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# MOBILISING PRIVATE FINANCING FOR MANUFACTURING IN SUB-SAHARAN AFRICA

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## ACRONYMS

AfDB	African Development Bank
ADB	Asian Development Bank
CDC	CDC Group
DFI	development finance institution
DFID	Department for International Development
DRC	Democratic Republic of the Congo
FCAS	fragile and conflict-affected states
FDI	foreign direct investment
GDP	gross domestic product
IFC	International Finance Corporation
IFI	international finance institution
IGC	International Growth Centre
IMF	International Monetary Fund
LIC	low-income country
MIC	middle-income country
NPL	non-performing loan
ODI	Overseas Development Institute
SEZ	special economic zone
SMEs	small and medium-sized enterprises
UK	United Kingdom
UN	United Nations
UNCTAD	UN Conference on Trade and Development
UNIDO	UN Industrial Development Organization
US	United States
USDOS	US Department of State

## EXECUTIVE SUMMARY

Since the downturn in global commodity prices in 2015, sub-Saharan African macroeconomic conditions have deteriorated, and 2016 saw the slowest economic growth in more than two decades (IMF, 2017). To maintain progress in economic transformation, employment-intensive and higher-productivity sectors need to be developed. Manufacturing – including agricultural processing – offers this opportunity, including through participation in regional and global value chains. This will require private investment in the sector.

Positively, private financing for manufacturing grew more than sixfold from \$5.9 billion in 2006 to \$35.5 billion in 2015. Its share of total financing and its value relative to gross domestic product remained stable, at approximately 8.0% and 1.5%, throughout the period.

However, manufacturing's share of financing remains relatively small compared with that of other sectors. In particular, the extractives and financial service sectors received more financing, with 30.5% and 17.1% of all 2015 financing stock compared with manufacturing's 11.7%.

In addition, the financing that is flowing into manufacturing is **heavily concentrated by country**, with 66% of it going to Nigeria and Ethiopia alone, and many countries, including most fragile and conflict-affected states, receiving negligible flows.

To date, policy to address these issues has been focused on financial development and 'ease of doing business' reforms. While necessary, these are not sufficient to mobilise private finance for manufacturing.

Instead, **firm-level constraints are repressing investment**. The most important of these are

- **a lack of 'bankable' projects and viable business models**
- **a lack of established value chains**
- **difficulty in coordination between private investors and governments and donors to overcome constraints, including in public goods.**

Policy needs to address these firm-level barriers. This paper makes the following policy recommendations in relation to this:

- Existing 'impact accelerator funds' are developing innovative business models and providing a 'learning by doing' forum. As a source of transformational change, they can potentially play a critical role in overcoming firm-level constraints in manufacturing and agricultural processing. **Greater funding of 'impact accelerator' funds should be considered.** These could also be combined with technical assistance and grants to provide a symbiotic impact with building individual firms' capacity in order to increase the number of bankable firms.
- Participation in regional and global value chains offers a significant opportunity to increase productivity and employment in sub-Saharan Africa. In relation to financing this, policy needs to support the **development of specialist financing for value chain development**, including specialist buyer and supplier trade-cycle financing and specialist commodity exchanges.
- Growth in the manufacturing sector requires coordination between public and private actors. This is especially true for value chains. However, coordination mechanisms are currently often weak. The international financial institutions could provide more **technical support to governments** to help them improve policy effectiveness and, in weak institutional environments, **support a 'lead firm' to take the coordinator role.**

Finally, **fragile and conflict-affected states** need tailored policy approaches focused on supporting small-scale, informal livelihoods rather than on developing formal firms. This requires a strong emphasis on financial access. Other policies could include increasing the role for remittances in small and medium-sized enterprise financing, including recent innovations such as diaspora bonds.

# 1. INTRODUCTION

The manufacturing sector – defined in this paper as both manufacturing and agricultural processing – has the potential to drive structural economic transformation and inclusive growth in developing countries. This is because it is a sector that delivers both productivity increases and high levels of employment creation (McMillan et al., 2017).

For sub-Saharan Africa, realising these gains through development of its manufacturing sector is a realistic possibility. Indeed, since 2005 manufacturing production in the region has more than doubled, going from \$73 billion in 2005 to \$157 billion in 2014 (Balchin et al., 2016).

However, beyond the challenge of macroeconomic stability, discussed in the sister paper to this one ('Financing for manufacturing: financing conditions in sub-Saharan Africa'), this requires the mobilisation of significant private finance for investment in the sector.

As this paper highlights, this mobilisation is currently muted and, despite growing in absolute terms in recent years, is not sufficient to support strong growth in the sector.

Further, the finance mobilised has been concentrated in a few countries, with 66% of financing going to Nigeria and Ethiopia but many of the poorest countries – particularly fragile and conflict-affected states (FCAS)<sup>1</sup> – receiving minimal or no private finance for manufacturing.

This paper focuses on what policy-makers can do to address these issues. It starts in Section 2 with a review of the landscape for private financing for manufacturing in sub-Saharan Africa from 2005 to 2015.

Section 3 then discusses the constraints to further financing. The key message is that broad economic measures, including financial development and 'ease of doing business' improvements, are 'necessary but not sufficient' conditions to increase financing to manufacturing.

Instead, firm-level constraints are critical constraints. These include lack of 'bankable' firms, viable business models and established value chains, as well as weak coordination with governments.

Section 3 also discusses FCAS and their specific difficulties in attracting finance.

Section 4 discusses what policy can do to tackle these issues. Currently the focus is on providing financing and domestic policy, but this has delivered only modest financing in the manufacturing sector to date. In order to mobilise a greater scale of finance, policy needs to tackle firm-level constraints more robustly.

Section 5 concludes that, with sub-Saharan African growth rates at a two-decade low, and more than 200 million entering the workforce by 2020, growth in employment-intensive and higher-productivity sectors such as manufacturing are vital for future economic prosperity. (Thomas et al., 2017).

<sup>1</sup> Defined by the UK Department for International Development (DFID) as 'countries where the government cannot or will not deliver core state functions, such as providing security and justice across its territory and basic services to the majority of its people' (See Appendix for full list and source).

## 2. THE FINANCING LANDSCAPE TODAY

This section reviews the landscape for private financing for manufacturing in sub-Saharan Africa, from 2005 to 2015.

### 2.1 The regional landscape

Sub-Saharan Africa has seen significant financial deepening between 2006 and 2015 with private financing<sup>2</sup> increased from \$65.3 billion to \$304.2 billion, a nearly sixfold increase, and from 9.0% to 22.0% as a percentage of regional gross domestic product (GDP). This included financing from foreign direct investment (FDI), domestic and international bank lending and domestic and international capital markets.<sup>3</sup>

The manufacturing sector participated in this absolute growth in private financing, increasing more than sixfold from \$5.9 billion in 2006 to \$35.5 billion in 2015. Its share of total financing and its value relative to GDP remained stable, at approximately 8.0% and 1.5%, respectively, over the period<sup>4</sup> (Figure 1).

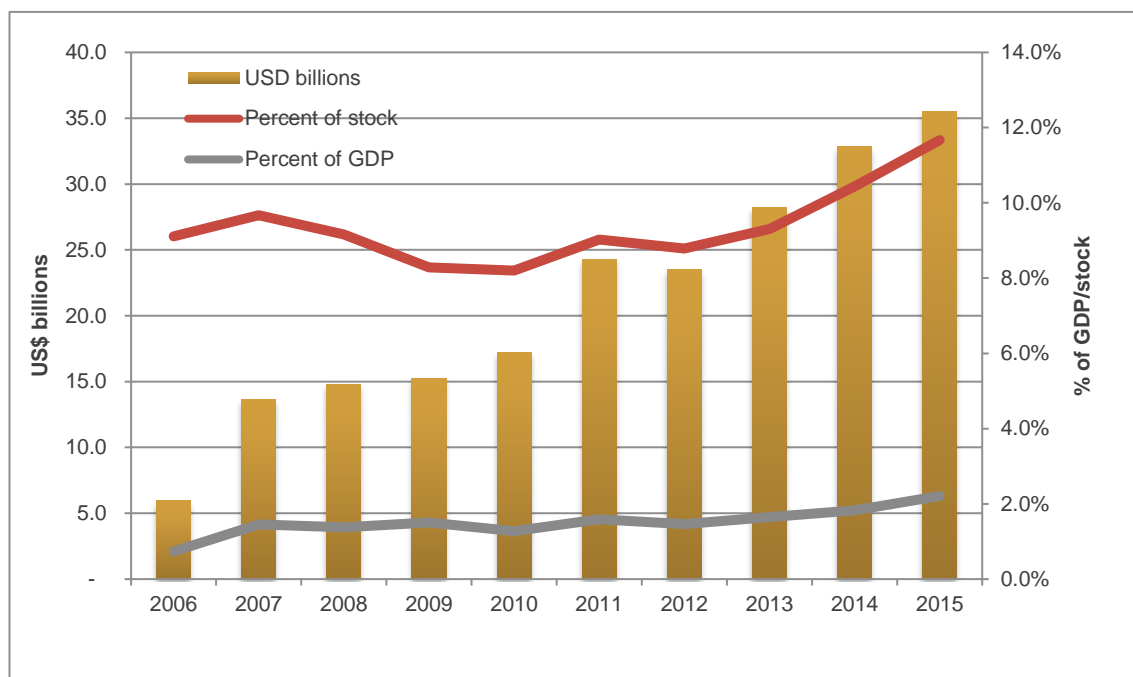
However, manufacturing's share of financing remained relatively small compared with that of other sectors. In particular, the extractives and financial services sectors received more financing, with 30.5% and 17.1% of all 2015 financing stock compared with manufacturing's 11.7%. (Figure 2).

