



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

Case studies from Brazil, China, India, Indonesia and South Africa

Non-paper version, as delivered by authors

Christoph Sommer (Ed.)

Drivers and constraints for adopting sustainability standards in small and medium-sized enterprises (SMEs) and the demand for finance

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Foreword

Sustainability standards – voluntary or mandatory – have become a major issue in global trade. Since SMEs are striving to integrate into global value chains the pressure to comply to labor, environmental or governance standards has mounted. However, SMEs are facing a multitude of barriers to adopt sustainability standards in their operations. The research presented here sheds light on those barriers as well as on the incentives for SMEs to invest in the adoption of standards. It also points to appropriate policy actions to be considered by policymakers and stakeholders in support of SMEs.

The research is based primarily on case studies in five emerging economies – Brazil, China, India, Indonesia, South Africa – which have been conducted by researchers from prestigious research and advisory institutions from those countries. All of them are part of DIE's Managing Global Governance (MGG) network, a growing group of institutions in emerging economies which is engaging in joint research, learning and policy outreach on global issues. We are particularly pleased that initial results of this research have already been taken up in G20 processes as well as by public and private standard setting institutions and stakeholders in various countries.

The papers presented here provide ample opportunities for discussion as well as for further research. We will continue collaborating on this and other topics in the MGG network, reaching out to policy institutions and stakeholders. Many thanks go to the German Federal Ministry for Economic Cooperation and Development (BMZ) for its continuous support and to all partners who have contributed to this research project.

Peter Wolff

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Abbreviations

ABNT	Brazilian Association for Technical Norms
ACP	Assets Certification Program (Brazil)
ADB	Asian Development Bank
AEPC	Apparel Export Promotion Council (India)
AFDB	African Development Bank Group
AQSIQ	Administration of Quality Supervision, Inspection and Quarantine (China)
AQUA	Alta Qualidade Ambiental (Brazil)
ASEAN	Association of Southeast Asian Nations
B2B	business-to-business
BAB	bank acceptance bill
BAD	bank acceptance draft
B-BBEE	Broad-based Black Economic Empowerment
BCI	Better Cotton Initiative
BIS	Bureau of Indian Standards
BNDES	Brazilian Development Bank
BOB	Bank of Beijing
BOC	Bank of China
BSN	National Standardisation Agency of Indonesia
CAA	China's Certification and Accreditation Administration
CAC	Credit Advisory Centre (India)
CAFE	Coffee and Farmer Equity
CAR	Rural Environmental Registration (Cadastro Ambiental Rural, Brazil)
CASME	China Association of Small and Medium Enterprises
CBRC	China Banking Regulatory Commission
CERFLOR	Certificação Florestal (Brazil)
CFCS	China Forest Certification Scheme
CFIE	China Federation of Industrial Economics
CGS	Credit Guarantee Scheme
CGTMSE	Credit Guarantee Fund Trust for Micro and Small Enterprises (India)
CMB	China Merchants Bank
CONAMA	National Environment Council
CRE	collectively-run enterprise
CRSCA	China's Responsible Supply Chain Association
CSIS	Centre for Strategic and International Studies
CSR	Corporate Social Responsibility
DTI	Department of Trade and Industry (South Africa)
EITI	Extractive Industries Transparency Initiative

EMS	environmental management system
ERI	Emission Reduction Investment (Indonesia)
ESG	environmental, social and governance (principles)
EU	European Union
EUR	Euro
FDI	foreign direct investment
FGI	Investments Warranty Fund (Fundo Garantidor para Investimentos) (Brazil)
FGV	Fundação Getulio Vargas
FIE	foreign-invested enterprise
FSC	Forest Stewardship Council
GCG	Green Credit Guidelines
GDP	gross domestic product
GIZ	German Corporation for International Cooperation
GoI	Government of India / Government of Indonesia
GOTS	Global Organic Textile Standard
GRI	Global Reporting Initiative
GVA	gross value added
GVC	global value chain
HQE	Haute Qualité Environnementale (Brazil)
IBAMA	Brazilian Institute of Environment and Renewable Natural Resources
ICBC	Industrial and Commercial Bank of China
ICRIER	Indian Council for Research on International Economic Relations
ICS	International Classification for Standards
ICT	information and communications technology
IEC	International Electrotechnical Commission
IFC	International Finance Corporation
IGO	intergovernmental organisation
IISD	International Institute for Sustainable Development
ILO	International Labour Organisation
INDC	Intended Nationally Determined Contribution
INMETRO	National Institute of Metrology, Quality and Technology (Brazil)
INR	Indian rupee
IPR	intellectual property right
ISEC	Subsidy Eligibility Certification Scheme (India)
ISO	International Organization for Standardisation
ISPO	Indonesia Sustainable Palm Oil
ITC	International Trade Centre
ITC	International Trade Centre

KfW	German Development Bank
KYC	know your customer
LPEI	Indonesian Export Financing Institution
MNC	multinational corporation
MNCs	Multinational Corporations
MNE	multinational Enterprise
MoEF &CC	Ministry of Environment, Forest and Climate Change (India)
MoF	Ministry of Finance
MOFCOM	Ministry of Commerce (China)
MoU	memorandum of understanding
MSC	Marine Stewardship Council
MSMEs	micro, small and medium enterprises
NGO	non-governmental organisation
NMISA	National Metrology Institute of South Africa
NRCS	National Regulator for Compulsory Specifications (South Africa)
OECD	Organisation for Economic Co-operation and Development
OJK	Financial Services Authority of Indonesia
PAB	Ping An Bank (China)
PE	private enterprise
PEFC	Programme for the Endorsement of Forest Certification
PKE	Economic Policy Package (Indonesia)
PLI	Primary Lending Institution
PROPER	Rating Program for Business Performance in Environmental Management (Indonesia)
QLICAR	Quality, Logistics, Innovation, Competitiveness, Environment, Social and Relationship (Brazil)
RBI	Reserve Bank of India
RIPIN	Master Plan of National Industry Development (Indonesia)
RMB	Renminbi (Chinese currency)
ROI	return on investment
RSPO	Roundtable for Sustainable Palm Oil
RTRS	Roundtable on Responsible Soy
RVC	regional value chain
SABS	South African Bureau of Standards
SAC	Standardisation Administration of China
SAN	Sustainable Agriculture Network
SANAS	South African National Accreditation System
SANS	South African National Standards
SCB	Scheduled Commercial Bank (India)
SDG	sustainable development goal

SDG	Sustainable Development Goal
SIDBI	Small Industries Development Bank of India
SIIS	Shanghai Institutes for International Studies
SMERA	SME Rating Agency of India
SMEs	small and medium-sized enterprises
SNI	Indonesian National Standard
SOE	state-owned enterprise
SPCB	State Pollution Control Board (India)
SPD Bank	Shanghai Pudong Development Bank
SSE	Shanghai Stock Exchange
STeP	Sustainable Textile Production
SUASA	Unified Care System for the Agro Sanity (Sistema Unificado de Atenção à Sanidade Agropecuária)
SVLK	Timber Legality Assurance System (Sistem Verifikasi Legalitas Kayu) (Indonesia)
TBT	technical barrier to trade
UEBT	Union for Ethical BioTrade
UN	United Nations
UNDP	United Nations Development Program
UNFSS	United Nations Forum on Sustainability Standards
UNSDGF	United Nations Sustainable Development Goals Fund
USD	US dollar
VSS	voluntary sustainability standards
WEF	World Economic Forum
WTO	World Trade Organisation
ZED	Zero Defect and Zero Effect (India)

Introductory chapter: The growing importance of standards¹

Christoph Sommer, German Development Institute / Deutsches Institut für Entwicklungspolitik

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.

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. The rise of sustainability standards is welcomed in the political sphere as social and environmental standards 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). In order to foster sustainable supply and global value chains, social and environmental standards have been prominently integrated into the latest leaders' declarations of the G7 and the G20.

However, transformative effects will only materialise 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 [Inter-Agency Working Group], 2011). The latter prerequisite is at the core of this collection of case studies, which look into the drivers and constraints for small and medium-sized enterprises (SMEs) to adopt sustainability standards. Before the five country case studies from Brazil, China, India, Indonesia, and South Africa are presented in full length, this introductory chapter provides a definition and an overview of social and environmental standards and briefly sketches the growing importance of GVCs and sustainability as well as associated opportunities and challenges for SMEs.

Origin and classification of standards

Most standards that are listed by national metrology institutions, national standard-setting bodies, the International Organisation for Standardisation (ISO), and other standard organisations are of generic nature. These standards entail agreed-upon technical norms in order to ensure quality and compatibility of products and processes. The following case studies, however, focus on a specific subgroup of standards that are broadly defined as "... set[s] of criteria defining good social and environmental practices in an industry or product"

1 This introductory chapter draws heavily from and incorporates extracts from Sommer (2017).

(ISEAL, 2017). These social and environmental standards are also referred to as sustainability standards in this publication.

To get an overview of the complex standard landscape, standards can be organised along meaningful dimensions. The probably most elaborate and 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.

Henson and Humphrey (2009) differentiate most importantly 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.

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 (Organisation for Economic Co-operation and Development) Guidelines for Multinational Enterprises, which are meant to be embodied in companies' corporate social responsibility (CSR) strategy (IAWG, 2011). Several international initiatives such as the UN Global Compact, the European Union Strategy for Corporate Social Responsibility, the International Finance Corporation's Performance 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).

Figure 1: Classification of standards		
	Public	Private
Mandatory	Regulations <ul style="list-style-type: none"> • <i>Example: emission standards (e.g. Euro 6, US Clean Air Act)</i> • <i>Origin: national governments, national standard-setting bodies</i> 	Legally-mandated private standards <ul style="list-style-type: none"> • <i>Example: reference to ISO 9000 in EU Directive on CE marking</i> • <i>Origin: VSS & national governments</i>
Voluntary	Public voluntary standards <ul style="list-style-type: none"> • <i>Example: ILO MNE (multinational enterprise) Declaration</i> • <i>Origin: national standard-setting bodies, intergovernmental organisations, international initiatives, etc.</i> 	Private voluntary standards <ul style="list-style-type: none"> • <i>Example: VSS (e.g. Fairtrade, FSC (Forest Stewardship Council), GlobalGAP), CSR, ISO 26000, etc.</i> • <i>Origin: industry associations, CSR of individual firms, multi-stakeholder initiatives of civil society/firms, etc.</i>
Source: Based on Henson and Humphrey (2009)		

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.

The following part outlines how internationalisation of production and growing sustainability concerns have fostered the spread of standards. Integration into GVCs and supply chains also confronts SMEs with social and environmental standards.

The growing importance of global value chains and sustainability

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. Thus, growing participation of such countries in global production processes is necessarily associated with integration of SMEs into supply chains and GVCs.

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).

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.

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 has 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 lists 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 [European University Institute], 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 standard; 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. Mainstreaming sustainability standards, however, requires both credibility of standards through positive social and environmental effects as well as bearable financial and nonpecuniary burdens for firms in the supply chain (IAWG, 2011). The latter requirement is briefly sketched in the following section.

Opportunities and challenges for small and medium-sized enterprises because of standards

Standards adoption may empower SMEs to access GVCs and export markets and to benefit from price premiums, increase in sales and more secure markets (e.g. COSA, 2013; ITC, 2016; ITC & EUI, 2016; UNFSS, 2016). Integration into GVCs additionally promotes the dissemination of knowledge and technology – improving the productivity of SMEs in developing and emerging countries (ITC & EUI, 2016; UNFSS, 2016). Consequently, implementation of sustainability standards has the potential to boost SME growth. In addition, helping SMEs to develop and mature by growing beyond their local market and into sustainable GVCs, may contribute significantly to widespread, sustainable development. SME development spurs employment creation and economic growth, as SMEs form the backbone of the economy accounting for more than half of employment and more than ninety per cent of businesses worldwide (IFC, 2013) and as SMEs generate the highest employment growth and the largest share of job creation (Ayyagari, Demirgüç-Kunt, & Maksimovic, 2014).

However, 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). Hence, the spread of standards could exclude SMEs from international production and from lucrative markets. 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. Concerns about discriminatory effects and standards as technical barriers to trade have stirred debates whether standards – in particular private standards – fall under WTO rules (e.g. Thorstensen, Weissinger, & Sun, 2015).

Because of the growing importance of standards and the ambivalent implications for SMEs, five country case studies have been issued to identify incentives and challenges that SMEs face in the adoption of sustainability standards. Identifying drivers and constraints for standards implementation, the case studies also try to understand the link between finance and sustainability standards. The five country case studies were conducted by local research partners in the emerging economies of Brazil, China, India, Indonesia, and South Africa because emerging economies are best suited to analyse drivers and constraints for standards adoption by SMEs as they have the most conducive quality infrastructure environment for standards implementation within the developing world. Qualitative findings from key informant interviews with entrepreneurs and experts from industry associations, standard organisations, regulators, financial institutions, and/or lead firms are triangulated with secondary data and available studies to identify the incentives and challenges for SMEs in standards adoption. The findings were summarised and synthesised in a DIE discussion paper by Sommer (2017). This collection offers the benefit to make the primary sources, the country case studies, available in full lengths.

In the following, the country case studies are presented in alphabetical order. Each case study comprises of four main elements: an overview of relevant standards in the country context, an analysis of drivers and constraints for standards adoption among SMEs (with a zeroing in on one or two selected sectors/industries), an overview of SMEs' demand for finance and the link to sustainability standards, as well as policy considerations.

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I Drivers and constraints for adopting sustainability standards in small and medium-sized enterprises (SMEs) and the demand for finance: a Brazilian case study

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1 Introduction

The present study is based in primary and secondary research and fosters the current levels of sustainability adopted by SME in Brazil, its drivers and constraints as well as the need for a deeper approach from either governance or financial support. A broader approach on the use of standards will also be part of the text. Among the findings, it is clear that there is a strong need for two major issues in Brazil: Sustainability standards governance and financial structure. In the first perspective, the way that different strategies influence social and economic behaviour should be undertaken in order to achieve the communities' goals. For the second mentioned, not only state-run actions should be acknowledged, but also measures created by other organisations – “including corporations, self-regulators, professional or trade bodies, and voluntary organizations”.

Currently, a “smart” regulatory framework is in place among value chains and suppliers, what boosts opportunities for cooperation among different stakeholders, in order to develop a model where public welfare can effectively be created, by taking advantage of the diversity of views and instruments. However, without a national focused plan, the potential for SMEs to actually jump into this trend is put at risk. It is estimated that Brazil has about 11 million Small and Medium-sized enterprises (SMEs)² currently in operation, which accounts for a considerable portion of the economic activity in the country. SMEs' contribute to 27% of Brazil's GDP, and are responsible for 52% of the country's legal workforce.

In 2015, 12,163 SMEs exported to international markets³, out of which 5,360 were small enterprises and 6,803 medium-sized enterprises. That accounts for 61% of the total number of export companies in the country in that year, and represents an increase of 8.6% in comparison to the previous year. As for the absolute values, SMEs exported US\$1.97 billion in 2015, 1.6% less than 2014. This amount represents 1.03% of the total national value exported in 2015.

There has been an increase of manufacturing and industrial SMEs among the exporting companies. The main manufacturing products identified were: footwear, marble and granite derivatives, processed timber, instruments for measurement and verification, women's clothing and furniture in general. About 44% of the total Brazilian SMEs exports were bound to South America, especially Mercosul countries, such as: Argentina, Chile and

2 <https://www.sebrae.com.br/sites/PortalSebrae/ufs/mt/noticias/micro-e-pequenas-empresas-geram-27-do-pib-do-brasil,ad0fc70646467410VgnVCM2000003c74010aRCRD>

3 [http://www.bibliotecas.sebrae.com.br/chronus/ARQUIVOS_CHRONUS/bds/bds.nsf/55ba13f77c84abe6b2cca37e46909190/\\$File/7484.pdf](http://www.bibliotecas.sebrae.com.br/chronus/ARQUIVOS_CHRONUS/bds/bds.nsf/55ba13f77c84abe6b2cca37e46909190/$File/7484.pdf)

Uruguay. In second place, two markets evenly account for SMEs' exports, in one side EU (16.5%) and in the other side USA and Canada (16%).

2 Methodology

This study was conducted under 3 methodological steps. The first was based on secondary documental research, the second on primary interviews with high level professionals in private and public sectors, and, the third, an analytical interpretation based on the results found.

The secondary research was mainly conducted using government publications, as well as public documents and scientific papers highlighting the use of sustainability standards among companies in all levels of productivity in Brazil. A specific approach has been given to SMEs and the supply chains of national and international value chains. The results were broad and showed the need to an adjustment in the general understanding about the use of sustainability standards in the Brazilian production system (primary or secondary) and service provision. Therefore, a need for direct primary interviews was clear.

The second part of the study involved interviews with relevant stakeholders that are either in the ruling sector of Brazil or in the operational activities, making it possible to understand all levels of sustainability standards use and regulations. Additionally, members of academia (professors and researchers), whose body of scientific production focused in SMEs and the adoption of sustainable practices, have also been contacted and interviewed.

Finally, in the analysis of the material collected, two things became clear: (1) the different approaches to drivers and constraints in multiple sectors, which can be understood by the emergence of a diverse number of such opportunities and barriers; and (2) the different levels of importance of each factor, which urged for a ranking. Thus, in the presentation of these elements, readers will find those recurrent in multiple industries and activities, as well as a comprehensive hierarchy among them.

3 Overview of standards

The idea that sustainability is a complex theme is still in the mind of some regulators and private managers. On the other hand, most of the companies have already acknowledged that it is more than merely "red light" actions, which means that much more can be done than just restrict behaviours and prevent undesirable activities. It is feasible to develop policies that would enable, or at least facilitate, the flourishing of values through a "green light" approach. In sum, not only is it important to develop measures to restrict unsustainable behaviours, but it is also necessary to create opportunities to the development of public goods (funds, technical assistant, capacity building, etc). By cleverly taking advantage of green regulatory approaches, it is possible to handle policy issues with a variety of tools and, consequently, look forward to better outcomes.

Along these lines, companies that manage natural resources, operate or deal with potentially harmful activities are demanded to comply with Brazilian environmental standards. Law on

three administrative levels regulates these standards and, in some cases, special authorisations are needed for the company to start its operations. In the Federal level, licences are regulated by Law #6.938/81 (complemented by law #140/2011) and CONAMA⁴ Resolutions #001/86 and #237/97. Companies need to issue their federal licences with IBAMA⁵ whenever the project implicates the exploitation of forests or any biome altering, or when national Conservation Units are involved.

Whenever the endeavour's impacts are limited to a specific Brazilian state, or to an area broader than a municipality, environmental licences are granted by the specific State's Board for Environmental Issues. Each board adopts different standards, following Brazil's commitment to the federative principle. The state of São Paulo, for example, has recently passed a bill to simplify the process of licencing. Through the Decree # 60.329/2014, companies that have a lower environmental impact, such as SMEs, may issue the three necessary licences at once, and by means of an online system.

If the project has merely local potential impacts, then the entrepreneur must address the municipal Board for Environmental Issues solely, which will provide specific guidelines depending on the type of company. In Rio de Janeiro city, for instance, Law # 1.618/1990 regulates the penalties that polluting companies are subject to when they do not comply with standards, and law # 4.969/2008 establishes instruments, principles and goals for the integrated management of solid waste in the city, including those produced by SMEs.

As a rule of thumb, federal and state licences are issued on a three-step process. Firstly, the entrepreneur issues the "Licença Prévia", or Preliminary Licence, which establishes the specific requirements that needs to be fulfilled by the project, once its conception and location have been approved. In this stage, special studies and reports on environmental impacts may be demanded or not. Secondly, the authorization for the company to establish itself is provided by the "Licença de Instalação", or Installation Licence. At this point, the public organisation in charge indicates environmental quality patterns that must be addresses by the company, as well as its control mechanisms during the implementation process.

The final authorization necessary to start the company's operation is granted by the "Licença de Operação", or Operation Licence, once it is 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 it, in terms of minimizing its impacts. It is worth mention that the SME itself, is the sole responsible for all impact studies, payments and tariffs involved in obtaining these licences.

In addition to the environmental licences aforementioned, two other types of authorisations may apply. Whenever the activity implicates vegetation suppression, a specific authorisation must be issued with the corresponding state's environment board, thus observing the new Brazilian Forest Code (Law #12.651/2012) and Conama Resolution #428/2010. On the other hand, if the activity requires underground or surface water catchment as an input for production or delivery of the service, the entrepreneur needs to issue a bestowal for the right to use it. The authorisation is also usually granted by the state board, in accordance to the National Policy for Hydric Resources (Law #9.433/97).

4 CONAMA: National Environment Council

5 IBAMA: Brazilian Institute of Environment and Renewable Natural Resources

Together, there are about 155 mandatory standards according to Inmetro, and about 80% of these refer to sustainable practices. As for voluntary standards, according to the Brazilian Association for Technical Norms (ABNT)⁶, there is a total of 7,822 on the list. The most prominent sustainability certifications across SMEs in Brazil are within the ISO series. Typically, the ISO 14.001 series is the most well known and more often demanded by larger companies in all industries to their suppliers. Depending on the sector, especially within the timber value chain, additional certificates like FSC and Fairtrade are also usually in order for SMEs to comply.

In the past few years, due to local governmental initiatives in some Brazilian states, like Rio de Janeiro, São Paulo and Pernambuco, there has been an increase in relevance of certifications concerning greenhouse effect gas emission. These states have approved legislation requiring stronger commitment by companies concerning the report on emissions, which is the subject of ISO 14.064, for example, and therefore the demand for this certification has increased.

It is worth mention that most of these standards are sought by SMEs as they engage in Global Value Chains, due to the fact that the domestic market for certified products is still to be further developed. That helps explain the reason for national certification seals to be still in its infant stage, making room for the prominence of international types of standards, which are a prerequisites imposed by lead companies, in order to buy from local suppliers. A better overview on the relevance of these standards may be seen in the sectors analysis below.

3.1 Industry sector

The typical sectors in which Brazilian SMEs activities are worthy of specific regulation are within the industry and agribusiness, even though some services may be subject as well. In the industry sector, the Construction value chain is a common example of activity that demands a large number of smaller suppliers, who handle or transform potentially harmful raw materials, such as timber, iron and metals in general. Construction waste management is regulated by specific resolutions from the National Environment Council – CONAMA: Resolutions #307/2002, #431/2011 and #448/2012.

Voluntary standards concerning energy efficiency in Construction are provided by Procel⁷ through its “Selo Procel Edificações”. It is estimated that the residency and commercial buildings’ energy consumption represents about 50% of the total energy demanded in Brazil. Thus, this program grants certification for building projects that prioritise wrapping techniques, illumination and water boiling systems, in addition to air conditioning systems that are more eco-efficient⁸.

Broader voluntary standards recognition is granted by Fundação Vanzolini⁹ that represents the HQE (Haute Qualité Environnementale) process in Brazil. The foundation developed

6 <http://www.abnt.org.br/normalizacao/numeros-2016>

7 Procel: National Program for Conservation of Electric Energy

8 <http://www.eletronbras.com/pci/main.asp?View={89E211C6-61C2-499A-A791-DACD33A348F3}>

9 <http://vanzolini.org.br/aqua/certifique-o-seu-empreendimento/>

the AQUA – Alta Qualidade Ambiental certificate, which evaluates 14 enterprise environmental quality categories, such as water, energy and waste management, visual and acoustic comfort and sanitary quality of the construction project.

Finally, Caixa Econômica Federal¹⁰, a government bank, provides the “Selo Casa Azul” for those housing projects that comply with socio-environmental standards organised in 6 categories, such as: urban quality, project and comfort, energy efficiency, resources conservation, water management and social practices. It is worth mention that because this certificate is granted by a public bank, it is also a prerequisite to access some financial lines in this bank, that is considered a reference for construction credit in Brasil.

3.2 Agribusiness

Advancing to agribusiness activities, one of the first concerns entrepreneurs must have is to fill out the CAR – Cadastro Ambiental Rural¹¹, a mandatory registration for all rural properties with the Brazilian Ministry of Environment database. This registration¹² entitles SMEs in rural areas to access federal programs and development projects, access special financing lines from banks, tax incentives on production inputs, let alone the ability to commercialise environment reserve quotes and compensations for other rural properties, among other kinds of advantages. Nonetheless, the registration in the CAR system is only the first step towards obtaining many of these benefits, which does not exclude the necessity for the SME to pursue additional suitability for each specific program.

Agribusiness entrepreneurs also need to observe sanitary legislation concerning their activity. Such adequacy was considered as time-consuming and expensive until the creation of the SUASA – Sistema Unificado de Atenção à Sanidade Agropecuária¹³. This system is turning the sanitary registration process for SMEs less bureaucratic and demanding when compared to the past, when they needed to comply with the same standards as big agribusinesses. It does that by decentralising and unifying the sanitary registration process for agro SMEs, which become eligible to offer their products to other states within the country, and not only locally.

As far as Voluntary Standards go, there has been a growing interest for organic production in agribusiness. The Orgânicos do Brasil¹⁴ certificate is granted for farms that minimise their environmental impacts, by banishing the use of pesticides and synthetic fertilisers for example, but at the same time, are able to comply with labour legislation and other social premises. The certificate is extended to industries that obtain their inputs from organic farms and, thus, utilise at least 95% of organic inputs in their production process. Annual fees may vary from R\$2,500 to R\$15,000 depending on the complexity of the project, and companies must be audited on a yearly basis.

10 <http://www.caixa.gov.br/sustentabilidade/produtos-servicos/selo-casa-azul/Paginas/default.aspx>

11 CAR: Rural Environmental Registration

12 <http://www.car.gov.br/#/sobre>

13 SUASA: Unified Care System for the Agro Sanity

14 <http://ibd.com.br/pt/Default.aspx>

Another example of Voluntary Sustainability Standards in agribusiness is the CERFLOR – Programa Brasileiro de Certificação Florestal certification. It is granted by INMETRO¹⁵ to farms that either handles forest stewardship or industries prone to work with certified timber in their productive process. It adopts about the same policies as the PEFC – Programme for the Endorsement of Forest Certification.

As far as international VSS go (e.g. Fairtrade, FSC, PEFC) it became clear along the course of the present study that in the large majority of the cases, SMEs and small rural producers tend to seek them only as a means to sell to big multinational companies. Very rarely do small Brazilian companies issue international certifications if they aim the domestic/local markets. If we consider that less than 1% of the total of SMEs are engaged in GVC, it becomes clear how limited this pool is in the whole scenario.

4 Drivers and constraints analysis

In this section, we will provide an overview of the main topics arisen during the specialists' conversations, in combination with those identified in the review of studies and previous publications about the Brazilian scenario on SMEs' adoption of sustainability standards. Some of these topics may not be exclusive national characteristics, but when seen in combination they build the expected portray of the country's reality.

The analysis as follows refers mainly to opportunities and bottlenecks that may be faced by SMEs who are engaging in export activities, and therefore need to comply with certification demands as part of Global Value Chains. However, as the present research unfolded, an a priori analysis of reasons and limitations for SMEs to adopt sustainable practices in general seemed invaluable to understand the problematic in a broader perspective.

Broadly speaking, we can say that the main drivers associated with the adoption of sustainability practices by Brazilian SMEs are the possibility to **increase efficiency**, and the **adequacy to legal regulations**. At first, a number of simple practices such as recycling, resource rationalisation and energy saving may be seen by the SME as less demanding in terms of investments, and bearing the potential to provide short term operational results. As engagement in these activities progresses, other initiatives take place like the acquisition of new more efficient machinery and the installation of greener energy supply systems, like solar panels for example, which may have longer payback periods.

Secondly, when talking about environmental and labour regulation, SMEs, especially those that handle natural resources, tend to be more sensitive to comply with federal and local laws in order to avoid regulatory retaliations. Also, some domestic opportunities may unfold because of that, in the form of government procurement, as public institutions in Brazil are forced by law to hire suppliers that audit their social and environmental practices¹⁶.

15 INMETRO: National Institute of Metrology, Quality and Technology

16 Just to give an idea of the size of this market, in 2013, SMEs represented 57% of the R\$40 million spent by the federal government on public purchases, and this trend should increase according to specialists. Source: <http://sustentabilidade.sebrae.com.br/Sustentabilidade/Para%20sua%20empresa/Estudos%20e%20Pesquisas/CSS%20-%20estudo%20-%20tend%C3%Aancia%20de%20sustentabilidade.pdf>

One interesting finding of the present study is that, unlike what one could expect based on other national contexts, environmental awareness was not mentioned by specialists as a main driver. It is not the same as to say that there is little or no concern on the entrepreneurs' side to voluntarily engage in practices that are more responsible. However, when analysing the primary motivational factors, the concern with environmental and social sustainability per se is not sufficient to be translated into behaviours and make actual changes in the companies' activities impacts. Especially if the SMEs' market is mainly local or domestic.

As for the a priori constraints for the adoption of sustainability practices, three main factors have been identified: the **lack of information**, the perception of **high costs** and the **access to finance**. Many entrepreneurs fail to realise that adopting sustainable practices may be beneficial to his/her business in several ways, while others have not even come across this topic yet, as if all the imperatives about sustainability in the international level were too distant from SMEs. Also, there is a widespread misperception that sustainability is a synonym for expenses, as if there were no leveraging opportunities associated with it. Finally, small companies that make past these first barriers concerning misinformation, and understand the importance of sustainable practices, may lack the necessary initial investments to adopt them.

As previously argued, the aforementioned opportunities and bottlenecks help build a broader comprehension on a priori factors that comprise the general mind-set of Brazilian SMEs concerning sustainable practices. Some of these factors relate to the upcoming analysis of drivers and constraints in GVC, which should be further discussed as follows.

4.1 Drivers to adopt sustainability standards

A) Access to new markets

According to standards institutions in Brazil, SMEs typically engage in a certification process due to a pre-existing or a potential opportunity to take part in a GVC. In these cases, SMEs are forced to comply with standards in order to access these markets, which leaves them with little choice if this is their goal. In a lesser extent, small companies may commit to a certification process when they target the domestic market. Some of the examples seen to have increased in the past few years include B2B markets like printing (print shops) and coffee roasting, as well as the organic food consumer market as a whole.

Along these lines, in the specialists' view, the possibility to develop international demand is a key strategy for SMEs in the current scenario of economic recession the country is experiencing. To illustrate this trend, there has been an 11.44% increase of export SMEs from 2013 to 2015, which highlights the attempt of these companies to diversify their demand and at the same time be granted with better security, with fixed contracts.

In addition to the aforementioned economic reasons to integrate a larger company's supply chain, SMEs seek innovation opportunities. As they became part of the GVC, it becomes easier to disseminate managerial practices that will improve the SME's productivity and competitiveness, which otherwise would require more time and effort to develop in an independent manner. Also, when they need to audit their production to acquire a certification, specialists say this is an opportunity to better organise and improve their productive systems.

B) External support

SMEs seldom manage to go through the whole process of certification on their own. As a means to bridge this gap, the small company may either be aided by the lead company in the GVC (by means of supplier development programs) or by supporting agencies like Sebrae. Sebrae is the most prominent reference for small entrepreneurs in Brazil, as they provide training and consulting focused in SMEs at affordable prices. They also provide financing access both by its own funds targeted to innovation projects (which also covers sustainability initiatives), and through acting as an intermediary between SMEs and banks.

In some cases, e.g. small rural producers, the ones who lack more qualification and resources, the lead company itself may subsidise the certification process. This subsidy may be full-expense, or a partial coverage, usually tied to better negotiable prices, which increases the lead company's bargain power. These suppliers usually are certified in group, which makes it more viable by means of cooperation.

C) Social and environmental awareness

SMEs' management is too centred in the manager or entrepreneur's figure. So, if the manager considers sustainability to be a relevant issue, this topic will somehow make its way into the company's strategic planning. Specialists were consensual to claim that there is a new generation of entrepreneurs who have a higher level of environmental and social awareness, but this trait is harder to find in more traditional businesses. This trend is usually pulled by the awareness of the domestic consumer market as well, which is still non-significant in the country, and too centred in high-income, urban, upper classes segments.

Another process associated is the fact that as SMEs begin to engage in rather basic sustainable practices, other possibilities may unfold. One of the specialists claimed that it is not rare to find SMEs that begin by adopting cost-efficiency types of practices, for example, and when they realise the importance of such initiatives on the environmental side, they move on to engage more thoroughly in social actions too. Some examples are the promotion of incentive programs for workers, improvement of the relationship with local communities and the promotion of a gender equality mentality throughout the organisation's culture.

D) Level of internal bureaucracy

SMEs typically show a lower degree of internal bureaucracy, which allows them to adopt new practices without having to go through several departments or managerial levels until they are approved. Due to the lower amount of employees and managers, internal communication tends to be easier, allowing it to be more fluid and helping spread the benefits of being certified.

4.2 Constraints to adopt sustainability standards

If in one hand enterprise do see advantages to adopt sustainability standards, on the other hand there are several issues that pull them back in terms of expectancies to a more sustainable business development.

A) High costs

The adoption of standards is considered an expensive process in Brazil, and therefore not many companies can afford it, especially when the certification is not directly linked to an existing market opportunity. The high investments comprise both the adequacy to standards and the auditing process per se. Typically SMEs need to hire consulting agencies and qualified personnel to assist in the process, as they seldom have internal staff to go through all stages, which increase even more the overall certification costs.

What has been seen as possible ways to overcome this problem is the issuing of group certifications. This possibility allows small communities and owners of small forest stewardship areas, for example, to be certified by sharing its implementation and auditing costs. In some cases, the SME out of self-awareness adopt several of the practices usually listed by certification agencies, but does not get certified because it cannot afford the auditing costs. In other cases, the SME has previously had a certification, but fail to renew it due to ongoing auditing costs, but still carry on with the sustainable practices. Depending on the relationship with the lead company in the supply chain, in these cases the contract with the small company can either be automatically terminated or not.

The problem concerning certification costs becomes even more prominent as one considers the overall production costs in the country. According to specialists, Brazilian entrepreneurs tend to face other barriers (monetary and non-monetary) that add up to operation costs that are less observable in other countries, like the deficient logistics system, complex taxation systems as well as the level of government's bureaucracy. Just as an example, in average, 7.6 reports need to be filled in order to demonstrate companies' state taxes alone. This number can be up to 19 reports in some states.

Existing initiatives that are meant to surpass the costs barrier, like financing lines provided by Sebrae, turns out being low in efficacy due to the next constrain concerning the information gap.

B) Information and technical gaps

As one of the specialists from academia mentioned, the topic sustainability is not a new one, and one may consider we are going through a second stage on the process towards achieving a more sustainable global society. The first stage, in the early 1980's was a time for people, companies and governments to raise awareness on the topic and start reflecting upon alternative ways for development. The second stage, the one the international community is in, is a stage to commit to the cause and start witnessing concrete changes in the preservation of resources.

Making a parallel to the reality in Brazil, SMEs seem to be starting to shift to the second stage, as there is still too much misunderstanding on the relevance and feasibility of sustainable practices. Despite the role played by the country internationally, since Rio 92, for instance, all this talk and imperatives seem to be very distant from the small entrepreneurs' day-to-day. It is not clear for the majority of the SMEs their role in the process.

Even after overcoming this so-called raise of awareness stage, SMEs fail to identify which possible paths could lead to being more responsible. There is a number of programs and

initiatives by supporting agencies that may be of help for SMEs. Sebraetec, just to mention one of these initiatives, is geared towards the improvement of innovation in small companies, covering topics such as design, productivity and sustainability among others. According to consultants from these agencies, innovation sustainability projects are still not very often seen in the proposals.

Finally, as SMEs raise awareness and learn about regulatory standards and VSS, they may experience one final gap in the form of the necessary expertise. Usually high-qualified professionals are demanded to adequate production processes, like environment engineers, chemical engineers, agronomists, and so on. The technical terms and protocols stated in standards usually require a degree of knowledge that goes beyond the ability of an average SME to comply.

This is a very relevant issue that needs to be addressed, especially by standardisation agencies when designing their products. Even after pricing and promoting certifications adequately around the globe, when SMEs in developing countries have difficulties going through the whole demands, it may lower the efficacy of these promotional efforts. How much of this information asymmetry must be internalised by standardisation agencies, supporting agencies, banks or the government is a decision open to discussion.

C) Scalability

A secondary problem associated with High costs concerns economies of scale. Usually, new processes and technology are designed for big companies which, given their production and service capacity, makes it more feasible to implement. SMEs not always have the scale necessary to make certain processes financially and operationally feasible. A good example is waste management. Even after reducing waste generation in the production process, there will always be a portion of it that remains.

These residuals may be significant inputs for recycling processes within big companies. However, there may be not sufficient ones generated by an SME so as to justify the implementation of a new process or new technology to handle it within the company. On the other hand, when seen jointly, waste and residuals from several SMEs may achieve the necessary feasibility to a new production process, which can be seen as a market opportunity to develop. Specialists believe that in order for this to happen, incentives on the government's side should exist.

D) Deficient supervision

SMEs who are engaged in GVCs are sometimes posed with communication problems with the lead company. On the one hand, requirements by the lead are not always as clear as they should be, for smaller companies to be able to coordinate the level of importance of each practice and prioritise. Also, supervision of SMEs' compliance on the lead companies' side is not always effective, which tends to lower the motivation of SMEs. Sometimes non-compliant companies or companies with certification renewal pending may still be serving as suppliers to the lead, as the termination of contracts is not always automatic.

5 In-depth analysis: cosmetics industry

Brazil is internationally known by its intense biodiversity. The country is home to 5 unique biomes, among which the Amazon basin, that is covered by the Amazon Forest and accounts for an area of about 6.7 million square kilometres. The region is populated by as much as 40 thousand species of plants, 300 species of mammals and 1.3 thousand bird species¹⁷, which helps explain the widespread zoning of protected areas in its territory, including national and state parks, ecological stations, biological reserves, wildlife refuges and other typologies of conservation units as provided by Brazilian law.

As a means to capitalise the potential of such natural resources, there has been increased interest by the cosmetics industry to develop products based on the Amazonian biodiversity. Natura is a Brazilian company founded in 1969, based in São Paulo area, which has a prominent presence in Latin America as a whole, in addition to its operation unit in France. The company has an average yearly revenue of R\$7 billion, employs over 7 thousand direct workers and its main products comprise personal hygiene, fragrances and cosmetic items.

In a recent study carried out by UEBT (Union for Ethical BioTrade)¹⁸, Natura was mentioned by 41% of Brazilian respondents as the brand perceived to make the most effort to respect biodiversity in the country. That is explained by the company's commitment to several sustainable practices, many of which are described in its 2050 Sustainable Vision document¹⁹. Just to mention a couple of initiatives involving packaging, for instance, since 1983 some product lines are offered in a refill format, and since 2007 the use of recycled plastic for packages has been more widely adopted in different product lines.

Natura's relationship with the majority of its productive suppliers (about 240) is managed through its QLICAR²⁰ Program. The initiative is aimed at leveraging the performance of the value chain as a whole, by monitoring suppliers' environmental, social and economic indicators and promoting an exchange between smaller companies in terms of their sustainable practices. In addition to the direct productive suppliers, Natura has a close relationship with 31 rural suppliers, consisting of cooperatives, associations and SMEs.

As a whole, these smaller businesses involve 2301 families, most of which based in very remote and difficult-to-access locations, which demands from Natura's side an approach that has been established over the past decades intended to develop these areas in terms of infrastructure and business opportunities. In the present case study, we will focus on two commodities used to produce fragrances, body lotions and oils: cocoa and pirioca root.

In 2004, Natura's ISO 14001 certification process was completed, but even before that, in 2000, the company started a more thorough engagement process with its small rural suppliers by implementing the Assets Certification Program (ACP). The program was possible after Natura partnered with Imaflora, the Brazilian NGO responsible for providing Forest

17 <http://www.icmbio.gov.br/portal/unidadesdeconservacao/biomas-brasileiros/amazonia>

18 <http://www.biodiversitybarometer.org/#country-results>

19 Source: Natura Sustainability 2050 vision, available at: http://www.natura.com.br/sites/default/files/static/sustentabilidade%20natura/visao%20sustentabilidade_2050_resultados%202014.pdf?utm_source=site_cf&utm_medium=widget&utm_campaign=sustentabilidade

20 QLICAR = Quality, Logistics, Innovation, Competitiveness, Environment, Social and Relationship aspects.

Stewardship Council (FSC) and Sustainable Agriculture Network (SAN) certifications in the country. In 2010, about 36 bioassets, or 61% of the species used as inputs by Natura, were certified. Certifications comprise FSC, SAN, IBD, ECOCERT, OIA and IMO labels.

According to small businesses (SMEs, cooperatives and associations) certified for Natura, the main additional incentives, on the top of those flagged previously by the present study, may be seen below:

- 1- **Costs sharing.** Natura covered, in many cases, the costs associated with obtaining certification, these were mainly group certifications. In other cases, Natura would partially subsidy the producers' costs.
- 2- **Higher margins.** Natura sets prime prices for its suppliers who adequate their productive systems to be certified.
- 3- **No bonding contracts.** Natura's commitment to local development of its supplier communities prevents it from demanding exclusivity contracts, this way it is possible for small producers to diversify buyer if they wish so.
- 4- **Genetic heritage.** By taking part in Natura value chain, small rural producers are entitled to receive benefits due to access of genetic heritage. Complying with law #11.284/06, Natura transfers payments to family producers due to the exploitation of traditional knowledge linked to local communities, and the access to bioassets and genetic heritage. From 2000 to 2009, there has been a total payment of R\$17.9 million under these premises.

A synthesis of the main players (producers and processor) of small size in the Cocoa and Priprioca value chain may be seen as follows.

Natura's Cocoa and Priprioca Value Chain			
Value Chain	Producers	Profile	Productivity
Cocoa	IBC – Indústria Brasileira de Cacau	Cocoa processor -Since 2005 -34 workers -R\$3 million in revenue in 2010	900 tons/month
	CABRUCA – Cooperativa dos Produtores Orgânicos do Sul da Bahia	Cocoa producer -Since 2000 -39 workers From 2005-2010: -80 tons of cocoa sold to Natura -R\$550,000 in revenue	200 tons/year
Priprioca (<i>Cyperus articulatus</i> L.)	AMBVA – Associação dos Moradores de Boa Vista do Acará APROCAM – Associação de Produtores Rurais de Campo Limpo MMIB – Movimento das Mulheres das Ilhas de Belém	APROCAM (Priprioca producer) -Since 2002 -42 workers From 2005-2010: -135 tons of priprioca root sold to Natura -R\$350,000 in revenue (R\$3/kg)	42 tons/hectare 2011: 25,000 kg R\$3,96/kg
Source: Based on Carvalho, André P. Gestão sustentável de cadeias de suprimento: análise da indução e implementação de práticas socioambientais por uma empresa brasileira do setor de cosméticos. Dissertation (PhD) – Escola de Administração de Empresas de São Paulo, EASP-FGV, 2011.			

6 Demand for finance

Concerning the Brazilian financial system to sustainability standards, little is known about the control mechanisms set up by finance organizations in relation to the availability of credit and the counterparts' sustainability strategies and initiatives. An exploratory work on financial possibilities to SMEs in Brazil will find several lines of credit available for investments in general in small business. Either private or public banks open credit lines without any specific commitment to sustainability measures, therefore, they do not capture (yet) the possibility to use these processes to enhance the knowledge and practice of sustainable activities from those taking the money. The credit lines are available in differentiated rates, subsidised either by the government or under a risk investment of the bank, betting on the strong Brazilian SME market and the need for financing.

As stated in the previous chapters, the use of sustainable patterns in the Brazilian market (SME) is very much driven by the supply chain – major industries demanding certification from their suppliers. In responding to this reality, the empirical evidence in this study provided rich insights into the (lack of) use of the financial system for the improvement of sustainability standards translating into proactive strategy for corporate sustainability performance. In particular, the findings in this study allow us to understand the various needs for financing in sustainability certifications in Brazil.

Unlike what was anticipated, higher interest rates did not emerge from the specialists' interviews as a main problem for SMEs, as this seems to be a shared problem for entrepreneurs in Brazil regardless of their company's size. However, within the main setbacks when it comes to credit access for SMEs, specialists highlight the difficulty to comply with terms and conditions from financial institutions. Part of the requirements include longer years of operation, which if we consider that in average 50% of SMEs do not survive past the first two years of operation, it becomes clear how limited is the pool of potential companies entitled.

It is true that some specific financial products are designed for SMEs, however according to specialists, even these ones are hard to comply, as collaterals may be of up to 130% of the amount borrowed in some cases. It is recurrent in the specialists' talk, the impression that SMEs lack alternatives, and that collaterals and general warranties should reflect better the ability of SMEs to comply in a financially healthy manner.

The Brazilian Development Bank (BNDES) has credit lines to be taken by private and public banks with differentiated interest rates based on segmentations established by the organization. For example, they have open lines for microcredit and credit for SMEs that are meant to enhance the business infrastructure or improve inventory management. According to the governmental authorities interviewed in this paper, the rules for credit are much more related to the development process than to a sustainability agenda. That does not mean that the Brazilian government does not have a sustainable development agenda, but the financial operations fail to match this agenda.

One specific example is the ABC Program ²¹ – financing for investments that contribute to the reduction of environmental impacts caused by agribusinesses. Its interest rates used to be from 4.5% to 5% in 2015 and now they vary from 8% to 8.5%. It is granted by BNDES,

21 <https://tinyurl.com/lt8egta>

which may demand warranties of up to 130% of the amount financed. In the case of SMEs, they offer the FGI²² – Fundo Garantidor para Investimentos²³.

In the market banking system (in parallel to the development bank), the credit lines may be accessed as a regular credit line either for SMEs or any other industrial part. They will follow a regular risk assessment analysis and have competitive market rates. From credit lines to investment in the agribusiness to industrial plant implementation, the opportunity to take credit is not linked to a sustainability agenda, but, as previously mentioned, to a developmental tendency.

Several reasons could be identified to highlight the need to a more focused agenda to sustainability standards financing, making capital cost be more attractive for SMEs:

A) Command and control environmental norms

The environmental legislation in Brazil is relatively new and there is still a lot of effort from federal, state and municipal governments to implement the law. Therefore, the firms prioritise their attention to the rule of the law, which has already high costs to the entrepreneur, especially the small and medium. According to entrepreneur associations, the production sector in Brazil is mainly worried about operating under the law to avoid criminal investigations and (therefore) are far from the incrementing of voluntary standards of sustainability.

B) Lack of national incentives

In the process of research it is clear that the several departments of government and class institutions are focused in policy making regarding sustainable standards. However, their effort is not translated into a national platform for financing operational implementation of sustainable patterns. For example, the sustainability reports under the Global Reporting Initiative (GRI) are relevant instruments that a small number of companies present. At the present moment there is lack of incentives to build up partnership agreements (especially financial) that could facilitate the implementation of a national policy for reporting. According to the class association authorities, most of the SME managers don't have money, time – or even good projects – to build up a strong network of reports.

C) Low pressure form the demand side

In addition to the possibilities of government incentives, there is a relevant aspect that impacts the financing process as well. There is still in the Brazilian market a lack of recognition of sustainability practices (including certifications) from those buying products from SMEs. The consumers market for sustainable products is still very much concentrated in a specific niche of the population. That makes the pressure for sustainable standards and, consequently, for financing processes more discrete.

