

# Insight

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## What's the impact of investing in trade and supply chain finance?

**Insights from evidence and our experience investing in the sector**

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## Foreword

**This evidence review considers the impact of CDC's investments in trade and supply chain finance.**

Trade and supply chain finance is core to our development agenda, because of its role in enabling trade and long-term development outcomes. Between 2015 and 2020, our TSCF programme supported \$13.2 billion of trade across Africa and South Asia through partnerships with regional and international financial intermediaries.

As a development finance institution, we have a dual mandate to grow businesses and deliver development impact. Our TSCF programme supports this objective by facilitating the movement of goods across developing countries and improving access for consumers and businesses to commodities, capital equipment and business inputs. This promotes business growth and enhanced economic opportunities, contributing to the ultimate objective of poverty alleviation.

Over the past year, we have worked with a team at the London School of Economics Trade Policy Hub to deepen our understanding of the evidence and better understand the impact of our investments. We are grateful to the LSE team for constructively challenging our assumptions and helping us to improve our impact framework. This will enable us to continue to enhance our impact as we continue to expand our TSCF programme in the coming years.

This report highlights the main insights from the evidence review and outlines key opportunities for investors who, like us, are looking to deliver impact through trade and supply chain finance.



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## List of abbreviations

<b>ADB</b>	Asian Development Bank
<b>AfDB</b>	African Development Bank
<b>AFTA</b>	Association of Southeast Asian Nations Free Trade Area
<b>AML</b>	Anti-Money Laundering
<b>ASEAN</b>	Association of Southeast Asian Nations
<b>AU</b>	African Union
<b>BCBS</b>	Basel Committee on Banking Supervision
<b>BCT</b>	Blockchain Technology
<b>COMESA</b>	Common Market for Eastern and Southern Africa
<b>CFT</b>	Combating the Financing of Terrorism
<b>CFTA</b>	Continental Free Trade Area
<b>DC</b>	Documentary Collection
<b>EAC</b>	East African Community
<b>ESG</b>	Environmental, Social and Governance
<b>ECOWAS</b>	Economic Community of West African States
<b>FTA</b>	Free Trade Agreement
<b>GDP</b>	Gross Domestic Product
<b>GVC</b>	Global Value Chains
<b>HOS</b>	Heckscher-Ohlin-Samuelson model
<b>ICC</b>	International Chamber of Commerce
<b>ICT</b>	Information and Communications Technology
<b>IF</b>	Impact Framework
<b>IFC</b>	International Finance Corporation
<b>IT</b>	Information Technology
<b>ITC</b>	International Trade Centre
<b>IWOSS</b>	Industries Without Smokestacks
<b>KYC</b>	Know Your Customer
<b>LC</b>	Letter of Credit
<b>LDC</b>	Least Developed Country
<b>LSE</b>	London School of Economics
<b>MDB</b>	Multilateral Development Bank
<b>MNC</b>	Multinational Corporation
<b>MSMEs</b>	Micro, Medium and Small Enterprises
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>PTA</b>	Preferential Trade Agreement
<b>RECs</b>	Regional Economic Communities
<b>RFP</b>	Request for Proposal
<b>RTA</b>	Regional Trade Agreement
<b>SADC</b>	Southern Africa Development Community
<b>SCF</b>	Supply Chain Finance
<b>SDGs</b>	Sustainable Development Goals
<b>SMEs</b>	Small and Medium-sized Enterprises
<b>TF</b>	Trade Finance
<b>TFTA</b>	Tripartite Free Trade Area
<b>TSCF</b>	Trade and Supply Chain Finance
<b>UNCTAD</b>	United Nations Conference on Trade and Development
<b>UNECA</b>	United Nations Economic Commission for Africa
<b>UNESCAP</b>	United Nations Economic and Social Commission for Asia and the Pacific
<b>WB</b>	World Bank
<b>WEF</b>	World Economic Forum
<b>WTO</b>	World Trade Organisation



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## Executive summary

**Supporting trade is key to our development agenda, as well as contributing to many of the United Nations' Sustainable Development Goals. Trade and supply chain finance (TSCF) primarily acts as an economic enabler, facilitating the movement of goods between and within economies, which ultimately contributes to long-term impact outcomes.**

A substantial body of literature exists on the role of trade and finance in long-run developmental outcomes. Understanding this evidence base is especially important in areas such as TSCF, where the investment approach is typically intermediated and the impact on people and planet is therefore more indirect. The team at the LSE Trade Policy Hub<sup>1</sup> have not tried to summarise the existing literature in its entirety but have rather focussed on the evidence most relevant to private sector development in developing and emerging markets which can help us and other investors make investment decisions that are optimised for impact.

This review is divided into three key sections that test the logic of the impact framework presented in Figure 1 below:

- Chapter 1 presents the hypotheses that were tested for the evidence review.
- Chapter 2 seeks to understand the evidence underpinning the relationship between trade and development. Under what circumstances can different types of trade be a positive or potentially negative force for development? Who does and does not benefit from trade? What are the key bottlenecks preventing developing countries from realising the benefits from trade?
- Chapter 3 assesses the role of TSCF in supporting trade. Is the availability of appropriate financing a key constraint? Do different types of businesses face different constraints when trying to access trade finance? How can investors, such as CDC, optimise the impact of their TSCF investments?

<sup>1</sup> Referred to as "the LSE team" for the remainder of the report.

The LSE team conducted a comprehensive evidence review of 58 academic studies and policy reports to ensure that our TSCF Impact Framework and investment activity is informed by rigorous evidence. As part of this process, the team also engaged with external stakeholders, including sector experts, economists and academics. Based on the review, the framework articulates our long-term impact objectives:

- **Economic opportunities:** We aim to narrow the supply-demand gap for trade and supply chain finance, increase trade volumes and promote inclusive and sustainable value chains. Our intention is to contribute to long-term growth, employment creation, poverty reduction and supply chain resilience.
- **Better access to goods:** By increasing trade volumes, we aim to contribute to the increased availability, affordability and quality of goods. This could, for instance, be through facilitating the imports of finished goods for consumers, or through enabling imports of business inputs and capital equipment to scale domestic production.

Our TSCF Impact Framework seeks to explain the main pathways through which TSCF enables the long-term development outcomes described above. The framework outlines our contribution, which leads to a set of short-term outputs, medium-term outcomes and ultimate impacts. The pathways outlined are not always discrete as the evidence demonstrates there is considerable interplay between the outputs, outcomes and ultimate impacts. This report does not seek to separate individual pathways or outcomes on ultimate impact. Rather, the impact framework serves as a conceptual representation that determines how to best understand the impact of investments in this sector.

The evidence review highlights the following key takeaways:

- There is strong evidence that trade has a positive impact on developing countries through its contribution to long-term economic growth and reduced inter-country inequalities. The primary impact channels of trade are via productivity, investment, technology/skills transfer, competition and economic growth which, in turn, impact long-run developmental outcomes.
- The participation of developing countries in global value chains is typically limited to commodities and limited manufacturing. A key challenge is how these countries can move up the value chain by adding more value to the commodities being traded and developing capabilities in advanced manufacturing/services and innovative activities.
- Despite these overarching positive macroeconomic impacts, the distributional impacts of trade are more nuanced. While trade is a contributor to overall poverty reduction through its effect on economic growth, the gains from trade can impact various segments of society in different ways, creating winners and losers. Some stakeholders require a longer timeframe to adjust to trade liberalisation or need more support to overcome barriers.
- Access to finance is one of several barriers to trade. Others include weak regulatory frameworks, poor infrastructure, weak institutions and limited regional trade integration. TSCF needs to be complemented by actions to address other barriers of trade.
- TSCF has an indirect impact on development outcomes because it enables the movement of goods. It helps businesses manage various types of risk and provides liquidity support, which can help firms to scale and access new markets. Particularly, TSCF reduces payment and counterparty risk, protects firms against volatility, ensures secure and timely payment across borders, and increases access to working capital.

