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SME Upgrading Programs: Exploring Initiatives That Combine Market Linkages and Capability Strengthening

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I. Introduction

A key focus of most countries is to stimulate growth in their small and medium enterprises (SMEs). There are various influences on SME competitiveness. These include improving *capabilities,* including knowledge and information to increase their productivity and ability to compete; improving their ability to access and compete in new *markets* and find customers through supply chains, global value chains, government procurement and other channels; improving access to *finance* to fund operations and investment for growth; and a conducive *business environment,* including the availability of infrastructure (hard and soft) and effective regulations.[1] SME upgrading involves increasing an SME's ability to make higher-quality products, to make them more efficiently, or to move into higher-value activities, new markets, or a combination of some or all of these. Thus, upgrading involves innovating to increase value added.[2]

Governments, development partners (including the World Bank Group), nonprofit entities, and private sector associations and firms intervene to attempt to increase SME competitiveness by addressing market, coordination, and government failures that affect these four areas. Some interventions address multiple needs—such as business incubators that provide a physical space (infrastructure) and mentoring (capabilities) for start-ups. Other interventions address only one type of need—for instance, management training or matching grants for business development services and certifications (capabilities), loan guarantees (finance), or funding for attendance at trade fairs (markets). And in some cases, different interventions are combined within integrated programs.[3]

This paper examines interventions that seek to address firm-level capabilities and access to markets in an integrated fashion. It does not discuss initiatives whose primary focus is access to finance or the business environment although in some cases these might also be touched on by the initiatives we explore.[4] A substantial body of SME interventions aim to address both capabilities and markets. Examples of such interventions include supplier development programs (linking domestic SMEs in developing countries with large buyers, such as foreign investors that are part of global or regional value chains) and export development efforts (which work with firms beyond purely funding activities to explore and pursue opportunities in foreign markets). These programs aim to assist firms with upgrading, targeted toward the specific market opportunities in the value chains in which they operate or aim to compete.

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[1] World Bank Group Trade and Competitiveness Global Practice. *SME Growth and Productivity Action Plan (FY16-19)*; Metz, M., and J. Hill. Forthcoming. "Typology of SME Needs and Interventions."

[2] Petrobelli, C. and R. Rabellotti, R., eds. 2006. *Upgrading to Compete: Global Value Chains, Clusters, and SMEs in Latin America*. Inter-American Development Bank and David Rockefeller Center for Latin American Studies, Harvard University.

[3] The interventions/programs discussed in this paper are those that aim to assist multiple firms across an economy, region, industry, or other designation. This paper discusses considerations for the design and implementation of such programs. It does not address the variety of strategic approaches and analytical tools that can be used by individual firms to chart their improvement and market growth, although such tools can be used as part of some of the interventions we explore.

[4] Metz, M., and J. Hill. Forthcoming. "Typology of SME Needs and Interventions" includes more details on the types of interventions that address all four areas of needs laid out in the World Bank Group SME Growth and Productivity Action Plan.

This paper explores the notion that market demand is an important driver of SME upgrading and that interventions that incorporate both firm-level capabilities (supply) and access to markets (demand)—as opposed to addressing these needs separately—are potentially more complex but can be more effective. The evidence is limited, as only few impact evaluations have been done. However, these interventions strive to build viable markets, addressing demand issues, supply issues, and the linkages between them. Given this market-building approach, they could be more effective in building more sustainable economic activity and so warrant closer attention.

The aim of this paper is to provide practical information to World Bank Group Task Team Leaders and other development practitioners on the design and implementation of SME support initiatives that incorporate an SME upgrading and market development element. It is structured as follows: section II describes the approach taken to identify relevant interventions; section III presents findings on the types of interventions; section IV presents detailed case studies on four interventions; section V presents findings from the case studies and emerging practices within the World Bank Group, and section VI concludes with lessons learned and recommendations for the World Bank Group teams. A long list of programs is presented in Annex 1, and a literature review is presented in Annex 2.

II. Approach

To identify programs that work on both firm capabilities (the supply side) and market linkages (demand side), the team conducted desk research, reached out to World Bank Group colleagues in the Trade and Competitiveness Global Practice, and reviewed available information on the World Bank, IFC, U.S. Agency for International Development (USAID), nongovernmental organizations, and country government initiatives. The team focused on interventions for which the supply and demand activities were apparent and that had already shown concrete results. The matrix of programs reviewed and which passed this first filter (20 programs) is presented in Annex 1 of this paper. Many newer World Bank Group initiatives are not included as they may have a promising design but do not yet have results.