22 <https://tinyurl.com/lwwpsky>

23 FGI: Investments Warranty Fund

D) The lack of standard managerial processes for implementing proactive sustainability strategy

This is a major impediment for SMEs achievement of sustainability performance, including the ability to contract financing. Among entrepreneurs in Brazil, management may be interested in investing in sustainability projects but unaware of how to execute them or how to access credit lines. This increases environmental cost and risk and also the inability to provide innovative products and services, such as environmentally friendly, green products.

E) The “culture” of certification for standards

While the few existing companies focus on extending their approach towards sustainability strategy, the majority of SMEs only sees the environmental rules towards certifications. The certification market is extremely relevant for the supply chain for internal and external markets, but lines of financing and governmental agreements for the implementation of Voluntary Sustainability processes could be strategic to the Brazilian market. That would enlarge knowledge about sustainability industrial standards and create an additional culture of voluntary patterns.

F) Segmented-financing lines:

There is no doubt that financing lines are relevant when they are applied to specific segments of industry or agricultural sectors. However, in addition to the lack of governmental policy there is a need to a broader financing line towards sustainability. Literature has proven that the relationships among proactive sustainability strategy and corporate sustainability performance are related to individual aspects of sustainability strategy and performance. That means that if there is credit to invest in the sustainability approach as whole, the company may increase the types of standards to be applied to sustainability according to its objectives or to the knowledge of these managers (environmental strategy connected to economic performance).

G) Knowledge production towards financing for sustainability is low

Most of the current sustainability strategy and certification studies that contribute to understanding sustainability issues are qualitative, conceptual, and based on developed sectors of the economy. According to the interviewees, only a few are quantitative and based on surveys. This raises both contextual and conceptual concerns for financing: (i) the opportunity to include local (country) knowledge in the (future) financing process; and (ii) the opportunity to integrate international approaches to the country cases, creating relevant information to the increment of sustainability standards in the supply chains.

The implementation of financing services under a strong public policy for sustainable development could be a relevant mechanism to increasing the adoption of sustainable standards either from certification or from voluntary approach. So far there is no horizontal certification (even voluntary) in the agricultural, industrial or service sector in Brazil. The present investments are much more related to a use of image or to the need to establish levels of certification to exportation or to sell to a bigger producer. A Sustainable financing development strategy, which considers political aspects, environmental command and control rules, economic and social aspects, must focus on maintaining environmentally

friendly production processes for an indefinite future, but also in creating alternative lines for sustainability standards in Brazil. In particular, this strategy aims at implementing sustainability that benefits stakeholders and less-developed companies that contribute to the supply chain in various ways.

7 Conclusions and recommendations

The adoption of sustainability standards is a reality to some of the SMEs in the Brazilian territory. However, the great majority of standards are connected to certification processes to comply with Global Value Chain patterns or to supply to major companies in the internal market. Government institutions, business organizations, financial institutions and private stakeholders, they all promote sustainable production processes and the need to adopt compliance methodologies with social and environmental standards, but they operate with introspective view. That means that every sort of organization in Brazil dealing with sustainability standards is focuses in its own role instead of being part of a national policy.

To conclude, this study was able to find 4 key aspects that may be relevant to increase the participations of SME in sustainability compliances and connect the several organizations involved in a more cooperative way to promote best production standards. They will be listed below as recommendations.

1. *The need for a national governance network*

The first and most important recommendation is related to the creation of a national governance network for sustainability standards. The governance approach is necessary to have a common agenda towards the implementations, the creation of financing lines, the adaptation to command and control rules of law, to the disseminations of voluntary sustainability standards and to simplifying the documentation processes to the operations of SMEs. In a first approach the governance should be leaded by a federal organization, such as a Ministry or Sebrae. It must be an institution with some sort of leadership, national capillarity, but also capacity to drive a public policy towards a horizontal implementation of sustainability standards of all kinds (mandatory, certified or voluntary).

2. *Less bureaucracy*

Brazil's level of bureaucracy for businesses is an important gap to be overcome. The amount of fees, documents and requirements that need to be provided in order for companies of all sizes to operate is overwhelming. There are several different types of taxes. The "Simples Nacional" was an advance, but still not enough, as several states and cities fail to implement the same principles for taxes in their level. Considering sustainability is a branch of innovation, when SME managers have so much bureaucracy to face, this topic gets undermined and may fail to come forward in entrepreneurs' agenda.

- In Brazil, it takes in average 2 month to open a new company.
- Every year entrepreneurs have (in average) 7.6 reports to fill out in order to demonstrate their state taxes. That can be up to 19 reports in one of the states.

- Initiatives in the federal level, like the Simples national, have been trying to minimize the problem, but these initiatives need to be pursued by states and municipalities as well.

3. *Creation of a supplier development program*

Lead companies in GVCs face the burden of having to supervise its suppliers, which demands the implementation of specific departments for accreditation of the standards established in the supply chain. Throughout a broader policy for standards implementation those companies could have specific financing from the government to improve their operations and adopt capacity building processes among their suppliers to the implementation of certified standards.

4. *Fund for SMEs to obtain certification*

Companies, government and Certification institutions may create a fund to help SMEs and small producers pay for the certification process. That fund could operate in parallel or together the implementation of financing policies to sustainability standards in SMEs. That would go hand in hand with the need to a more horizontal perspective of sustainability standard implementation.

8 List of interviewees

Below, the list of specialists interviewed for the study can be seen.

	Name	Company	Position
1	Alberto Besser	FGV	Professor and SME Researcher
2	Alexandre Ambrosini	Sebrae Nacional	Sustainability Analyst
3	André dos Santos	Inmetro	Overcome of Technical Barriers Division
4	Anízio Vianna	Sebrae/MG	Innovation and Sustainability Access Manager
5	Celso Lemme	Coppead/UFRJ	Professor and SME Researcher
6	Ellen Cavalheri	Imaflora	Forest Certification Coordinator
7	Laila Pieroni Martins	Brazilian Standards Association/ ABNT	Market and events Manager
8	Leonardo Salema	Inmetro	Cerflor Coordinator and Conformity Analyst
9	Luis Fernando Pinto	Imaflora	Certification Manager
10	Mariana Garcia	ABNT/AGS	Senior Certification Consulting
11	Suênia de Sousa	Sebrae/MT	Head of the Sebrae Sustainability Centre
12	Valéria Barros	Sebrae	Social Business Specialist
13	Vana Tercia	Ministry of Environment	Coordinator for environmental standards
14	Vera Thorstensen	FGV	Professor / Head of unit for International Commerce

II Drivers and constraints for adopting sustainability standards in small and medium-sized enterprises (SMEs) and the demand for finance: a Chinese case study

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Introduction

Sustainability standards, which set best practice in an industry, can be effective tools for verifying socially and environmentally friendly goods and services along global supply chains. Some of these are set up by national government agencies as public standards to provide legally binding requirements for general market access, while many others are private standards, set up by multi-stakeholder initiatives or large companies with global membership to attract segments of high-value market and respond to ethical concerns.

As an emerging power, China has become more prominent in global trade and investment with both developing and developed countries. China's embrace of sustainability standards will not only promote the country's overall competitiveness and new modes of low-carbon, resource-light prosperity, but contribute to the transformation of global economy as well. Always regarded as backbones of national economy, large State-Owned Enterprises (SOEs) in China have become the primary focus of sustainability or Corporate Social Responsibility (CSR) initiatives. It is important to engage with Chinese SOEs to enhance their sustainability efforts, however, there is also significance to be aware of the growing needs and obstacles faced by Small and Medium-sized Enterprises (SMEs) in working towards sustainability. As the Chinese government has been committed to deepening domestic reforms by giving more weight to market mechanisms, Chinese SMEs will be further involved into the Global Value Chains (GVCs), which presents new opportunities and challenges for the application of sustainability standards. When introducing, developing and implementing sustainability standards in the Chinese context, it is necessary to improve understanding of current endeavors by Chinese SMEs towards sustainability in GVCs, the drivers of these endeavors, and their impact. In particular, what are the demands for finance by Chinese SMEs to integrate into sustainable GVCs?

Built on an initial review of academic literature and interviews with relevant stakeholders, this report attempts to identify major drivers and constraints for adopting sustainability standards by Chinese SMEs, with an in-depth analysis of those in the furniture manufacturing sector in China's Guangdong Province. In the meantime the report will explore the status quo of financial services delivered to Chinese SMEs as well as their demands for better access to finance that enable them to integrate into sustainable GVCs. The study concludes by offering policy implications and recommendations how government, together with other national and international stakeholders can take a leading role in promoting better compliance with social and environmental standards by Chinese SMEs and facilitate their access to finance.

1 An overview of sustainability standards in China

Up until June 2017, 21162 active standards have been listed by the Standardization Administration of China (SAC). Among these standards, 2005 are mandatory (marked as “GB”) and 19157 are “recommended” or voluntary (marked as “GB/T”) (SAC 2017). Based on the International Classification for Standards (ICS) formulated by the International Organization for Standardization (ISO), SAC further splits all the standards into 39 categories. None of these categories carries the name of “sustainability standards”, and most of them encompass sector-oriented performance, quality/safety and management standards. However, a large number of these standards can be regarded as sustainability standards because of their nature. For instance, one category of standards that is “environmental protection, health care and safety” (892 mandatory and 923 voluntary) may qualify as sustainability standards for they aim at reducing socially and environmentally harmful impacts of technical products.

In addition to the SAC, China’s Ministry of Agriculture (MOA), Ministry of Housing and Urban-Rural Development (MHURD), Ministry of Environmental Protection (MEP) as well as National Health and Family Planning Commission (NHFPC) also play unique roles in formulating sustainability-related standards within their mandates. It is noteworthy that the standards made by China’s MOA, MHURD, MEP and NHFPC, either mandatory or voluntary, have yet included into the SAC’s standard catalog. Nevertheless, they are considerably sustainability-related due to their content. For example, MOA has issued some standards that concentrate on the process of food production and meet requirements from consumers for higher food quality. MHURD lists 150 mandatory standards of energy efficiency over the life cycle of buildings (marked as “JGJ”) and 173 mandatory standards of urban sanitation (marked as “CJJ”) (Ministry of Housing and Urban-Rural Development, 2017). Similarly, MEP has listed 289 mandatory standards (marked as “GB”) and 95 voluntary standards (marked as “GB/T”), most of which are emission standards for vehicles and factories (MEP 2017). Furthermore, 535 standards on food safety and food additives are currently put in NHFPC’s list, 255 of which are mandatory (marked as “GB”) and 280 are voluntary (marked as “GB/T” or “WS/T”) (National Health and Family Planning Commission, 2017).

Although there is still lack of clear definition or special category for “sustainability standards” in China, both the Chinese government and enterprises have increasingly recognized their obligations to take social, environmental and governance issues into account when pursuing economic benefits. Nowadays, the word “sustainability” is often used inter-changeably with “Corporate Social Responsibility” or “CSR” by Chinese. The introduction of the concept of CSR into China can be traced back to the 1980s right after the reform and opening-up initiated by Mr. Deng Xiaoping, while it was not until 2000s that CSR came to be understood and accepted by Chinese companies, largely because of regulatory changes (Duan & Eccles, 2014). The Chinese government amended the Company Law of People’s Republic of China promulgated in 1993 and put it into effect in January 2006, which officially adopted CSR as part of the Chinese legal system. The Article 5 of the new Company Law encourages Chinese companies to comply with laws and administrative regulations, social and business morality when undertaking business operations, accepting the supervision of the government and the general public and bearing social responsibilities (Standing Committee of the National People’s Congress, 2015). However, it is notable that the Article 5 of the 2006 Company Law

tends to be ambiguous for companies to follow and thus far from legally binding in practice, though it has laid legal foundations for further sustainable practices in China.

Since SOEs play a dominant role in the Chinese economy, they become key to the implementation of sustainability in the country. In January 2008, China's State-owned Assets Supervision and Administration Commission (SASAC) published "Guidelines for State-owned Enterprises Directly under the Central Government on Fulfilling Corporate Social Responsibilities", calling for Chinese SOEs to further promote the goals of CSR when developing the Chinese economy, including workplace safety, protection of the legal rights of employees, participation in social public welfare programs, protection of the environment and conservation of natural resources (State-owned Assets Supervision and Administration Commission, 2008). Unlike SOEs, China's SMEs do not operate under a central supervisor, while the China Association of Small and Medium Enterprises (CASME) is a significant stakeholder to provide sustainability guidance to country's SMEs. On December 18, 2013, the CASME published the "Guidelines to Small and Medium Enterprises on Corporate Social Responsibility", the first document to instruct Chinese SMEs to raise their CSR awareness and recognize four main categories of social responsibility, namely employment, environment, market and community (China Association of Small and Medium Enterprises, 2013). Other industry associations have also issued their own guidelines that created huge influence on their respective industries. For instance, the China Federation of Industrial Economics (CFIE) published "China Industrial Enterprise and Industrial Associations Social Responsibility Guidelines" in 2008, and China's Responsible Supply Chain Association (CRSCA) published "China Social Compliance 9000 for Textile and Apparel Industry" in the same year. In 2009, the China Banking Association issued "Guidelines for Corporate Social Responsibility of Chinese Banking and Financial Institutions".

Under the framework of these CSR guidelines, CSR reporting is increasingly encouraged by the government while still remains voluntary in China. Chinese governments in the central and local levels have published a series of standards guiding businesses to release their CSR reports. SAC issued a national standard in 2015 (GB/T 36001-2015), which is a public voluntary standard that sets general guidelines for companies and other organizations expecting to develop and publish a CSR report. It has laid out basic principles of reporting, key aspects of report planning, steps for report compilation, and measures aimed at improving the credibility of a report (Standardization Administration of China, 2015). Separately, stock exchanges in China are strong advocates of CSR reporting. Since 2008, the Shanghai Stock Exchange (SSE) has been making and enforcing disclosure requirements for listed Chinese and overseas companies. In particular, the release of environment-related information has become mandatory for listed companies in the extractive sector. The SSE also issued its environmental, social and governance (ESG) reporting guidance, though it seems very broad in scope on how to report (Shanghai Stock Exchange, 2008). In a similar vein, the Shenzhen Stock Exchange (SZSE) published its ESG reporting guidance in 2006, while its contents look more detailed. According to this guidance, listed companies should report their implementation of CSR relevant to labor protection, environmental impact, product quality and community relations. They also need to address public concerns on measures and timetable for improvement (Shenzhen Stock Exchange, 2006).

In the meantime, a number of international public and private standards, including the ISO standards (9000, 26000, 14001, etc.), the UN Global Compact, the Global Reporting Initiative (GRI) and the Equator Principles, the Roundtable on Responsible Soy and

Roundtable for Sustainable Palm Oil (RTRS and RSPO), Forest Stewardship Council (FSC), Global GAP and Fairtrade, are being adopted by the government and companies to meet the demands of investors, consumers and other stakeholders in China. It is interesting to find that a number of ISO or the International Electrotechnical Commission (IEC) standards are adopted by the Chinese government and become part of SAC's standard catalog. However, the international standards do not always fit into the political, social-economic, environmental and business contexts in China so that many of them lack local legitimacy. Particularly, many of these international standards have been developed without the participation of relevant local stakeholders and thus triggered concerns that they could act as technical barriers to trade (TBT).

Against this backdrop, China is seeking to adopt sustainability standards or CSR initiatives that best suit the nation's context in harmonization with the current working international standards. One example in this regard is the GRI and CASS-CSR reporting guidelines. On the one hand, both foreign subsidiaries and Chinese companies generally use the internationally recognized GRI G4 reporting guidelines. At least 60 major Chinese companies use the GRI guidelines, with the state-owned China Overseas Shipping Company (COSCO) securing the GRI's most stringent 'A+' level rating for its sustainability report (Zadek, 2012). On the other hand, the Research Center for Corporate Social Responsibility of the Chinese Academy of Social Science (CASS-CSR) has set the criteria on which CSR reports in China should be based. Besides publishing the *Blue book of Corporate Social Responsibility* and the *White Book of Chinese CSR Reports*, CASS-CSR also delivers Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises, which are widely followed by many Chinese companies. The objective of these guidelines is quite similar to that of the GRI G4 guidelines since the GRI model is more popular in China than the CASS-CSR model.

In the banking industry, Industrial Bank of China has become the country's first and only bank to have signed up to the Equator Principles, despite the fact that Chinese government does not officially endorse it. For the majority of Chinese banks, the China Banking Regulatory Commission (CBRC) issued the Green Credit Guidelines (GCG) in 2012 to encourage all financial institutions directly regulated by the CBRC to "effectively fend off environmental and social risks" (China Banking Regulatory Commission, 2012). In the mining industry, although China has rejected the Extractive Industries Transparency Initiative (EITI), the Chinese government has given its explicit endorsement to ISO 26000 through the official introduction of the standard. Some Chinese companies, such as the Aluminum Corporation of China, are employing ISO 26000 as a framework for their CSR reports. China Chamber of Commerce of Metals, Minerals and Chemicals Importers and Exporters (CCCME), under the supervision of Ministry of Commerce (MOFCOM), initiated the Chinese Due Diligence Guidelines for Responsible Mineral Supply Chains and the Responsible Cobalt Initiative (RCI) as public standards to regulate overseas investments of Chinese enterprises in international mining sectors. In the agricultural sector, China's Certification and Accreditation Administration (CAA) launched the China GAP series standards (GB/T 20014) benchmarked to Global GAP. The China GAP as a government project aims to set out public voluntary standards for the certification of primary agricultural products (including crops, livestock and aquaculture), which encourages reducing the use of chemical inputs, with the aims of improving food safety, environment protection, worker health and safety as well as animal welfare. In the forestry sector, China's State Forestry Administration (SFA) has developed the China Forest Certification Scheme (CFCS) that

received endorsement from Program for Endorsement of Forest Certification Schemes (PEFC) in February 2014. The certification scope of CFCS includes forest management, chain of custody, carbon forest, bamboo forest, non-timber forest products, forest ecosystem services and commercially managed precious, rare and endangered species.

In a nutshell, the majority of national sustainability standards listed by SAC and other governmental agencies, together with CSR guidelines, CSR reporting standards or other localized initiatives with reference to international public and private standards can be put into the public voluntary group. Despite being voluntary, plenty of these public standards have been adopted by Chinese companies to improve product quality, augment market competitiveness and be as benchmarks to their own private standards.

2 Incentives and challenges for Chinese SMEs to adopt sustainability standards

It is widely acknowledged that definitions on a SME vary from country to country in the world. The measurement of SMEs in China is mainly based on employee numbers and annual revenue. According to the Categorizing Criteria for Chinese SMEs enacted in 2011, the annual revenue of small-sized enterprises ranges from 3 million RMB (around 0.44 million US dollars) to 30 million RMB (around 4.36 million US dollars), where employment size is from 20-300. The annual revenue of medium-sized enterprises is from 30 million RMB (around 4.36 million US dollars) to 300 million RMB (around 43.58 million US dollars), where employment size stays in between 300 and 2000. Those enterprises with lower than 20 employees and less than 3 million RMB (around 0.44 million US dollars) annual revenue are considered micro-sized enterprises (MIIT, 2011).

By and large, SMEs have been playing a significant role in China's economic and social development. SMEs represented 98% of China's all types of companies at the end of 2013, and more than 75% of new products in China were created by SMEs that year (National Bureau of Statistics China, 2013). According to another statistic by the World Economic Forum (WEF), SMEs of all sizes in China contribute 60% of the country's GDP and 73% of formal employment in 2015 (WEF, 2015). In 2012, China's registered SMEs already accounted for 68% of the nation's export earnings (MOFCOM 2012). A FedEx Corp. survey released in November 2015 showed that 45% of Chinese SMEs were then engaged directly or indirectly in export, 9% above the regional average in Asia Pacific. Meanwhile, 61% of all Chinese SMEs surveyed believed they would be generating higher revenue from international exports in next five years (Fedex Corporation, 2015). In China, nearly 70% of the SMEs are located in the eastern and southern regions, while the rest are in the middle and western provinces. The third National Economic Census (NEC) results demonstrate that the ownership of SMEs is skewing towards private capital. SMEs in the Manufacturing, wholesale and retail sectors have hired the majority of people and contributed more than 80% of the whole business revenue (Le & Dong, 2014).

Therefore, the sustainability practice of Chinese SMEs should not be neglected, although big SOEs are usually faced with tougher CSR pressures and have become major practitioners of adopting sustainability standards. Today Chinese SMEs are doing their business in a more responsible and ethical way thanks to a series of incentives that include

the change of regulatory context, the involvement into global supply/value chains, the diffusion of international standards and etc.

The economic slowdown and environmental deterioration have compelled the Chinese government to prioritize CSR and sustainability standards as essential elements of transformation into new modes of low-carbon and resource-light prosperity. Also, the implementation of the Paris Climate Agreement and the United Nations (UN) 2030 Agenda has offered China both challenges and opportunities to reshape its developmental pathway, which requires joint action from the country's public and private stakeholders. With this background, Chinese SMEs have received mounting pressures from the government to comply with "recommended" standards and CSR guidelines. Due to their voluntary nature, these standards or guidelines used to be adopted by SMEs on the basis of self-determined principle, given different sizes and capabilities of SMEs. In the past, the government basically focused on the economic achievements of SMEs and companies that failed to comply with "recommended" standards rarely faced consequences. To balance economic growth and sustainability, the Chinese government is now more inclined to push SMEs to fulfill their social responsibilities by absorbing voluntary standards and CSR measures into laws and regulations. For instance, China's new Labor Law enacted in 2013 requires companies to compensate employees who are terminated unexpired labor contracts at least 3-month salaries. Under the government pressure, an increasing number of Chinese SMEs view concern and responsibility for employees as one of the most important aspects of CSR. Moreover, products and services of good quality as well as environmental protection and resource saving are other major aspects of CSR considered by some Chinese SMEs.

However, solely from the perspective of Chinese SMEs, another two prominent drivers lie behind their CSR practices. The first one is to safeguard the public reputation or image of a company. Some researches show that enterprises conducting their business more responsibly and ethically can increase their value by managing public reputation and image (Li et al., 2013). Investigations on consumer behavior also revealed that nearly 90% of customers would stop buying a product if they learned any illegal or immoral practice on the part of the manufacturer. Customers are more willing to buy a product with social and environmental benefits, even at higher prices (Ramli et al., 2013). China's booming market with rising demands from high-end consumers for quality food and other commodities calls for certification and traceability services. Actually, hundreds of thousands of small food processors in China have lost their market and even gone bankrupt because of bad reputation on sanitary condition and labor rights. In this light, more and more Chinese SMEs believe a well-known brand and a good reputation will keep the loyalty of their existing consumers and attract more new potential consumers, which is vital for their long-term development. Therefore, they prefer to attend sustainability certifications that guarantee the use of sound materials for making high-quality products. The sustainability certifications also help them set criteria for a delicate control over their processing procedure from raw material procurement, design to fabrication.

The second driver, the requirements of international customers and global market access, are key factors that motivate Chinese SMEs to adopt CSR or sustainability standards. For many Chinese SMEs, certifications of ISO 9000 and ISO 14000 are deemed to be licenses for entry into the global market. Meanwhile, since a large number of Chinese SMEs have become suppliers of multinational corporations (MNCs) such as Starbucks, Mars, Carrefour and IKEA, they are encouraged to adopt some international private sustainability standards. For

instance, IKEA China requires all of its cotton suppliers to be certified under the Better Cotton Initiative (BCI), and has been working with Chinese SMEs to support the application of BCI (Blackmore et al., 2013). Therefore, Chinese SMEs without sustainability certifications are likely to lose some of their businesses as suppliers if they fail to pass the regular inspection by their international buyers, while those whose products meet sustainability standards have seen a dramatic increase of their export volume (Alqahtani & Song, 2016).

Despite the incentives, Chinese SMEs have been constrained by a number of factors when conducting CSR practices or adopting sustainability standards. In the first place, China's changing macro-economy has prevented numerous SMEs, who are extremely sensitive to increases in supply chain costs, from investing in their CSR programs. The cost of certification has long been considered a major challenge in the implementation of sustainability standards (UNFSS, 2016). Under the current business circumstances with rising labor costs and raw material prices, Chinese SMEs have no choice but to concentrate on how to survive in low-price competitions so as to generate more profits, while CSR programs or sustainability certifications could only lead to additional financial burdens (Alqahtani & Song, 2016). They are thus reluctant to adopt new practices unless many of their peers take actions.

Next, lack of financial support is also a major stumbling block to the adoption of CSR or sustainability standards by Chinese SMEs (Alqahtani & Song, 2016). Compared with SOEs, SMEs in China are beset by poor credit guarantee system, dearth of financial institutions supporting SMEs, extremely high stock market threshold, and inability to obtain bank loans owing to imperfect management and poor accounting system that discourages banks from lending to them. In this scenario, Chinese SMEs will only have limited capitals to maintain their daily operations, and make sure there are no payment delays or business downsizing. It is imaginable that they cannot afford sustainability certifications without more financial support.

Besides the difficult access to financial services, many Chinese SMEs are not fully aware of the existence and significance of international, regional or even national standards. They also lack technical and management skills to apply sustainability certifications (Graafland & Zhang, 2014). A few SMEs are not equipped with testing, certification and accreditation facilities while others are short of highly-qualified employees. The SME Competitiveness Outlook 2015 by International Trade Center (ITC) shows that inability to conform to standards has severely obstructed the access of SMEs to the GVCs, especially for SMEs in some emerging economies (International Trade Center, 2015). What's more, the low consumer awareness of sustainability in China, especially in less developed regions, also hinders the promotion of CSR or sustainability standards by SMEs, which demand more effective community engagement at the local level (Alqahtani & Song, 2016). Most Chinese consumers seem to merely care about a bargain price and have little awareness of the application, let alone the significance, of CSR and sustainability standards, compared with those in some European countries.

Last but certainly not the least, the localization of some international private standards remains a problem for Chinese SMEs to introduce relevant certifications. Just take the FSC certification program as an example. As two international forest certification initiatives, the FSC and the PEFC are competing with each other in recent years. FSC is spearheaded by a partnership of non-governmental organizations (NGOs) and retailers, while PEFC is formed by forest production industry with strong support from Germany, Austria and Scandinavian countries. PEFC can be regarded as a move by the forest production industry to challenge the

influence of FSC, which originates from environmental activist perceptions of their industry (Gulbrandsen, 2004). FSC carries relatively more rigid principles and criteria, which must be universally applied and thus have limited scope for adaptation to the national context.

In China, FSC is often considered inflexible regarding some contentious issues such as indigenous people's rights, plantations and land tenure, etc. The FSC certification program in Linyi, Shandong Province requires each family to allocate 10% (about 1 acre) of their forests for protection and restoration purposes, which might reduce household income and thus be difficult to carry out. When it comes to labor rights, FSC standards cannot be fully applied since China is not a signatory party to all International Labor Organization (ILO) conventions. Therefore, FSC standards could be incompatible with China's domestic laws and regulations. In contrast, PEFC provides countries opportunities to create their own standards based on seven meta-standard criteria under the "umbrella scheme" (Programme for the Endorsement of Forest Certification, 2012). Given the fact that all forestland in China is state-owned, the Chinese government would prefer to take the central role in facilitating domestic industry to adopt forest certification and has finally chosen the state/industry-led PEFC over the NGO-led FSC to retain more government control in national standard setting (Buckingham & Jepson, 2013). To a certain extent, PEFC makes it possible for Chinese forest industry to improve their social and environmental credentials without having to comply with high requirements of FSC. However, for those Chinese SMEs who have attended the FSC certification program, their certifications may no longer be endorsed by the Chinese government, which could hamper willingness of other SMEs to participate in the FSC certifications in China.

3 Furniture manufacturing SMEs in Guangdong: incentives for purchasing certified wood

China is the largest furniture exporter in the world and enjoys a key position in the global market of furniture products. Since furniture manufacturing SMEs usually rely on the resource supply of timber, their purchase of certified wood as raw material could generate positive social and environmental implications. Producing furniture with certified wood will enhance the market competitiveness of these SMEs and facilitate their involvement into GVCs. In this section, furniture manufacturing SMEs in China's Guangdong province are chosen as research samples. Located in the Pearl River Delta adjacent to Hong Kong and Macao, Guangdong is regarded as one of China's economic powerhouses. In 2014, the province's GDP reached 6.779 trillion RMB (about 1.104 trillion US dollars), an increase of 7.8% compared with that of 2013, ranking No. 1 in the country. SMEs in Guangdong are significant as a major source of job creation. The number of SMEs in Guangdong was 43.86 billion in 2014, which accounted for more than 90% of enterprises and provided around 80% of the job positions (Bureau of Statistics Guangdong Province, 2014). With its geographical advantages and industrial base, Guangdong has absorbed huge amounts of foreign investment, and the development of furniture industry in the province is promoted by the government. Thanks to lower labor costs and higher labor productivity as well as price advantages, a great many SMEs flourish in the furniture manufacturing in Guangdong and have been expanding their international markets.

During March to April 2017, 21 managers from furniture manufacturing SMEs in Dongguan City, Zhongshan City and Guangzhou City were contacted via telephone or e-mail.

Ultimately, 10 managers or directors responsible for CSR issues agreed to be interviewed, while most of them required to anonymize their names and companies. Among these surveyed SMEs, 5 are foreign-invested enterprises (FIEs), 3 are private enterprises (PEs) and 2 are collectively-run enterprises (CREs). Meanwhile, 7 are located in Dongguan City, 2 are located in Zhongshan City and 1 is located in Guangzhou City. In terms of business age, 6 enterprises have been operating for 5-10 years, 3 have been operating for less than 5 years and only 1 has been operating for more than 10 years. In term of size, 1 enterprise (PE) employs 45 people, 6 (including 1 PE, 2 CREs and 3 FIEs) have 50-100 employees, 2 (FIEs) have 100-300 employees, and 1 (PE) has around 330 employees. Also, it is interesting to find that 7 out of 10 surveyed SMEs, including 5 FIEs and 2 PEs, have been purchasing certified wood with either the FSC or PEFC program, and the 3 enterprises (including 2 CREs and 1 PEs) which do not buy certified wood are all under age of 5. (See Table 1)

Table 1: Background of surveyed furniture enterprises

Location	Ownership	Number of employees	Business age (years)	Certified wood as raw material	Job title of interviewees
Dongguan	FIE	165	12	Yes (FSC)	President
Dongguan	FIE	66	7	Yes (FSC)	General manager
Zhongshan	CRE	74	4	No	Vice-manager
Dongguan	PE	45	2	No	Vice-manager
Guangzhou	FIE	204	8	Yes (FSC)	Director of Marketing Department
Dongguan	PE	330	6	Yes (FSC)	Assistant manager
Dongguan	FIE	93	8	Yes (FSC)	Manager
Zhongshan	PE	68	6	Yes (PEFC)	Assistant manager
Dongguan	FIE	82	7	Yes (FSC)	Office director
Dongguan	CRE	85	3	No	General manager

Source: interview summary by the author

More specifically, 3 FIEs and 1 PE who have been purchasing wood with the FSC certification for a few years are suppliers of MNCs such as IKEA and B&Q. As is known, IKEA has very stringent procurement policies for wood products. With the long-term goal to source all of its wood from well-managed forests as verified by a third party, IKEA China has developed a Four Step system for its domestic suppliers. To assure that suppliers are meeting IKEA's standards, the company demands that all suppliers must accept reviews of the wood supply chain either by IKEA or a third party appointed by IKEA, and will check all suppliers of wood products once a year and do random audits of wood supply chains. According to IKEA's Four Step system, suppliers are not only required to meet the company's own standard (i.e. IKEA Forest Standard), but an official standard (only FSC is recognized) as well (IKEA, 2011). Therefore for the aforementioned SMEs, they must guarantee that their purchased wood materials strictly comply with business ethics such as resource conservation and protection of labor rights through forest certification, which are requested and examined in a regular base by these MNCs like IKEA. If they fail to do so, they are very likely to lose their qualification as suppliers. As the CSR manager of the PE mentioned, their company experienced a tough time after IKEA demanded them to purchase certified wood, while they finally went through by peer learning and especially the adoption of FSC certification.

Furthermore, 2 FIEs who choose to buy FSC certified wood intend to use this as an effective tool for international market access and a long-term strategy for expanding their international market shares. In the global forestry trade, China plays a big role as processor and manufacturer rather than an end market. Nearly half of the wood products processed in China find their terminal market in the EU, U.S. and Japan, which increasingly require verification that timber comes from legal sources. The amendment of the U.S. Lacey Act²⁴ in 2008 and the EU Timber Regulation in 2010 have strengthened the above requirement and further driven Chinese SMEs in the furniture industry to purchase certified wood materials. Being foreign-invested nature with more than 80% of their products exported to international markets, both of the two FIEs are very sensitive about the changing regulatory context in the U.S. and EU and keep in touch with international forest certification bodies in order to guarantee their market access to western countries. As the manager of one company said, the export volumes of their furniture to the U.S. have dramatically increased because of their commitment to certified wood and FSC is just like a market passport for them.

In addition, the only PE who buys PEFC certified wood seems to have found some hidden advantages of its furniture products in China's domestic market. Actually during the 2008-2009 financial crisis, wood furniture exports from Guangdong severely declined due to shrinking demand in the U.S. and Europe. Consequently, the growth of domestic consumption has gained more attention from some SMEs. Unlike the 5 FIEs and 1 PE discussed above, this private enterprise sells the majority of its furniture products in the domestic market and has been seeking great loyalty from domestic customers. China's thriving middle class and flourishing property market in the Jingjinji (Beijing, Tianjin and Hebei), Yangtze River Delta and Pearl River Delta metropolises have driven the demand for high-quality wood furniture products with forest certifications. The manager of the PE mentioned that their company has been facing growing pressures from local governments as well as some NGOs in these developed regions to adopt more rigorous social and environmental standards. Purchasing PEFC certified wood materials has provided the company with enhanced opportunities for quality control on their furniture products which can differentiate them from other competitors. From their perspective, it can help them consolidate and even enlarge market shares in China to choose wood with PEFC rather than FSC certification, for PEFC has been well harmonized with CFCS and will be fully acknowledged by the Chinese government. Meanwhile it is still conducive to maintain their market shares in western countries with the PEFC certification.

4 Financial services for Chinese SMEs to integrate into global value chains

Nowadays, global value chains (GVCs) have become more popular in the international trade and investment system. According to a report released by the United Nations Conference on Trade and Development (UNCTAD) in 2013, 80% of global trade takes place in GVCs linked to transnational corporations (UNCTAD, 2013). The dynamics of GVCs have been shaping a new organizational system of production based on the precise division of labor within industries and across countries, which can improve the production efficiency and reduce the

24 The Lacey Act is a 1900 United States law that bans trafficking in illegal wildlife. In 2008, the Act was amended to include plants and plant products such as timber and paper. This landmark legislation is the world's first ban on trade in illegally sourced wood products. Retrieved from <http://www.forestlegality.org/policy/us-lacey-act> [08/04/2017].

cost of manufacturing. Since the SME sector in China has been increasingly integrated with global trade, Chinese SMEs that participate in GVCs now include material suppliers, parts and components suppliers, export oriented manufacturers, subcontractors to MNCs, distributors and service sectors entering overseas markets. By being involved in GVCs, Chinese SMEs can obtain new technology, improve product quality, enhance productivity and competitiveness, and as a result, expand their market shares and create domestic jobs. While in the meantime, they may also face some barriers such as labor market rigidity, cross-border regulatory constraints, non-tariff barriers and poor access to finance. The Asian Development Bank (ADB) once estimated that the shortage of trade finance in China and other Asian developing economies combined might have been as high as 700 billion US dollars in 2014, and nearly half of trade finance requests from SMEs are rejected (ADB, 2015a).

Although the Chinese government has formulated a series of policy frameworks to support the development of SMEs, including the promotion of market access, technology transfer, productivity enhancement, human capital development and improvement of business climate, poor access to financial services still remains a structural problem for most Chinese SMEs. Under the current financial system, Chinese SMEs are regarded as high-risk borrowers and can only get very limited access to bank credit due to their lack of liquid capital and real estate, which has become a major obstacle to their survival and growth. According to the ADB, SMEs loans made up average of 18.9% of total bank loans in China in 2014, only accounting for a small portion of commercial bank lending (ADB, 2015b). Even if SMEs successfully receive credit from banks, their loans constitute a large part of non-performing loans, which make banks even reluctant to lend them money.

To be further integrated into GVCs, Chinese SMEs need to gain greater access to formal financing and long-term funding opportunities. Actually, there is a clear demand among Chinese SMEs for long-term funding of more than 5 years from formal financial institutions. However, they have difficulty seeking appropriate financial options that meet their strategic needs to participate in GVCs, not only because of difficult access to bank loans, but also because of no financial priorities, such as improving product quality and company management, as well as how to deal with a rapidly changing business climate. Moreover, a lack of knowledge about finance also prevents some of these companies from actively exploring funding opportunities from diversified financing alternatives. In this light, Chinese SMEs usually choose to rely on informal finance. Borrowing money from family members, relatives and friends has been quite prevalent among SMEs in China. Nevertheless, Chinese SMEs would still like to reduce their reliance on own capital and informal financing channels. They've been looking for other financing models that go beyond traditional bank credit, with a sharp increase in demand for venture capital financing. In addition, Chinese SMEs requires more trade financial services to survive and grow in GVCs, given the rising costs of labors and raw materials as well as the dropping profits.

Since most Chinese SMEs face challenges to manage their operating cash flow, supply chain finance has become an increasingly preferred solution for SMEs financing from the perspective of the entire supply chain. Supply chain financial services emerged around 2005 when Shenzhen Development Bank (now the Ping An Bank, PAB) introduced the "1+N" model in view of lack of funds of domestic logistic companies. The "1+N" model usually seeks a large core business in the supply chain as the starting point to provide financial support, and then links the core business with upstream and downstream SMEs. On the one hand, funds from banks will be effectively injected into SMEs through shared credit with the

core business, helping them solve financing difficulties and improve the balance of the supply chains, while on the other hand, banks' credit will be integrated into the purchase behavior of upstream and downstream SMEs, promoting them to establish long-term strategic synergy with the core business to enhance competitiveness of the whole supply chain.

The "1+N" supply chain finance model soon attracted other major commercial banks, including Industrial and Commercial Bank of China (ICBC), Bank of China (BOC) and Shanghai Pudong Development Bank (SPD Bank), etc. These banks have begun to realize that giving SMEs financial support is not only the demand of national policies but also the requirement of expanding market shares and cultivating new sources of revenue. They thus quickly stepped into the field and upgraded their services into e-supply chain finance with the ongoing development of internet-based economy in China. For instance, ICBC now provides loans through electronic banking channel to upstream and downstream companies in a supply chain, who transacts with some key companies of the supply chain via e-commerce websites. ICBC extends credit to the upstream and downstream companies in a supply chain based on their online transactions, commercial credit record and credit standing of the key companies (Industrial and Commercial Bank of China, 2017).

Despite its features and advantages, ICBC's e-supply chain finance still requires the banks to facilitate SMEs to get funding based on the credibility of "core business" or "key companies". However in practice, domestic banks usually enlarge the credit of "core business" to support more enterprises in the supply chain. Therefore, if the core business or large enterprises have 10 banks to conduct similar credit, their credit will be extended 10 times, which may lead to a dramatic credit expansion in the foreign trade. Furthermore, since SMEs usually lag behind large "key companies" in employing the Internet in order to reduce the cost, they have relatively lower transparency of activities in the supply chain process. Banks sometimes refuse the financing request from SMEs even within the supply chain for they cannot monitor the business of SMEs in real time.

To solve these problems, non state-owned commercial banks like PAB and China Merchants Bank (CMB) are moving faster than those state-owned ones in innovation. PAB has developed a new online supply chain finance platform named Orange-e-Net, which represents the evolution of "1+N" model into "N+N" model. Instead of relying on the credibility of "core business" or "key companies", Orange-e-Net is set to deliver financial services directly to a variety of SMEs based on their real-time transaction records. In collaboration with some third-party information platforms, Orange-e-Net has been able to provide affordable e-commerce services for these SMEs which can better promote their synergistic coordination of production in the supply chain. In another case, CMB has introduced its Business-to-Business (B2B) bills pool service into Alibaba's e-commerce platform, which collects the bank acceptance bills (BABs), also known as bank acceptance drafts (BADs), from large companies on Alibaba's platform. In the past, e-commerce B2B platforms allowed only cash payments between two parties, which is not a common practice adopted by large companies. CMB's B2B bills pool service makes non-cash payment from conglomerates to SMEs possible. By uploading BABs onto Alibaba's platform, SMEs are able to quickly receive payments via CMB's acceptance bills with a corresponding amount of funds without pledging any assets. To activate the B2B bills pool service, Alibaba member companies only need to submit an application form with additional documents demanded by CMB (Hong & Yu, 2017).

Currently, there are very few Chinese banks that provide tailored financial services to promote adoption of sustainability standards by SMEs, and also, there seems to be a lack of relevance between sustainability compliance by SMEs and their easier access to formal financing or long-term funding opportunities. Nevertheless, it is notable that the Bank of Beijing (BOB) has become the first Chinese bank to include a water-efficiency component under a risk-sharing facility with the International Finance Corporation (IFC). In the past few years, BOB has been working with IFC's China Water Program to finance Chinese SMEs in the textile industry to improve water efficiency and water quality, which set an example for future cooperation between international and local financial institutions to facilitate SMEs with sustainability compliance in emerging economies to get access to finance and thus promote more sustainable production processes.

5 Policy implications and recommendations

So far, it can be concluded that the adoption of sustainability standards by Chinese SMEs still remains in its infant stage. On the one hand, more and more voluntary standards have been included into laws and regulations, which SMEs are increasingly obliged to conform to. Some SMEs choose to take an active part in sustainability certifications based on their intrinsic needs to safeguard market reputation or status as suppliers to MNCs; while on the other hand, a great many SMEs fail in standards compliance due to various constraints such as price sensitivity and rising costs, lack of technical, management and financial capabilities, as well as the incompatibility between national and international standards. As the first step, mapping out drivers and constraints behind company behaviors could help come up with potential solutions.

From a much broader perspective, the UN 2030 Agenda has set parallel objectives to simultaneously promote sustainability and trade. It is notable that the Sustainable Development Goal (SDG) 12 aims at ensuring sustainable consumption and production patterns, while the SDG Target 17.10 calls for a universal, open, transparent, predictable, inclusive, non-discriminatory and equitable multilateral trade system under the World Trade Organization (WTO) (United Nations, 2015). However in reality, it will not be an easy task to kill two birds with one stone. In terms of sustainability standards, they can be conducive to facilitate the transformation of consumption and production patterns, meanwhile they also trigger some concerns about creating technical barriers to trade. Therefore, it is worth thinking how to guarantee the adoption of sustainability standards by SMEs will not sacrifice their trade interests. In China, sustainability standards should never become trade barriers or job killers that jeopardize the basic survival of SMEs. Instead, they should be used as effective tools to foster true sustainability and better employment and contribute to the nation's socially and environmentally sustainable economic growth in the long run.

To this end, the Chinese government shoulders an indispensable responsibility in navigating SMEs through their difficulties in standards compliance. Given China's centralized political culture and authoritative traditions, government at all levels needs to take the lead in scaling up their efforts on capacity building for SMEs. The inability of Chinese SMEs to adopt sustainability standards can be well addressed through the combination of tax stimulation, bank financial support as well as technical and management assistance from the government. In particular, the launch of China's national platform on voluntary sustainability standards

(VSS) in June 2017 has presented a unique and valuable opportunity for SMEs to embrace sustainability standards.

By absorbing experts from relevant ministries, industries, academia and non-governmental organizations (NGOs) into the advisory committee, China's national VSS platform could follow trade discussion and conduct sector-based investigation as well as impact assessment on SMEs' access to the GVCs. It could also provide SMEs concrete capacity-building or training projects to directly support their participation in VSS activities and indirectly strengthen their competitiveness in international trade. Furthermore, China's national platform should establish a VSS database in partnership with ITC to deliver tailored information services to SMEs and improve their understanding on complicated standards systems. Finally, China's national VSS platform needs to hold regular dialogue with its counterparts in other developing countries such as India and Brazil to share experience and lessons and pave the way for mutual VSS recognition in the future. The SAC, under the guidance of Ministry of Commerce (MOFCOM) and 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 German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE) to enhance China's national VSS platform.

In addition to efforts by the government, large Chinese private companies, especially these electronic commerce and trade platforms, also possess key positions in promoting standards compliance by SMEs and meet their demand for finance. China's e-commerce giants represented by Jack Ma's Alibaba Group, can leverage their great influence to cultivate consumer awareness on sustainability standards and innovatively extend green digital finance to SMEs based on big data analysis. It is worth mentioning that Marine Stewardship Council (MSC) has been in collaboration with Alibaba Group to promote sales of MSC certified fishery products on the Tmall platform which brings extremely positive market responses to seafood sustainability certifications. IFC has also reached consensus with Alibaba's Ant Financial Services to strengthen their cooperation on joint investments to make digital finance more accessible to Chinese SMEs.

For international standards-setting bodies, either the intergovernmental organizations (IGOs), international NGOs or MNCs, it would be better to get government endorsement which could make their public and private VSS more acceptable by Chinese consumers and SMEs. However, this by no means implies that international stakeholders cannot survive only if they degrade their standards to reach compromise with the government. They should rather be encouraged to initiate consultation with the government to further improve existing official certification programs. More importantly, they should work closely with the government to develop more coordinated, localized and sector focused certification programs to better facilitate the inclusion of SMEs to the GVCs. These programs should stay as rigid as possible while taking an incremental and differentiated approach to include SMEs on the basis of their capacity progress.

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III Drivers and constraints for adopting sustainability standards in small and medium-sized enterprises (SMEs) and the demand for finance: an Indian case study (Part I: Macro Perspective)

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Abstract

This paper looks at the current status of sustainability standards among Micro, Small and Medium Enterprises (MSMEs) in India. Given the MSME sector's economic and social importance, it is crucial that this sector be directed towards more environmentally benign developmental trajectories. Diseconomies of Scale and technological backwardness have often plagued this sector, with lack of access to formal sources of finance being the result. The following paper tries to look at how greater integration into global value chains and financial innovation for the MSME sector could be brought about and how these could thereupon be used for achieving the aforementioned desired sustainability outcomes.

1 Background

Worldwide, micro, small and medium enterprises (MSMEs) have been recognised as engines of economic growth. MSMEs have been instrumental in generating large-scale employment; contributing towards rise in incomes of labour and returns to capital; promoting regional development; etc. In India the Micro, Small and Medium Enterprises (MSME) sector forms a pivotal part of the Indian economy. These enterprises are a product of individual skills and initiatives, displaying high operational flexibility, tendency to adapt to technological innovations, and utilization of local human capital and material resources to the optimum level. According to the Ministry of MSME, these enterprises contribute around 38% of the national GDP, 45% of the overall exports and 40% of the national industrial output. (CII, 2016).

According to the Annual Report of Ministry of MSME (2015-16) (MSME, 2016a), there are about 51 million MSMEs in India, employing over 117 million people, making it the second largest employer in India after agriculture. There are over 7,000 products, ranging from traditional to high-tech, that are manufactured by Indian MSMEs today (FMC, 2016).