<sup>2</sup> Private financing data have been extracted from Murinde and Tyson (2017, forthcoming). Private financing is defined as domestic bank lending, foreign direct investment (FDI), domestic capital markets (equity and bonds), international capital markets (equity and bonds) and cross-border bank lending. Figures include international sovereign bond issues but exclude domestically issued short-term government borrowing. Sample includes all sub-Saharan African countries with per capita 2015 gross domestic product (GDP) below \$6,000 with the required data. These are Cameroon, Ethiopia, Ghana, Kenya, Liberia, Nigeria, Rwanda, Senegal, Tanzania, Uganda and Zambia. It excludes countries where data are not available or not sufficiently comprehensive. This includes some fragile states and members of the West African Economic and Monetary Union.

<sup>3</sup> See Tyson and McKinley (2014) and Tyson and Carter (2017, forthcoming) for detailed discussions of these financing trends.

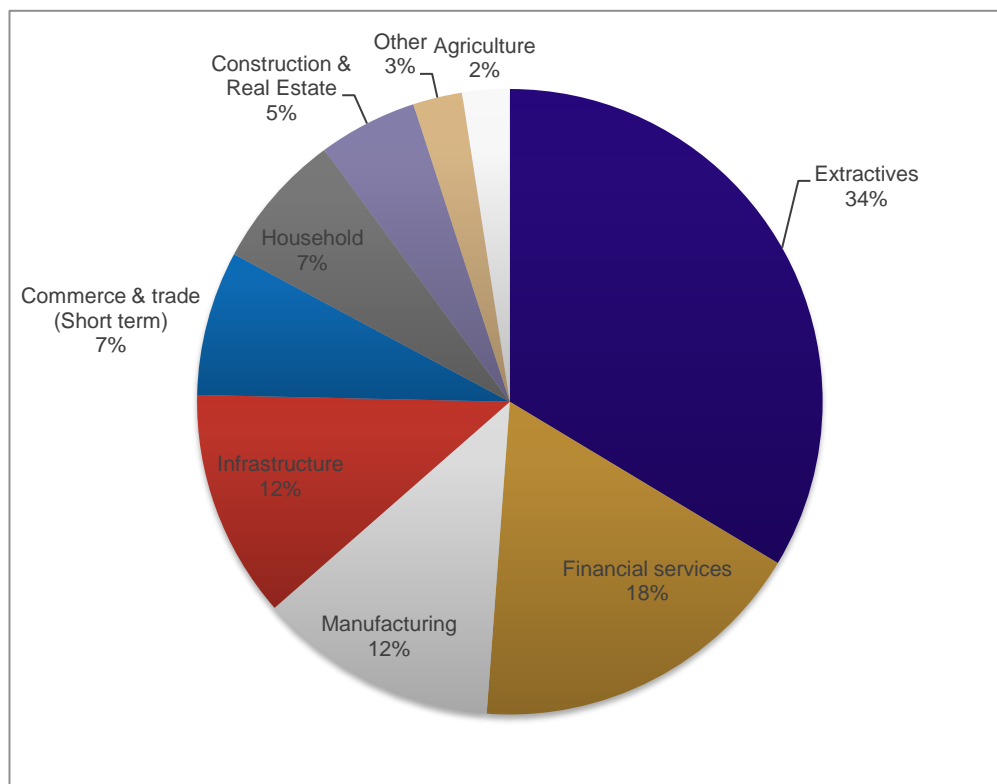
<sup>4</sup> The exceptions to this were in 2014 and 2015, when growth in flows to manufacturing remained stable but a slowdown in flows to other sectors, particularly extractives, caused manufacturing's share of total flows to increase.

Figure 1: Sub-Saharan African manufacturing financing, 2006-2015



Source: Murinde and Tyson (2017, forthcoming); figures are 2015 stock.

Figure 2: Sub-Saharan African financing flows by sector, 2006-2015



Source: Murinde and Tyson (2017, forthcoming); figures are percentages of 2006-2015 flows.

Within this general picture, there have been significant changes in the composition of sources of financing to the sector. As can be seen below, the most important sources of financing for manufacturing in the decade 2006-2015 were domestic bank lending and FDI, which provided 47.9% and 46.9% of financing, respectively.

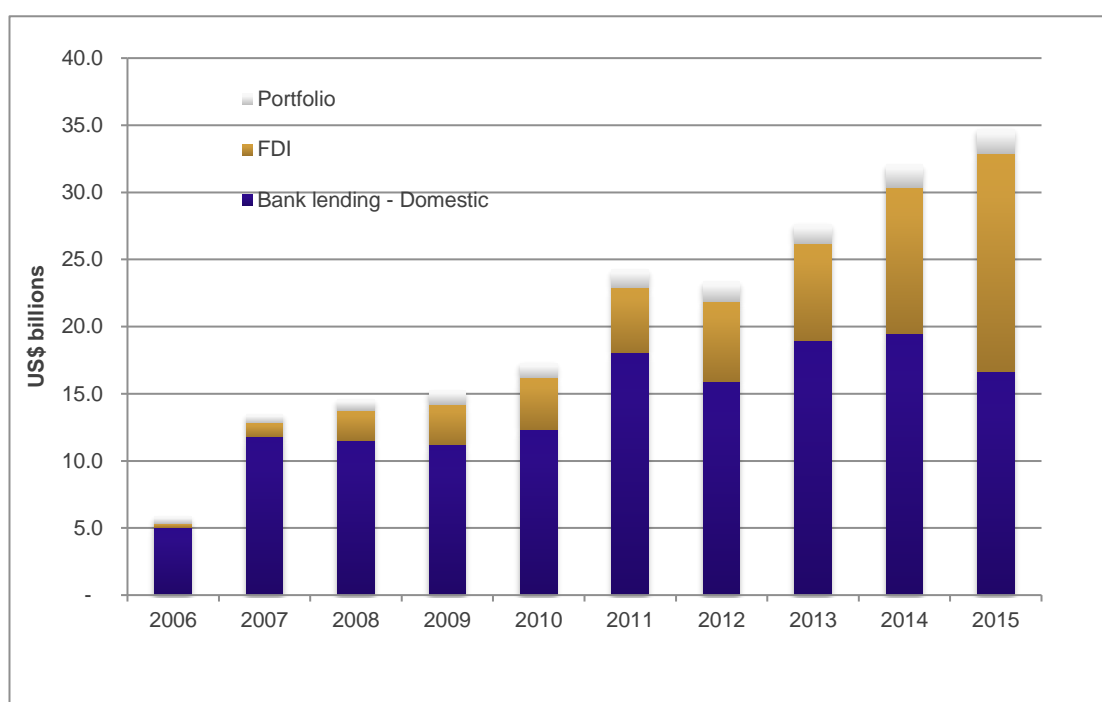


However, although both sources of financing have increased in absolute terms, there has been a shift in their relative importance, with FDI becoming more, and bank lending less, important.

This trend has been most notable since approximately 2013, when domestic bank lending to the sector stagnated at approximately \$18 billion and then, while remaining the top source of financing stock, declined to \$16.6 billion by 2015. This reduced importance of domestic bank lending reflects the overall contraction in credit in the region as it has suffered from slowing GDP growth (Tyson, 2016).

By contrast, FDI increased every year throughout the decade to accumulate to a stock of \$16.3 billion by 2015. Importantly, despite weak economic conditions in 2014 and 2015 in sub-Saharan Africa, these strong flows in FDI into manufacturing have continued. This has included increasing levels of intra-regional, as well as international, FDI (Murinde and Tyson, 2017, forthcoming; UNCTAD, 2016) (Figure 3).