- There is a large unmet global demand for trade finance of \$1.5 trillion per year. Barriers to TSCF access can be broken down into multiple layers at the macro-, financial intermediary, and firm-level. These include regulatory and compliance barriers, limited digitalisation of paper-heavy operations, a lack of skills/awareness of these financial products, as well as social barriers faced by certain segments. Small and medium-sized enterprises (SMEs) and women-owned businesses tend to face particularly high barriers to access.
- DFIs and impact investors could deepen the impact of their TSCF portfolios through:
  - + Increasing the availability of liquidity and risk cover through risk-sharing, so that financial intermediaries can maintain or grow their TSCF portfolios and underwrite more trade. This is especially relevant for economies with a large unmet demand.
  - + Improving access in the least-developed countries, where financial intermediaries typically have lower appetite, to support trade and value chains where the need is highest.
  - + Promoting inclusive and sustainable value chains by supporting sectors employing a high proportion of low-skilled and semi-skilled workers, improving access for businesses facing the highest barriers (such as SMEs or women-led firms) and prioritising trades that accelerate the transition to low-carbon economies.
  - + Increasing environmental, social and governance (ESG) standards to better manage ESG risks, promote sustainability and drive value in international trade.

The following sections summarise the evidence base underpinning the impact pathways in the TSCF Impact Framework and describe how our financing contributes to these.

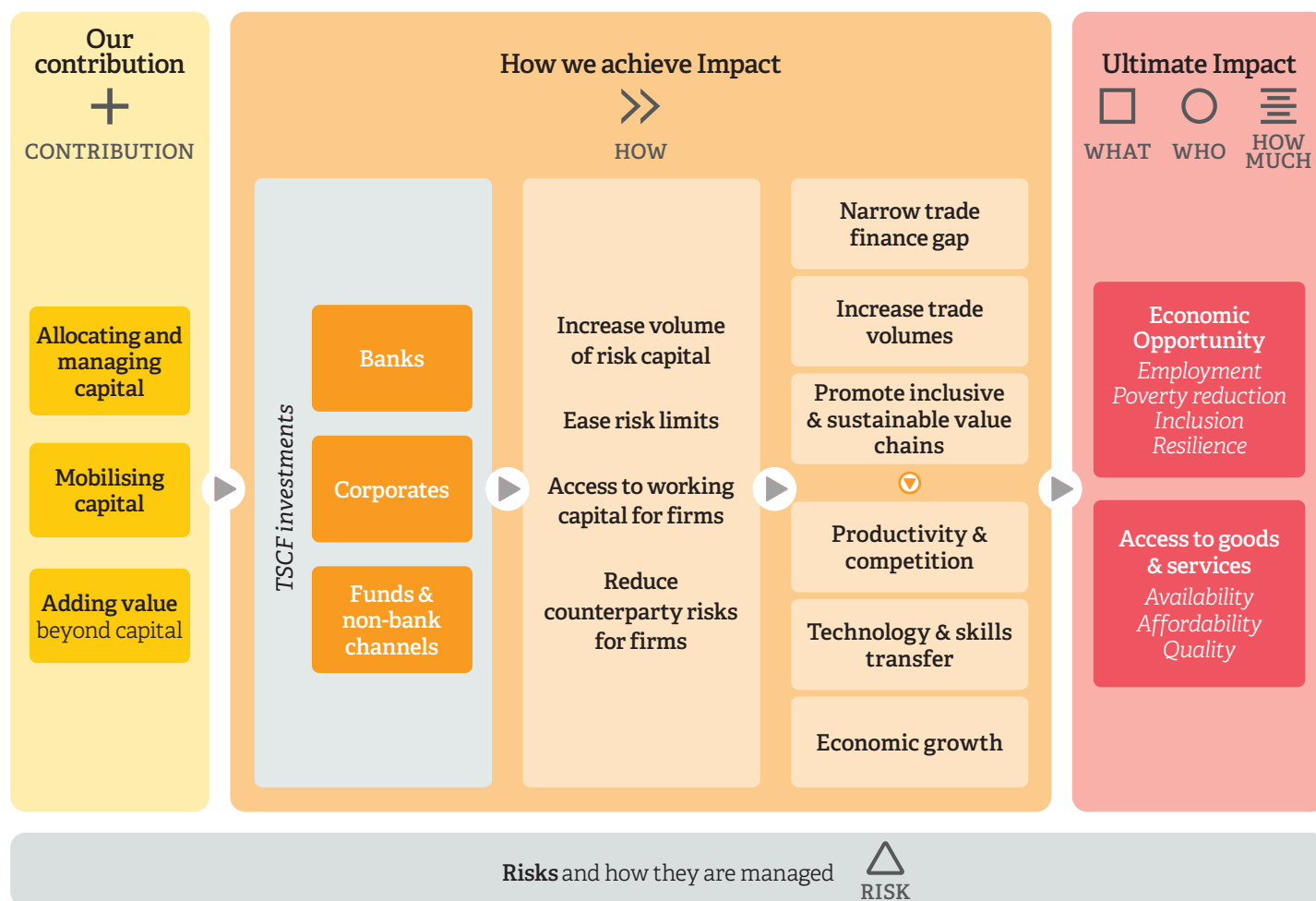


Figure 1: TSCF Impact Framework

## What is our approach to impact?

Sector impact frameworks are aligned with our overarching **Impact Framework**. In line with the **Impact Management Project's** dimensions of impact, we analyse the impact of each investment in terms of:

- **What** is the type of impact?
- **Who** ultimately benefits, in terms of people and planet?
- By **how much** in terms of scale and depth?
- What is the likelihood the impact will be different than expected (**impact risks**)?
- What is our role in achieving the impact (**contribution**)?

We also analyse **how** this impact is achieved, through short-term outputs and medium-term outcomes, including:

- The **direct** impact of our investments;
- The **indirect** impact of our investments, such as through economic enablers; and
- The impact of our investments on shaping and **catalysing markets**.

## Mapping the evidence

Table 1 presents the hypotheses that were evaluated in developing the TSCF Impact Framework. For each hypothesis, the final column represents (i) the quantity of evidence; and (ii) the direction of findings.


























Impact pathway	How does supporting trade via trade and supply chain finance intersect with...	Direction & quantity
<b>Ultimate impact</b>		
Employment and wages	Creating jobs directly or indirectly? Enabling higher wages/incomes?	
Poverty reduction	Reducing overall or absolute poverty levels:	
	In the short/medium term?	
	In the long term?	
Inclusion	Contributing to a more inclusive or equitable economy in terms of:	
	Income inequalities?	
	Gender inequalities?	
	Spatial inequalities?	
	Skill inequalities?	
Resilience	Increasing the resilience of trade and supply chains, and ultimately economies and people?	
Access to goods and services	Increasing availability, affordability, and quality of goods and services for producers and consumers?	
<b>Outcomes</b>		
Productivity and competition	Increasing business productivity and competition?	
Technology and skills transfer	Enabling improvements in technology and transferring of skills between economies?	
Economic growth	Promoting economic growth?	
Trade finance gap	Narrowing the trade finance gap?	
Trade volumes	Increasing import and export volumes?	
Value chains	Promoting inclusive and sustainable value chains?	
<b>Outputs</b>		
Risk limits	Easing risk limits for financial institutions?	
Working capital	Increasing access to working capital for businesses?	
Counterparty risk	Reducing counterparty risk for businesses?	
Innovation and digitisation	Supporting technological improvements and upgrades in the systems/processes of financial intermediaries?	

Table 1: Evidence summary – impact of manufacturing

### Direction of findings

-  Significant positive impact or relationship (>70% of studies)
-  Significant negative or null relationship (>50% of studies)
-  Mixed findings or not significant

### Quantity of evidence

-  Small body of evidence (<5 studies)
-  Moderate body of evidence (5-14 studies)
-  Well-documented (>15 studies)





## 02

### The role of trade in development

#### 2.1 Impact channels

Trade and global value chain integration can foster economic growth through multiple channels. Trade brings increased advantages through economies of scale as well as specialisation and dissemination of technologies, know-how and ideas. International linkages, through exports, imports, and global value chain participation, can also lead to:

- i. Increased productivity and employment;
- ii. Technology and knowledge transfer and acquisition of new skills and techniques;
- iii. Improved availability and quality of goods and services; and
- iv. Increased competition and reallocation of resources from unproductive to productive activities.

The empirical literature highlights that the most important impact channels of trade appear to be on productivity and investment which, in turn, affect long-term development outcomes (Organisation for Economic Co-operation and Development, 2011).