In India, MSMEs are defined in accordance with the provision of the Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 and are classified into two classes based on investments made:

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- *Manufacturing Enterprises:* Enterprises engaged in the manufacture or production of goods pertaining to any industry specified in the first schedule to the industries (Development and Regulation) Act, 1951. A Manufacturing Enterprise is defined in terms of investment in plant and machinery.
- *Service Enterprises:* Enterprises engaged in providing or rendering services and are defined in terms of investment in equipment.

The categories of different MSMEs are shown in Table 1 below.

Table 1: Categories of MSMEs		
Industry Category	Investment in plant and machinery/ equipment (excluding land and building)	
	Manufacturing enterprise	Service enterprise
Micro	Not exceeding INR 25 lakh	Not exceeding INR 10 lakh
Small	Between INR 25 lakh and INR 5 crore	Between INR 10 lakh and INR 2 crore
Medium	Between INR 5 crore and INR 10 crore	Between INR 2 crore and INR 5 crore
Source: MSME (2016a)		

The 4th All India Census of MSMEs for 2006-07 is the most comprehensive source of information on the MSME sector with its coverage of 24 lakh units from the registered sector, and more from the unregistered sector (MSME, 2011). The data from this survey shows that Micro enterprises dominate the MSME sector with a 94.9 per cent share, followed by small enterprises (4.9 per cent) and medium enterprises (0.2 per cent). Geography wise, around 45.2 per cent of enterprises operate in rural regions. On activity basis, firms can be classified into three categories: manufacturing (67.1 per cent of total registered units), services (16.8 per cent), and repair and maintenance (16.1 per cent) (IBEF, 2013).

Key MSME product categories in India in terms of employment, turnover, GVA and exports are presented in Table 2 below. In view of their importance, it is clear that any policy directed towards sustainability goals needs to necessarily target these key sectors.

Table 2: Ranking of sectors as per contribution of MSMEs				
Census-sectors	Employment	Turnover	GVA	Export
Food products and beverages	1	1	1	2
Textiles	2	2	2	3
Wearing apparel	3	7	6	1
Fabricated metal products	4	5	4	6
Chemicals and chemical products	7	4	3	5
Machinery and equipment, n.e.c.	6	6	5	7
Basic metals	9	3	7	10
Other non-metallic mineral products	5	10	9	9
Source: MSME (2011)				

The paper is organized in the following manner. Section Two discusses the status of production networks in India and the G20 Working Group context that promotes integration

of MSMEs into Global Value Chains. The following Section (Section Three) discusses the taxonomy of existing sustainability standards in India. Standards are looked at both from the vantage points of environment (local pollution and climate change) as well as social welfare. Section Four looks at the benefits from and barriers to greater adoption of sustainability standards in India. The situation with respect to access to finance is discussed in the next section (Section Five). The last section presents the conclusions where we discuss how both finance and GVCs could be leveraged to encourage firms towards sustainability standards.

2 Economic clusters and integration into global value chains

The MSME landscape has matured over time and moved up the value chain. The MSME sector has evolved from the manufacturing of traditional products to much more hybrid products to the value-added services segment. This transition has been majorly fuelled by the consortium approach adopted by MSMEs.

The organization of MSMEs into homogenous clusters has been a historic phenomenon. Abid Hussain Committee on Small Scale Industry, set up by the then Ministry of Small Scale Industry, in its report in 1997 was first to recommend adopting the cluster approach for support to small and medium enterprises. Firms in the MSME sector that were facing difficulties in achieving economies of scale, specialisation and innovation due to their small size have all benefited from the advent of industrial clusters. Clusters and associated networks enable small firms to combine the advantages of running a small unit, with the benefits of scale and specialisation provided by large units. Even access to finance is a bit easier for units as financial institutions such as banks have prior details of the production processes and business requirements through past transaction histories and can plan appropriate credit instruments and delivery mechanisms, thereby reducing operational costs for both parties. Currently, there are more than 600 industrial SMEs clusters and over 7,000 artisan/micro enterprise clusters operating in India (IBEF, 2013). FMC (2016) estimates that around 63% or about two-thirds of Indian MSMEs operate from industrial clusters.

Albeit its domestic market orientation, the networking approach in economic clusters has helped MSMEs to overcome barriers such as technological obsolescence, supply chain incompetence, global competition and investment shortages. It is expected that with greater international integration with various product global value chains the level of specialization would only increase.

For developing countries such as India, it is generally easier to enter a value chain as a lower-tier supplier. But this position tends to be unstable as the SME can be easily replaced by other suppliers that offer better comparative advantages, such as lower costs of production (Abonyi, 2005). Thus, there become two goals that need to be targeted simultaneously. First, to try to enter a global value chain, and, second, to move up the tiers by upgrading the added-value content of their activities. Existing studies such as by Harvie *et al.* (2010, 2015) focus on identifying key factors that are important for SME participation in a regional production network, and then key factors influencing the participation of SMEs in higher value-adding tiers of a production network for seven ASEAN economies plus the PRC. They found that the key factors associated with the ability of SMEs to participate in a production network were labor productivity, foreign ownership share, financial stability and

cost of credit, and an ability to meet international standards of their goods. Integration of ICT as a core part of their business activity was also found to be important.

The importance of promoting SMEs and integrating them into global supply chains as a driver of sustainable development has been recognized at the 2016 G20 Summit in Hangzhou as well. This work on “implementation of the G20 Action Plan on SME Financing” would continue under the 2017 German Presidency and investigations would be conducted in order to find out how innovative financing models may promote the integration of SMEs into sustainable global supply chains.

3 Taxonomy of MSME sustainability standards

3.1 Mandatory standards

3.1.1 Local pollution mandatory standards

There are seven Acts relating to environment protection administered by Ministry of Environment, Forest and Climate Change (MoEF &CC) namely Indian Forest Act, 1927, Wildlife (Protection) Act, 1972, Forest (Conservation) Act, 1980, AIR (Prevention and Control) Act, 1981, Water (Prevention and Control of Pollution) Act, 1974, Environment (Protection) Act, 1986 and Water (Prevention and Control of Pollution) Cess Act, 1977.

Most of compliance monitoring and enforcement is done by SPCBs. Under the Water Act, the Air Act and the Environment (Protection) Act, the pollution control boards have the authority to issue and revoke consents to operate, require self-monitoring and reporting, conduct sampling, inspect facilities, require corrective action and prescribe compliance schedules. The enforcement powers include emergency measures of disconnecting water or power supply and facility closure, which are widely used in some states. According to the Hazardous Wastes (Management and Handling) Rules of 1989, SPCBs can, with CPCB approval, impose administrative fines for any violation of those rules (OECD, 2006). Despite the legislative ‘teeth’ given to the SPCBs enforcement powers, the story remains discouraging on the ground. Assessments for SPCB’s effectiveness show that these organizations remain understaffed which result in a low ratio of technical staff to number of industries to be regulated. Most staff members are overstretched with responsibilities which make the quality of monitoring poor (Planning Commission, 2012). An additional problematic factor is that many of the above standards for pollution are concentration based²⁹ and not industry based.

To ease the monitoring process, MoEF & CC has categorized industries as “Red”, “Orange”, “Green” and “White”³⁰ with the purpose of facilitating decisions related to location of these industries and surveillance/inspection of pollution levels from these industries. The criteria

29 Concentration based standards do not put a cap on a particular industries which often leads to pollution loads exceeding the carrying capacities of the environmental resource i.e. air or water.

30 The categorization is as follows: Industrial Sectors having Pollution Index score of 60 and above – Red category, Industrial Sectors having Pollution Index score of 41 to 59 –Orange category, Industrial Sectors having Pollution Index score of 21 to 40 –Green category, Industrial Sectors having Pollution Index score incl. & up to 20 – White category

of categorization of industrial sectors are based on the Pollution Index which is a function of the emissions (air pollutants), effluents (water pollutants), hazardous wastes generated and consumption of resources.

Eleven sectoral clusters of MSMEs have been identified by FMC, IICA and GIZ (2013) to have the most harmful impact on the environment. These include the sectors, namely- foundry, sponge iron, leather tanning, textiles, dyes and chemicals, electroplating, brick kilns, ceramics, glass and glassware, small cement plants and pulp & paper. Table 3 below presents both the pollution aspect of these industries as well as their contribution to the economy. It is unfortunate that despite their social and economic significance, around 70 per cent of the total industrial pollution is contributed by SMEs in India (FMC, IICA, & GIZ, 2013). In most respects, these sectors present the typical tradeoffs between natural and physical capital discussed in environment economics literature.

There is thus great scope for these industries to move towards sustainability pathways. FMC, IICA and GIZ (2013) note that the pollution per unit of production is generally higher in SMEs than that of the corresponding large units, partly due to the use of obsolete technologies and poor management practices, and partly because most of these units do not come under the ambit of regulatory authorities. This needs to be improved upon. Also, it is observed that large industries comply with environmental regulations as they have the financial capacity to install pollution control technologies, while smaller companies tend to struggle more to achieve conformance with the law.

Also, in India, Industries falling under 17 categories of (large & medium scale) highly polluting industries have to necessarily install continuous effluent/emission monitoring systems (CETPs). In many cases, industries have been asked to relocate or shutdown if they are unable to install such systems. The latest Annual report of the MoEF & CC shows that as on May 31, 2016, 1733 industries had installed CETPs and closure directions have been given to 1000 plus industries for not complying with these norms.

For all businesses and from the upstream and downstream value chain perspective, it is necessary to take into account the environmental impacts so that creation of products and delivery of services by an organization can be done in an environmentally and socially benign manner.

Table 3: Environmental impact of MSME sectors and their economic contribution						
Sector	Sub sector	Environmental issues	Industry category	Total production	Employment	Total clusters
Engineering	Foundry	Air emissions	RED	8.18 MTPA	0.65 mn	28
	Sponge iron	Solid waste	RED	21.2 MTPA	0.52 mn	29
		Wastewater				
Leather and footwear	Leather tanning	Water pollution	RED	0.27 MTPA	2.5 mn	17
		Hazardous solid waste				
Textile and garments	Textile and garments dyeing and processing	Water pollution	RED	54.96 bn sq. metres of cloth	35 mn	113
		Hazardous solid waste				
Chemical	Dyes and chemicals	Water pollution	RED	28.7 MT	NA	12
	Electroplating	Hazardous waste	RED	28000 tonnes	50000	20
Non-metallic industries	Brick kilns	Air pollution	NA	140 bn bricks	10 mn	40
	Ceramic tiles and sanitaryware	Air pollution	RED	340 mn sq. metres-ceramic tiles	0.55 mn	16
		Solid waste				
	Glassware	Air pollution	RED		0.8 mn	4
		Solid waste				
	Mini cement plants	Air pollution	RED	176 mn MT	0.14 mn	10
Paper and paper products	Paper industry	Air pollution	RED	10.5 mn tonnes	0.46 mn	4
		Water pollution				
		Biodiversity				

Source: FMC, IICA, & GIZ (2013)

The other important local pollution mandatory standard is actually a product standard rather than an industry standard. Bharat stage emission standards (BSES) are air pollution emission standards for motor vehicles. These standards are set by the Central Pollution Control Board under the Ministry of Environment & Forests and climate change. It is mandated that all new vehicles have to be compliant with these regulations.

3.1.2 Other mandatory quality standards

Other than the pollution standards there are a series of product quality standards that are important from the Indian standpoint. The Bureau of Indian Standards (BIS) enforces mandatory certifications for a various products in the interest of public health and safety, security, infrastructure requirements, etc. Currently there are 140 products under the mandatory certification list which include products such as household electrical goods, food products, automobile accessories, stoves and valves, medical equipment, etc.

3.2 Voluntary standards

3.2.1 Local pollution voluntary standards

A voluntary environmental management system benchmark that has gained some degree of prominence in India is the International Organization for Standardization (ISO), which is a non-governmental organization whose members are the national standard setting bodies in countries around the world. Its standards are widely recognized and endorsed by international bodies (e.g. the WTO) and national governments. Within this, the ISO-14001 series of standards specify the standard for establishment and maintenance of an environmental management system (EMS).

Data from the ISO site shows that there were around 4362 companies in India that were ISO-14001 certified. While the increasing trend of certification among Indian firms is heartening, the amount is still quite small in absolute terms. Among MSMEs, Padma et al. (2008) find that export-oriented firms focus more on identifying and managing environmental issues and processes to improve their end products. In view of the greater international integration of production processes, as envisaged under GVC, the number of certified business are all set to increase.

Table 4: Number of ISO-14001 certified businesses in India						
Country	2010	2011	2012	2013	2014	2015
India ISO Certificates	3878	4147	4286	5872	6443	6782
India ISO Sites	2252	2516	4886	2752	4213	4362
Source: ISO (2017)						

3.2.2 Energy efficiency voluntary standards

As a part of its Intended Nationally Determined Contribution (INDC), India has declared that it would reduce the emissions intensity of its GDP by 33 to 35 percent by 2030 from 2005 level. The current policy agenda is thus highly focused on achieving greater energy efficiency in different consuming sectors.

As part of this, the Perform and Trade (PAT) Scheme empowers the Indian government to identify energy-intensive industries as designated consumers (DC) and set mandatory energy conservation standards for them. Under this Act, the Ministry of Power's Bureau of Energy

Efficiency (BEE) identified DCs from 15 sectors, including the 8 sectors targeted in the PAT scheme. Each facility under the PAT Scheme has been assigned a specific energy consumption (SEC) reduction target, compared to its baseline SEC³¹, to be achieved by March 2015. DCs receive tradable, certified energy savings credits if they achieve efficiency gains beyond their targets. If they fall short of their targets they can buy energy savings credits to make up the difference.

In its initial two rounds, the focus has been on larger industrial units consuming energy beyond a set level. The sectors covered under PAT-I are aluminum, cement, chlor-alkali, fertilizer, iron & steel, paper & pulp, textile and thermal power stations. There has been a deepening and widening of PAT in its second round to include more DCs in identified sectors and more sectors such refinery, railways and electricity Discoms.

Efforts are currently underway that seek to include MSME's under this policy's umbrella as well. As a part of their research, Sekhar, Dhingra and Pal (2015) compare SECs in select MSME clusters and identify the best performers under different product groups. Table 5 below presents the SEC comparisons in different MSME clusters. These numbers can be used at a later date as the efficiency benchmarks for the MSME sector.

31 SEC is the energy consumed per unit of production and is generally expressed in terms of toe per ton of production.

Table 5: SEC comparison in MSME clusters

Sub sector	Cluster	Product/Process	SEC (toe/tonne)		
			Min.	Average	Max.
Brass	Bhubaneswar	Utensils	0.46	1.36	2.08
	Jagadhri	Brass	0.29	0.73	0.96
		Aluminium	0.25	1.19	2.75
	Jamnagar	Extrusion	0.08	0.10	0.19
		Foundry	0.06	0.08	0.11
		Electroplating	0.03	0.08	0.14
		Machining	0.01	0.04	0.19
Brick	Varanasi	Fired clay bricks	0.024	0.028	0.033
Ceramics & refractories	Morbi	Wall tiles	0.07	0.23	0.68
		Floor tiles	0.12	0.20	0.28
		Vitrified tiles	0.08	0.19	0.59
		Sanitary ware	0.005	0.10	0.35
		Spray dryer powder	0.04	0.05	0.06
	East & West Godavari	Refractory bricks	0.10	0.74	1.76
		Ceramic jars	0.67	0.90	1.19
	Khurja	Ceramic and potteries	0.17	0.20	0.47
	Thangarh	Tiles, sanitary ware	0.08	0.09	0.10
Chemical	Ahmedabad	Chemicals	0.01	0.52	1.06
		Dyes	0.03	0.69	1.54
	Vapi	Chemicals	0.01	0.55	2.76
		Dyes and pigments	0.02	0.44	1.98
Dairy	Gujarat	Milk chilling & pasteurization	0.002	0.003	0.007
		Other milk products	0.009	0.097	0.21
Foundry	Batala, Jalandhar & Ludhiana	Foundry	0.127	0.147	0.167
	Belgaum	Cupola	0.045	0.069	0.093
		Induction furnace	0.048	0.058	0.067
	Coimbatore	Cupola	0.043	0.075	0.11
		Induction furnace	0.048	0.058	0.067
Galvanizing and wire-drawing	Howrah	Galvanizing	0.03	0.10	0.17
		Wire drawing	0.01	0.04	0.07
Ice making	Bhimavaram	Ice blocks	0.001	0.008	0.013
Paper	Muzaffarnagar	Kraft paper	0.06	0.45	1.05
Rice mill	Ganjam	Rice	0.26	0.37	0.48
	Vellore	Rice	0.036	0.088	0.143
	Warangal	Raw rice	0.001	0.003	0.004
		Parboiled rice	0.053	0.063	0.086
Sponge iron	Orissa	Sponge iron	0.64	0.70	0.82
Tea	Jorhat	Coal based	0.58	0.70	0.82
		Natural gas based	0.40	0.50	0.60
Textiles	Solapur	Towels and blankets	0.07	0.34	1.58
	Surat	Sarees and dress materials	0.14	0.40	1.26
	Tirupur	Compacting	0.02	0.07	0.31
		Dyeing and bleaching	0.49	1.02	2.06
		Washing, heat setting and drying	0.23	0.63	0.92
		Knitting	0.01	0.02	0.04
Glass	Firozabad	Glass products	0.30	0.34	0.38
Note: Analysis primarily based on data collected under the BEE-SME program (2007-12)					
Source: Sekhar, Dhingra & Pal (2015)					

3.2.3 Other voluntary quality standards

Another key quality standard operational in India is the ISI mark instituted by BIS which certifies that the product conforms to BIS standards. BIS has put in place over 15800 standards in diverse fields such as agriculture, chemicals, engineering, medical instruments, textiles, etc.

Among sectors, the agriculture and food products sector has the most number of standards instituted. In fact the 'Report of the Inter-Ministerial Committee for Boosting Exports from MSME Sector 2013' (MoF, 2013) highlights that quality certification is a key concern for the food processing sector and needs to be expeditiously looked into. There are a series of Indian standards such as Agmark, FPO mark and India Organic certificate mark used in this sector. There are a number of international certifications that are gaining ground as well. These include GlobalGAP and its local variant IndiaGAP³², chain of custody certification (COC), Fairtrade, etc. These are however in their nascent stages as there is a lack of awareness among producers and an inability of smaller producers to access certification mechanisms due to financial constraints.

3.3 Designing a comprehensive voluntary EMS assessment tool

The Government of India has recently announced the ZED Assessment Mechanism that envisages promotion of Zero Defect and Zero Effect (ZED) manufacturing amongst MSMEs and ZED Assessment for their certification. The mechanism aims to improve the quality and competitiveness of Indian MSME over a period of time. It will also provide a benchmark for units to strive to continuously improve its processes thereby aiming to move up the ZED maturity assessment model. This would also ensure that the larger companies investing in India have a ready-made vendor base to support their activities and an expansive base of trained human capital who can contribute to their manufacturing process without much retraining (MSME, 2016b). The GoI document lists multiple benefits that would accrue to business going for this assessment such as reduction in wastages, increased productivity, expansion of market as Indian Offset Partners (IOPs), become vendors to PSUs, have more IPRs, develop new products and processes etc.

Under the ZED certification, enterprises would be assessed under 35 different criteria. Some of the key categories of environment assessment under ZED are as follows:

- Process Design for Environmental Management
 - Technology selection and continual upgradation
 - Systems for abatement of effluent, emissions and wastes
 - Systems for energy efficiency
 - Systems for natural resource conservation

32 Following GlobalGAP, Good Agricultural Practices Basic Requirements, has been developed for India by a committee constituted by Quality Council of India at the request of Food Safety Standards Authority of India, Ministry of Health, Govt of India for implementation by small and medium farmers, who dominate the Indian agricultural landscape. It is interesting that due to barriers in India, parallel initiatives by the public and private sectors have led to two co-existing and overlapping local GAP standards.

- Preproduction (startup activities) for environmental Management
 - Installation of environmental protection and measuring equipment
- Production and maintenance activities
 - Planned maintenance of Environmental management systems
 - Planned maintenance of energy control systems
- Outcomes for Environmental Performance
 - Optimal use of natural resources
 - Energy performance
 - Environmental performance – air/effluent / solid waste

4 Social welfare agenda

It has been argued that India ‘probably has the most comprehensive legal structure for labour welfare and protection in the world’ (Deshingkar, 2009). Table 6 below lists some of the key Acts that govern labour welfare in Indian industries.

Despite the existence of these laws, there is a large part of industrial labour that operates outside of this welfare net. Most labour market laws are applicable to formal sector firms, as establishments employing below a certain number of workers are exempt from them. This effectively translates into the fact that about 93 percent of India’s workers who are in informal employment, do not form part of this and thus do not enjoy the protection of minimum conditions of work (NCEUS, 2009). The NCEUS report has also calculated that “85 percent of all casual workers in rural areas and 57 percent of them in urban areas get wages below the minimum wages”. This situation requires drastic improvement.

Table 6: Key acts governing labour welfare in India		
Name of Act	Objectives & applicability	Compliance requirements
Factories Act, 1948	The Act provides for the health, safety, welfare, service conditions and other aspects of workers in factories. It covers all workers employed in factory premises directly or through an agency.	<ul style="list-style-type: none"> • Licensing and renewal of license • Provision of safety measures • Provision of welfare measures • Payment of wages and overtime wages • Maintenance of registers • Submission of returns
Industrial Disputes Act, 1947	This Act provides for machinery and procedure for the investigation and settlement of industrial disputes for industrial establishments carrying on business, trade, manufacture, etc.	<ul style="list-style-type: none"> • Prevention of unfair labour practices • Prior permission from regulatory bodies for retrenchment and closure • Payment of wages on account of retrenchment or closure
Industrial Employment and Standing Orders Act, 1946	This Act requires employers to define and publish standing orders and to make them known to workmen employed by them	<ul style="list-style-type: none"> • Formulation of service rules and obtaining of approvals • Display of standing orders in a prominent place
Minimum Wages Act, 1948	This Act provides for fixing minimum rates of wages in certain employments	<ul style="list-style-type: none"> • Provision of minimum rates of wages • Maintenance of registers • Submission of returns
Payment of Wages Act, 1965	The Act provides for payment of bonus to persons employed in certain establishments	<ul style="list-style-type: none"> • Payment of bonus • Submission of returns
Contract Labour (Regulation & Abolition) Act, 1970 and Rules	The Act regulates the employment of contract labour in certain establishments and provides for its abolition in certain circumstances.	<ul style="list-style-type: none"> • Working conditions of workmen • Adequate facilities like drinking water, safety, etc. • Maintenance of registers • Submission of returns
Employee State Insurance Act, 1948	The Act provides for provision of benefits to employees in case of sickness, maternity, employment injury, etc.	<ul style="list-style-type: none"> • Remittance of monthly contribution • Maintenance of registers • Submission of returns
Employee's Provident Fund and Miscellaneous Provisions Act, 1952	This Act provides for compulsory institution of contributory provident funds, pension funds and deposit linked insurance funds for employees	<ul style="list-style-type: none"> • Payment of monthly contribution • Maintenance of registers • Submission of returns

5 Barriers and incentives for MSME sustainability standards

As per the existing regulatory frame-work, there is more of a rigid mandate of “Comply or Close Down” rather than “Comply and Benefit” as far as sustainability standards are concerned. Details of the command-and-control approaches have already been furnished earlier. However, in literature there are multiple papers that have looked at Indian MSMEs and the benefits that accrue from better environmental management systems.

For example, most ISO 14001 certified companies in India confirm that “reduction in waste” and cost savings, are the largest benefit they receive from sustainability standards

implementation (Khanna, 2008). Other important benefits accruing to MSMEs, noted in literature are organizational and competitiveness benefits and increased market access (Padma et al., 2008; Prakash, 2000; Sawhney, 2004). Their findings also suggested that export-oriented firms focus more on identifying and managing environmental issues and processes to improve their end products.

From the view of barriers, Dasgupta (1996) highlights two socio-economic reasons characterizing the lack of environmental compliance. Firstly, most SMEs have a low capital output ratio compared to larger units (Sandesara, 1991). The investment surplus is limited, constraining the standard business argument of improved technologies leading to better business in the long run. This argument would be valid for both, end-of-the-pipe solutions as well as overhauls made in nested production processes. It is from this view point that the Indian government offers various subsidy and fee reimbursement schemes for CETP setup, ISO certification as well as ZED certification.

Secondly, with heavy emphasis on daily production, limited awareness of environmental technologies and better processes, the environmental decision making is severely constrained (Sethuraman & Ahmed, 1992). Natu (1999) observing the sufferings of the small scale industries in India due to small scale manufacture, meager profitability, severe competition, limited organisation and importance of process secrecy, suggested that it will be difficult for SMEs to adopt and maintain ISO 14001 (Singh et.al., 2015).

FMC (2016) in their assessment however make an important point. There is a widespread notion that only substantive higher technology equipment changes can lead to energy savings. However, even with large-scale manpower skilling, there substantial savings in energy efficiency can be achieved in usual day-to-day operations. Thus, to supplement all government policies and schemes that focus on tangible schemes which can lead to capital infusion by linking up with formal financial institutions, focus needs to be also on greater awareness creation and skill training. The move towards sustainability standards needs to be an amalgamation of availability of finance, raw material sources, and knowledge of both, the proprietor and owner. This becomes a significant component for the SMEs to implement environmental management practices.

Involvement and commitment of founder/owner and top management into environmental management practices are key to successful adoption of sustainability standards by Indian SMEs, as demonstrated by Sethuraman and Ahmed (1992) and Dasgupta (2000.) Some of the other motivations for meeting sustainability standards discussed in literature are for better regulatory compliance, prevention of environmental incidents and to portray the image of an environmentally responsive firm.

6 Demand for finance and SMEs

However, one of the major deterrents in the progress of MSMEs is the access to finance. Lack of adequate and timely access to finance limits the potential of the sector in its contribution to the economy. The MSME sector requires funding of mainly two types, either for long term fund investment in fixed assets, for setting up or expansion of units or for working capital needs, to meet the operational requirement of business. The long-term credit is mostly provided by financial institutions like Commercial Banks, State financial Corporations (SFCs), Non-Banking Financial Companies (NBFCs, SIDBI etc. The working

capital needs are met by the banking sector, including Scheduled Commercial Banks (SCBs), Regional Rural Banks (RRBs) etc. However, it has been estimated that around 92% of all MSMEs are outside the coverage of formal financial channels, and thus compelled to raise money through informal channels, which exploits them by charging higher interest rates and thus causing a slow-down in progress of the MSME sector.

Majority of the MSME sector demand comprises of finance in the form of debt while equity as a source of finance has been under-utilized. Equity is not a popular option due to the lack of awareness about MSMEs and the legal structure of the firms. Most of the MSMEs are proprietorship, which limits their ability to raise finance through equity. According to the 4th census report (2006-07) of MSME sector, 87.23% share of enterprises had access to self-finance/no finance. The share of enterprises with access to finance from institutional and non-institutional sources stood at 10.87% and 1.05% respectively, demonstrating a gap in credit availability to the sector. The 2012 IFC Report on Micro, Small and Medium Enterprise Finance in India further corroborated the existing finance gap, as it stated that an overall finance gap of INR 20.9 trillion was present in the MSME sector. The report also stated a break-up of this gap into a debt gap standing at INR 19 trillion and an equity gap at INR 1.9 trillion, which elucidates that debt financing is a preferred mode of option by the MSMEs. The final seal on the existence of a finance gap is provided by Planning Commission statistics. In a paper on the flow of private sector investments for MSME sector, the amount outstanding to the MSE enterprises by Scheduled Commercial Banks (SCBs) was found to be increasing from year to year. For instance, amount outstanding in March 2009 recorded a year-on-year growth of 19.94% while the same figure had increased to 34.13% by March 2011. These figures from various reports collectively prove the point that a finance gap exists in the MSME sector, which needs to be addressed to ensure full development.

The problem of inadequate finance faced by the MSME sector can be analysed from a “three-fold perspective” (Agasty, 2016). Firstly, the demand side. Most of the MSMEs are small businesses that have very low financial awareness. They are not fully aware of the relevant financial avenues and public support schemes available to their sector, and thus find it difficult to expand their business. In some cases, they lack the technical know-how and the necessary wherewithal to provide the required information to avail these schemes. Most of the micro enterprise owners have low levels of education or are first generation entrepreneurs, having limited training in resource planning, thereby making it more difficult for them to access debt financing.

Secondly, the supply side. Banks and financial institutions face challenges in credit risk assessment of MSMEs due to the absence of financial information. Many MSME entrepreneurs prefer to transact in cash as they have limited incentives to maintain financial history. A lack of credit track record makes it difficult for financial institutions to assess the credit worthiness, thereby resulting in adverse selection, i.e. either higher interest rates being charged or no loan being sanctioned at all. Outreach to MSMEs, engaging them as customers, building up transaction and credit history, are all challenged by the lack of a formal legal structure. Another factor is the limited access to immovable collaterals of MSMEs, particularly in knowledge based industries. The security needed to finance the amount of loan required is often in scarcity, adding yet another obstacle in their access to adequate debt from formal financial institutions.

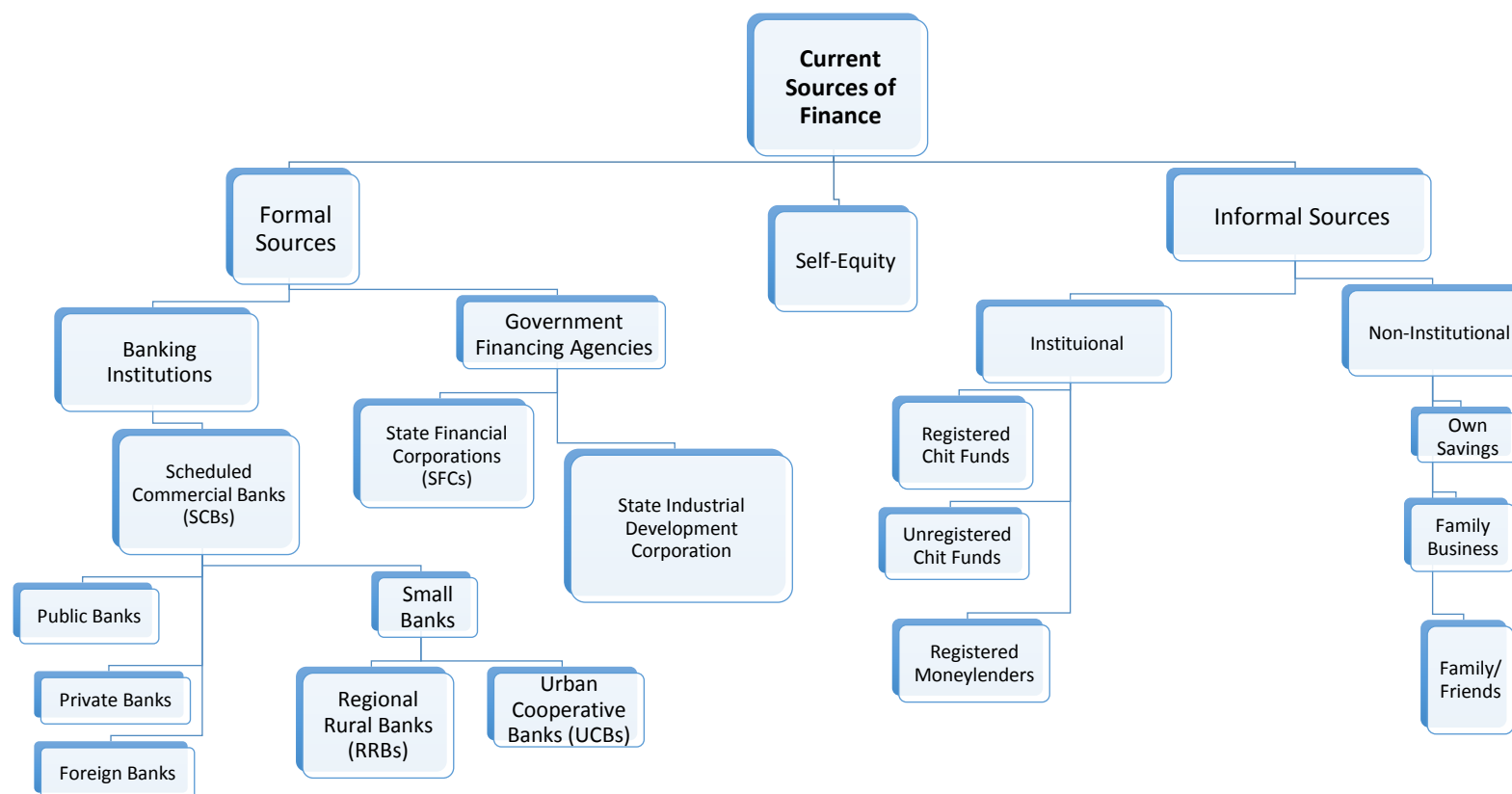
Thirdly, the intermediary channels. It has been noticed that the bankers that provide the loans to MSMEs, serving as intermediaries, are not exposed to the MSME sector and the constraints

faced by it. This limits their capacity to provide correct financing solutions, adding to the woes of the MSME sector.

Fortunately, Government of India has been playing an active role in supporting the MSME sector. Various acts have been formulated and existing acts revised to facilitate the MSMEs in accessing adequate finance. Several schemes such as the Credit Guarantee Scheme (CGS) of Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) have been implemented and proven to be successful.

Banks are pushed to lend to MSMEs as per the Priority Sector Lending requirements drafted by RBI. As per the recommendations of the Prime Minister's Task Force on MSMEs in 2010, banks were advised to achieve a 20% year-on-year growth in credit to micro and small enterprises and a 10% annual growth in the number of micro enterprise accounts. The recent RBI guidelines also advise banks that 60% of MSE advances should go to micro enterprises. The government has also launched the MUDRA Bank with a corpus of Rs. 20,000 crore and a credit guarantee fund of Rs. 3,000 crore to fund small and micro units. The Bank has been set up as a subsidiary unit of Small Industries Development Bank of India (SIDBI) and has already succeeded in reaching out to a large number of micro enterprises. (Agasty, 2016).

Figure 1: Current sources of finance for the SME sector



Source: IFC (2012)

Small Industries Development Bank of India (SIDBI) is the principal financial institution to promote, finance and develop the MSME sector and it also serves as a coordinator of other institutions engaged in similar activities and thus deserves a special mention. It provides financial support to MSMEs through various ways. These include refinancing Primary Lending Institutions (PLIs) for further lending to MSMEs, providing financial assistance in the form of grants, loans etc. to MFIs/NGOs for on-lending to micro enterprises and making them able to take up income generating activities by aiding through their wide network of branches. Further, SIDBI works to bridge the financial and non-financial gaps in the MSME sector. One of the strategies adopted to address the financial gap is facilitating risk capital assistance to start-ups and early stage ventures. Other methods include the implementation of the Srijan Scheme that aims to support MSMEs towards development and up-scaling. The non-financial gaps are dealt with by setting up loan facilitation to MSMEs that helps them to access credit directly and indirectly from banks. SIDBI has also set up Credit Advisory Centres (CACs), which provide free consultation by SIDBI officials and retired bankers to the MSMEs about getting credit from banks and financial institutions. SIDBI also addressed the information gap faced by MSMEs by launching a website (www.smallB.in) which serves as a virtual mentor. SIDBI also facilitates the supply side constraints in MSMEs access to finance by helping banks in quicker credit sanction. This has been achieved through the setting up of SME Rating Agency of India Ltd. (SMERA) in September 2005. It is a third-party rating agency particularly for MSME which provides a comprehensive, transparent and reliable ratings and risk profiling. By the end of September 2012, SMERA had assigned credit rating to about 65% micro enterprises. SIDBI has been supporting the MSME sector to its full capacity and thus plays a pivotal role in developing the MSME sector (Rao & Noorinasab, 2013).

Moreover, under the Pradhan Mantri Mudra Yojana (April 2015), about 1.5 crore new entrepreneurs received financial support from various banks and microfinance institutions to set up small businesses. Several funds, like the India Aspiration Fund and the SIDBI Make in India for Small Enterprises are further additions to the financial options made available to the MSME sector by the Government.

Sustainable business conduct is now a pre-requisite in every field. Responsible production encouraged by standards, such as the 'Corporate Social Responsibility' standards encourage financial inclusion. This helps to create a sustainable financial system that offers a decent range of financial services, which in turn helps small business to improve the state of their access to finance. Further, sustainable standards include the industry specific standards which cater to the specific needs and capabilities of that sector. They encourage capacity building, as enterprises incorporate sustainability into their operations and work together with other members of the value chain or industry to address shared challenges more effectively and efficiently (UNCTAD, 2011c).

It is assumed that MSMEs can produce sustainably only through adoption of the most advanced technology which requires huge investment. Access to finance is an important need but sustainability can also be achieved through smart alignments, retrofitting, and upgradation of skills of labour and with other small initiatives. Adoption of sustainability standards encourages these practices and provides a base to build on, which in turn not only increases their chances to access finance, but also helps them in maintaining and widening that access (Sanwal, 2016).

7 Conclusions

Based on global experiences and various studies in India, it has been seen that the problems faced by the MSMEs can be analyzed from both the demand and supply sides (FMC, 2016). On the demand side, most of the MSMEs have very low awareness of relevant financial products and public support schemes. This leads to them not partaking in many of the supportive programmes that the Government of India has initiated to provide greater access to credit and technology up-gradation. Whereas, on the supply side the main bottlenecks include lack of innovative financial products and public schemes that enable cluster enterprises to switch to green technology and adopt broader sustainability standards that help MSMEs bring down their operating costs. Besides, local bankers, credit officers and other actors in the credit delivery channels are often not trained to be sensitive towards the needs of MSMEs for wider sustainability issues (FMC, 2016). Both of these factors have limited the MSME owners' ability to address sustainable production.

Based on our assessment, we believe that a three pronged strategy is what would work best in such a scenario:

1. There are a significant number of enterprises that are going for voluntary EMS certifications to improve their market access. This needs to be further encouraged. The production networks created under Global Value Chains should be tapped into more effectively, so that better technologies and environmental management practices are necessitated for firms seeking to integrate into these. This would help solve the lack of demand for environmental management systems and about awareness of sustainability standards among MSMEs.
2. For MSMEs seeking finance, environmental standards and benchmarks could be included as part of their rating mechanism. For example, the SME rating Agency of India or SMERA assesses firms on the basis of their business and financial risk as well as their management experience. Environmental criteria, such as the ones suggested by ZED, could easily be incorporated as part of the rating methodology.
3. Even from the government procurement and eligibility of specific firms for claiming promotional policies angle, greater preference needs to be given to firms that comply with sustainability standards. Firms' adherence to labour standards can easily be gauged from official records, etc; gauging environmental performance is trickier. We would suggest that more firms be encouraged to go for different types of environmental certifications such as ISO-14001 and ZED to provide records of compliance. Firms going for greater energy efficiency investments also need to be promoted.

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IV Drivers and constraints for adopting sustainability standards in small and medium-sized enterprises (SMEs) and the demand for finance: an Indian case study (Part II: Micro perspective)

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1 Introduction

Indian Micro, Small and Medium Enterprises (MSMEs) contribute about 45% of country's manufacturing output, generate employment for over 40% of the Indian working class, and, demonstrate one of the fastest, 11.5%,³³ annual growth rates for any other size of industry in the world. MSMEs contribute 38% of total GDP. Manufacturing sector MSMEs contribute around 7.04% of total GDP (2012-13 figures). 42.38% of the total export earnings of India came from MSME sector. However, the contribution of the MSME in manufacturing sector to India's GDP recorded at 8 per cent for 2011-12³⁴, has been comparatively low comparing to some of the other global economies. Manufacturing sector contribution to the GDP has the capacity to reach 15% by the year 2020³⁵. Textile sector contributes 4% of total GDP and 13.5% of total exports from India, an output largely accredited to the MSMEs operating in the textile sector.

Global Value Chains provide an opportunity for small and medium enterprises to upscale their business models and to grow across borders³⁶. However, MSMEs face a number of challenges in meeting product quality and sustainability standards demanded by global value chains, often restricting their full potential in integrating with potential foreign business opportunities.

In some sectors sustainability standards have become so crucially important for the customers that producers need to either adhere to those standards or their products and services may get shelved in the future. While there are some MSMEs who are delaying adoption of standards in their businesses due to sheer ignorance, there are a large number of MSMEs who genuinely lack resources, time and know-how necessary for integrating with the standards requirements.

The willingness and capability of MSMEs to adopt sustainable practices and seize better business opportunities generally face size-related resource constraints, skill deficits and knowledge limitations. On account of inborn disadvantages of being small, MSMEs find it difficult to get necessary finance, buy the latest machinery, train personnel etc., adhering to environmental, social, labor and technological peculiarities that come with standards add

33 Sustainable trends of MSME in India: An empirical study. Dr. M. Meganathan, P. Balaji Kumar, R. Sarvanan, Feb 2015 issue of IJRM.

34 MSME Annual Report 2013-14, (<https://assets.kpmg.com/content/dam/kpmg/pdf/2016/03/The-new-wave-Indian-MSME.pdf>)

35 http://www.business-standard.com/article/sme/msme-share-of-gdp-can-be-raised-to-15-pc-by-2020-study-114102701382_1.html

36 <http://techstory.in/make-in-india-challenges/>

extra burden on the MSMEs. Many of the standards may require dismantling their existing infrastructure, practices and methods and adopting completely new ones.

Small enterprises work under several limitations. Their constraints range from financial to technological, location to labor, technical to resources. Cultural, traditional, attitudinal and leadership related issues pose different kinds of barriers. Emergence of VSS in global exports has created opportunities for some, but it looks like a lonely walk for many others.

Globalization has increased competition and accelerated the need for better standards. In order to meet the sustainability standards, small businesses need to change their traditional ways of production. Mostly operated by non-state parties and civil society groups, sustainability standards are not mandated by the Law. Producers are voluntarily motivated to adopt these standards as they are driven by buyer demands and consumer preferences and hence promise better market access.

Governments, along with international organizations, investors and suppliers, are important stakeholders for MSME integration in global value chains. India is moving from a highly 'protected' centralized economy to open global economy led by the private sector. Though government is highly supportive and sensitive to the limitations faced by the MSME sector in India, it is a leading supporter of the sustainable development goals too. The recent governments at the center in India have taken several measures to ease MSME operations. The policy framework in India is undergoing remarkable changes in the last few years, incorporating considerations for environmental and social sustainability in development of MSMEs; hence, directly or indirectly facilitating the dissemination of Voluntary Sustainability Standards.

Sustainability concerns have started taking roots in Indian domestic market also, albeit at a very miniscule level. Indian middle classes are increasingly becoming concerned about the environmental impacts, labor issues, product safety, water-usage, recycling, etc., involving all types of products. Concerned citizen groups are gaining ground among the Indian middle classes. The emergence of sustainability concerns in India has created space for organic and natural products; mainly in food and agriculture, textiles & clothing, beauty & cosmetics sectors. MSMEs are closer to the resource bases and their impacts are easily identifiable. Hence ignoring sustainability concerns will not be possible for them for long. If they have to maintain their profitability and growth, integrating sustainability in their businesses will be a winning opportunity for them.

This study aims to assess and identify some of the factors which encourage or discourage the MSMEs, in making decisions for adopting the voluntary standards demanded by their buyers, consumers and retailers.

This paper will assess the impacts of voluntary sustainability standards on the firms and other parameters; environmental, social, economic, etc. A few case studies will be undertaken on the struggles and turnarounds for sustainability, reflections of important stakeholders will be part of the report.

A separate section on VSS and demand for finance by MSMEs will be devoted to understand the role of donors and financial institutions in promoting VSS. We shall take a keen look on how MSMEs are figuring in international donor interests. And, what challenges are prevailing in sustainability funding and finances for MSMEs.

Finally we will try to come out with some meaningful recommendations for promoting an understanding around MSME's interaction with voluntary sustainability standards.

2 Review of literature

The available literature demonstrates relevance and opportunities for Micro, Small and Medium Enterprises in India vis-à-vis Voluntary Sustainability Standards, their challenges in adopting the VSS and limited resources and financial support available to them. To understand the trends and justify context of the present study, following literature has been studied.

Sustainable Trends of MSME in India; An Empirical Study by Dr. M. Meganathan, P. Balaji Kumar & R. Saravanan (Feb 2015). This Study attempted to identify obstacles faced by MSMEs while evaluating working enterprises, investments and average production of MSMEs. Some of the major challenges identified by this study throw light on lack of financial assistance MSMEs face in adopting new product-line or new processes, leadership crises faced by MSMEs and lack of necessary know-how in accessing favorable technologies and remain competitive.

Voluntary Sustainability Standards and Value Chain Governance by Kathleen Sexsmith & Jason Potts for IISD (July 2009). This study throws light on how sustainability standards affect the distribution of decision-making power in global value chains.

The Curious Case of Environmental Standards and Its Trade Impact: An integrated Indian and Norwegian Perspective a CUTS CITEE study by Archana Jatkar gives a different perspective on the dichotomy of EcoLabels and environmental sustainability in textile market. It studies how EcoLabels on the one hand penetrated the consumer mindsets worldwide, and on the other posing challenges to producers in European and North American Markets.

Voluntary Sustainability Standards: An Overview by Alex Marx, Arjun Sharma, Emile Becault, gives an in-depth idea about emergence of VSS, how they are operated and what impacts VSS have on business, society and environment.

3 Methodology

We conducted interviews with MSMEs & their stakeholders, noted down their understanding and concerns regarding VSS. We interacted with standards organizations, analyzed documents, case studies and views available on their websites. We reviewed the existing literature on the MSMEs and their interaction with voluntary standards. We studied the different perspectives on MSME financing and role of donors. We went through international and domestic case studies of successes in sustainable transformations made by MSMEs and their challenges.

Standards organizations, like Better Cotton Initiatives, provided valuable insights on how voluntary standards are differentiated with mandatory requirements, how the organic,

environmental and labor requirements separate from voluntary sustainability commitments of the firms. They helped us understand why working with the primary producers, farmers, and small enterprises is important but ignored part of sustainability. They also pointed out to the advantages larger organizations have in adopting sustainability standards. Based on the discussions with the standards organizations, efforts were made to identify some key MSMEs who could identify the link between sustainability initiatives and better business outcomes.

We also spoke to some senior Consultants working closely with the industry, helping MSMEs in their pursuit for transformation. Rajesh Bheda Consultants (RBC) is one such group of committed people. They gave us a valuable insight into how important it is for the industry to internalize sustainability in their core business strategy and not always wait for external resources. They pointed out the importance of innovativeness for MSMEs that is being ignored. They gave a number of examples how MSMEs have overcome their energy, water and chemical compliance problems adopting to innovative and simple ideas.

We also received answers to our questionnaires from a few MSMEs who have successfully integrated sustainability standards in their businesses. Sree Kapagambal Mills Ltd. is one of the respondents. Their response gave us information about how VSS can help company gain recognition and respect in a crowded market place by following sustainable and responsible practices.