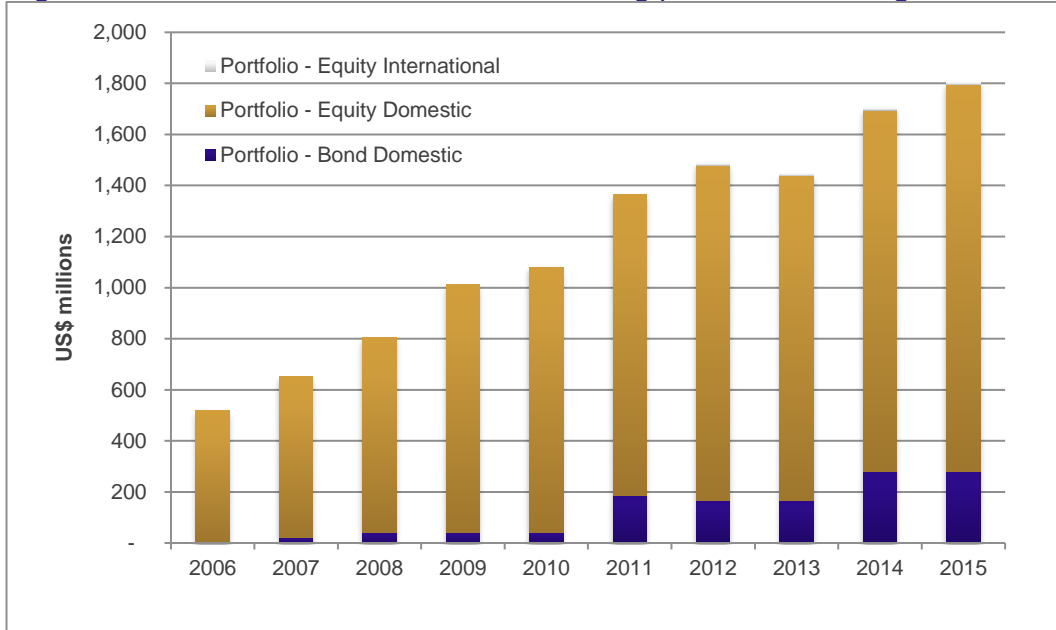
Figure 3: Sub-Saharan African manufacturing financing by source, 2006-2015



Source: Murinde and Tyson (2017, forthcoming); figures are 2015 stock.

Also of interest are trends in portfolio flows. By 2015, portfolio flows had reached \$1.8 billion. Although this is a modest 5.2% of stock, they also experienced strong and steady growth throughout the decade. This was driven by capital-raising on international stock exchanges (primarily the London Stock Exchange) and by the deepening of domestic capital markets in the region, with the latter raising more than \$1 billion in equity since 2006. There have also been more modest contributions from domestic corporate bonds, which have raised \$0.3 billion since 2011 (Figure 4).

Figure 4: Sub-Saharan African manufacturing portfolio financing, 2006-2015

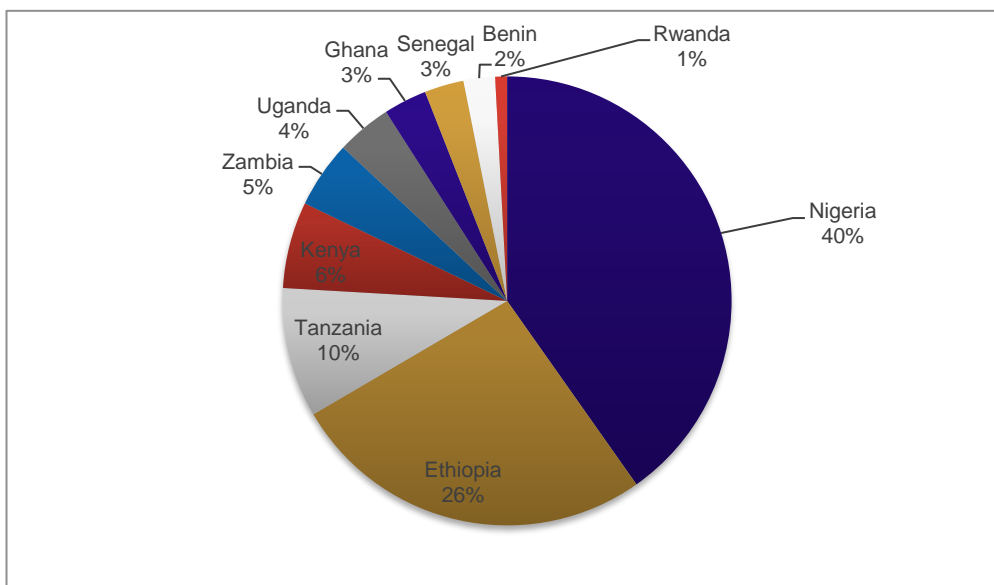


Source: Murinde and Tyson (2017, forthcoming); figures are 2015 stock.

## 2.2 The country landscape

Within this reasonably positive regional landscape for financing, there are significant differences between countries. Nigeria and Ethiopia received 66% of all financing flows to the manufacturing sector. Three other countries in the region received more than 5% of flows: Tanzania with 10%, Kenya with 6% and Zambia with 4%. The other countries shared the remaining 11% between them, with a number of low-income countries (LICs) receiving no financing at all (Figure 5).

Figure 5: Sub-Saharan African manufacturing financing by country 2015

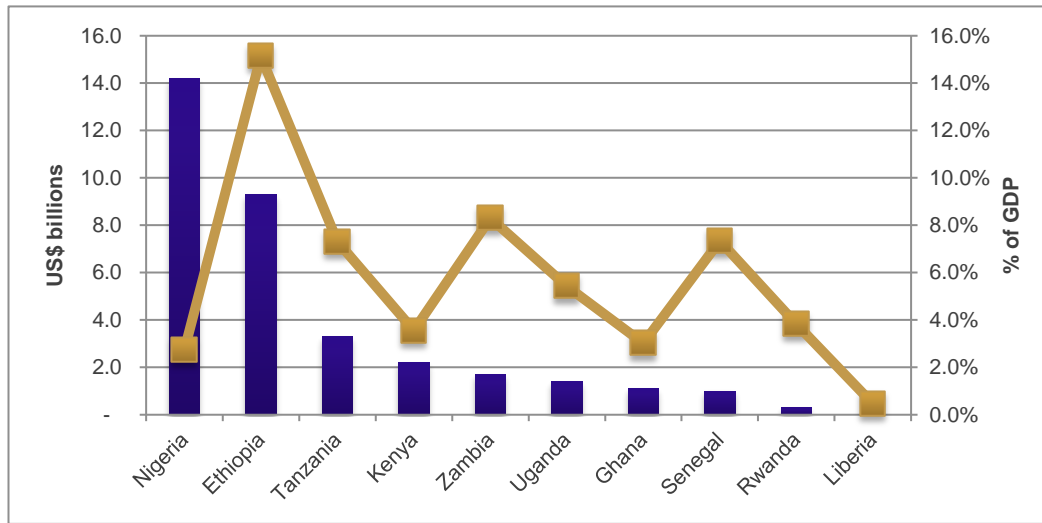


Source: Murinde and Tyson (2017, forthcoming); figures are 2015 stock.

Relative to GDP, there is also significant variation among recipients. Ethiopia, Tanzania and Zambia have high ratios of manufacturing financing to GDP, with 2015 ratios of 15.1%, 7.3% and 8.3%,

respectively. By contrast, Nigeria and Kenya<sup>5</sup> have relatively low levels of financing, with ratios to GDP of 2.7% and 3.6%, respectively (Figure 6).

Figure 6: Sub-Saharan African manufacturing financing relative to GDP



Source: Murinde and Tyson (2017, forthcoming); figures are 2015 stock.

These country differences are driven partially by economic structure, with non-resource-intensive countries, including both low-income countries (LICs) and middle-income countries (MICs), having higher levels of manufacturing relative to GDP, at 7.1%, than resource-intensive countries, at 4.3% (Table 1).

This is because, in resource-intensive countries, financing is concentrated in the extractives sector. An example of this is Nigeria, where financing has been directed predominantly towards the extractives sector, which received 24.4% of financing compared with manufacturing’s 7.5% between 2006 and 2015.<sup>6</sup>

However, country variance is not determined by resource endowment or size of GDP. Indeed, non-resource-intensive LICs have the highest share of manufacturing relative to GDP of any group. This indicates that policy is also an important determinant of these variations. Section 4 discusses these policy variations further.

Table 1: Country classifications and average manufacturing financing (% of GDP)

	Non-RI	RI	Total
LICs	8.1%	7.3%	7.9%
MICs	5.4%	3.5%	4.2%
<b>Grand total</b>	<b>7.1%</b>	<b>4.3%</b>	<b>5.7%</b>

Source: Murinde and Tyson (2017, forthcoming); IMF 2016 country classifications (RI = resource-intensive; Non-RI = Non resource-intensive).

<sup>5</sup> Both are classified by DFID as ‘moderately fragile’. However, as this relates to only certain regions, including Northern Nigeria and its Southern Delta, and in Kenya its borderlands with Sudan and Somalia, for the purposes of this paper they are not treated as FCAS.

<sup>6</sup> The financial services and telecommunications sectors attracted 23.4% and 10.0%, respectively.

In addition, it is notable that FCAS have negligible financing for manufacturing. These countries present data difficulties in assessing financial flows, including on their sectoral composition.<sup>7</sup> However, it appears they suffer from low financing flows of any type and also from capital flight.

