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Drivers and Constraints for Adopting Sustainability Standards in Small and Medium-sized Enterprises (SMEs)

Christoph Sommer

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Bonn, August 2017[1] Christoph Sommer

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Abbreviations

B2B	business-to-business
B-BBEE	Broad-Based Black Economic Empowerment
BMZ	German Federal Ministry for Economic Cooperation and Development (Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung)
CII-ITC	Centre of Excellence for Sustainable Development (India)
CSR	corporate social responsibility
EU	European Union
EUI	European University Institute
FGV	Fundação Getúlio Vargas
GDP	gross domestic product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GPFI	Global Partnership for Financial Inclusion
GVC	global value chain
ICRIER	Indian Council for Research on International Economic Relations
ICT	information and communication technology
IFC	International Finance Corporation
ILO	International Labour Organization
ISO	International Organization for Standardisation
ISPO	Indonesian Sustainable Palm Oil
ITC	International Trade Centre
MGG	Managing Global Governance
MNE	multinational enterprise
MSC	Marine Stewardship Council
MSME	micro, small and medium-sized enterprise
NGO	non-governmental organisation
SABS	South African Bureau of Standards
SAC	Standardisation Administration of China
SDG	Sustainable Development Goal
SME	small and medium-sized enterprise
SIIS	Shanghai Institutes for International Studies
UN	United Nations
UNFSS	United Nations Forum on Sustainability Standards
USD	US dollar
VSS	voluntary sustainability standards
WTO	World Trade Organization
ZED	Zero Defect and Zero Effect

Executive summary

In order to "make standards work" for small and medium-sized enterprises (SMEs) and sustainable development, the challenges and incentives for SMEs in the up-take of standards need to be better understood. The paper analyses five country case studies in the emerging economies of China, Brazil, India, Indonesia and South Africa in order to 1) identify drivers and constraints for the adoption of social and environmental standards by SMEs and 2) to derive policy considerations of how to promote more sustainable production processes and compliance by SMEs with social and environmental standards.

Over the last decades, globalisation has led to the continued internationalisation of production processes. Production has become fragmented and dispersed across countries with multiple firms contributing intermediate inputs to the final good. These complex production networks – the global value chains (GVCs) – have fostered the relevance and spread of standards for several reasons: Civil society organisations try to make production more transparent through the certification and labelling of products and services that comply with social and environmental standards in order to make conscious consumption decisions possible. Large corporations, as lead firms of GVCs, make use of standards to steer and organise their vast supply chains and ensure the quality and compatibility of the supplied inputs. In addition, standards compliance allows lead firms to manage brand reputation and to access high-value segments of the market, for instance, for ethical and organic produce.

This has given rise to a rich and complex landscape of public and private standards. Private standards stem from private multi-stakeholder initiatives including civil society organisations and/or businesses, from industry associations or from the corporate social responsibility strategies and codes of conduct of private firms. Public standards emerge from national regulations that aim to protect the safety and health of their citizens, as well as the fragile ecosystem, by limiting the scope of action for businesses and private actors. Other sources of public standards are intergovernmental organisations and international initiatives. Due to the proliferation of standards and co-regulation, the lines between public and private standards and between voluntary and mandatory standards have become blurred.

While standards were initially concerned with quality and the compatibility of intermediaries, they have increasingly included an orientation towards the production process to account for consequences for workers, the local community, and the environment – starting in the late 1990s. Social and environmental standards, that this paper regards as "[…] set[s] of criteria defining good social and environmental practices in an industry or product" (ISEAL, 2017), have the potential to foster labour rights, working conditions, and environmental-friendly practices in supply chains and global production. After all, sustainability-oriented lead firms are expected to push sustainability standards across GVCs so that SMEs in the supply chains adhere to the standards requirements.

The adoption of standards may empower SMEs to access GVCs and export markets in order to benefit from price premiums, increase of sales and more secure markets. Integration into GVCs additionally promotes the dissemination of knowledge and technology to SMEs in developing and emerging countries. Consequently, the implementation of sustainability standards has the potential to foster sustainable SME development and in turn to spur employment creation and economic growth, as SMEs form the backbone of the economy accounting for more than half of the employment and more than 90 per cent of businesses worldwide. This may contribute to the achievement of the 2030 Agenda, in particular to

Sustainable Development Goal (SDG) 8 (decent work and economic growth) and SDG 12 (sustainable consumption and production patterns). For this reason, social and environmental standards have gained attention in the political sphere and have been prominently integrated into the latest leaders' declarations of the G7 and the G20.

However, standards implementation may necessitate adaptations in the production process and technology. This requires managerial and technical skills as well as the financial means for investments, both of which SMEs systemically lack. Hence, the spread of standards could exclude SMEs from international production and from lucrative markets. Concerns about discriminatory effects and standards as technical barriers to trade have stirred debates of whether standards – in particular private standards – fall under World Trade Organization (WTO) rules.

Because of the growing importance of standards and the ambivalent implications for SMEs, this study attempts to identify the incentives and challenges that SMEs face in the adoption of sustainability standards. Identifying the drivers and constraints for standards implementation, the study also tries to understand the link between finance and sustainability standards. Evidence is based on five country case studies from Brazil, China, India, Indonesia, and South Africa, which build upon key informant interviews, in triangulation with secondary data and existing literature. Emerging economies are best suited for the analysis of the drivers and constraints for standards adoption by SMEs as they have the most conducive quality infrastructure environment for standards implementation within the developing world.

Both drivers and constraints have been organised into three broad categories: demand; firms and business environment; and political environment. Among the incentives for standards implementation, the demand for sustainably produced goods and services is found to be the key driver. Access to GVCs and export markets, new domestic markets and public procurement constitute the most important motives for standards compliance as they go hand in hand with increase of sales and more secure buyer relationships. Technical and financial assistance by lead firms or government programmes and national regulations are two relevant drivers as well, especially when market forces create insufficient demand for sustainable products or exert pressure on labour rights and the environment.

However, national regulations and legal enforcement can also constitute a relevant constraint. The lax enforcement or lack of legally binding minimum requirements impose steep cost disadvantages on standard-compliant SMEs relative to non-compliant competitors. Mandatory localised standards that are not recognised internationally may compromise the ability of export-oriented SMEs to additionally adopt important international standards.

The most binding constraint for standards adoption are implementation and certification costs, which are essentially fixed costs and thus weigh particularly heavy on smaller firms. Such firms face difficulties in financing adaptation to standards requirements and the recurrent costs of audits, documentation, and certification fees. Against this background, access to finance and the size and productivity of firms are also identified as two relevant constraints. Another important challenge is the lack of awareness among firms about sustainability standards, their relevance and value to the businesses, and information gaps with respect to the first practical steps of how to implement standards. This paper develops various policy considerations as regards how to foster the adoption of standards and sustainable supply and value chains.

Most importantly, governments have to create demand for sustainably produced goods and services by adapting their public procurement strategies and by scaling up SME development programmes that integrate smaller firms into international production processes characterised by sustainability requirements. At the same time, the problem of prohibitive implementation and certification costs must be addressed through mutually beneficial cost-sharing schemes with the lead firms of GVCs; governments may facilitate such partnerships, while standard setters should develop multi-stage certification processes that verify and reward first steps in transition to full compliance.

Information platforms, such as national voluntary sustainability standard platforms under the auspices of the United Nations Forum on Sustainability Standards (UNFSS), can bridge the information gap for SMEs with respect to the relevance, value, and implementation of sustainability standards. Technical assistance may smoothen the process. It is crucial to involve financial institutions in the quest for sustainability promotion. Development finance institutions should take a leading role and embed standards compliance into the terms and conditions of lending contracts. After all, easier or subsidised access to finance constitutes a strong motive for standards adoption. Central bank requirements may strengthen sustainability criteria in the credit assessment among commercial banks.

1 Introduction

The growth and spread of standards has been fostered by the continued internationalisation of production processes. Production has become fragmented and dispersed across countries so that complex production networks of regional and global dimensions – so-called global value chains (GVCs) in which multiple diverse firms contribute to the final good or service through intermediate inputs – have emerged. The rising share of intermediary goods in global trade, which already accounts for more than two-thirds of trade, underlines how GVCs have reshaped trade patterns. While international supply chains and GVCs have promoted efficiency gains and both decreased cost and increased the variety of consumption goods, production has become more complex (Marín-Odio, 2014; OECD [Organisation for Economic Co-operation and Development], WTO [World Trade Organization], & World Bank, 2014). Lead firms need to be able to steer extensive networks of suppliers, which implies monitoring and managing flows of inputs and processed products while ensuring transparency, traceability, and quality. And here, standards have become a crucial tool to hold suppliers accountable to documentation requirements as well as to quality, safety, social and environmental norms.

Most standards do not stem from the social and environmental sphere but merely guarantee to buyers that certain product characteristics have been met. At the same time, however, more and more standards are becoming increasingly concerned with the process of production, looking into the social and environmental consequences of producing the good of interest. In order to label and market their products accordingly and to thus enter or create high-value ethical and organic markets, firms adopt sustainable practices and require their suppliers to comply with these as well. Standards, certification and labelling are also a result of civil society initiatives for more transparency in interconnected global production processes. The introduction of standards informs conscious consumers about products that adhere to social and environmental sustainability principles, both upstream in supply chains and along the value chain.

As the significance and market penetration of standards grow, export-oriented SMEs, and SMEs integrated or seeking to integrate into sustainable supply chains and GVCs, need to face the challenges of adopting standards. In a 2011-survey carried out by the Organisation for Economic Co-operation and Development (OECD) and the World Trade Organization (WTO) (2013), lead firms named "meeting standards" as one of the top five barriers for inclusion of SMEs in GVCs. Since then, the importance of standards has further increased: the agricultural sector, for instance, recorded continuing, exceptional growth of standard-compliant production of 41 per cent compared to 2 per cent in the corresponding conventional commodity markets, leading to significant market penetration for coffee, cocoa, palm oil and several other commodities (Potts et al., 2014). For fruit and vegetable produce, GlobalGAP has become a de facto mandatory standard for exports to the European Union (EU).

Private, voluntary standards in the form of voluntary sustainability standards (VSS) or business standards that are fleshed out as industry association standards or as corporate social responsibility (CSR) standards, become the norm in many industries and sectors, while public, mandatory standards are imposed by national regulation. Compliance with standards may require changes in the production process and the technology, which may involve further investments. It may increase production costs and definitely creates additional costs for certifying or verifying standards compliance (ITC [International Trade

Centre], 2016b). In order to meet standards requirements, SMEs need to be equipped with both managerial and technological knowledge as well as financing. Yet SMEs systematically lack capacity, productivity, a trained labour force, and managerial and entrepreneurial skills. Additionally, half of the small and medium-sized enterprises lack access to finance with an estimated financing gap of USD 2.1 to 2.6 trillion (Stein, Ardic, & Hommes, 2013).

Against this background, the spread of standards, in particular private standards, has aroused heated debates as to whether the WTO rules embedded in the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and the Agreement on the Technical Barriers to Trade (TBT) apply. Emerging and developing countries complain that standards create discriminating effects and barriers to trade (Thorstensen, Weissinger, & Sun, 2015). Non-compliance effectively results in exclusion from international markets and jeopardises, on the level of the firm, the integration into global production processes (see, for example, Brandi, 2017) and, at the country level, economic integration, growth, and the creation of employment.

On the other hand, the implementation of standards may boost SME growth through price premiums, more secure markets, increase in sales, access to finance and/or access to GVCs and lucrative markets. Helping SMEs to develop and mature by growing beyond their local market and into sustainable GVCs may contribute significantly to widespread, sustainable development. After all, small and medium-sized enterprises are the backbone of the economy, accounting for about 90 per cent of businesses and more than half of the employment worldwide (IFC [International Finance Corporation], 2013); small and medium-sized firms also generate the highest employment growth and the largest share of job creation (Ayyagari, Demirguc-Kunt, & Maksimovic, 2014). Thus, integration of SMEs into socially and environmentally sustainable GVCs will contribute to the achievement of the Agenda 2030, in particular of Sustainable Development Goal (SDG) 8 (decent work and economic growth) and SDG 12 (sustainable consumption and production patterns). Due to their potential contribution to sustainable development, standards have gained attention in the political sphere. In 2016, the G7 leaders agreed in the G7 Ise-Shima Leaders' Declaration to "[...] strive for better application of internationally recognised labour, social and environmental standards in global supply chains" (G7, 2016, p. 7) and confirmed this position in the 2017 declaration. The G20 countries also put sustainability standards onto their agenda; under the German Presidency, the G20 Employment Working Group (EWG) has included the promotion of sustainable supply chains as one of their four core topics while the SME Finance Subgroup of the Global Partnership for Financial Inclusion (GPFI) mandated a study to understand the role of finance in standard promotion.[2] Accordingly, the G20 Hamburg Leaders' Declaration dedicates a whole section within the topic 'Sharing the Benefits of Globalisation' to sustainable global supply chains and standards. The declaration acknowledges the potential for job creation and balanced economic growth while emphasising the importance of labour, social and environmental standards in achieving sustainable and inclusive supply chains.

2 The study was mainly conducted by the World Bank Group (WBG) and is titled "Leveraging Financial Services for Small and Medium-sized Enterprises (SMEs) in Sustainable Global Value Chains (GVCs)". DIE contributed a focus on the demand side, namely on SMEs and their challenges and incentives in taking up standards.

However, if the possible contributions that standards for SMEs can make to development are to be unlocked, the bottlenecks and the drivers for standards adoption by SMEs need to be better understood. Thus, the aim of this paper is twofold: first, to a) identify drivers and constraints for the adoption of social and environmental standards by SMEs in order to enter globalised production processes within GVCs or to access lucrative markets and b) to understand the link between sustainability standards and finance; second, to derive considerations and recommendations for policymakers, government institutions, donors, business organisations, and financial institutions on how to promote more sustainable production processes and compliance with social and environmental standards by SMEs in GVCs.

The study is based on five country case studies that were conducted by local research partners in the emerging economies of Brazil, China, India, Indonesia, and South Africa. Qualitative findings from key informant interviews with entrepreneurs and experts from industry associations, standards organisations, regulators, financial institutions, and/or lead firms are triangulated with secondary data and available studies to answer the said research questions.

The rest of the paper is organised as follows: the way in which the research has been designed is laid out in Section 2. The following section gives an overview of standards and their origins. Section 4 reviews the literature to assess, firstly, the impact of internationalisation in production and of the growing importance of sustainability on SMEs and, secondly, catalysts and obstacles to the adoption of sustainability standards by SMEs. Summaries of the findings from the five case studies with regard to the national SME landscape, type and relevance of standards, drivers and constraints for standards implementation, and demand for finance are presented in Section 5. While Section 6 synthesises the evidence and the following section offers discussions and conclusions, Section 8 provides policy considerations for governments, donors, standard organisations, financial institutions and value chain actors.

2 Research design

The paper explores the incentives and barriers that SMEs, either integrated or seeking to integrate into sustainable GVCs and/or global markets, face with regard to adopting social and environmental standards and explores the link between the implementation of standards and demand for finance. The core of the analysis is a case study approach that comprises five country case studies from the emerging economies of Brazil, China, India, Indonesia, and South Africa.

The focus on emerging economies has been chosen to ensure the availability and relevance of sustainability standards within the local context. The five country cases in this study constitute good learning examples with regard to the drivers and constraints for adopting sustainability standards because of the relatively well developed quality infrastructure (QI) systems that are necessary to facilitate and foster standards implementation. As early recipients of technical and financial assistance for the setting up of quality infrastructure, the emerging economies benefited for many years until national metrology institutions had time to mature. In Brazil, for instance, the Instituto Nacional de Metrología, Qualidade e Tecnología (INMETRO) was founded in 1968 with German support that continued into the mid-1990s (Ehlbeck, 2001). Positive effects of cooperation with emerging countries on

national quality infrastructure are reflected by a study of the National Metrology Institute of Germany (PTB). The authors' preferred measurement index of quality infrastructure ranks the country cases of Brazil, China, India, and South Africa among the top 32 countries and identifies them as "best performers" among official development aid (ODA) recipients (Harmes-Liedtke & Oteiza Di Matteo, 2011). Hence, among emerging and developing economies, the chosen country cases provide the most conducive quality infrastructure environment for the implementation of standards and thus allow drivers and constraints for standard adoption to be studied. This is further underlined by a report by the International Trade Centre (ITC) and the European University Institute (EUI) (2016), which found the prevalence of standards to be "strongly associated with a country's GDP [gross domestic product], logistics performance, quality of institutions and membership in the World Trade Organisation (WTO)". This suggests that, within the developing world, standards would be predominantly expected to be important in emerging economies where the size of the economy and the quality of the logistical and institutional infrastructure tend to be better.

As the criteria for classification as an SME vary across countries, this paper applies a loose definition of SMEs. Each country case study adopts the national definition. Due to its simplicity and widespread use, staff headcount is presented in this paper as the preferred criterion, even if other criteria are additionally used in some country cases. Firms with less than 500 employees are classified as SMEs in Brazil; for China the figure is less than 1,000,[3] and in South Africa firms with less than 200 employees are described as small or medium. SMEs in India are classified according to investments (less than USD 2 million) and in Indonesia according to assets (less than USD 1 million) and turnover (less than USD 5 million).[4]

The concept of sustainability standards used in this paper is elaborated in more detail in the following section about origin and classification of standards.

The case studies were conducted by research partners of DIE who are part of the Managing Global Governance (MGG) network and have been engaged in previous work on sustainability standards. Country cases build upon key informant interviews, in triangulation with secondary data and available studies. First, a broad overview is provided in order to identify sectors and industries in which sustainability standards are relevant. In the following, the case studies zero in on drivers and constraints for standards implementation and the link to finance. The zeroing in is of a qualitative nature and is based on interviews with key informants from SMEs, industry associations, standard organisations, regulators, financial institutions, and/or lead firms. The case studies seek to explore:

- the types of standards that are relevant in different sectors and industries, looking particularly into the dimensions of geographical coverage (local versus international standards) and the nature of standards (public versus different types of private standards);
- incentives and challenges for SMEs to adopt sustainability standards as well as stakeholders that promote the spread of standards; and

3 The upper limit applicable to most industries is "less than 1,000", but varies across industries from "less than 200" in the wholesale sector to "less than 2,000" in information technology (IT) (OECD, 2016).

4 If national SME definitions were not provided in the case studies, definitions were taken from Kushnir (2010).

- financial services that are used by SMEs, including the role of sustainability standards in potentially facilitating the access to finance.

First, a summary of every case study is presented, before the country cases are synthesised by way of developing common themes and by contrasting different developments in the adoption of sustainability standards by SMEs in GVCs across different geographical regions and in different country contexts. Finally, the drivers and constraints are compared to the ones identified in the literature, and policy considerations are derived.

3 Understanding standards and their role

3.1 Origin and classification of standards

Social and environmental standards have gained increasing attention in academia, policy circles and the business world over the last 15 years. Yet definitions and categorisations of social and environmental standards are numerous and blurred. This paper champions a broad definition of social and environmental standards as "[…] set[s] of criteria defining good social and environmental practices in an industry or product" (ISEAL, 2017). In the following, the origins of social and environmental standards – which will also be referred to as sustainability standards – will be illuminated by offering a classification of standards based on Henson and Humphrey (2009) but extending their narrow focus on food safety standards to sustainability standards in general. It is important to be aware that this classification applies in principle to all types of standards, especially since the majority of standards do not qualify as food safety standards or social and environmental standards, but serve compatibility and quality concerns as well as other standardisation purposes.