List of main stakeholders who were spoken to for the study:			
SN	Type of Stakeholder	Stakeholder	Size
1	Sectors	SMEs operating within priority sectors	5
2	SME Functionaries	SME chiefs and compliance officers	5
3	VSS	NGO/group operating VSS framework	2
4	Investors	Investment advisors, asset managers, assessors, creditors, buyers, outsourcers	6
5	Policy champions	Government, NGO, think-tank	2
6	Consultancy	Indian, international	1 each

4 Major findings

- In general, there is a need to develop a more conducive and supportive environment that could facilitate and encourage MSMEs to adopt sustainability standards in their business. Government is supportive & sensitive towards the needs and limitations faced by MSMEs in India. At the same time, government is supportive of the sustainability goals and sustainability standards also. Through subsidies and various schemes, government is trying to facilitate a better environment for sustainability standards in India. Government has its own sustainability standards, like ECOMARK that provide incentives and awards to MSMEs in environment and social performances. But government subsidies and schemes need to undergo an overhaul to make them more effective and efficient incorporating international demands and concerns on sustainability.
- Certified products market is mainly concentrated in developed countries and growing at a very fast rate – more than 500 standards are already operational. VSS have

substantial power in facilitating a product in the global markets, or barring, expelling or banning certain products for non-compliance. Role in Global Supply Chain – an attractive driver for MSMEs to adopt VSS.

- MSMEs have a big impact on environmental and social well-being of the country as they command over large percentage of manufacturing and employment. They also face pressures of depleting resources on one hand and international sustainability demands on the other. Adoption of sustainable practices by MSMEs has a great potential to maximize the development impacts on poverty, environment and other indicators. VSS can provide direct output to the sustainable development goals agenda.
- Scale of operations of MSME is an important factor in decisions regarding VSS. Most MSMEs operating on smaller scale tend to ignore VSS, even if they are aware. About 73% of all sizes of firms in textile and clothing business are aware of ISO and 65% know about REACH standards.
- Consumer preferences and buyer pressures are the leading drivers for adoption of VSS by MSMEs. Domestic demand for sustainability certified products is at a miniscule level in India, mainly concentrated in food & cosmetics sectors, now slightly visible in textile sector. In developed countries, the demand for certified products is growing at a substantial rate; in 2012, 3% of the world's entire cotton was certified, 38% Coffee and 12% Tea was certified. Retailers and buyers have an important role in pushing VSS down the supply chain.
- MSMEs who organize or allocate their resources more efficiently have managed VSS within their business models. MSMEs responsible towards social-environmental impacts better suited in adopting sustainability. Better educated, mostly second generation ownership and management show more drive for VSS. Companies who invest in learning the know-how and diversification strategies are better equipped to adopt VSS. There are examples of how Firms took one-step at a time, starting with water, power and chemicals, made a complete turn-around towards sustainability over a period of time.
- MSMEs are generally attracted towards cleaner technologies as they offer better savings, efficiency and safety. Cleaner technologies come at a cost that deters small scale enterprises. Companies adopting innovations in their production and practices are able to scale up and remain competitive; innovation has helped them in their sustainability and social responsibility. MSMEs using sustainable practices are helpful in revival and replenishment of natural resources.
- Limited resources and lack of finance are a major constraint for the MSMEs in adoption of VSS. Smaller firms face maximum impediments in adopting VSS due to their size-related constraints. Smaller companies often fail to realize their social and environment responsibilities as more pressure is on the larger companies. Smaller companies also tend to become risk-averse due to uncertainty of returns in sustainability investments. Many MSMEs look at sustainability standards as cumbersome & intangible, technically complex and burdensome due to multiplicities and reporting pressures involved.
- The socio-economic, traditional and attitudinal spill-overs in the organization's demographics also play a role in its sustainability decisions. Those who are lacking in strategic management skills, expecting from them to develop a sustainable business strategy is not fair. Moreover strategic failure is a big risk that MSMEs cannot afford. MSMEs doing better business in domestic markets or neighboring markets bother less

about sustainability certification. Entrepreneurs, not well aware of sustainability norms and VSS certification, tend to be misguided by adverse reports, associates, other traders, suppliers, clients, accountants, etc. Trade federations can play an important role in spreading correct knowledge and information.

- MSMEs established in the industrial clusters caught in a very un-sustainable environment, due to congested surroundings and pollution, helpless in adopting sustainable standards. Relocation to new, more sustainable clusters, is an option for them, but it comes at the cost of losing already existing resource base, suppliers, labor, transport, etc.
- International donor support tilted towards sustainability organizations/ operators. Many of the 500 or so sustainability operators worldwide are funded or supported by one or the other international donor. Donor organizations find it easier to support the non-profit organizations operating sustainability standards rather than fund MSMEs directly. The profit making tendency of MSMEs and foreign currency rules make it difficult for donors to directly fund the MSMEs.
- Domestic funding not sufficient in supporting MSMEs massive requirements. DISHA and ECOMARK are examples of industry's own initiatives in sustainability standards. While DISHA suffers from lack of funding, ECOMARK carries less weightage in international markets.
- Very few revenue models operating in the country that could fund MSME sustainability investments at recoverable costs. Mainstream banks and financial institutions lack skills and manpower to deal with sustainability standards. Most financial institutions follow fundamental principles of ROI and see no tangible returns in sustainability standards funding. Maximum challenges are faced at the grassroots where access to market and access to banking are still not smooth. Plethora of competing standards and resulting escalation in transaction cost are negative factors for bankability of the projects.
- Majority of MSMEs argue that buyers do not share the cost of VSS while they keep pressing for lower costs. Low prices of commodities are a major concern of the producers. One time cost incurred by manufacturers not properly distributed throughout the value chain.
- Growth of VSS is coincidental with global efforts on Sustainable Development Goals (SDGs). MSMEs are important engines of new development paradigm given their reach in the areas of high need. UN Sustainable Development Goals Fund (UNSDGF) is a great way of looking forward. The fund finally enlists MSME contribution in the development agenda. However, UN faces challenges, like, infrastructure for engaging with MSMEs, UN's own decreasing funds, focus shifting to larger enterprises rather than MSMEs, and uncertainty in private finances for public good (which UN is targeting under UNSDGF) which may create impediments in promoting SDGs through MSMEs.
- Credit for micro-finance and rural-finance is a novel way of going forward for MSME funding. It will also increase inclusiveness at the grassroots levels one the major requirements of sustainability. But higher and uncontrolled interest rates prevailing in micro-finance may not be attractive for MSMEs.

5 Defining voluntary sustainability standards (VSS)

The VSS are voluntarily adopted rules, procedures, and methods to systematically ensure better social and environmental behavior and performance of firms (Gilbert et al., 2011, p. 24.) Most VSS are non-legal in nature, operated by non-state actors (Abbott et al., 2000).

As conventional production and trading practices can be detrimental to the stability of resources, environment & communities in the long run, sustainability standards have primarily emerged as people's response to these environmental and social concerns.

Mainly concentrated in developed countries, consumers' demand for products that are not harmful to people and the environment is a major driver of sustainability standards.

Sustainability standardization is a mechanism that could promote trust in the entire value chain, especially between the producers and end users. Compliance of businesses with sustainability standards can demonstrate that goods have been produced in accordance with the principles of sustainable development. A large number of commodities worldwide are certified for adhering to the sustainable standards and certified markets are growing at a very fast rate.

Sustainability standards are developed, operated and monitored by well-organized sustainability organizations represented by NGOs and civil society groups. Sustainability organizations derive their legitimacy from their genuine concerns for social, labor, environmental, economic and business sustainability. Most organizations operate through multi-stake-holder participation and have an independent certification process.

This section offers a brief summary of the basic characteristics of some of the leading sustainability organizations, mainly in textile sector that we studied in this report, and their core objectives.

Better Cotton Initiative (BCI) – The objective of BCI is to make global cotton production better for the producers, better for the environment, and better for the sector's future.

Clean Clothes Campaign (CCC) - The objective of CCC is to improve the working conditions and status of workers in the global garment industry. They hope to end suppression, exploitation and abuse of the workers in this sector, especially women workers.

Disha Common Code of Conduct (DCCC) - AEPC (India) is committed to increasing the export potential of Indian garments industry. The sustainability standards promoted by AEPC were aimed at increasing sustainability and expansion of global markets, by bridging the gap between the exporters and buyers through sustainable practices and quality management system.

Fairtrade International - Small Producers Organizations - Fairtrade's objectives are to connect small, marginalized and disadvantaged producers with consumers and promote fairer trading conditions and empower producers to combat poverty, strengthen their position and take more control over their lives. It promotes transparency, sustainable practices and stakeholder participation at different levels.

Forest Stewardship Council (FSC) - The FSC's objective is to promote environmentally sustainable, socially beneficial, and economically viable management of the world's forests.

Global Organic Textile Standard (GOTS) - The Global Organic Textile Standard aims to ensure organic status of textiles, from harvesting of the raw materials, through environmentally and socially responsible manufacturing up to labeling in order to provide credible assurance to the consumer.

Good-Weave – Good-Weave International works to ensure child labor is not used in the handmade rug industry.

IFC Performance Standards on Environmental & Social Sustainability - A World Bank Group, IFC's mission is to end poverty. Its objective is to help people help themselves and their environment by providing resources, sharing knowledge, building capacity, and forging partnerships in the public and private sectors, grounded in sustainable private investment.

OEKO-TEX® – OEKO-TEX has developed a reliable product label, OEKO-TEX®Standard 100, for consumers who specifically buy textiles which are harmless to health. It has introduced a testing and certification system that satisfies varied requirements of consumer preferences and complex production conditions. It promotes among other things sustainable labor practices, disuse of harmful substances and discouraging use of ecologically harmful textiles for the humans.

Sustainable Agriculture Network (SAN) - Rainforest Alliance - SAN promotes environmentally sound, socially equitable and economically viable development that ensures sustainability, recognizing well-being of societies and protects ecosystems.

The EU Ecolabel – Ecolabels encourage organizations towards making environmentally friendly products. Certain European nations have stringent quality and sustainability standards and Eco-Labels certify that products entering EU markets fulfill those standards. Eco-labels are popular among the consumers of some EU countries. In some sectors, such as textiles, having an Eco-Label certificate guarantees better returns for the businesses.

1) Role of Voluntary Sustainability Standards in global value chains

Voluntary standards institute rules for all the participants in the value chain. A common objective of the VSS is to enhance the sustainability of production and consumption. Implementing organizations of these standards are formalized through their board of directors, committees or secretariats. Some impacts and benefits the VSS bring to the value chain participants are discussed below:

- VSS give a surety that a product has been brought to market using sustainable production or trading methods, and not just focus on the physical quality of the product.
- VSS Verify labor standards and environmental protection norms.
- VSS infuse more information and knowledge (about the production methods, raw materials, sustainability criteria etc.) into the value chain and up till the end consumers.
- VSS help in segregating products and practices that follow sustainability standards from those which are not certified for sustainability standards.

- VSS play an important role in establishing terms of contracts and value of certified products. E.g. Fair-Trade certification standardizes a minimum price that developing country suppliers must get.
- VSS help in structuring management practices in production processes and facilities, ensuring that important national and international conventions for labour, health & safety, environment and social well-being are met.
- VSS operators take part in auditing and verifying the compliance of the standards in production processes. The auditing and accreditation bodies have the power to admit, suspend or expel enterprises from certified value chains.

As discussed earlier, a large number of commodities today are certified for sustainability standards and certified markets are growing at a very fast rate. In this scenario VSS have a very important role in global value chain decision making process. They have substantial power and authority in *barring, expelling or banning certain commodities from entering into the certified markets*.

2) *Micro, small and medium enterprises (MSMEs) and Voluntary Sustainability Standards*

MSMEs are crucial to the growth and stability of the global economy. They command large percentage of manufacturing operations and employment. Their social and environmental impacts are noticeable.

Due to depleting natural resource base and environmental degradation, MSMEs are increasingly being faced with pressures to adopt sustainable means and methods in their activities. MSMEs are an integral part of the supply chain, and the growing demand for sustainability from their customers and suppliers is a double edged challenge for a large number of MSMEs. It affects their access to resources (labour, raw materials, machinery and finance) and their access to markets.

That said, many MSMEs still feel they can ignore addressing sustainability issues. MSMEs are tied up in more urgent issues at hand and sustainability standards don't take priority in their list of urgent tasks. But in the long run, MSMEs may not be able to push sustainability demands any further. The growing international and domestic demands for sustainable practices in production may see their products go off-the-shelves if not responsibly produced.

The biggest hurdle facing MSMEs in integrating with VSS is their limited financial capabilities. Initial cost of integrating sustainability into the existing business model is high. Although these costs get offset by the benefits of sustainable standards, but it takes a long time before the costs are recovered. Positive brand association, expanded consumer base, new investors, and expanded supplier base are some of the added benefits MSMEs get by associating with VSS. But a majority of MSMEs fight a daily battle for resources and survival. They need short term returns to carry on their businesses.

6 Perceived impacts of integrating VSS in MSME

A close analysis of the objectives and outcomes of several relevant voluntary sustainability standards reveals the benefits and impacts of the VSS on the businesses, environment and social concerns. The VSS positively impact the United Nation's agenda of the Sustainable Development Goals (SDGs).

A sincere approach of MSMEs towards VSS can make promising impacts on development indicators identified by the UN; poverty, health & education, water, sanitation, clean energy, sustainable cities and industrial growth, decent work and gender equality, economic growth, innovation and infrastructure development, reduced inequalities and community sustainability, partnerships and environmental protection.

Strengthening MSME's in sustainable production can help extend and expand the new development agenda. Some of the impacts of this approach are highlighted below:

Market access – Sustainability standards such as FairTrade and Better Cotton Initiative promote access to markets for marginalized farmers. The organizations adopting their standards need to invest in working with farmers and intermediary producers. As many markets are interconnected, VSS also impacts labor markets, input markets, access to credit and financial services, fertilizer, seeds, technology etc. Therefore, promoting VSS that impacts markets access for small producers achieves an important development goal.

Increased returns – A number of impact studies point out that organizations which participate in VSS gain price premiums and higher yield, and related improvements in net incomes. Usually, when adopting new sustainable standards, producers positively get benefited from factors like agricultural yields, production efficiencies, energy savings, labor efficiencies, etc. All these factors contribute in increased returns, not only for the certified industry, but all the participants in the business down to the last person in the chain, the primary producer. Therefore, producers could provide better returns thus bridging inequalities in earnings and livelihoods, up to the lower end of the pyramid.

Inclusion and technology transfer – Several studies have shown that integration of VSS by producers creates inclusiveness to a great extent. Producers, and suppliers from the lower end, have improved access to credit and technical know-how by adopting VSS. MSMEs can create conducive conditions for inclusion of primary producers in sustainable certified product chain, fulfilling an SDG agenda of inclusive development and equal opportunity.

Poverty alleviation – Several VSS have been established with the goals of improving the plight of the poor, marginalized farmers and small producers while promoting sustainable practices. Several studies provide insights into how adoption of VSS impacts poverty alleviation and equitable development as a commitment by the producers. Poverty is a major SDG agenda and MSMEs play a very important role in employing almost half of India's working population, mainly from the lower end of the economic pyramid. Integrating poverty alleviation standards (e.g. training of farmers and primary producers) by MSMEs will be also be adoption of an important SDG goal. As large number of MSMEs operate at the grassroots levels, this will benefit some of the most economically backward and disadvantaged regions of the country.

Ethical labor & wage practices – A significant number of individuals are employed as wage labor by MSMEs. The proportions may differ based on the site and commodity, but a large number of farm laborers are also part of the value chain. Some studies have found that those who work in VSS certified firms and farms perceived they as better off compared to those who worked on non-certified ones. They feel comparatively safe and think their environments and surroundings are healthier.

Gender equality – A few positive instances have been cited of women's empowerment due to participation in VSS. An ITC report states that "female participation in farm activities and decision-making is less in farms associated with non-VSS standards". As per Census 2011, the work participation rate for women is 25.51 percent in India. The wage per man day worked in 2008-09 is Rs. 258.04 for male and Rs. 131.23 for female (Source: Labour Bureau). While just 12.7 per cent of the working women were in regular wage employment 32.1 per cent were employed as casual labor in 2011-12. The voluntary standards adoption by MSMEs can increase potentials for employment of more women in regular wage labor.

Health and education – Some studies have shown improved outcomes in food consumption as well as "health and education" among VSS linked producers; farmers & wage laborers. They compared individuals hired as wage labor in FairTrade as well as non-Fairtrade sites and compared their educational attainments and dietary intake and found discrepancies amongst Fairtrade and non-Fairtrade wage –workers. To measure educational outcomes, the researchers used access to child-care and scholarship programs as indicators and found a positive impact of VSS on these parameters.

Environment

Environmental impacts broadly cover topics such as resource management, soil conservation, bio-diversity and water quality. Studies conducted by ITC and others notes positive outcomes in the area of soil conservation on Coffee plantations, levels of resource degradation and soil erosion where FairTrade was involved. Studies by De Lima et al (2009), noted a net positive impact of VSS on deforestation.

The more important question here is not whether VSS promote adoption of sustainable practices by the producers, but does VSS really make an impact on sustainability itself? By improving profitability, business opportunities, socio-economic development and environment VSS demonstrate their value for sustainable development. As MSMEs are well placed in the value chain as well as in the society, a wider adoption of sustainable practices by them has great potential to maximize the impact and achieve the sustainable goals at a much faster rate. Therefore, MSMEs are not only the engines of growth but also engines for sustainable development.

7 Case studies

1) Appachi Eco-Logic Cotton Private Limited

A number of small businesses are already reaping the profits of standards use. Pollachi based, Appachi Eco-Logic Cotton Private Limited has long been committed to promoting inclusive growth in its Farm to Fashion value chain using Better Cotton Initiatives and other standards.

The company, led by its promoters, Mani Chinnaswamy and Vijayalakshmi Nachiar, has successfully integrated 2,000 farmers spread across 2,000 acres into the organic project in the endangered ecology of the Kabini Reservoir region. The group has been involved in cotton trading for more than 6 decades and is well known for the Extra Long Staple (ELS) Cotton and Suvin. With Mani's extensive work with small farmers, the company was the first to introduce cotton contract farming in the region along with crop insurance for farmers. Appachi Cottons has also improved farmers' livelihood by providing non-BT seeds, sanitation and access to education.

When Mani, an MBA graduate from the USA, inherited family's cotton mill, took a conscious decision in 2006 that they should be an "ethical" business. They quit their conventional business methods and adopted sustainable methods.

It was a decision driven by concerns for cotton farming in India, which was losing its age old organic farming culture, with overuse of fertilizers, failing soil, subsequent crop loss, farmers moving to GM crop because of low yields, farmers being in debt, leading to suicides and so on. The Company realized that the perception in international markets was that Indian cotton was one of the most polluted. "The solution was to reviving the Soil, going back to organic", they thought. This is how their Eco-Logic Project started.

They have about 165 farmers in their network now. They don't offer farmers a pre-fixed price, but a minimum support price; else, a market committee is formed that fixes the price in keeping with market rates.

Weavers too have the same sad story as farmers; the weavers work for a wage; get no recognition for their work; and so don't want their children to continue in the profession. That's when the idea of value addition came in. The couple built a 22-room studio with traditional jacquard looms. They roped in designers to work with weavers. Each of their products carries a tag with a picture of the weaver, his name, how long he took to weave it; they have over 50 weavers working with them now. They also started a free-education school for the children of weavers.

But how do they fund their sustainability inputs. "Look at this way, you, as a customer, paying a 'conservation contribution'. We pay 10 per cent over what conventional cotton farmers get for their produce", informs Mani. The farmers do multi-cropping and so earn a little more from the organic farm. The company raises resources by exploring new markets and new products. The company saw another business opportunity and started the Eco Logic Tours!

Appachi has not only established its own unique identity, but also ensures that people involved in its value chain, get their due recognition and adequate reward. Entire value

addition chain adheres to the ethical business practices to ensure that the cotton farmers, weavers, workforce and the end users benefit from the same. Over 750 hectares of land, 1200 small holder farmers, households, 100s of tailors and handloom weavers have benefited through the project. The journey connects farmers, ginners, spinners, artisans, the textile value chain and finally the consumers.

Appachi shows an innovative way to the small businesses in developing regions of the world. The key to success lies in the organization's willingness and capability in identifying and adapting change. Innovative, efficient use and ensuring revival of available resources bring everyone in the chain better returns and sustainable market access.

2) Tirupur – A case study of struggle & turnaround of an entire cluster towards sustainability

Tirupur was a job working center and not a brand exporter. This meant that most of the exporters take up job work for brand marketers in developed countries and do not sell their own brands. Year 2006, the power supply was erratic and the town was prone to frequent blackouts. A majority of the industrial units were on diesel generators to provide stand-by power. The piped water supply was hardly adequate and the limited water was insufficient even for household requirements. There was no underground sewerage system. The industrial effluents were carried through open drains into a dry river called Noyel. The wastewater was carried to a reservoir built for irrigation purposes, about 15 km away. During its journey to the reservoir, a part of the wastewater permeated through the soil and contaminated the groundwater.

Water was a major requirement of the industry. As the area was dry and much of the groundwater was polluted, over half the water required by the industry was brought in by trucks from groundwater sources at distances of over 50 km. The industry paid around US\$ 6 million annually to bring the water by trucks. In addition, the lure of quick money tempted small farmers to sell the water to the industry instead of using it for farming. The other half of the water requirement was met from the few bore-wells where water was still of good quality. However, the groundwater table was going down rapidly.

The industrial effluents were drained out untreated into a dry river. A substantial part of the effluent leached into the ground through its passage to the reservoir. The water was saline, highly colored and contained toxic dyes. The entire agricultural operations in the neighborhood had been badly affected by the groundwater contamination.

The consumption of firewood by the industry was over 437,760 tonnes per year. The firewood was brought in by the felling of trees from the nearby Nilgiri Hills. The wood cover in the Nilgiri Hills was rapidly depleting. The steam calendaring industry was using over half of this quantity, for steam generation. The bleaching and dyeing industry was using the rest. The firewood was being used in inefficient boilers at 850 different production centers.

Nearly 40 tonnes of combustible solid waste was generated every day by the textile industry. This comprised paper and textile scrap (rags and threads). This has a high fuel value. In addition, an estimated 250 tonnes per day of municipal waste was generated by the industry and the households.

The situation in Tirupur was not sustainable and turning to worse. In 2009 the business started drying up due to global economic meltdown. Clients from foreign shores stopped orders as their pockets emptied. In February 2011, Madras High Court banned all dyeing units in Tirupur for violating pollution norms. They would only be reopened when they implemented zero-discharge protocols in order to protect the surrounding farmlands and rivers. The smaller players were hit very hard as they work with limited capital. Companies drastically scaled down and small timers simply went out of business.

State government records show that close to 40,000 families working in the garment units surrendered their ration cards and headed back to their native villages in the southern districts in search of employment.

The turn around

Reeling from the blow by the Madras High Court, large and small businessmen quickly came together to find a solution. There was now an urgent need to voluntarily invest in pollution control norms. Through a series of trial and error, they borrowed technology from various parts of the world and came up with their own version of effluent treatment plants. Larger manufacturers set up individual plants to process their waste, while smaller units came together to route their polluting effluents through a single central plan. Today, there are 18 Central Effluent Treatment Plants in Tirupur.

The magnitude of resources flowing through the system made the businessmen anxious as now they bothered for each penny. Each small industrialist was paying a small amount for buying water every day and the costs had been internalized into the product cost. It was obvious that water recycling could be both an economically viable option and a solution to the environmental problems. A private entrepreneur came forward to explore the business possibility of using the waste heat from the boilers in the dyeing units to serve as the energy source, and to recycle the wastewater. A prototype was ready in six months. A commercial plant was readied for marketing and its use is now proliferating. By the last quarter of the year 2000, over 40 units had already installed these plants.

Currently around 92 per cent of the water that is discharged as effluent is recycled and reused. They are also recycling the salt used. Only 0.5-1 per cent of the dye used is removed in the treatment process and sent for use in cement factories. The Tirupur industries have attained zero liquid discharge.

Some challenges

All of this has come at a price. Grants from the Centre and the state government of Tamil Nadu totaled Rs 300 crore. The state government also arranged for interest-free loans to industry to the tune of Rs 200 crore. Out of a total of Rs 1,070 crore, close to Rs 600 crore was pumped in by industry and private loans from banks. Power usage too went up as a result of the treatment plants.

As a result, the industry as a whole became less competitive. There was an additional 4 per cent hike in the final garment price that the industries had to bear.

However in the long run the industry stands to recover from these losses. The rich availability of the raw material, being in close proximity, is assured as more water is available to the farmer now. Moreover the opportunity cost of water, which was very high as the individual industries were spending a substantial amount on it, with recycling may compensate the cost of power.

Better sustainability practices has helped Tirupur based MSMEs a better leverage in the international markets. The Tirupur Exporters Associations (TEA) has emerged as a dynamic association of more than 500 MSMEs. The association helps industries establish a direct contact with buyers, disseminate market and demand information through their dissemination materials, has set up training & learning centers, apparel parks and sustainability linked institutes such as, Women Entrepreneurship Training center. Similarly Tirupur Dyers Association is promoting sustainability, in effluent management and training, through 750 of its operating members. Through all these mechanisms, individual industries are coming together to promote common brands as collective adoption of sustainable practices gives differentiated advantages to the industry in the international markets and opportunities to access potential customers.

8 Factors driving adoption of VSS by MSMEs

It has been proven that adopting the standards is beneficial for all types of businesses; small or large. The strategic use of standards can significantly increase their market access, turnovers and profits. Collective adoption of VSS by a group of industries has an extraordinary impact on the entire sector and resource base.

Standards improve the global competitiveness of the firms and open up the export markets, improve their operational efficiencies and increase customer confidence in their products.

With the emergence of sustainability concerns in the global value systems, the environment for information and adoption of VSS has also increased in the recent years. We need to look at and record factors that drive actors to engage with VSS. Why do farmers, forest owners, factories, would want a certificate? They need to be motivated and ready for the same. Factors like demand, vision, and need are definitely factors which will contribute in MSME's decisions for going sustainable, provided they see a positive impact on their growth. Collectively for the entire MSME sector growth is a major factor that will drive them towards the adoption of standards. We briefly discuss a few drivers that promote the sustainability standards.

1) Consumer preferences

In recent years there has been a sharp increase in the numbers of certified products. In 2012, 38% of the coffee sold on the world market was certified, 12% of the Tea and 3% of the Cotton was certified (Potts et al., 2014 p. 90).

Consumer demand is the strongest driver for VSS in the context of Indian textile business. Interacting with a small scale apparel manufacturer, Shazia International Limited (SIL), it could be easily deciphered how the textile industry has gone a sea change in the recent years.

When SIL started out about 28 years ago, they had ample work outsourced from the large export houses in NCR region of Delhi. SILs turnover was touching 2-3 crores annually. During 2005-6, SIL's business scaled down as they failed to comply with demands for sustainable production methods. SIL failed chemical tests and could not source certain safe listed raw, their energy usage was also questioned by the assessor. When SIL's orders completely stopped they were forced to depend on the domestic markets for survival. Now realizing the potential of sustainable, SIL is promoting another company by the name of Bandwagon, under the leadership of their owner's MBA Son, and is looking for launching their own organic products as they realize that consumer demand for such products is growing.

The consumer demand for sustainable products is going to be the future for all businesses.

Start Up companies like Organic Clothes India (OCI) have identified the consumer need for environmentally friendly products as a major growth potential. The company believes that consumers expect sustainability and social concern as a matter of basic business practice and Organic is a great way to implement it. The company has a range of organic products including bamboo clothes, herbal and natural clothes. Their products carry several Certifications including Global Organic Textiles Standards (GOTS), and the American International Accreditation Organization (AAIO – BAR).

2) *Market forces (international & domestic)*

A study conducted by CUTS-CITEE, identified, 'better acceptance of products in international market', as a most important reason for producers to subscribe to sustainability standards. The survey in India points out that among several environmental standards, the majority of respondents (73%) are aware of International Organization for Standardization (ISO) and about 65% know about Registration, Evaluation, Authorization, and Restriction of Chemical (REACH). Export potential of the textile and clothing firms in India is highly dependent on sustainability standards certification and environmental compliances.

According to Gurgaon based consultant, Rajesh Bheda, "there are about 6000 registered exporters and around 20,000 manufacturers associated with exports of textiles from the country today". He mentions that a large number of these are MSMEs, some directly linked with exports and some exporting via third parties. He further points out that export trade is a major driver for adopting sustainability in textile business as exports do increase with environmental and sustainability compliance and there is less uncertainty in market access.

As Mr. Rajesh Bheda mentioned, a large number of textile and clothing firms of all sizes comply with standards such as REACH and GOTS as they are applicable to the EU, which is a major export destination for these firms.

The international buyers, especially large retailers, are driven by a strong demand for products which are certified according to sustainability standards. For example, Marks & Spencer, aspires 'to become the world's most sustainable major retailer by 2015' (Marks and Spencers, 2010, p. 3). It uses a VSS system. Retailers have an important role and decision making power in global supply-chains (Hamilton, Petrovic, & Senauer, 2012). They have a power to pushing through voluntary standards down the supply chain to all actors involved in the production process.

3) Resources

Mr. Rajiv Baruah of Better Cotton Initiative, identifies resources as an important reason why producers are now turning for certifications. He says that buyers and retailers pressurize the producers but don't pay any cost towards sustainability. In this scenario for the large scale organizations going for sustainability certification is not an easy decision. Comparatively, it is difficult for small scale producers; hard pressed for resources, only those who could manage to divest some of the resources for adopting sustainability standards are doing it. Most successful are those who see resources as not a means and end to everything but try and leverage all the resources available to them towards their sustainability commitments. For examples, those firms who have focused on cultivating a better trained producer network automatically become part of the sustainable value chain. E.g. firms who invest back in reviving the natural resource base, through training of the farmers, ensure better soil quality and water use, and better returns in a sustainable manner. Those organizations who have freedom of resources are well placed for taking the risk that comes with investing in new technologies as they are not worried about the long payback period generally associated with sustainability investments.

4) Leadership & management know-how

For SMEs, going sustainable is largely a voluntary decision dependent upon the vision and conviction of one or a few individuals. The entrepreneur plays a key role in the enterprise and his personal preference, knowledge and exposure are usually the most influential factor when deciding about investments and business strategies. Those MSMEs are better placed in adopting VSS whose leadership and management are concentrated in the same hands, are better educated of the trends and benefits; mostly those led by second generation owners or second line management.

In the example of Appachi Cotton, the second generation owner of the firm, a western educated MBA, took the firm decision of stopping all the traditional methods of business and adapting to an entirely new sustainable methods.

Many MSMEs willing to invest in more energy efficient and environmentally friendly processes are able to do so if they have specialized human resources needed to implement these decisions. Availability of appropriate skills and expertise encourages these firms to act upon and benefit from opportunities brought by VSS.

5) Technology

MSMEs that integrate sustainability into their core business strategy can benefit from lower costs, reduced risk, and new opportunities. Technology plays a very important role in this integration.

Even when there is no buyer input for general sustainability such as water, energy and chemical management, many MSMEs are adopting new technologies in these areas as they promise better returns on account of higher efficiencies and lower losses. There are some experts advising the businesses on revenue model linked sustainability transformation.

A number of MSMEs have set examples of how they transformed their business into sustainable models over a period of time taking one step at a time. Starting with water; reducing wastage by recycling and reuse; adopting cleaner chemicals, they moved to more complex issues such as solar and other energy-saving solutions, energy efficient production lines, lean management techniques, and so on.

The MSMEs are attracted to the cleaner technologies because this brings multiple benefits to them. Clean technologies promise higher revenues due to less wastage, longevity, safety of the workers and lessor adverse impact on the environment.

6) Innovation, scale & competition

At a time when changing buyer/consumer attitude towards sustainability is creating problems for the MSMEs to remain afloat, there are opportunities also. As the economy changes color and traditionally flourishing markets become constricted, smart companies adopting innovation can retain their profitability.

As the saying, “need is the mother of all inventions”, innovation is a blessing in disguise as it helps the companies scale-up and beat the competition. For example, Textile Recycle Association is promoting recycling and reuse of the clothing. Some very high street vendors such as H&M and Marks and Spencers are also part of this campaign. They collect unwanted clothes in-store and distribute to charity. These are converted into rugs, made into other clothing, or cleaning clothes. Many small players are venturing into ethnic and traditional rugs made from recycled items.

Another example is how some organic textile firm are experimenting with bamboo fiber and other natural and herbal materials in their clothing.

9 Constraint for MSMEs in adopting sustainability standards

So what are the constraints that MSMEs face in adopting the voluntary sustainability standards? Although, a number of respondents have linked low financial resources as a major impediment, however, we will discuss several other constraints as well in this chapter. In the next chapter however, we will try to deal at length on what are the urgent financial demands for VSS in the MSME sector.

1) Size related constraints

It is still a challenge for smaller companies to participate in the standardization debates and hence they lose on the knowledge and urgencies involving sustainability. Smaller companies cannot commit their workers to represent at the sustainability forums.

Most MSMEs, particularly the smaller ones, lack the necessary human resources to devote into developing long-term strategies, finding right kind of solutions, resources, etc. Their management is largely involved in daily operational practice, and there is no time for activities not directly related to the daily business. They are forced, therefore, to a short-

term view of their business and are limited in their actions on future-ready regulations and standards.

Size of a company also impacts its perceived social burden. Smaller companies in singularity are seldom identified as responsible for depleting resources or harmful impacts to the environment because their impacts may appear small. On the contrary MSMEs by nature contribute to sustainability by employing the masses and producing for low budget markets. But the collective impact of MSMEs on sustainability is the same as larger conglomerates. A responsibility they overlook.

Smaller firms mostly remain out of the direct purview of mounting global pressures as the focus there also remains largely on bigger firms. This also means that global sustainability debate has kept MSMEs out of the development agenda.

2) Resource constraints

The willingness and capability of SMEs to adopt sustainable practices generally face resource constraints, skill deficit and knowledge limitations. MSMEs are often unaware of many schemes and opportunities that are associated with sustainability standards framework. Many MSMEs see sustainability as a cumbersome process associated with technical complexity, burdens and usually very high costs. Lack of resources often leads to MSMEs being risk-averse and less willing to invest in new technologies.

A 2014 German Standardization Panel report identified financial constraints as a major hurdle for small scale enterprises in adopting sustainability standards. Most MSMEs in India work on limited financial resources. They are less willing to wait for the return on their investments. Therefore it is difficult to convince them make investments in technologies and practices that will pay them in the long run. They may be convinced of the future benefits of going sustainable but often it's a question of their survival.

3) Attitudinal, cultural and traditional challenges

Attitude is a mental state systematized through knowledge influencing upon individual's response to objects and situations around which it relates (Allport, 1935). Culture, one of the main sources for the formation of attitudes, includes generational, social, legal and institutional experience (Douglas & Pratkanis, 1994). Business decisions and enterprises very much depend on attitudes and cultural dispositions of the entrepreneurs and workers.

Indian MSMEs work within the socio-cultural ecosystem of India. Many of the MSMEs are working in the rural areas of the country where traditions are not very favorable for several groups (e.g. women taking up jobs travelling long distances to work). There are seasonal labor variations that the MSMEs have to deal with on account of predominance of agrarian societies.

The socio-cultural and traditional spill overs are very much visible in the organizational demographics and life-cycles. It is demonstrated through how the enterprises deal with events such as festival breaks, group dynamics, divergent behaviors and stubbornness of certain groups in their production and management lines. For traditional enterprises it is not easy to break from their old traditions (and situations) and adopt entirely new systems

without resistance and frictions (for example, introduction of computers in public and private sectors alike was looked upon as a threat by the employees used to working in traditional ways). Any disruption in the usual calm and ease of an organization has a risk of attracting resistance. And this is a discouraging factor for adopting sustainable systems by many MSMEs in their existing structure.

4) Technological and infrastructural challenges

Existing MSMEs operating on old technologies and traditional practices need transformative approaches if they wish to adopt sustainability standards. Many of them will need to discard their existing infrastructure and adopt an entirely new set of infrastructure all together. They will need to set up new plant and machinery; more energy saving, water and environmentally friendly. They will have to create better and healthier working spaces for their labor force. Decisions for discarding machinery and tools also, such as boilers, looms, fittings and fixtures, in many cases which have taken a life time to establish and master, is not an easy decisions if growth and profits are not clearly demonstrated. Smaller players would go on using their inefficient infrastructure for their already guaranteed short term profits.

MSMEs will have to invest in training of employees to use new technologies and methods. In many cases they will need to change their supplier base (to ensure sustainable raw enters the business). They will need certain technologies which most likely will not be easily and economically available within the country. With limited financial avenues, it is difficult to persuade MSMEs to make that kind of investment in something which has no immediate returns and whose benefits are mainly looked as social or environmental good by a large number of small industries.

5) Locational challenges

A large percentage of MSMEs in India are located in ‘ghetto’ like geographically located ‘industrial clusters’ where they face cut throat competition due to mushrooming of copycats and ‘marginal-rate’ operators. Their challenges get multiplied due to unhealthy environment, lack of regulation and poor infrastructure prevailing in many of the clusters.

Industrial clusters in India are generally facing acute problems in terms of infrastructure such as transportation, congestion, power and pollution and in terms of human resources such as unionism, alcoholism and reverse-migration.

Congestion and pollution pose health hazards to the labor living in surrounding areas. Labor colonies converting into urban slums compel workers to low standards of living. MSMEs operating in such congested clusters can’t do much about sustainability because the very environment surrounding them is in contravention to the requirements of sustainable development goals.

A number of Court orders, and national green tribunal reports, in India have declared several industrial clusters as hazardous. Some clusters are directed to be shifted to other places where they could be sustained. Relocation is another challenge for smaller firms as new areas will pose them with new challenges in labor sourcing and transportation.

6) *Strategic limitations*

MSMEs face a number of operational issues within the organization, such as the capacity to absorb and implement new systems and methods, uncertainty about the most appropriate technology to be used and simply a lack of knowledge about how sustainable practices can be incorporated in their business planning. Many MSMEs, operating on their daily business needs, may not be having a strategic plan for their business altogether.

Strategic failure is another risk that MSMEs will avoid taking. The product or the processes they chose may not turn out to be that profitable or that sustainable as previously thought and they might lose the right to very Certification that they took all the pain for. Again, for developing an effective company strategy, most MSMEs would require outside support and consultants that a majority of them cannot afford.

Moreover, sustainability certification is not an attractive option for an MSME if it is already doing well in non-certification markets, e.g. domestic market or neighboring markets. They see no clear incentives in the lengthy and complicated certification process.

Again, most MSMEs are largely driven by a single entrepreneur or a small group, very likely tied in time and task pressures. Reflecting on strategy and future sustainability does not figure in their tight schedules. Thus the concerns related to voluntary sustainability standards, considered 'extra' inputs by most entrepreneurs take a back seat. Sometimes entrepreneurs may be simply misguided or misled by adverse reports, associates, suppliers, trade-unions, clients or accountants. This leads them to believing on entirely opposing views pertaining to sustainability standards.

The above is not a complete list of what will drive, or discourage, an industry to go for sustainability certificate. There are many more factors. But at the core of every industry is a desire to grow. Every enterprise wishes to increase the size of its business and profits. If sustainability standards have the potential to guarantee the growth to the industries, in long or the short term, the industries are opening up to the standards and adopting the same in their businesses. Some however remain indecisive due to a variety of reasons.

Finance and investment is however the key in making these decisions. Larger companies with unlimited resources and access to better financing options at their hand tend to adopt sustainability standards more easily. Smaller companies, however, do not have that luxury, despite their advantageous position in writing the growth story of the industry and the nation. Recognizing if the growth is centered in the MSME sector, and voluntary sustainability standards can maximize these potentials to the full, what role should financial organizations (both international and domestic should play)? What type of financial solutions should be developed for MSMEs? How financing and repayment be made easy for MSMEs? Some of these answers we shall be exploring in our next section.

10 Voluntary sustainability standards for MSMEs and demand for finance

A number of responses recorded for this study indicated that a substantial number of MSMEs, especially those involved in export generated textiles and apparels business; adopt sustainability standards using their own resources. Their direct investments are in terms of fee for standard organizations and indirect in terms of infrastructural and methodological investments. Where do they fund their sustainability needs from?

Some, as mentioned below, achieved sustainability, through internal resource allocation, one-step-at-a-time, that took them a life time to reach the certification standards. A large number, however, turned to banks loans and finance companies for their needs. A number of them lose their competitive edge due to resulting price escalations commanded by higher rates of interests billed to them.

Contrary to the belief that only larger players are interested in sustainability, a large number of smaller businesses are also financing their sustainability investments. But, again, size sometimes turns out to be their big adversary. As Rajesh Bheda puts it, “As there are different sizes of enterprises in the supply chain, there are different sizes of buyers and customers also, but their sustainability demands are more or less. A small players with a small order of say 10,000 units carry the same responsibility as a large corporate with an order of 100,000 units”.

Most MSMEs fail to invest in more sustainable processes due to lack of reliable partners who could finance their investments. Very few options have been developed in the country which could offer the MSMEs a revenue model that could transform their infrastructure at a recoverable cost. Mainstream banks are always reluctant to fund such investments. Moreover, even at a time when MSME loaning is a major banking activity, most mainstream banks are lacking in sustainability specialized personnel and know-how that could help them evaluate and understand MSME proposals for such demands.

Standards organizations, on the other hand are much better placed in funding their international standards advocacy, policy and implementation regimes. Most of the donor agencies focus on strengthening the standards organizations as a tool for dissemination of their sustainable development goals. VSS promoters and organizations are supported through grants in their various activities. MSMEs fail to obtain financial support from donor organizations mainly due to prevailing rules under Foreign Contribution and Regulation Act that bars profit making enterprises from receiving foreign donations.

While most donor agency efforts are focused on scaling-up the international standards operators very few are actively thinking about investing directly with the MSMEs to increase their access and implementation rate of the standards. On the contrary, however, the standards organizations are raising revenues from MSMEs for their services in certification processes. MSMEs on the other hand have also to pay to sustainability consultants their hefty fees. Standards market is growing worldwide as about more than 500 VSS operator have set their base, many of whom have their offices and highly paid staff at multiple locations. All this is adding to the costs incurred by the MSMEs.

In this context DISHA standards initiated by Apparel Export Promotion Council (AEPC) or the EcoMark standards of the government of India are better placed in extending

performance linked awards and incentives to MSMEs showing better environmental and social impacts.

Under DISHA about 487 factories were enrolled by March 2014 in their sustainable human capital advancement program funded by AEPC. However, the program was rolled back by September 2015 as the AEPC decided not to use its funds for the program (vide letter No. AEPC/HO/SG/ 2015 dated 29th September, 2015).

The ECOMARK, promoted by the Bureau of Indian Standards (the national standards organization of India) however has a better support system for the MSMEs. The marking scheme was started in 1991. One of the purposes of the mark is to inform and guarantee the consumers towards reducing environment impact. ECOMARK is operated by the Ministry of Environment and Forest, and has a provision of **incentives and rewards** for manufacturers and importers to reduce adverse environmental impact of the products. However, EcoMark is not very helpful for Indian exporters to access the international markets where consumers are more familiar with international marks.

Most common issue faced by the producers is that buyers demand high standards but always pressurize for low prices. While MSMEs are expected to volunteer for sustainability standards, buyers and consumers never volunteer to internalize the costs incurred on standards. Buyers exert pressure to keep the prices low because, as “higher the cost of the commodity, lesser there will be demand from the consumers”. Buyers also press producers because of uniformity of taxes in most countries irrespective of size of exports and absence of sustainability linked benefits in taxes.

Sustainability costs are not equally divided among all the participants of the value chain, while the benefits of sustainability are reaped by all.

The standards organizations are playing a remarkable role in developing multi-stakeholder partnerships that are crucial to supporting these initiatives. The challenges MSMEs face in participating and benefitting from these partnerships again stem from lack of resources and finances. All the services offered by sustainability organizations such as training and capacity building, group certification, farm to factory alignment, etc. have transactional costs involved that small organizations cannot afford.

While the manufacturing sector is still at some advantage, significant challenges are faced by the primary sector producers, where social goal of empowering the poor is obstructed by clashing grassroots realities, such as technocratic approaches or adverse traditional practices (Lambin, 2014). Access to banking and access to markets are still big questions for grassroots based MSMEs.

“Furthermore, the plethora of competing standards, along with the multiple agents promoting and implementing them, can undermine the credibility of VSS and lead to confusion amongst potential standard takers and financiers. Comply with multiple standards also increases the transaction costs” (Knorringa, 2012). This presents a negative image to the banks and finance companies.

11 Avenues & challenges for sustainability funding for MSMEs

Micro and small enterprise need diverse services and support. A range of institutions need to understand and specialize in serving their particular requirements. These include commercial and development banks, finance companies, credit unions, co-operative banks, thrift and saving societies, and other intermediaries. However, almost all these entities widely follow fundamental principles of finance, where return on investments is a priority. MSMEs often face obstacles in getting access to finance.

Banks and other financial institutions are often reluctant to fund such investments where returns are not monetized. Social and environmental investments carry uncertainties and higher risks. The high rates of interests prevailing in MSME loaning are another concern. The best for MSMEs is Interest Subsidy Eligibility Certification Scheme (ISEC) of Government of India implemented mainly through Small Industries Development Bank of India (SIDBI). Under the ISEC scheme, small industries could avail a credit on concessional rate of 4 per cent annual interest on capital as well as working expenditure, if they fall in the non-profit industries category operating in *khadi* and village industry sectors.

Certain banks, especially those in private sector, have informally developed negative criteria against loaning persons from certain professional backgrounds. Persons engaged in NGOs and NGO led activities are among them. Since most VSS are operated by NGOs, banks may be wary of funding standards led by them.

Moreover, most donor linked funds are not designed in ways that are consistent with best international practices and long-run development of sustainability framework. On the flip side, the crowding of VSSs is also a factor that is undermining their credibility and importance as a viable investment option. A robust standard system should ideally incorporate functions that are recognized by financial institutions; such as infrastructure and organizational development of MSMEs. Growth is a major requirement of the MSMEs and is common across the sectors, industries and among nations. Growth of MSME is recognized as an important factor for global business growth. However, a majority of donors supporting are stand-alone standards limited to fringe areas of sustainability and missing the greater goal of growth; of local enterprise, of the value chain, of the global market.

Government subsidies have a higher potential for moving towards a better sustainability regime for MSMEs. But government subsidies need to undergo a “radical overhaul” to effectively deal with rising global sustainability concerns³⁷. E.g. the highly subsidized skill development initiatives that the government has undertaken in partnership with the industries is targeted towards sustainable employment for the marginalized youth, however, the sustainable employment is subjective given migration model many of these programs follow and their crowded existence in un-sustainable slum clusters.

Considering the need for external support, creation of United Nations Sustainable Development Goals Fund (UNSDGS), is a major international sustainability development cooperation mechanism that recognizes the important role of MSMEs in sustainable development. The Fund is aimed at connecting businesses, and creating avenues where they

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could participate (with UN agencies, governments and civil society), in a collective pursuit towards sustainable development goals.