The countries that do have financial flows see them go predominantly into extractives sectors such as oil, metals and unprocessed agricultural products. For example, Liberia, the Democratic Republic of the Congo (DRC) and Zimbabwe attract these types of flows but have little or no investment flows into manufacturing or agricultural processing, despite their inherent advantages in these products (interviews).

Conversely, some FCAS are attracting significant financing. For example, Ethiopia, defined as 'moderately fragile', has attracted the highest flows relative to GDP in the region. The next section discusses the country's policy approaches underlying this success.

## 2.3 Conclusion

As discussed, the manufacturing sector in sub-Saharan Africa has maintained a relative share of financing and has increased financing in absolute terms.

However, there are a number of issues. First, some countries that are attracting strong financing overall are seeing a low proportion of this going to manufacturing compared with other sectors, such as financial services and real estate. This represents an 'opportunity cost', with financing raised not going to the sectors that are important for structural transformation and employment creation, such as manufacturing.

Second, there are significant country variations around this regional pattern. Some countries are doing well, but others, including FCAS, are failing to attract material finance for the sector at all.

In the next section, the paper examines further the factors that affect how much finance can be mobilised for manufacturing. Section 4 looks at policy options for those countries that have fallen behind in attracting finance to this economically transformational sector.

<sup>7</sup> See Appendix for DFID country classifications of FCAS.

## 3. CONSTRAINTS ON FINANCING FOR MANUFACTURING

### 3.1 Introduction

Macroeconomic policy and reform measures can support investment. Most important are macroeconomic and political stability and improvements in infrastructure and trade networks (McMillan et al., 2017).<sup>8</sup>

These general factors are important for financing for manufacturing. However, the landscape discussed in Section 2 suggests there are barriers to mobilising finance that are specific to manufacturing. This section discusses these barriers.

### 3.2 Financial development

Well-functioning financial markets and economic growth are linked, and financial development can be a causative factor in economic growth (McMillan et al., 2017).<sup>9</sup> Because of this, financial sector development has been promoted. This has been largely successful, including through growth in both private credit and financial access (see, e.g., Beck et al., 2011).

However, as illustrated below, and unlike the broader economy, financial development does not have a strong relationship with mobilising finance for manufacturing. While there is a positive relationship of financial development with domestic bank lending and capital, there is a negative one with FDI, suggesting that financial development has a substitutional, not additive, relationship with manufacturing, with one source of finance being substituted for another as financial deepening proceeds (Figure 7).

While this conclusion needs further formal empirical analysis,<sup>10</sup> it implies that promoting financial deepening in general will not necessarily result in increased mobilisation of financing for manufacturing.

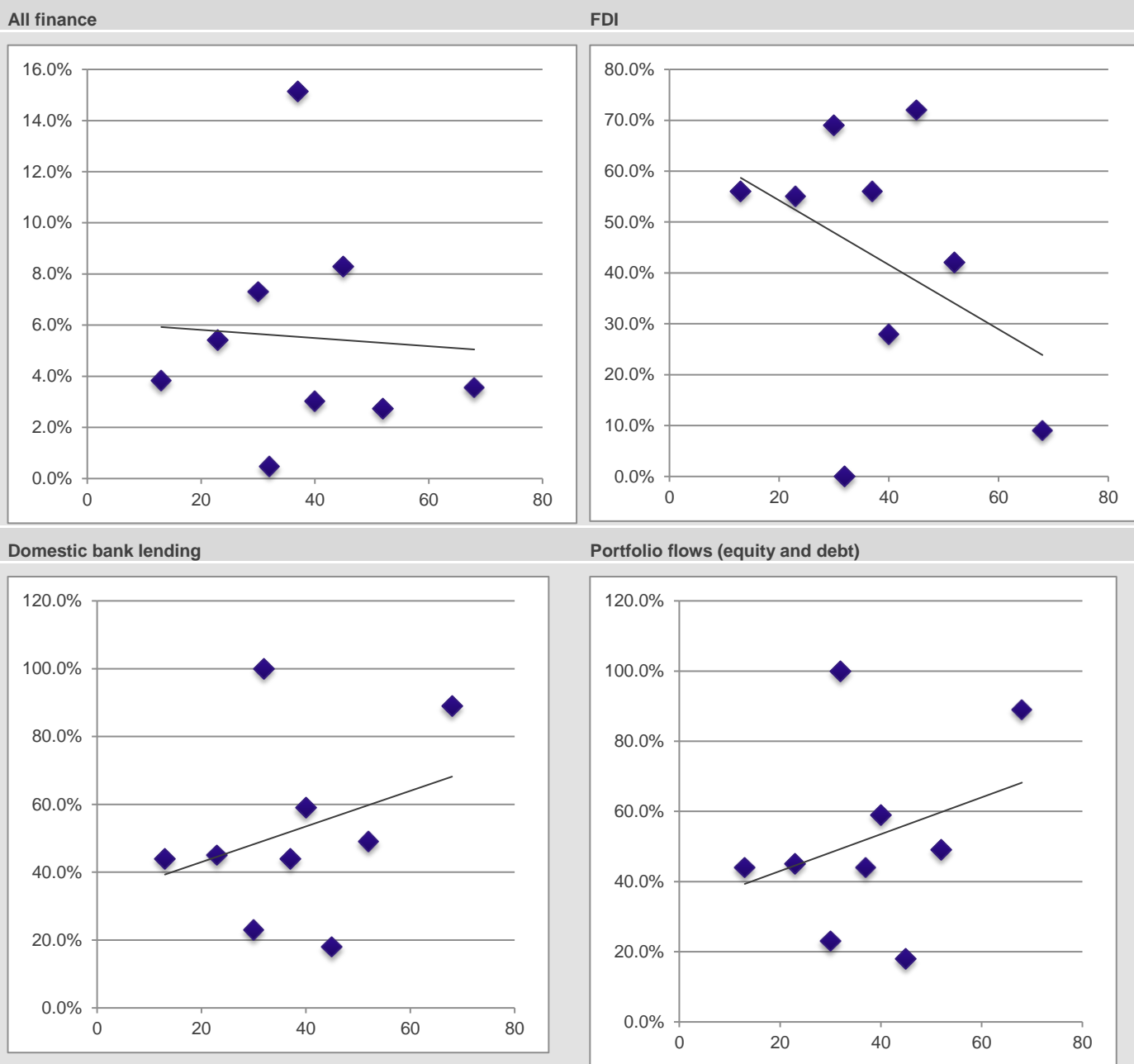
<sup>8</sup> In addition, in the current macroeconomic environment in sub-Saharan Africa, some governments are running large fiscal deficits, and the resultant public financing may be crowding out private investment in the region. This is especially the case for countries without openness to cross-border capital flows (IMF, 2017).

<sup>9</sup> However, there is also evidence that there is an optimal amount of credit in relation to an economy's size and that beyond this there can be negative effects for growth, including financial instability (McMillan et al., 2017).

<sup>10</sup> To be published by Murinde and Tyson (2017, forthcoming) as part of the Economic and Social Research Council programme relating to financial access.

Figure 7: Sub-Saharan African manufacturing financing and financial development

As % of GDP



Notes: (i) vertical axis is 2015 financing stock as a percentage of GDP; (ii) horizontal axis is the IMF's Financial Development Index rating; (iii) details of data by country are given in the Appendix.

Source: Murinde and Tyson (2017, forthcoming); elaborated by author.

There are a number of possible reasons for this. One is that the higher credit risk of manufacturing compared with other sectors may lead to manufacturing not attracting increases in finance. However, data on non-performing loans (NPLs) from sub-Saharan African domestic banking do not support the fact that the manufacturing sector does, in fact, present higher risk than other sectors.

For example, the percentage of gross loans and NPLs is lower for manufacturing compared with the average for all sectors in five out of seven countries in the region. This implies lower – not higher – credit risk associated with the sector in comparison with other sectors. Indeed, *on average, the percentage of a country's lending portfolio that goes to manufacturing is 11.2%, while the sector is responsible for only 7.8% of NPLs – a 3.5% difference.* (Table 2).

Further, this is true for non-resource-intensive economies (such as Kenya, Rwanda, Tanzania and Uganda) as well as resource-intensive countries such as Nigeria and Zambia, indicating it is not a result of the commodity price cycle.<sup>11</sup>

Table 2: Sub-Saharan African manufacturing credit and NPLs

Country	As a % of credit	As a % of NPLs	Difference	Date
Kenya	12.3%	11.0%	-1.3%	December 2015
Ghana	8.0%	12.5%	+4.5%	July 2016
Nigeria	13.6%	4.2% (ii)	-9.4%	December 2016
Rwanda	9.1%	6.0%	-3.1%	June 2016
Uganda	14.6%	4.6%	-10.0%	June 2016
Tanzania	9.0%	11.0%	+2.0%	December 2016
Zambia	11.5%	5.3%	-6.2%	June 2014
<b>Average</b>	<b>11.2%</b>	<b>7.8%</b>	<b>-3.4%</b>	

Notes: (i) data are not available for Benin, Ethiopia and Senegal; (ii) the Central Bank of Nigeria does not disclose sectoral composition of NPLs. The value has been estimated from the top five Nigerian banks' individual financial statements; (iii) average is simple average and is not weighted.