There is a difference between 'traditional' trade and participation in production networks or global value chains. The Asian Development Bank (2015) defines the latter as "cross-border production sharing or fragmentation of production". In practice, this means a single product is manufactured and assembled in multiple countries, where each stage adds value to the end product (World Bank, 2020). Global value chain trade is different from traditional trade because of two features: hyper-specialisation and durable firm-to-firm relationships. Global value chains allow resources to be allocated to their most productive use, not only across countries and sectors, but also within sectors across stages of production. These features raise productivity and income more than through traditional trade, since global value chains disseminate know-how of lead firms and suppliers along stages of production and in multiple offshore locations.



*Trade enables increased economies of scale, specialisation and dissemination of technologies, know-how and ideas.*



*Global value chain trade differs from 'traditional' trade in two main ways: hyper-specialisation and durable firm-to-firm relationships.*

Exporting is widely considered to increase productivity and economic development, but importing has notable complementary effects. Companies can learn by exporting, as they must satisfy the needs of foreign customers who may be more demanding in terms of product quality, while also facing competition from foreign producers, leading to higher productivity (De Loecker, 2013). Companies can also make productivity gains from importing, by learning from new technologies embedded in foreign inputs and gaining access to better-quality and a larger variety of inputs.

For example, Edwards et al. (2018) studied the linkages between direct access to imported inputs and manufacturing business performance. By looking at companies in South Africa, they showed that importing and exporting businesses consistently performed better in terms of productivity, employment, wages and capital intensity, when compared to those that do not trade, or only export or import.

Trade leads to specialisation in output but can reduce diversification in production and resilience to shocks. Greater trade openness implies greater exposure to external shocks, particularly for outward-oriented industries (Frankel and Rosen, 2008; Koren and Tenreyro, 2007; Kose and Riezman, 2001). Trade contributes to greater specialisation in output, leading to a reduction in production diversification, which may make a country more susceptible to shocks. Kose and Riezman (2001) find that since a significant fraction of African countries' exports are concentrated in a narrow range of primary commodities, terms-of-trade shocks account for 45 per cent of the volatility in aggregate output.<sup>2</sup> In turn, trade shocks can cause prolonged recessions, since they induce a significant decrease in aggregate investment (World Bank, 2018). Similarly, Koren and Tenreyro (2007) suggest that greater volatility in developing countries arises from their initial specialisation in the most volatile production sectors.

There is a positive correlation between export diversification and growth. There is strong evidence that export diversification makes economies less vulnerable to terms-of-trade shocks and volatility, which in turn fosters long-term growth (Imbs and Wacziarg, 2003; de Ferranti et al., 2002; Jansen, 2004; Bachetta et al., 2007, and Lederman and Maloney, 2012, among others). McIntire et al. (2018) found that among small states, those with more diversified exports have lower output volatility and higher average growth rates than less-diversified states. Evidence also shows that export diversification is especially important for least-developed countries (LDCs) at graduation stage.

## 2.2 Ultimate impact outcomes of trade

### 2.2.1 Economic growth

There is a large body of work on the linkages between trade and economic growth – and the direction of impact is overwhelmingly positive. Global trade and GDP have grown in tandem, both increasing by a quarter since 2008 (World Bank 2020). Evidence suggests that greater openness to international trade is associated with faster growth (in terms of long-term GDP per capita) and increased economic productivity (World Bank 2015).



*Importing and exporting have different but complementary impacts on development.*



*Export diversification is crucial to make developing economies less vulnerable to economic shocks.*

<sup>2</sup> 'Terms of trade' is a measure of a country's export prices relative to its import prices. For instance, if over a given period the index of export prices increases by 10 per cent while the index of import prices rises by only 5 per cent, the terms of trade have net-net improved.

Global value chain participation varies between different countries. As Figure 2 shows, countries differ in terms of the type of global value chain participation (World Bank, 2020). East Asia, Europe and North America specialise in advanced manufacturing/services and innovative activities, whereas Africa, Central Asia, and Latin America are predominantly involved in commodities and limited manufacturing. This highlights one channel for global value chain participation to contribute to development, namely through supporting companies in developing countries to move up the value chain from commodities to advanced manufacturing/services and innovative activities.

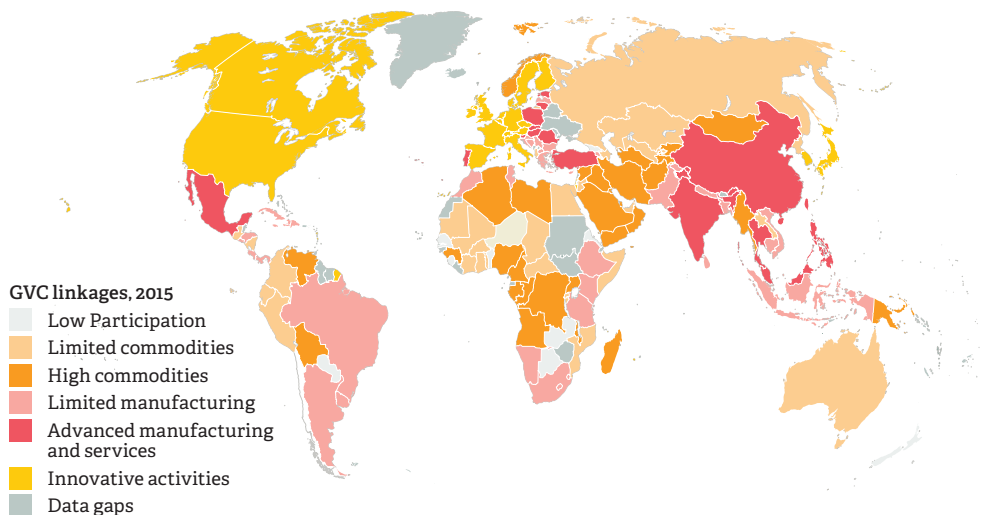


Figure 2. Global value chain participation globally (World Development Report 2020 (worldbank.org))

The gap between the ‘upstreamness’ of imports and exports, which gives an indication of the distance from the final use in terms of the number of production stages, can illustrate the potential for a country’s transformation and value-added capture. Countries that buy imported inputs, components and machinery – and export further downstream – tend to show a positive gap (such as Vietnam), while countries that buy final goods and export commodities show a negative gap (Lopez-Calix, 2020). The latter is the case for four West African countries covered by the study (Chad, Niger, Mali and Guinea).

### 2.2.2 Employment and wages

The evidence on the relationship between trade and employment, albeit extensive, is mixed on the direction of the effect. Trade is only one among many factors affecting the impact on employment.

Trade can reduce inequality through interaction with local labour markets. The Stolper–Samuelson theorem sets out that trade liberalisation leads to an increase in the price of so-called abundant factors relative to the price of scarce factors in an economy. For those developing countries which have a high proportion of low-skilled labour, this suggests an increase in wages. The reason is that trade expands the production and export of products that use a country’s abundant (and relatively cheaper) resources and import products that use their scarce factors.<sup>3</sup> Developing countries therefore observe an increase in the wages of unskilled workers and a decrease in the wages of skilled workers, which may reduce inequality.<sup>4</sup> Support for this theory has been found in various empirical studies.<sup>5</sup>

3 Derived from the Heckscher-Ohlin trade model.

4 Contrary to the Heckscher-Ohlin-Samuelson theory, which suggests trade will increase the labour-intensive part of output, some trade theories suggest trade increases the scarcity factor in developing countries. In Feenstra and Hansen’s (1996) model of intra-industry trade, factors of production are skilled and unskilled labour and the authors’ results reveal that trade increases demand for skilled labour.

5 For instance, according to Amiti and Cameron (2012), in the case of Indonesia, reducing input tariffs has reduced the wage skill premium within firms that import their intermediate inputs. Similarly, Aldaba (2013) finds a declining wage gap in the Philippines manufacturing sector as result of trade liberalisation introduced by the ASEAN Free Trade Agreement (AFTA). They also point out that firm characteristics, such as skill intensity, firm size, and capital labour ratio, matter in assessing the impact of trade reform on the wage premium. Another example is Vietnam, after the signature of 2001 US-Vietnam Bilateral Trade Agreement, where the boom in exports to the US led to an increase in the wages of unskilled workers and reduced the skill premium. Poverty reduction in Vietnam was concentrated in unskilled, labour-intensive global value chain sectors, most notably in the textiles sector (Fukase, 2013; McCaig, 2011).