According to Paloma Duran, head of UNSDG Fund, “Achieving sustainability – which combines economic growth, social progress and environmental protection – requires us to go the extra mile. Only when businesses are part of development programs can we achieve this.” As MSMEs form the backbone of the business output and serve directly in the most backward areas, these efforts must give priority to MSMEs in sustainability funding. However, there are some fundamental challenges in this framework, these relate to lack of UN infrastructure for engaging with MSMEs, dwindling funds of the UN system itself, higher opportunity of partnering with the larger businesses. Collection of funds under UNSDGF is also a big concern, given past failures in getting private funds for public good (e.g. \$100 billion fund for UNFCCC promised by various sources by 2020 has very little collections).

One of the attractive ways of developing finance framework for micro, small, and medium enterprises could be by supplying credit for micro-finance and rural finances. Many parts of the country have well-developed micro-finance networks that can be a useful channel for scaling up MSME finance for sustainable development. Microfinance is also an inclusive way of involving the poor, women and other disadvantaged groups.

Ministry of Small Scale Industries in its memorandum dated 17th March 2014, observed that total requirement of micro-credit in the country was \$ 50000 billion. Micro-credit program works through NGOs and local groups called SHGs. SIDBI's micro credit program has a high rate of recovery, 98%. But the combined reach of micro-credit program is very low. Secondly, the high rates of interests prevailing in the micro-credit program may not be suitable for MSMEs.

12 Conclusion

The Indian Micro, Small and Medium enterprises (MSMEs) have emerged as the ‘engine’ of economic growth. At a time when their contribution is well recognized for domestic growth; their impact is also demonstrated on global growth, through their export potential.

MSME's are also recognized as an important player in sustainability. They are credited with generating high rates of employment and admirable capacity for innovativeness and adaptability. MSMEs reduce regional imbalances by promoting industrialization of rural & backward areas. They are an important vehicle for equitable distribution of incomes and wealth.

With a wide penetration and reach, they are more inclusive and accessible as compared to large industrial units. Their nearness to the primary producers places them better in responsible consumption of natural resources. Factors like these, and several others, make MSMEs strategically important to economic growth and socio-economic development of the country.

The emergence of Voluntary Sustainable Standards (VSS) places both, advantages and challenges for the MSMEs. On the one hand, MSMEs are encouraged to adopt the

sustainability standards for better opportunities and remain in standards certified global business chains. On the other hand, MSMEs are faced with challenges like how to finance their sustainability needs or channelize their limited resources.

Among the examples of how better planning of available resources and innovation has helped some MSMEs, their enormous struggles in financial, technological and strategic challenges are also quite visible. Of the many challenges, the straight-jacketed approach of the financial institutions is one that rides above all their business decisions.

With the changing development paradigm at international levels, international donor organizations have started recognizing the importance of MSMEs in environmental and social sustainability.

13 Recommendations

Voluntary sustainability standards epitomize the market-linked instrument that can facilitate equitable development of micro, small and medium producers into global value chains. A number of stakeholders have a defined role to enable this process by providing the necessary supporting conditions. They can see themselves as agents of development given the socio-economic impacts of MSMEs. As we have shown in this report, spread of awareness and information, friendly policies, ease of access to resources and finances and capacity enhancement are some of the key determinants underlying the promotion, integration and success of VSS. Among other things, a supportive role of the government and international donors is a vital element to foster effective framework for sustainable development.

International donors and governments of the day have an enormous task of facilitating an environment for VSS in the MSME sector. There are many ways this could be achieved. Donors can directly engage with standards organizations to develop more realistic and comprehensive standards framework. They can directly work with MSME sectors in awareness building, capacity, and cluster development programs.

Donors could also help in creating multi-stakeholder coalition comprising different stakeholders to facilitate, monitor, evaluate, VSS in MSME sector. Donors can also provide financial and technical support to MSMEs in their standard adoption needs, which will be instrumental for a large number of organizations in the country. Donors can help set up knowledge sharing platforms regarding VSS impacts, promoting observer groups providing objective analysis of the effectiveness and impacts of the VSS and helping their replication at the larger scale. Donors can also aid in developing learning and development platforms for VSS implementers and adopters.

Apart from this, infrastructure is also an important area where investments and donor interests can make a valuable contribution. Donors can help create investment platforms that could undertake work on cluster level sustainability issues as well as issues faced by individual MSMEs.

Besides the donors, government can also play an important role by adopting VSS in broader policy framework. A public policy approach to VSS will be helpful in developing sustainability linked schemes, programs and financial framework for banks and financial

institutions. There is a need to institutionalize the VSS and this could be achieved by integrating public policy with international frameworks.

Standards adoption commonly has formal or informal transactional costs involved in certification programs. Standards organizations can help internalizing or distributing this cost either within the value chains or externally through easy financing options.

They can also help producers gain greater access to governmental and non-governmental financing sources. In doing so, the standards organizations can extend the scope of VSS beyond just the producers but also the financiers, donors and other interest groups in the sustainable development paradigm.

Standards organizations can facilitate better access of MSMEs to technical assistance needed in the compliance process. Availability of technical assistance in the areas such as clean technology, innovations, resource replenishment, organizational transformation, strategic management, will influence a large base of MSMEs as they are already inclined and attracted towards these approaches.

Financial institutions and banks have the most crucial role in MSMEs decisions regarding sustainability standards. While direct financial assistance to assist with VSS compliance is necessary, sustainability linked revenue models and investment options could also be developed. Financial institutions need to bring down the transactional costs by studying the gaps between the pre-certification state of the products and the state necessary to obtain certification. In order to close this gap substantial technical knowledge will be required that the financial institutions will have to develop. This gap could be plugged by the donor assistance to the financial institutions under sustainability initiatives.

Government's contribution through effective policies has been very helpful for the growth and development of the MSMEs. A more supportive, and sustainability linked, financial framework, however, will be of great help to MSMEs adoption of sustainable practices. It will help MSMEs leverage their competitive advantage more effectively and create a level-playing field for MSMEs vis-à-vis their larger counterparts. More vigorously promoting VSS will allow them to compete on fair and equal terms in the global value chains. Emergence and better acceptance of MSMEs in the GVCs will help in creating a new economic order where small businesses will play a big role in global business and sustainability.

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V Drivers and constraints for adopting sustainability standards in small and medium-sized enterprises (SMEs) and the demand for finance: an Indonesian case study

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Background

With growth of Global Value Chain and economies become more integrated, it is important for businesses to derive benefits from their participation in GVC. In GVCs, Multinational Enterprises (MNEs) plays a leading role by coordinating networks activities of seller and buyer. It also opens up a lot of opportunities to Small Medium Enterprises (SMEs) by participating in the process, including those in Indonesia. However, since most SMEs are more followers than leaders in this process, challenges in joining GVCs abound, including from the requirement to follow certain standards. This paper takes a look at the issue of challenges faced by Indonesian SMEs to be integrated into GVC, such as lack of efficiencies (due to small-scale production), limited access to finance and hesitance to comply with standards prevailing in the GVCs.

Sustainability standard are gaining considerable attention as public awareness increases, especially on social and environmental issues. One of the objectives of sustainability standards, in addition to ensure the quality of final product, is to attempt covering or tracing the whole value chain process from producer to consumer. The purpose is to run business responsibly, not only to society but also to the environment. There is a growing importance for business sector, including SMEs, to implement sustainability standards in their daily operations. Therefore, business entities in Indonesia must comply with national regulations and standards, including several international standards that are adopted.

There are several sustainability standards currently in place in Indonesia, both the international and national standards. Examples of the international standards are the general standards such as those issued by International Standard Organizations (ISO), *Roundtable Sustainable Palm Oil* (RSPO), *Forest Stewardship Council* (FSC) and *Programme for the Endorsement Forest Certification* (PEFC), International Council on Metal and Mining. Meanwhile, the national standards include *Indonesia Sustainable Palm Oil* (ISPO), Indonesian Forestry Certification Cooperation Program (IFCC) that issues Timber Legality Assurance System (*Sistem Verifikasi Legalitas Kayu/SVLK*). Furthermore, the financial sector is currently encouraged to also create financial products and services through sustainable finance program, which will be elaborated in Chapter 4 Section 4.

Nevertheless, adopting sustainability standards requires SMEs to change the way they run their business since it has involves interaction of various activities along the supply chain and various stakeholders needed to implement the sustainability standards. For the sustainability standards to hold, the willingness and of all related stakeholders to uphold the sustainability requirement is of fundamental importance. Implementing the standards could therefore also have an impact on the efficiency and performance of the SMEs, since this might require extra efforts and costs.

This paper is organized into five sections. Following the background, we would discuss different types of standard, which can be categorized at least into two things (the setters and the characteristics). This is followed by an overview (including value chain, total production, and contribution to national economy) of coffee and textile (our two selected industries) industry in Indonesia. This chapter will also contain results from in-depth interviews to SMEs in the two selected industries to elaborate the main obstacles of SMEs for joining GVC including, limited access to finance and government regulations. Chapter 4 will lay out financing options for SMEs in order to adapt sustainability standards to join global production network. The last section summarizes the findings based on our literature review and in-depth interview.

1 Sustainability standards and certifications in Indonesia

1.1 Indonesian standards

Government Regulation No 102/2000 on National Standardization appointed the National Standardization Agency (BSN) as the institution to oversee the implementation of national standard in Indonesia. According to the regulation, the obtainment of SNI is voluntary for most of the goods. While for some other goods considered to have direct safety concern among others, obtaining SNI is mandatory.

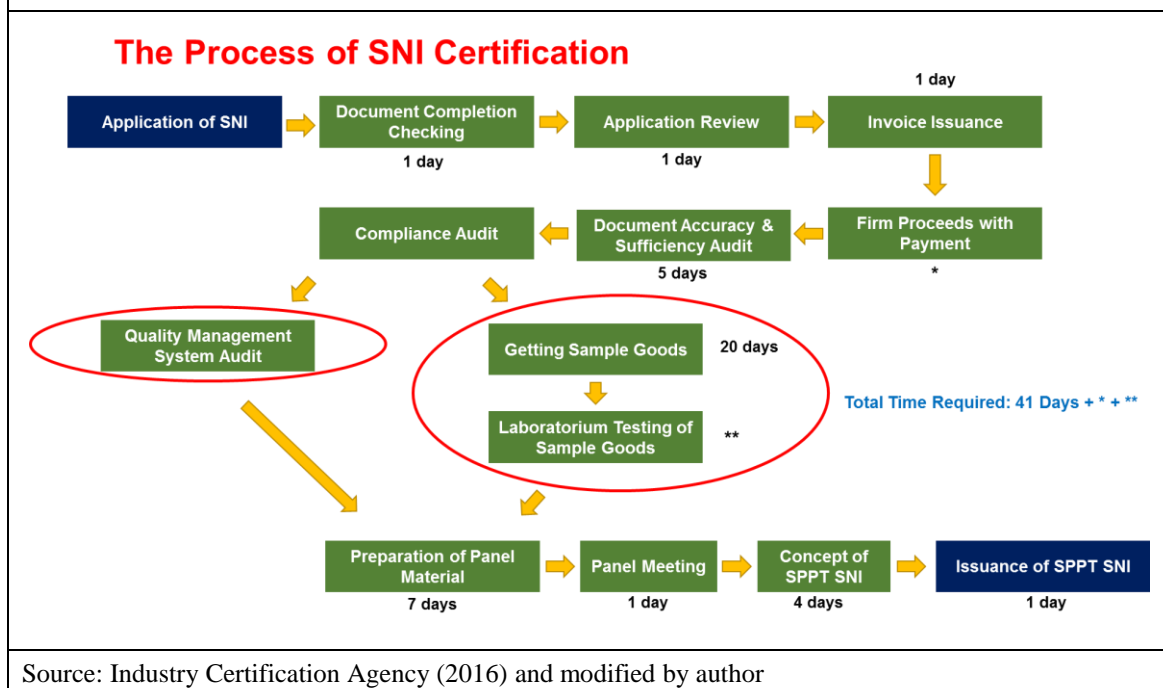
There are three main institutions responsible for developing and overseeing standards in Indonesia. Badan Standardisasi Nasional (BSN) or the National Standardization Agency of Indonesia is the government institution in charge of coordinating and facilitating standardization activities. There are three standards & conformity measures that need to be conducted on the national level, (i) regional standards adoption, (ii) transposition of national technical regulations, and (iii) conformity assessment procedures. BSN is the lead agency appointed by the government for conducting these measures, especially for measures (i) and (iii). Along with BSN, there are also Badan Nasional Sertifikasi Profesi (BNSP) which maintains competency standards for Indonesian workers, and also Badan Standar Nasional Pendidikan (BSNP) that oversees the nation's education standards.

Meanwhile, all technical regulations are under the authority of relevant technical authorities. This means different ministries/institutions will become the technical regulatory authorities for different types of products. Mandatory SNI is enacted by the issuance of several Ministry of Industry Regulations on specific type of goods. In automotive sector for example, Mandatory SNI covers goods such as alloy wheels, tyres, and laminated glass, along with some other automotive components.

Table 1: Technical regulatory authorities in Indonesia	
Name of Ministries	Products under authority
Ministry of Industry	Food & beverages industry, forest & plantation products (IHHP), furniture, automotive, machines, textiles, paint, etc.
Ministry of Maritime Affairs & Fisheries	Fisheries products & processes
Ministry of Trade	Label registration Import, and export
Ministry of Agriculture	Fresh food, plant origin, livestock, food of animal origin
Ministry of Transportation	Vehicles
National Agency of Drug and Food Control (BPOM)	Processed food, contaminant, additives, food label, drug & cosmetics
Ministry of Manpower	Profession
Ministry of Forestry	Raw materials from forest and timber plantation, sawn timber and plywood
Ministry of Environment	Waste water, air emission waste, hazardous waste
Source: DFC S.A.U. Study (2011)	

Indonesian National Standards (SNIs) are ruled to be voluntary according to the new Law on Standardization. However, they may be mandatory for products related to national security requirements, the protection of human health or safety, animal or plant life or health, and the environment. As of 2014, the number of SNIs already developed had reached 9,888 standards, of which 270 are mandatory for all products distributed in Indonesia, both local and imported. These standards are broadly distributed across sectors, with material technology and agriculture and food technology contributing the most, at 23% and 16% respectively. Of 270 mandatory standards, the majority of them are regulated by Ministry of Industry (36%) and Ministry of Maritime Affairs and Fisheries (30%).

In regulatory making process, SNI is also affected by elements in sustainability standard. Since the 1980s, NGOs and the global private sector have begun to apply standards that were initially voluntary to regulate the production of goods and services in a global production network. The main objective is to improve sustainability through safer, environmentally friendly and more efficient production practices in various industries. Sustainability standards are applied ranging from commitments to evade child labor to restrictions on the use of pesticides and chemical fertilizers.

Figure 1: The process of SNI certification

At least, we can distinguish standards into three categories, such as major actors that are involved in setting the standard, nature of the standard (assessing in process product or final product), and geographical areas of standard (international vs local).

1.2 Sustainability standards in Indonesia

Majority current sustainability standards and certifications in global production networks come from initiatives of non-governmental organizations, development agencies and the global private sector. Most of these are in the agricultural sector where around 40% of the world's coffee production is certified and 15-20% of cocoa and tea production also adheres to international sustainability standards. In addition, other sectors are forestry, wild fisheries, cotton and palm oil are also starting to practice certified sustainable production.

In Indonesia, there are some adoption to these sustainability standards, described in the following Table 2.

Table 2: Examples of sustainability standards in Indonesia		
Type of standards	Name of standard / regulation	Elements
Private standard	Toyota Production System (TPS)	Mandatory for Toyota's suppliers. Maintaining quality until final products by using technical and management practices. This is also called "Learning manufacturing system" to reduce lead time, to obtain best quality at lowest cost.
	Starbucks Coffee and Farmer Equity (CAFE)	Mandatory for Starbucks' suppliers. Set of sustainability standards that focuses on quality, economic accountability and transparency, social responsibility, and environmental leadership. Using third-party verification body: SCS Global Services.
Government standard	Environmental Standard (Law No 32/2009)	Mandatory. To measure the important of environmental impact on business, and managing and monitoring further located in Indonesia.
	Labor Standard (Law No 13/2003)	Mandatory. Prohibiting child labor with the exemption for 13-15 years of ages: have the permission from their parents, maximum 3 working hours, do not interfere their school time.
	Indonesian National Standard (SNI)	Mandatory for some specific product or condition.
	Timber Verification and Legality System (SVLK)	Mandatory. To reduce illegal logging. To ensure legality of materials being export and to support traceability.
	Indonesian Sustainable Palm Oil (ISPO)	Mandatory. Ensuring sustainability to reduce greenhouse emission using several principles such as guidelines for cultivation and processing, environmental management, and social responsibility.
	Utz Certification	Voluntary. Code of conduct for growing sustainable coffee based on 'good agricultural practices' that include standard on environmental protection and management, and labor & living conditions.
Civil society standard	Bird Friendly Coffee	Voluntary. Minimum standard for vegetation (diversity) and standard for soil management, also cover 100% organic and shade grown
	Fairtrade	Voluntary. Minimum guaranteed price paid to registered small farmers' organizations that match socio-economic standard development, labor issues, and environmental protection.
	OEKO Tex	Voluntary. Certify firm in the context of chemical & environmental management, occupational health & safety, social responsibility, quality management, and transparency
Source: Author's construction from many sources, Ponte (2002) and Giovannuci (2005)		

1.3 International vs local standard

In regards of geographical impact point of view, we can distinguish sustainability standards into two categories, international and local standard. The nature of International standard, even though are globally accepted, it usually non-mandatory. Nonetheless, complying with international standard could increase the opportunity for firm joining global value chain. One of the example of international standard is ISO 22000 concerning food safety. Meanwhile, local standard or standards that have been set by government are mandatory in nature. Despite the existing of international standard, adjustment needs to be done (as a form of local regulations) due to difference environmental condition in each country. One of Indonesian standard related to food safety is regulated in Head of BPOM Regulation No 11/2014. For food containing Genetically Modified Organism (GMO) is regulated under different regulation, Head of BPOM Regulation No 1563/2012.

Another example in this type of standard is in palm oil industry. Roundtable on Sustainable Palm Oil (RSPO) is a group that unites stakeholders from 7 of palm oil industry; producers, processors, consumers, retailers, banks/investors, and NGOs. It aims to create guidelines for Certified Sustainable Palm Oil (CSPO) to help minimizing negative impact of palm oil cultivation on environment. There are 8 principles that must be accomplished by firm in order to be certified, which are; (1) commitment to transparency, (2) compliance with applicable laws, (3) commitment to long-term financial viability, (4) use of appropriate best practice by growers and millers, (5) environmental responsibility and conservation of natural resources, (6) responsible consideration of employees, (7) responsible development of new plantings, and (8) commitment for improvement in key areas of activity. In addition, verification and audit must be conducted every 5 years by third-party RSPO-accredited certification body.

In Indonesia, Indonesian Sustainable Palm Oil (ISPO) is a mandatory national standard to improve sustainability and competitiveness in Indonesia's palm oil industry and contribute to reduce greenhouse emission. The standard is mandatory for all oil palm growers in Indonesia, including the smallholder. However, for large producers were required to comply with the standard in 2014, while Ministry of Agriculture has set a target for smallholders in 2022. ISPO is part of Sustainable Palm Oil initiatives, developed with a support of United Nations Development Program (UNDP). The principles that have been set in ISPO such as; (1) licensing system and plantation management, (2) technical guidelines for palm oil cultivation and processing, (3) environmental management and monitoring, (4) responsibilities for workers, (5) social and community responsibility, (6) strengthening community economic activities, and (7) sustainable business development.

Regarding of these two standards, there are some distinctions which we can elaborate more. While ISPO is much more practical to implement, it has fewer criteria than RSPO. In terms of business practices and commitment to transparency, RSPO is much more transparent in its standard development and auditing results relatively to ISPO (Efeca, 2015). In regards of social impact, ISPO that relies on AMDAL process social impact assessment does not provide extensive requirements for management system. As to social issues, RSPO much more advance with clear and detail guidance on worker rights and health and safety, while ISPO only stated that worker must be enrolled in government's social security program.

Box 1. ISPO vs RSPO

Although ISPO has a very well objectives, to ensure every businesses in palm oil industry comply on environmental standard, but it creates another hurdle for firms. Since the nature of ISPO is mandatory, it makes every palm oil growers operated in Indonesia have comply with the certification. However, this certification has not been well accepted by international related parties due to several distinctions in terms of guidelines and requirements with international standard which is RSPO. This condition complicates firms who want to export their products abroad, causing them to comply with two standards which are very costly and time consuming.

In February 2016, a report of joint study between Indonesian government, Sustainable Palm Oil Initiative (SPOI) (which is established by several multinational companies to address some systemic barriers in palm oil industry), and United Nations Development Programme (UNDP) has been released concerning the similarities and differences of certification system of ISPO and RSPO. The purpose of this study is to create better alignment between ISPO and RSPO and also to reduce costs, time, and complexity to comply with. Moreover, by analyzing the similarities and differences of two system, this study provide recommendation for more efficient field audit by integrating same requirements into one single audit, while different requirements will be separately inspected.

In this study, at least there are several points that could be highlighted to discuss further. In regards of new plantation, ISPO requires firms to provide certification for plantation that have legally approved land (including *HGU* license) following new indicative government plantation postponement map. While RSPO, does not allow new plantings on converted primary forest, HCV and High Carbon Stock (HCS) and areas that developer has not obtained FPIC of indigenous and local peoples. This means, both certification only give certification for legally approved land and firms have comply with national and district regulations. This can be used as a basis to conduct combined audit.

Several distinctions of these two certifications which are highlighted in the report such as the independent third party certification body. ISPO and RSPO accreditation bodies Indonesia need to be accredited by National Accreditation Committee (KAN). But since 2012, RSPO accreditation bodies also need to be accredited by Accreditation Services International (ASI). In the assessment process, RSPO categorizes as minor major indicators, whereas all indicators in ISPO are major and compulsory.

1.4 Product vs process standard

Product standards address final output or final product as a result of production process. The characteristics of this standard often unambiguous and are defined by quality requirements. In this kind of standard, standard setters are usually seeking to increase the quality of final product and reduce cost. For example, in case of standard set by third-party, standard for exportable Arabica coffee by ICO is 86 defects out of 300 grams, with the moisture content below 8%. The minimum levels of permitted defects may drive firm to produce more effectively and would reduce cost of production. Meanwhile process standard, usually are more complex and tricky due to involving documentation procedures in every stage of production to fulfill traceability component. One of the example of process standard is Bird Friendly Coffee certification. In Indonesian Standard (SNI), in order for a firm to obtain SNI certificate, they should comply with final product standard (which will be assessment in lab verification) and process standard (which will be audited by LSSM in order to look at quality system). The reason why SNI certification also needs quality management system is to ensure firm could produce similar and standardize quality of goods in some period of time.

1.5 Sectoral cases: standards in coffee and garment sector

There are several sustainability standards in coffee and textile industry which created by civil society and also applies for Indonesian firm. One of the example of third-party standard is Fair Trade, which aims to improve the livelihood and welfare of small producer by paying a fair price with a fixed minimum and continuity in trading relationship (Giovannucci & Koekkoek, 2003). The impact of Fair Trade in producing countries is generate income of producers, capacity building, organizational skills, and resilience to external shocks (Muradian & Pelupessy, 2005). Another standard that has been set by civil society is Utz Certification (or was known as Utz Kapeh). This standard originally was created by Ahold Coffee Company (private sector standard), and is now an independent foundation that has developed code of conduct for growing sustainable coffee (Giovannucci & Ponte, 2005). It serves minimum assurance that basic condition met and less strict than SMBC bird friendly. Meanwhile, Bird friendly coffee or shade-grown coffee certification has created system for production, processing, and marketing of shade grown organic coffee. This standard is known as the most rigorous certification scheme due to combining technical requirement quality with shade cover and species richness (Muradian & Pelupessy, 2005; Giovannucci & Ponte, 2005).

Besides civil society standard, private sector standard is also existing in coffee industry. Starbucks, with its program called Coffee and Farmer Equity (CAFE), which are part of Starbucks' preferred supplier program establishes set of sustainability standards that focuses more on quality, economic accountability and transparency, social responsibility, and environmental leadership. The aim of CAFE practices is to create a long-term supply of high quality coffee and positively impact the lives of livelihood of coffee farmers and their communities.

Meanwhile in textile industry, Sustainable Textile Production (STeP) as a civil society also created sustainability standard called OEKO Tex 100 and OEKO Tex 1000 standard. The standard requires firms to optimize energy consumption through energy recovery practices and restrict some chemical substances to be used as materials in textile production process. Workers health and safety have also become important elements in this standard, which encourage firms to provide equipment for handling some hazardous materials and prevent workspace from harmful dust and noise stress.

2 Analysis of the incentives and challenges for SMEs to adopt sustainability standards

This chapter will discuss two main aspects related to the adoption of sustainability standards by Indonesian SMEs. First part will analyze incentives and potential drivers for Indonesian SMEs to adopt sustainability standards as well as stakeholders that promote the spread of standards. The second part will discuss challenges for SMEs to adopt the sustainability standards.

2.1 Incentives and potential drivers for Indonesian SMEs to adopt sustainability standards

The drivers for adoption of sustainability standards in Indonesia can come from two directions. One factor is market driven incentives, including higher prices and greater access to market. Another incentive comes from government programs that provide incentives toward the adoption of social and environmental actions. Among those initiatives are the GoI's Economic Policy Package (*Paket Kebijakan Ekonomi/PKE*), the development of Master Plan of National Industry Development (*Rencana Induk Pembangunan Industri Nasional/RIPIN*), the implementation of Rating Program for Business Performance in Environmental Management (*Program Penilaian Peringkat Kinerja Perusahaan/PROPER*), Cleaner Production (CP) program, tax policy, government awards, Emission Reduction Investment (ERI), and investment policies.

2.1.1 Market incentives for the adoption of sustainability standards

Natural drivers or incentives from market are needed in order for firms to adopt sustainability standards. These incentives from market usually are benefitted directly for producers. At least, there are several potential drivers by the market that can encourage Indonesian firms to obtain sustainability standards such as, higher selling price, having a wider market, and long-term production.

The first incentive for businesses to adopt sustainability standards is higher selling price. International buyers which concern about sustainability issue often offer higher prices for those products that are compliance to sustainability standards. In the case of coffee industry in Indonesia, prices of green beans from growers that comply with sustainability principles are quite different from those who do not. Although growers (coffee farmers) need to adapt those good farming practices, which often costly and burdensome for them, they can expect additional revenue from higher green beans price. Several certification, such as Fair Trade, explicitly determine higher selling price for those products.

Another incentive that can be obtained by businesses for complying sustainability standards is the possibility of having much wider market. International buyers in developed countries, especially from European countries and US, are paying high attention on sustainability issues and using it as a standard compliance in their requirements when they look for firms to be put into their value chain production. This condition is an overview of global production network in textile industry. Thus, complying with sustainability standards is one of the tools to enter advanced market countries.

Kadarusman (2010) in his study illustrated buyers in advanced market, including big brand names, impose standards and social and environmental compliances to Indonesian garment industry as basic requirement to join their production network. Many of them have their own code of conducts or require the adoption of certain certification in the production. This is different than developing countries market such as Middle East or African countries which do not strictly regulate the compliance. Meanwhile in coffee industry, complying sustainability standards mean businesses are entering higher market with higher selling price. A niche market of specialty coffee, for instance, can offer the price up to two times higher than regular

coffee; and complying with sustainability standards is the basic requirement for this type of coffee.

The implementation of sustainability standards on business also potentially affect long-term production. In coffee industry for example, by implementing sustainability principles to achieve good agricultural practices such as knowing the right way of picking technique, not using chemical substances, and others could spur the growth of coffee plants in the next harvesting period. In fact, the right way of picking could ensure plants to re-grow without any assistance.³⁸ The know-how of planting and harvesting in coffee plantation is very important for the businesses or land owners to ensure sustainability in their business

2.1.2 Master plan of national industry development/Rencana Induk Pembangunan Industri Nasional (RIPIN)

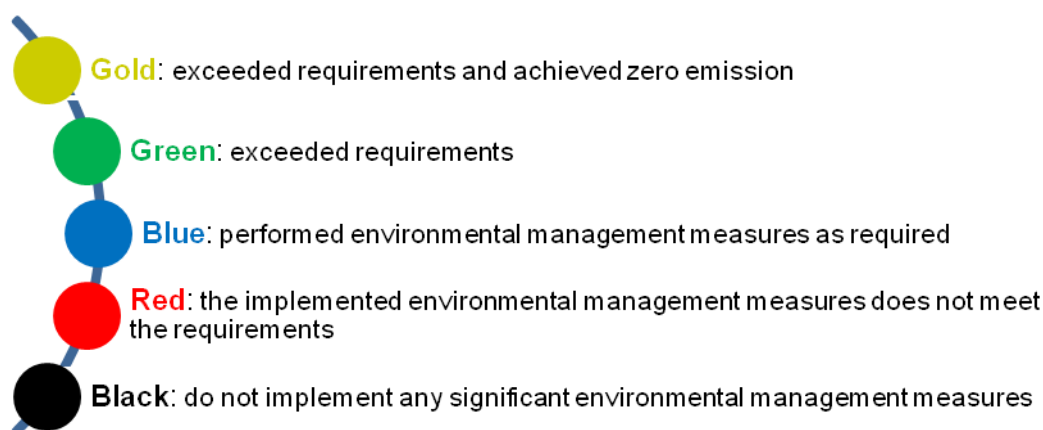
GoI has issued Government Regulation No. 14 Year 2015 concerning a Master Plan of National Industry Development/*Rencana Induk Pembangunan Industri Nasional* (RIPIN) Year 2015–2035. The strategies laid out in RIPIN include the development of green industry and provide affirmative action in designing policies, strengthening the institutional capacity, and providing facilities for small and medium industries. Green industry means embed green concept as a series of green activities 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 use the resulting products.

The development of green industry consists of two main strategies, i.e. green industry standardization and the provision of facilities for green industry. The strategic outcomes emphasize innovation and technology capability that is energy-saving and environmentally friendly. This is in line with Green Growth strategy as stated in Manila Declaration on Green Industry (2009) that Indonesia already ratified. The strategy is translated to Green Industry concept that includes Cleaner Production, 3R (Reduce – Reuse – Recycle), and Low Carbon/CO₂ Emission Reduction (Klarer, Berndt, & Sumaryana, 2013).

2.1.3 Rating program for business performance in environmental management/Program Penilaian Peringkat Kinerja Perusahaan (PROPER)

In 1993, Indonesian Ministry of Environment introduced a public environmental performance rating system, called PROPER. The rating program aims to promote industrial compliance with pollution control regulations, to facilitate and enforce the practices of “clean technology”, and to make sure a better environmental management system (Torres & Kanungo, 2003). PROPER rating system uses colour identification. Each colour represents how well a company’s environmental management practices. The colour rating system can be seen in Figure 2:

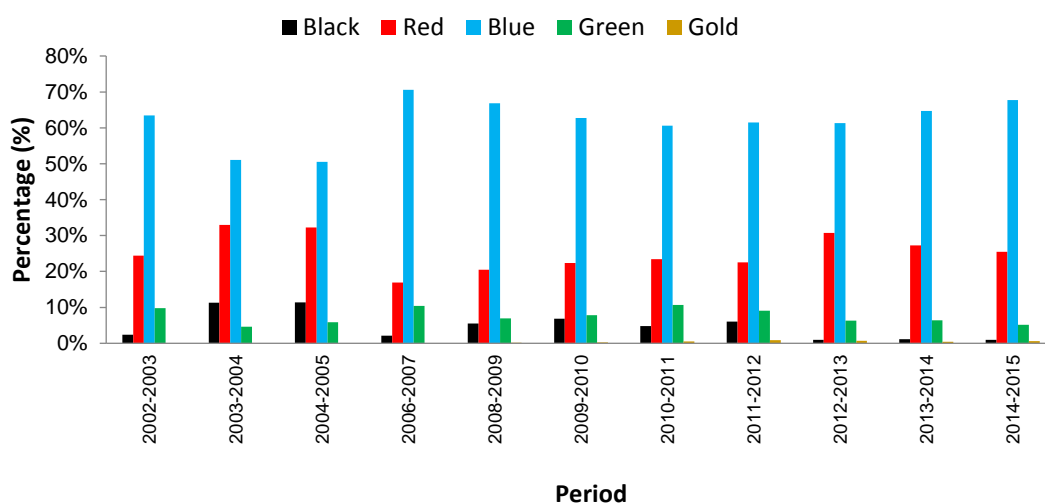
³⁸ based on writers’ interview with one of the coffee shop chain owner in Jakarta

Figure 2: PROPER colour rating system

Source: Ministry of Environment (2015)

In addition, based on Bank Indonesia Regulation No. 14/15/PBI/2012 and Letter (Surat Edaran Bank Indonesia/SEBI) 7/3/DPNP issued in 2005, as a part of assessment of debtors' business prospects, they encouraged banks to take into consideration "efforts undertaken by the debtor in the framework of environment conservation", for instance by using PROPER Rating by the Ministry of Environment. However, the participants of the program were mostly large scale industries, such as PT Pertamina, PT Holchim Indonesia, Chevron Geothermal Salak, Ltd, and other big companies.

PROPER has been started since 2002. However, none of the company could get the gold rating before 2010. According to a Ministry of Environment report (2015), out of 2,137 companies that were evaluated in the 2014-2015 PROPER program, 12 companies (1%) were assessed as gold, 108 companies (5%) were assessed as green, 1406 companies (68%) were assessed as blue, 529 companies (25%) were assessed as red, 21 companies (1%) were assessed as black (see Figure 3).

Figure 3: The trends of PROPER compliance 2002-2015

Source: Ministry of Environment (2015)

Cleaner Production (CP) Program

In order to encourage stakeholders to implement the 3R (Reduce, Reuse, Recycle) principles, Cleaner Production (CP) was initiated by GoI and has been developed since 1993 by Indonesia's Environmental Impact Management Agency/*Badan Pengendalian Dampak Lingkungan* (BAPEDAL), which currently named as Ministry of Environment. In 2004, GoI introduced Indonesian Cleaner Production Center-ICPC (*Pusat Produksi Bersih Nasional/PPBN*) to promote, facilitate, and catalyze, cleaner production through service providers (AECEN, ICEL, & State Ministry of Environment of Indonesia, 2008).

In 2014, ICPC have a new role as an executor of resources pool management in serving the application of Sustainable Consumption and Production (SCP) in Indonesia (Ministry of Environment, 2014). SCP is program that aims to create patterns of economic production that is more efficient. In 2013, SCP was launched as the 10-Year Framework of National Programs and has been formally adopted in the 2015-2019 medium-term development plan (RPJMN). The program comprises of (GGGI Green Growth Program, 2015):

1. The Ministry of Energy developing criteria for eco-labeling, systems to verify labeling and public information to support this initiative, as well as green public procurement
2. The Ministry of Industry working towards green industry
3. The Ministry of Public Works and the Green Building Council developing green building construction
4. The Ministry of Tourism building capacity for ecotourism based on sustainable consumption and production models

Other example that applies clean production is rattan production called "Promoting sustainable production and consumption eco-friendly rattan products" (PROSPECT) program. This program has been initiated by PUPUK (The Association for Advancement of Small Business), AMKRI (Indonesia Rattan Furniture Association) and in cooperation with SNV (Netherlands Development Organization) and Innovations Zentrum Lichtenfels e.V., Germany which aims to support the development of rattan industry in Indonesia. This program has been running since 2013 and aims to create Indonesian rattan products brand that are environmentally friendly (Aldila, 2016). In 2015, PROSPECT has trained 1,200 rattan SMEs in Cleaner Production, published and distributed guideline books on rattan cleaner production, and provided technical assistance to rattan SMEs in order to be able to produce eco-friendly rattan products (PROSPECT Indonesia, 2015).

2.1.4 Tax policy

Since 1997, the Ministry of Environment in cooperation with the Directorate General of Customs and Excise at the Ministry of Finance has given an exemption or **reduction of duties for imports on pollution control equipment and materials used by manufacturing industries**. This exemption is under Finance Minister Regulation No. 101/PMK.04/2007 concerning The Exemption of Duty on Equipments and Materials Used in Environmental Pollution Control, which replaced Finance Minister Decree no. 136/KMK.05/1997. The equipment includes installations, machine and machinery and its equipment and spare parts that are solely used for waste processing. The aim of tax exemption is to facilitate industry that produces waste and waste treatment company to

provide more affordable equipment for environmental protection. In addition, zero import duty is to encourage/motivate industry toward environmental protection.

In addition, government also offers incentives such as **tax reduction on the cost of waste treatment**. In 2008, government issued Law No. 36/2008 on Fourth Amendment to Law No.7/1983 on Income Tax. Based on the law, one of the costs components that could be deductible from gross income is waste treatment cost. This regulation is stipulated in article 6 paragraph 1.

2.1.5 Government award

There are numerous award related to sustainability standard initiated by government. However, there were only limited award that targeted to SMEs. One of the examples of award for SMEs is **GreenIndustry Award**. This award is initiated by Ministry of Industry in 2010 and applies to all size of business firm with different assessment. However, the number of SMEs that participates the award were still minimum. In 2016, the number of participants of Green Industry Award was 142 companies which include 127 large industrial enterprises, 14 companies of medium-sized industries and 1 company of small businesses (Maskur, 2016).

2.1.6 Emission Reduction Investment (ERI)

ERI is a program that has been developing by Ministry of Environment to support GoI's 26 percent CO₂ emission reduction target by 2020. The purpose of ERI is to finance industry's (including SMEs) environmental programs in order to reduce the emission. Like the DNS program, ERI also gives low interest loan. Similar to DNS, ERI also offered by the German Development Credit Bank/Kreditanstalt für Wiederaufbau (KfW) with total amount EUR 16.5 million loans. The program offers a loan period of 40 year with a period of 10 yr. The interest rate of KfW to the Government of Indonesia was 0.75 percent per year with a commitment fee of 0.25 percent per year.

According Ministry of Finance report (2014), the program offer two types of loans, i) Loans up to Rp750 million for small-scale ERI investments; ii) loans up to Rp10 billion ERI Investment for medium-scale enterprises. ERI program is expected to reduce the emission up to 750,000 tones CO₂ emission per year. The following are terms and conditions that are applied to ERI program (Klarer et al., 2013):

- a. Loan from KfW for the ERI program reaches 100 million EUR, with assumption that an average loan size to industry is 10 billion IDR (708,546 EUR) and total projects funded would reach 50 to 100 projects.
- b. Eligible recipients of the loans are SMEs and larger firms including state-own enterprises (BUMN) with capital in the range of USD 500,000 (470,543 EUR) – USD 5,000,000 (4,705,503 EUR).
- c. ERI can be combined with commercial loans or other credit programs.
- d. The amount of loan is up to 50 billion IDR (3.5 million EUR) and can also be disbursed in dollars.

2.1.7 Investment policies

Incentives are needed to attract investor companies to not only invest but also linkage with local/domestic actors, especially SMEs. Through the linkage, investor companies are expected to share knowledge and technology so that the SMEs can be more productive and be better suppliers. By being better suppliers, the SMEs more easily affiliate themselves into GVCs. In this case, GoI's investment policies can play a big role. The Indonesia Investment Coordinating Board/*Badan Koordinasi Penanaman Modal* (BKPM) is a government agency that is mandated to boost domestic and foreign direct investment through creating conducive investment climate.

According to the World Bank survey in 2017, Indonesia ranked 91st which was increase 15 points compared to the last year survey³⁹. Although there is an improvement, doing business in Indonesia is still relative complicated and costly due to the illegal fees that businesspeople have to pay in order to receive necessary documents. Ease of doing business is important for SMEs, due to most of them are in the informal sector and do not have a license. The two main problems that hinder businesses to register a business are: 1) the number of permits that must be taken care of, and 2) high levels of corruption and inefficiency.

GoI's efforts to promote investment in Indonesia can be seen in its economic policy packages, particularly in the second, third, fifth, seventh, 10th, 11th and 13th packages that include efforts to increase investment with easier regulations for business licensing to simplify and improve the business climate for the industrial sector, for SMEs and for other business sectors (Carolina, 2016). The following are some strategies and services by GoI (through BKPM) in order to create a more conducive investment climate (BKPM, 2016).

1. Improving investment licensing services

a. One Stop Services (OSS) for Investment and 3-hour investment licensing

GoI established One Stop Integrated Services for Investment (OSSSI) at national, provincial and regency/city levels through Presidential Regulation No. 27 Year 2009 on OSSSI and also its implementation regulations through 4 BKPM Chairman's Regulations No. 11, 12, 13 Year 2009 and No. 7 Year 2010 on Amendment to No. 14 Year 2009. All OSSSI across Indonesia will be equipped with integrated computer online system (National Single Window for Investment/NSWI) in order to make easier investment services needed by investor/business entities. This online system is centred at BKPM in Jakarta. Through OSS, investors can submit and obtain permits exclusively at BKPM with time certainty and online monitoring.

In 2015, BKPM launched three-hour permit service. This program is based on Presidential Regulation No. 4 Year 2015. The permit require that investments worth more than Rp100 billion (US\$6.79 million) or projects that could employ more than 1,000 local workers in industrial estates should be able to process their preliminary permits at the BKPM's OSSSI in just three hours. The documents that are provided consist of Investment License, Certificate of Incorporation, Tax Registration,

³⁹ <http://www.doingbusiness.org/data/exploreeconomies/indonesia>

Company Registration, Import Identification, Customs Registration, Employment Plan, Working Permit, Letter of Land Availability.

In 2016, areas that have been formed the OSSIs consist of 34 provinces, 385 districts, 98 cities, 5 Free Trade Zone and Free Port (*Kawasan Perdagangan Bebas Pelabuhan Bebas - KPBPB*), and 4 Special Economic Zone (*Kawasan Ekonomi Khusus - KEK*). Then the areas that do not form the OSSIs comprise 31 districts and 4 KEK. As a result, at second quarter of 2016, investment realization has reached Rp151.6 trillion or increase 12.3% compared to last year. This figure is the highest record of investment realization in Indonesia. The source of these investments consist of domestic direct investment amounting to Rp52.2 trillion (up 21.7% from Rp42.9 trillion in the previous period)⁴⁰.

b. *Saberpungli*

In addition to improve the investment climate in Indonesia, in 2006, GoI has set up a special task force to tackle illegal levies named “*Saberpungli*”. The task force is based on Presidential Regulation No. 87 Year 2016. *Saberpungli* was established under the Coordinating Political, Legal, and Security Affairs Ministry. The unit's task is to combat illegal levies effectively and efficiently through optimizing the use of ministries/agencies and government. Whereas, *Saberpungli* function consists of four: intelligent service, deterrence, prosecution, and judicial. Two months after it was established, *Saberpungli* has received 17,600 reports on illegal fees. Most of the reports were related to permit issuance, administrative documents, land certificates and passports. It is too early to call the program a success. However, the government is really committed to ending illegal levies.

2. Improving investment climate

a. Infrastructure

Investment-friendly policy packages have been launched to support infrastructure in Indonesia. First are tax incentives, such as income tax relief for labor-intensive industries, tax incentives for real estate investment trusts (REITs) and tax incentives and relaxed regulations on property. Second are business and infrastructure incentives like those for the footwear and apparel industries, simplification of import licensing for drugs and raw foods, accelerating infrastructure development, water management and regulations, dwelling time optimization, oil refinery development, aviation sector incentives, downstream industries, debt to equity ratio, integrated logistics zones, CPO funds, support for export-oriented industries, relaxed cattle imports, improved ease of doing business ranking, revised DNI and facilitating FDI and accelerating electricity infrastructure. Last, other incentives, such as the one-map policy, expansion of coverage and interest subsidies for micro, small and medium enterprises (MSMEs) are also expected to support infrastructure.

⁴⁰ <https://www.pressreader.com/indonesia/the-jakarta-post/20160816/281784218494007>

b. Incentive (tax allowance/tax holiday, income tax)

Import duty exemption – Based on Regulation of Ministry of Finance No. 76/PMK.011/2012 jo. No. 176/PMK.011/2009. This incentive focuses on exemption from import duty on the import of machines, goods and materials for production for a period of 2 years. The import duty exemption is granted for 2 years based on the installed machine capacity for production purpose and available for 1 year extension. If the company uses at least 30% local machineries, import duty exemption is available for additional product for 4 years. The requirements of this incentive are imported machine, goods and raw material are: i) Not yet being locally produced; ii) If the local machines are available, yet unable to fulfill criteria of required machines; iii) If the local machines are available, yet unable to fulfill the total required machines.

Tax allowance – Based on Government Regulation No. 9 of 2016. The facilities of tax allowance include: i) Total net income reduction by 30% of the investment, that are charged respectively 5% per year in the 6 years period; ii) Accelerated depreciation and amortization; iii) Imposition of income tax on dividends which paid to foreign tax subject of 10% or a lower rate according to the avoidance of double taxation agreement; iv) Compensation losses longer than 5 years but not more than 10 years with the certain conditions (can be seen in the regulation) for the companies that are located in industrial or bonded zone, developing infrastructure, using at least 70% domestic raw material, absorbing 500 to 1,000 labors, having Research and Development (R&D) program, reinvesting capital, exporting at least 30% of selling product.

Tax holiday – Based on Regulation of Ministry of Finance No. 159/PMK.010/2015. Income tax exemption or Tax Holiday are available for 5 to 15 years and is possible for the extension up to 20 years under the discretion of Ministry of Finance (MoF). For Communication, Information and Telecommunication Industry, the value of investment plan could be lowered from Rp500 billion (34 million EUR) to Rp1 trillion (68 million EUR) for exemption up to 50%. If the investment value exceeds Rp1 trillion, the exemption is available up to 100%. The decision for Tax Holiday proposal takes 45 days, with details 25 days at BKPM and 20 days at MoF. If the proposal is rejected, the company may get Tax Allowance incentive when they fulfill the criteria stated in Government Regulation No. 18 Year 2015. There are nine types of industries that are eligible for Tax Holiday: i) Upstream metal industry, ii) Oil refinery industry, iii) Organic basic chemical industry, based on oil and natural gas, iv) Machinery industry producing industrial machine, v) Processing industry based on agriculture, forestry fisheries, vi) Telecommunication, information and communication equipment industry, vii) Maritime transportation industry, viii) Processing industry that are main industry in Special Economic Zone, and ix) Economic infrastructure not in the scheme of government and business project.

c. Revision of Negative List

Revision of Negative List is a revision on list of business fields closed to investment and business fields open, with condition, to investment. The purposes for the changes are: i) the achievement of national targets, both economic and infrastructure development, ii) enhancing the role of domestic and foreign investments in economic

development, iii) creation of new employment opportunities, iv) increasing value added and national exports, v) the increase in state revenues.

Due to the revision, Presidential Regulation No. 44 Year 2016 becomes more open to investments, makes investment process easier, provides more protection to investor, becomes easier to be understood by the investors, reduces the cost of logistic, reduces the production cost, supports the creative industry, accommodates the improvement of the workers.