Source: Author elaborated from central bank financial stability reports for respective countries.

An alternative explanation is that other sectors are more attractive because lending to them has shorter maturities, better collateral and higher spreads than in manufacturing, and this may partially account for the preference that private sector banks have for allocating credit to other sectors (interviews).

In particular, manufacturing requires long-term financing, and this can be difficult in sub-Saharan African financial systems, where 60% of loans have a maturity of less than one year and only 2% have a maturity of over 10 years (Beck et al., 2011).

### 3.3 Business environment

Similar results are found in relation to the general business environment, as measured by the Ease of Doing Business Index.

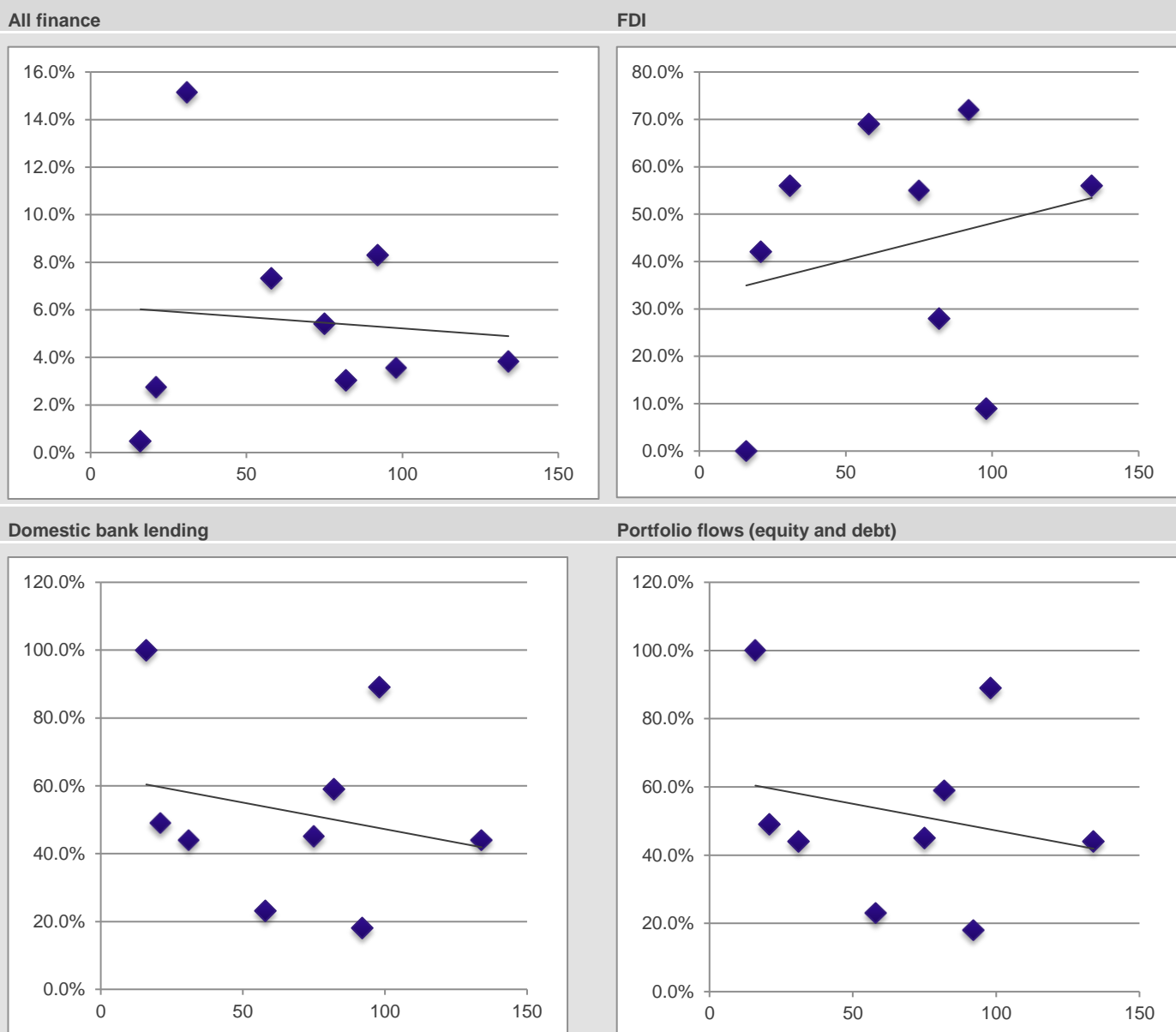
As shown below, there is an overall neutral relationship with 'ease of doing business' and financing for manufacturing, with increases in bank lending and capital markets being offset by declines in FDI.

As for financial development, this suggests there are sector-specific barriers to investment in manufacturing and that general policy to improve the business climate will not, in itself, result in increased financing for manufacturing.

<sup>11</sup> Although it is higher for resource-intensive countries because the commodity price declines have pushed the average NPLs up because of high levels of credit losses in the commodity sector, making the comparison with manufacturing look more favourable at this stage of the business cycle (Tyson, 2016).

Figure 8: Sub-Saharan African manufacturing financing and ease of doing business

As % of GDP



Notes: (i) vertical axis is 2015 financing stock as a percentage of GDP; (ii) horizontal axis is the World Bank's Ease of Doing Business Index rating; (iii) details of data by country are given in the Appendix.

Source: Murinde and Tyson (2017, forthcoming); elaborated by author.

### 3.4 Firm-level constraints

As discussed, lifting constraints to overall financing is not strongly linked to lifting constraints to financing for manufacturing. Instead, evidence suggests that financing for manufacturing suffers from additional sector-specific constraints.

Some of these are constraints that affect other sectors but are also relevant to manufacturing. These include high real exchange rates and infrastructure deficits in electricity, transport and trade (Sutton et al., 2016; Papadavid, 2017, forthcoming).

In addition, there are constraints that are specific to manufacturing at the firm level. Drawing on recent investor surveys (Cann, 2015; Ernst & Young, 2015; Tyson, 2015b; Sutton et al., 2016) and interview material, the most important of these are the following:



- **A lack of ‘bankable’ projects and viable business models.** Investors typically wish to invest in existing medium- or large-sized firms that need external capital for further growth. However, few such firms exist in the region. The lack of such firms relates primarily to non-financial constraints. For example, these include weak firm capacity and lack of business skills resulting in low graduation rates from small, informal firms to medium-sized formal businesses.

The alternative is to invest in greenfield projects or smaller and less formal firms. However, these are higher-risk investments because of their longer timescales and because of the additional demands they make on investors, such as for developing management capacity and new business models.

This problem is heightened in manufacturing and agricultural processing because of the limited number of successful firms and business models.

Greenfield investments are also hampered by a lack of demonstration projects and the consequent need for a high level of ‘learning by doing’ and innovate to find successful business models.

- **Lack of established value chains.** Africa has significant potential to participate in regional and global value chains, including those based in agriculture and commodity processing. However, participation is currently limited as a result of constraints that include inadequate transport, energy and telecommunications infrastructure; difficult and costly trade environments; and low institutional capacities (AfDB, 2013).

This lack of established value chains and the constraints relating to public goods undermine aggregation benefits and create disincentives for investment in individual firms (AfDB, 2013).

- **Difficulties in coordination between private investors and governments/donors to overcome constraints,** including in public goods, such as power, trade and transport infrastructure, and in value chain development, such as special economic zones (SEZs) and supportive tax and trade arrangements (AfDB, 2013).

### 3.5 Fragile and conflict-affected states

In relation to FCAS, the financing landscape is, as noted in Section 2, very poor. These countries struggled to attract financing for manufacturing, except some limited FDI for extractives with low levels of value-added processing.

This is because FCAS face constraints to financing that differ from those in more stable or developed countries. Such countries’ political and macroeconomic instability undermines the ‘must have’ conditions for investment – stable and credible property rights and adequate infrastructure (McMillan et al., 2017). Problems also include rampant corruption and weak or absent formal banking systems (Leo et al., 2012; Besada, 2013).

Also of importance is that this problem persists long after conflict has subsided (that is, it has a high level of hysteresis). For example, Liberia, a ‘low fragility’ state,<sup>12</sup> has attracted negligible private finance for manufacturing or agricultural processing more than 13 years since its civil war ended (Murinde and Tyson, 2017, forthcoming).

<sup>12</sup> DFID 2017 fragile states list.