» *The participation of developing economies in global value chains is typically limited to commodities and limited manufacturing.*

» *The impact of trade on employment and wages is mixed, highly contextual, and depends on many factors.*

A recent study highlights how these learnings may apply to developing countries. Page (2020) distinguishes between traditional “smokestack” industries and “industries without smokestack” (IWOSS), where the latter includes activities, which (i) are tradable; (ii) have high value-added per worker relative to average economy-wide productivity, as well as exhibit capacity for technological change and productivity growth; and (iii) can absorb large numbers of moderately-skilled labour.

These sectors span agro-industry and horticulture, tourism, some business services – including information and communications technology (ICT)-based services – plus transport and logistics. The authors found that IWOSS sectors could deliver three and a half times more formal sector jobs than non-IWOSS sectors. Moreover, preliminary data for South Africa suggests IWOSS sectors that they are more progressive in the employment of women and youth.

Imports can reduce the costs of production, therefore leading to higher demand which in turn can translate into job creation. Jobs supported by imports or exports tend to pay a premium compared to jobs supported by domestic demand. In a study using a dataset from Portugal, Martins and Opromolla (2011) found that average wages were up to 30 per cent higher in exporting and importing plants compared to non-trading plants. In turn, Seker (2012) analysed 43 developing economies and found exporters as well as importers tend to employ more workers. Brambilla et al., (2017) found that exporting had positive spinoffs on employment and wages across a wide range of developing countries, including countries in Africa.

In the case of exporting, the target market seems to matter for the resulting technology upgrade, productivity increase and wage premiums. In South Africa, Rankin and Schoer (2013) showed that export destination plays a crucial role in determining the wage premium. Exporters pay higher wages only when exporting to more-developed economies, whereas companies exporting to regional less-developed markets are characterised by negative wage premia. The causal relationship between exporting to high-income markets and higher wages has been demonstrated globally (Brambilla and Porto, 2016), indicating that companies and their workers may benefit from technology upgrades induced by exports to more developed economies. However, Milner and Tandrayen (2007) investigated the relationship between exporting and wages in six countries in sub-Saharan Africa. They found the wage premium is positive only when businesses export to African markets, and is negative when exporting to more competitive markets, possibly because they face less competitive pressure in regional markets.

### 2.2.3 Poverty reduction

Trade is considered a key contributor to long-term poverty reduction. Trade reforms primarily affect poverty indirectly via economic growth. Increased trade openness can improve access to technology and foster productivity growth, leading to faster economic growth and reduced poverty (UNCTAD, 2010). At the same time, trade restrictions can impede productivity and economic growth, leading to increased poverty (WTO, 2018).

However, trade liberalisation impacts various segments of society differently, with some stakeholders needing to adjust more than others. In other words, international trade tends to create winners and losers, particularly in the short term. For example, some workers may lose income as a result of increased import competition or offshoring. Governments play a key role in this adjustment process, which may focus on overcoming market failures, reducing costs of entry and exit, and enhancing the productivity of companies, as well as the realisation of equity objectives (Hoekman and Porto, 2010).

Several factors impact the ability of the poor to benefit from trade, including the nature of policy change, the mobility of production factors, or the extent to which affected industries employ a large number of low-skilled workers (World Bank and WTO, 2018).



*Tradable activities in industries such as horticulture, business services and logistics which employ large numbers of moderately skilled workers can deliver more inclusive growth.*



*Jobs supported by imports or exports tend to pay a premium compared to jobs supported by local demand, especially in certain sectors.*



*The export target market matters in terms of the potential for technology upgrading, productivity growth and wage premiums.*



*Trade is a key indirect contributor to poverty reduction via its effect on economic growth.*



*The gains from trade are however typically not distributed equally with certain stakeholders needing more time to adjust than others.*

Trade can impact the poor through production as well as consumption. Trade integration changes the relative prices in both product and factor markets, which in turn impacts people as consumers and/or producers. Trade can impact the poor in two main ways: (i) as a result of price reductions of consumed goods hence improving real incomes; and (ii) through increasing the price of goods and services they produce. As producers, the poor can, for instance, gain by selling their output in overseas markets where they can get a better return. As consumers, trade can reduce the prices of imports and provide access to a wider variety and better quality of goods.

While trade benefits consumers at this general level, it is also important to highlight the increased vulnerability of households in trade-exposed sectors. Looking at the channel of domestic prices, there are potential sources of disadvantages for households, such as:

- Reductions in tariffs reducing prices – households that are consumers of these goods will benefit, while producers will be hurt;
- Households, as income earners, may benefit as higher prices in competitive exporting sectors attract more producers into a given industry, increasing employment and subsequently also wages; and
- Declining prices for imports can put pressure on employment and wages in import-competing sectors.

One example where positive linkages between trade and poverty occur is in Vietnam. During the Doi Moi reforms, both poverty and vulnerability decreased. More precisely, the proportion of Vietnamese households under the poverty threshold fell from more than 50 per cent at the start of the liberalisation process to just above 16 per cent in 2008. Meanwhile, the share of vulnerable households fell from around 56 per cent in 1992 to 8.3 per cent in 2008. The rate of decline was steeper at the beginning of the liberalisation process (between 1992 and 1998) and more relevant for rural households than for urban households.

#### **2.2.4 Distributional impacts**

While trade has helped to narrow inequalities between countries, the distributional implications within countries is more nuanced. As described above, trade brings efficiency improvements, but also adjustment costs (Hoekman, 2020). While trade openness in developing countries has contributed to narrowing the gap with developed countries, the impact of increased trade or trade liberalisation within countries is mixed (ADB, 2017). Some of the factors determining these differences include: existing labour market conditions; inflow of capital; and policy reforms. Trade also has distributional implications with respect to where jobs go, the types of jobs created, and who gets them. Governments have a key role in attenuating the negative effects on disadvantaged groups, which requires an understanding of how businesses, workers and households respond to trade reforms.

The impact of trade can differ across geographical areas, as well as between low-skilled and high-skilled workers. Trade can contribute to regional and individual disparities because industries tend to cluster regionally (World Bank and WTO, 2019, p. 47). While trade may benefit labour markets in regions with importing and exporting industries, it might hurt regions that compete directly with foreign producers. This can lead to spatial divergence in economic activity. For example, ADB (2017) found the impact of international trade on regional inequality was mixed. In some cases (such as Brazil and Indonesia), expansion in trade contributed to reduced regional inequality, while in others (China, Indonesia and Mexico) trade expansion increased regional income inequality. ADB attributed these differences to trade and industry-specific factors, including the composition of trade and the location of industry. Similarly, trade can have uneven effects across low-skilled and high-skilled workers.



*Trade can benefit the poor as consumers (such as through lowering the cost of consumption) as well as producers (through impacting the cost of inputs and goods).*



*While trade has helped to narrow inequalities between countries, the distributional impact of trade within countries is more nuanced.*



*While trade may benefit labour markets in region with trading industries, it might hurt regions that compete with foreign producers.*

The evidence on the impact of trade on women is varied. The impact of trade on gender inequality is mixed. Wages for women tend to be lower than those of men on average (Blau and Khan, 2017). The evidence is mixed on whether the wage premium associated with trade differs between women and men. Boler, Javorcik and Ulltveit-Moe (2015) found that in Norway, the gender wage gap is larger within exporting businesses than within non-exporters. Meanwhile, the World Bank (2012) has evidenced a lower gender wage gap in exporting businesses as well as higher wages for women. Drawing on Do, Levchenko and Raddatz (2011), the World Development Report (2012) concludes that gender inequality diminishes as a country becomes more competitive internationally – provided it specialises in the export of goods and services which employ both male and female workers. Countries with an advantage in making products that rely more on women’s labour also have become more gender equal. Shepherd and Stone (2012) found that companies with international linkages hire a larger share of female workers. Women who previously had difficulty accessing this type of wage work have filled many of these jobs (Barrientos, Gereffi and Rossi, 2010).

Trade is positively correlated with an increase in the representation of female workers in the workforce. In developing and emerging countries, the proportion of female workers is approximately 4 percentage points higher in exporting firms compared to the proportion of female workers non-exporting firms (World Bank and WTO, 2020). Trade can empower women within the household by creating jobs for women that would not otherwise exist. For instance, the emergence of the apparel sector in Bangladesh has moved many women into formal employment. However, while trade can create more opportunities for women, some of the opportunities can be higher risk than others. The Bangladeshi context has also shown that female workers in the export industry, particularly garment workers, can be prone to higher rates of gender-based violence (World Bank, 2020). Increased trade can positively affect female consumers as goods and services become more available and affordable (World Bank, 2020).