2.2 Challenges and constraints for Indonesian SMEs to adopt sustainability standards

Various initiatives have been taken, not only by the government but also by donors, to encourage the implementation of sustainability standards in business sectors in Indonesia, including SMEs. The GoI has also made a strong commitment to facilitate sustainable economy. However, there are many implementing problems to solve. The current incentives and disincentives for uptake of higher sustainability standards are also less effective. The following summarizes general challenges for SMEs to adopt sustainability standards and some specific cases and examples of the challenges.

2.2.1 High costs and difficult procedures of certification process

In order to meet international standard, Indonesian SMEs need to secure several number of certificates to meet global standards. International Standard Organization (ISO), domestic timber legality system (SVLK), and Indonesian Sustainable Palm Oil (ISPO) are examples of certification need to be secured by Indonesian SMEs in order to meet international standards. However, there are several challenges in securing those certifications. One of the obstacles is the certification fee. In order to have international standards, Indonesian business players (including SMEs) must pay expensive costs to secure certificates from authorities for their businesses. Another obstacle is that the SMEs do not aware of the benefit of securing those certificates. The SMEs also lack of basic information on how to apply for those certificates and of institutions that handle the certification processes.

Related to high costs of certification, Indonesia SMEs also have problems with Intellectual Property Rights (IPRs) certificate. The SMEs are reluctant to apply intellectual property rights due to their poor information on the IPRs and costly application fee.

2.2.2 Weak motivation to green practice

It could be argued that the activities of most enterprises in Indonesia are still driven by profit motive, with little concern for the sustainability of their resources. On the one hand, companies tend to focus on purchasing raw materials and/or intermediate goods at the lowest cost in order to drive consumption and making the maximum profit for their shareholders. On the other hand, Indonesian consumers are focusing more on purchasing more affordable goods and services, which is a common phenomenon in developing countries. Unlike in much developed countries, eco-branding and eco-label are rarely considered by Indonesia consumers in choosing products. Only a small part of consumers who are responsible buyers

who have high concern for eco-friendly products and care about whether the goods and services they purchase are processed by following sustainability standards.

2.2.3 Lack of knowledge and transformative capacity to respond to sustainability standard

Another challenge to implement the sustainability standards is the lack of knowledge and transformative capacity to respond effectively to sustainability concerns. Schouten, Vellema, and Wijk (2016) further argue that the transformative capacity in Indonesia largely depends on its acceptance by and connection with locally constructed rules and practices directing sustainable change. This raises two questions, i.e. (i) how far a global standard is flexible enough to align with diversity in local context and (ii) how far the local regulation and local culture can fit to the global standards.

Producers supply base in Indonesia also have different sizes, are located in different geographies, with different business models, and with different sources of investment. Due to this diversity, each producer may respond differently to incentives designed to promote the spread of sustainability standards. In particular, SMEs may respond and make decisions based on non-economic factors, such as family, social pressures, or securing tenure/ownership over land (Gnych, Limberg, & Paoli, 2015). The difference in how to meet the sustainability standards may cause the marginalization and exclusion of the SMEs. The SMEs also had limited capital and knowledge of sustainability standards (Mimba, 2012).

2.2.4 Limited connectivity

The Indonesia SMEs awareness to adopt sustainability standard is still low. There are several reason that caused the awareness in SMEs is still minimum, such as limited connectivity⁴¹ and poor education. Asian Development Bank (2015) mentions that connectivity is the second main factors SMEs to succeed in GVC, after competitiveness. This factor is imperative due to gain knowledge related to sustainability standard. Asian Development Bank (2015) also mentions that connectivity will benefit firm to harmonize standards and professional qualifications (including investment laws and taxation procedures). Firm could also identify the economic potential and ensuring its resilience to climate change and other risks with connectivity. Therefore, this condition will depend on critical investments in connectivity.

However, in 2013, there are only 21.98 percent of the Indonesia population were internet users. This number is quite lower compared to other countries in Asia such as China (50.3), Malaysia (71.06) and Thailand (39.32)⁴². Moreover, the average connection speed in Indonesia in 2015 is about 7.45 megabits per second (mbps). This connection speed is lower 5 megabits per second (mbps) compared to Singapore which was 12.5 megabits per second (mbps)⁴³.

⁴¹ Telecommunications, railroads, highway, airports and seaports are backbones of connectivity.

⁴² World Bank Data

⁴³ Akamai Technologies, *State of the Internet*, Q3 2015

2.2.5 High cost of required/certified raw material

National and Indonesian-based multinational firms always hope on raw material availability in the cities where they operate. In addition, individual SMEs are constrained from obtaining inputs, such as supplies, raw materials, equipment, technology, skilled labor, and finance, due to their business size and their isolated/remote location (Abe, 2015). The environmentally friendly product relative more expensive compared to the non-environmentally friendly product.

Besides, SMEs also face challenges to secure the raw material, such as uncertainty, dependency to importers and single partners, as well as fluctuated currency. In addition, research by BAPENAS found that Indonesian firm experiences that there are limited availability of domestic raw materials meeting international specifications.

2.2.6 Limited technology to meet the required standards

Generally, technology for green industry is not widely available in the market so requires innovation that must be done by SMEs. Costs for innovation are often caused high cost production, thus impact SMEs product become uncompetitive.

Machines are also main part in a production chain for small medium enterprisers to generate goods. Unfortunately, they were unable to improve quality as machines at factories under poor condition. Poor machines condition, such as lack of maintenance and old age will hamper businesspeople to escalate competitiveness

3 SMEs and industry specific profile in Indonesia

3.1 SMEs overview in Indonesia

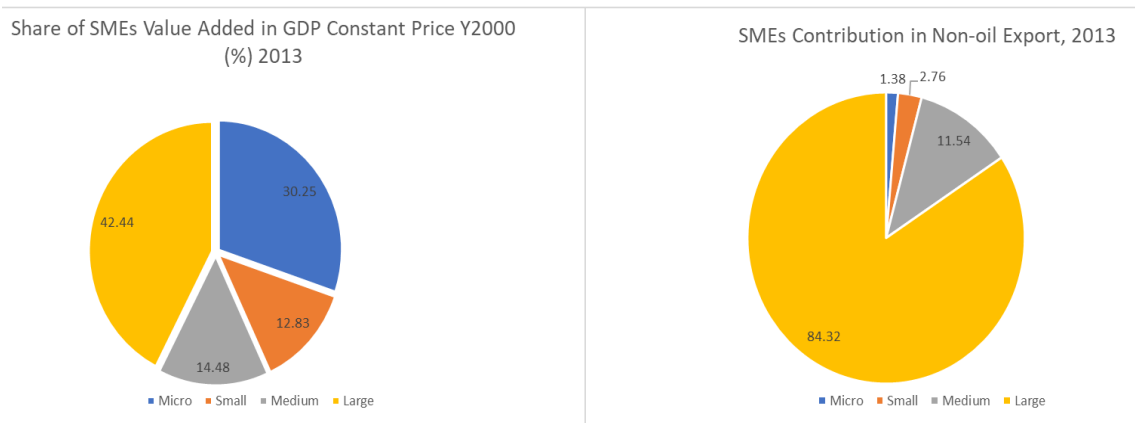
In Indonesia, the Micro, Small, Medium Enterprises (MSMEs) play a crucial role in the economy, particularly in employment and economic growth. The term MSMEs is slightly different to the general definition of SMEs after the implementation of Law of Indonesia No. 20 Year 2008, which adds Micro enterprises the general term. Hence, throughout this paper the term MSMEs will be referred as SMEs to avoid any inconsistency in using the term.

SMEs represent more than 99% of all enterprises and 96.99% of employment. In 2013, SMEs were recorded at 57.895 million units, rose by 12.6% (accumulated growth) compared to five years ago (2008) which was accounted for 51.409 million units (BPS, 2017a). Similarly, the increasing number of employment from 94.024 million people in 2008 to 114.144 million workers in 2013. These figures suggest that SMEs sector is one of the biggest source of employment, which provides job opportunities to a large proportion of the Indonesian workforce.

Furthermore, Indonesia's SMEs are largely scattered in rural areas and are mostly found in agriculture, trade and manufacturing sector Within these sectors, the majority of enterprises are privately owned and have the entity status of sole proprietorship of non-legal entity (World Bank, 2015). This tells us, SMEs are more vulnerable to financing and legal issues in comparison to those legal entities enterprises. It is worth noting, despite its big

contribution to the domestic economic growth such as employment and sectoral activities, SMEs do not contribute as much to the GDP and non-oil export sector, accounted for approximately 58% and 16% respectively (see Figure 4).

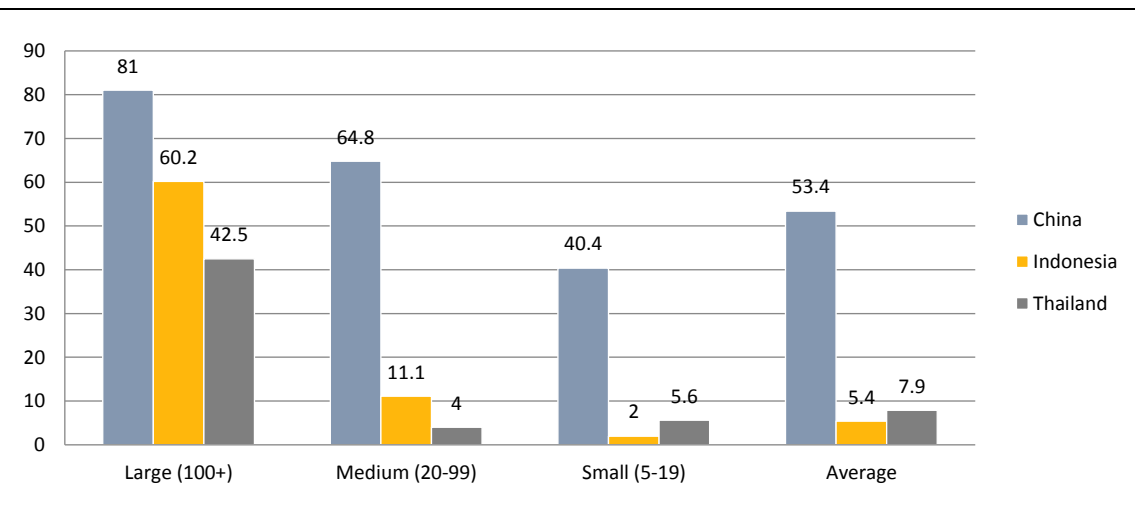
Figure 4: SMEs share of GDP and share of export in non-oil sector (%), 2013



Source: Ministry of Cooperatives and SMEs (2015)

Within a broader context of trade, the participation of Indonesia's SMEs in the global market remains low as indicated by the per cent of firms exporting and per cent of firms using foreign origin material and supplies. According to the World Bank Enterprise Survey, in 2015 only 7.9% of SMEs exported directly and 5.6% exported indirectly and around 12.3% used materials and supplies of foreign origin (2015). Similarly, based on the the number of firms that have international-recognized quality certifications, Indonesia still lags behind other Asian countries such as China and Thailand as depicted in Figure 5 below. This result suggests Indonesia SME's low export propensity to the global market may be partly due to its low engagement and compliance with international standards. Low percentage of SMEs whom are certified at international level suggests there are contributing factors (e.g. practice of informal sector and financing ability) that may hinder these enterprises from obtaining international certification, and enabling them to join the global production network.

Figure 5: Sum of percent (%) of firms with internationally-recognized quality certification, 2015



Source: World Bank Enterprise Surveys Data, (2015)

Nonetheless, looking at the growing number of SMEs and its significance contribution to the economy, Indonesia's SMEs have much room for expansion and improvement. Though, due to their characteristics as well as specificities, SMEs often face issues that can hinder their prospective growth. Some of these issues include limited financial access, entrepreneurship and technical capacity, low productivity, technology adoption and standard implementation (Ministry of Cooperative and SMEs, 2015).

In the era of globalization, the proliferation of regional trade agreements imposes new challenges to the SMEs. Indonesia's SMEs will not only face stronger competition from global competitors, but also increase in production costs and implementation of global sustainability standards and practices. This implies, the exposure to global market and production network could mean two things: firstly it could enable SMEs to do economic and social upgrading which will force SMEs to spur its productivity growth and secondly, it could possibly intensify the fragile production structure and poor labor and sustainability condition that has already existed prior to joining the global network (Posthuma, 2008).

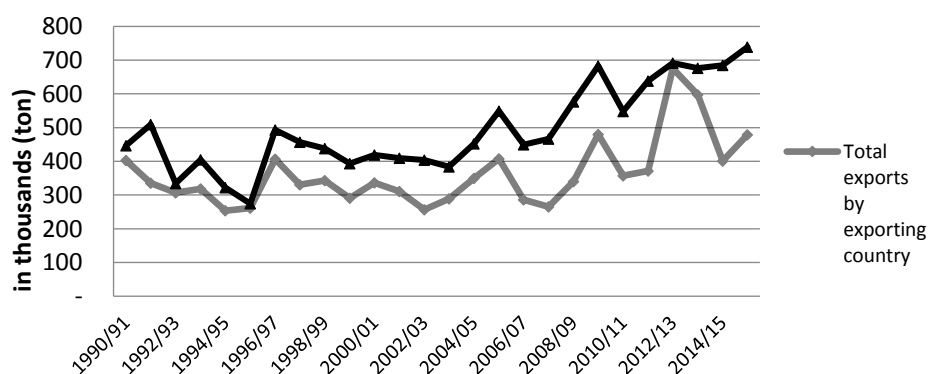
Thus, it is important for SMEs to have the incentive and the facilitation provided by the government that will support them to enhance their productivity growth in order to prepare SMEs to meet these global demands for higher sustainable standards for labor and product specification.

3.2 Case study I: Indonesia's specialty coffee industry and its VC position in global network

3.2.1 Coffee production and export

Indonesia is one of the largest coffee producers and exporters in the world after Brazil, Vietnam and Columbia. For more than 30 years, Indonesia's coffee production has shown an overall positive growth, which expanded rapidly in the last ten years. In 2016, Indonesia's coffee production stood at 739.05 thousand tons reaching all-time high. Due to the growing demand in the global market, Indonesia's coffee production growth has accelerated, as it is for other coffee producing countries. Consequently, Indonesia's coffee export has also increased, as seen in the figure below.

Figure 6: Coffee production and export, 1990-2016



Source: International Coffee Organization (www.ico.org) and modified by author

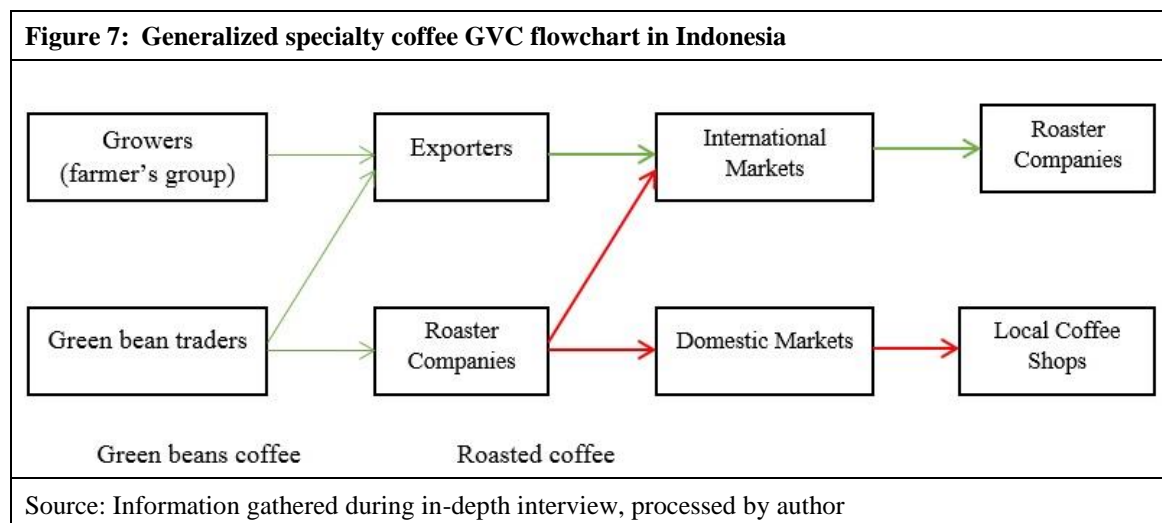
On average, coffee plantation area in Indonesia is estimated around 1.2 million hectares. In 2016, the coffee plantation area was 1.23 million hectares, which has not much changed in comparison to a decade ago, estimated at 1.25 million hectares (BPS, 2017b). Most of plantation area produces three types of coffee, they are Robusta, Arabica, and Liberika coffee. The Robusta coffee accounts for almost 90% of total production, while the Arabica coffee and Liberika make up for 10% of production. Similarly, Indonesia's coffee export mainly comprises of Robusta coffee (80%) and Arabica and Liberika coffee (20%) (Ministry of Agriculture, 2015). Large proportion of coffee production is exclusively planted on smallholders' land area, which makes up for 96% of total area, which is followed by state-owned coffee area at 2% and private-owned coffee area 2%.

Moreover, Indonesia's coffee plantation areas are centered on Sumatera, Sulawesi and Java island. Robusta coffee is largely produced in Lampung, South Sumatera, Bengkulu, East Java and West Sumatera, meanwhile Arabica coffee mainly grows in Aceh and North Sumatera (BPS, 2017b). Although most of coffee plantation produce Robusta coffee, it is observed that coffee plantation area for Robusta production has shown a decline, while area for Arabica coffee shown some increase. In 2006, land area for Robusta coffee was estimated around 1.13 million hectares and fell to 1.04 million hectares in 2011 while land area for Arabica coffee grew from 177.1 thousands hectares to 251.8 thousands hectares in 2011 (AEKI, 2013). This indicates an increase in Arabica production which may be due to the increasing demand for specialty coffee from the global market, particularly in developed countries such as Japan, US and Europe. In addition, based on its product type, there seems to be a shift in coffee production towards processed coffee and roasted coffee. Depicted below is Indonesia's coffee export based on its product type.

Table 3: Export volume based on product type, 2008-2013				
Year	Green beans	Instant coffee	Extract, essence, concentrate	Roasted coffee
2008	468,018	7,829	15,618	727
2009	510,187	7,200	19,647	708
2010	432,780	7,384	43,870	812
2011	346,091	7,196	69,721	399
2012	447,064	71,685	14,941	1,526
2013	532,157	72,899	10,030	1,867
Source: Association of Indonesia Coffee Exporters (AEKI), 2013				

In terms of export value, the overall coffee export's contribution has increased. In 2000, the coffee export (FOB) was valued at US\$ 339.9 million, and as global demand continued to grow it increased to US\$ 812.3 million in 2010 and US\$ 1,189 million in 2015 (BPS, 2017b). The expansion on Indonesia's coffee production and export has resulted from the seeming growing demand for coffee globally and domestically. In 2010, global consumption for coffee was around 6.9 million tons (117 million bags) while this year is forecast to increase to 9.1 million tons, or 153 million bags. Although coffee consumption in Indonesia remains low, it has continued to grow, indicated by the consumption per capita which grew from 0.8 (kg/year) in 2010 to 1.54 (kg/year) in 2016 (ICO, 2017).

3.2.2 Value chain in coffee industry



Within the Global Value Chain (GVC) context, the position of specialty coffee industry is depicted in the flowchart above (Figure 7). Similar to other coffee industry (e.g. commercial-grade coffee), the specialty coffee works under the buyer-driven chain and roaster companies and large traders/exporters are the leading firms in the functional division of labour within the chain (Ponte, 2002). Growers, whom are mainly smallholders are responsible for plantation and production process which includes selective picking, pulping, fermentation, sun drying, dry hulling, and manual sorting. Coffee production is then collected by green bean traders who act as collector traders who sell coffee to larger traders/exporters and local roaster companies. At a global level, coffee are exported to the international markets or can be sold to roaster companies in the domestic market. In addition, coffee beans from producing countries undertake an international grading coffee system which is called *The Q Coffee System*. It aims to identify the quality of coffee, especially specialty-grade coffee at the international level. The system allows greater opportunity for growers to obtain a fair market premium price through high-quality producing coffee.

In the value chain system, growers generally have a close relationship with green bean traders to whom coffee beans are sold to. However, due to the profile of growers and its characteristics (e.g. low-income family, no education background), it often results in not only low productivity and low quality of coffee, but also weak bargaining power within the global system. The collector traders which have higher bargaining power and better access to the market have more control over economic decision making and production decision making which prevent them benefiting from the global network. Consequently, growers face several issues such as limited choice of marketing channels, unfair price system and market mechanism within the supply chain system (Arifin, 2010).

In addition to producer's value chain position, growing global initiatives on sustainability standards and practices have played a role in improving quality of coffee as well as restructuring supply chain in the global system (Arifin, 2010). Coffee certification systems such as the Rain Forest Alliance, UTZ Certified and Fair Trade and capacity building programs for producers are seen as alternative mechanism to improve coffee production and trade within the value chain system and empower producers especially growers. It allows exporters and larger traders to have direct relationship in ensuring integrity and high quality

of product. Such mechanism will encourage improvisation of market structures and price transparency as well as sustainability practices in the long run.

3.2.3 Regulations and issues

The emerging trend of global sustainability initiatives have pushed traders and exporters within the value chain system to enforce sustainability standards and environmental practices in coffee-producing countries. Within the specialty coffee industry itself, there has been an increasing awareness and market value for “sustainable coffee”(Ponte, 2004) towards Certification systems becomes a requirement for producing countries by the exporting/consuming countries to ensure “economic viability” for growers, “environmental conservation” and “social responsibility”. In Indonesia, the most prominent certifications include the Utz Certification, Rainforest Alliance, Bird-friendly and Fair Trade.

However, given the raising awareness of sustainability standards and environmental practices and the growing initiatives for certifications often raised another question for coffee growers, particularly smallholders. The implementation of global sustainability standards can often be taxing due to several issues particularly for SMEs. This section will further discuss about the issues and incentives regarding the adoption of sustainability standards for SMEs in the coffee industry in Indonesia. The analysis made is based on in-depth interview with two SMEs coffee and one sustainability coffee platform (NGO).

Issues

1. Profile of coffee producers

Coffee producers in Indonesia comprise of a large proportion (90%) of smallholders. The majority of these producers come from low income family with low education and skill background. Without formal and intensive agricultural training, it affects the productivity and yield of coffee they produce, which often put their production at risk. Other factors include their weak bargaining position within the value chain system and high dependence on collector trades exacerbate the existing conditions for producers, especially smallholders.

2. High certification and membership fees

The adoption of sustainability standards require coffee producers to obtain different certifications, which could be burdensome for most of coffee producers due to its high cost. Without the financial support from traders or exporters, producers will not be able to afford such expenses especially given other principle issues they face. According to our interview, less than 10% of coffee exporters are certified as sustainable. This indicates not enough incentives for coffee producers and traders to obtain any sustainability certifications.

3. Unawareness towards the importance of sustainability standards

Coffee producers are often unaware of the importance of sustainable and good agricultural practices. The lack of enforcement and coordination between government and coffee producers may also contribute to the underlying issue. The adoption of sustainable standards, which most are voluntary is often only enforced by NGOs and traders/exporters itself.

4. Lack of transformative capacity to comply

The lack of transformative capacity to comply with sustainability standards can originate from various factors such as lack of knowledge, technology and the economies of scale. Within the specialty coffee industry, the adoption of sustainable standards come mostly from buyers (e.g. local coffee shops, roaster companies).

Incentives

1. Market incentive: higher premium price

The adoption of sustainability standards by coffee producers are incentivized by higher price offered by traders/exporters. Different pricing scheme can act as an incentive for producers to produce high quality of coffee. One example is fixed price scheme where buyer sets a fixed price for coffee product, where buyer is responsible for market risks.

2. Direct trade between coffee traders and producers

The implementation of sustainability standards enforced by the market encourages intensive and direct interaction between traders and coffee growers within the value chain system. It allows direct contact between both parties which promotes the principle of traceability. This acts as an incentive for growers to perform best practice for best quality. In return, the level of trust built between both parties will translate into fair and direct trade.

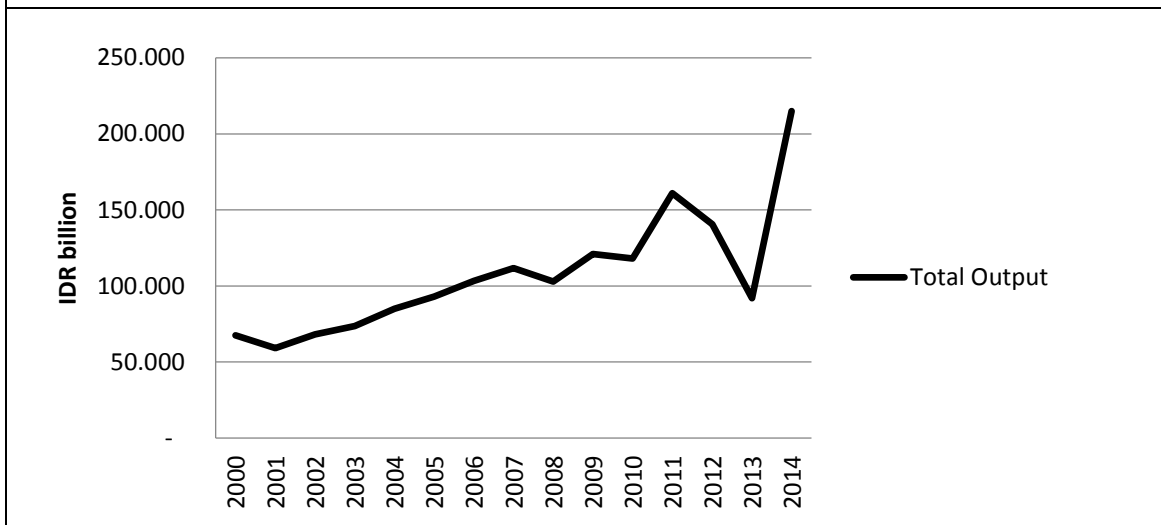
3. Formal training and education

Based on our in-depth interviews, the implementation of sustainability standards are taught by traders through formal training and education. Training on best agricultural practices are believed to have stronger impact in the long run rather than affording coffee producers certification and membership fee. Thus, this can serve as an additional incentive for coffee producers, particularly smallholders to improve their production through better practices and implementation of labor condition and sustainability standards.

3.3 Case 2: Textile and Products of Textile (TPT) industry and its VC in global network

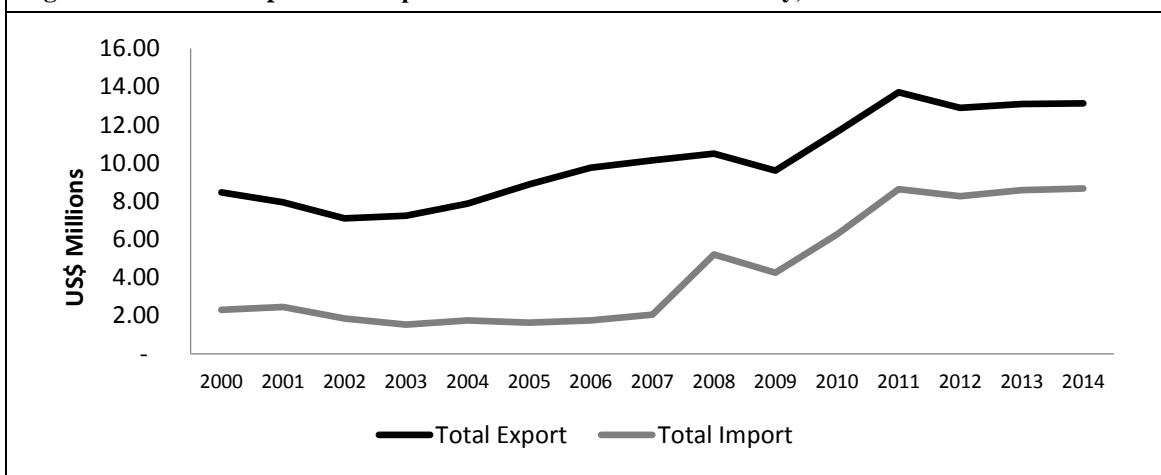
3.3.1 Textile and Products of Textile production

The Textile and Products of Textile (TPT) has been one of the most important industries in the Indonesian economy. The industry plays a major role in Indonesia's employment and as one of the main non-oil exporting products. During the 1980s, after a series of economic reforms (e.g. export promotion), concurrent with the declining growth in oil and gas sector, the TPT industry began to grow rapidly. Until 2011, the textile industry has contributed significantly to the non-oil gas industrial sector growth, recorded at 7.5% (WTO, 2013). Figure 8 below depicts the output value of textile industry for the period 2000-2014 measured in IDR billion. Overall, it shows a gradual increase trend, from IDR 98,066 billion in 2008 which slowdown and plummeted in 2013 before it grew rapidly to IDR 214,966 billion in 2014 (BPS, 2017a).

Figure 8: Output value of textile and products of textile sector, IDR billion, 2000-2014

Source: BPS (2017a)

The Textile and Products of Textile sector has experienced rapid growth ever since the economic reform took place in 1985. The implementation of reform packages transformed the trade structure of the sector, in which custom procedures, tariff-barriers and other restrictive regulations were obliterated. Moreover, as seen in Figure 9 below, the annual growth of the textile exports continued to rise, despite some minor falls in during the period. In 2000, Indonesia's export value was at US\$ 7.93 million and US\$ 13.3 million respectively in 2014. Similarly, the overall total import from the textile and apparel sector also increased corresponding to the growing demand for these productions within the country. Figure 9 depicts it as follows.

Figure 9: Total export and import of Indonesia's textile industry, 2000–2014

Source: WITS World Bank (2016)

The Textile and Products of Textile sector in Indonesia consists of three sub-sectors: upstream, mid-stream, and down-stream (Association of Textile Indonesia, 2014). The upstream sector comprises industry activity at the very beginning level such as natural fiber and fiber-making. The main characteristic of the sector is capital-intensive. The fiber-making process requires full automation technology with very large energy absorption. Therefore,

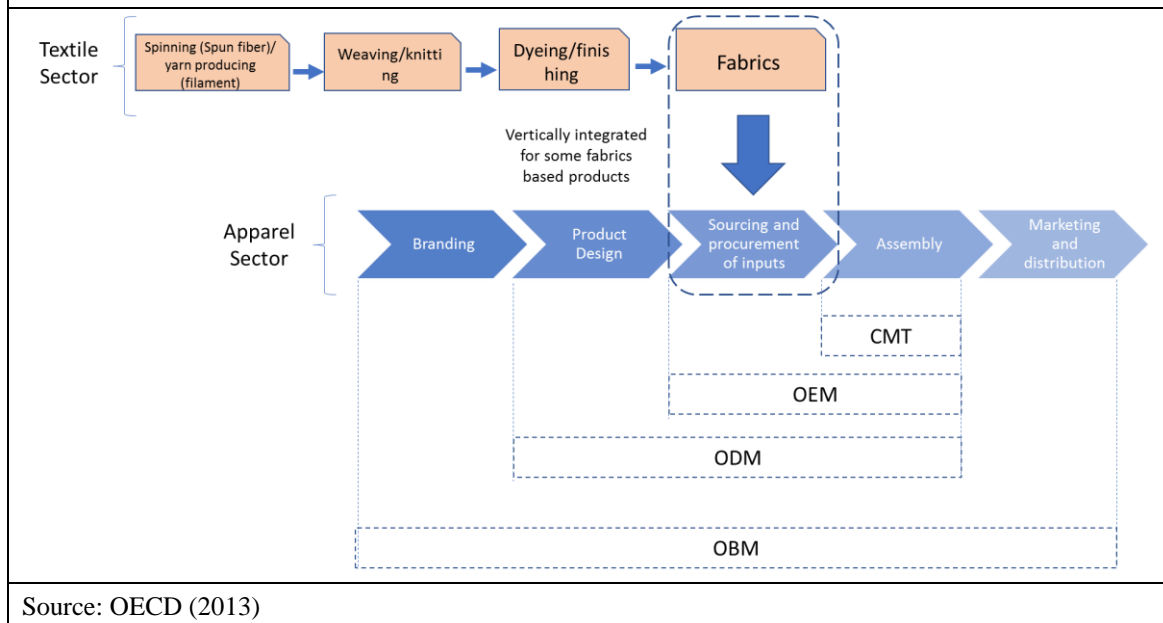
only small number of labors is required in the fiber making process. Products include Polyester Staple Fiber and Nylon Filament Yarn. Meanwhile the mid-stream sector is less capital-intensive and more labor-intensive. The mid-stream sector incorporates spinning, weaving and knitting activities which manufactures products namely cotton yarn, woven fabric and knitted fabric. Lastly is the down-stream sector which is full labor-intensive. Over time, the technology has progressed rapidly in supporting manufacturing activities. The products such as garment and other textile products are then renovated to finished goods such as knit and woven garment and bed linen.

The textile sector is a high labor-intensive manufacturing industry relative to other non-oil manufacturing industry on average. This indicates real productivity changes more often due to the technological advancement and improved efficiency and productivity. In Indonesia, the textile industry absorbed quite significant amount of labors although throughout the year has shown a declining trend in the respective sector. In 2000, the textile industry contributed around 15% to the total employment for large and medium sector, where it declined to 12% in 2007 and 11% in 2014 accounted for approximately 546,940 labor unit (BPS, 2017a). Moreover, looking at the size of the Textile and Products of Textile sector, the majority of firms are medium and large companies due to the high-profile investment which can only be accessed in the formal financial market. Similarly, according to BPS (2017a), as of 2014 the number of medium and large firms was recorded at 2555, which has not changed much in comparison to five years and fifteen years prior which totaled to around 2300 and 2000 medium and large firms respectively.

3.3.2 Value chain in textile industry

Value chain in textile industry is slightly more complex than in coffee industry since it has longer chain or phase of production. This longer chain creates more opportunities for firms, especially in developing countries, to participate and give a value added in one of the production phase. The concept of GVC itself is the processes of production and distribution which are linked and organized by inter-firm governance across border (Fukunishi, Goto, & Yamagata, 2013). The characteristic of value chain in textile industry is “buyer-driven chain”, in which buyers as a lead firms that can be in form of brand owners, brand marketers, or retailers (OECD, 2013). Moreover, buyers usually set up several requirements for firms regarding product quality, lead time, and compliance with social and environmental standard (Thomsen, 2007).

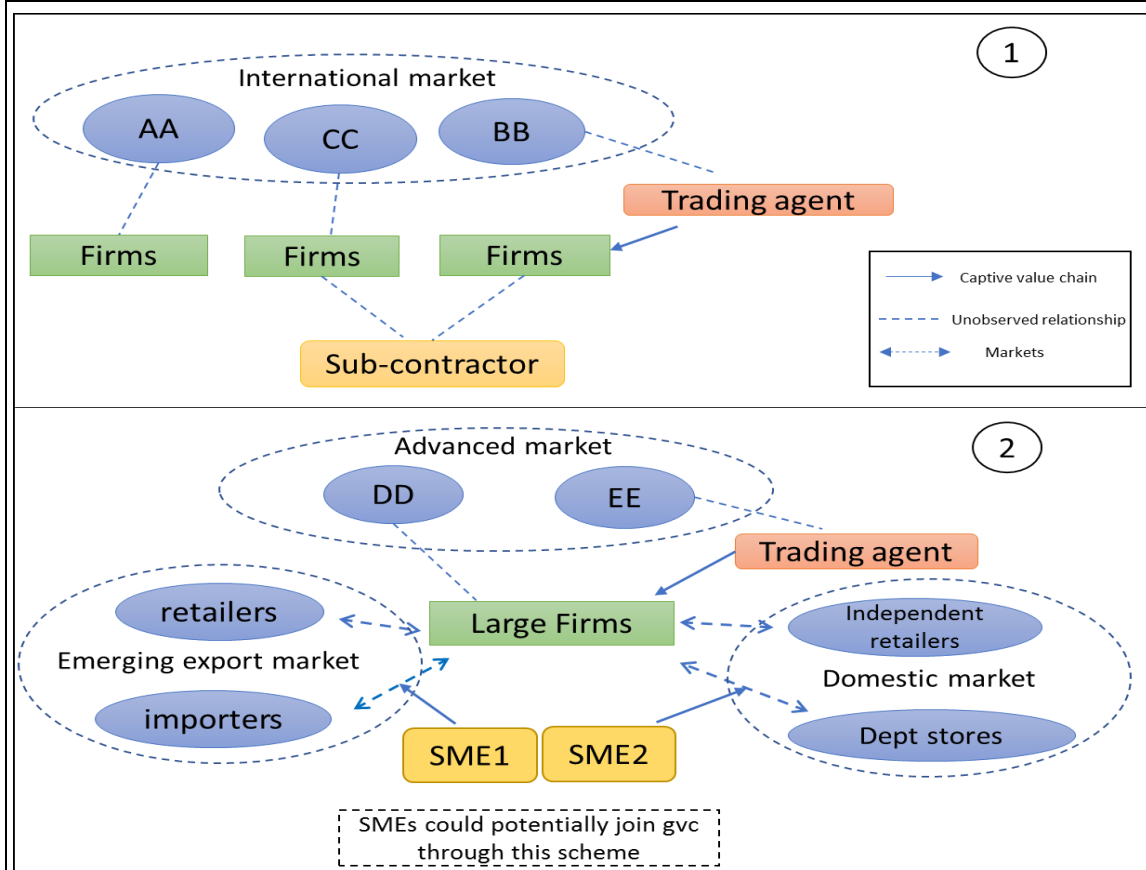
The key important things of GVC is to add value in one of the production process and giving some economic upgrade. For some developing countries, firms usually could join gvc through labor intensive functions like cutting, making (sewing), and trimming (CMT). CMT modality usually consist in function that are mostly dependent on low-skill or semi-skill labor and it is one of lowest value added. For others, they can give more functional value added in a way business upgrade its position into more complex chain. When sourcing of input and procurement process functions added to the assembly, it is referred as Original equipment manufacturing (OEM). Furthermore, when firms also have the responsible for product design it is called Original Design Manufacturing (ODM), and if they also integrate branding and marketing it is known as original brand-name manufacturing (OBM).

Figure 10: Value chain in textile industry

Indonesian textile firms, in their experience entering GVC, always have interaction to international buyers or third party which is usually called trading agents. Independent trading agents can be functioned as “hand extension” of international buyers in order to find garment manufacturer to produce goods ordered with standards that is set by international buyers. Moreover, trading agents must ensure and check standard quality of products that are being produced by manufacturer before it comes to the buyers’ hand.

During engagement or interaction process with international buyers, at least there are two types of agreement or buying practices. First, firms receive an order from international buyers with all quality standard and brand design set by international buyers. The buyers usually established liaison offices in that particular country to conduct surveillance on garment manufacturers, in terms of quality of products and social and environmental compliance. Transferred knowledge on technical improvement on production, such as implementing lean production, to shorten delivery time, and improve materials management, are given by international buyers to increase productivity and lower production cost (Kadarusman, 2010). Therefore, this relationship is advantageous for both parties. Second, the relationship scheme where firms only received order from international buyers. With regards to product quality, design, or even source of input was fully under firms’ responsibility. Neither, buyers do not intervene production’s process, which include labor standard, social or environmental compliance. This type of scheme usually happens when firms successfully enter emerging export market such as in Middle East or African countries and firms could also sell their own brands.

In regards of production process, firms do not always produce all the orders from buyers or trading agents by their own. Sometimes, large firms search for sub-contractor (usually smaller garment manufacturer) to help in the production process. In this scheme, large firms will be a supervisor for the sub-contractor regarding standard quality products. Small garment manufacturers or as we can categorize as SMEs have better opportunity joining global value chain by this kind of format as it is difficult for them to find and connect themselves into international buyers or even trading agents.

Figure 11: Mechanism of insertion into value chain

Source: Kadarusman (2010), modified by author

3.3.3 Key issues and recommendation

In Indonesia, issues and challenges that are often encountered by the textile industry mainly originate from low productivity, high production cost and sustainability standards. The issues have become major constraints for prospective investors in doing business in the textile industry. Given the sizeable industry production and growing global and domestic demand, Indonesia's textile industry have the potential to expand to meet the global demand. This section will further discuss about the issues and incentives regarding the adoption of sustainability standards for SMEs in the textile industry in Indonesia. The analysis made is based on in-depth interview with medium enterprise and the Indonesia's association of textile.

Based on our interviews, the sustainability standards are mainly adopted by large and medium companies and is not an underlying issue within the textile and product of textile industry. All textile companies comply fully to the compliance/standards imposed by buyers where the consequences of non-compliant behavior can result in high penalty/claim cost or termination of contract for the company. In the case for SMEs, they often do not adopt any sustainability standards because of the inability to meet standards required by buying agents/global buyers.

That makes SMEs involvement in the GVC is relatively marginal. Not only that SMEs often do not have access to supply global buyers, they also are not eligible to become suppliers for

larger companies that participate in the production network due to their inability to adopt sustainability standards. Those SMEs are only able to have informal contracts with larger companies, which tend to outsource from SMEs supplier when they face difficulties fulfill buying orders. Those contracts are often without the consent of buyers or brand's principals to avoid sanctions and penalties. Another opportunity for SMEs in the GVC of TPT is to become suppliers of large companies for their products being sold in emerging markets, such as Middle Eastern and African markets (Figure 11).

In addition, SMEs in the TPT industry often face difficulties such as lack of skilled labour, lack of training and education for labours. The lack of government's involvement in the provision of formal training is an underlying issue, the company felt needed to be addressed.

The supply chain system does not permit SMEs to have direct access to the global buyers due to layers of agents and buyers in between. This has resulted in captive relationship between SMEs suppliers and global buyers within the textile industry. This finding is similar to a study done by Kadarusman and Nahvi (2013) where it identifies the captive Global Value Chain (GVC) relationship between suppliers and global buyers through local trade agents. Hence, the supply chain system does not allow the adoption of sustainability standards to be fully enforced on SMEs supplier.

4 Financial services for SMEs to integrate into global value chains

Access to finance is a critical part of SMEs development. Chapter 4 will explore on how the access to financial services can encourage the SMEs in Indonesia to join the GVCs. This chapter will give an overview of the following topics:

1. Financial services that are demanded by SMEs to integrate into value chains;
2. Specific financial services offered by financial institutions and businesses (including financial services that are already used by SMEs);
3. Barriers and bottlenecks for SMEs' access to finance; and
4. Role of sustainability standards in potentially facilitating the access to finance.

4.1 Financial services that are demanded by SMEs to integrate into value chains

SMEs in Indonesia in general need different financing schemes that fit to the nature of their business. They do not tend to fit to the conventional, branch-based banking practices and result in low access to finance and low loan share. According to the data of Bank Indonesia in August 2016, the loan share of SMEs is 19.7 percent, 53 percent of which is disbursed to trade sector (Rijanto, 2016).

The low access of SMEs to financial services in Indonesia can be analyzed from two perspectives. From the perspective of financial service providers, serving SMEs is costly, especially since a high number of SMEs in Indonesia are located in rural areas. In addition, financial service providers presume that SMEs have high probability of default and lack necessary and formal requirements to access finance. From the perspective of SMEs, banks'

financial services do not meet their needs since many SMEs need quick process of loan application and it is costly to access the financial services. Another overarching issue that concerns not only financial service providers and SMEs, but also the government and regulators, is the low level of knowledge on consumer protection.

As the policy to integrate SMEs into GVCs is quite recent in Indonesia, the real need for specific financial services to integrate into GVCs might be relevant to only a very small number of SMEs in Indonesia, particularly the export-oriented ones. Out of 57 million SMEs in Indonesia, there are only 5 thousand SMEs (0.009 percent) that are export-oriented (Ministry of Cooperatives and SMEs, 2016). Most Indonesian SMEs are serving the domestic market, which is one of the largest markets in the world.

Therefore, it would seem that the demand of SMEs in Indonesia for financial services is more related to financing policies that can eliminate the asymmetric information between financial service providers and SMEs and the provision of affordable and easy-to-access financial services. These financing policies can directly and indirectly support the SMEs to integrate into GVCs.

In order to integrate into GVCs, SMEs will require financing sources that can be gained by providing affordable, suitable, and easy-to-access lending to SMEs; developing systems for supply chain finance; ensuring trade finance options are available to SMEs; and developing crowd funding. Additionally, SMEs will need better financial market infrastructure to go digital and improved financial literacy and consumer protection awareness. Each aspect is briefly discussed in the following.

4.1.1 Providing affordable, suitable, and easy-to-access lending

SMEs in Indonesia, either the export-oriented SMEs or the domestic-oriented ones, generally need the provision of affordable funds that are easy to access. This can be provided through direct mechanism (provision of loan guarantee and offer interest rate subsidy) or indirect yet potentially more sustainable mechanism such as facilitating easier Know Your Customer (KYC) procedures, reduce asymmetric information between the financial providers and SMEs, and solve informality issues facing SMEs. Many SMEs in Indonesia prefer informal loans in lieu of formal loans due to fast procedures, despite significantly higher interest rates of the informal loans. Developing a credit rating offers a solution for this hurdle.

SMEs in Indonesia also need a systematic solution for the informality of their business entity and their lack of formal proof of asset ownership, which in many cases cause them to be excluded from financial services. Helping the SMEs to prepare formal documents of their business and assets is therefore central to the provision of wider financial access to the SMEs.

4.1.2 Providing trade finance options

SMEs wish to engage in GVCs face additional risks associated with cross-country transactions, making banks are even more reluctant to provide loans. Therefore, providing accessible trade finance options might provide incentives for SMEs to integrate into GVCs.

The GoI has founded Indonesian Export Financing Institution/*Lembaga Pembiayaan Ekspor Indonesia* (LPEI) since 2009, which operates as an export financing institution in Indonesia. The capacity of LPEI should be expanded in order to reach more SMEs that have potentials to join the GVCs. Other than the main office in Jakarta, LPEI only has 4 branch offices (in Medan, Surabaya, Surakarta, and Makassar) and 3 marketing offices (Balikpapan, Batam, and Denpasar). With this limited number of branches, the outreach to local SMEs is limited. Meanwhile, SMEs need to be aware of the existence of such institutions, available trade finance, the source of trade finance, and how to access the trade finance.

4.1.3 Developing the market for crowdfunding

The popularity of crowdfunding has also spread to Indonesia. Crowdfunding presents opportunities for entrepreneurs to raise funding through an open call on the Internet. Rather than raising funds from specialized investors, crowdfunding taps “the crowd” generally using online social networks. Crowdfunding can take several forms, ranging from an equity-based model, profit-sharing scheme, and lending to outright donations (Belleflamme et al., 2014). Crowdfunding offers a great potential of gathering funds from largely untapped rising middle-class domestic investors to be channeled to SMEs. Nevertheless, SMEs do not have enough knowledge of such financing scheme and how the system works.

In order to enable SMEs to take advantage of the crowdfunding, several measures are needed. First, since crowdfunding is working on online platform, it is necessary to provide better internet and telecommunication infrastructure, especially in eastern part and remote areas in Indonesia. Second, the regulation related to crowdfunding needs to be strengthened to provide customer protection and prevent cyber crimes. Third, financial education for SMEs related to the crowdfunding is crucial, for instance through public dissemination, campaign awareness, and financial literacy trainings. Fourth, there is a need to build cooperation between crowdfunding with the banks in speeding up transactions among related parties. Fifth, in order to amplify the impact of crowdfunding to SMEs, the government can provide incentives to attract more investors and SMEs to join the platform.