However, there are exceptions. In Ethiopia, for example, which is a ‘moderate fragility’<sup>13</sup> state, government policy has facilitated the highest financing levels for manufacturing in the region relative to GDP. This has been achieved by means of the country’s credit and industrial policy. This includes limiting foreign investment to selected sectors only, including the manufacturing sector but excluding financial services and telecommunications (USDOS, 2015). This has facilitated strong growth in the manufacturing sector, which, in turn, has been a key factor in Ethiopia having among the highest and most consistent GDP and GDP per capita growth rates in sub-Saharan Africa (IMF, 2017).

### 3.6 Conclusion

As discussed, improved financial development and ‘ease of doing business’ contribute to mobilising private finance. However, their role in mobilising financing for manufacturing is more limited. This is because the finance that they mobilise goes to other sectors, such as extractives, financial services, real estate and telecommunications.

While some of these sectors may assist with supporting economic transformation through secondary effects (such as financial services and telecommunications), others are unlikely to do so (such as extractives and real estate). Thus, more needs to be done if the manufacturing sector is to develop. This includes tackling the constraints that are specific to the sector. The next section discusses approaches to addressing these sector-specific constraints.

<sup>13</sup> Ibid.

## 4. POLICY OPTIONS

This section discusses policy for stimulating financing for manufacturing. It starts with an overview and critique of current policy, including of development finance institutions (DFIs) and domestic policy. Such policy has been effective but has limitations in tackling firm-level constraints. Options for tackling these constraints are discussed. In addition, we explore policy for FCAS.

### 4.1 Current policy

#### 4.1.1 Development finance institutions

Policy-makers have sought to mobilise financing for manufacturing through public financing from both domestic and international institutions.

A range of policy instruments serve different market segments. These include wholesale financing to service small and medium-sized enterprises (SMEs) and small farmers, risk-sharing for venture capital projects, and vanilla loans for larger companies. In addition, enterprise development is supported through technical advice (Table 3).

Table 3: DFI policy instruments for manufacturing and agricultural processing

Instrument	Typical structures	Example market segment
<b>Debt and equity financing</b>	Debt and equity including in local currency and for relatively long periods	Larger companies and value chains
<b>'Ring-fenced' funds via financial intermediaries</b>	Intermediaries are typically local banks or microfinance institutions serving small and micro businesses	SMEs and small farmers
<b>Venture capital funds</b>	Equity, quasi-equity and debt for new investments, including via fund-of-funds and risk-sharing with investors	Innovative businesses and greenfield sites
<b>Raising and managing third-party funds</b>	Including loan syndication and funds to provide diversification benefits to investors through risk-pooling	Not used extensively in manufacturing
<b>Advisory services and technical advice</b>	Support for domestic financial institutions, private investors and to firms; can be difficult to leverage because it is cost-intensive	Building a pipeline of 'bankable firms'

Sources: IFC and CDC website and interviews.

In relation to institutions, there are a number of regional, sub-regional and national development banks dedicated to the agriculture and SME sectors. However, problems have included high levels of NPLs, poor financial viability and political interference in lending decisions (Beck et al., 2011; McMillan et al., 2017).

In addition, either the level of financing is low or financing is to SMEs, which have low rates of graduation to becoming larger-sized enterprises (AfDB, 2014). For example, the Eastern and Southern African Trade and Development Bank holds only 9% of its portfolio in the sector (Faure et al., 2015); and the South African Industrial Development Corporation holds 59% of its loans in manufacturing but this is dominated by mining (Guadagno, 2016). Similarly, the African Development Bank (AfDB) has less than 0.1% of its portfolio in manufacturing. However, this is because lending is concentrated in infrastructure; this may be a more appropriate role given the scale and complexity of infrastructure projects and their importance for economic development (AfDB, 2015).

International finance institutions (IFIs) provide financing for manufacturing, but again the level of funds for manufacturing is modest. For example, CDC Group has 6% of its global portfolios in manufacturing and agricultural processing, and the International Finance Corporation (IFC) has 12%.<sup>14</sup>

Overall, there are only moderate levels of lending to manufacturing, and this does not tackle the firm-level barriers discussed in Section 3.

However, recent innovative policy has been promising. For example, IFIs have sought to leverage funds from other private financiers through co-investment and risk-sharing. The IFC had such a portfolio of nearly \$2.4 billion in sub-Saharan Africa as at June 2016, including nearly \$1 billion mobilised from other investors. However, only a small proportion of this was in manufacturing.<sup>15</sup> This approach could be extended further for manufacturing.

Some IFIs are also providing financing via private sector fund-of-funds and via direct finance through specialist funds. For example, CDC has a Department for International Development (DFID)-funded £40 million 'Impact Accelerator' fund, which is dedicated to high-risk sectors and countries with high development impact. CDC also provides seed finance for relatively small in-country private equity funds. These approaches represent influential demonstration projects including in countries where investment flows are minimal, such as the FCAS of DRC and Rwanda.

To date, these approaches have been relatively small in scale because of the difficulty involved in sourcing and scaling direct investments and because indirect investments have been mainly through small regional private equity funds with limited absorption capacity (interviews).

However, all of these approaches take a piecemeal approach to developing the manufacturing sector, which limits their contribution to the development of value chains. For example, in 2016, CDC held 8% of its portfolio in manufacturing plus a further 32% in infrastructure (including telecommunications) and 15% in trade, but these investments are not coordinated to provide a holistic approach to developing a sector or a value chain (CDC, 2015) This is discussed further in Section 4.2 below.

#### 4.1.2 Domestic policy

As discussed in Section 2, some countries have attracted above- or below-average levels of financing relative to GDP, and domestic economic structures and policy have been an important part of these variations. Countries with above-average financing for manufacturing relative to GDP include Zambia, Tanzania and Kenya.

Zambia, a resource-intensive MIC, has achieved above-average levels of financing for manufacturing relative to GDP. Agricultural processing has received 60% of FDI, and there have also been high levels of financing flowing into cement and various consumer goods sectors, with linkages to the mining sector in Zambia and DRC. Because of this, Zambia now hosts a number of large regional companies, including Dangote Cement, Zambeef and Zambrew. As well as bank lending and FDI, these companies have graduated into equity financing on the Lusaka Stock Exchange (IGC, 2015; IMF, 2015; Murinde and Tyson, 2017, forthcoming) (Figure 9).

From a policy perspective, Zambia has a formal industrial policy, which includes regional trade support, infrastructure development, incentive structures (such as tax) and special industrial zones. However, these have largely not been seen as particularly effective (IGC, 2015).

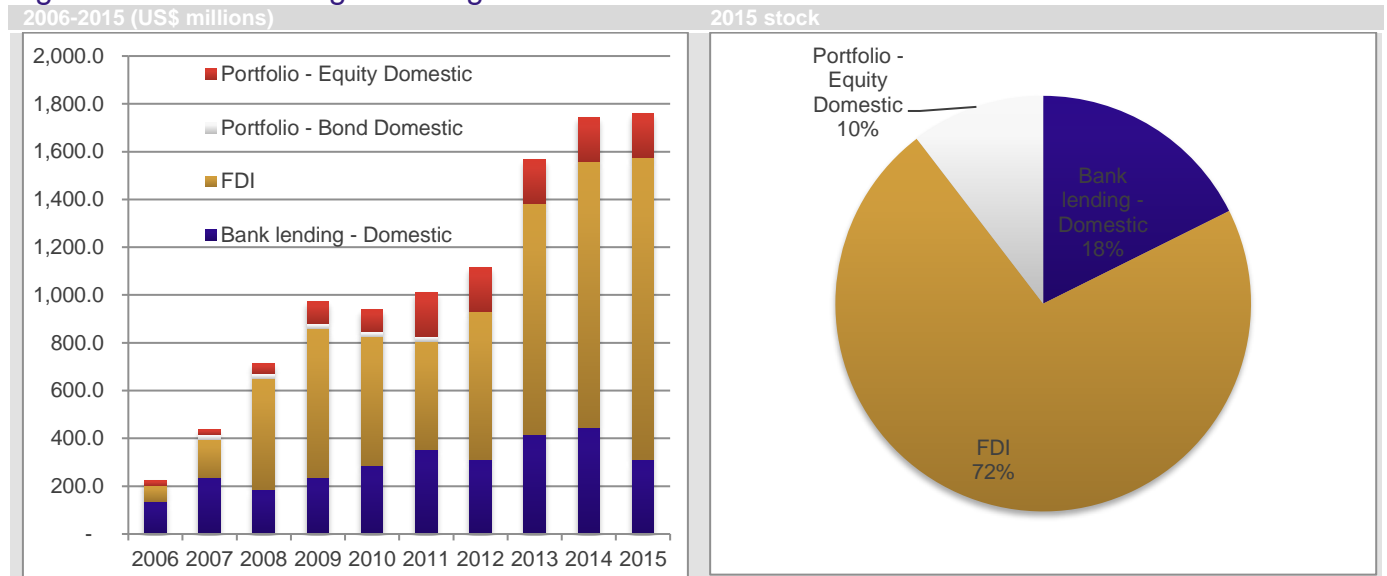
Instead, Zambia's relative success in manufacturing seems related to its inherent comparative advantages and good basic business environment (reflected in its high Ease of Doing Business ratings). Its advantages, which private investors have exploited, include building on backward linkages with

<sup>14</sup> See IFC and CDC annual statements on their respective websites.