SMEs in Asia and Africa have not been able to fully utilise business and trade opportunities generated by the emerging global value chains. SMEs are mostly affected, as their involvement in global value chains poses a two-dimensional challenge. First, to try to enter a global value chain, and second, to move up the tiers by upgrading the added-value content of their activities (UNESCAP, ADB, 2019). Key factors that impact the ability of companies, and in particular SMEs, to participate in a production network are identified as: labour productivity; foreign ownership share; financial stability; cost of credit; and ability to meet international standards of their goods (UNESCAP, ADB, 2019). ADB highlights the need to establish industrial linkages between SMEs, large local enterprises and multinational corporations (MNCs).

### **2.2.5 Environment and climate**

The interplay between trade and the environment/climate is an important topic for further consideration. While global trade can have an impact on the environment and climate (for example, through the conversion of land for commodities), climate can vice-versa also pose a cause of uncertainty for developing countries. The impact of trade on greenhouse gas emissions is context-specific and influenced by: the scale of economic activity; the composition of economic activity (specifically relating to the proportion of emissions-intensive sectors); and the techniques and inputs used to produce goods and services. The impact of climate change on trade is also important as trade patterns, production and specialisation will be affected by factors such as rising sea levels, more frequent extreme natural events, and changes in a country’s natural endowment. Damages from climate impacts in one country can also have harmful spill-over effects to other countries in the value chain.



*The overall impact of trade on women is varied. Women tend to benefit more if a country develops a comparative advantage in industries which rely more on female labour.*



*SMEs in Africa and Asia have not been able to fully utilise business and trade opportunities generated by the emergence of global value chains for multiple reasons.*

While a number of studies explore the impact of trade on the environment<sup>6</sup>, the studies covered under this evidence review predominantly treat climate as a source of risk and uncertainty for developing economies (UN Inter-Agency Task Force, 2020). The report cites that in 2017, 37 commodity-dependent developing countries, mostly LDCs, were ranked among the 40 most vulnerable countries, due to their lower levels of preparedness to tackle climate change. On the other hand, policy shifts at the global level towards less carbon-intensity and cleaner economies may also raise uncertainty for countries dependent on fossil fuel exports.

### 2.3 Barriers to trade

Domestic distortions hinder the benefits of trade. The gains from trade can be hampered by several country-specific factors (Sakyi and Egyir, 2017), including:

- Poor design and implementation of national trade policies;
- Lack of complementary policies, institutions and infrastructure;
- Weak institutions;
- Trade structure resulting from poor diversification of production and exports; and
- Limited access to finance.

A specific example of how trade policies can negatively impact trade is the high tariff and non-tariff measures applied to agricultural goods in West African economies. A necessary condition for promoting higher-value-added processing is for business inputs, such as tools and equipment, to be allowed to enter at very low rates. Similarly, if exports were directed at highly competitive markets – as could be the case for meat, hides and skins – zero or low tariffs on imports of inputs could improve the competitiveness for these countries' exports.

Limited regional trade integration hampers development. Hoekman (2020) offers evidence that global value chain trade in Preferential Trade Agreements (PTAs) has higher chances of benefitting its member states. This is because in addition to having uniform policies, PTAs also give countries more opportunities to engage in production that results in cheaper value addition in their cross-border linkages. Kowalski et al. (2015) also found that such agreements can play a crucial role. Their evidence shows that free trade agreements (FTAs) have a higher impact on trade flows of intermediate goods in manufacturing sectors than on aggregate trade flows. The findings are valid for agreements between countries in the same region, or with partners outside it, but the impact is found to be greater in the former case. What both studies conclude is that engaging in regional trade agreements may be a necessary element to further develop regional value chains.

Policymakers in Africa widely recognise the potential of regional trade, evidenced by the push for a more integrated African market. Recent initiatives include the African Continental Free Trade Area between 54 member states of the African Union.

Infrastructure barriers in developing countries undermine competitiveness. The need of businesses to conform to 'just-in-time' delivery systems is a critical determining factor for competitiveness (UNESCAP, ADB, 2019). Small-scale cross-border traders are especially affected, as infrastructure constraints reduce business opportunities – for example, narrow roads cause traffic jams and delays, while lack of public transportation and parking lots, and restrictions on the types of vehicles allowed across the border with goods, affect a company's creditworthiness (WTO, World Bank, 2018). Lack of internet access in Africa also affects the efficiency of credit risk assessments (AfDB, 2017).

Another barrier to trade involves the lack of access to finance. Despite the fact that trade finance is considered a low-risk asset class (ADB, 2019), global demand continues to outstrip supply. The World Economic Forum (2020) found that the shortage of trade finance is one of the top three obstacles faced by 50 per cent of the world countries, notably the poorest. We explore this further in the next section.

<sup>6</sup> See LSE's Sustainability Impact Assessment in Support of the Association Agreement Negotiations between the European Union and Mercosur; also Morin et al., (2018). Mapping the Trade and Environment Nexus: Insights from a New Data Set.



*Gains from trade can be hampered by several country-specific barriers such as the poor design/ implementation of trade policies, lack of infrastructure, weak institutions, poor diversification and limited access to finance.*



*Regional trade agreements will help to further develop regional value chains and achieve a more integrated African market.*



## 03

### The role of finance in enabling trade

#### 3.1 Overview

The main differentiator between trade and supply chain finance and other financial products we support is two-fold: (i) the purpose of the transactions are specifically focussed on enabling the movement of goods between countries and value chain participants; and (ii) as a result, the underlying tenors are relatively short term.

**Trade finance:** In any international trade transaction, there are two key parties involved, namely an exporter who wants to be paid in time for the goods delivered, and an importer who wants to ensure the goods purchased are of the correct quality and quantity expected. Trade finance is an umbrella term that refers to the instruments being used by financial intermediaries to enable global trade (IFC, 2019). It helps to overcome the time gap between exporters being paid and importers paying, ensuring both parties are financially protected throughout the transaction. The majority of trade finance involves credit extended bilaterally between businesses in a supply chain, or between different units of individual companies. Banks play a central role in facilitating trade, both through providing finance and bonding facilities and through the establishment and management of payment mechanisms, such as documentary letters of credit.

**Supply chain finance:** Buyers and sellers in a supply chain have competing interests. While buyers want to pay invoices as late as possible, suppliers prefer to be paid early. Supply chain finance (SCF) serves to bridge these conflicting interests (Oliver Wyman, 2017). SCF refers to the techniques and practices used by financial intermediaries to manage the capital invested into the supply chain, reducing the risk for the parties involved. These aim to lower financing costs and improve efficiency for buyers and sellers by automating transactions and tracking invoice approval (International Finance Corporation, 2019).

The most common trade and supply chain finance instruments are listed in Appendix II.

» *Trade and supply chain finance enables the movement of goods between countries and firms.*



Trade finance has been a key catalyst for the expansion of international trade. Since 2000, global trade flows have trebled from \$6.2 trillion to \$18.1 trillion in 2019, in part enabled by trade financing (ICC, 2020). Despite this surge in global trade flows, the top traders in goods and services continue to be dominated by developed and select emerging economies (WTO, 2020). The African continent, for instance, has one of the lowest rates of trade growth among the major regions of the world. This indicates a need to direct support, including financing, to areas that would benefit the most (AfDB, 2020).

Bank-intermediated transactions now support more than a third of world trade (ICC, 2018). Trade finance is especially relevant for SMEs that often lack the financial resources to import or export goods and services. The Asia-Pacific region is the largest user of bank-intermediated trade finance, but lags behind in terms of making effective use of inter-company non-banking trade transactions through supply chains, factoring and forfaiting (Narain, 2015).

The global demand gap for trade finance is estimated at \$1.5 trillion annually (ADB, 2019b). About 40 per cent of this unmet demand is in developing Asia, with 6 per cent in Africa (AfDB, 2020). This gap leads to reduced economic opportunities through loss of trade for businesses (ADB, 2019b; WTO, 2017). Globally, 60 per cent of all trade finance requests by SMEs are rejected, primarily through the inability of smaller businesses to provide the required documentation, compared to 7 per cent for multinational companies, especially in developing countries and fragile states (IFC, WTO, 2019). There is a serious risk this gap will be exacerbated by the COVID-19 crisis (ICC, 2020).