4.2 Specific financial services offered by financial institutions and businesses (including financial services that are already used by SMEs)

There are various financial services offered by financial institutions, businesses, and GoI for SMEs. Many of those financial services also have been already used by SMEs. In Indonesia, financial services that are specifically designed to promote SMEs into GVCs are, however, quite limited. Therefore, this part will explore existing financial services in Indonesia that either directly or indirectly related to supports the SMEs to integrate into GVCs.

4.2.1 Government’s programs and credit schemes

Various financing/credit schemes for SMEs have been initiated by GoI, among others: Community Business Credit/*Kredit Usaha Rakyat* (KUR), and Export-Oriented Community Business Credit/*Kredit Usaha Rakyat Berorientasi Ekspor* (KURBE). Food and Energy

Sustainability Credit/*Kredit Ketahanan Pangan dan Energi* (KKPE), and Vegetable Energy Development and Plantation Revitalization Credit/*Kredit Pengembangan Energi Nabati dan Revitalisasi Perkebunan* (KPEN-RP). KPEN-RP has been terminated at the end of December 2014, followed by KKPE a year later. The GoI directed those financing programs to be merged into KUR scheme, in order to avoid overlapping of the credits (Widiyanti, 2016).

1. *People business credit/Kredit Usaha Rakyat (KUR)*

KUR is specifically designed for SMEs considered having business potentials but do not have the required collateral. KUR was started in all provinces in Indonesia following the issuance of Law No. 20 Year 2008 on Micro, Small, and Medium Enterprises. In KUR scheme, the GoI acts as provider of credit interest subsidy fund, meanwhile credit distribution fund 100 percent derived from the executing banks. In addition, there is a scheme of guarantee-risk sharing between guarantor firms (70 percent) and executing banks (30 percent) (Ministry of Public Works and Public Housing, 2009).

The GoI subsidizes KUR interest for SMEs from around 22 percent to 9 percent in 2016 (based on Regulation of Minister of Economic Affairs No. 13 Year 2015) (Coordinating Ministry for Economic Affairs, 2016). In the state budget/*Anggaran Pendapatan dan Belanja Negara* (APBN) 2017, the GoI allocates Rp9.02 trillion (639,692,575 EUR) for subsidy of KUR interest (Ministry of Finance, 2016).

KUR has several financing products, such as KUR Mikro (Micro KUR), KUR Ritel (Retail KUR), and KUR Tenaga Kerja Indonesia/TKI (Indonesian-workers KUR). KUR Mikro is a working-capital credit and/or investment credit with ceiling up to Rp25 million (1,772 EUR) per borrower. KUR Ritel is a working-capital credit and/or investment credit for borrowers who have productive and potential business with ceiling more than Rp25 million (1,772 EUR) to Rp500 million (35,452 EUR) per borrower. KUR TKI is given as a facilitation to finance the departures of the prospective Indonesian workers to their destination country, with ceiling up to Rp25 million (1,772 EUR)⁴⁴. KUR also has product that specifically designed for SMEs who are export-oriented, named KURBE.

2. *Export-oriented people business credit/Kredit Usaha Rakyat Berorientasi Ekspor (KURBE)*

The GoI had prepared a financing program to support the SMEs in accessing export-oriented financial services, which is called KURBE. KURBE, that is a part of KUR, is launched on March 29, 2016. KURBE is embodiment of one of points in Economic Policy Package 11 Year 2016. The purpose of KURBE is to give stimulus for SMEs in order to increase the national export, improve the competitiveness of export products, and improve the quality and value added of export products. With this kind of program, it is expected that SMEs will be encouraged to integrate into GVCs through export activities. KURBE is managed directly by LPEI.

The time period of KURBE is three years for KMKE (*Kredit Modal Kerja Ekspor*/Export Working Capital Credit) and five years for KIE (*Kredit Investasi Ekspor*/Export Investment Credit), with interest rate 9 percent. Maximum limit of financing for KURBE Mikro (Micro

44 <http://www.tnp2k.go.id/id/tanya-jawab/klaster-iii/progam-kredit-usaha-rakyat-kur/>

KURBE) is Rp5 billion (354,418 EUR), for KURBE Kecil (Small KURBE) is Rp25 billion (1,773,142 EUR) (with maximum provision of KMKE is Rp15 billion or 1,063,721 EUR), and for KURBE Menengah (Medium KURBE) is Rp50 billion (3,547,291 EUR) (with maximum provision of KMKE is Rp25 billion or 1,773,142 EUR).

The facilities of KURBE consist of:

- a. Complete and integrated export financing for working capital (KMKE and KIE).

Facilities of KMKE are assisting the SMEs who need financing for: procurement of raw materials, purchasing of raw materials from abroad, replacement and/or maintenance of the production components, production of goods and/or services of export. Meanwhile, facilities of KIE are assisting the SMEs who need financing for machine modernization, business expansion including development and expansion of new factories, and projects financing (Indonesia Eximbank, 2014a).

- b. Distribution of financing for export-oriented SMEs, by LPEI.

This support is reflected by the growth of financing in SME sector per September 2016, which increase 47 percent compared with same period in the previous year, from Rp5.866 billion (416,075 EUR) to Rp8.615 billion (611,109 EUR) (Indonesia Eximbank, 2016).

- c. Facilities related to business failure, default risk, and politics risk in destination country.

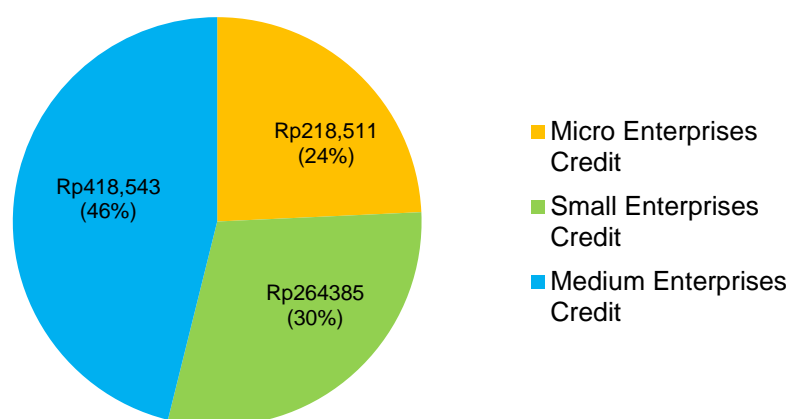
These facilities consist of various protections, such as: account receivables protection, marine cargo insurance, and asset/business interruption insurance (Indonesia Eximbank, 2014b).

3. *Micro super credit*

Micro super credit is a program of revolving fund disbursed through non-bank financial institutions and it is not a grant (it is an investment fund that have to be repaid). The purpose of this credit is distributing fund to the groups that are lower than KUR's targeted groups. The initial fund allocated is Rp1.1 trillion (78 million EUR), meanwhile the maximum credit that is given is Rp10 million (708 EUR). The interest rate is 4.5 percent per year.

4.2.2 Credit from financial institutions

In addition to schemes from the GoI, financial institutions also participate in giving credits to SMEs. The GoI through Bank Indonesia requires the commercial banks to give credit or financing for SMEs according to the ability of each bank. In 2015, the lowest credit is 5 percent, in 2016 is 10 percent, in 2017 is 15 percent, and since 2018 is 20 percent. This policy is based on Regulation of Bank Indonesia No. 17/12/PBI/2015 and No. 14/22/PBI/2012 (Division of Legal Information Department of Law of Bank Indonesia, 2015). The policy of banking obligations to give credit to SMEs is indicated by Figure 12 below.

Figure 12: Outstanding MSMEs credit based on enterprise classification (in billion Rp) 2016

Source: Bank Indonesia (2016)

In general, credit from financial institutions for SMEs can be classified into three categories, as explained below:

1. Credit from community credit bank/Bank Perkreditan Rakyat (BPR)

The purpose of this credit is assisting the GoI to distribute credit for SMEs that can not access the credits from commercial banks. BPR has distributed around Rp50 trillion (3,540,054,963 EUR) at the end of September 2012, increasing 22 percent compared to 21 percent in the previous year. The number of borrowers is increasing 1.35 percent in 2010, 7.67 percent in 2011, and 8.53 percent in 2012 (APO, 2015).

2. Credit from civil capital investment/PT Penanaman Modal Madani (PNM)

SMEs credit from PNM is called Micro Capital Services Unit/*Unit Layanan Modal Mikro* (ULaMM) that was launched in August 2008. ULaMM is a credit for SMEs that is accompanied by consultation, training, and coaching related to financial management and access to market. ULaMM is a “One Stop Shopping” outlet for SME financing and technical assistance. In 2012, PNM has disbursed Rp2.3 trillion (162,859,447 EUR) (APO, 2015). The requirement to apply for this credit is having prospective business at least two years. The ceiling of this credit is ranging from Rp1 million (71 EUR) to Rp200 million (14,161 EUR), depend on the needs and scale of business of the SMEs. The scheme of this credit can be either conventional scheme or sharia scheme.

3. Credit from CSR of private firms or state-owned firms (BUMN)

Based on Law No. 40 Year 2007 on Limited Liability Company and Government Regulations No. 47 Year 2012 on Social and Environment Responsibility of Limited Liability Company, private and state-owned firms are obligated to implement the Corporate Social Responsibility (CSR) to support the SMEs. CSR programs for SMEs such as: credits with very low interest rate that are equipped with consultation on management and training, credit requirements that are simple, and installment that can be managed based on the borrowers' financial capability. In 2009, the distributed credits are Rp1.6 trillion (113.3

million EUR) for around 650,000 SMEs in agricultural sector (65 percent), in trade sector (20 percent), and others (APO, 2015).

4.2.3 Technology-based financial services

Bank Indonesia and OJK have initiated branchless banking models. Bank Indonesia initiated Digital Financial Services/*Layanan Keuangan Digital* (LKD), which is payment and financial services that are provided by electronic money issuers (bank/non-bank) with the collaboration with third parties (agents) and using technologies. Meanwhile, OJK initiated Financial Services without Office in the context of inclusive finance/*Layanan Keuangan tanpa Kantor dalam Rangka Keuangan Inklusif* (Laku Pandai), which is also a provision of banking and/or other financial services through cooperation with agents and supported by the use of information technology infrastructure. Another recent financial innovation that has spread in Indonesia is FinTech. This approach makes use of risk-assessment method using psychometric approaches and credit scoring technologies to make quick KYC assessment to tap into large unbanked SMEs in Indonesia.

Through these technology-based financial inclusion programs, it is expected that the banking and other financial services can be more reachable for Indonesian community. The implementation of these programs brings several benefits for SMEs, such as: the transactions become easier; lowering the transactions cost; the SMEs can have financial transactions records needed for procedure of applying bigger loans.

4.2.4 Developing the venture capital to support SMEs

The GoI had released Regulation of OJK No. 35/POJK.05/2015 on business operation of venture capital firm. Venture capital is an alternative financing source for new businesses that have no collateral, but they have potential business. The GoI supports the financing of new business through venture capital guarantee, by increasing the disbursed fund, from Rp3 trillion (212,758,063 EUR) in 2009 to Rp6.5 trillion (460,975,803 EUR) in 2014 (Ministry of Finance, 2016).

4.3 Barriers and bottlenecks for SMEs' access to finance

This part will elaborate the barriers and bottlenecks for SMEs' access to finance in order for SMEs to be able to integrate into global value chains (GVCs). In general, barriers and bottlenecks for access to finance can be classified into three categories, i.e. physical factors, supply side (financial institutions side), and demand side (SMEs side). Please see the details in the following table.

Table 4: Barriers to SME's access to finance		
Physical factors	Supply side	Demand side
Weak infrastructure, includes:	High transaction costs and business risks, caused by:	Risks within the customers (characteristics, skill, etc):
<ul style="list-style-type: none"> Geographic location (main road, railway, etc) 	<ul style="list-style-type: none"> Problems regarding authorization, monitoring, and implementation 	<ul style="list-style-type: none"> Illiteracy
<ul style="list-style-type: none"> Less market 	<ul style="list-style-type: none"> Negative stigma towards the customers 	<ul style="list-style-type: none"> Unsecure feelings
<ul style="list-style-type: none"> No telecommunication tools (telephone, fax, internet, etc) 	<ul style="list-style-type: none"> Customers with no guarantee 	<ul style="list-style-type: none"> Unguaranteed (land or other assets)
<ul style="list-style-type: none"> Less bank units 	<ul style="list-style-type: none"> Customers only need small financing 	<ul style="list-style-type: none"> Illness risk
	<ul style="list-style-type: none"> No guarantee towards interference 	<ul style="list-style-type: none"> Political instability risk
	<ul style="list-style-type: none"> Diversification problem 	<ul style="list-style-type: none"> Risk of economic management
	<ul style="list-style-type: none"> Limited branch network 	<ul style="list-style-type: none"> Difficulties to borrow
	<ul style="list-style-type: none"> Limited range of financial instruments and lending conditions 	<ul style="list-style-type: none"> Difficulties to use a good technology (<i>have traditional tools</i>)
	<ul style="list-style-type: none"> Financial institutions' inadequate capacity to appraise the creditworthiness of SMEs 	<ul style="list-style-type: none"> Poor financial information
	<ul style="list-style-type: none"> Limited outreach at disparate cost 	<ul style="list-style-type: none"> Unreliable and inadequate book keeping
	<ul style="list-style-type: none"> Perceived risk (SMEs are seen by banks as carrying greater risk), especially where there is a lack of credit-rating agencies 	<ul style="list-style-type: none"> Lack of collateral
	<ul style="list-style-type: none"> Lack of SMEs transparency 	<ul style="list-style-type: none"> Lack of bankable business plan
	<ul style="list-style-type: none"> Lack of financial institutions expertise in the evaluation of SMEs loans 	
Source: Harvie & Charoenrat (2015), Bank Indonesia (2014), Dusuki (2008)		

4.4 Role of sustainability standards in potentially facilitating the access to finance

Enterprises in Indonesia are starting to embed sustainability standards into management practices and regular business activities. Most are in the form of corporate social responsibilities (CSR) for environment protection and resource conservation, energy savings, and emission reductions. The involvement of private sectors in managing environmental and social risk is governed under Law No. 32 Year 2009 concerning Environmental Protection and Management.

The sustainability standards are, however, mainly adopted by large enterprises. SMEs, on the other hand, have limited concerns about environmentally-friendly business practices. According to the report of Bank Indonesia (2014), this lack of concern is due to several factors. Those are the lack of knowledge and low awareness about environment sustainability, weak management, less supportive technical infrastructure, unavailability of green financing schemes, and low awareness of Indonesian consumers in using eco-friendly products (Bank Indonesia, 2012).

On the supply side, special financing schemes from the banks to encourage SMEs to incorporate sustainability standards into their business activities are limited. Despite the initiative of several central ministries and donors to carry out eco-friendly financing programs, most commercial banks seem reluctant to continue the programs (Bank Indonesia, 2014). Indonesian Ministry of Environment has cooperated with the banks to disbursed eco-friendly soft loans since 1993, but the banks have not initiated similar programs funded by their own internal funds. It would seem that the eco-friendly financing schemes for SMEs will be highly dependant on the government and donor initiatives.

The most recent step towards encouraging the financial sector to finance eco-friendly activities is the implementation of Green Banking, based on a memorandum of understanding (MoU) between Indonesian Ministry of Environment and Bank Indonesia in 2010. The purpose of the MoU is to encourage more active participation of the banking sector in creating eco-friendly financial products and services, which therefore in turn is expected to also encourage economic actors to be more responsible and comply with sustainability standards in conducting their business. It aims to grow the awareness of pursuing a balanced economic growth that also take into account the triple bottom line (Profit, People, Planet) approach. OJK has joined the initiative and also signed an MoU with Indonesian Ministry of Environment in 2014 about the improvement of the role of financial service providers in environment protection and management through the development of sustainable financial services.

OJK in cooperation with several institutions has developed a Sustainable Finance Roadmap that sets forth the medium term (2015-2019) and long term (2015-2024) goals of sustainable finance in Indonesia. The goal of the sustainable finance program in Indonesia threefold. First, to improve the resilience and competitiveness of financial service industry to enable them to grow and develop in a sustainable manner. Second, to provide financing resources required by the public by using the pro-growth, pro-job, pro-poor, and pro-environment. Third, to contribute to the national commitment to address the global warming challenge by carrying out climate change mitigation and adaptation in business activities towards a competitive low carbon economy (OJK, 2014).

The Roadmap in particular has identified several priority sectors that are granted an increased funding portion. These sectors are industry, energy, agriculture, infrastructure, and **MSMEs**. OJK has cooperated with 8 main commercial banks to start the sustainable finance program. Although this sustainable finance program is relatively new, it presents a bigger opportunity for MSMEs to have an increased access to finance. Considering that the knowledge of SMEs about the availability of such funds is rather limited, it is therefore important to improve the socialization and dissemination regarding the schemes of the sustainable finance. In addition, the SMEs should be equipped with necessary knowledge on how to conduct their business in environmentally-friendly manner through trainings and

technical assistances. This will potentially improve the chance of the SMEs to integrate into GVCs by producing eco-friendly products. Another important aspect is to improve the awareness of Indonesian consumers to be more environmentally conscious to also take part in supporting eco-friendly SMEs.

5 Summary and recommendations

5.1 Summary

There is a growing importance for business sector, including SMEs, to implement sustainability standards in their daily operations. The purpose is to run business responsibly, not only to society but also to the environment. To implement the sustainability standards, business entities running their operation in Indonesia must comply with national regulations and standards, including several international standards that are adopted.

There are various initiatives that can potentially encourage Indonesian SMEs to adopt sustainability standards, directly or indirectly, ranging from government policies to specific programs. Among those initiatives are the GoI's Economic Policy Package (PKE), the development of Master Plan of National Industry Development (RIPIN), the implementation of Rating Program for Business Performance in Environmental Management (PROPER), Cleaner Production (CP) program, tax policy, government awards, Emission Reduction Investment (ERI), and investment policies. In Indonesia, economic incentives for adopting sustainability standards mostly come from the government.

The general challenges for SMEs to adopt sustainability standards are: high costs and difficult procedures of certification process; weak motivation to implement green practice; lack of knowledge and transformative capacity to respond to sustainability standard; limited connectivity; high cost of required/certified raw material; limited technology to meet the required standards; and threats to Intellectual Property Rights (IPRs).

Facilitating SMEs to develop and able to integrate within GVCs is of fundamental importance due to the role of SMEs in giving significant contribution for Indonesian economy, in term of the number of business units, absorption of employment, contribution to GDP. SMEs are largely varied and a high number of them are prone to be informal entities (only act as households' business), lack of skills, lack of finance, etc. Because of these limitations, not all SMEs can develop and be driven into GVCs.

The demand of SMEs in Indonesia for financial services is more related to financing policies that can eliminate the asymmetric information between financial service providers and SMEs and the provision of affordable and easy-to-access financial services. These financing policies can directly and indirectly support the SMEs to integrate into GVCs. In order to integrate into GVCs, SMEs will require financing sources that can be gained by providing affordable, suitable, and easy-to-access lending to SMEs; developing systems for supply chain finance; ensuring trade finance options are available to SMEs; and developing crowd funding. Additionally, SMEs will need better financial market infrastructure to go digital and improved financial literacy and consumer protection awareness.

Enterprises in Indonesia are starting to embed sustainability standards into management practices and regular business activities, such as environment protection and resource conservation, energy savings, and emission reductions. The sustainability standards are, however, mainly adopted by large enterprises. SMEs, on the other hand, have limited concerns about environmentally-friendly business practices, caused mainly by lack of knowledge and low awareness about environment sustainability. The most recent step towards encouraging the financial sector to finance eco-friendly activities is the implementation of Green Banking, based on a memorandum of understanding (MoU) between Indonesian Ministry of Environment and Bank Indonesia in 2010. In addition, OJK in cooperation with several institutions has developed a Sustainable Finance Roadmap that sets forth the medium term (2015-2019) and long term (2015-2024) goals of sustainable finance in Indonesia. These latest policy development is expected to increase awareness of both SMEs and consumers to adapt to more environmental-friendly conducts. Thus, by doing so, SMEs will have more opportunities to take part in GVCs as they will be more inclined to fulfil sustainability standards required in GVCs

5.2 Recommendations

Based on this Indonesia case study, the sustainability standards indeed need to be taken to promote SMEs into GVCs. Nevertheless, it is undeniable that meeting the sustainability standards is not easy. SMEs cannot be expected to do so voluntarily. Furthermore, there are obstacles and challenges in meeting those standards. One of the biggest obstacles is that compliance with social and environmental standards is costly since SMEs have to improve their skills and capabilities, obtain certain certifications, conduct more sustainable production processes, etc.

From business perspective, the compliance does not only increase SMEs expenses, but also increases their business risk profile, since there are many elements of costs that require relatively large investments, e.g. using cleaner technology and machineries. Unless they already secure contracts that require them to comply with the standards, SMEs will face higher business risk since they have to bear the cost of compliance upfront. The risk can be reduced by ensuring successful contract with buyers or higher participation in the global value chain. The costs of compliance would become less relevant if SMEs have greater chance to secure contract. The problem is that the increasing numbers of GVC leaders and buyers would not endorse business contracts with SMEs that do not comply to sustainability standards. It is then very important to come up with business schemes that cut this vicious circle.

Therefore, there should be incentives and supports from government institutions, business organizations, financial institutions, and private stakeholders for potential SMEs to meet the sustainability standards and eventually participate in the GVCs. The following are recommendations of roles and actions that can be taken by each stakeholder.

1. *Government institutions*

Government's initiatives, such as Economic Policy Package (PKE), the development of Master Plan of National Industry Development (RIPIN), Rating Program for Business Performance in Environmental Management (PROPER), etc (please see Chapter 2), need to be improved and supervised to evaluate the effectiveness of each initiative. In addition,

government's intervention is needed especially in terms of incentives for SMEs to comply with sustainability standards, for example: tax incentives. The SMEs who already meet certain standards are given tax breaks.

2. Business organizations

One way to reduce the perceived risk of adopting sustainability standards is to modify the current business practice. SMEs should be allowed to take part in GVC while they are in the process of adopting sustainability standard. What more important is to see the progress of adoption instead of requiring the SMEs to collect certifications. The SMEs would be eligible to join GVCs and engage in business contracts given that they should comply fully with certain sustainability standards during a certain period of time.

While this requires decisions from buyers and GVC leaders, that would not be effective unless all stakeholders support such scheme. Issuers of certifications and voluntary standards should also come up with transitional schemes that provide more flexibility to SMEs to adopt the standards in several stages. At national level, business associations can facilitate the process by identifying SMEs that are willing to adopt the standards but require transitional period. Buyers and GVC leaders should also bear parts of the costs of compliance during the process, while provide assistance and transfer of knowledge and technology. Furthermore, the buyers and GVC leaders should be encouraged to invest to SMEs business connections in order to help the SMEs to grow.

3. Financial institutions

The role of financial institutions and financial system is facilitating access to finance. They should give more opportunities in the form of credits without collateral, suitable financial products and services for SMEs, etc. The opportunities shall be given based on fairness and competitiveness, and therefore the financial access should lead the SMEs into GVCs fold (for instance, financial scheme related to import-export activities). Other than that, financial institutions can also provide a more affordable technology financing for SMEs since SMEs need to adapt up-to-date technologies to keep up with sustainability standards. Financial regulators also have roles, for example monitoring the disbursement of loan for SMEs and ensuring the stability of financial system since SMEs can be prone to economic crisis.

4. Private stakeholders

Investment from private stakeholders could contribute in SMEs growth. Moreover, private stakeholders could intervene in the process of some certifications. For instance, certification institutions for SMEs could set at a lower rate and more simple procedures for SMEs.

As mentioned above, private stakeholders, especially issuers of certification and voluntary standards should come up with transitional mechanisms that allow SMEs to be monitored and recognized in their willingness to adopt sustainability standards, not only their compliance. That would be complemented by the obligation to fully comply with the standards during a certain period of time. It would allow SMEs to get greater chance to participate in GVCs and receive contracts from buyers.

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Appendix 1: List of standards and regulations in coffee and textile industry			
Name of standard/regulation	Institutions	Characteristics	Additional information
General			
Environmental Permit (Law No 32/2009)	Ministry of Environment Indonesia	To measure the important of environmental impact on business, and managing and monitoring further.	Mandatory. For each firm that operate in Indonesia
Head of BPOM Regulation No 11/2014	National Food and Drugs Agency Indonesia (BPOM) Indonesia	Food safety standard. Procedures to conduct certification to assure minimum quality standards.	Mandatory
Child Labor issues (Law No 13/2003)	Ministry of Manpower Indonesia	Prohibiting child labor with the exemption for 13-15 years of ages: have the permission from their parents, maximum 3 working hours, do not interfere their school time.	Mandatory for firm in Indonesia
ISO 9001	International Organization for Standardization	Standards and procedures to assure all products and services are consistently produce	Voluntary for global
ISO 22000	International Organization for Standardization	Health and safety measure for firm that also include food safety and traceability	Voluntary for global
Specific sector: Coffee			
Head of BPOM Regulation No 1/2015	National Food and Drugs Agency Indonesia (BPOM)	Set of standards for valuation and certification of food safety. For example: water content of coffee beans is no more than 12%. Content of anhydride caffeine in coffee powder is no more than 2%, the water content is no more than 7%	Mandatory
Coffee Quality - Improvement Programme	International Coffee Organization (ICO)	Target standards for exportable coffee. For Arabica: 86 defects out of 300g sample; Robusta: 150 defects out of 300g sample. Moisture content below 8%.	Mandatory for ICO member states
Utz Certified	Utz	Code of conduct for growing sustainable coffee based on 'good agricultural practices' that include standard on environmental protection and management, and labor & living conditions	Voluntary
Coffee and Farmer Equity (CAFÉ)	Firm (Starbucks)	Set of sustainability standards that focuses on quality, economic accountability and transparency, social responsibility, and environmental leadership. Using third-party verification body: SCS Global Services.	Mandatory for Starbucks' suppliers
Rainforest Alliance-Certified	Rainforest Alliance	Certification for farms that covers environmental protection, shade, basic labor and living conditions, and community relations.	Voluntary for global

Appendix 1: List of standards and regulations in coffee and textile industry			
Name of standard/regulation	Institutions	Characteristics	Additional information
Bird-Friendly Coffee	Smithsonian Migratory Bird Center (SMBC)	Minimum standard for vegetation (diversity) and standard for soil management, also cover 100% organic and shade grown	Voluntary for global
Fair trade	Fair Trade Labeling Organizations International (FLO)	Minimum guaranteed price paid to registered small farmers' organizations that match socio-economic standard development, labor issues, and environmental protection.	Voluntary for global. Large amount of Fair Trade coffee is bought in Africa
Organic Certification	International Federation of Organic Agriculture Movements (IFOAM)	Monitor organic standards on production, processing and handling, and also covers social justice.	Voluntary for global
Common Code for the Coffee Community (4C)	German Development Cooperation Agency (GTZ) and German Coffee Association (DKV)	Emphasize more on social and ethical principles, such as minimum wages, child labor, and comply with international environmental standards on pesticide and ground-water contamination.	Voluntary
Commercial coffee purchasing system	Commercial importers and roasters	Paying prices in relation to commercial classification or description mandated by regulation in producing country. Pricing based on differentials over future market.	Private standard.
Relationship coffees	A minority of importers and roasters in the specialty industry	Sourcing direct at origin, paying premium for the quality; may buy on the basis of multi-year fixed price contracts de-linked from future market price. Contract may also contain in regards of environmental protection and social issues.	Private standard. A few specialty coffee producing countries only; Uganda & Rwanda
Certified Home Brewers	Specialty Coffee Association of America (SCAA)	Set strict minimum quality standards both on physical appearance and cup quality, such as: proper water temperature, brewing time, and uniformity of performance	Voluntary
Appellation of origin	Trade associations, producer organizations or public institutions in producing countries. WIPO	Sets boundaries to facilitate the enforcement of the intellectual property rights in relation to geographic indications of origin and truth in labelling.	Voluntary
Biodynamic Coffee	Demeter Association	Niche sustainability concepts. Using some methods such as crop rotation, composting, homeopathic sprays to cultivate the long-term health of soil	Voluntary. For only high quality of Arabica Coffee

Appendix 1: List of standards and regulations in coffee and textile industry			
Name of standard/ regulation	Institutions	Characteristics	Additional information
Specific sector: Textile			
Minister of Manpower Regulation No 138/2016	Ministry of Manpower Indonesia	Standard or minimum requirements for national worker competency in textile industry to increase productivity	Mandatory for firm in textile industry in Indonesia
Minister of Industry Regulation No 515/2015	Ministry of Industry Indonesia	Technical specification for downstream textile industry to produce more effectively and efficiently. For example maximum energy used: 1100 kwh/ton product; reject rate 5% at max, water used 120 m ³ /ton product.	Mandatory
Regulation (EC) No 1907/2006, Concerning the registration, evaluation, authorization and restriction of chemicals (REACH)	European Union	Placing responsibility on all manufacturers and importers to identify and manage risks of chemical substances. Notification of Substances of Very High Concern (SVHC) is required if they are present above concentration limit of 0.1%.	Mandatory for EU market
Consumer Protection Notice No 25 of 2010	Commonwealth of Australia	To ensure consumer protection by giving a Care Labelling for clothing, household textiles, apparel etc. for example: “unable to be washed or dry cleaned”,	Mandatory for Australian market
Regulations 2011 (SI 2012 No.1102)	UK Government	Standard information of textile products in order for firm to label it	Mandatory for UK market
Textile Standards	ASTM International	Set of standards that provide specifications and test for the physical, mechanical, and chemical properties of textiles, fabrics and cloths, as well as natural and artificial fibers	Voluntary for global
Sustainable Textile Production (STeP)	OEKO TEX	Certify firm in the context of chemical & environmental management, occupational health & safety, social responsibility, quality management, and transparency	Voluntary
ISO/TC38	International Organization for Standardization	Scope of standard such as specification for textile products, auxiliaries and chemical required for processing textile raw materials	Voluntary
ISO/TC72	International Organization for Standardization	Standardization of textile machinery, parts thereof and accessories, machinery for dry-cleaning and laundering	Voluntary
Source: Edited from Ponte (2002)			

VI Drivers and constraints for adopting sustainability standards in small and medium-sized enterprises (SMEs) and the demand for finance: a South African case study

Peter Draper and Anna Ngarachu, Tutwa Consulting

Acknowledgments

Data on voluntary sustainability standards was provided by the ITC Standards Map, while those on voluntary national standards by the SABS Sales department. Informant interviews were essential to this report and a list of Interviewees is available in Annexure 5.

1 Introduction

Sustainability within Global Value Chains (GVCs) has been an area of key interest, having been initiated by the G20 report on “Promoting standards for responsible investment in value chains” and with the Agenda 2030, addressing social and environmental sustainability, coming into focus. The German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE) has accordingly commissioned country case study reports to investigate the factors that incentivise and constrain Small and Medium-sized Enterprises (SMEs), in various countries, to adopt sustainability standards in order to access global or regional value chains (RVCs). This report investigates the South African market. In particular, it examines how SMEs are incentivised to adhere to sustainability standards, the factors preventing them from effectively entering RVCs or GVCs, and what financing is demanded to adhere to sustainability standards and to access GVCs or RVCs.

Without sustainable value chains then trade impacts will not be sustainable, meaning that there will be subdued employment and growth prospects created within SMEs (ITC, 2015). South Africa’s grave unemployment rate of 26%, indicates a need for innovative employment creation and this is the role SMEs fill. There are about 2,251,821 documented SMEs operational in South Africa, that play a major role in employment and economic growth prospects (Bureau of Economic Research, 2016). They make up 60% of formal employment, 91% of formalised business and contribute 50% to GDP (Grater, 2016). The SMEs engaged in exports do so directly or indirectly through cross-border value chains, usually to regional partners. These are usually manufacturing intensive, with 91% going to Sub-Saharan Africa. The share of SMEs contributing to South Africa’s total external trade is minute, as large firms accounted for over 90 percent of export sales between the period, 2010-2014. Exploring this further, only 1.1% of small firms account for export sales, 5.6% of medium sized firms and 93.3% of large firms (Perelli, Anand, & Zhang, 2016). Data on the share of export earnings is undetermined; however it is stated that “80% of SMEs derive less than 20% of their revenue from exporting” (Business Environment Specialists, 2013).

Efforts to establish sustainability will not only lead to beneficial outcomes such as increased productivity, within an SME but to developmental outcomes such as improved livelihoods. According to the International Social and Environmental Accreditation and Labelling Alliance (ISEAL) sustainability standards are a “set of criteria defining good social and

environmental practices in an industry or production process” (ISEAL, 2017). These are adopted by producers, companies, governments, financial institutions and consumers. The G20 Insights report (2011) suggests that sustainability standards enhance the social and environmental sustainability of Global Value Chains (GVCs). This is because they foster consumer awareness of which products are safe to purchase while informing the consumer that the product was made in a socially acceptable way. Sustainability standards foster sustainable production processes and could result in the creation of business opportunities, giving access to new markets where SMEs require sustainability standards to participate in. Moderating the use of energy and resources is a motivation for the promotion of environmental standards (Blumenschein et al., 2017).

However, standards have transitioned into a form of non-tariff barriers and are a major determinant of access to markets. Within developing economies, they are deemed important as they develop producers’ capabilities which may lead to enhanced productivity and efficiency. However, this is a costly practice within value chains⁴⁵ which requires organized actions between upstream and downstream players of the value chain (Kaplinsky, 2010). Subsequently, standards can act as a barrier for upstream SMEs to access GVCs or RVCs due to some of their demanding requirements.

The South African market is an interesting case when relating to sustainability standards. The uptake of standards, in general, is low within industry in South Africa and functions, mainly, within the domain of large corporations. For many SMEs in value chains, complying with sustainability standards is an arduous process and may significantly affect their profits if not properly guided as to the value these sustainability standards can yield. This does not deter from their importance, within the changing environment of value chains as SMEs continue to partner with corporations and consumers whose growing interest in these standards forces SMEs to reconsider how they do business.

The report builds upon existing literature and informant interviews. It commences by giving an overview of the standards available in the South African market identifying any voluntary, international, national and mandatory standards in operation and contrasting these to the voluntary sustainability standards available. Then, the main incentives for and constraints on SMEs adopting sustainability standards are examined. The report will expand on a case study of a small company within the retail sector, to investigate its main motivations for adopting sustainability standards; the challenges it faces, incentives it has to adhere to sustainability standards; and understanding of its linkage to value chains. The financing gap, the difference between what SMEs demand and what is available to them with accessing value chains, and any financial support to adopt sustainability standards, is also investigated. The recommendations and considerations for how government, private stakeholders, and financial institutions can promote the adoption of sustainability standards and access to finance are addressed last.

45 Value chains may be used interchangeably within the text and implies either Global or Regional Value Chains.

2 Overview of standards governance in South Africa

This section considers the different standards operating in the South African market and relevant in industry while contrasting it to the role that sustainability standards play in the market.

2.1 Importance of standards

Standards are important as they address several beneficial factors for consumers, notably protection from hazards through health and safety measures, thereby promoting the consumer's ability to confidently choose which goods and services they purchase and ensuring their interests are protected including through redress. They also allow consumers to profit from competition among producers (SABS, 2017). Within industry, standards prevent the erection of arbitrary trade barriers and yield access to markets, businesses can also use them for energy and environmental management and potentially decrease business costs due to: production and service efficiency while promoting reliability of products due to improved management systems and time-saving mechanisms with the increased efficiency. In addition, the added trust in the business, competitiveness in the product or service and the attraction of new customers are recognized benefits (SABS, 2017).

These benefits also extend into government as standards complement regulations that could promote international trade, regulate industry to prevent hostile business practices, and indicate an economical procurement process. (SABS, 2017). With our focus on SMEs, the presence of standards allows SMEs to compete on an equal level with larger organizations, with the SABS advocating for standards, stating "compliance with an accepted standard can replace the power of a big brand" (SABS, 2017).

2.2 Structure of standards

Standards can be categorized into four principal areas, according to the G20 (2011):

- Intergovernmental Standards, governed by international agreements and declarations;
- Private Standards, normally referenced as Multistakeholder Initiatives or private sustainability standards;
- Industry Codes;
- Individual Company Codes, also relating to Corporate Social Responsibility (CSR) initiatives.

These four groups of standards can either be mandatory or voluntary, with most starting out as voluntary but thereafter if there is legislation attached to them, they become mandatory. Within these groups, voluntary sustainability standards can emerge. These can also reference either international or local sustainability standards.

2.3 Government institutions responsible for standards management

Historically, standards in South Africa became prominent with the rapid development of the mining industry. The Transvaal Chamber of mines founded a board to consider how machinery and other materials used were fit for industry use. More branches were formed to look into standardization of various sectors, which thereafter were integrated to form the South African Bureau of Standards (SABS), the main and sole standard-setting institution in the country. It is also a founding member of the International Organization for Standardisation (ISO) (SABS, 2017).

Today the SABS is a government agency reporting to the national Department of Trade and Industry and forms part of a network of government agencies mandated with standards development as shown in Annexure 2.

2.4 National standards

With over sixty years of experience, the SABS main role is to develop national standards and aid in the implementation of international standards, to increase South Africa's global competitiveness and international trading capabilities. These standards focus mainly on consumer protection, health, environmental and safety issues (SABS, 2017). National standards are developed by SABS and are known as the South African National Standards (SANS) which cover a number of industries as shown in Annexure 3. Within the South African context, all standards developed by SABS are voluntary.

The Department of Trade and Industry has established a broader set of technical infrastructure institutions that seek to maintain and improve compulsory standards. The National Regulator for Compulsory Specifications (NRCS) applies legislation to some SANS and these become mandatory. The South African National Accreditation System (SANAS) and the National Metrology Institute of South Africa (NMISA) are part of the technical regulatory institutions. There are currently 1139 mandatory national standards and 7402 voluntary national standards, across different industries and sectors as confirmed by the SABS database.

There other industry-specific regulators relating mainly to health, safety or environmental protection requirements and are prevalent in the automotive, consumer, electrotechnical and food and associated industries (NRCS, 2017).

2.5 Intergovernmental standards

Sustainability Standards in the Intergovernmental framework refer to Normative Instruments and International Initiatives. Normative instruments look to amplify the positive economic and social contributions of MNCs and reduce the negative impact of their operations. These focus on promoting skills development, work-life balance, and industrial relations. Examples are the ILO Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy (ILO MNE Declaration) and the OECD Guidelines for Multinational Enterprises (G20, 2011).

International Initiatives like the UN Global Compact focuses on the following areas: human rights, the environment, labour standards, and anti-corruption measures. Originally written with states in mind, they have become a policy document for business to apply corporate responsibility and can be applied within value chains (G20, 2011).⁴⁶ Within South Africa, there are roughly 75 corporates using the UN Global Compact with 19 that are SMEs (United Nations Global Compact, 2017).⁴⁷ There is a strong business case for the sustainable supply chains highlighted as well (United Nations Global Compact, 2017).

2.6 International standards

SABS collaborates with international standards setting bodies such as the ISO and the International Electrotechnical Commission (IEC) and advises its wide community on which standards are relevant in their value chain or tender processes. South Africa also has associations with regional standard setting bodies, especially in Europe. The different international and regional standards present in the South African market are shown in Table 1 below. The prevalence of international standards in the country arises from these international collaborations. These are largely voluntary standards but can be referenced in legislation. It should be noted that ISO is also referenced as a multi-stakeholder standard (G20, 2011) and the IEE as an Industry standard. We group it as an international standard due to its global scope.

Table 1: International and regional standards associations present in the South African market
International associations
IEC – International Electrotechnical Commission
IEEE – Institute of Electrical and Electronics Engineers
ISO – International Organization for Standardization
ITU – International Telecommunication Union
ASTM – Originally known as the American Society for Testing and Materials
Regional associations
EBU – European Broadcasting Union
ETSI – European Telecommunications Standards Institute
CEN – European Committee for Standardization
CENELEC – European Committee for Electrotechnical Standardization
UN/ECE – UN Economic Commission for Europe
SADCSTAN – Southern African Development Community Cooperation in Standardization
Source: SABS (2017)

⁴⁶ The UN Global compact is currently the largest voluntary corporate responsibility globally.

⁴⁷ SMEs that have less than 10 direct employees cannot be participants but can learn about its initiatives.

2.7 Industry standards

Industry Standards are developed by leading companies within the industry to serve some social or environmental concern within the supply chain or for export markets. The IEE and IEC, for the electrotechnical and engineering industries, respectively, would serve as examples. Their standards are usually voluntary and would cover national or international commercial activity; i.e. the IEE is an international industry standard (G20, 2011)

2.8 Individual company codes

Company Codes are standards set by individual companies regarding best-practices that they prefer to implement in addition to participating in other international, national and industry standards. Examples include the Woolworths and Massmart company codes that govern their own supply chain mandates (D. Mngadi, personal communication, April 10, 2017). These may also include CSR initiatives, which are prevalent in Multinational Corporations (MNCs) and have a growing influence on SMEs. Due to lack of data, the scale and type of sustainability standards applied by companies in the form of CSR or company codes cannot be properly examined here.

CSR is defined differently within different country contexts. In South Africa, the preferred term is Corporate Social Investment (CSI). CSR was initially voluntary but the application of B-BBEE⁴⁸, various industry charters, King II and King III reports on corporate governance, and the ISO 26 000 Guidance on Social Responsibility all oblige large South African companies to adopt CSR. The ISO 26 000:2010 became a nationally accepted standard (Kloppers & Fourie, 2014).

2.9 Voluntary Sustainability Standards (VSS) in industry

This paper refers to VSS and sustainability standards interchangeably, using the assumption that all standards are initially voluntary. However, it is important to note that voluntary standards do not imply sustainability standards and vice versa. VSS refer for example to “Environmental standards such as safer waste management, non-toxic production materials, reduced use of pesticides, energy efficiency measures or others. Social standards such as health and safety measures, exclusion of child labour, better working conditions or others” (German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE), 2017).

VSS are also referred to as private sustainability standards and are usually set by multi-stakeholder groups. Traditionally, standards related to the health, safety and quality assurance of products were usually covered in legislation by governments with increasing focus on the characteristic of the products. Recently, the focus has changed to the process of

48 Broad-based Black Economic Empowerment (B-BBEE) is an initiative launched by the South African Government to address the restrictions that exist within the country for Black individuals to participate fairly in the economy. The BEE Act allows for the existence of the B-BBEE “Codes of Good Practice” which provide the structures for the BEE Scorecard and certain rules associated with claiming BEE points. B-BBEE seeks to promote equality, increase broad-based participation of previously disadvantaged people in the economy, promote employment, higher growth and more equitable income distributions.

the production of products and services with the intention of ensuring that these processes are sustainable, particularly from labour and environmental viewpoints. This was spearheaded by voluntary private initiatives. However, safety and quality assurance are now increasingly being linked to sustainability meaning that sustainability standards can also be publicly regulated (Gotoh, 2015).

According to the International Trade Centre's (ITC) Standards Map, 81 VSS pertain to the South African market. The data is confirmed to be up to date according to our respondent (J. Wozniak, personal communication, April 4, 2017). It is important to note that, by definition of VSS, there might be a gap between what is reported and what is actually implemented (R. Heydenrych, personal communication, April 10, 2017). For example, the national (SANS) standards such as SANS 14001 on Environmental management systems or the ISO 26 000 is not on this list, implying this number could be more. In addition, there is no specific data detailing which sustainability standards are operational through company codes. Nonetheless, we will refer to the Standards Map from the International Trade Centre (ITC) as the framework for VSS as these are particular to sustainability standard hotspots within global value chains. Out of the numerous standards in the country only 81 VSS, according to the ITC (2017), refer to sustainability in value chains.

From analyzing the Standards Map, and bearing in mind that one standard can cut across any of the four categories listed in 2.2, 12 VSS relate to the Services Industry, 56 to Processing & Manufacturing, 57 to Production & Extraction, and 26 to Trading & Retailing practices. A detailed listing of all sustainability standards and their respective industries in operation in the South African market is highlighted in Annexure 4. Sustainability standards featured largely in the Agricultural sector, organic content specification, supply chain practices, sustainable trading practices and relating to labour issues.⁴⁹

3 Adoption of sustainability standards

This section details the drivers behind, and barriers to, SMEs adopting sustainability standards, drawing on literature and supplemented by interviews in South Africa.

3.1 Challenges for the adoption of sustainability standards

3.1.1 The lack of awareness

This is a major factor hindering the uptake of sustainability standards by SMEs, and centers on their not understanding the value that adopting these standards could bring to their businesses. The value proposition centers on the fact that sustainability standards are dominant within larger corporates, and for many SMEs, the next phase of growth often requires accessing those MNC value chains, which means adhering to the standards the MNC applies.

The SABS plays a key role in the promotion of all standards. However, reaching out to SMEs is challenging when they do not belong to value chains within which advice on standards is

⁴⁹ This is from inhouse industry analysis on processes or areas impacted by the VSS as shown in Annexure 4.

available, meaning it is left to a one-on-one interaction between the standards body and the SME. This problem is common due to the dispersed nature of SMEs (B. Ntlangula, personal communication, April 10, 2017). Their geographical location serves as an additional disadvantage, especially in rural settings, even if the standards body has established satellite offices (G. Chapman, personal communication, March 30, 2017). The SABS conducts outreach programmes for SMEs, in rural areas especially, however, these are often unsuccessful. There are opportunity costs for SMEs to participate in these outreach programmes, including traveling costs, the operational costs for leaving the business managed by junior staff, and financial costs of closing the business altogether (D. Mngadi, personal communication, April 10, 2017).

3.1.2 Lack of technical assistance and training

SMEs often lack the technical capacity to understand sustainability standards and adhere to them on a consistent basis (G20, 2011). They would require capacity building initiatives to guide them through the adoption of, and compliance, with, these standards. Capacity building can be challenging where SMEs are widely dispersed and lack access to information on assistance programmes. In addition to the SABS programmes, various MNCs, such as Massmart, participate in capacity building initiatives to boost the competitiveness of the SMEs in their supply chains (SABS, 2017). However, in the South African context, there is also the language barrier preventing many SMEs from understanding these standards, thus necessitating the use of translators, an effort over and above capacity building. An additional obstacle is the lack of adequate literacy, which affects many SMEs. Furthermore, limited or no access to the internet, which is required for accessing additional information and ongoing maintenance, is another barrier (JJ. Wozniak, personal communication, April 4, 2017).

Stakeholders that support these initiatives have a vested interest in the SMEs. For example, mining houses that contract to various SMEs, or companies like Woolworths cater for training costs for the SMEs in their value chains in order to assist them to uphold their company codes (D. Mngadi, personal communication, April 10, 2017). However, these are the exception and not the rule as many corporates leave it to government agencies to promote or ensure capacity building for local SMEs (J. Wozniak, personal communication, April 4, 2017).