It has to be noted that the most comprehensive typology of standards is presented by Nadvi and Wältring (2004). Their typology differentiates standards along the seven dimensions presented in Table 1.

Table 1: Typology of standards

Scope	Function	Geographical reach	Key drivers	Forms	Coverage	Regulatory implications
Process standards, product standards	Social, labour, environmental, quality, safety, ethical	National, regional, international	Public, private, public-private	Management standards, company codes, labels	Generic, sector-specific, firm/value chain-specific	Legally mandatory, necessary for competition, voluntary

Source: Based on Nadvi and Wältring, 2004

Since the focus of this paper is on social and environmental standards, the first two dimensions are already fixed: interest lies in the **social and environmental** performance (function) during the production **process** (scope). The dimensions of "coverage", "forms", and "geographical reach" are merely of a descriptive nature for the formal anchoring and the spread of standards. For the sake of simplicity, the main focus will thus be directed towards the two central dimensions that also influence the other dimensions of the typology: the key players behind the standards and regulatory implications of standards. Henson and

Humphrey (2009) present a classification of standards that is reduced to these two features and thus adopted in this paper.

Most importantly, Henson and Humphrey (2009) differentiate between public and private standards. Public standards are introduced by national governments or by intergovernmental organisations and international initiatives, while private standards are established by individual firms, industry associations and private multi-stakeholder initiatives including civil society organisations. As indicated in Figure 1, standards can be further grouped into legally binding requirements (mandatory) and voluntary standards that usually go beyond legal obligations in order to create high-value market segments and to address ethical concerns.

Figure 1: Classification of standards

	Public	**Private**
Mandatory	**Regulations** • *Example: emission standards (e.g. Euro 6, US Clean Air Act)* • *Origin: national governments, national standard-setting bodies*	**Legally-mandated private standards** • *Example: reference to ISO 9000 in EU Directive on CE marking*[5] • *Origin: VSS & national governments*
Voluntary	**Public voluntary standards** • *Example: ILO MNE (multinational enterprise) Declaration* • *Origin: national standard-setting bodies, intergovernmental organisations, international initiatives, etc.*	**Private voluntary standards** • *Example: VSS (e.g. Fairtrade, FSC (Forest Stewardship Council), GlobalGAP), CSR, ISO 26000, etc.* • *Origin: industry associations, CSR of individual firms, multi-stakeholder initiatives of civil society/firms, etc.*

Source: Based on Henson and Humphrey, 2009

In the sphere of **public standards**, regulations are probably the best known standards. Government entities seek to protect the safety and health of their citizens as well as fragile ecosystems by limiting the scope of action for businesses and private actors within national boundaries. One example is the emission standards for the automobile industry.

Such national legislature is often based on international declarations and intergovernmental agreements where global issues – most prominently climate change, decent work, and trade – are addressed. Since supranational bodies are generally not empowered to enact binding laws, intergovernmental declarations and agreements establish universal principles that provide guidelines and international standards of a voluntary nature. Central outcomes for sustainable business practices of such intergovernmental efforts are, for instance, the guidelines of the International Labour Organization (ILO) Tripartite Declaration concerning Multinational Enterprises and Social Policy (ILO MNE Declaration) and the OECD Guidelines for Multinational Enterprises, which are meant to be embodied in companies' corporate social responsibility (CSR) strategy (IAWG [Inter-Agency Working Group], 2011). Several international initiatives such as the UN Global Compact, the European Union Strategy for Corporate Social Responsibility, the International Finance Corporation's Performance

5 CE marking labels products with the letters CE (*Conformité Européenne*) to indicate compliance with high safety, health, and environmental protection requirements. CE marking is compulsory for most of the products traded in the extended Single Market in the European Economic Area. For more details see http://ec.europa.eu/growth/single-market/ce-marking/.

Standards, and the UN Guiding Principles on Business and Human Rights promote similar sustainability guidelines concerning fair labour practices, improved environmental performance, and sustainable investment (Giovannucci, von Hagen, & Wozniak, 2014).

Private standards have mainly emerged as a reaction to globalisation. The continued internationalisation and fragmentation of production processes have made standardisation necessary. Initially, private standards were concerned with compatibility and quality of intermediaries and final goods so that standards predominantly focused on the product and its features. Much of this work was done by the International Organization for Standardisation (ISO), a non-governmental international organisation that develops norms for products, industries and sectors. The introduction of the ISO 26000 standard on social responsibility in 2010 reflected the general evolution of private standards that had already started in the late 1990s: private standards increasingly included an orientation towards the production process in order to account for consequences for workers, the local community, and the environment.

Spurred by both growing consumer awareness with regard to sustainability and mistrust in the ability of intergovernmental processes to guarantee sustainability in global supply chains, civil society organisations began to start up inclusive multi-stakeholder initiatives such as Fairtrade to increase transparency in global trade by certifying products that complied with given sustainability criteria. Such voluntary sustainability standards (VSS) define sustainability practices and audit participating producers and firms through verification or third-party certification. VSS operate under the premise that any and all actors should adopt the standard, that is, VSS generally apply to entire markets and across national borders (Potts et al., 2014).

Pressure from civil society organisations and conscious consumers in combination with growing corporate awareness have strengthened the spread and practice of CSR, which allows firms to secure a good reputation for their brand along with profitability through product differentiation and access to high-value segments of the market (Giovannucci et al., 2014).

While private sustainability standards are almost exclusively of a voluntary nature, within particular markets market forces may render voluntary standards de facto mandatory (even if there is no legal penalty for non-compliance) (Henson & Humphrey, 2009). In some cases of co-regulation, the legislator also passes legislation relating to particular private standards or refers to private standards so that VSS become legally binding. These two situations already explain why the classification of standards is not straightforward but in fact blurred: VSS may become de facto mandatory or even legally binding and thus part of public regulations. The spheres of public and private standards are truly interconnected as, on the one hand, firms may incorporate public standards and regulations into their CSR strategies while, on the other, local VSS may adopt national regulations. Lastly, firms may also adopt VSS into their CSR strategies. This means that while the classification of standards may provide a general overview of standards and their origins, one must remember that these are subject to constant change and that boundaries are blurred.

3.2 The contribution of standards to economic development, sustainability, and the Agenda 2030

Standards have emerged mainly because of the internationalisation of production and trade, but their persistence and proliferation are also related to the potentially beneficial effects on economic integration and growth, sustainability and the achievement of the Agenda 2030.

Many large corporations have originally introduced standards as a managerial and organisational tool to steer their extensive networks of suppliers. Standards help to guarantee good documentation of processes as well as quality, safety, social and environmental practices in the supply chain. Yet the spread of standards is not merely driven by the challenges of the internationalisation of production and trade, but also stimulates economic integration and growth as the next paragraph explains.

Standard adoption by small and medium-sized enterprises can act as a substitute for brand reputation (ITC & EUI, 2016). Especially for smaller firms that are new to the market or lack an international reputation, standards compliance and certification may create trust among potential buyers. Standards may thus generate opportunities to become integrated into supply chains and global value chains or to export directly to international markets. Growing beyond local markets helps SMEs to develop and mature. As small and medium-sized firms form the backbone of the economy, a healthy and growing SME sector in turn spurs economic development, growth, and employment creation at the national level.

Social and environmental standards are an outcome of civil society initiatives that pushed for more transparency in global production processes in order to raise awareness and implementation of sustainable production and consumption. Certification and labelling of standard-compliant products allow consumers to make sustainable consumption decisions; and firms have identified demand for sustainable goods and services as a chance to occupy high-value ethical and organic markets and thus adopt sustainable practices and require their suppliers to comply as well.

These effects on economic integration, growth, and sustainability, reveal that social and environmental standards have the potential to contribute to the achievement of the Agenda 2030 with its 17 Sustainable Development Goals (SDGs). To be more precise, they may contribute directly to promoting decent work and economic growth (SDG 8) and responsible consumption and production (SDG 12).

Sustainability standards also have the potential to generate significant environmental benefits because they encourage improved managerial and sustainable practices among smallholders, small producers and firms in the supply chains: reduction of chemicals, energy and natural resources in the production process; enhancements in efficient water usage and water quality; as well as other sustainability contributions. As such, social and environmental standards have the potential to (indirectly) contribute to many of the interconnected SDGs – namely clean water and sanitation (SDG 6); climate action (SDG 13); life below water (SDG 14); life on land (SDG 15). And, in a best-case scenario where economic benefits of standards implementation are shared along the value chain even with downstream producers, standards may even help to promote zero hunger (SDG 2); good health and well-being (SDG 3); and gender equality (SDG 5).

4 Literature review

The literature review is split into two parts. The first subsection looks into the internationalisation of production and the associated rise of GVCs and sustainability as well as the consequences for SMEs. The second subsection focuses on factors that foster, or respectively impede, the adoption of sustainability standards by SMEs.

4.1 The growing importance of GVCs and sustainability: implications for SMEs

Global value chains comprise of diverse firms that contribute to the final good or service through intermediate inputs. The rising share of intermediary goods in global trade, which already accounts for more than two-thirds of trade, underlines how GVCs reshape trade patterns in a world of ever more interdependent and interconnected economies. Global value chains increasingly involve developing and emerging economies in global trade, as lower transportation costs as well as improvements and diffusion of information and communication technologies (ICTs) allow GVCs to move production to where it is most advantageous, exploiting, for instance, the comparative advantage of labour- or resource-abundant countries. Host countries of GVCs, in turn, benefit from the spread of technologies and knowledge, growing productivity and the subsequent effects on wages and income. Instead of building own national industries over decades, local firms can specialise in specific production steps, integrate into GVCs, and gradually upgrade to higher-value activities (Marín-Odio, 2014; OECD et al., 2014).

Small and medium-sized enterprises constitute the backbone of every economy and account for about 90 per cent of businesses and more than half of employment worldwide (IFC, 2013). Their importance is even more profound in developing and emerging countries, as is underpinned by Table 2 (data for Germany and the United States are provided by way of comparison). Especially in China and Indonesia, SMEs account for almost all the businesses (98 per cent and 99 per cent, respectively), providing jobs for the vast majority of the working population (73 per cent and 97 per cent, respectively). Thus, the growing participation of such countries in global production processes is necessarily associated with integration of SMEs into supply chains and GVCs. SMEs also contribute to national exports by directly accessing export markets. Indian SMEs, for instance, generate about 42 per cent and SMEs in China even 68 per cent of national export earnings. In Brazil, 61 per cent of exporting firms are classified as SMEs.

Due to their flexibility and ability to move fast, SMEs occupy niches for the supply of products and services within global value chains (OECD, 2008). They usually provide intermediates to larger exporting companies in their country and are thus part of the wider supply chains of GVCs (Cusolito, Safadi, & Taglioni, 2016). Whether SMEs succeed in integrating into global production processes depends both on internal factors – such as managerial and workforce skills, innovation, technology adoption, knowledge absorption and their ability to comply with international standards – as well as external factors, that are determined by the national economic and political environment; these external factors include most importantly trade policy, ICT inclusion, infrastructure and logistic services, access to finance, secure and reliable political, legal and social environments, enhanced intellectual property protection, and geographical or cultural proximity to the sourcing firm and/or export markets (Cusolito et al., 2016; Marín-Odio, 2014).

Table 2: The importance of SMEs within the respective national economies

	Number	Share of gross domestic product (GDP)	Employment share	Share of exports
Brazil	11 million (99% of enterprises)	27%*	52%*	1.03%* (61%* of exporting firms)
China	not available (98% of enterprises)	60%	73%	68%
India	51 million (99.9 % of enterprises)	38%	> 40%	42%
Indonesia	58 million (99% of enterprises)	58%	97%	not available (16% of non-oil exports; 7.9% of SMEs exported directly, 5.6% exported indirectly)
South Africa	2.25 million (91% of enterprises)	50%	60%	6.7%
Germany[6]	*2.48 million (99.3% of enterprises)*	*47.4%*	*60.9%*	*17%*
USA[7]	*28.7 million (99.7% of enterprises)*	*50%*	*48%*	*33.6% (97.7% of exporting firms)*

* In Brazil, the main focus is on micro and small enterprises, which are defined as firms with less than 100 employees. The numbers with an asterisk only capture micro and small businesses and not SMEs.

Sources: Author (based on data from: Sebrae (2014) and Fonseca (2016) for Brazil; Chinese Ministry of Commerce (2012), National Bureau of Statistics of China (2013), and WEF [World Economic Forum] (2015) for China; CII [Confederation of Indian Industry] (2016) and Indian Ministry of Micro, Small and Medium Enterprises (2016) for India; Indonesian Ministry of Cooperatives and SMEs (2016), and Badan Pusat Statistik (2016) for Indonesia; Bureau for Economic Research (2016), Grater (2016), and Anand, Perrelli, and Zhang (2016) for South Africa)

The spread of complex and intransparent production processes has stirred criticism about abuses in GVCs. Suppliers, subcontracted firms, and other GVC participants are blamed for routines of forced overtime, child labour, unsafe workplaces often with direct exposure to toxic substances, and the reckless pollution of rivers, ground water and soil. On the one hand, such criticism underlines the need and importance of sustainability standards and, on the other, indicates how civil society organisations, the media, and conscious consumers successfully mobilise public opinion to increasingly hold multinational corporations accountable for deficiencies in GVCs and supply chains.

6 Note that Germany follows the SME definition of the European Commission that classifies enterprises with less than 250 employees as SMEs. Data is from 2014 and stems from the Federal Statistical Office: https://www.destatis.de/EN/FactsFigures/NationalEconomyEnvironment/EnterprisesCrafts/SmallMediumSizedEnterprises/SmallMediumSizedEnterprises.html

7 Note that in the United States enterprises with less than 500 employees are considered as SMEs. Data is from 2013 and stems from US Census Bureau (Statistics of US Businesses) and International Trade Association, presented in US Small Business Administration (2016).

Sustainability standards first took hold in environmental resource- and labour-intensive sectors, especially in those integrated into global production such as petro-chemicals, mining, agriculture, forestry, chemicals, textiles, carpets, clothing and footwear industries. From there, sustainability standards spread to GVC activities in industries and sectors where consumers take ethical, social and environmental factors into account in their consumption decision (Nadvi & Wältring, 2004).

Before the introduction of sustainability standards, civil society organisations called upon consumers to boycott firms that disrespected labour rights and sustainable production (Potts et al., 2014). Throughout the 1990s, for instance, Nike as a leader in sportswear was consistently criticised for child labour and sweatshops in its supply chains and for not taking responsibility for the malpractices of its suppliers and subcontracted firms. As a reaction to these civil society actions, Nike overhauled its codes of conduct and improved the openness and transparency of its supply chains by publishing third-party audit reports showing the compliance of suppliers with Nike's sustainability principles (Birch, 2012).

More recently, an American newspaper exposed that cobalt mines in the Democratic Republic of Congo relied on child labour and polluted rivers. As a consequence, Apple declared that it would discontinue the business relationship with artisanal Congolese mines until compliance with Apple's standards was verified (Frankel, 2017).

These two examples show how conscious consumers, civil society, and the media can rally public opinion behind reforms in supply chains. Moreover, such concerns are taken seriously as a survey by PWC (2014) underlines: more than 91 per cent of CEOs agree that the integrity of the supply chain is crucial for their firm. According to a survey by McKinsey & Company (2014), the share of CEOs who picked sustainability as their priority has doubled since 2012 and more than a third list sustainability among the top three items on their agenda. Interestingly, the motivation behind the concern for sustainability is no longer driven by reputational risk (36 per cent) and cost reductions (26 per cent) alone, but rather the majority of CEOs (46 per cent) seek to align sustainability with the overall business goals, missions, or values. Apparently, CEOs are beginning to understand that sustainability is simply good for business. Khan, Serafeim, and Yoon (2016) show that firms with high material sustainability investment get the best returns on their stocks even after controlling for firm characteristics.

The spread of standards goes hand in hand with standard proliferation. For voluntary sustainability standards, for example, the International Trade Centre (ITC) recorded about 50 different standards in 1997, while 20 years later the number has risen to over 200 (ITC & EUI, 2016). The Ecolabel Index (2017) even counts more than 450 sustainability labels. Firms seeking to adopt sustainability standards find it hard to navigate through this increasingly crowded and complex standard landscape. As standards often cover the same commodities or similar issues, overlap and competition for market shares are unavoidable, so that standard organisations reject mutual recognition and avoid interoperability of standards (UNFSS [United Nations Forum on Sustainability Standards], 2016). The lack of interoperability may require firms that sell to various buyers which have a preference for different standards to adopt all these standards simultaneously. The obvious response to this unfavourable situation, which threatens the operability and relevance of VSS, is harmonisation of similar standards under the guidance of intergovernmental organisations, governments, donors, and meta-standard organisations. Yet progress is slow and cannot

keep pace with the mushrooming of new standards (UNFSS, 2016). The debate around proliferation and harmonisation of standards is not peculiar to VSS, but is also well established in literature for all types of standards – examples are standards in trade (such as Disdier, Fontagné, & Cadot, 2014); green finance (such as Berensmann, 2017); and others.