### 3.2 Impact channels

Trade finance has an overall positive effect on development due to its role in enabling trade (UNESCAP, ADB, 2019; ADB, 2019a; ADB, 2019b; WTO, 2016). This form of finance plays a particularly important role in allowing companies to mitigate the risks associated with importing or exporting goods and services (ICC, 2017; WBG, 2020). Trade finance supports international and regional integration and provides businesses with liquidity to access new markets (AfDB, 2017). Narain (2015) highlights the importance of trade finance as an engine for growth in the Asia-Pacific region, while noting that the region suffers from a persistent demand-supply mismatch and widening of trade finance gaps.

TSCF is important for trading firms, namely for risk mitigation and liquidity support. TSCF mitigates various types of risk involved in a trade transaction by lowering the risk that the seller fails to deliver the goods as agreed, or that the buyer fails to pay or to accept the goods. Trade finance instruments reduce commercial risks (such as performance and credit), protect firms against exchange rate volatility, and ensure secure and timely payment across borders (ADB, 2019b; IFC, 2019; Extra et al., 2019).

Second, it provides liquidity to firms to support (international) trade transactions. Trade finance optimises the availability of working capital on the buyer side and generates quicker and more secure operating cash flow on the supplier side (Cambridge Associates, 2018). This, in turn, supports economic activity and creates value for firms in the supply chain (OECD, 2018). The trade finance approach relies on cooperation among stakeholders within the supply chain and provides new opportunities for firms to obtain loans that face limited access to working capital (Gelsimo et al., 2016).

Access to finance remains a key constraint for SMEs. Various data sources and studies indicate that small firms rely on internal financing much more than large firms, and that the likelihood of a small firm having access to a bank loan in low-income countries is less than half of what it is for a larger firm. Other sources of SME finance, such as leasing and factoring, are also less developed in low-income countries (Narian, 2015). Trade finance instruments can strengthen backward linkages and support vertical integration with MNCs (ADB, 2015; WEF and Global Alliance for Trade Facilitation, 2016; ADB, 2019b). The role of supply chain finance can be particularly powerful in forming business linkages, facilitating clusters of SMEs and consortium financing.



*Since 2000, global trade flows have trebled from \$6.2 trillion to \$18.1 trillion in 2019, in part enabled by trade financing.*



*The global demand gap for trade finance is estimated at \$1.5 trillion annually and will likely be exacerbated by the COVID-19 crisis.*



*Trade and supply chain finance mitigates various types of risk and provides liquidity to facilitate trade transactions.*

Trade finance used to be a popular activity among banks in Africa, but the participation rate has declined. Bank participation rates fell 16 per cent between 2013 and 2019, due to increasing barriers that have raised operational costs and put downward pressure on profit margins (AfDB, 2017). We explore the reasons behind this in the next section.

Environmental and social (E&S) risk management is an evolving topic in trade and supply chain finance. Greater consideration for E&S risks in trade and supply chain finance is a growing movement among DFIs and commercial banks alike. The ICC Sustainable Trade Finance Working Group is an example of an initiative to promote advancement in thinking on E&S risks in trade and supply chain finance. Started by the International Chamber of Commerce (ICC) as a forum for organisations to share ideas, tools and approaches, the Group is working towards setting industry standards, including defining what constitutes 'sustainable trade finance' and developing training on E&S risks in trade and supply chain finance. Tools like IFC GMAP are equipping financial institutions with the capacity to assess the likelihood and severity of poor labour and working conditions, and biodiversity considerations based on country and commodity combinations, making it easier for financial institutions to identify and apply greater scrutiny to high-risk trades (IFC, 2021). These efforts are helping to drive a sustainability agenda in trade finance and a stronger commitment to ESG.

In addition, there is a growing interest in actively targeting sustainably-sourced commodities and trades that help accelerate the transition to low-carbon economies through offering preferential terms such as price incentives, higher risk-sharing or longer tenors. For example, the IFC has partnered with the Banking Environment Initiative to develop a Sustainable Shipment Letter of Credit to integrate sustainability standards into trade documents as a means of supporting trade in Roundtable on Sustainable Palm Oil (RSPO)-certified palm oil (IFC, 2014). As advancements in the thinking on E&S risks and opportunities continues to evolve, the outcome will be more sustainable practices and better E&S risk management.

## Case study: Supporting the imports of food staples in Kenya

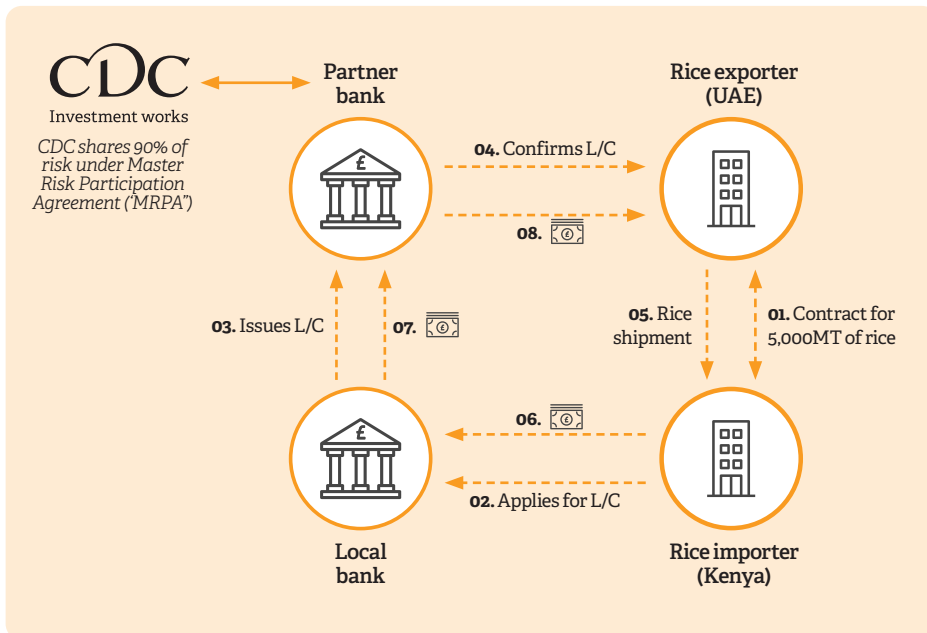
Kenya's national rice consumption is estimated at 949,000 metric tonnes (MT) annually compared to an annual domestic production of 180,000 MT.<sup>7</sup> Kenyan rice imports have grown from around 284,368 MT in 2010 to 650,000 MT in 2020. In 2019, Kenya imported \$257 million worth of rice (1.37 per cent of the country's total imports), the majority coming from Pakistan and Thailand.<sup>8</sup>

In 2020, CDC supported the import of rice into Kenya under a risk-sharing agreement with a regional bank. The bank issued a letter of credit to a local commodity importer headquartered in Nairobi to enable the import of 5,000 MT of Pakistani long grain rice worth approximately \$3 million from a commodity exporter based in the United Arab Emirates (UAE). Faced with a lack of sufficient risk capacity, the confirming bank reached out to us for risk cover of 90 per cent (approximately \$2.7 million) under its risk-sharing agreement. The letter of credit was subsequently confirmed, and the trade went ahead. The transaction reduced counterparty risk for the rice exporter by guaranteeing payment in case the rice importer would fail to pay for the goods upon receipt. The payment and the letter of credit were settled in less than 170 days.

By facilitating trade between Kenya and the UAE, our support indirectly helped to narrow the trade finance gap and increase trade volumes, ultimately improving access to staple foods for Kenyans.

<sup>7</sup> International Rice Research Institute, 2020.

<sup>8</sup> The Observatory of Economic Complexity. Kenya country profile.



### 3.3 Barriers to TSCF access

Barriers to access can be broken down in multiple layers, namely at the macro, financial intermediary and firm level.

#### 3.3.1 Macro and bank-level barriers

Access to appropriate forms of financing remains a persistent challenge for financial intermediaries and firms in developing countries (ADB, 2019a, 2019b). The greater the country risk, the more difficult it is for firms to access TSCF products and engage in international trade (Alam, 2016). In fragile states, access to trade finance is constrained by low or non-existent country risk ratings, weak banking systems, lack of credit information and regulatory requirements. Additional constraints SMEs face include the relatively high cost of capital and inability to meet bank requirements such as collateral (ADB, 2019a).