The team identified four programs for which to develop detailed case studies to understand how the programs work in practice. Criteria for selection of a program as a case study include known good practice model, tangible results, mix of regions, mix of interventions (World Bank Group and non-World Bank Group). Case studies were developed through desk research and interviews with individuals involved in program implementation.

The findings on types of programs draw both from assessing the full sample of programs identified and from the in-depth case studies. The team identified several programs currently ongoing with World Bank Group support that take the capabilities-and-markets approach described in the paper, but that have not yet achieved full results. These types of programs are described in ‘emerging practices’.

To develop findings and implications for practitioners, the team considered World Bank Group Task Team Leader experiences, challenges, and opportunities in designing and implementing SME upgrading interventions—especially, but not limited to, those that are implemented through investment loans.

The team also reviewed relevant literature and empirical evidence (presented in Annex 2). However, there is little comprehensive evidence (for example, impact evaluations) that can provide compelling insights either into the performance of these initiatives, or particularly into their relative performance versus other types of SME support, particularly those which either focus just on direct SME upgrading or on market development.

III. Description of Interventions

Types of Interventions and their Similarities

Programs that incorporate firm upgrading (through creation of capabilities) and explicit market linkages element fall into two broad categories:

1. Upgrading firm capabilities and linking to buyers for a specific market opportunity and/or a specific customer:

    (a) **Supplier development programs:** A long-term cooperative strategy to enhance a supplier or potential supplier's performance and/or capabilities so that it is able to meet a buying organization's supply needs more effectively and reliably.[5]

    (b) **Buyer-driven innovation:** Initiatives that involve customers/buyers identifying problems/opportunities within their operations for which there is no off-the-shelf solution, then commissioning potential solutions from the market.

2. Upgrading firm capabilities to increase competitiveness in export markets:

    (a) **Export competitiveness programs:** Programs that aim to increase the export competitiveness of SMEs by upgrading production capabilities (for example, quality, standards, efficiency) to meet market demand by considering competitive forces and demand characteristics in the specific value chain the SME operates in or wishes to upgrade into.

These programs have several aspects in common:

- They are always focused on understanding and serving a known market demand.
- They build capabilities that specifically help firms to compete in those markets and meet that demand.
- They also usually build firm capabilities to manage the firm more effectively or to engage in new product development and expose firms to markets through targeted efforts to meet buyers (for example, trade missions and fairs, and 'meet the buyer' events).

[5] Chavhan, R., S. K. Mahajan, and J. Sarang. 2012. "Supplier Development: Theories and Practices." *IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE)* ISSN: 2278–1684 3 (3): 37–51.

- The approach for competing in the specific value chains of focus in any intervention can be informed through various analytical and strategy tools.

Examples are provided in the four case studies in this note and comprise supplier development program in the Czech Republic, BHP Billiton and Codelco's World Class Supplier Program in Chile, the Macedonia Competitiveness Program, and Local Productive Clusters in Brazil.

Differences Between Interventions

The broad difference between these programs is driven by the governance of the value chain in which the SMEs are aiming to compete. Different forms of value chain governance can be described in a simple way by considering buyer and supplier power, which affects the governance of the value chain:[6]

1. **Producer-driven governance:** In value chains where the final producer has strong power, this producer (in manufacturing chains sometimes referred to as the 'original equipment manufacturer' [OEM]) drives production requirements, and the value chain relies on its branding, distribution networks, and so on. Value chains of this type tend to require capital/technology-intensive production and economies of scale. Thus, they tend to have high barriers of entry, and OEMs can consolidate their position and power in the value chain in this way. Typical examples of value chains with producer-driven governance include automotive, aeronautical, machinery, and electronics (for example, smartphones and computers).[7]

2. **Buyer-driven governance:** In value chains where the end buyers (consumers) have strong power, demand from buyers drives the decisions of producers. Producers design products and marketing strategies to cater to demand from buyers. This may include complying with certain standards or achieving certain certifications. Buyer-driven value chains arise in sectors that tend to have lower barriers to entry. Typical examples of these value chains include agriculture, textiles and clothing, footwear, and toys.[8]

Thus, a key differentiating factor between supplier development or supplier-driven innovation and export competitiveness programs is in the range of market opportunities and the way that an SME enters and competes in those markets:

[6] The understanding of global value chains has evolved to include market-based governance, modular governance, relational governance, captive governance, and hierarchy (integrated firm). For the purposes of this paper, the simpler 'producer-driven' and 'buyer-driven' models are used as a reference. For more detail on the five more detailed types of governance, see Gereffi, Gary, and Humphrey, John. 2005. "The Governance of Global Value Chains." *Review of International Political Economy* 12 (February): 78–104.