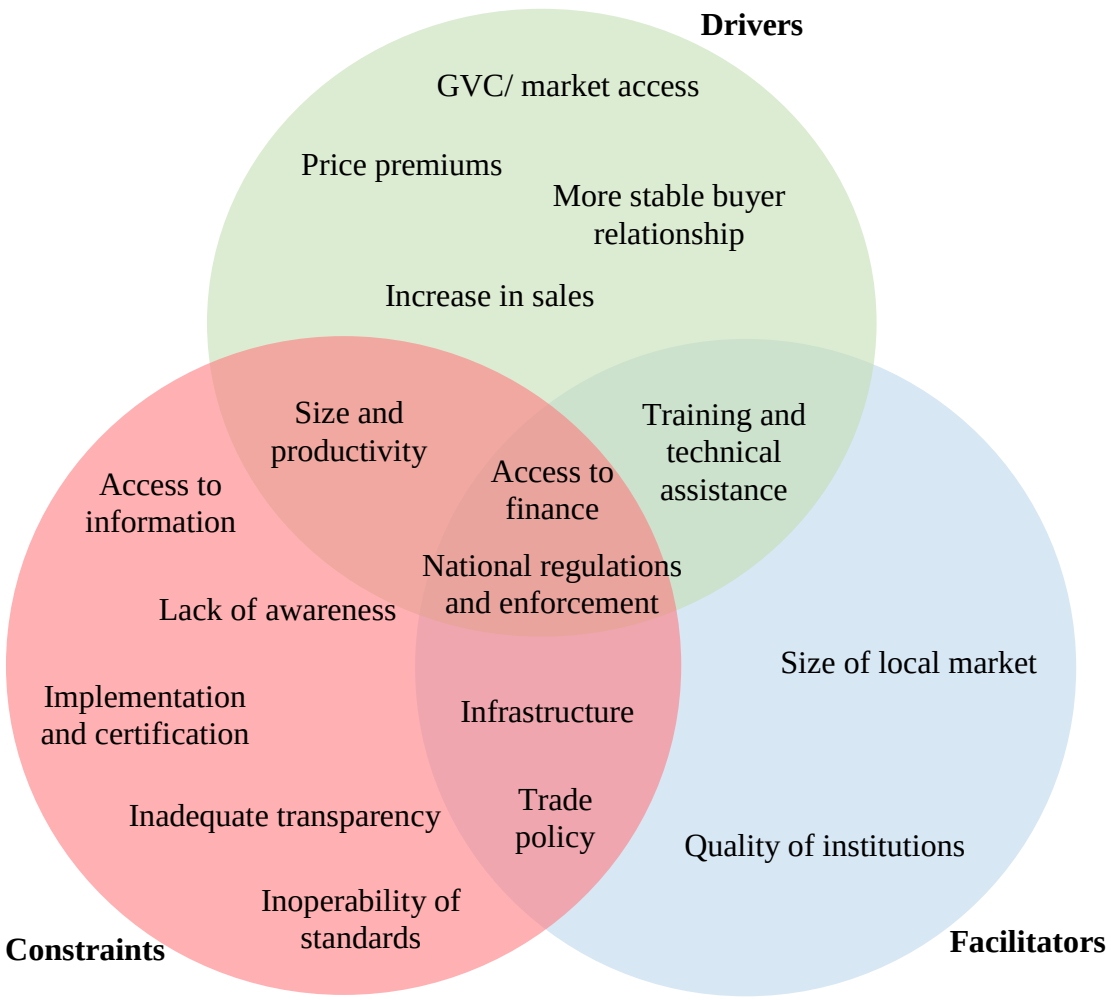
One source of standards proliferation – the localisation of standards – adds another level of complexity to the harmonisation discussion. Local non-governmental organisations (NGOs) and national governments may launch new standards initiatives that adjust requirements to national realities. While this improves the applicability and adoption of standards, it aggravates the proliferation problem. Localisation of standards is especially attractive in the context of developing and emerging economies because the requirements of international standards are often perceived as inapplicable to the local climatic, societal, and economic environment or as too demanding or exclusionary. Less stringent local standards may foster the spread of social and environmental standards and thus advance inclusiveness and coverage of sustainability standards; yet, at the same time, they may endanger the credibility of standards by both enhancing proliferation and (potentially) watering down standards requirements. Hence, it is essential that harmonisation initiatives balance the benefits and perils of standard localisation.

In short, thanks to growing environmental and social awareness among consumers, the media, and investors, multinational corporations are beginning to perceive sustainability considerations as a necessity in order to guarantee product quality, their good reputation, and profitability. It is assumed that sustainability-oriented lead firms push social and environmental standards across GVCs, which effectively means that SMEs in the supply chains are required to adhere to these standards. However, transformative effects will only materialise if proliferation and harmonisation challenges are solved and if sustainability becomes mainstream in entire industries and sectors, which in turn requires that standards become both credible through their positive social and environmental effects as well as bearable in that their financial and nonpecuniary burdens for firms in the supply chain are acceptable (IAWG, 2011). The latter prerequisite will be discussed in the following subsection and in the sections where, amongst other things, the paper looks into the challenges and incentives for SMEs when adopting sustainability standards.

4.2 Drivers and constraints for standard adoption

An overview of incentives (drivers) and disincentives (constraints) for SMEs in adopting sustainability standards, based on factors identified by the existing literature, is presented in Figure 2. Through the overlapping of the circles, the diagram accounts for factors that may motivate a push towards sustainability in some cases but impede it in others. Further, the diagram distinguishes between driving factors, that encompass direct motives for sustainability compliance (that is, drivers); and facilitating factors, that are best described as components of an enabling environment that do not directly incentivise, but ease the adoption of standards (namely, facilitators).

Figure 2: Drivers, constraints, and facilitators for the implementation of sustainability standards



Source: Author

Drivers generally take the form of economic incentives such as market access, sales, price premiums, and improved productivity and access to finance. Over the last 15 years, markets for sustainable products have grown considerably. A prominent example is the agricultural sector whose standards-compliant production grew by 41 per cent compared to a growth of 2 per cent in the corresponding conventional commodity markets, resulting in significant market penetration (Potts et al., 2014). Continuous growth is ensured by the commitments of global lead firms such as Mars, Mondelez, Unilever, H&M, McDonalds, PepsiCo, IKEA, Nestle and others to buy up to 100 per cent of certain supplies from sustainable sources (COSA [Committee on Sustainability Assessment], 2013; ITC, 2016a; Potts et al., 2014). Sustainable sourcing incentivises suppliers to adopt sustainability standards in order to gain **access to lucrative markets** with (potential) price premiums (ITC, 2016b; ITC & EUI, 2016; UNFSS, 2016). In fact, the progressing incorporation of sustainability into CSR strategies by the lead firms of GVCs may effectively render standards implementation a prerequisite for SMEs to integrate into supply chains and GVCs.

SMEs that implement sustainability standards may also enjoy **more stable buyer relationships**, which grant SMEs certainty vis-à-vis sales. Since increased planning certainty mitigates some risk, investments in standards implementation becomes more feasible for SMEs. It is worth noting that stable buyer relationships are more likely to evolve when buyers commit to suppliers through training, capacity-building services, or financial support for implementation and/or certification (COSA, 2013; ITC & EUI, 2016; UNFSS, 2016).

Increase in sales constitutes another economic reason for adopting standards (ITC, 2016b). The quantity increase may result from more optimistic assessments of the sales market due to improved buyer relations or access to GVCs and lucrative markets.

Implementation of standards is associated with adaptations in the production technology and process, which promises efficiency gains. Integration into GVCs and cooperation with large corporations fosters the dissemination of knowledge and skills on the production and management level so that the productivity and competitiveness of SMEs are raised. **Productivity improvements** are often stimulated by technical assistance and capacity-building for suppliers (ITC & EUI, 2016; UNFSS, 2016).

Standard-compliant produce targets high-value segments of the market and thus promises **price premiums**. There is mixed evidence whether higher prices of the final product trickle down to price premiums for upstream producers in the supply chain. It is generally accepted that implementation of standards translates into higher prices and revenues along the value chain (von Hagen & Alvarez, 2011a, 2011b; COSA, 2013; ITC, 2016b; UNFSS, 2016). In some cases, smallholders and SMEs realised higher prices (COSA, 2013; ITC, 2016b; Kersting & Wollni, 2012; Subervie & Vagneron, 2013) which, of course, strongly encourages SMEs to adopt sustainability standards. Yet it has been documented as well that the structure and governance of the value chain may unevenly allocate additional revenues to retailers and processors and thus casts doubt on the existence of significant price premiums for upstream producers (von Hagen & Alvarez, 2011a; UNFSS, 2016).

Some standards schemes and sustainability-oriented lead firms enhance the attractiveness of compliance with sustainability standards by providing **finance** beyond the support for implementation and certification costs (UNFSS, 2016). Since SMEs tend to suffer from a systemic financing gap, this might be an important driver for adopting sustainability standards.

Most of the constraints are related to the incremental costs for SMEs to adopt standards. Many SMEs and potential suppliers suffer from a **lack of awareness of sustainability standards** (such as Brandi et al., 2015). However, even being aware of relevant standards leaves a myriad of questions open. Firms have to invest time and resources to collect and analyse **relevant information** in order to decide whether to implement a standard (ITC, 2016b). The strategic choice is complicated by the hidden, indirect costs of compliance and by benefits that are not easily monetised (COSA, 2013). The **inadequate transparency of standards** in respect to their contents, requirements, and modes of verification imposes additional transaction costs on SMEs (ITC & EUI, 2016).

International standards are sometimes ignorant of local environmental and technical conditions, which means that the standards, norms and regulations may not be applicable to the local context. The applicant or local NGOs has to undertake costly efforts to work around such **inoperability** issues (see, for instance, Schouten, Vellema, & Wijk, 2016). On the other

hand, standards are often dysfunctional with respect to interoperability with other standards. Sustainability-oriented SMEs may be confronted with various standards from different buyers, financial institutions, and other business partners that encompass differing requirements. Due to a lack of harmonisation, SMEs face parallel procedures of implementation, documentation, and multiple certifications, which shoots up the costs of compliance (UNFSS, 2016).

In necessitating the adaption of production technology and processes, the implementation of standards often requires new investments and may even raise the running costs because of more expensive production methods (ITC, 2016b). Certification comprises administrative costs due to documentation requirements as well as costs for third-party audits, verification and certification. Since **implementation and certification costs** can be more or less described as fixed costs, smaller firms in particular perceive these costs as prohibitively high (such as Holzapfel & Wollni, 2014; ITC, 2016b). In order to control incremental costs, small-scale producers and SMEs can organise themselves into collectives and cooperatives or can use group certification to handle implementation and certification costs (FAO [Food and Agriculture Organization of the United Nations], 2014; ITC & EUI, 2016). Another cost-mitigating strategy is to share costs between producers and buyers. This is applied in 36 per cent of the cases for implementation costs and in 45 per cent of the cases for certification (ITC, 2016b).

Lastly, the spread of standards may also be hampered by the political and economic environment. Organisations for international standards strategically decide in which countries to maintain offices and thus standards vary in their presence and visibility across different countries. Developing and emerging countries are systematically underserved as **standards availability is strongly linked to GDP, logistics performance, quality of institutions, and WTO membership** (ITC & EUI, 2016); that is, these economies suffer from lower levels of facilitating factors. Even if standards operate in developing and emerging countries, the **poor infrastructure of testing facilities** often impedes, or significantly raises, time and costs for certification (ITC, 2016b). In addition, the restricted size of local markets limits the **size and productivity** of firms. Consequently, SMEs are neither big nor productive enough to afford standards implementation and certification (ITC, 2016b; ITC & EUI, 2016).

If **legislative regulation or enforcemen**t of labour and environment issues is lax, the gap between firms complying with voluntary sustainability standards and non-compliant competitors is large with respect to implemented standards and associated costs. Thus, standards-compliant SMEs face a higher burden and cost disadvantages in comparison to non-compliant national competitors (UNFSS, 2016).

5 Evidence from the five country cases

The country cases shed further light on standards as well as on challenges and incentives for their implementation. Additionally, they examine the demand for finance of SMEs, in particular potential links between access to finance and sustainability standards. The case studies were conducted by local experts who are members of the Managing Global Governance (MGG) network of DIE. The local research partners belong to the following institutions: Fundação Getúlio Vargas (FGV, Brazil); the Shanghai Institutes for International Studies (SIIS, China); the Confederation of Indian Industry – Centre of Excellence for Sustainable Development (CII-ITC, India); the Indian Council for Research on International Economic Relations (ICRIER, India); the Centre for Strategic and International Studies (CSIS, Indonesia); DEFINIT (Indonesia); and Tutwa Consulting (South Africa). Case studies were conducted between February and May 2017 using key informant interviews with entrepreneurs and experts from industry associations, standard organisations, regulators, financial institutions, and/or lead firms in triangulation with secondary data and available studies. The current section presents summaries of the main findings from the five country cases.

5.1 Brazil[8]

SME landscape

In 2015, about 11 million SMEs were registered in Brazil. The national focus is on micro and small enterprises, which Brazilian agencies define as firms with less than 100 employees; hence the availability of data restricts the description of the SME landscape to enterprises with less than 100 employees. These micro and small enterprises provide jobs for 52 per cent of the legal workforce and produce 27 per cent of the added value in Brazil (Sebrae, 2014). Only a small fraction, about 12,000 of these (or roughly 0.1 per cent), export to international markets. Even though this accounts for 61 per cent of the total number of exporting firms, the share of the export value for micro and small enterprises amounts to a meagre 1.03 per cent. Almost half of the exports from micro and small enterprises are sent to South America (44 per cent). In second place as export destinations are two markets with relatively high standard profiles: Europe and North America, with 16 per cent each (Fonseca, 2016).

Types of standards and relevance

Most of the standards that are adopted by Brazilian SMEs are of a public nature. Mandatory standards are introduced through regulation by national, federal, or municipal governments. Any economic activity that could potentially harm the environment, in particular business concepts that involve natural resources, have to be licensed in a three-step process. First, the *Licença Prévia*, or Preliminary Licence, establishes the specific requirements that need to be fulfilled by the project, once its conception and location have been approved. At this stage, special studies and reports on environmental impacts may be asked for. Second, the *Licença de Instalação*, or Installation Licence, authorises establishment of the firm. At this

8 The section on Brazil summarises the findings of Coelho and Nunes (2017).

point, environmental quality patterns, that must be addressed by the company, as well as their control mechanisms during the implementation process are set. The final authorisation necessary to start the company's operation is granted by the *Licença de Operação*, or Operation Licence, once it has been verified that the company has complied with all standards from previous stages. In order to maintain the final licence (which is valid from 4 to 10 years), the company must keep track of the operational goals set by the licence, in terms of minimising its environmental impacts. The firms are responsible for impact studies, payments and tariffs involved in obtaining these licences.

There are also various public voluntary standards. In the construction sector, for instance, certification for energy efficiency (*Selo Procel Edificações*), environmental quality (*Alta Qualidade Ambiental*), and for compliance with socio-economic standards (*Selo Casa Azul*) are in place.

Compliance with private, voluntary standards is less common by Brazilian firms. Two types of firms are more likely to adhere to such voluntary sustainability standards. On the one hand, larger firms that acquire certification of ISO standards. Most prominent is the ISO 14001 series that lays out criteria for setting up an effective environmental management system that measures and improves the firms' environmental impact. With stricter legislation by local governmental states such as Rio de Janeiro, São Paulo, and Pernambuco, the demand for ISO 14064 certification concerned with reporting on and reduction of greenhouse gas emissions is rising. On the other hand, firms engaged in international production processes through GVCs, supply chains or direct exports adopt international voluntary standards. Standards implementation is often a prerequisite imposed upon suppliers by the lead firms of the respective GVCs or is a requirement to enter export markets directly.

National private, voluntary standards are still at their infant stage because domestic markets for certified products need to be developed further. One notable exception is the agribusiness sector. Certain consumer groups reveal preferences for organic food. Certification by *Orgânicos do Brasil* guarantees organic production without pesticides and synthetic fertilisers as well as compliance with labour legislation and other social standards. Another example is the CERFLOR (*Programa Brasileiro de Certificação Florestal*) certification for forest stewardship and timber that is endorsed by PEFC (Programme for the Endorsement Forest Certification).

Drivers and constraints for implementing sustainability standards

Most importantly, Brazilian SMEs have an incentive to adopt sustainable practices due to the demand for sustainably produced goods and services through markets for such products or through national regulation. External support as well as entrepreneurs' awareness of potential efficiency gains or the environmental and social awareness of the entrepreneur also contribute to standards implementation. However, sustainability-oriented SMEs have to overcome several obstacles, the most stringent being high and recurrent costs associated with certification. Limited size and expertise of SMEs additionally results in information and technical gaps as well as diseconomies of scale. Inadequate communication and supervision by lead firms further hinders the implementation of standard.

Drivers for implementing sustainability standards

The main driver for SMEs in Brazil to adopt sustainability standards is **access to new markets**. As indicated in the subsection above, domestic markets for sustainably produced goods and services are relatively underdeveloped. Consumer awareness is low so that only organic food allows for additional revenues through product differentiation along the sustainability dimension. In other industries – printing and coffee roasting, for example – so-called business-to-business (B2B) standards, that are not visible to consumers, are used. The buyer is assured that B2B-compliant products meet certain quality levels, product features and process standards. Since B2B standards mark compliant firms as reliable sellers, they also enhance opportunities to enter new domestic markets.

SMEs can gain access to even bigger markets by exporting to international markets either directly or indirectly through integration into supply chains. Brazilian SMEs typically undergo certification due to a pre-existing, or a potential, opportunity to take part in international value chains. Lead firms generally make standards compliance a prerequisite for suppliers in order to uphold their quality demands and sustainability profile. In this way, SMEs depend upon standards implementation to access international markets. Between 2013 and 2015, there was an increase in exporting SMEs by 11.5 per cent in Brazil, which suggests that this driver is continuously gaining relevance.

The third source of demand for sustainably produced goods and services stems from the Brazilian government. Since domestic markets for sustainable products are underdeveloped and less than 1 per cent of Brazilian SMEs are engaged in export, public procurement constitutes a crucial driver of demand for sustainable products. In Brazil, public institutions are bound by law to purchase products and services from suppliers whose environmental and social practices have been audited and found to be sustainable. In 2012, 57 per cent of the sustainable public purchases by the Federal Government accrued to SMEs.[9] Thus, a strong incentive for SMEs to comply with sustainability standards is provided by the government's public procurement strategy.

Beyond stirring demand for sustainable products via market forces, the Brazilian government also insists on sustainable practices through elaborated **legislation**. As indicated in the subsection above, firms that might cause environmental harm have to undergo a three-step licensing process and document sustainable performance along with their impact on the environment. Adequacy with environmental and labour regulations does incentivise SMEs, especially those that handle natural resources, to be more sensitive to comply with federal and local laws in order to avoid legal consequences.

Implementation of standards by Brazilian SMEs is often facilitated by **external support**. Lead firms offer supplier development programmes or subsidise costs of standards implementation. In addition, agencies like Sebrae, that specialise in assistance and consultancy for small businesses development, walk SMEs through the adoption and certification process of standards. After all, standard adoption not only requires technical knowledge but also organisational and managerial capacities and skills.

9 Note that the total public procurement of the Federal Government amounted to roughly USD 40 billion in 2012. With USD 22 million, the share of sustainable purchases among public procurement is relatively small, but continuously rising in Brazil.

Lastly, SMEs in Brazil integrate sustainability standards into the firms' strategic planning if it is a concern of the management. Internal bureaucracy tends to be low within SMEs as decision-making power is largely concentrated in the person of the entrepreneur. Consequently, the **environmental and social awareness of the entrepreneur** can directly translate into the sustainability orientation of the SME. Even though environmental and social awareness is relatively low in Brazil, the expert interviews suggest that the new generation of entrepreneurs exhibit higher awareness levels. Furthermore, experts pointed out in the interviews that many Brazilian entrepreneurs and SMEs are maturing in their environmental and social awareness and are enhancing sustainability efforts. At the beginning, less demanding sustainable practices in terms of investments such as energy saving, resource rationalisation, and recycling are introduced for short-term efficiency gains. Operational results and positive external effects on firm profile, staff motivation, the organisations' culture and/or unforeseen opportunities, which unfold due to implementation of sustainable practices, drive SMEs to pursue sustainability more thoroughly through more voluminous investments and formal standard adoption.

Constraints for implementing sustainability standards

The main barrier to standard adoption are the associated **costs** that are generally perceived as high by Brazilian SMEs and sometimes even as prohibitive, if not linked to an existing market opportunity. The costs may be differentiated into implementation costs and certification costs. The former comprise all expenses needed to fulfil standards requirements, for example investment in new production technologies and new machinery. Since SMEs typically have neither the capacity nor the expertise to overhaul their production process, consultancy agencies and qualified personnel need to be hired to assist in the implementation process. This adds up to the costs.

Certification costs may constitute a barrier as well, especially due to the recurrent nature of these costs. Verifying and certifying standards compliance requires amongst other things trained personnel, documentation, audits, and the payment of certification fees. It is not uncommon for Brazilian SMEs to adopt several practices listed by standard organisations, but not to get certified due to audit and certification fees. Some SMEs that used to be certified, fail to renew certification for the same reasons.