Regulatory and compliance barriers are among the most commonly cited challenges for financial intermediaries, according to the ICC Global Survey Report (2018) and the ADB (2019). Commercial banks are required to maintain leverage ratios and meet minimum capital requirements under the Basel III framework. Trade finance fits into the Basel framework<sup>9</sup> particularly in relation to the rules for credit and liquidity risk, and the position of trade finance in the denominator of the leverage ratio.

Banks cite the lack of sufficient risk capital and limits with correspondent banks as a constraint. Banks in low-income countries in particular are often unable to meet capital requirements, hampering the growth of trade finance portfolios (AfDB, 2017). Studies by ADB (2017; 2019a, b) suggest the perceived regulatory requirements often result in banks being unable to meet the guidance provided by international and national regulatory bodies, which has an adverse effect on access to trade finance for businesses.

» Access to trade finance remains a persistent challenge for firms, especially in developing countries and fragile states.

<sup>9</sup> The Basel Committee on Banking Supervision was formed in 1974 to coordinate banking regulations around the world. It has 45 members from 28 jurisdictions. BCBS publishes “accords” which set out detailed provisions for bank regulation, and most regulators derive their domestic regulations from these accords. The most recent accord is Basel III, published in response to the financial crisis of 2007/8 and updated in 2017.

Basel III proposes strict capital treatment rules for the issuance of letters of credit relative to Basel II and relative to the treatment of other types of banking business. The regulations are being gradually implemented in local banking regulations, and have led banks to reduce support for trade finance or even pull out of the trade finance business.

Compliance with international regulations on Anti-Money Laundering (AML), terrorist financing and sanctions, as well as licensing and export requirements, are seen as obstacles for trade finance growth. International standards on AML, terrorist financing and sanctions controls have become more stringent. As a result, international banks have faced increased regulatory scrutiny on their compliance controls and have invested heavily in ensuring adequate compliance controls are implemented in higher risk jurisdictions and for higher risk products. This 'cost of compliance' limits the ability of businesses in higher risk markets to access finance for trade, and particularly affects smaller businesses (WTO, 2016; AfDB, 2017; Alam, 2016; OECD, 2016). According to the ICC Global Survey 2020, 84 per cent of banks report being extremely or somewhat concerned about AML/KYC (Know Your Customer) requirements and see them as an obstacle for trade finance growth. Into Africa (2017) specifically lists impediments that African firms face from the implementation of regulations stemming from state and international laws, regulations and policies, which include licensing and other export requirements.

Growing protectionism and trade policy uncertainty is also increasingly impacting access. This was highlighted as a barrier by 33 per cent of companies (receiving or applying for trade finance) in the McKinsey Global Executive Survey (2019). The highly volatile trading environment makes it complicated for financial institutions to carry out due diligence, and to understand and categorise the severity and likelihood of the risks in the supply chain (OECD, 2016; WTO, World Bank, 2020).

Legacy technologies and reliance on excessive paperwork is another constraint. Trade finance is associated with high operational and transaction costs, because of paper-heavy processes and the resulting lack of cohesion between participants in the transaction cycle (ICC, 2017). Paper-based manual processing of trade financing instruments, such as Letters of Credit, involves examination and validation of a large number of documents, often leading to processing delays and errors by banks, and increasing the risk of financial fraud (ADB, 2019a).

Digitalisation and innovation hold promise, but adoption is still not widespread (ADB, 2015). Technological innovation and automation can reduce collateral, operational and compliance costs, thereby increasing the profitability of financing trade (ICC, 2018). Evidence suggests that technological diffusion can reduce trade finance operating costs by 50–70 per cent and shortens turnaround times by nearly a third (ADB, 2019b). This can help banks to process more applications and improve the viability of transactions with smaller enterprises (ADB, 2017). However, digitalisation is still in a nascent form: only 12 per cent of banks have successfully implemented technology solutions and 37 per cent of the banks do not have digitalisation as part of their immediate agenda (ICC, 2018). The survey (2018) found 35 per cent of respondents agreeing paper documentation is a key barrier, while 52 per cent highlighted the lack of solutions for document verification as impediments.

Degrees of separation and lack of visibility on underlying trades remains a concern. The structure of TSCF products can result in lenders being far removed from underlying trade transactions. Intermediated structures can create significant challenges in the collection and assessment of data on the commodities being traded. Without traceability or access to data down the supply chain, financial institutions may struggle to assess the likelihood of negative impacts on biodiversity, or breaches in human rights that may be associated with particular commodities. Similarly, it can be challenging to identify and track sustainably sourced or certified agricultural products through the supply chain.

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» *Digitalisation and innovation can address barriers through cost reductions, but technology adoption is still not widespread.*

Recognising these challenges, organisations are striving to create innovative solutions. The IFC Sustainable Shipment Letter of Credit imbeds sustainability into standard trade documents as a method of ensuring the traceability of certified palm oil (IFC, 2014). Another example is Halotrade, a pilot project run by the University of Cambridge Institute for Sustainability Leadership that used blockchain technology to track tea produced by smallholder farmers in Malawi through the supply chain (Halotrade, 2019). While these are positive developments, until such innovative products become more mainstream, access to information will remain a significant challenge.

### 3.3.2 Firm-level barriers

Business-related barriers impact access to TSCF in developing countries, especially for SMEs. Smaller firms have limited available liquidity, sometimes lack sophisticated financial reporting, are unable to provide sufficient collateral, or struggle to comply with information disclosure processes. SMEs are therefore often limited to internal finance sources, such as personal savings, borrowing from friends and relatives, and retained earnings. This puts a severe constraint on the capacity of firms to grow and take advantage of market opportunities (Harvie et al., 2013).

The inability to meet requirements are key constraints that often lead to abandoned business transactions (WTO, 2016). SMEs face the biggest hurdles in accessing finance, and 75 per cent of rejected requests for trade finance involve SMEs (Harvie, 2005; IFC, WTO, 2019). Studies show SMEs often lack access to alternative financing options and face a higher rejection rate in comparison to larger businesses (Auboin and DiCaprio, 2017). A rejection of a trade finance application often leads them to abandon the transaction (WTO, 2017). ADB (2017) point out that trade lending to SMEs in developing countries is severely constrained by the lack of credit history, limited knowledge and experience of trade finance, and absence of collateral.

Companies often lack the necessary paperwork to comply with AML/KYC requirements. KYC and related processes can be time-consuming, costly, and can cause interruptions in businesses accessing trade finance products. Delays in customer onboarding and screening processes can negatively impact the cost of financing and increase the time taken to access financing (ADB, 2015; IFC, 2019). Studies have found that for SMEs, the cost of compliance with regulations is high (AfDB, 2020; IFC, 2019; AfDB, 2017; ADB, 2015).

Lack of business and management skills magnify financial barriers for SMEs. Low levels of financial literacy prevent SMEs from adequately assessing and understanding different financing options, as well as preventing them from navigating complex loan application procedures. Further, SME accounting and financial statements are sometimes less transparent, which makes them riskier and less attractive to lenders.

Women face particularly high barriers in accessing trade finance, as their applications are rejected 2.5 times more than those of male entrepreneurs (ICC, 2018). Only one in five global exporting businesses is led by a woman, and the lowest rate of female participation is in West Africa (ITC, 2015). In Asia, nearly 40 per cent of micro, small and medium-sized enterprises (MSMEs) are women-owned, and are relatively financially constrained compared to male-owned enterprises (ADB, 2019a). Adopting a gender lens to TSCF investing, such as through the 2X Challenge initiative, can help in addressing gender inequities in international trade transactions.<sup>10</sup> Gender lens investing also presents an opportunity to address a large underserved market.

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» *Adopting a gender lens to TSCF investing can help in addressing gender inequities in international trade transactions.*

<sup>10</sup> In 2018, the G7 DFIs announced the 2X Challenge – a commitment to mobilise investment in businesses and funds that contribute to gender equality.