[7] The vast majority of the examples of supplier development programs around the world found during the background research for this paper and cited in literature reviews are in the automotive sector. Other sectors mentioned include smartphones/computers, office equipment (copiers and so on), and agricultural packaging equipment.

[8] The text on producer- and supplier-driven governance is adapted from
Rodriguez, Jean-Paul. 2017. *The Geography of Transport Systems.* New York: Routledge; and
Gereffi, Gary. 2001. "Shifting Governance Structures in Global Commodity Chains, With Special Reference to the Internet." *American Behavioral Scientist* 44 (10): 1616–1637.

1. In value chains with producer-driven governance, supplier development is a more relevant intervention. In these value chains, an SME gains entry by showing the capability to produce a product consistently to a buyer's exact specifications including product requirements and timeliness, usually through a rigorous process of supplier qualification. Price is also an important consideration, but an SME would not be able to compete purely on price without first achieving the buyer's product and timing requirements. Over time, as the relationship with the buyer grows, the supplier may propose/develop innovations to this core offering (or develop other offerings), and the SME's performance over time would affect the duration and depth of the supplier-buyer relationship.

2. In value chains with buyer-driven governance, export or value chain competitiveness are more relevant interventions. Here, firms have a broader spectrum of options for competing—including product differentiation, cost, and marketing strategies. Competitive strategies may be based on quality, standards, design, volume, speed of supply, price, and so on. There are major global buyers in these value chains who buy in large volume (for example, supermarkets, large retailers), and there are market segments that provide more niche opportunities. Examples of niche or more specialized market segments include organic and non-GMO food products; 'fair trade' food, handicrafts and textiles; fast-fashion brands; and others. Service sectors, such as information technology and tourism, also allow for differentiation based on various factors and market segments.

Firm-Level Strategy and Improvement

In relation to SME upgrading, there are various firm capabilities that feed into general performance and which may need to be improved. These include strategy and planning, operational management, people management, strategy, formalized business systems, new market entry and product development, getting finance, and operational improvement.[9] Further, within each type of intervention, a firm will choose its own competitive strategy (within the bounds describe earlier)—the competitive strategy of each firm participating in the intervention does not need to be the same and there are various strategy tools to help this process. There are also additional considerations for upgrading in value chains that have each of these types of governance— particularly for strategy and new market entry/product development. Upgrading to compete in producer-driven value chains involves understanding and responding to the specific requirements of a particular buyer. Upgrading in buyer-driven value chains involves understanding market requirements (which may include meeting product standards and having specific certifications), how to differentiate products through quality, marketing, or particular features or value added, or price.

There are also different levels of capability within SMEs, and any upgrading needs to identify what level of sophistication an SME has, and tailor upgrading accordingly. A broad schematic of these levels can be found in Table 1.

[9] Adams, R., J. Bessant, and R. Phelps. 2007. *Life Cycles of Growing Organizations: A Review with Implications for Knowledge and Learning.*

Table 1: Levels of SME Capabilities

Level of SME capability	Strategic Intent *[commitment to growth & upgrading]*	Change capabilities & management *[absorptive capacity, change, management, design & engineering competence]*	Linkages *[links with customers, suppliers, business service & knowledge organisations]*	Where are most SMEs?
Stage 1: Capabilities for basic supply	Want to grow, but little idea or experience of how to do so strategically	Lack capabilities to select, use & improve businesses practices (e.g. finance, tendering) and new technologies	Lacking understanding of MNC needs and realities	**80%**
Stage 2: Capabilities for marketing & expansion based on the same products	Can select, implement and maintain technologies to replicate or expand production	Capacity to expand to related markets with same product mix	High dependence on technology suppliers and customers, active use of market information, effective relationships with MNCs	**15%**
Stage 3: Capabilities for product development	Formal strategies to invest, improve and grow	Professional standards & a culture of performance and continuous improvement, strong innovation capabilities	Targeted interaction with suppliers, customers and knowledge organisations, proactive relationship with MNCs around existing and new supply opportunities	**5%**

Note: The estimate of 'where are most SMEs' is based on observations across a range of countries but has no empirical basis.

Complementary Interventions

Finally, additional complementary interventions addressing gaps in the broader market environment, beyond the capabilities and markets elements that this paper highlights, may be needed to increase SMEs' competitiveness. National quality infrastructure (standards and laboratories) may need to be established or upgraded, logistics may need to be improved, regulations may require streamlining or adjustment, and labor force skills may need to be increased, among others. Thus, SME specific markets and capabilities are necessary, but may not be sufficient to make a long-lasting impact.

The following sections describe each type of intervention in more detail.