According to the expert interviews, SMEs in Brazil already face relatively high operational costs due to deficiencies in the national logistics system, complex taxation systems, and the level of government bureaucracy. For instance, a Brazil firm has to file on average 7.6 reports for the company's state tax alone – in some states even up to 19 reports. Since Brazilian SMEs are already strained by these operational cost burdens, the costs associated with standards implementation are often perceived as prohibitively high. In addition, SMEs' limited access to finance complicates financing up-front investments for meeting standards requirements even if the adoption of standards were profitable.

A second constraint is the **information and technical gap**. In general, the 1980s constituted a time when society, companies and governments were raising awareness for sustainability and were beginning to reflect on alternative ways of development. The subsequent second stage – in which the international community is today – is characterised by commitments to the cause and by concrete changes aimed at the preservation of habitats, resources, and the well-functioning of our ecosystem. In Brazil, SMEs just seem to be starting with the

transition to the second stage, as there is still too much misunderstanding of the relevance and feasibility of sustainable practices. The debate around sustainable development and the imperatives therefore seem very distant from the small entrepreneurs' day-to-day business realities. It is not clear for the majority of SMEs which role they should play in the process and which path should be taken in order to become more responsible as regards sustainability. Supporting programmes and initiatives for SMEs, such as Sebraetec, confirm that innovative sustainability projects are rare among Brazilian SMEs.

Even where SMEs are aware of the concrete steps towards more sustainable production, they may experience a gap in the necessary expertise. The technical terms and protocols surrounding the adoption of standards usually require a degree of knowledge that stretches beyond the ability of an average SME to comply. Implementation may demand highly qualified professionals such as environmental engineers, chemical engineers, agronomists, and so on.

Moreover, meeting sustainability standards is often compromised for SMEs by **scalability**. New processes and technologies that are guided by sustainability considerations are usually designed for big firms with extensive capacities. Where in-house waste management and recycling systems or renewable energy systems are concerned, for instance, SMEs may not have the necessary scale to make such processes financially and operationally feasible.

Another disincentive encountered by Brazilian SMEs is the **imperfect communication and supervision** of lead firms in GVCs. Frequently, buyers insufficiently lay out requirements to SMEs in the supply chain so that suppliers remain uncertain which practices are of importance and where to prioritise changes towards more sustainable practices. In addition, ineffective and lax supervision by lead firms may undermine the motivation of suppliers to implement sustainability standards. From time to time, some non-compliant firms, or firms with pending certification renewal, continue to serve as suppliers as the termination of contracts is not always automatic.

Demand for finance

In Brazil, financial instruments are not designed in a manner to promote the spread of sustainability standards. Government authorities interviewed stated that credit rules reflected the development process and development goals rather than the sustainability agenda. Even though the Brazilian government has developed a sustainable development agenda, financial operations fail to match this agenda. Private and public banks merely offer common credit lines without any specific commitments to sustainability measures. The credit lines are available at differentiated rates, subsidised either by the government or under a risk investment of the bank, speculating on the strong Brazilian SME market and the need for financing.

Firms adopting sustainability standards are found to have higher financing needs because of the incremental costs of standards implementation. SMEs can opt for government-subsidised loans through national development banks. The National Bank for Economic and Social Development (BNDES) has a credit line for microcredits and SME financing that seeks to improve business infrastructures and inventories. Besides preferential interest rates, the government guarantees the risk of these loans by setting up the BNDES-managed Investment Guarantee Fund, the *Fundo Garantidor para Investimentos* (FGI). Alternatively, SMEs can

rely on the commercial banking system where they face regular risk assessment analyses and competitive market rates like any other loan applicant.

It is noteworthy that the expert interviews did not rank interest rates as one of the major problems for SMEs in receiving loans. Brazilian entrepreneurs generally experience similar interest rates regardless of firm size. Terms and conditions of financial institutions, however, exclude most SMEs from finance. On the one hand, loan applicants are required to prove longer years of operation (over 2 years), although the majority of SMEs do not survive the first two years. On the other hand, financial institutions request collateral, often as high as 130 per cent of the loan amount. The expert interviews underlined that even financial products designed for SMEs have similar terms and conditions so that collateral and years of operation are serious bottlenecks for access to finance on the part of SMEs.

Recommendations

The case study arrives at four policy considerations to foster sustainability standards among SMEs and to connect the organisations involved in a more cooperative way:

- **National governance network for sustainability**: A national governance network for sustainability is necessary if a common agenda is to be maintained, as well as to simplify and align national legislation, the creation of financing lines, and standards requirements. An institution with some sort of leadership and national capillarity but also the capacity to drive a public policy towards the horizontal implementation of sustainability standards should lead the governance network: a ministry, or Sebrae, could initially take the lead.
- **Less bureaucracy**: Reducing the burden imposed upon firms of all sizes by fees, documentation and requirements for the operation license alone could free capacities to improve environmental and social performance.
- **Supplier development programme**: Packaged into a broader policy for the promotion of sustainability standards, lead firms could receive government subsidies for capacity-building programmes among their suppliers, which would lead to implementation of selected standards.
- **Fund for SMEs to obtain certification**: Companies, government and standard organisations could create a fund to help SMEs and small producers pay for the certification process. This fund could operate in parallel or – in the spirit of a more horizontal approach – operate together with new financing policies promoting the implementation of sustainability.

5.2 China[10]

SME landscape

At the end of 2013, small and medium-sized enterprises made up 98 per cent of Chinese companies (NBS [National Bureau of Statistics of China], 2013). In terms of contributions to the economy, Chinese SMEs employed 73 per cent of the formal workforce and produced 60 per cent of the national GDP in 2015 (WEF, 2015). Registered SMEs realised 68 per cent of China's export earnings (MOFCOM [Chinese Ministry of Commerce], 2012), which reveals the significance of international markets for Chinese SMEs. A survey undertaken by FedEx suggests that 45 per cent of Chinese SMEs are engaged directly or indirectly in export (FedEx Corporation, 2015). SMEs especially dominate manufacturing and the wholesale and retail sectors where they hire the vast majority of people and account for more than 80 per cent of the business revenue (Le & Dong, 2014).

Types of standards and relevance

The standards landscape in China is almost completely located in the public sphere, leaving only an extremely restricted role for the few private international standards that are endorsed by the Chinese government. The majority of national sustainability standards listed by the national Standardisation Administration of China (SAC) and other governmental agencies, together with CSR guidelines, localised initiatives with reference to international public and private standards can be classified as public voluntary standards. Even without legal obligation, plenty of these standards have been adopted by Chinese companies to improve product quality, enhance market competitiveness, and to serve as benchmarks for in-house standards.

Over 34,000 standards are listed with SAC, out of which roughly 32,000 are classified as recommended (i.e. voluntary) and the remaining 2,000 as mandatory. In addition, there are more than 850 mandatory and more than 350 voluntary standards not listed with SAC. These sustainability-related standards have been developed under the mandate of China's Ministry of Agriculture, the Ministry of Housing and Urban-Rural Development, the Ministry of Environmental Protection, and the National Health and Family Planning Commission.

It is noteworthy that the category 'environmental protection, health care and safety' – which corresponds closely to this paper's notion of sustainability standards – entails about a quarter of the mandatory standards listed by SAC (506 mandatory and 1176 voluntary standards), that is, almost as many as the remaining 38 categories together. This indicates the commitment of the Chinese government to halting environmental degradation. Indeed, both the government and firms have recognised their obligations to consider social, environmental, and governmental issues when pursuing economic benefits. In China, the use of the term 'sustainability' has become interchangeable with 'corporate social responsibility'.

Introduction of the CSR concept occurred in the 1980s but it was not until the Company Law of People's Republic of China was put into effect in 2006 that the legal foundations for CSR were laid. In 2008, China's State-owned Assets Supervision and Administration Commission (SASAC) issued 'Guidelines for State-owned Enterprises Directly under the

10 The section of China summarises the findings of Cao (2017).

Central Government on Fulfilling Corporate Social Responsibilities', which promoted CSR among the state-owned enterprises (SOEs), which are mainly the large and dominant firms of the Chinese economy. The guidelines encompass workplace safety, protection of employees' legal rights, participation in social public welfare programmes, protection of the environment, and conservation of natural resources. The China Association of Small and Medium Enterprises (CASME) developed 'Guidelines to Small and Medium Enterprises on Corporate Social Responsibility' to instruct Chinese SMEs about the government's four main categories of social responsibility (employment, environment, market and community) as well as to promote the development of CSR. Other industry associations such as the China Federation of Industrial Economics, the China's Responsible Supply Chain Association, and the China Banking Association have also published their own guidelines with influence on their respective industries.

CSR reporting is still voluntary in China, but the government increasingly encourages such behaviour. Governments at the central and local levels have developed guiding principles for CSR reporting while SAC has issued a respective public voluntary standard. Leading national stock exchanges promote CSR reporting, offer guidance on reporting according to environmental, social and governance (ESG) principles, and require listed companies in certain sectors to disclose environment-related information.

Beyond these national standards, Chinese firms have more recently also adopted voluntary international standards of public and private nature to satisfy investors, consumers, and other stakeholders. Examples of such standards are ISO 9000, ISO 26000, ISO 14000, the Forest Stewardship Council, the Programme for the Endorsement of Forest Certification Schemes (PEFC), Global GAP, Better Cotton Initiative, the Roundtable on Responsible Soy and Roundtable for Sustainable Palm Oil, Fairtrade, the UN Global Compact, the Global Reporting Initiative (GRI) and the Equator Principles. Even though the government has only approved a few international standards for wider use in the Chinese market, firms still adopt international standards because of export market requirements.[11]

Drivers and constraints for implementing sustainability standards

SMEs increasingly adopt standards because of rising government pressure and economic incentives, mainly to safeguard public reputation and to access global markets. On the other hand, lack of consumer demand and the lack of awareness among entrepreneurs undermine the spread of standards, while high implementation and certification costs along with

11 The earlier version of the Chinese case study also pointed out that Chinese agencies are suspicious of such international standards and question their legitimacy at a local level because local stakeholders have not participated in the development of these standards. They further criticise that international standards may both fail to fit the political, socio-economic, environmental and business contexts of China and act as technical barriers to trade (TBT). Consequently, the Chinese government refuses to endorse a series of international standards and has instead developed local standards: the Green Credit Guidelines instead of the Equator Principles in the banking industry; ChinaGAP instead of GlobalGAP for agricultural products (Note that the GlobalGAP standard is designed to become customised to national conditions and realities. Minimum requirements are set by GlobalGAP); and the China Forest Certification Scheme instead of the FSC (Forest Stewardship Council) in the forestry sector (note that the China Forest Certification Scheme (CFCS) has been endorsed by the international PEFC forestry standard), just to mention some examples.

challenges in financing these investments and localisation of standards further impede standards implementation.

Drivers for implementing sustainability standards

Environmental deterioration is forcing the Chinese government to prioritise CSR and sustainability standards in order to transform the hitherto existing development into a low-carbon and resource-light path to prosperity. This has led to the intensification of **government pressure** on SMEs to adhere to CSR guidelines and "recommended", that is, voluntary, standards. Moreover, the Chinese government continuingly incorporates voluntary standards into laws and regulations so that SMEs are bound by national legislation to fulfil their social responsibility with regard to the environment and society. This tendency contributes to the disproportionally wide array of SAC's mandatory standards concerned with environmental protection, health care and safety mentioned in the subsection above. One example for progressing mandatory norms in the social dimension is China's Labour Law from 2013 that extended labour rights such as compensation payments for workers whose contracts have been terminated.

The other two drivers for standards implementation are based on market forces. Chinese SMEs use standards compliance to create trust among consumers and to **safeguard public reputation**. As competition is fierce in such a populous country, poor reputation translates into eviction from the market. Multiple small food processors have suffered such a fate due to shortcomings with respect to sanitary and labour standards. Sustainability standards, however, may not merely secure existing market shares, but allow firms to benefit from China's rising demand from high-end consumers. Booming markets for quality products and services rely on the identification of goods with desirable product features and production histories, which can be guaranteed by certification through credible standard schemes.

A key factor that motivates Chinese SMEs to adopt sustainability standards is **access to global markets**. The requirements of large international buyers drive firms in China to embrace international standards in spite of lacking government endorsement for many of these standards. SMEs have successfully integrated into the supply chains of multinational corporations such as Starbucks, Mars, Carrefour and IKEA. Even though subcontracting with global players involves standards compliance, dramatic increases in orders make up for implementation investments. Discontinuation of standards compliance will likely lead to failure in the regular inspections by international buyers and subsequent contract termination. Hence, Chinese SMEs in GVCs have a strong economic incentive to follow sustainability standards.

Constraints for implementing sustainability standards

A major barrier to standards adoption are the associated **implementation and certification costs**. China's changing macro-economy, in particular the slowdown of economic growth, has made SMEs cautious with regard to investments in CSR programmes and standards implementation. Rising labour costs and raw material prices raise input costs and, in combination with fierce price competition, depress profit margins. In such an environment, Chinese SMEs are reluctant to bear additional financial burdens from sustainability programmes unless the majority of competitors adopt such standards as well.

Closely related to the cost issue is limited **access to finance**, which is required if investments towards the adoption of standards are to be undertaken. Like commercial banks worldwide, the banking sector in China finds it hard to lend to SMEs. The credit guarantee system in place for SME finance is poor compared to the one for SOEs and equity finance is often infeasible due to high stock market thresholds.

The spread of sustainability standards is hampered by **low awareness on the part of SMEs and consumers**. Chinese SMEs are often ignorant of international standards and sometimes even of national ones. This goes hand in hand with insufficient technical skills and qualified personnel within firms to adopt sustainability standards as well as a poor infrastructure of testing and certification facilities at the regional and national level. In addition, low consumer awareness in China, especially in less developed regions, stifles local demand for sustainably produced goods and thus hinders the promotion of CSR or sustainability standards by SMEs.

As laid out in more detail in the previous subsection, the Chinese government is suspicious of international standards for various reasons and often develops national standards instead of endorsing international ones. While **localisation of standards** allows requirements to be adjusted to national realities and thus also the enhancement of applicability and the adoption of standards, in practice such measures often water down the requirements of international standards. An area of particular concern is labour rights as China is not a signatory party to all the International Labour Organization (ILO) conventions. Yet localisation of standards may also harm Chinese entrepreneurs because parallel standard schemes may multiply costs. SMEs have to adopt (mandatory) national standards, while exporting firms have to additionally implement more stringent international standards in order to access export markets.

Demand for finance

Limited access to finance remains a structural problem for most SMEs in China. Since many SMEs lack knowledge about finance, few explore alternative funding opportunities; most SMEs depend on banks for their long-term funding needs. Banks, however, perceive SMEs as high-risk borrowers that fail to provide collateral such as liquid capital and real estate. Consequently, only about 19 per cent of bank loans in China were directed towards SMEs, although SMEs account for 98 per cent of Chinese firms. SME loans constitute a large part of non-performing loans, which in turn makes banks even more reluctant to lend to SMEs.

Hardly any Chinese banks offer financial services that are designed to promote sustainability standards. Hence, there is no clear link between standard adoption and access to finance. One programme, however, that could serve as an example for cooperation between international and local financial institutions to promote sustainable practices among SMEs, is run by the Bank of Beijing (BOB). It includes a water-efficiency component under a risk-sharing facility with the International Finance Corporation (IFC).

Progress has been made in supply chain financing, which mitigates cash-flow problems. The concept has been introduced by the Shenzhen Development Bank (now Ping An Bank) as the "1+N model" in response to funding shortages among local logistic companies. Large core businesses initiate financial relationships with the bank, that are in the following extended to upstream and downstream SMEs of the core businesses' value chains. It

effectively injects funds into SMEs in the form of shared credits with the core businesses. This facilitates access to finance for SMEs and simultaneously promotes long-term strategic synergies with the core business as well as competitiveness of the entire supply chain.

The 1+N supply chain financing model was soon adopted by other commercial banks, including the Industrial and Commercial Bank of China (ICBC), the Bank of China (BOC) and the Shanghai Pudong Development Bank. With growing competition, services were upgraded to e-supply chain finance reacting to the ongoing development of the internet-based economy in China. Funds are provided to SMEs which engage with core businesses via e-commerce websites, based on their online transactions, their commercial credit record and the credit standing of the core businesses.

The Ping An Bank (PAB) has modified the original concept to a "N+N model" where credit disbursement is no longer based on the credibility of core businesses but on real-time transaction records of the applying SMEs on online platforms. Using a similar strategy, the China Merchants Bank (CMB) has introduced its business-to-business bills pool service into Alibaba's e-commerce platform, which collects the bank acceptance bills (BABs). By uploading BABs onto Alibaba's platform, SMEs are able to quickly receive payments via CMB's acceptance bills plus a corresponding amount of financing without pledging any assets.

Recommendations

The case study arrives at four policy considerations to foster sustainability standards among SMEs and to make best use of the newly launched national voluntary sustainability standard (VSS) platform:

- The VSS platform should **inform and empower Chinese SMEs** with regard to sustainability standards. Since it bundles the knowledge and experience of experts from relevant ministries, industries, academia and NGOs, the VSS platform could launch a VSS database – potentially in cooperation with ITC – to deliver tailored information services to SMEs. This could raise awareness among SMEs, bridge information gaps and improve understanding of complicated standards systems, especially about concrete measures for standards implementation. It could also assist SMEs through specific capacity-building or training projects to support their VSS activities and to indirectly strengthen their competitiveness in international trade.
- China's national VSS platform needs to engage in **knowledge exchange**: on the one hand through regular dialogue with its counterparts in other developing countries, such as India and Brazil, to share experience and lessons and to pave the way for mutual VSS recognition in the future. On the other hand, SAC – under the guidance of Ministry of Commerce (MOFCOM) and the Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) – should continue to be proactively engaged in mutual learning and knowledge-exchange activities coordinated by the United Nations Forum on Sustainability Standards (UNFSS) and the German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE) to enhance China's national VSS platform.
- Following the example of the Marine Stewardship Council (MSC) that has partnered with the Alibaba Group to promote the sales of MSC-certified fishery products on the Tmall platform with extremely positive market responses to seafood sustainability certification, China's e-commerce giants could **raise consumer awareness and the**

significance of sustainability standards. This may include granting e-commerce finance based on compliance with sustainable practices.

- International standards should seek **endorsement from the Chinese government** to increase relevance and acceptance among Chinese firms and consumers. The proponents of international standards should not soften requirements, but work with the government to design more coordinated and localised certification programmes to facilitate standard adoption by SMEs. These programmes should consider an incremental and differentiated approach for SMEs in accordance with their capabilities and capacities.

5.3 India[12]

SME landscape

In India, there are 51 million registered small and medium-sized enterprises, most of which operate in the manufacturing sector (67.1 per cent), while the rest are split almost evenly between the service sector (16.8 per cent) and repair and maintenance (16.1 per cent). Disaggregating further, the industries to which SMEs contribute the most in terms of employment and export are food products and beverages, textiles, and wearing apparel (Indian Ministry of Micro, Small and Medium Enterprises, 2011). According to the Ministry of Micro, Small and Medium Enterprises, Indian SMEs as a whole account for around 38 per cent of national GDP, more than 40 per cent of employment, and 42 per cent of total exports (CII, 2016; Indian Ministry of Micro, Small and Medium Enterprises, 2016).