## 04

### Areas for future research

While a large body of evidence exists on the ways in which trade affects development, the evidence on the impact of TSCF is a newer area of research, and relatively more challenging to assess given the intermediated nature of the impact and data confidentiality. There are several key dimensions that require more attention:

- The long-term distributional effects of TSCF on low-income and/or vulnerable segments (including women). How does TSCF impact those with the greatest need, and how can we ensure that investments reach these populations?
- Assessing the direct impact of TSCF programmes on the outputs outlined in the TSCF Impact Framework, such as easing risk limits, increasing access to working capital, reducing counterparty risk, and supporting technological improvements. For instance, how do increased risk limits translate into greater volumes of TSCF in the market? Given the nascency of the field, there are fewer studies on this subject. An additional complication in this area relates to the fungibility and traceability of capital, which makes measurement all the more challenging.
- The macro-level impact of TSCF on economic growth and development. Owing to the complexities in assessment, there are limited studies assessing the direct contribution of TSCF on higher trade volumes, and how this in turn can contribute to the development of economies and people.

This evidence review also noted that the impact of global value chains remains under-researched. With regards to global value chains, current evidence shows that integration into production networks, either global or regional, can provide new opportunities for developing countries to participate in global trade and diversify their export baskets. Where the research falls short is in better understanding the contribution of global value chains in enhancing the resilience of value chains to external shocks, both for the individual businesses and for the entire value chain. As the rise of global value chains is a relatively recent phenomenon, the area is likely to experience a growth in its evidence base in the coming years.

In addition, further work is required to better understand the impact of physical climate risks on trade and supply chains. This includes the impact of more frequent extreme natural events, rising sea levels, or changes in a country's natural endowments.

DFIs and other impact investors can play a role in contributing to the evidence and deepening the impact of their TSCF investments through:

- (i) Incorporating screening criteria: Investors can enhance their intentionality through structuring investments to target certain impact objectives or trade types, such as targeting low-income or economically fragile countries, SMEs, women-led businesses and climate-positive trades. At CDC, we have started setting impact objectives in recent years by setting ex-ante targets and, in some cases, offering incentives for financial intermediaries (e.g. by allowing for longer tenors and/or higher risk participation).
- (ii) Collecting and monitoring data: Investors can integrate impact indicators in portfolio management tools to create a better understanding of the impact performance of TSCF portfolios. Portfolio management tools can provide rich, real-time data on countries, sectors, purpose of the underlying facilities and trade/business types. Innovative technologies make this increasingly possible.
- (iii) Conduct evaluations: Impact investors can run evaluations to better understand the ultimate impact of their TSCF investments. These can be in the form of long-term studies spanning the breadth of the portfolio, or investment-specific assessments to understand whether the impact objectives of an investment are being delivered.

# Appendix 1

## Methodology

The evidence review identified reports and articles from the past 20 years, and the literature searched is based on the following criteria:

- a) Search term includes 'Trade', 'Development', 'Poverty', and/or 'Supply Chain Finance' and keywords included: finance OR financing OR (trade credit) OR (bank credit) OR (early payment) OR (dela\* payment) OR (advanc\* payment) OR (capital constraint) OR (financial constraint) OR factoring OR (limited liability) OR (cash conversion cycle).
- b) Published between 2000-2020, with a focus on sustainable development goals (SDGs).
- c) High-quality and rigorous methodology.

Of the 65 studies reviewed, 58 studies were selected for evidence mapping review. Additional sources have been cited where relevant to expand on the context. The LSE team also conducted five interviews with key experts in the field.

## Evidence mapping and report

### Identification of sources

As per the request for proposals, the LSE team conducted a review of the academic and international policy literature presenting evidence on:

- a) Transmission channels between trade, development and finance.
- b) The framework for trade and supply chain finance
- c) Factors for inclusive and sustainable trade

The LSE team focussed on literature published after 2000 for several reasons: a longer timeframe leads to the inclusion of too many sources for meaningful analysis; and the global financial crisis resulted in a major shock for the global economy – therefore papers which do not take the global financial crisis into account are less meaningful.

The identification of secondary sources for the literature review continued to be performed at the inception stage and in preparation for the study deliverables using the following techniques:

- **Web scraping:** gathering research publications relating to the study topic from the LSE Library and public websites (public or private institutions and academic institutions).
- **Snowballing:** additional sources referenced in materials already identified and/or gathered from web scraping.

### Quality assurance of sources

While the identification of existing literature relating to the study topic aimed to be as comprehensive as possible through these means, a selection of the sources for review was based on the extent to which the information provided:

- Was relevant to the study's research questions – helping to answer the questions at hand.
- Had credibility – focusing on the validity of the research methods used to arrive at the findings.
- Offered insights into best practices, recommendations and evaluation techniques.

These aspects formed part of the LSE team's approach to quality assuring the identified secondary sources, for the sake of efficiency and consistency in research. The LSE team also identified gaps in the evidence base, where there were no existing information sources to answer a research question.



## **Review and analysis of quality assured sources**

Once the literature sources were checked for relevance and quality, information was extracted and analysed across the following key questions:

- Through what channels is the link between trade, development and finance strengthened?
- Through what channels can organisations benefit the most from TSCF?
- How can CDC optimise its impact through financing in line with the organisation's investment strategy and approach?

The information from the quality assured secondary sources was extracted and coded into units of observation against each key question. This facilitated the identification of information gaps. Five external key experts, namely Eugene Bempong Nyanktakgi (AfDB), Alisa DiCaprio (R3), Susan Starnes (IFC), Roberto Leva (ADB), and Rebecca Harding (Coriolis Technologies).

### TSCF Instruments

#### Examples of trade finance instruments (ICC, 2019)

- **Letters of credit:** This provides an irrevocable guarantee to the exporter that – provided the goods and services are delivered to the importer according to the contractual terms and the compliant document – it will be paid by the issuing bank of the importer. It also provides assurances to the importer that the goods and services ordered will be received, in line with the compliant documentation and under any contractual terms set out in the purchase agreement.
- **Guarantees:** These provide risk coverage against non-compliance by a contracting party to fulfil agreed obligations (such as failure to pay or deliver). A guarantee is a type of protection that one contracting party imposes in case the other contracting party fails to comply with the predefined specifications. In such an event, the first party will receive a compensation from the guarantor, to whom the second party has to repay.
- **Documentary collection:** An instrument whereby an exporter entrusts the collection of a payment to the remitting bank (exporter's bank), which sends documents to a collecting bank (importer's bank), along with instructions for payment. Funds are received from the importer and remitted to the exporter through the banks involved, in exchange for those documents.
- **Open account:** A transaction where the goods are shipped and delivered before payment is due. This is the most advantageous option for the importer, in terms of cash flow and cost, but it is the highest risk option for an exporter. Because of intense competition in export markets, foreign buyers often press exporters for open account terms, since the extension of credit by the seller to the buyer is more common abroad. Therefore, exporters that are reluctant to extend credit may lose a sale to their competitors.

#### Examples of supply chain finance instruments

- **Receivables discounting:** The supplier of goods sells its receivables to the financial institution. At maturity, the buyer pays back the proceeds of the receivables to the financial institution.
- **Forfaiting:** Purchase of medium to long-term future payment obligations represented by financial instruments by a financial institution, at a discount in return for a financing charge. At maturity, the buyer pays the face value to the financial institution.
- **Factoring:** A financial institution purchases receivables from a seller of goods and services at a discount. At maturity, the buyer pays the invoice proceeds to the financial institution.
- **Reverse factoring:** The seller sells their receivables to the financial institution, to which it finances based on the creditworthiness of the buyer. On maturity of the invoice, the buyer pays the principal amount owed to the financial institution.
- **Loan/advance against receivables:** A loan to a seller is repaid through funds generated from current or future receivables. The security is considered as the receivables. At maturity, the seller repays the financial institution.
- **Distributor finance:** Financing for a distributor of a large manufacturer to provide funds to hold goods for sale and to reduce the liquidity gap. At maturity, the distributor repays the financial institution (IFC, 2019).
- **Loan/advance against inventory:** Financing provided to a buyer or seller holding inventory (either pre-sold, un-sold, or hedged). Typically, the financial institution takes rights or security control over the underlying asset. The proceeds of sales are used for repayment to the financial institution.
- **Pre-shipment finance:** A loan provided to a seller by a financial institution for sourcing, manufacturing, or conversion of semi-finished goods into finished goods, which are then delivered to a buyer. The financial intermediary usually provisions a percentage of the value of the order as advance, with disbursement made in stages as the order is fulfilled. At maturity, the seller repays the financial institution.

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