplier development programs and adequate training;
- Preferential treatments will mostly result in unproductive rent-seeking and block inward investment;

### **Proponents of a local content law:**

- Capable Mozambican firms are not able to access larger markets because legal instruments to ensure their participation as suppliers do not exist;
- The development and upgrading of Mozambican suppliers has to happen while they are integrated in the market;
- Local content law allow the economy to retain capital and reduce import dependence;

## 5.2 Views on local content policies

- So far, government ‘indirect measures’ of local content promotion have been irregular, fragmented and limited in scale:
  - Not part of a broader and coordinated strategic vision to develop capabilities
  - Initiatives to develop local suppliers by megaprojects are often located in non-core (peripheral) areas of megaprojects activities and associated with corporate social responsibility activities;

**Beyond this dichotomy, the crucial question to investigate:**

What conditionalities need to be in place in order to effectively develop capabilities and facilitate technological upgrading using a local content legislation?



## 5.3 Partnerships between Mozambican and South African firms as a sustainable alternative

For Mozambican firms, partnerships have the potential for:

- Ensuring local value addition:
  - Avoiding the risk of promoting indirect imports;
  - Avoiding that equipment is transported back to South Africa for repairs;
  - South Africa: BEE firms yet high importers VS Non-BEE firms with high local value-added;
- Skills and technology transfer:
  - Ability and commitment to impart skills varies: competitive companies who are large enough to internalise training have deliberate strategies to transfer technologies to countries in the region and invest heavily in building capabilities.
  - Embedding the need to acquire skills and ensure the transfer of technology in binding partnerships would ensure that capabilities of local Mozambican firms are enhanced;

## 5.3 Partnerships between Mozambican and South African firms as a sustainable alternative

For Mozambican firms, partnerships have the potential for:

- Developing specialized capabilities, and therefore, supply in core areas of multinationals activities;
- Access to capital for investment in new machinery, certifications and workforce qualifications;
- Regionalise industrial infrastructure by facilitating access to testing and certification centres
- Build financial reserves through access to larger and more financially attractive contracts.

## 5.3 Partnerships between Mozambican and South African firms as a sustainable alternative

For South African firms, partnerships have the potential for:

- Reducing initial investment costs with a workshop, machinery and trained labour
  - Growing potential in the region, but Mozambique's relatively small market and lack of infrastructure does not justify the setting up workshops, particularly for production using specialised machinery;
- Maintenance and repair contracts which are more long-term and represent an opportunity for mutually beneficial collaboration on continuous training and skills transfer;

For megaprojects, partnerships have the potential for:

- Reducing lead time;
- Developing local capabilities while ensuring quality and reliability;

## 5.3 Partnerships between Mozambican and South African firms as a sustainable alternative

- Partnerships without regulation will not automatically promote industrial development
- The case of partnerships promoted around Mozal :
  - Most were short-term and superficial partnerships, some did lead to technology transfer (Warren 2007);
  - Partnerships did not lead to long term access to Mozal market. On the contrary, the foreign partnering firms were the ones subcontracted by Mozal when the partnerships ended (Langa 2014)
  - Mozambican firms interviewed argue that these partnerships were not successful because there was not a legal instrument creating a binding relationship.

## 5.3 Partnerships between Mozambican and South African firms as a sustainable alternative

- The fieldwork showed that:
  - Most partnerships established by the firms interviewed focus on contract-sharing or import facilitation, rather than technological and organizational capabilities development;
  - Although some partnerships are being promoted by the megaprojects themselves, the balance of power in the partnerships is skewed in favour of the foreign firms as they are the direct suppliers of the megaprojects, and therefore have control over the partnerships;
  - Foreign firms established in Mozambique generally do not cooperate with Mozambican firms;
- Regulation can give structure to ensure mutually beneficial partnerships;

## 5.4 Issues around targetting and selectivity

- There are limitations in terms of institutional capacity to promote and monitor the development of capabilities, and thus **sector selectivity** should be accounted for;
  - Local content legislation is intended to be general to all sectors with sector specific regulation;
- Focusing on particular sectors and activities within these sectors may require solving specific information asymmetries:

Example:

Since 2010 a private vocational training centre in Maputo has been equipped to deliver short-term training on CNC machining but the course has never been implemented because the centre is not aware of any firm where students could have apprenticeships or be potentially employed. On the other hand, the research found firms using CNC machines reporting difficulties in acquiring adequate skills to expand their activities.

## 5.4 Conclusion and implications

- Given growing capital equipment imports, there needs to be strategies where the development of capabilities for activities such as aftermarket, repair services and service centres is supported in Mozambique, taking in account not just for local, but also regional capabilities;
- The current patterns of backward linkages with megaprojects is unsustainable for both Mozambican and South African firms due to the social and economic tensions arising from the imbalances in terms of productive capabilities and bargaining power with megaprojects;
- Sustainable regional industrialisation requires cross border collaboration for mutual benefit between countries:
  - FDI inflows have to be integrated in the economy to complement and upgrade existing investments and capabilities focusing on technology absorption and adaptation;
  - Not addressing the need to promote technology transfer to Mozambican firms ultimately perpetuates the economy's dependency on South African firms and other foreign firms and exacerbates the social and economic tensions between national and foreign investments;

## 5.4 Conclusion and implications

Strategic planning to reconcile interests between governments as well as between domestic and foreign firms' capabilities requires comprehensive and systematic information about:

- **Local capabilities and domestic and regional demand poles:**  
Planning investments to create and develop capabilities cannot be done without comprehensive and long term information demand poles as well as existing capabilities. Therefore there is a need to strategically integrate on-going initiatives aiming at surveying existing capabilities and demand to promote linkages with megaprojects, which are currently fragmented and limited in scale.
- **Regional dynamics and corporate strategies:**  
With South Africa being among the main investing and trading partners of Mozambique, the pressures and opportunities arising from regional dynamics and corporate strategies have to necessarily be part any industrialisation strategy of Mozambique;