An important feature of the Indian SME landscape is its organisation into homogeneous clusters. Confronted with difficulties in achieving economies of scale, industrial clusters of SMEs were formed in the late 1990s to foster networking, specialisation, and innovation. Nowadays, almost two-thirds of Indian SMEs take advantage of these industrial clusters, combining the advantages of small businesses, such as operational flexibility, with the benefits of scale and specialisation provided by larger units.

Types of standards and relevance

The core of the public mandatory standards and requirements is embedded into seven legislative acts concerned with environmental protection. Therein the Ministry of Environment, Forest and Climate Change addresses issues related to forests, wildlife, air, and water. Pollution control boards ensure enforcement; they are authorised to issue and revoke consents to operate, to require self-monitoring and reporting, to inspect facilities, to require corrective action, and to prescribe compliance schedules and administrative fines for any violation. The enforcement powers include emergency measures of disconnecting water or power supply and facility closure, which are widely used in some states. In spite of the strong mandate and instruments, pollution control boards are relatively ineffective due to staff shortages.

12 The section on India summarises and merges the findings of Jain and Ashok (2017) and Kathuria, Goldar, and Jain (2017).

Mandatory energy conservation standards are imposed upon larger firms of energy-intensive industries by the Ministry of Power's Bureau of Energy Efficiency in order to fulfil the Intended Nationally Determined Contribution (INDC). It is planned to include SMEs into this reform. Under the Perform and Trade (PAT) Scheme, each firm is assigned a specific energy consumption (SEC) reduction target based on its baseline SEC. Firms receive tradable, certified energy savings credits if they achieve efficiency gains beyond their targets and have to buy energy savings credits if they do not meet the target.

The government has also announced that SMEs need to be certified under the Zero Defect and Zero Effect (ZED) manufacturing programme. This environmental management system is intended to set benchmarks for environmental performance and inspire continuous improvements. Through it, SMEs are expected to benefit from efficiency gains as well as increased competitiveness and quality.

Furthermore, the Bureau of Indian Standards (BIS) has developed mandatory product standards that address public health and safety concerns. Currently certification is required for 140 products such as household electrical goods, food products, automobile accessories, stoves and valves, medical equipment, and others.

Public mandatory standards cover the social dimension, too. The Indian government has passed a comprehensive set of laws guaranteeing labour welfare and protection. Yet 93 per cent of Indian workers do not profit from these labour standards as they are employed informally or work for firms that are exempted from such regulations because staff headcounts fall below certain thresholds.

In the sphere of voluntary standards, BIS lists over 15,800 public voluntary standards in diverse fields such as agriculture, chemicals, engineering, medical instruments, textiles, and others. Most of the standards apply to the agriculture and food products sectors where a series of national standards like Agmark, FPO (Fruit Products Order) mark and India Organic certificate mark have emerged in the 2000s. Several international, private voluntary standards, including the ISO 14000 series, GlobalGAP and its local variant IndiaGAP, chain of custody certification (COC) and Fairtrade, are also taking hold. Adoption of international standards is still in its infancy and is mainly undertaken by export-oriented firms.

Drivers and constraints for implementing sustainability standards

Indian SMEs are discouraged from adopting standards by high costs, risk aversion and lack of finance. Often, smaller firms do not have the human resources to implement standards and find markets that do not require certification. Factors that drive the spread of standards are either economic incentives, such as efficiency gains and access to lucrative markets, or public incentives such as subsidy schemes and legal requirements. Entrepreneurs' personal preferences, knowledge and exposure with regard to sustainability facilitate standard adoption.

Drivers for implementing sustainability standards

A legal framework for mandatory environmental and social practices is in place and is being increasingly extended to Indian SMEs. Even though pollution control boards are understaffed so that disrespect of legal norms may not necessarily result in **legal retaliation**, consequences

are harsh. The rigid approach of "comply or close down" does move SMEs to adopt mandatory standards.

The strongest incentive to implement standards is provided by the demand for sustainable products. One example is the textile industry in which around 70 per cent of firms are aware of international standards such as the ISO series or REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals). Compliance with international standards like REACH and GOTS (Global Organic Textile Standard) is essential to gain **market access** to the EU, one of the major export destinations. Adopting sustainability standards secures SMEs larger and more predictable orders.

The implementation of standards is associated with adaptations in the production process that lead to **efficiency gains**. Indian firms with ISO 14001 certification, for instance, report reductions in waste and cost savings. More demanding investments in new production technologies and new machineries raise productivity and competitiveness. Most Indian SMEs gradually mature towards sustainable production taking one step at a time due to capacity constraints in finance and personnel: starting with water rationalisation, reducing wastage by recycling and reusing, utilising cleaner chemicals, SMEs graduate to more complex sustainability practices such as solar and other energy-saving solutions, energy-efficient production lines, and so on.

Since investments only pay off in the longer run, the government supports the adoption of sustainable practices and standards through various **subsidy and reimbursement schemes** covering international standards like ISO and national ones like ZED certification.

Developing a sustainable business profile is largely a voluntary decision that depends on the vision and conviction of management. Usually, decision-making power is concentrated in one figure, meaning that the **entrepreneur's personal preference, knowledge and exposure** determine investments and business strategy. SMEs in the case study that were found to play a key role in promoting sustainability standards in their respective industries were mostly led by highly educated entrepreneurs, well familiar with countries of important export destinations.

Constraints for implementing sustainability standards

Smaller firms often **lack human resources** for developing long-term strategies. Both management and employees are absorbed by the daily operational tasks, leaving no capacities for activities that are not directly related to the daily business. Consequently, such SMEs are unaware of standard schemes and associated longer-term business opportunities.

One major constraint in standard adoption are **costs and risk aversion**. Due to in-house ignorance of standards, SMEs need to hire consultants to identify appropriate standards and to guide the implementation process. Implementation and certification costs have to be borne by producers alone and cost internalisation into product prices is usually curtailed by the bargaining power of large buyers who demand quality as well as low prices. Employees must be trained in new production processes and documentational requirements. In some cases, new technology is even needed, but SMEs are reluctant to discard machinery and tools which have taken a lifetime to establish and master. As such investments involve uncertainty, many SMEs exhibit risk aversion and continue with inefficient, incumbent

production technologies that promise guaranteed short-term revenues. And even if SMEs are willing to invest in new machinery, they face funding problems because of limited **access to finance**.

Another important disincentive against the adoption of standards is **access to markets without certification**. Although Indian SMEs have a relatively high share in national export earnings compared to other countries – which exposes many SMEs to the standards requirements of international markets – Indian firms face a domestic market and neighbouring markets of enormous size for which compliance with voluntary sustainability standards is generally irrelevant. As the markets are so large, there is no need for lengthy and complicated certification processes.

A cotton-trading SME interviewed in the case study showed an alternative way to access global markets without certification by international standard organisations. Appachi Eco-Logic Cotton Private Limited had initially adopted the standard of the Better Cotton Initiative and several other international standards. Because of high certification costs, the sales price of its ecological cotton rose and rendered the firm uncompetitive. Having already adjusted the supply chain and business operations to sustainable practices, Appachi Eco-Logic Cotton decided to continue according to its ethical principles but without renewing certification. The firm convinced Tchibo of its ethical business practices in spite of the lack of certification and became one of Tchibo's ecological cotton suppliers. This approach may not be replicable one-to-one, but depicts how temporary certification, compliance without certification, or in-house standards may suffice to integrate into GVCs if the trust of the lead firm is won. Such developments restore the importance of in-house principles and standards, but undermine the significance and spread of international standards.

Demand for finance

In India, financial instruments are not designed to spread sustainability standards. It is rather the other way round, namely that the adoption of sustainable practices increases the demand for finance. A substantial number of SMEs approached in the case study financed the incremental costs of standards compliance with internal resources. The majority, however, turned to the financial sector for funds. A third possible source of funding, aid from international donors for standards implementation, is prohibited by the Foreign Contribution and Regulation Act that bars profit-making enterprises from receiving foreign donations.

SMEs mainly look for long-term finance for investments in fixed assets and working capital. Long-term credit is mostly provided by financial institutions such as commercial banks, state financial corporations, non-banking financial companies, and others. Working capital needs are met by the banking sector, including scheduled commercial banks, regional rural banks, and so on. However, more than 85 per cent of SMEs have no access to formal financial services and are completely dependent upon internal or informal funds (Indian Ministry of Micro, Small and Medium Enterprises, 2011).

While most SMEs in India have a low awareness of potential funding sources and merely approach banks for finance, banks employ credit risk assessments which are not applicable to typical SMEs as the latter lack financial payment histories, credit records, immovable collateral, and sometimes even formal legal structures. The central bank of India, the Reserve Bank of India, issued the Priority Sector Lending requirements to strengthen,

amongst other things, bank lending to SMEs. At least 7.5 per cent of total outstanding loans have to cater to micro enterprises.

The government is trying to facilitate SMEs' access to finance. It has launched credit guarantee schemes such as the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) as well as development banks with a special mandate for SMEs. The Small Industries Development Bank of India (SIDBI) is an example of such a development bank: it refinances primary lending institutions through loans and grants; it engages in direct lending to risky borrowers such as start-ups, early-stage ventures, and SMEs; and, lastly, it also provides non-financial support to SMEs through credit advisory centres that assist SMEs in choosing and applying for suitable credit options. SIDBI strengthened the functioning of the supply side by setting up the SME Rating Agency of India Ltd. (SMERA) in 2005, which prepares comprehensive, transparent and reliable ratings and risk profiles. By 2012, SMERA had assigned independent third-party ratings to the majority of SMEs in India.

Recommendations

The two Indian case studies yield policy considerations that can be clustered into three action areas. Instead of tackling the action areas independently, there is a need for a broader policy framework that coordinates and develops sustainability-linked schemes, programmes and funding.

i) Creating demand for sustainable products and services

- Demand has been identified as the major driver for standards adoption. There are several ways to enhance the significance of this driver. In line with its development agenda, the government could promote the **integration of SMEs into supply chains and global value chains**. Many international buyers necessitate that their suppliers comply with sustainability standards and offer large, longer-term contracts that guarantee the profitability of investments in standards implementation.
- Government could stimulate demand by modifying its **public procurement** strategy. Greater preference should be given to sustainable practices in order to also augment domestic demand. One could also consider attaching sustainability conditionalities to promotional policies.

ii) Supporting SMEs in the implementation process

- International donors and organisations promoting sustainability standards could collaborate with UNFSS, ISEAL, and other meta stakeholders to **inform SMEs about the effectiveness and impacts of particular standards**. This could help SMEs to identify standards that constitute profitable business cases for their specific setting and environment.
- Standards organisations could provide **technical assistance** to facilitate the implementation of standards. In general, meeting standards requirements exposes sustainability-oriented SMEs to the same challenges. Standard organisations are best qualified and positioned to centrally offer tailored assistance to support the organisational transformation and the training of management and employees.
- The government has a vested interest in promoting sustainable development and SME development is at the core of this task. Strengthening the sustainability profile of

SMEs requires **awareness creation and capacity-building**. It would be possible for the government to use cluster development programmes to cost-efficiently reach SMEs in order to raise awareness of the business value of standards and to empower SMEs to adopting standards.

iii) Assisting in cost and financing challenges

- Standard organisations should develop schemes to **distribute implementation and/or certification costs across value chain actors**. In most cases, suppliers bear these costs completely, although downstream buyers and retailers benefit from the sustainability branding of the product. Costs and benefits need to be shared more equally. In doing so, large corporations additionally benefit from strengthened relationships with suppliers, which improves quality and security of sourcing.
- Financial institutions should **include environmental standards and benchmarks into credit assessment** to incentivise SMEs to adhere to standards. The SME rating agency SMERA could additionally assess the social and environmental practices of SMEs. Environmental criteria such as a mandatory ZED assessment could be easily incorporated into the rating methodology.

5.4 Indonesia[13]

SME landscape

In Indonesia, micro, small and medium-sized enterprises (MSMEs) play a crucial role in the economy, particularly in employment and economic growth. Between 2008 and 2013, the number of SMEs grew by 12.6 per cent to almost 58 million units. SMEs account for 99 per cent of all firms in Indonesia and employ 97 per cent of the working population. Their contribution to GDP and export, however, are disproportionally small. SMEs account for 58 per cent of national GDP while merely 13.5 per cent of SMEs engage in export, of which 7.9 per cent do so directly and 5.6 per cent indirectly.

Types of standards and relevance

The Indonesian government has passed legislation to protect the well-being of citizens and the environment. Regulations address environmental safety, labour issues and management systems. For example, businesses must acquire environmental permits, abstain from child labour, and pay minimum wages. There are 270 standards developed by the national standardisation agency, Badan Standardisasi Nasional (BSN), that have become mandatory through reference in laws. The majority of these public, mandatory standards are regulated by the Ministry of Industry (36 per cent) and the Ministry of Maritime Affairs and Fisheries (30 per cent).

BSN has developed 9,618 public voluntary standards that cover various sectors, while material technology with 23 per cent and food technology with 16 per cent contribute the most.

13 The section on Indonesia summarises the findings of Damuri and Santoso (2017).

Most of the private standards in Indonesia are set by buyers that require suppliers to comply with firm-specific standards. Examples are the Coffee and Farmer Equity (CAFE) programme by Starbucks, which establishes a set of mandatory sustainability standards among coffee growers within Starbuck's supply chain, or the Toyota Production System, which mainly focuses on technical and management practices to uphold the frictionless and high-quality functionality of complex supply chains.

Private voluntary standards with international coverage, such as Fairtrade or UTZ for the coffee industry or Roundtable Sustainable Palm Oil (RSPO), Forest Stewardship Council (FSC), Programme for the Endorsement Forest Certification (PEFC), International Council on Metal and Mining, Sustainable Textile Production (STeP), are still of minor significant in Indonesia. The reasons for this are manifold and include minute exposure of Indonesian SMEs to export markets with standards requirements, the preference of lead firms for in-house standards, and the development of parallel local standard schemes. Indonesia has designed national standards such as the Indonesian Forestry Certification Cooperation programme (IFCC) or the Indonesian Sustainable Palm Oil (ISPO) standard. The latter is supposed to improve sustainability and competitiveness in Indonesia's palm oil industry. Compared to the internationally common Roundtable on Sustainable Palm Oil (RSPO) standard, it comprises fewer criteria, is easier to implement but is less transparent with regard to auditing results and standard development. ISPO is mandatory throughout Indonesia.

Drivers and constraints for implementing sustainability standards

The relevance of standards is still rather limited in Indonesia because high implementation costs and a lack of consumer demand discourage firms from adopting standards. Several other factors such as awareness and information gaps on the firms' side, poor infrastructure, and weak monitoring of compliance with mandatory standards contribute to low take-up rates. The government is trying to set incentives for sustainable practices through regulations, various financial and technical support programmes and, to a limited extent, through easier access to finance for sustainable firms.

Drivers for implementing sustainability standards

In Indonesia, it is mainly the government that motivates sustainable practices among SMEs. Partly, sustainability standards are promoted directly in the form of national certification requirements, and often indirectly through **government programmes** targeting transformation towards a green economy. The most ambitious programme is the Master Plan of National Industry Development that aims at developing a green industry, starting from the use of raw materials (clear origin), production processes which apply the concept of 3R (reduce, reuse and recycle), as well as control and waste management during and after using the resulting products. The government spurs on this programme by strengthening the institutional capacity and by providing facilities for SMEs that assist firms so that they benefit from information interventions, technical assistance, capacity-building, certification and additional financial incentives.

In addition, the government runs supplementary programmes to advance clean production. It has long established a public environmental performance rating system, called PROPER, which aims at strengthening industrial compliance with pollution control regulations and

better environmental management systems. A subsequent programme entitled "Cleaner Production" provides technology information, training, consultation, technical assistance, Cleaner Production Technical Guides for specific industries, and liaison services with government agencies, the private sector, non-governmental organisations, universities and banks. Additional government efforts have been undertaken to motivate sustainable practices such as awards for green businesses and fiscal incentives in the form of tax reductions and exemptions, for instance for pollution control equipment and the cost of waste treatment.

Lastly, the Indonesian government employs **laws and regulations** to make standard adoption compulsory. Indonesia has national standards such as the Indonesian Sustainable Palm Oil (ISPO) standard that are mandatory for national producers including SMEs. In order to avoid legal consequences, Indonesian firms have to acquire certification.

The Ministry of Environment in corporation with the German KfW Development Bank has facilitated **access to finance** for firms committed to environmental-friendly production. A soft loan programme with a volume of roughly USD 17.5 million has been set up to boost investment in low-emission technologies and environmental protection activities. Since SMEs are continuously struggling to receive funding, facilitated access to finance strongly encourages SMEs to adopt sustainable practices.

Even though only realised by a few Indonesian SMEs, the case study indicates that **market forces** could incentivise standard adoption. After all, compliance with sustainability standards potentially leads to (export) market access and price premiums.

Constraints for implementing sustainability standards

The biggest challenge for Indonesian SMEs as regards standards implementation are the **associated costs**. The most obvious cost obstacles are audit and certification fees that are required to verify and confirm standards compliance formally. Certification by the national timber standard SVLK, for instance, involves fees from USD 7,500 to USD 11,000 for the legal documentation; small-scale forest enterprises have to pay unofficial fees of USD 1,400 to USD 7,500 per year. Consequently, in 2013, less than 800 enterprises held SVLK certification, most of which were of medium or large size as the fixed costs overstrained the capacity of small firms.

Additional costs arise during the implementation process. Staff have to be trained in sustainable practices, alternative production processes, and documentation requirements for certification. Sometimes investment in new technology and machinery is necessary to comply with standards. This might be a particularly severe constraint, as both state-of-the-art, environmental-friendly technology and finance for such investments are barely accessible for SMEs.

Even the sourcing of sustainability-certified inputs proves to be expensive and compromises profit margins and competitiveness. The availability of domestic raw materials that meet international specifications is limited, which translates into higher prices and dependency on single partners. Importing certified inputs creates exchange rate risks.

So far, market opportunities to recoup the higher costs associated with sustainable production practices have been limited, partly because only a small fraction of Indonesian

SMEs export to international markets that require standards compliance. As mentioned above, a meagre 7.9 per cent of SMEs export directly while 5.6 per cent export indirectly. The majority of small and medium-sized firms serve the domestic market, which is characterised by **low consumer awareness** of sustainability issues. Eco-labels neither create an edge in consumption decisions nor higher willingness to pay on a larger scale. Conscious consumption with regard to sustainability is still limited to a very small fraction of Indonesian consumers; the same holds for export markets with low-standard profiles such as the Middle East and Africa. First and foremost, consumers prefer affordable products. The resulting price competition drives SMEs to focus on cost reductions instead of standards compliance.

Awareness and information about sustainability standards is also low among firms. SMEs are often unaware of standard schemes or have a constricted view of certification. The immediate costs of standards shape misperceptions and presumptions that compliance constitutes a costly waste of time and money, ignoring the business opportunities of access to export and high-value segments of the market. Lack of information persists beyond the initial decision-making stage of whether to adopt standards. The next concrete steps from choice of a distinct standard to the implementation of the standards requirements in production and organisation of the firm are unclear. SMEs neither have the human resources and technical knowledge to acquire the relevant information, nor the financial resources to outsource these tasks to consultancies.