<sup>15</sup> Including agricultural processing.

extractives industries (such as manufacturing of cement and machinery) and making use of the country’s good access to regional markets, including in DRC and southern neighbouring countries.

Figure 9: Manufacturing financing in Zambia



Source: Murinde and Tyson (2017, forthcoming); elaborated by author.

In Tanzania, growth in the manufacturing sector averaged a strong 7.5% between 2006 and 2015 (ODI, 2016). As in Zambia, there has been active industrial policy to support manufacturing, but in Tanzania it has not been particularly effective, because of slow development of SEZs, power shortages and cumbersome hard and soft infrastructure for exports (UNIDO, 2015; ODI, 2016; Page, 2016) (Figure 10).

Instead, there has been strong FDI into the sector that represents 69% of 2015 stock, compared with 23% for domestic bank lending and only 8% for capital markets. Most of this FDI in the past decade has been from Chinese companies, which have invested \$1.75 billion in approximately 400 manufacturing projects. This has funded mainly small firms located outside of SEZ and whose investment has been independent of policy. (UNCTAD, 2016)

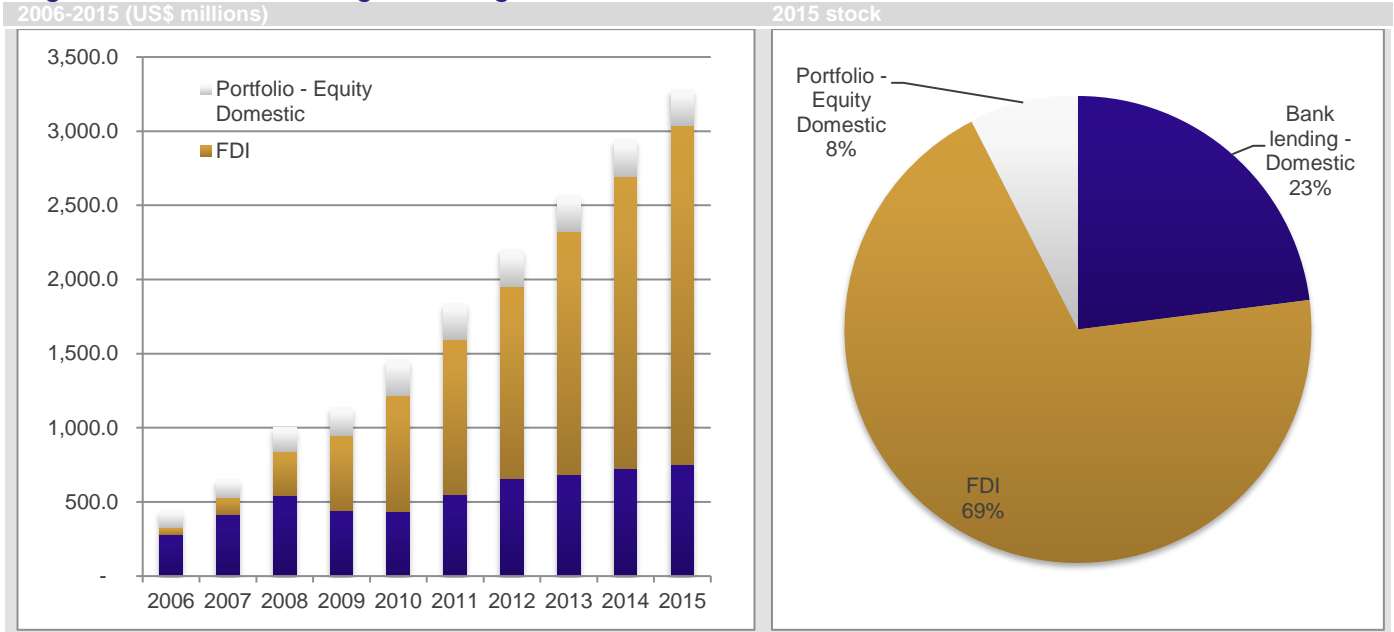
The weaknesses in policy in Tanzania can also be seen in the pattern of bank lending to the manufacturing sector, where there has been limited growth compared with FDI and so little lifting of financing constraints on small, domestic firms.<sup>16</sup> In addition, there has been no capital-raising in domestic capital markets for manufacturing since 2010.

However, the Tanzanian government has an established agricultural development bank and in 2017 announced a new industrial development bank, but it is too soon to assess its effectiveness.<sup>17</sup>

<sup>16</sup> Although strong growth in the microfinance sector in the country may have alleviated these constraints.

<sup>17</sup> According to a government press release dated 16 December 2016.

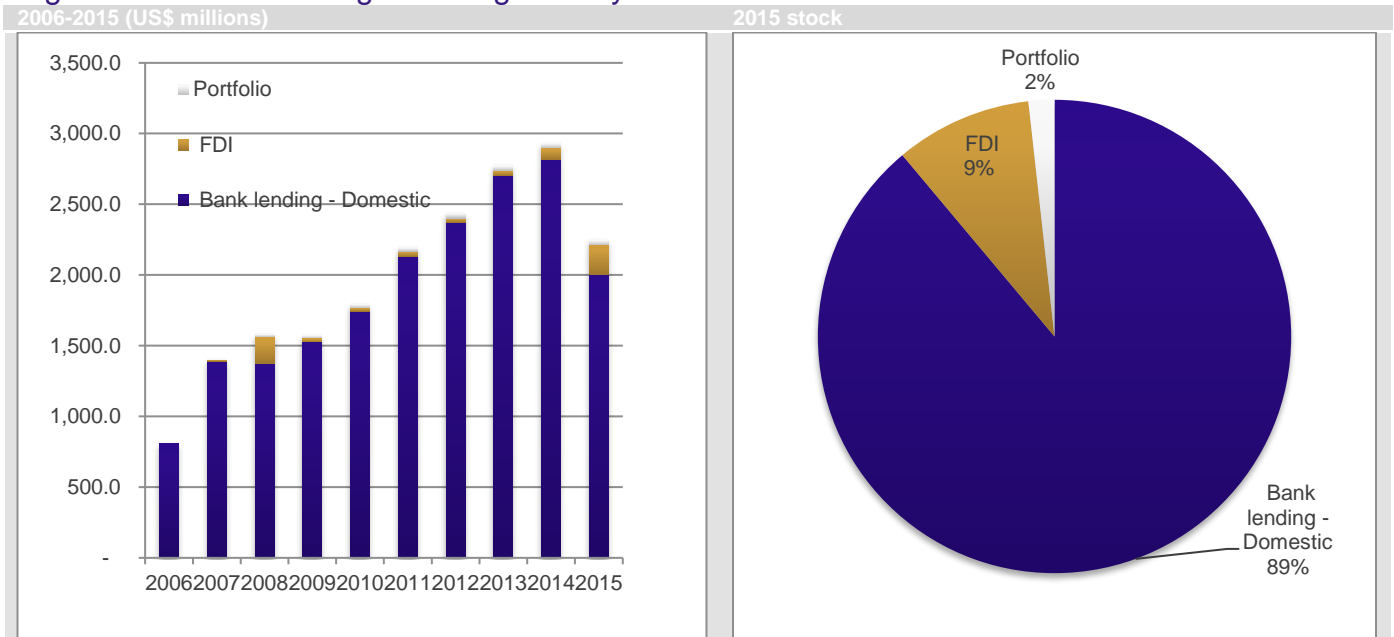
Figure 10: Manufacturing financing in Tanzania



Source: Murinde and Tyson (2017, forthcoming); elaborated by author.

In Kenya, financing for manufacturing grew strongly between 2006 and 2014, albeit with a decline in 2015. This financing is heavily concentrated in domestic bank lending, at 89% of all finance. This reflects threefold growth in domestic bank credit in Kenya between 2006 and 2015 in a policy environment of a liberalised private market for financial services. This has led to strong growth in credit in the country. However, although manufacturing financing has grown in absolute terms, this has some disadvantages: credit has increased to households and the real estate sector, with possible problems for financial stability; and it has also led to pro-cyclical lending to manufacturing (Tyson, 2016) (Figure 11).

Figure 11: Manufacturing financing in Kenya



Source: Murinde and Tyson (2017, forthcoming); elaborated by author.

Overall, these examples indicate that success in mobilising finance for manufacturing is linked to commercially attractive opportunities that will pull in investors independently of public policy initiatives.

## 4.2 Enhancing policy approaches

As noted, DFIs and domestic policy have sought to support the development of the manufacturing sector. However, to date, results have been modest. This suggests a more vigorous approach is needed. This section proposes how development might be achieved, including by building on the recent innovative approaches already being executed.