3.1.3 Implementation and certification costs

The cost of attaining certification and implementing sustainability standards is a well-known barrier. These costs are often independent of the value of the SME's operations, obliging them to incur fixed costs that limit profit margins (ITC, 2016)). It is argued that the costs can be recouped with the resulting productivity gains and economies of scale once the SME has accessed markets and value chains. However, the first step is to cater for these costs. Producers are known to bear most of these certification costs with little or no assistance from standards bodies or other value chain agents (ITC, 2016).

The SABS contends that, within their capacity building initiative and the stakeholders they participate with, such as the mining houses, there are cost-sharing initiatives to support these SMEs. These would include an 80 percent, 5 percent and 15 percent split between corporates in the value chain, the SME, and SABS, respectively. There are other initiatives developed by the Department of Economic Development that can assist with certain costs,

however, these costs are usually not fully compensated as there is no ownership taken by the SME (D. Mngadi, personal communication, April 10, 2017).

Adopting VSS is just one stage of the process. There are maintenance costs that recur year-on-year such as membership costs that start roughly at \$200 as shown in the UN Global compact (2017). There are also guidelines in place to retrain employees on certain procedures which can be costly in time and effort. Internal audits are thereafter necessary to ensure these sustainability systems become the part of the company culture.

Notably not all sustainability standards bear testing and certification costs. Some require a best-practice system to be followed, which is futile without the necessary awareness and training implemented (B. Ntlangula, personal communication, April 10, 2017).

3.1.4 Regulatory enforcement

Adoption of sustainability standards may lag if there is no regulatory enforcement of some standards within a sector, for example in the absence of mandatory standards governing workplace conditions or environmental management it is rare to find SMEs taking up voluntary sustainability standards (Y. Ndlhovu, personal communication, April 10, 2017). There is an importance for regulation, in setting the baseline or floor, and its subsequent effects on sustainability standards.

3.1.5 Market structure

The South African market is largely dominated by MNCs and SMEs are realizing that several of these value chains are controlled and dominated, deterring an interest to adopt sustainability standards (L. Matlou, personal communication, April 7, 2017). Some MNCs adopt upstream SMEs or suppliers of their choosing and foster their growth and development. However, they are assimilated into the MNCs value chains on a long-term basis and that can lead to these SMEs losing their intellectual property rights (D. Mngadi, personal communication, April 10, 2017). Losing intellectual property may deter SMEs from adopting sustainability standards for the integration purposes of such MNCs. Additionally, those willing to adopt such standards will face competition from other SMEs for recognition purposes of these MNCs. Furthermore, if VSS are too unrealistic or the expectations of dominant MNCs are too high, uptake of standards is likely to be subdued (G20, 2011).

3.2 Incentives for the adoption of sustainability standards

3.2.1 Sustainability requirements by buyers

SMEs access markets indirectly through the value chains driven by MNCs, whether global, regional, or domestic. Subcontracting with these corporations involves adopting stringent sustainability requirements, which are often imposed by the international buyers at the downstream end of the value chain, who in turn are responding to consumer needs, perceived and real (Gotoh, 2015). In South Africa, many SMEs receive contracts by participating in tenders despite being unaware of the standards they must comply to for the award of the tender to be valid (D. Mngadi, personal communication, April 10, 2017). In both cases,

SMEs are compelled to attain the standards set by buyers, whether MNCs or government agencies. This negative incentive was repeatedly cited by interviewees. However, having attained the standards, and therefore being able to sustainably participate in the value chain in question, the SME is also subject to strong positive incentives, namely the financial benefits that can flow from larger, more predictable orders.

3.2.2 Consumer awareness

Some SMEs want to uphold sustainability practices as they understand the value of doing so, both from a financial viewpoint but also societal, and so adopt these standards (B. Ntlangula, personal communication, April 10, 2017). This is also against the backdrop of rising consumer awareness of how, and in which forms, products have been consumed both locally and internationally. The implication being that SMEs recognize their consumers' preferences, for example for organic products, and as a result apply these standards (G. Chapman, personal communication, March 30, 2017). There is a growing local market for organic produce in the country, evident in small organic markets arising in more affluent areas such as the Bryanston Organic Market, however, "South Africa is far behind the rest of Africa and the world, in terms of recognising Organic Agricultural standards and principles" (South African Organic Sector Organization, 2017).

3.2.3 Access to finance

Access to finance did not appear to be a major driver of uptake of sustainability standards. Adhering to sustainability standards would not qualify an SME to access funding relative to the obstacles they face to accessing funding in general. As SMEs are naturally riskier investments, it is harder to access smaller amounts of funding versus the larger pools of finance available to larger companies (L. Matlou, personal communication, April 7, 2017). From our case study in *Annexure 1*, there is a positive correlation between having sustainability standards and access to finance though it occurs indirectly. This was also echoed by FAST International's Serena Thomson at the DIE workshop on 25 April 2017. Having sustainability standards in place is an indication of a healthy business that is able to absorb funding more efficiently, therefore making it more inclined to be considered for funding. In chapter 4 we focus on some financing solutions being applied and/or explored in the South African market.

4 Finance, SMEs, and sustainability standards

This section investigates the financing gap; what SMEs demand against what is already on offer in the market in order to access value chains and maintain sustainability standards, which can be costly to implement and maintain.

Financial options available to SMEs are largely dependent on the country's growth prospects. At the initial stages of development, SMEs rely mainly on their own capital or from borrowed funds of informal community lending programmes but are soon impacted by cash flow problems that come with the high demands of participating in value chains. SMEs can participate in regional or value chains in a variety of forms as "material suppliers, parts

and components suppliers, export-oriented manufacturers, subcontractors to MNCs, distributors, and service sectors” (ADB, 2015). Partaking in these activities would require the SME to obtain new or improved technology, improve their product quality, expand their business and hire workers. SMEs often lack the capacity to mobilize additional labour or material and face several non-tariff barriers and issues with cross-border regulatory constraints, which can be resolved with financing capacity (ADB, 2015).

GVCs can take two broad forms as shown in Annexure 6: Those characterized by vertical-linkages, where an MNC sits at the end of the supply chain and is responsible for final assembly; and those characterized by horizontal-linkages, where SMEs form business clusters and are the main contributors throughout the production process. Those in horizontal linkages have more difficulty regarding access to finance compared to those in a vertical linkage as financial support from the MNC is lacking in the former (ADB, 2015).

4.1 Demand for and supply of finance

4.1.1 Demand for finance

Value chain financing is crucial if the chains are to survive and this does not happen without the local SMEs, that are important in the value chain process (AFDB, 2013). Different financing is required at various stages of development, as shown below and highlighted by the National Credit Regulator (NCR), (2011). Such financing options are relevant not only regarding the growth and operations of funding the SME but can be used for the upskilling costs incurred to enter value chains and maintenance costs to adhere to sustainability standards i.e. various certification and maintenance costs.

Table 2: 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	N/a
High Potential. Possibly export business	Angel finance, Team's 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: NCR (2011)

4.1.2 South African government initiatives to supply finance to SMEs

There are many government initiatives supporting SMEs' access to finance, notably:

- The Department of Trade and Industry (dti) operates many incentive schemes to support various type of industrial development projects.
- The Industrial Development Corporation, reporting to the Economic Development Department, also provides many incentive schemes, loans and grants.
- 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.

However, awareness of these programmes is low, especially for SMEs not connected to cooperatives⁵⁰ or MNCs in their value chains (NRCS, 2017). SMEs in a vertical value chain with a large corporate have the advantage that the MNC can source the funding required for the SMEs upskilling needs⁵¹. Furthermore, some MNCs partner with Enterprise Development Agencies thus sourcing government funding more easily (D. Newman, personal communication, April 12, 2017).

With respect to government incentives, most schemes will cover 50 percent of the cost of funding leaving SMEs to use other means of financing such as bank financing, to fill the gap. Historically these initiatives have not always been successful but provide “free government money” and are supported by government agencies. Grants have several conditionalities such as the recipient being B-BBEE accredited, with some offering 90 days to access the grant money, if the rest of the funds are raised. These grants have recently moved into open window policies with the funding only accessible within a certain time frame implying that SMEs need to keep up to date regarding new policy and funding opportunities, to take advantage of them. (D. Newman, personal communication, April 12, 2017).

SEFA's Bridging Loans, for example to meet immediate cash flow needs, can also be granted on the basis of the SME having firm contractual orders from buyers.

For cash flow and business continuity purposes, bank financing or bank loans are highly demanded by SMEs as seen from Table 2 above. SMEs need agility to meet project or contractual demands and require easily accessible financing to do so. Bank financing is liquid and easily accessible, and as a result quite popular. The issue lies with the fact that banks are not prepared to finance SMEs that have no business record, since SMEs are naturally riskier ventures to the banks, and/or are unable to understand the loan process due to lack of financial acumen. According to the National Credit Regulator (2011), about 75 percent of bank credit requests by SMEs are rejected.

Table 3 below highlights the loan amounts available to SMEs in their various sizes.

50 Co-operatives are independent associations of persons/businesses who join forces to meet their economic, social and cultural needs and aspirations. The co-operative provides services and products to its members and have profit-sharing mechanisms to support each other. The South African government has prioritised support of cooperatives as part of its broader empowerment initiatives.

51 This is also highlighted in the case study.

Table 3: Loan amounts available to SMEs

Sector	Description	Number of employees	1. Annual turnover 2. Loan sizes 3. Access to banking facilities
Survivalist	<ul style="list-style-type: none"> Income generated is below poverty line 	<ul style="list-style-type: none"> No employees 	1. < R10 000 2. Average R500 3. None
Micro (0)	<ul style="list-style-type: none"> Turnover is less than VAT registration limit Not usually formally registered for tax or accounting purposes 	<ul style="list-style-type: none"> No employees 	1. R10 000 to R25 000 2. Average R1 000 3. Possibly individual account
Micro (1-4)	<ul style="list-style-type: none"> Same descriptors as Micro (0) except the number of employees are 1-4 	<ul style="list-style-type: none"> Less than 5 employees 	1. R25 000 to R50 000 2. Average R7 000 3. Individual account
Very Small	<ul style="list-style-type: none"> Operate in formal market 	<ul style="list-style-type: none"> Less than ten employees 	1. R50 000 to R200 000 2. Average R25 000 3. Entry Level Business Account
Small Enterprises	<ul style="list-style-type: none"> Distinguished by some form of managerial co-ordination 	<ul style="list-style-type: none"> Less than 50 employees 	1. R200 000 to R5 000 000 2. Average R70 000 3. Business account
Medium Enterprises	<ul style="list-style-type: none"> Further decentralization of decision making More complex decision making Increased division of labour 	<ul style="list-style-type: none"> Less than 100 employees (200 in mining) 	1. R 500 000 to R50 000 000 2. Loan size is dependent on sector, region and institution providing finance. Average R150 000 3. Business Account with additional facilities

Source: NCR (2011)

The issue is not the lack of financing per se, but rather the low success rates. Bank loans are not as cost effective to cater for small quantities of finance (L. Matlou, personal communication, April 7, 2017). Micro-finance institutions are present and fit to lend lesser amounts but this would be at the cost of high interest rates (NCR, 2011).

Banks only lend to businesses that are contractually ready, implying a demand for certified offtake agreements. SMEs in value chains would have higher success rates if the supporting MNC or contractor supplies guarantees for the project using offtake agreements. However, MNCs generally do not supply offtake agreements as they are unaware of what their consumers require in the next business cycle, and so they only supply Letters of Interest, which banks don't consider in their approval processes (D. Newman, personal communication, April 12, 2017). This identifies a gap in bank loan finances as SMEs have low bargaining power.

4.1.3 Innovative financing options

Angel financing options are also demanded by SMEs, especially those in horizontal value chain structures. Angel investors contribute more to the financing structures of the loan amounts and give guidance to SMEs on their business operations (L. Matlou, personal communication, April 7, 2017). There are a series of Angel investors in the country, such as the Angel Investment Network. The ease with which SMEs can access such funding is conditional on factors the Angel investor determines. Investors could also commit to smaller deal sizes, which are desired by SMEs (K. Sharum, personal communication, April 3, 2017).

The recent trend of making use of 12J venture capital funds⁵² in the country means that there is another access point for SMEs to gain funding. This, however, is a very elitist funding segment and is difficult for SMEs that are not part of a vertical value chain to access. The demand for venture capital funding is not as prevalent as the two cited above and did not come up much in interview findings.

5 Considerations and recommendations

5.1 Financing recommendations

It is undeniable that there are several linked factors. SMEs in GVCs or RVCs require financing and the capacity to implement standards in order to enter and remain in value chains and, accordingly, may need cost compensation to implement and sustain these standards. Therefore, financing is a central determinant for better adherence to standards.

Financing, as indicated above, is in the forms of either debt or equity. According to our literature review, and interviewees, financing provided to SMEs was mainly in the form of bank loans and government initiatives. There was little information on how the private sector contributes to this. While there are specific SME lending firms like Business Partners, nothing conclusive can be affirmed at this stage. Therefore, more study in this area is required.

Resolving gaps to finance is essential, as there is a shortage of funding capabilities. The demand for government finance is still present, however it should more accessible, timeous, and hold fewer conditionalities for SMEs to take advantage of. Statistically, applications for grant funding result, on average, in a six percent approval rate with some of these projects not even coming to fruition due to the subsequent barriers (D. Newman, personal communication, April 12, 2017). SMEs call for less emphasis on collateral to secure loans, more timeous grant funding and transparency of the grants made available. It is recommended that financing houses collaborate and co-ordinate on how to lend funds that have less contractual minutiae to SMEs that would generally be unable to access finance (D. Newman, personal communication, April 12, 2017). Effective government-credit-guarantee-schemes would also be a step forward (Mazanai & Fatoki, 2012).

SMEs usually require a small initial amount of funding to expand their operations to enter value chains though investors have established deal agreements with larger amounts of funds; these are large funds disbursing large amounts for projects, which are not suited to the SME environment as only smaller sums are required to develop standards. SMEs are often overlooked for these deals, as they are unable to absorb large finances efficiently. Investors in the equity space should in effect consider doing smaller deal sizes that benefit SMEs (K. Sharum, personal communication, April 3, 2017).

52 These funds raise money from investors whose capital contribution is 100% tax deductible if the funds are used for the development of SMEs. Essentially, corporates who want to mitigate their business overheads can take advantage of these funds by investing in other business structures without the usual inhouse administration required for tax benefits and B-BBEE scores. SME's can take advantage of this pool of funds from corporations and individual investors, that may or may not have a vested interest in the SME.

More innovative ways to tailor the tender process are also necessary. These involve getting SMEs exposure to global tenders, enabling them to compete globally, through engagements with industrial players using networking events for instance. The tender process will consist of linking into a value chain but is applied with certain conditions and uses financial institutions to back the SMEs in the form of guaranteed cash flow to advance projects (L. Matlou, personal communication, April 3, 2017).

Negative cash flow cycles is an option SMEs, in clusters especially, can use to enter value chains. Essentially, SMEs can enter the value chain by consignment i.e. receive financing or product in advance from a mature SME or MNC, that has a vested interest in expanding their business and enabling them to enter value chains. After subsequent profits are, made, there is a repayment of the initial capital (L. Matlou, personal communication, April 3, 2017).

There should be more offtake agreements and more structured lending from intuitive lenders in the form of rental finance instead of a focus on retail banking loans or governmental initiatives. Intuitive lenders would be financial institutions such as SASFIN bank (L. Matlou, personal communication, April 3, 2017). These intuitive lenders offer tailored financial solutions but also assist small businesses to streamline their banking and cashflow systems by partnering with innovative firms like Xero that are tailored for SMEs. Not only do these lenders create business for themselves, they provide solutions based on understanding the client at hand, the SME, and go beyond the need to just provide financing (Sasfin Bank, 2017).

5.2 Standards recommendations

5.2.1 Enhance awareness

Increase the awareness of the value of standards and their enhancement capabilities. This should be the focus of standards bodies, cooperatives and the MNCs linked in value chains with respective SMEs. Business Organizations like the South African Chamber of Commerce (SACCI) could be mobilised to bring more SMEs into the equation; since such associations are networks containing MNCs and SMEs. They could promote and exemplify how the use of sustainability standards can lead to growing contractual arrangements for SMEs in value chains or those in their nascent stages (M. Taylor, personal communication, April 7, 2017).

Boosting consumer awareness of sustainability standards would drive the demand for standards and improve market sentiment. This is crucial, as consumers in the developing world are less familiar with, and more indifferent to, sustainability standards. This should drive the demand for sustainability standards from producers to meet client demand. A novel suggestion is to use radio as a media tool (SABS, personal communication, April 3, 2017).

Ensuring there is transparency of the standards implementation process, costs associated, assessment methodology, and dispute resolution process (the latter two often lacking) will allow SMEs to make more informed decisions (ITC, 2016).

5.2.2 Support SMEs to get certified

More institutional support mechanisms to adopt and adhere to sustainability standards is essential. These would include extending the geographical presence of standards bodies for SMEs to make use of testing facilities, documentation support, and support for implementation of the standards process. Corporations with a stake in their SMEs could aid in these costs by including them in corporate social responsibility or enterprise development programmes, thereby creating tax advantages, an potentially enhancing their BBEE points in order to access government contracts. This would be beneficial for both parties (M. Taylor, personal communication, April 7, 2017).

Engagement of buyers and SMEs in the standard setting process, if multi-stakeholders set standards, could enhance cost-sharing models. Since SMEs bear most of the costs of certification and implementation, cost-sharing mechanisms between SMEs, standards bodies and value chain players should be promoted as an incentive for the adoption of standards (ITC, 2016).

Capacity-building initiatives to support SMEs should not come at an additional cost to the SME. These should also be adapted to the local context and consider the language and educational barriers including the size of the SMEs in question (ITC, 2016).

5.2.3 Less creation of standards

Decreasing the constant creation of new standards is important to consider, as the sustainability gap is large enough and difficult for developing countries' SMEs to adopt. There are numerous standards of all spectrums, environmental or social and SMEs should learn to work with these and not be disadvantaged by the growing gap that would hinder their participation in value chains (J. Wozniak, personal communication, April 4, 2017).

Increasing the access to standards countrywide, however, should be the focus. This will allow producers equal access to the sustainability standards and the opportunity to be certified, enabling them to be competitive and access more value chains (ITC, 2016).

5.2.4 Uncover data

The lack of data on the performance of SMEs has been noted in several publications particularly the challenges SMEs face have not been fully understood (NCR, 2011). Where possible, develop cooperation mechanisms between companies that can drive low cost and high uptake IT tools enabling the creation of digital self-assessment questionnaires for producers. This will allow standards bodies to collect data and understand how these producers are performing to gauge the sustainability gaps better i.e. to target funding or intervention in these sectors. There would be a need to keep the data anonymous for protection reasons and to yield an unbiased approach to the analysis (J. Wozniak, personal communication, April 4, 2017).

This would aid in the reduction of the geographical gap, if producers can access the internet, communicate, and get training from appropriate standards bodies or direct buyers. Standards

bodies should additionally look to integrate these digital communication channels in a variety of ways, such as catering for different South African languages with provision for the illiterate.

5.2.5 Government ownership

The government, in the form of ministries, should be on board to increase the competitiveness of their sectors be it the agricultural or electrotechnical sector. This would result in higher price points for products, higher profit margins, create employment within the SME sector, and expand export capabilities through more linkages within value chains. A public policy commitment by government is essential (J. Wozniak, personal communication, April 4, 2017).

The government determines and delivers initiatives for SMEs leaving them to be "price takers". It is essential for SMEs and government officers to collaborate and determine what works and what does not. Officers in charge of SME development should have some experience with the SME space as in some cases these initiatives created are run by inexperienced officials (M. Taylor, personal communication, April 7, 2017).

6 Conclusion

This report investigated the sustainability space in South Africa. It looked into the standards "market", what is available in terms of standards, mandatory versus voluntary standards, compared to which sustainability standards are available. The dominant incentives for SMEs to adopt sustainability standards are requirements by buyers (MNCs) and rising consumer awareness, while constraints revolved mainly around costs, lack of awareness, lack of technical capacity and regulatory enforcement. Financing as an enabler to access global value chains was also investigated, revealing a shortage in the supply of funding, as SMEs need more innovative and accommodative options. Several recommendations were stated to promote sustainability standards such as promoting awareness, broadening support for SMEs, and enabling government access to data so that more focused interventions could be developed. Different financial options were also proposed to enable more SME participation within value chains and adherence to sustainability standards. Finally, a case study of PortiaM was included to give a practical example as shown in Annexure 1.

7 Annexures

Annexure 1: Case study – PortiaM

The SABS recommended looking into PortiaM⁵³, a small company based in Pretoria, with a unique story of growth to expansion; owing to the ideal steps Portia Mngomezulu followed to take her SME from a home-based business to a thriving SME. We paid a visit to Portia⁵⁴ at the Innovation Hub, a business center that houses and supports entrepreneurs and offers favourable rental rates for upcoming SMEs. PortiaM is not your typical SME but one that has some exemplary lessons to draw on.

Figure 1: The BioPark



Source: Ngarachu (2017)

A. Company history and information

PortiaM falls under the retail category of industry, producing *Proudly South African*⁵⁵ bath and body products, from a natural resource grown in the Northern province, Marula Oil, which comes from the ripened fruit of the marula tree and is native to many parts of central and southern Africa. Seeing the positive effects of using Marula Oil on the skin as a child,

53 Portia M™ is a privately black owned, led and managed, Johannesburg based company producing skin care and cosmetics. Portia M™ is a Level 3 BBBEE contributor and a Proudly South African certified company. Our products are manufactured in an SABS approved facilities that follow Quality Management System based on ISO 9001/2008. Our Vision is to become a leading skin care and cosmetics brand in Africa and the world at large, specializing in quality skin care with locally sourced ingredients. <http://portiamss.com/wp/>

54 Her company is named after her.

55 To be a Proudly South African certified company, a company would be members of the campaign and can bear a logo on their products. "The Proudly South African Campaign was born out of Socio-economic necessity in 1998 with the Presidential Jobs Summit – under leadership of former South African Pres. Nelson Mandela. It was formed from the international research that was based on the Australian buy local campaign. The same concept was bought here in South Africa to address the issues of Job creation through local investment in local products and services.

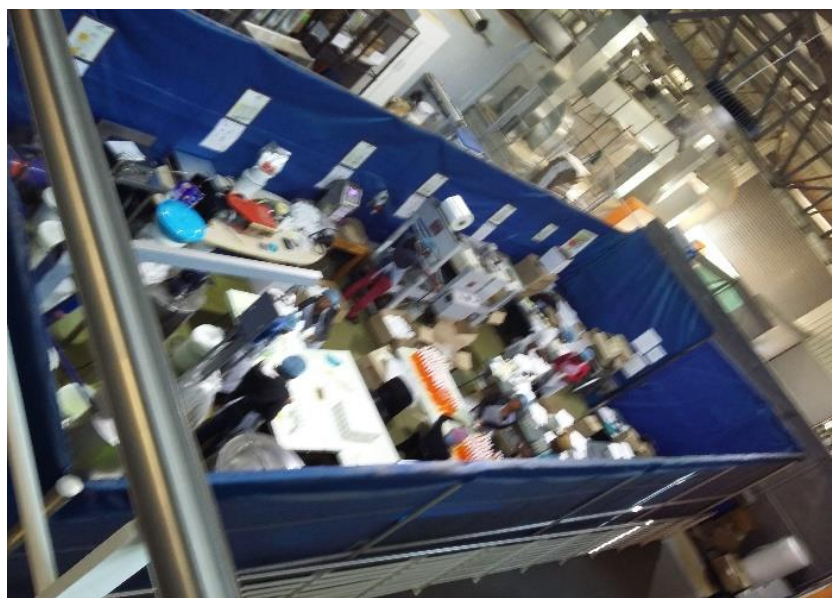
The aim of the Proudly South African Campaign is to educate consumers to buy local goods when doing their shopping and to get businesses to procure locally in so doing they will be injecting money back into the country and the economy. Proudly South African Campaign urges businesses to be members of the campaign and this is done to promote local goods and services and to make it easily identifiable to the consumers": <http://www.proudlysa.co.za/index/index.html>

she felt there was a gap in the market for supplying an African based product, sourced from African materials.

Walking into the BioPark, where her factory and offices are situated, we go over her growth story. Portia's background is in engineering but followed her passion for beauty by starting her company in 2011. She obtained an MBA in Entrepreneurship from the Gordon Institute of Business Studies (GIBS), funded by Massmart, in 2013 after leaving permanent employment and venturing into small business ownership. Naturally, her first retailer to stock her products was Makro, part of the Massmart group.

This five-year company started as a home-based business where she began producing and making products such as facial and body lotions using a two-plate stove. This later extended to a small sized factory (Figure 2:) and houses 23 employees. The managerial capacity is growing, with two main managers, both female, and herself. It is 100% black female owned and offers preferential employment to previously disadvantaged individuals; these are mainly young biochemistry graduates. Portia started her company with R200 and in five years is turning over R 3.5 Million annually. Some statistics are given in Table 4 below.

Figure 2: PortiaM Factory



Source: Ngarachu (2017)

B. PortiaM value chain and market entry

PortiaM supplies to a number of major retailers in South Africa namely Pick n Pay, Shoprite, Checkers and Massmart. Currently, this is at a local/regional level to over 335 stores, however, there is a contractual agreement in process between Pick n Pay and Shoprite to expand PortiaM and enter cross-border value chains in Africa where these two have a large footprint.

All upstream suppliers and packaging are South African, reducing costs for the business. They source their main ingredients from "smallholder" Marula seed pickers who are mainly her extended family. At the onset of her business, she sourced directly from her family but

now contributes to their profits by paying them for their efforts. According to Portia's website, they

support the women of the co-operative who extract the kernels from ripe marula fruits by hand, then cold-press the kernels to harvest the marula oil inside. Our approach to harvesting the marula oil is environmentally conscious with a social aim of community upliftment empowering women and youth in Africa. (PortiaM, 2017).

In terms of support that retailers provide, it is rarely in financial terms to get funding for equipment or certification. Rather it is through a variety of business development programmes. During her start-up phases, Pick n Pay's Suzanne Ackerman Foundation, known to incubate select entrepreneurs, was instrumental in aiding PortiaM. They helped her to make the necessary buyer connections for PortiaM to enter the respective supply chains, learning how to engage with buyers and training on management of finances. They also offered other types of support such as covering traveling costs to all provinces in the country to promote her product and brand. This has created a two-way relationship between PortiaM and the Foundation where Portia delivers necessary feedback that the foundation is interested in learning, to develop fellow SMEs.

C. PortiaM experience with standards

The term sustainability standards is almost unfamiliar to Portia at the onset but when elaborated on, she catches on, especially when an ISO standard is mentioned. This touches on one of the constraints on *The lack of awareness* indicating that many African SMEs are not well versed with VSS but are familiar with leading standards bodies. Currently, PortiaM is in the process of acquiring the new ISO 9000/2010 having in place the ISO 9000/2008. This is a quality management system, which is also voluntary, that the company has been following ever since Portia approached the SABS to understand which standards are necessary to enter regional markets and supply through the big retailers. Approaching the SABS was an individual effort by Portia, based on her own due diligence to know who to approach.

Following the quality management system is difficult in their small premises (see Figure 2), therefore, PortiaM will be relocating to a larger factory. This allows them to continue to follow the GMP, which is in alignment with their standard developed by the SABS i.e. the SANS 22716:2011 standard for "Cosmetics – Good Manufacturing Practices (GMP) – Guidelines on Good Manufacturing Practices".

Regarding good social practices, PortiaM ensures that each employee receives a decent wage, complying with minimum wage laws, training and upskilling of staff and promoting employment of disadvantaged individuals and women. Due to the chemical nature of her industry, there are certain environmental standards that are regulated that the company complies with. They are also registered with COIDA⁵⁶ to ensure there is compensation paid to employees for any work-related injuries for example.

PortiaM is part of The Cosmetic, Toiletry & Fragrance Association of South Africa which is the industry's voice committed to maintaining the high quality and safety of cosmetic products. The CFTA has its own industry codes and standards that members choose to

⁵⁶ Compensation for Occupational Injuries and Diseases Act.

practice. Membership implies access to industry knowledge, updates on legislation and assistance with exporting, such as translating the labels, among other benefits.

Retailers that PortiaM supplies to are transparent regarding which standards are required, however, they do not participate in any cost reducing mechanisms regarding the certification and implementation of their prescribed standards. The cost of certification, in PortiaM's specific industry, would generally average R 20 000 annually, however, as a recipient of the "Best Entrepreneur in Tshwane⁵⁷" award, the SABS funded this cost for her, initially. According to Portia, this is what it would have cost her on average including annual audits, which would be a little less than the stated figure. Auditors can be contracted through the SABS or are independent and this is a cost PortiaM bears solely.

Portia stated that implementation was/is her biggest challenge yet, especially the initial documentation, which is an unfamiliar territory for small business owners. The SABS consultants initially helped in training for the documentation process as every procedure i.e. receipt of new material, returns, had to be documented. This has led to the documentation and verification of systems where new employees can follow a systemized process in making products. PortiaM highlights this as a benefit of standards implementation as it has led to an efficient manufacturing process.

The main motivation to adopt these standards was access to markets, however, she reports that she can have better pricing, as standards make her products exclusive. What was uncovered regarding PortiaM's experience with standards, is that Portia researched the necessary/bare minimum she needed to enter retail value chains and was completely certified and actively implementing these good social and environmental practices when she approached the retailers. This allowed her to negotiate larger orders, more favourable pricing (which is competitive but lower than international brands) and meet the demand from buyers. It also allowed her better contractual relationships going forward, where plans to shelve her products in other African markets are underway.

D. PortiaM financing experience

Financial access is difficult in a number of cases as outlined in the study. PortiaM being a unique case used many exposure tactics to get her name and brand noticed and ABSA, a local bank, adopted her as "special case study" and provided some financial support in her early stages to travel to market her product. This led to her meeting Suzanne Ackerman where she was adopted by the foundation.

The Small Enterprise Development Agency (SEDA), a national government grant agency, was influential in the growth of PortiaM. SEDA identifies companies needs before granting funding and appropriates financing accordingly. Initially, PortiaM required funding for testing of her product, which she was successful at receiving. Now, with expansion as her prime objective, the need is for new equipment. She has applied for the funding but is still waiting. This is an example of the grant financing being untimely. The Innovation Hub itself allows the company to pay favourable rental rates and provided for an SSP fund, a Start-up Support Programme, which helped Portia purchase machinery as shown in the factory (see Figure 2). Constraints mentioned were the difficulty in accessing bank financing for entrepreneurs.

57 A municipal region.

This was regardless of documentation showing the large orders in line. Banks, in her experience needed to see a certain amount of turnover. Other funders required some turnover, as well as evidence before accessing funding. Funders that are ready to lend to SMEs in their start-up phases are necessary; a comment relating to the financing conclusions.

PortiaM states that some retailers may give a 50% grant and a 50% loan in order to meet one's orders and if not, provide the necessary contacts with written proposals to larger corporates such as Anglo American to help fill the financing gap.

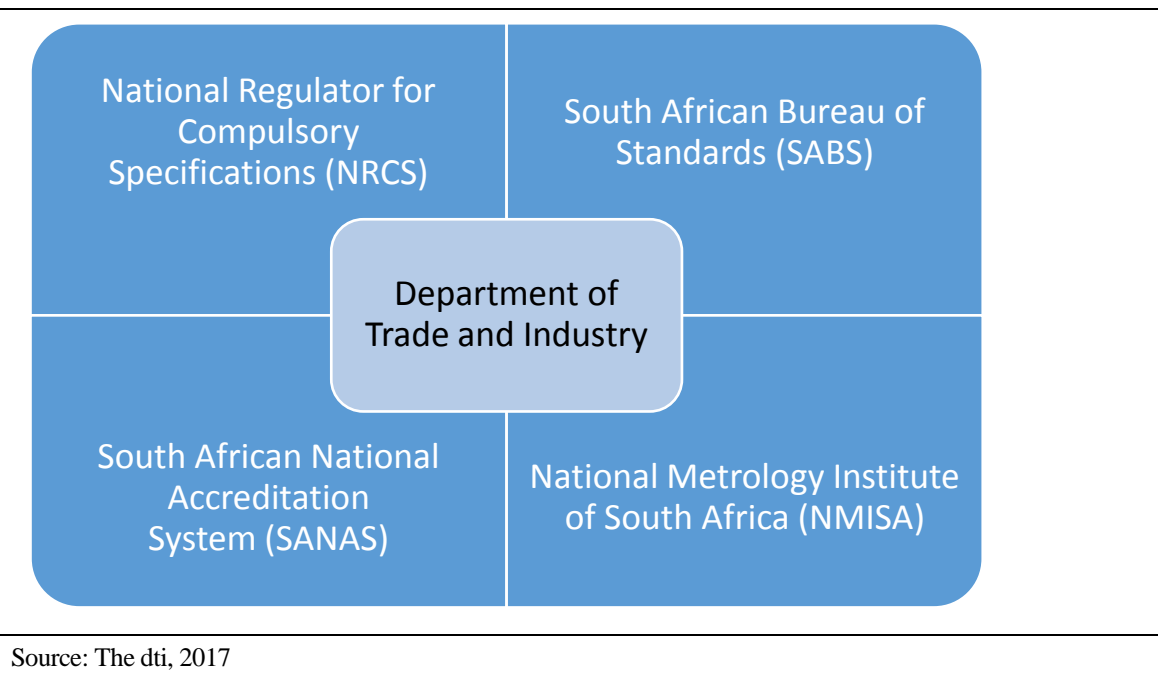
E. Concluding comments

The fact that she had her standards and certification in place and followed good practice systems, Portia found that her ability to access finance and markets to start up and to keep growing were positively correlated. She states that they are more favourable, hence the recommendation by SABS to market her story, her connections with ABSA and the Suzanne Ackerman Foundation. She recommends compliance should be done at the start, in order for the implementation procedures to not catch up with you, or negatively influence the company.

Regarding funding, she recommends that grant houses move into or work with supplier development programmes to train entrepreneurs in financial management rather than just leaving the SME to absorb a huge amount of funding that it may not do so efficiently, leading to more demand for money in the future; a vicious cycle afflicting the SME market in the country.

Table 4: Company at a glance			
Company statistics	Employee capacity	Technical capacity	Productivity scale
Age: 5 years (2011-2017)	23 employees Hires previously disadvantaged individuals under 40 years.	Portia Mngomezulu: Engineer and MBA in entrepreneurship	Suppliers to 335 regional retailers
R 3.5 million annual turnover	2 Female managers (100% black female owned)	Employees are biochemistry graduates	Exports to independent distributors in over 4 countries.
Source: Ngarachu (2017)			

Annexure 2: Standardisation, quality assurance, accreditation and metrology institutions linked to Department of Trade and Industry



Annexure 3: Industry span of SABS voluntary standards in the South African market

Accessibility and Disability	Acoustics	Adhesive & Packaging	Agrochemicals	Automotive	Building & Construction
Chemicals	Chromatography	Civil Engineering	Clothing & Ppe	Electronics Appliances	Energy Efficiency
Engineering	Environment (Ems)	Explosion Prevention	Fibre & Polymers	Food & Beverages	Industrial Chemistry
Lighting Technology	Mark Scheme	Mechanical & Fluids	Medical & Health	Metrology	Mining & Minerals
Paints & Sealants	Petrochemical	Pharmaceutical	Radiation Protection	Rotating Machinery	Rubber & Plastics
Safety & Security	Smmes & Quality Audits	Solar Water Heating	Textiles & Leather	Timber	Transportation

Source: SABS, 2017

Annexure 4 ITC list of voluntary sustainability standards in the South African market		
Standard	Related sector or process impacted	Industry or process impacted (ITC Classification)
Heritage Certification - Hotels and Tourist Accommodation	Tourism	Services
Wine and Agricultural Ethical Trading Association	Wine	Production & Extraction
Fair Trade Tourism Product Certification Standard	Tourism	Services
Milieukeur Standard for Citrus Production - South Africa	Agriculture	Production & Extraction
Clean Clothes Campaign - Code of Labour Practices logo	Labour	Production & Extraction
Codex Alimentarius Food Hygiene	Food Safety	Production & Extraction
UNECE Standard FFV-50 Apples	Agriculture	Production & Extraction
IFFO Global Standard for Responsible Supply (IFFO RS)	Fishing	Production & Extraction
European Feed Ingredients Safety Certification - EFISC	Feeds	Processing & Manufacturing
TÜV Rheinland - Green Product Mark - Furniture	Furniture	Production & Extraction
International Council on Mining and Metals	Mining and Metals	Production & Extraction
Bonsucro	Agriculture	Production & Extraction
FAMI-QS	Feeds	Processing & Manufacturing
Friend of the Sea - Master	Marine	Production & Extraction
Roundtable on Sustainable Palm Oil - Supply Chain Certification	Supply Chain	Supply Chain
Sustainability Initiative of South Africa (SIZA)	Agriculture	Production & Extraction
Fairtrade International - Gold Standard	Sustainable Trading Practices	Production & Extraction
Global Sustainable Tourism Criteria for Destinations	Tourism	Services
Pharmaceutical Supply Chain Initiative	Supply Chain	Production & Extraction
Together for Sustainability	Chemical industry supply chains	Production & Extraction
UTZ	Agriculture	Production & Extraction
Worldwide Responsible Accredited Production - WRAP	Manufacturing	Processing & Manufacturing
Global Sustainable Tourism Criteria for Hotel and Tour Operators	Tourism	Services

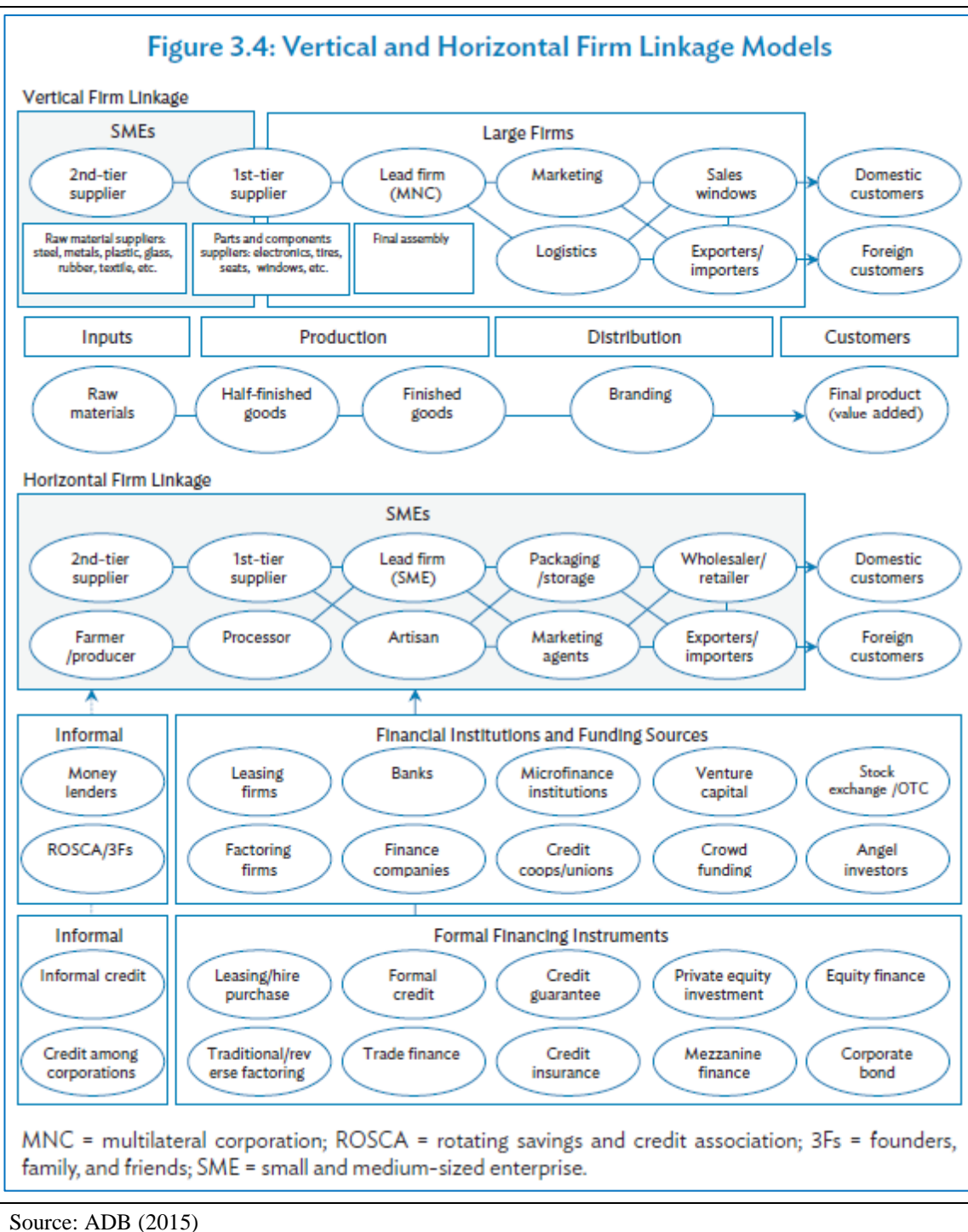
Annexure 4 ITC list of voluntary sustainability standards in the South African market		
Standard	Related sector or process impacted	Industry or process impacted (ITC Classification)
Fairtrade Textile Standard	Textile	Production & Extraction
Made in Green by OEKO-TEX®	Textile	Processing & Manufacturing
OEKO-TEX® Standard 100	Textile	Production & Extraction
Initiative Clause Sociale - ICS	Retail	Processing & Manufacturing
FOS - Wild - Generic Sustainable Fishing Requirements	Fishing	Production & Extraction
Electronic Industry Citizenship Coalition - EICC	ICT	Production & Extraction
Global Organic Textile Standard - GOTS	Textile	Production & Extraction
Textile Exchange Organic Content Standard 2013	Organic Content	Trading & Retailing
Textile Exchange Organic Content Standard 2014	Organic Content	Processing & Manufacturing
Workplace Condition Assessment (WCA)	Labour	Trading & Retailing
Responsible Jewellery Council (RJC)	Jewellery supply chain	Trading & Retailing
Forest Stewardship Council® - FSC® - Forest Management	Forestry	Trading & Retailing
Forest Stewardship Council® - FSC® - Chain of Custody	Forestry	Services
GLOBALG.A.P. Floriculture	Agriculture	Production & Extraction
Food Safety System Certification 22000	Food Safety	Processing & Manufacturing
Global Social Compliance Programme - Environment Level 2	Environmental management	
Global Social Compliance Programme - Environment Level 3	Environmental management	
GLOBALG.A.P. Crops	Agriculture	
Fair Trade USA	Labour	Production & Extraction
USDA National Organic Program - NOP	Organic Content	Trading & Retailing
IFS Food	Food Safety	Trading & Retailing
MPS-ABC	Environmental management	Production & Extraction
IFC Performance Standards on Environmental& Social Sustainability	Performance Standard and Funding	Production & Extraction

Annexure 4 ITC list of voluntary sustainability standards in the South African market		
Standard	Related sector or process impacted	Industry or process impacted (ITC Classification)
Marine Stewardship Council - MSC	Fishing	Production & Extraction
Fairtrade International Trader	Sustainable Trading Practices	
Bio Suisse Standards for Imports	Organic Content	Production & Extraction
Unilever Sustainable Agriculture Code	Agriculture	Production & Extraction
ISCC EU	Supply Chain	Production & Extraction
ISCC PLUS	Supply Chain	Trading & Retailing
Fairtrade International - Hired Labour	Labour	Trading & Retailing
Naturland Standards on Production	Organic Content	Trading & Retailing
SAI Platform -- Farm Sustainability Assessment	Agriculture	Trading & Retailing
Sustainability Assessment of Food and Agriculture systems - SAFA	Agriculture	
Alliance for Water Stewardship	Water	Production & Extraction
Carbon Trust Product Footprint Certification	Greenhouse gas verification	Production & Extraction
Sustainable Agriculture Network - Rainforest Alliance - 2010	Agriculture	Production & Extraction
Sustainable Agriculture Network - Rainforest Alliance - 2011	Agriculture	Processing & Manufacturing
EU Organic Farming	Organic Content	Production & Extraction
Soil Association organic standards	Consumer products	Production & Extraction
Global Reporting Initiative (GRI)	Reporting framework	Production & Extraction
IFOAM Standard	Organic Content	Production & Extraction
Guide on Social Responsibility for Chinese Int Contractors	Construction	Processing & Manufacturing
International Labour Organization Labour Standards	Labour	Production & Extraction
UN Global Compact	Sustainable Development Goals	Production & Extraction
GLOBALG.A.P. Risk Assessment on Social Practice (GRASP)	Agriculture	Production & Extraction
Sedex Members Ethical Trade Audit - SMETA Best Practice Guidance	Reporting framework	Production & Extraction

Annexure 4 ITC list of voluntary sustainability standards in the South African market		
Standard	Related sector or process impacted	Industry or process impacted (ITC Classification)
Sedex Global (Supplier Ethical Data Exchange)	Supply Chain	Production & Extraction
Verified Carbon Standard - VCS	Carbon credits	Production & Extraction
Global Social Compliance Programme	Social and environmental conditions	Production & Extraction
Global Social Compliance Programme - Environment Level 1	Social and environmental conditions	Production & Extraction
Ethical Trading Initiative - ETI	Labour	Production & Extraction
WFTO Guarantee System	Sustainable Trading Practices	Production & Extraction
LEAF Marque	Agriculture	Production & Extraction
EcoVadis	Supply Chain	Production & Extraction
Fair for Life	Sustainable Trading Practices	Production & Extraction
Fairtrade International - Small Producers Organizations	Sustainable Trading Practices	Production & Extraction
Business Social Compliance Initiative Code of Conduct - BSCI	Working conditions	Production & Extraction
BRC Global Standard for Food Safety issue 7	Food safety and quality management	Processing & Manufacturing
Source: ITC, 2017		

Annexure 5: List of interviewees			
Name	Company	Date	Location
Geoffrey Chapman	(former SABS official)	31/03/2017	Skype – England
Susanne Fricke	Student-Jena	30/03/2017	Skype – Germany
Kate Sharum	EBS Advisory	3/04/2017	Johannesburg, South Africa
Joseph Wozniak	ITC	4/04/2017	Skype – Geneva
Mark Taylor	DesSoft	7/04/2017	Centurion, South Africa
Lebo Matlou	Borwa Mining	7/04/2017	Pretoria, South Africa
Tom Mollo	SABS	10/04/2017	Pretoria, South Africa
Rene Heydenrych	SABS	10/04/2017	Pretoria, South Africa
Thato Chabeli	SABS	10/04/2017	Pretoria, South Africa
Thabisa Mbungwana	SABS	10/04/2017	Pretoria, South Africa
Dumisani Mngadi	SABS	10/04/2017	Pretoria, South Africa
Lisbeth Boloka	SABS	10/04/2017	Pretoria, South Africa
Babalwa Ntlangula	SABS	10/04/2017	Pretoria, South Africa
Duane Newman	Cova Advisory	12/04/2017	Skype – Pretoria, South Africa
Sandra Kruger	Sandra Kruger & Associates	11/05/2017	Skype – Stellenbosch South Africa

Annexure 6: Value chain linkage models



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