One obstacle to awareness and information about sustainable standards and subsequent implementation is **poor infrastructure**. One problem is the limited capacity of certification agencies that cannot meet the demand for mandatory audits. Additionally, internet connectivity is a basic requirement for gaining knowledge related to standards and also facilitates participation and benefits from information interventions, training, and technical assistance through government programmes. In 2013, however, according to World Bank data only 22 per cent of Indonesians were connected to the web. In comparison to other countries in Asia such as China (50 per cent), Malaysia (71 per cent) and Thailand (39 per cent), this is quite low. Moreover, the average connection speed in Indonesia in 2015 was about 7.45 megabits per second and thus 5 megabits per second lower than Singapore.

Lastly, weak **legal enforcement** and the softening of regulations undermine the adoption of standards. Monitoring and control of compliance with mandatory national standards is lax. The ISPO standard, for example, has certified merely 184 palm oil producers covering only 11 per cent palm oil plantations in Indonesia. The fact that only large producers have implemented the standard suggests that smaller firms in this industry hope to fly below the radar without any legal retaliation. Due to the difficulties that small producers have in adopting ISPO, the legislation was modified in 2015 and exempted plantations without processing units – mostly small producers – from mandatory certification.

Demand for finance

SMEs in Indonesia do not tend to fit into the conventional, branch-based banking practices so that the loan share of SMEs only amounts to 19.7 per cent. Recalling that 98 per cent of all firms are SMEs, this strongly illustrates the financial gap faced by smaller firms.

From the bank perspective, serving SMEs is costly, especially since a high number of SMEs in Indonesia are located in rural areas. Additionally, smaller firms are perceived to be high-risk borrowers as SMEs often lack both collateral and legal structures. On the other hand, SMEs ask for easy and cost-effective loan applications that can be processed quickly. However the complicated traditional screening procedures requiring sound business plans along with risk assessment documents tend to drive away SMEs. As a result, many SMEs in Indonesia prefer informal loans despite significantly higher interest rates. Alternatively, SMEs rely on their own capital, or grants and loans from family and friends and only tend to apply for external finance if they want to expand their business. Lack of knowledge about financial products combined with insufficient capacity to identify suitable financial services from which they can benefit hamper such efforts.

Such limited access to finance impedes investments necessary to improve production technologies and competitiveness. Upgrades of this type are prerequisites to qualify for international standards and integration into GVCs. This means that facilitating access to finance indirectly enables SMEs to adopt standards. The Indonesian government has established a loan guarantee system to encourage financial service providers to increase the provision of loans to SMEs. On the other hand, the government is also attempting to make SMEs more "bankable" by facilitating and subsidising land certification, which establishes legal ownership and may serve as collateral in loan applications. The Indonesian government has also initiated various financing and credit schemes for SMEs such as the People Business Credit, the Export-Oriented People Business Credit, and the Food and Energy Sustainability Credit. Each of these initiatives offers subsidised interest rates and no, or soft, collateral requirements so that credits for working capital and investments are extended to previously unserved SMEs.

In addition to public financing programmes, the government obliges financial institutions to direct loans to SMEs through Bank Indonesia. Commercial banks are forced to provide credit and financing for SMEs according to the banks' abilities. Examples are credits for unserved SMEs from rural banks (Bank Perkreditan Rakyat) or credits from the Penanaman Modal Madani bank that comes with consultation and training in financial management and market access. Even private and state-owned firms are required by law to implement CSR strategies that encompass assistance to SMEs, for example in the form of affordable low-interest credits, and consultation and training.

There are trade-oriented financial instruments in place as well, mainly promoted by the Indonesian Export Financing Institution. Examples are supply-chain finance, where the bank provides finance to the SMEs on the basis of future payment that the large firms will make to the SMEs in their supply chain, and trade financing options which mainly comprise pre-export loans and guaranteed letters of credit backed by trade transactions.

Alternatively, more recent sources of finance have been introduced to Indonesian, but still operate on a low scale, as knowledge and expertise therein are limited. Crowdfunding offers a great potential of gathering funds from largely untapped rising middle-class domestic investors. Digital financial services provided by electronic money issuers (bank and non-bank) in collaboration with third party agents build upon inclusive technologies developed by FinTechs and have the potential to include unreached rural households and businesses. Lastly, the Indonesian government supports the financing of new enterprises through venture capital by launching a respective guarantee system.

One example of direct efforts to design financial instruments that foster sustainable practices is the implementation of green banking. A Memorandum of Understanding (MoU) between the Indonesian Ministry of Environment and Bank Indonesia from 2010 encourages the banking sector to expand eco-friendly financial products and services in order to also increase awareness, responsibility, and sustainable practices among borrowing economic actors. The Financial Services Authority (OKJ) has joined the initiative and signed an MoU with Indonesian Ministry of Environment in 2014. OKJ has further developed a Sustainable Finance Roadmap that is committed, amongst other things, to tackling the challenges of global warming by promoting sustainability and transformation to a low-carbon economy. One of the programme's target sectors are SMEs.

Recommendations

The case study suggests three policy considerations for the promotion of sustainability standards among SMEs:

- **Government initiatives** targeting access to finance and the adoption of standards need to be supervised, evaluated with respect to effectiveness, and improved. Major incentives to comply with sustainability standards stem from the government while public programmes have to be extended, for instance, in the field of tax exemptions and tax breaks.
- The spread of standards could be facilitated by **more commitment from actors in the value chain**. Lead firms could assist SMEs in their supply chains in various ways: First, they could cover some of the implementation and certification costs; and second, transfer of knowledge and technology could be enhanced and formalised through supplier development programmes.
- Standard setters should design **standard schemes compatible with the limited human and financial resources of SMEs**. This could include lower certification fees and simplified certification procedures for SMEs. Most importantly, standard setters should develop multi-stage certification processes that verify and reward first steps in transition to full compliance. Standard systems almost exclusively employ a binary certification approach where applicants either completely fulfil standards requirements or fail to achieve certification. However, SMEs often take longer periods to meet requirements as capacity constraints in finance and personnel necessitate a lengthy step-by-step approach to bring production processes and organisational structures into line with the requisites of the standard system. Certification of "semi-compliance" tied to obligations to fully comply with the standard within a given period, would allow firms to already reap economic benefits from standards compliance during the transition period and thus raise the feasibility and attractiveness of standards adoption.

5.5 South Africa[14]

SME landscape

About 2.25 million SMEs are documented in South Africa, two-thirds of which are informal (Bureau for Economic Research, 2016). These enterprises play a major role in the national economy and its growth prospects, making up 60 per cent of formal employment and accounting for 50 per cent of GDP (Grater, 2016). The vast majority of SMEs serve the domestic market so that merely 6.7 per cent of the export sales between 2010 and 2014 accrued to SMEs. The SMEs engaged in exports do so directly or indirectly through cross-border value chains, usually to regional partners: 91 per cent of exports go to Sub-Saharan Africa while only 8 per cent are shipped to Europe and the United States, markets with relatively high standard profiles. Export engagement of South African SMEs is also one-dimensional with regard to the exporting sector as 85 per cent of exports stem from manufacturing SMEs (Anand et al., 2016).

Types of standards and relevance

The uptake of standards, in general, is low across different industries in South Africa and is skewed towards large corporations. This can be partially explained by the obligation of large firms to develop CSR strategies, often referred to as Corporate Social Investment (CSI) in South Africa. Compulsory CSR strategies are enshrined in national legislation that has been shaped by Broad-Based Black Economic Empowerment (B-BBEE), various industry charters, and King II and King III reports on corporate governance. As laid out above in the section Origin and classification of standards, such CSR strategies often incorporate voluntary sustainability standards of a public and private nature. For instance, 75 South African firms follow the principles of the UN Global Compact and thus incorporate a voluntary public standard from the intergovernmental sphere into their CSR. The ISO series comprises voluntary standards that have experienced wide acceptance throughout South African firms, amongst others the ISO 26000:2010 standards on social responsibility.

Out of the 8,541 standards developed by the South African Bureau of Standards (SABS), 1,139 have been embedded into legislation and have thus become mandatory. Such standards aim at consumer protection and address health, environmental and safety issues. They can be categorised as national public mandatory standards and are applicable to firms of all sizes.

Through its associations with regional standard-setting organisations in Southern Africa and especially in Europe, the SABS has introduced international standards to South Africa. These standards are generally voluntary (unless embodied into laws) and facilitate cross-border production and trade. The growing importance of international production processes has also brought voluntary sustainability standards (VSS) with global coverage – such as Fairtrade, GlobalGAP, FSC, and others – to South Africa. According to the Standards Map database of ITC, there are 81 VSS available in South Africa, which is roughly 20 per cent less than in the four countries of the other case studies. Yet within the changing environment of value chains, SMEs continue to partner with lead firms and consumers whose growing

14 The section on South Africa summarises the findings of Draper and Ngarachu (2017).

interest in sustainability standards forces suppliers – especially SMEs in supply chains – to reconsider standard adoption. Consequently, the spread of GVCs is likely to foster the significance of VSS in South Africa.

Drivers and constraints for implementing sustainability standards

Standards adoption is generally low in South Africa as many SMEs are unaware of sustainability standards and their potential value to the business. Implementation and certification costs, inflated by needs for technical training and capacity-building, along with a disadvantageous environment of lax legislation and rigid market structures severely impede the uptake of standards. SMEs are driven to implement standards by demand for standards either through buyers such as value chain actors and public tenders or through rising sustainability awareness among consumers. The potential positive correlation between access to finance and standards may help with standard uptake as well.

Drivers for implementing sustainability standards

The South African case study identified **buyers' requirements** as the most important incentive for SMEs to adopt sustainability standards. SMEs often access markets indirectly through integration into supply chains and GVCs. International buyers at the downstream end of GVCs react to perceived or real consumer needs and impose respective standards upon suppliers. Although integration into the international production processes of GVCs and direct exports give firms an incentive to implement standards, the direct exposure of SMEs to the latter is minor. While SMEs represent 91 per cent of South African firms, their share in export sales amounts to a mere 6.7 per cent. Moreover, 91 per cent of SME exports are directed to Sub-Saharan Africa, a market with a relatively low standard profile. The second important buyer interaction promoting standards among SMEs is participation in public tenders. Often SMEs are unaware that validation of the award depends on compliance with sustainability standards. In both cases, whether through lead firms in GVCs or public tenders, SMEs are compelled by buyers to comply with standards. Once the costly implementation of standards has been mastered, SMEs profit from the financial rewards of larger and more secure contracts.

Expert interviews have shown that SMEs that choose to directly market their products also increasingly adopt sustainability standards voluntarily as they have understood the value of standards compliance, not only from the financial viewpoint but also from the societal one. The driving force behind this development is raising **consumer awareness** and the firms' response to increasing demand for sustainably produced goods and services. One example is the local market for organic produce that is taking hold in more affluent areas of South Africa. Nonetheless, in spite of these positive developments, South Africa has still some way to go before catching up with the organic agricultural standards and principles of the rest of the world.

Even though in some countries, financial institutions, in particular development banks, facilitate **access to finance** conditional on standards compliance, South African SMEs do not qualify for loans due to the uptake of sustainability standards in general. However, the case study discovered that standards adoption may be positively correlated with access to funding. The case study looked into a small enterprise in the cosmetic industry that had adopted good social and environmental practices following the quality management

standards of ISO 9000, the national "Cosmetics – Good Manufacturing Practices" as well as industry association standards. Commercial banks gained trust in financing this SME because of the potential prospects associated with these standards, namely product differentiation, price premiums, larger orders, and access to retail value chains and to more exclusive markets. This means that standards may indirectly contribute to accessing finance in South Africa.

Constraints for implementing sustainability standards

SMEs in South Africa often **lack awareness** of the value that sustainability standards may have for the business. Standards implementation may spur the firms' development, allowing access to GVCs and therefore growth beyond the local market. Government efforts try to create awareness for standards through outreach by the SABS. Outcomes, however, are limited as indicated repeatedly in expert interviews. One problem is the dispersion of SMEs that often demands time and resource-intensive one-on-one interactions. Even SABS programmes in satellite offices are not frequently used by (remote) SMEs because of the associated opportunity costs for travelling and for leaving the business either managed by junior staff or completely unattended.

Another major barrier to standards implementation by South African SMEs is the financial burden due to **implementation and certification costs**. These costs are generally independent of the size and value of firms, that is, they can be described as fixed costs, and thus particularly worsen the profit margins of smaller firms. Cost-sharing initiatives for certification are still the exception, but SABS has started some schemes with participating stakeholders such as mining houses, which leave only 5 per cent of the certification costs to the SMEs while the value chain actor covers 80 per cent and the SABS 15 per cent. Other cost-sharing initiatives have been developed by the Department of Economic Development, but fall short of full compensation by far. In addition to certification costs, SMEs face recurrent costs from membership fees or internal audits and training that are necessary to familiarise the staff with the sustainability systems and the documentation required for certification.

Implementation of and compliance with standards requires adaptation in the production process. In South Africa, SMEs often lack the necessary technical capacities and knowledge and cannot afford to hire consultants for the implementation process. There is need for **technical assistance and training**. Assistance programmes by SABS fail to reach many of the relevant SMEs because firms are unaware of the programme or because of the physical dispersion of SMEs. Language barriers, limited or no internet connection, and inadequate literacy further jeopardise programme results. Part of the solution in South Africa are lead firms such as Massmart, mining houses or Woolworths that pay for the training of SMEs in order to assist them in upholding sustainability standards in line with their company codes. Of course, such trainings are limited to SMEs in the corporations' supply chain in which they have vested interests. Yet most large corporations rely on the government agencies to promote capacity-building among SMEs.

The last two disincentives for standards adoption are related to the legal and economic environment of SMEs. If **lax legislation** does not establish regulatory minimum standards that set a baseline or floor, SMEs find it hard to implement more stringent, voluntary

environmental and social standards that would create an even more severe cost disadvantage compared to non-compliant competitors.

The second disincentive follows from the economic situation, more precisely from **market structures** in which large corporations control and dominate the market and the GVCs. SMEs abstain from market entry and even from competition with the suppliers of large corporations as these usually enjoy long-term contracts. Consequently, many SMEs refrain from GVC participation and adoption of relevant sustainability standards. More importantly, SMEs also risk losing their intellectual property rights if they integrate into GVCs, because large corporations often assimilate SMEs in the longer term.

Demand for finance

At initial stages, entrepreneurs mainly rely on their own capital or borrowed funds from informal community lending programmes. Accessible financing options are crucial for the growth of SMEs and their further development, which may involve investments in upskilling and in standards implementation to enter GVCs. The various financial needs of SMEs at various different stages of development are depicted in Table 3. In general, SMEs integrated in GVCs with vertical linkages, where a lead firm operates the supply chains and the final assembly, have relatively less difficulties with funding compared to horizontally linked GVCs, where SMEs form business clusters and act as main contributors throughout the value chain. Experts interviewed pointed out that lead firms may assist their suppliers with funding for upskilling or with partnering with enterprise development agencies, which allows SMEs in their supply chains to access government funding more easily.

Table 3: Funding requirements at different growth stages of SMEs

	Start-up phase	**Growth phase**	**Stable/ consolidation**	**Exit**
Type of SME	Source of finance			
Traditional small business. Provides employment for individual, family and friends	Family, friends, savings, **equity in residential property, loans underwritten by government**	**Asset-backed finance, bank debt, factoring**, trade credit	**Bank debt** if required	Not available
High potential. Possibly export business	Angel finance, **team equity**, some venture capital	Venture capital, private equity, **asset-backed finance, some bank debt**	Venture capital, high-yield debt market, **bank debt**	Exit via capital markets or direct access to stock market
High-tech, information and life sciences intellectual property	Angel finance, venture capital, corporates	Venture capital, corporates, **asset-backed finance**	Corporates, bank **debt**	Exit typically through trade sale

Source: Mahembe, Chiumya, & Mbewe, 2011

The government has launched numerous initiatives to improve SMEs' access to finance. For instance, the Department of Trade and Industry runs several incentive schemes for

industrial development projects; the Industrial Development Corporation also operates incentive schemes as well as loans and grants, and reports to the Economic Development Department; the Small Enterprise Finance Agency (SEFA) provides funding to SMEs, and reports to the Department of Small Business Development (DSBD), which has a mandate to develop SMEs nationally.

Government initiatives have not always been successful. One problem is low awareness of these programmes among SMEs, in particular SMEs not connected to GVCs or cooperatives (since the South African government prioritises cooperatives as part of its broader empowerment initiatives). Other problems are rooted in the design of government support: most government incentive schemes cover only 50 per cent of the cost of funding so that SMEs need other means such as bank financing to complete the financing quest. Grants come with conditionalities like B-BBEE accreditation and access periods limited to 90 days in which the rest of the funds have to be raised. In the expert interviews, the open-window policies of grant money– which makes funding only accessible within a certain time frame – was described as a bottleneck as well.

Bank financing is quite popular among South African SMEs. With their traditional financial instruments and screening practices, however, banks are poorly equipped to finance SMEs without a business record. The loan application process is complicated by limited financial acumen on the SMEs' side. For this reason, 75 per cent of applications for bank credits by SMEs in South Africa are rejected. Banks are only willing to lend to contractually ready businesses, for example SMEs that can provide certified offtake agreements. Yet expert interviews underlined that lead firms in GVCs and large buyers are reluctant to sign offtake agreements because of the uncertainty about consumers' preferences and demand in the next business cycle. Instead, letters of interest are issued, even though banks hardly consider them for credit approval.

If SMEs can produce buyer contracts, SEFA offers bridging loans to serve immediate cash-flow needs. Another suitable option for SMEs is the microfinance sector, even though loans are limited in size and interest rates tend to be higher than in the conventional banking sector.

Lastly, two innovative financing options may apply to SMEs as well: the Angel Investment Network and other angel investors in South Africa provide financing structures and guidance for business operations. How easy it is for SMEs to access such funding depends on factors that the angel investors determine. Secondly, 12J venture capital funds are gaining in popularity throughout South Africa. These funds aim at SME development and are particularly attractive for investors because capital contributions are 100 per cent tax deductible. Since this funding tool belongs to the elitist segment, SMEs outside vertically linked value chains will especially struggle to access this source. In general, expert interviews classified venture capital funds as less relevant for SMEs; most of SME finance in South Africa occurs through debt instruments with banks and government initiatives.

Recommendations

This case study highlights policy considerations for the challenges faced by SMEs to access finance and to implement standards:

i) Financing considerations

- **More accessible government incentive schemes, loans, and grants** could be provided by reducing the conditions attached. To be more precise, government initiatives should be continuously available throughout the year, be more timely, and soften conditionalities.
- **Credit guarantee schemes by the government** could tap and leverage funding from the private sector. Private investors need to be included in order to close the finance gap of SMEs.
- **Financial commitment from value chain actors** could assist SMEs in the supply chains with their financing needs. This could be realised directly through consignments so that suppliers receive finance in advance or through grant-type financing via cost-sharing schemes for the implementation and certification costs of relevant standards. Lead firms could also play an indirect role by engaging in a triangular relationship with suppliers and financial institutions. Large corporations enjoy better credit ratings and may guarantee the suppliers' loan with invoices of large orders, offtake agreements or letters of interest acceptable to the financial institution.

ii) Considerations for standards implementation

- **Awareness creation** by standard setters, cooperatives, and large corporations with SMEs in their value chains should elucidate both the availability of sustainability standards and the potential value for the business. Such awareness campaigns should involve or cooperate with business organisations such as the South African Chamber of Commerce and other associations and networks rich in large corporations and SMEs. Simply exemplifying the relationship between standards compliance and large and lucrative longer-term contracts with GVC lead firms would present a convincing case for SMEs that are at the nascent stage.
- **Financial and technical assistance by GVC lead firms in the process of implementation and certification** is in their own best interest. Engaging in capacity-building and enterprise development programmes will create tax advantages and most likely enhance the B-BBEE points for further financial benefits. Technical and financial support of suppliers in the implementation and certification processes guarantees the quality of the supply chain produce and will secure sourcing through more stable relationships with suppliers.
- **Government ownership** needs to be strengthened as national development depends on the competitiveness of SMEs, which form the core of the economy. Public policy commitments for the sustainable development of SMEs are essential and the government can play a key role in coordinating and integrating efforts by SMEs, lead firms, and financial institutions.