### 4.2.1 Expanding impact accelerator funds

As noted, one of the current approaches is for DFIs to manage ‘impact accelerator funds’ that provide venture capital (including ‘non-returnable capital’) to manufacturing and agricultural processing. Such funds are providing financing for innovative business models, including through experimentation and ‘learning by doing’.

This is of importance because the research literature shows that transformational change often emerges from a period of economic experimentation to find what works and what doesn’t in a specific country context on an adaptive, trial-and-error basis, with ‘small bets’ and rapid adjustments taking place until a workable solution is found (McMillan et al., 2017).

Impact accelerator funds promise to deliver such transformational change through providing a forum for such ‘learning by doing’ and the subsequent demonstration effects of new business models.

Because of this possible critical role in overcoming some of the key firm-level constraints in manufacturing and agricultural processing, further funding of impact accelerator style funds should be considered.

For DFID specifically, this could be done in advance of the current planned four-year review period for further funding at CDC. The mandate for additional funding should focus especially on anchor companies in the manufacturing and agricultural processing sectors.

### 4.2.2 Supporting value chain development

As noted, participation in regional and global value chains offers a significant opportunity for increasing productivity and employment in sub-Saharan Africa. Policy needs to support this but currently has some limitations.

First, some policy initiatives, especially in agriculture, do not have an explicit value chain approach. For example, in agriculture, programmes often deliver improved inputs and help link farmers to markets. Evaluation of these approaches shows they contribute to increased incomes but not to increasing value-added activities or developing value chains with links to high-value markets (ADB, 2012). Such programmes could be refocused to more explicitly develop these aspects.

Second, other policy does explicitly support value chain development including increasing access to finance. However, while this is helpful for microenterprises, financial access is unlikely to support the large-scale investments needed to develop value chains.

In addition, specialist financing is needed. For example, value chains need specialist buyer and supplier trade-cycle financing and specialist commodity exchanges.

DFIs could play a greater role in supporting the development of such specialist financing. For example, they could partner with existing global value chain financiers to expand their businesses into sub-Saharan Africa. Specialist and regional commodity exchanges could be developed to provide more liquidity and aggregation of inputs.

### 4.2.3 Supporting coordination functions

As discussed, growth in the manufacturing sector requires coordination between public and private actors. However, as noted in Section 4.1.2, current domestic government approaches are not always well targeted, and sector development, including value chains, is happening independent of policy.

There are a number of possible ways to improve coordination between private and public actors, such as development banks and IFIs providing technical support or acting as coordinators in order to supplement the capacities of governments.

In addition, in value chain development there is often a 'lead firm' that acts as coordinator. Given that public institutions in some countries are weak, this offers an alternative coordination mechanism for value chain development. IFIs could seek to promote this by providing financing and partnerships for such 'lead firms' (ADB, 2012).

#### 4.2.4 Policy for fragile states in sub-Saharan Africa

As discussed in Section 3.5, the constraints to financing for manufacturing in FCAS are more generic than those for non-FCAS. Problems include political and macroeconomic instability and a lack of basic functioning of financial systems. In addition, economies have high levels of informality, including subsistence agriculture.

Therefore, FCAS need tailored policy approaches. There also needs to be recognition that any sectoral development will be subject to broader non-manufacturing prerequisites, including establishing stable and sound institutions and infrastructure, and that the immediate policy goal is to predominantly support small-scale, informal livelihoods rather than develop formal firms (as for non-FCAS).

Policies that will assist in developing such manufacturing and agricultural processing (as well as other economic development) include supporting financial development with a focus on financial access. This is because many FCAS have limited and often dysfunctional financial sectors, and access to finance is one of the major constraints for microenterprises and SMEs (Leo et al., 2012; Besada, 2013). A focus on supporting the development of sound microfinance institutions and mobile banking could enable the provision of financial access in such difficult economic environments, where the population is often concentrated in rural areas and in the agriculture sector (Siegle, 2011).

Remittances are another important source of microenterprise and SME financing in some FCAS. In sub-Saharan Africa, they can be significant. In Liberia, for example, remittances are 32.2% of 2015 GDP. However, for other FCAS they are small. For example, they are below 1% of 2015 GDP for Sudan, South Sudan, Chad and DRC.<sup>18</sup> Other problems are that current remittances services are expensive and they can be used for illicit financing (Watkins and Quattri, 2014).

Policy could provide alternatives for diaspora to send and use remittances for enterprises. These might include diaspora bonds or equity funds. Such innovations may also encourage increased remittances to FCAS that currently have exceptionally low levels of funds. Indeed, this has already led to some successes. For example, in Somalia, telecommunications development has been financed mainly through remittances (Leo et al., 2012).

#### 4.2.5 Grants and technical assistance to develop firm capacity

Providing finance alone will not solve the issue of the lack of bankable projects in the manufacturing sector.

Financing needs to be combined with the policy options discussed earlier as well as with technical assistance and grants to improve management capacity and help firms develop and execute business plans in order to lead to higher levels of graduation from small to medium-size businesses.

There is an opportunity for expansion of such technical assistance in parallel with forthcoming higher levels of development capital. Such coordinated programming would be symbiotic for the impact of both technical assistance and development capital, through increasing successful growth of businesses.

<sup>18</sup> World Bank Remittance Database.



### 4.3 Conclusion

As discussed, policy is currently positive, but the level of financing it is providing and mobilising for manufacturing is moderate.

Enhancing policy to tackle firm-level constraints would help accelerate the development of the sector. This could be realised by providing demonstration projects and opportunities for 'learning by doing', which then has the potential to encourage greater private investment in the sector.

## 5. CONCLUSION

Since the downturn in global commodity prices in 2015, sub-Saharan Africa macroeconomic conditions have deteriorated; 2016 saw the slowest economic growth in more than two decades (IMF, 2017).

To maintain progress in economic transformation, to keep poverty in the region falling and to provide the 200 million new jobs needed by 2020 as the youth enter the workforce, employment-intensive and higher-productivity sectors need to be developed (Thomas et al., 2017).

Manufacturing and agricultural processing offer this opportunity, including through the linking of African production to regional and global value chains.

Currently, there is plenty of finance in the region, with strong growth in financial systems, increases in financial access and reasonable access to international capital markets. However, this financing is not flowing into manufacturing.

Policy needs to address the sector-specific barriers to financing for manufacturing. To date, policy has been helpful but not sufficient. More needs to be done to tackle firm-level constraints, including through 'impact accelerator' funds, specialist financing for value chains, better coordination for value chain development, and combining technical assistance and grants with development capital.

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## APPENDIX

### Policy variables by country

	Ease of doing business (i)	Financial development index (ii)	Level of manufacturing financing relative to GDP	Manufacturing financing by source		
				FDI	Domestic Bank lending	Domestic capital markets
Ethiopia	31	37	15.1%	56.0%	44.0%	0.0%
Ghana	82	40	3.0%	28.0%	59.0%	13.0%
Kenya	98	68	3.6%	9.0%	89.0%	2.0%
Liberia	16	32	0.5%	0.0%	100.0%	0.0%
Nigeria	21	52	2.7%	42.0%	49.0%	9.0%
Rwanda	134	13	3.8%	56.0%	44.0%	0.0%
Tanzania	58	30	7.3%	69.0%	23.0%	8.0%
Uganda	75	23	5.4%	55.0%	45.0%	0.0%
Zambia	92	45	8.3%	72.0%	18.0%	10.0%

Sources: (i) Ease of Doing Business; World Bank. Economies are ranked on their ease of doing business, from 1 to 190. A high ranking means the regulatory environment is more conducive to the starting and operation of a local firm; (ii) Financial Development Ranking, IMF (2016b). Ranking of 183 countries based on financial institutions and financial markets in terms of their depth, access and efficiency; (iii) other variables – ODI; (iv) both Ease of Doing Business and Financial Development rankings have been inverted so that the number represents their rank from the lowest ranking, with lower numbers indicating a lower ranking as opposed to the original index, where higher rankings have lower numbers. (So, for example, countries ranked 1st in these indices would be given a score of 190 or 183 in the table above. Conversely, those ranked 190th or 183rd are given the score of 1 in the table above.) This allows for better graphical presentation in the paper's graphs.

## DFID list of fragile states in sub-Saharan Africa

In addition to the regional classifications of 'South of the Sahara'

High fragility	Moderate fragility	Low fragility	Neighbouring 'high-fragility' states
<b>Burundi</b>	Angola	Cameroon	Rwanda
<b>CAR</b>	Ethiopia	Rep of Congo	Tanzania
<b>Chad</b>	Guinea	Côte d'Ivoire	Zambia
<b>DRC</b>	Guinea Bissau	Djibouti	
<b>Eritrea</b>	Kenya	Liberia	
<b>Somalia</b>	Mali	Madagascar	
<b>South Sudan</b>	Nigeria	Mauritania	
<b>Sudan</b>	Zimbabwe	Niger	
		Sierra Leone	
		Uganda	

Source: <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/international-development-committee/dfids-§allocation-of-resources/written/28276.pdf>