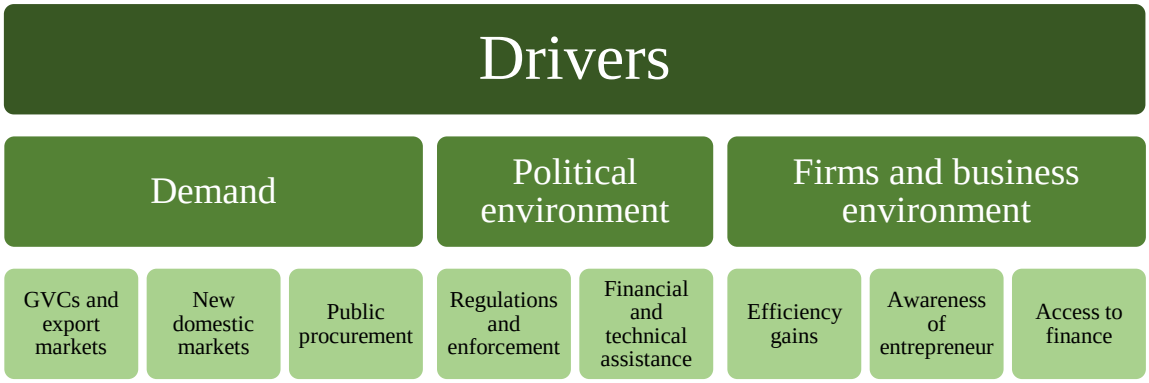
6 Synthesis of the five country cases

This section synthesises the evidence from the five country case studies with regard to drivers and constraints for the adoption of standards as well as with regard to demand for finance. The identification of factors influencing the take-up of sustainability standards follows the case studies closely. As a result, the drivers and constraints differ from the ones identified in the literature review (Section 4). The next section (Conclusions) sets out to link the findings of the case studies to the existing literature.

6.1 Drivers for adopting sustainability standards

As shown in Figure 3, factors that promote the adoption of sustainability standards in the five country cases can be organised into three broad categories: demand; political environment; and, firms and business environment.

Figure 3: Schematic overview of drivers for standards implementation in the country cases



Source: Author

Not all factors and broad categories are observed in every country case. While some drivers and constraints are relevant in all study locations, others are found to be specific to certain countries. Table 4 captures the prevalence of the various different factors in Brazil, China, India, Indonesia and South Africa. Factors that foster standards implementation are marked with "+", and hampering factors with "-". If drivers or constraints have been recorded in the country case, but their relevance is limited, symbols are set in brackets: "(+)" or "(-)". Factors that predominate in most or even all country cases (that is, accumulate three to five "+" or "-") are major drivers or constraints respectively. This means that the table allows one to identify important factors by visual inspection and thus offers indicative evidence of major drivers and constraints for standards implementation.

Table 4: Detailed overview of drivers and constraints in the country cases

			Brazil	China	India	Indo-nesia	South Africa
DRIVERS	Demand	GVCs and export markets	+	+	+	(+)	+
		New domestic markets	(+)	(+)			(+)
		Public procurement	+				
	Political environment	Regulations and enforcement	+	(+)	+	+	
		Financial and technical assistance	+		+	+	(+)
	Firms and business environment	Efficiency gains	(+)		(+)		
		Awareness of entrepreneur	+		(+)		
		Access to finance				(+)	(+)
CONSTRAINTS	Firms and business environment	Implementation and certification costs	–	–	–	–	–
		Awareness (firms)	(–)	–	–	–	–
		Information and technical gaps	–			–	–
		Size	–				–
		Access to finance	–	–	–		
		Infrastructure		(–)		–	(–)
	Political environment	Regulations and enforcement	–		(–)	–	–
		Localisation of standards		–		(–)	
	Demand	Consumer awareness		–	–	–	

Note: If drivers or constraints have been recorded in country cases, but their relevance is limited, symbols are set in brackets: "(+)" or "(-)".
Source: Author

The most important driver is the **demand** for sustainably produced goods and services. In all country cases, acquisition of bigger companies as buyers as well as access to **GVCs and export markets** are important motives for SMEs in adopting sustainability standards. Generally, standards are implemented by SMEs strategically to meet the requirements of GVC lead firms or export markets. In South Africa, many SMEs participate in public tenders without being aware that validation of the award depends on compliance with standards. Nevertheless, once standards are implemented and contracts signed, South African SMEs share the experience of SMEs in Brazil and India that such deals provide certainty, security

and increases in sales (Coelho & Nunes, 2017; Draper & Ngarachu, 2017; Jain & Ashok, 2017).[15]

The Indian and the Indonesian case studies indicate, however, that the incentive provided by market access may be compromised by access to markets without certification and market separation, meaning that only products for European and US export markets adhere to social and environmental standards while the other produce is sold domestically or shipped to less stringent export markets (Damuri & Santoso, 2017; Jain & Ashok, 2017).

Demand for sustainable products may also stem from **domestic demand**. Standards-compliant SMEs can tap expanding new markets. In China, for example, the local markets for quality food and other commodities is booming because of rising demand from high-end consumers from the growing middle class. Certification functions as a means of product differentiation and allows firms to enter and benefit from high-value segments of the market (Cao, 2017). Growing consumer awareness creates similar opportunities for organic food in Brazil and South Africa (Coelho & Nunes, 2017; Draper & Ngarachu, 2017). Yet the other two case studies suggest that, in emerging countries, local demand for certified products is often limited due to lack of consumer awareness and/or the lack of a thriving middle class.

The Brazilian case sheds further light onto an additional source of demand: Since public institutions in Brazil are bound by law to purchase products and services from suppliers that audit their social and environmental practices, **public procurement** rewards sustainable practices. In 2012, SMEs earned 57 per cent of the sustainable public purchases by the Federal Government (Coelho & Nunes, 2017).[16]

The Indonesian case study raises the concern that incentives through market access and integration into GVCs may only apply to a small fraction of SMEs. In Indonesia, less than 14 per cent of SMEs are engaged either directly or indirectly in export. The majority of SMEs serve the local market which is in turn characterised by low awareness for eco-labels along with fierce price competition. The Indonesian government steps in with various measures to encourage sustainable practices among SMEs. This brings us to the second broad category of drivers: the **political environment**. Several government programmes in Indonesia provide **technical assistance** and training through various different public institutions that especially target SMEs. The government also grants tax reductions and exemptions, for instance for pollution control equipment and the cost of waste treatment (Damuri & Santoso, 2017).

The South African Bureau of Standards (SABS) tries to reach out and provide relevant information interventions and capacity-building for SMEs to guide them through the implementation and certification process in spite of adverse circumstances such as the wide dispersion of SMEs, language barriers, lack of internet access, and limited literacy. Other stakeholders sometimes cater for the training costs of SMEs as long as they have a vested

15 The Indonesian Timber Entrepreneurs Associations (APHI) claims that certification has contributed to increased sales in international markets. As most certified exporters are larger firms, it is not clear whether these benefits also accrued to SMEs (Damuri & Santoso, 2017).

16 Note that the total public procurement of the Federal Government amounted to roughly USD 40 billion in 2012. With USD 22 million, the share of sustainable purchases among public procurement is relatively small, but continuously rising in Brazil.

interest in the SMEs. For instance, lead firms may cover costs for capacity-building in order to enable suppliers to uphold their company codes. Unfortunately, this tends to be the exception as many corporations leave it to government agencies to promote capacity-building in local SMEs (Draper & Ngarachu, 2017). In Brazil, some lead firms similarly offer supplier development programmes or subsidise the costs of standards implementation. Also, agencies like Sebrae, that specialise in assistance and consultancy for small businesses development, facilitate standard adoption for SMEs (Coelho & Nunes, 2017).

Governments also offer **financial assistance**. In South Africa, there is a capacity-building initiative by SABS in place that pays 15 per cent, leaving 5 per cent to SMEs and 80 per cent to corporations participating in the GVCs such as the mining houses (Draper & Ngarachu, 2017). The Indian government has installed various subsidy and reimbursement schemes for the certification costs of selected national and international standards (Kathuria et al., 2017).

National regulations and enforcement that foster standard adoption are observed in four country cases and are thus similarly common as financial support and technical assistance by government. In Brazil and India for instance, although environmental awareness is generally low among SMEs, mandatory regulations prove effective in forcing SMEs to implement standards, as SMEs are very sensitive with respect to the severe penalties of legal retaliation (Coelho & Nunes, 2017; Kathuria et al., 2017). China and Indonesia have developed national standards, such as the China Forest Certification Scheme (CFCS) and the Indonesian Sustainable Palm Oil (ISPO) standard respectively, that are mandatory for national producers and thus drive up the level of standards implementation (Cao, 2017; Damuri & Santoso, 2017).

Lastly, although prevalent only in two country cases each, factors of the '**firms and business environment**' category may incentivise SMEs to adopt standards. In neither case can one find direct evidence of financial instruments that are tailored to directly promoting the implementation of sustainability standards. This is not surprising as such mechanisms are still at an early stage and are expected to spread more widely. As more and more development banks, impact investors and funds include sustainability criteria in their terms and conditions for lending, it is expected that adoption of standards will lift SMEs into a favourable position to access financing. Even commercial banks may want to consider certification as a criterion for the loan screening process as certification is an extremely strong indication for (export) market access, good governance, and a robust financial basis. In addition, certification facilitates the assessment of creditworthiness, as standards-compliant firms are more likely to provide relevant documentation. A study conducted by the Rainforest Alliance (2013) finds that 90 per cent of certified producers keep financial records compared to 31 per cent with the non-certified producers.

Although there has been no clear evidence of a link between standard-compliance and preferential **access to finance** in the given country case studies, Indonesia and South Africa present anecdotal evidence of indirect linkages. The South African case study reports that standards adoption may be positively correlated with access to funding. Even though loan approval is not based on the condition of sustainability certification, the potential prospects associated with standards compliance, namely product differentiation, price premiums, larger orders, and access to retail value chains and to more exclusive markets, may convince commercial banks. This means that standards may indirectly contribute to accessing finance (Draper & Ngarachu, 2017). A soft loan programme in Indonesia grants access to finance

for firms that invest in sustainable practices, such as emission reduction (Damuri & Santoso, 2017).

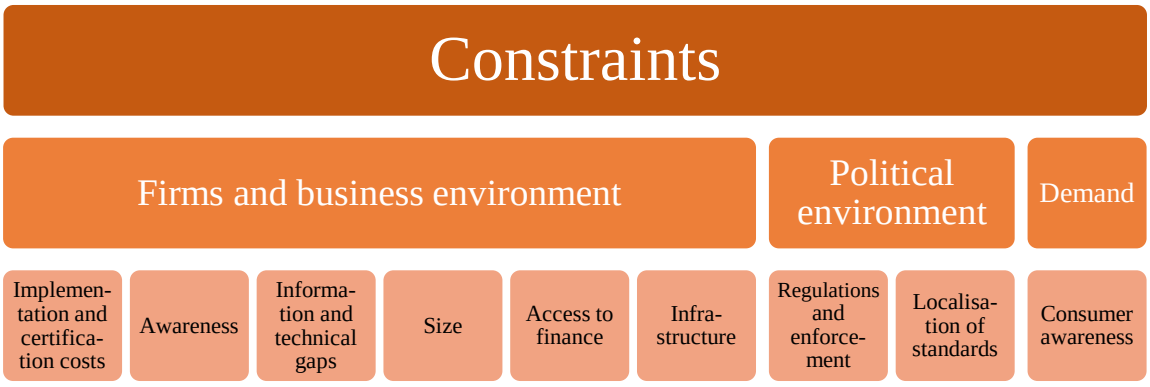
The business environment influences and shapes the attitudes and characters of entrepreneurs who usually decide upon strategic planning by themselves. The Brazilian case shows that growing **social and environmental awareness** among the younger generation of entrepreneurs fosters orientation towards sustainability (Coelho & Nunes, 2017). Jain and Ashok (2017) emphasise that, beyond personal preferences, it is higher levels of education and knowledge that allow entrepreneurs in India to undertake far-reaching overhauls of their business strategies and production technology in order to achieve certification.

The Brazilian case underlines that, even though environmental awareness may be ranked low on the firms' business agenda, SMEs are making small adjustments in daily business routines, (that is, behavioural changes such as rationalisation of water consumption, more efficient use of energy, and better management of production inputs and outputs) to reduce the costs of production and enhance **efficiency**. Operational results and the effects on firms' profiles may drive SMEs to pursue sustainable practices more thoroughly through more voluminous investments and through formal standard certification (Coelho & Nunes, 2017). The Indian case also finds that sustainable practices and standards compliance lead to reduced waste and to cost savings (Jain & Ashok, 2017; Kathuria et al., 2017).

6.2 Constraints for adopting sustainability standards

Analogous to the analysis of drivers, impeding factors give rise to three major themes that hamper the spread of standards. As shown in Figure 4, these are firms and business environment; political environment; and demand.

Figure 4: Schematic overview of constraints for standards implementation in the country cases



Source: Author

As indicated in Table 4, major barriers to the spread of standards fall into the broad category '**firms and business environment**'; whereas it is more issues relating to the firm, that is, challenges faced by firms due to own shortcomings or due to standard designs unfavourable to SMEs (implementation and certification costs, awareness, information and technical gaps, size) than the business environment (access to finance, infrastructure) that impede standards adoption. All country cases identify **implementation and certification costs** as central constraints. Draper and Ngarachu (2017) as well as Jain and Ashok (2017)

emphasise that certification costs recur regularly as certification needs to be renewed and staff have to be retrained in certain procedures. Since implementation and certification can be more or less described as fixed costs, smaller firms in particular perceive these costs as prohibitively high. For this reason, it is not uncommon in Brazil and India to find SMEs that adopt most of the required practices without being officially certified (Coelho & Nunes, 2017; Jain & Ashok, 2017).

The second major constraint in this category is also observed universally across the five emerging countries: SMEs and potential suppliers suffer from a **lack of awareness of sustainability standards**. This can be a general lack of awareness of sustainability considerations by the SME's management so that social and environmental standards will not make it into the company's strategic planning (such as Coelho & Nunes, 2017; Kathuria et al., 2017). SMEs in India, Indonesia, and South Africa are also often unaware of the value that sustainability standards could bring to their businesses: implementation of social and environmental standards may be a prerequisite for the next step in the firm's development, which is access to GVCs in order to grow beyond the local market (Damuri & Santoso, 2017; Draper & Ngarachu, 2017; Jain & Ashok, 2017).

Closely related to this is the next impeding factor, **information and technical gaps**, because even awareness of relevant standards leaves a myriad of questions open. SMEs often do not know about the next practical steps of how and where to apply for certification, for instance, in the case of India and Indonesia (Damuri & Santoso, 2017; Jain & Ashok, 2017). Time and resources are bound to decide whether a standard should be implemented. The strategic choice is complicated by the hidden, indirect costs of compliance and by benefits that are not easily monetised. Draper and Ngarachu (2017) note that SMEs are often left alone with these problems, although they would need technical assistance and guidance during the entire process of choosing a suitable standard through cost-benefit analyses, adopting the standard and complying with it.[17] Both Coelho and Nunes (2017) as well as Jain and Ashok (2017) observe that SMEs would need to hire a consultant to analyse which standard to adopt and how to best implement it. But, as SMEs generally do not have the necessary financial capacities, they do not achieve access to this crucial information. The need for technical assistance and for consultancy services implies that managerial skills, qualification of employees, and the absorption by day-to-day operations is a serious challenge for SMEs as well (Cao, 2017; Damuri & Santoso 2017; Jain & Ashok 2017).

In addition, SMEs that are already integrated into GVCs face a different kind of information gap. The inadequate transparency of standards in respect to their content, requirements, and verification imposes extra transaction costs upon SMEs. In the Brazilian case, Coelho and Nunes (2017) report that it is often not clear to the SMEs which practices are of importance and where to prioritise changes towards sustainable practices to fulfil the requirements of lead firms.

As a fourth and last factor among issues that relate to firms, the relatively small **size** of many SMEs was reported as being a constraint in the South African and Brazilian case studies for different reasons. Of course, firm size not only influences economy of scale and a whole

17 As explained above, the South African Bureau of Standards is struggling to provide SMEs with access to relevant information as SMEs are widely dispersed and language barriers, lack of internet access and limited literacy further impede successful information interventions (Draper & Ngarachu, 2017).

range of other operational and strategical business decisions, but completely alters the firms' economic fundamentals such as market power, access to finance, and so on. The case studies ignore most of the latter and mainly highlight size-related problems that directly follow from diseconomy of scale. Coelho and Nunes (2017), for instance, find that scale is an issue for SMEs in Brazil because many of the processes and technologies such as in-house recycling, waste management, and green energy production are only financially and operationally feasibly for firms of a certain size. Another disincentive stemming from insufficient size and productivity is the impotence of SMEs vis-à-vis the large corporations that control and dominate the market and the GVCs, as in the case of South Africa. SMEs may be discouraged from entering the market and even abstain from competition with other suppliers as the latter usually enjoy long-term contracts. Consequently, many SMEs are discouraged from taking any steps towards integration into GVCs and thus do not adopt sustainability standards (Draper & Ngarachu, 2017). As the Indian case study shows, size-related problems may be mitigated by organising SMEs into homogeneous clusters that combine the advantages of small businesses, such as operational flexibility, with the benefits of scale and specialisation provided by large units; thus clusters can spur networks, productivity and innovation among SMEs (Kathuria et al., 2017).

Unfavourable business environment is the second part of the first category and comprises two hampering factors for standard adoption, namely **access to finance** and infrastructure. The financing gap for SMEs in Brazil, China and India compromises their ability to comply with standards as the implementation process often necessitates investments (Cao, 2017; Coelho & Nunes, 2017; Jain & Ashok, 2017). While **logistical and ICT infrastructure** as well as availability of certification and testing facilities may not directly motivate the adoption of sustainability standards, it surely does facilitate standards implementation while the lack of such basic infrastructure respectively hurts sustainability efforts (such as Cao, 2017; Damuri & Santoso, 2017; Draper & Ngarachu, 2017).

Lacking **demand** and the **political environment** (arguably) tie for second most important category among the barriers to standard adoption. In China, India, and Indonesia just as in many other developing and emerging economies, **consumer awareness** and preferences for sustainably produced goods and services are low. Most households experience tight budget constraints and primarily base consumption decisions on price. The situation is not much different in Brazil and South Africa where only the organic food market creates demand for certified goods. There is hardly any demand for sustainable products in domestic markets and many export destinations are characterised by similarly lax standards requirements.

In the **political environment**, it is largely the passivity of the government that undermines the spread of standards. The passiveness manifests itself either by a regulatory vacuum, that is, an absence of mandatory standards concerning workplace conditions or environmental management within certain sectors, as for example in South Africa. The resulting gap between firms complying with voluntary sustainability standards and non-compliant competitors is large with respect to implemented standards and associated costs, and this results in low take-up of voluntary standards. **Regulation** needs to set a baseline or floor for minimum requirements (Draper & Ngarachu, 2017). The passiveness of the regulator can also lead to **lax enforcement** of existing legislation. Even though mandatory standards have been introduced in Indonesia and India, adoption rates, especially among SMEs, are relatively low. One reason might be the fact that government bodies responsible often fail to sue non-compliant smaller firms that consequently evade fines and more severe legal

consequences and thus feel no pressure to become certified. In India, part of the problem is understaffed government agencies (Damuri & Santoso, 2017; Kathuria et al., 2017).

The Brazilian case study records similar mistakes on the side of lead firms in GVCs. Coelho and Nunes (2017) criticise the ineffective supervision by lead firms turning a blind eye to some non-compliant suppliers, which undermines the motivation of the other suppliers to follow through with the sustainability requirements.

The second factor of the political environment, **localisation of standards,** predominates only in two country cases. The situations in China and Indonesia constitute special cases as the governments have developed national standards (for instance, CFCS and ISPO) instead of endorsing international ones. In the case of forest certification, Chinese firms benefit from the endorsement of CFCS by the international PEFC standard. Yet producers in Indonesia need to adopt the mandatory national standard, while exporting firms in most cases have to bear the costs of additionally implementing a more stringent international standard (for instance, RSPO) in order to access export markets (Damuri & Santoso, 2017).

6.3 Demand for finance by SMEs

All five country case studies find that no financial instruments to promote the uptake of sustainability standards or to require certification in the underlying terms and conditions exist. This means that standards compliance does not (yet) facilitate access to finance. The link between standards and finance identified in the country cases is given by additional financing needs from certified firms to cover the incremental costs of standards implementation.

The country cases univocally report a significant financing gap for SMEs. Especially in initial stages, start-ups and small firms rely on informal loans and grants from family and friends as well as on own resources. During the growth stage, SMEs increasingly turn to commercial banks to meet rising financing needs. SMEs are generally unaware of alternative financing options while banks are poorly equipped to lend to SMEs. In Brazil for instance, banks demand collateral of up to 130 per cent of the loan and a minimum of two years of business operation (Coelho & Nunes, 2017). Traditional credit risk assessment relies on payment histories, credit records, immovable collateral, and other documentation requirements that SMEs can hardly meet.

Governments try to mitigate the financing challenges of SMEs with specific lending programmes targeting smaller firms. Development banks and rural banks offer loans with subsidised interest rates and softened collateral requirements. Often the central banks oblige commercial banks to use certain portions of their portfolio for SME lending, as for example in India and Indonesia (Damuri & Santoso, 2017; Kathuria et al., 2017). Except for South Africa, all national governments included in this study have further introduced some form of credit guarantee system to leverage private finance for SMEs. India has even launched an SME rating agency to lessen the information asymmetry between banks and SMEs (Kathuria et al., 2017).

In some countries, trade finance and supply-chain financing based on invoices and the financial credibility of the lead firm are taking hold (see, for instance, Cao, 2017; Damuri

& Santoso, 2017; Draper & Ngarachu, 2017). This mainly serves to provide working capital and ensure the liquidity of SMEs. FinTechs in China have already incorporated such financing instruments into e-commerce platforms such as Alibaba (Cao, 2017). The real-time transaction data and vast payment and credit histories collected through such platforms opens up new opportunities in SME financing.

Only a small share of SMEs takes advantage of recently emerging financing instruments. Draper and Ngarachu (2017) and Damuri and Santoso (2017) have observed first cautious steps with venture capital funds and crowdfunding for SMEs. Also angel investment, which provides additional coaching and guidance, increasingly becomes part of the SME financing arsenal.

7 Conclusions

The main objective of this section is to compare the findings of the synthesis in Section 6 with the drivers and constraints discussed in the existing literature and to evaluate their relevance in the five emerging countries included in this study. Table 5 presents the prevalence of the factors that were introduced in the literature review above (Section 4) in the various different country cases. As before, "+" represents drivers and "-" constraints, whereas the minor significance of factors is denoted by bracketing the respective symbol. A factor is considered to be relevant across all the country cases if it is observed in the majority of case studies, namely, in three or more cases. Note that bracketed symbols only have a value of 0.5.

The table paints a clear picture with regard to hampering factors. The lack of awareness on the part of firms with regard to sustainability standards is a central constraint observed in all country cases while access to information constitutes a major barrier that is recorded in four out of the five country cases. Neither standard setters nor governments successfully manage to reach out to firms to bring standards onto the agendas of SMEs and to set the ground for an informed decision on whether to implement sustainability standards and which ones. As long as standard setters provide sufficient information about their respective standards and platforms like ICT's Standards Map that offers tools for overviews and the comparison of standards, there should be – at least in theory – no need for information interventions and technical assistance. The underlying assumption is that there is a business case for sustainability standards, that is, it is in the best economic interest of firms to adopt standards. So far, standard setters, meta standard organisations like ISEAL, and researchers have only succeeded in proving the business case of standards in some cases, but have failed to do so in others.

Evidence for a business case of standards is mixed because of the other major constraint that prevails in all country cases: high implementation and certification costs jeopardise the economic benefits of those that adopt standards. Small firms feel the deterioration of the profit margin the most because costs can be described as fixed costs and thus hit smaller firms the hardest. Some standard setters offer group certification to lessen the pressures of cost. Less than half of the buyers contribute to the certification fees and only about a third assists with implementation costs (ITC, 2016b). Sustainability standards are supposed to ensure fair treatment and payment of individual workers. Standards should also project the same aspirations into the relationship between suppliers and large buyers: ensure fair cost

and benefit distributions in spite of unequal bargaining powers. Multi-stakeholder approaches of standard setters that bring together smaller producers, larger buyers, and other stakeholders may not be sufficient to overcome power imbalances. Large corporations such as global players – sometimes with turnovers larger than entire national economies – easily overwhelm smallholders and smaller producers in standards-development processes due to steep bargaining-power imbalances. There is a need for mediation and correction by strong, independent parties such as governments and intergovernmental agencies.

Table 5: Relevance of drivers and constraints from literature in the country cases

		Brazil	China	India	Indonesia	South Africa
CONSTRAINTS	Awareness	**(-)**	-	-	-	-
	Information access	-		-	-	-
	Transparency of standards	-				
	Operability of standards		-		-	
	Implementation and certification costs	-	-	-	-	-
DRIVERS/ FACILITATORS/ CONSTRAINTS	National regulations and enforcement	-/+	**(+)**	**(-)**/+	-/+	-
	Infrastructure		**(-)**		-	**(-)**
	Scale and productivity	-/**(+)**		-/**(+)**		-
	Access to finance	-	-	-	**(+)**	**(+)**
	Training and technical assistance	+			+	-/+
DRIVERS	GVC/market access	+	+	+	**(+)**	+
	Price premiums					
	More secure markets	**(+)**		**(+)**		**(+)**
	Increase in sales	**(+)**		**(+)**	**(+)**	**(+)**

Note: Differentiation and overlap of drivers, constraints, and facilitators as introduced in Figure 2. If certain factors act as drivers (marked with "+") in some cases and as constraints ("-") in other cases, this is captured by "-/+". If drivers or constraints have been recorded in country cases, but their relevance is limited, symbols are set in brackets: "(+)" or "(-)".

Source: Author

In contrast to existing literature, transparency and operability of standards have been minor concerns in the five country cases. They do not qualify as relevant constraints. Among the factors that can either act as drivers or constraints or as mere facilitators of standards adoption, no clear evidence emerges with respect to the direction of the effects. One exception is training and technical assistance that plays the role of a relevant facilitator in standard adoption.[18]

18 Only in South Africa was the scale of technical assistance insufficient, which is partly due to geographical factors, lacking connectivity and language barriers. Yet, on the positive side, the SABS does offer capacity-building and financial support.

National regulations and legal enforcement is a very important and relevant driver especially when market forces create insufficient demand for sustainable products or exert pressure on labour rights and the environment. Yet, the effects of regulations are ambivalent as regulations and enforcement have also be found to be a relevant constraint. Introducing mandatory standards through legislation raises environmentally and socially responsible practices and promotes the spread of sustainability standards. Nevertheless, emphasis on nationally developed mandatory standards demands a cautious approach. First, it must not overstrain the capacities of new, small firms, but exhibit manageable requirements as well as a smooth and affordable certification process. Second, it has to go hand in hand with activities that ensure international endorsement of the local standard in order to facilitate access to export markets. Third, and lastly, monitoring and enforcement of standards compliance are prerequisites for the universal adoption of mandatory standards. Due to these potential pitfalls, the case studies see regulations and enforcement as bring both benefits and disadvantages.

"Size, productivity, and competitiveness" as well as "access to finance" are both factors that, according to existing literature, can either foster or hamper the spread of standards. In the country case studies, there were few circumstances in which these factors acted as drivers for the implementation of standards; in most cases, they were found to be relevant constraints. Access to finance is important because of necessary investments in new, environmental-friendly production technology and in training of the workforce. It is a topic that is on the radar of governments and development banks, although there is room for improvement with regard to green banking and tailored financial instruments that promote sustainable practices and the adoption of standards. Challenges with regard to size and productivity are hard to address. Information campaigns may attempt corrections of the predominant misperception that standards and sustainability are merely a waste of time and resources and instead point at potential efficiency and productivity gains. Following the Indian example, size-related disadvantages may be mitigated by organising SMEs into homogenous clusters that allow for networking, specialisation, innovation, and productivity improvements. Lastly, infrastructure is not a relevant constraint in the five case studies.

The drivers clearly show that the only relevant factor is demand: integration into GVCs; market access to export destinations and to high-end segments of the domestic market; as well as public procurement. Price premiums for certified products have not been observed in any of the country cases. The other drivers, increase of sales and more secure markets and buyer relationships, are not relevant, but have been mainly realised in connection with access to new markets and acquisition of large, international buyers. This means that promotion of standards depends on the development of new markets for certified goods and the promotion of GVC integration. The latter is achieved by upscaling and improving existing economic development programmes for SMEs, while the former depends on raising consumer awareness. Additionally, governments can adopt suitable procurement strategies to raise demand for sustainably produced goods and services.

8 Policy considerations

This section suggests a diverse set of possible measures for governments, donors, standard setters, large corporations, and financial institutions to promote the spread of sustainability standards. A national governance network for sustainability might be necessary to guarantee an integrated approach, that is, to simplify and align national legislation, government programmes, creation of financing lines, and standards requirements. An institution with some sort of leadership and national capillarity but also the capacity to drive public policies towards a horizontal implementation of sustainability standards should lead the governance network.

The following policy considerations are organised according to the drivers that should be further strengthened and according to the constraints that require to be addressed. The policy considerations focus on the factors that have been identified as relevant drivers and relevant constraints in Sections 6 and 7:

Drivers:

Demand

- In most developing and emerging economies, the social and environmental awareness of consumers is relatively low so that there is hardly any market for sustainably produced goods and services. The government can create such markets by incorporating sustainability criteria into **public procurement** guidelines. Since public expenditures account for a substantial share of national consumption, this could create significant demand for sustainable products and services. There would even be the possibility of attaching sustainability conditionalities to promotional policies.
- There are additional ways to enhance demand, which has been identified as a major driver for standards adoption. Governments could scale up existing SME development programmes and promote the **integration of SMEs into supply chains and global value chains**. Many international buyers insist that their suppliers comply with sustainability standards and offer large, longer-term contracts that guarantee the profitability of investments in standards implementation.

National regulations and enforcement
See “national regulations” under constraints.

Technical assistance and training
See “technical gaps” under constraints.

Constraints:

Implementation and certification costs

- In order to ensure brand reputation, businesses require suppliers to comply with certain social and environmental standards. Costs and benefits of such risk-mitigating strategies should be shared by all parties, which means that businesses should develop **cost-sharing schemes for certification costs**. Technical and financial support of suppliers in the implementation and certification process is in the best interest of lead firms as it

guarantees the quality of the supply chain produce and secures sourcing through more stable relationships with suppliers. Nevertheless, governments, civil society organisations and the media need to hold businesses accountable so that market power is not abused to impose the costs and risks associated with standards implementation disproportionally on SMEs in the supply chain.

- Governments could create a **fund** to help SMEs and small producers pay for the implementation and certification costs. Successful application for grant-type financing from the fund should rely on substantial financial contributions from the lead firm that requires its supplier to become certified. For instance, the lead firm could cover two-thirds of the costs, government grants from the fund a quarter and the SME roughly 10 per cent. The terms and conditions could further include the clause that suppliers receive price premiums because of a quality upgrade through certification.
- Standard setters should design **standard schemes compatible with the limited human and financial resources of SMEs**. This could include lower certification fees and simplified certification procedures for SMEs. Most importantly, standard setters should develop multi-stage certification processes that verify and reward first steps in transition to full compliance. Standard systems almost exclusively employ a binary certification approach where applicants either completely fulfil standards requirements or fail to achieve certification. However, SMEs often take longer periods to meet requirements as capacity constraints in finance and personnel necessitates a lengthy step-by-step approach to bring production processes and organisational structures in line with the requisites of the standard system. Certification of "semi-compliance" tied to obligations to fully comply with the standard within a given period, would allow firms to already reap economic benefits from standards compliance during the transition period and thus raise the feasibility and attractiveness of standard adoption.

Awareness (firms) and information access

- Standard setters, international donors and organisations promoting sustainability standards could collaborate with UNFSS, ISEAL, and other meta stakeholders to **inform relevant parties about the effectiveness and impacts of particular standards**. This could help SMEs to identify standards that constitute profitable business cases for their specific setting and environment.
- The national VSS platforms should **inform and empower** SMEs with regard to sustainability standards. It could launch a VSS database, potentially in cooperation with ITC, to deliver tailored information services to SMEs. This could raise awareness among SMEs, bridge information gaps, and improve understanding about complicated standard systems, especially about concrete measures for standards implementation. It is crucial to closely involve the chamber of industry and commerce as well as other institutions and organisations relevant to SMEs in order to maximise awareness and the use of such online tools. In addition, these programmes need to highlight the value of certification: SMEs need to understand the benefits of certification so that standards compliance is perceived as a business case, rather than as purely additional costs.
- The UNFSS should continue and intensify its efforts to **launch further national VSS platforms**. In addition, the UNFSS should provide a forum for information exchange between the various VSS platforms to foster knowledge-sharing and productive and efficient operation.

National regulations and enforcement

- Governments should not rely on private voluntary standards to protect the health and safety of citizens and the environment. Setting a baseline and a floor for standards through national legislation is crucial for preventing adverse external effects through economic activities. Additionally, such **national regulation** closes the gap between the requirements of mandatory minimum standards and voluntary sustainability standards so that the implementation costs of more stringent standards are less steep.

Technical gaps

- Governments should ensure assistance to SMEs through specific **capacity-building and training projects** to foster uptake of standards and to indirectly strengthen their competitiveness in international trade. Ideally, such SME development programmes are undertaken by large corporations for firms in their supply chain. The government could initiate partnerships with lead firms and subsidise such capacity-building programmes. In order to minimise deadweight loss from situations where firms already offer training programmes and later apply for government money, fade-out subsidies over a limited amount of time may be appropriate.
- Businesses should be responsible for promoting social and environmental awareness among suppliers. They should share skills and knowledge through **training, technical assistance and capacity-building** in order to enable SMEs to overhaul production processes, and to increase productivity, efficiency, and sustainability. Buyers benefit from deepening relationships with suppliers and improved product quality.
- Standards organisations could provide **technical assistance** to facilitate the implementation of standards. Meeting standards requirements exposes sustainability-oriented SMEs to the same challenges. Standards organisations are best qualified and positioned to centrally offer tailored assistance to support the organisational transformation and the training of management and employees. While online tools and seminars could allow for resource-efficient outreach programmes, standard setters need to invest enough into translation efforts to make information available in multiple local languages.

Access to finance

- Regional and multilateral development banks should take a leading role in promoting green finance and sustainable development. Embedding **standards compliance into the terms and conditions of lending contracts** would facilitate access to finance on the part of sustainability-oriented SMEs. As SMEs face a severe financing gap, easier access through sustainable practices could constitute a strong motivation for a good sustainability performance. Subsidised interest rates dependent on sustainability criteria could further incentivise the adoption of standards. Experiences from the soft loan programme of the KfW in Indonesia and the cooperation between the IFC and the Bank of Beijing to promote sustainable practices among SMEs through a water-efficiency component under an IFC risk-sharing facility could serve as examples.
- Central banks could require financial institutions to incorporate sustainability considerations into their lending decisions and financial reporting. Financial institutions should, for instance, **include environmental standards and benchmarks into credit assessment** to incentivise SMEs to adhere to standards. Many countries have introduced

mandatory environmental assessments for firms to track the progress of nationally determined contributions (NDCs) in the implementation of the Paris Agreement. Environmental criteria developed from these assessments could be incorporated into the credit approval process.

Beyond central bank requirements, financial institutions should consider expanding the role of social and environmental standards in credit application assessments. After all, certification is an extremely strong indication for (export) market access, good governance, and a robust financial basis.

- The SME Finance Subgroup of the GPFI should serve as a platform for knowledge and best-practice exchange for **successful central bank policies and finance instruments of financial development institutions** (DFIs) that promote the implementation of sustainability standards. It should make use of its implementing partners and existing associated forums concerned with central banks and DFIs.

  In addition, the GPFI should **build upon the WBG stocktaking study** "Leveraging Financial Services for Small and Medium-sized Enterprises (SMEs) in Sustainable Global Value Chains (GVCs)" in order to move from an overview of existing financing models that foster sustainability to concrete instruments and feasible cooperations between multilateral and regional development banks and national finance institutions that can be copied and scaled worldwide.

- Lead firms could also play an indirect role by engaging in a triangular relationship with suppliers and financial institutions to **assist suppliers in attaining access to finance**. Large corporations enjoy better credit ratings and may guarantee for the suppliers' loan with invoices of large orders, offtake agreements, or letters of interest acceptable to the financial institution.

Consumer awareness

- Following the example of the MSC that has partnered with Alibaba Group to promote sales of MSC-certified fishery products on the Tmall platform with extremely positive market responses to seafood sustainability certification, e-commerce giants could **raise consumer awareness and the significance of sustainability standards**. This may include granting e-commerce finance based on compliance with sustainable practices.

Size and productivity

- Governments could mitigate the challenges that SMEs face due to limited firm size and productivity by following the Indian example of organising SMEs into **homogeneous clusters**. Industry clusters promote specialisation and innovation, improving the productivity and efficiency and allow the upgrading of production technologies towards more sustainable production.

Infrastructure

- National development agencies in cooperation with national metrology institutes should provide technical assistance in developing countries with **building up a functioning quality infrastructure**. Available testing facilities are a prerequisite for standardisation, certification, and the spread of standards. Donors could financially support such efforts.

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