A. Pursuing Specific Market Opportunities

1. Supplier Development Programs

Definition: A long-term cooperative strategy to enhance groups of SME suppliers or potential supplier's performance and/or capabilities so that they are able to meet a buying organization's supply needs more effectively and reliably. The longer-term goal is to increase the capabilities of domestic industry and local-value added.

Market failure: While many supplier development initiatives may happen on their own within the private sector, at times—especially in emerging markets—support from third parties

(government, donors, and/or nongovernmental organizations) may be needed to develop and implement supplier development programs. Buyers may not on their own invest in upgrading the capabilities of their suppliers or potential suppliers, for several reasons:

1. **Ability to appropriate returns:** Buyers face the risk that if they invest in upgrading the capabilities of a supplier, the supplier may use the upgraded capabilities to supply to a competitor—thus putting the buyer's competitor at an advantage. Alternatively, the potential suppliers may not, even after investment in improvement, have improved their capabilities to supply in which case the investment is wasted. In either case, the buyer may not be able to appropriate all of the returns from helping the supplier become more efficient.

2. **Information asymmetries:**

    (a) *Regarding the supplier:* A buyer does not know the true extent of the supplier's (or potential supplier's) potential and will often have existing suppliers that they are more comfortable dealing with.

    (b) *Regarding the buyer:* While the ability to appropriate returns may be addressed through exclusivity or non-compete clauses, suppliers may be reluctant to agree to such contracts due to information asymmetries on the possible performance of the buyer. Suppliers may be wary of whether the buyer's offer will come through in enough volume to justify the investments the buyer will make in upgrading and may also be unsure as to whether they would be able to achieve the buyer's requirements with the assistance that is being offered by the buyer.

    (c) Small (likely domestic) suppliers and larger (likely international) buyers often also have large differences in business culture—with a consequential inability to communicate with each other, and with SMEs either unaware or not understanding the requirements of buyers (for example, process of supplier qualification, standards, and financial requirements).

3. **Limited absorptive capacity:** SMEs' ability and preparedness to engage in upgrading and implementing good practices is limited due to size, lack of awareness of good practices, lack of experience in innovation, path dependency, and other cognitive biases.

Description of the intervention: Supplier development programs typically consist of the following elements:

1. Preliminary analysis of situation on the market—needs of multinational companies (MNCs), situation of potential suppliers, objective and target setting, design of the program.

2. More detailed analysis of buyers:

    (a) Needs of MNCs already present within the country or thinking about entering the country

    (b) Needs of MNCs in other countries which may use suppliers from within the country

(c) Demand assessment—marketing of the program among MNCs and invitation to participate in the program

3. More detailed analysis of suppliers/potential suppliers:

   (a) Developing a supplier database

   (b) Screening suppliers to identify which enterprises would be a good fit for the program, including desk research and site visits/interviews

   (c) Assessing demand, inviting companies to participate, and selecting companies with potential to supply MNCs and invitation to participate

4. Based on the analyses above, identifying what the specific market opportunities for firms in the program are

5. *For each supplier:* Conducting business reviews and identifying areas for improvement to help them gain supplier status or improve their situation as a supplier

6. *For each supplier:* Assistance to implement the improvement plan (for example, funding or more in-depth consulting)

7. Conducting subsequent reviews of each supplier to determine whether they have been able to upgrade to the standards required by the buyer

8. Promoting/certifying the suppliers who are 'ready' and facilitating linkages with MNCs

9. Monitoring of the program, including impact evaluation

This intervention is most relevant in a context in which there is a critical mass of large buyers—typically MNCs (foreign direct investors)—with facilities in the country.

Instruments of intervention: Supplier development programs usually involve a core facilitation team, industry-specific experts to conduct business reviews and provide advisory services and funding to firms to implement improvements. The role of the core facilitation team is to lead the program through the steps mentioned earlier, developing relationships with MNCs and SMEs, identifying needs, managing the process of the business reviews, engaging experts when necessary, ensuring that monitoring and evaluation data is collected, and other management functions. Industry-specific experts are typically engaged as consultants and perform business reviews of the SMEs. The core team and consultants are paid through the program's budget or the budget of the agency that implements the program. The program may include resources for SMEs to implement their improvement plans—for instance, through in-kind technical assistance, grants, or matching grants for firms to acquire the assistance needed. Some programs include access to finance either

through specialized facilities that they establish[10] or through facilitating linkages with commercial banks.

Capabilities and markets elements: Supplier development programs include capabilities and market elements as outlined in Table 2.

Table 2: Capabilities and Market Elements of Supplier Development Programs

Capabilities (Supply)	Markets (Demand)
• Business review of each SME and development of an improvement plan. Improvement plans may include management processes, technology, adoption of standards, plant layout, and so on. • Grants (usually requiring a match from the firm) for firms to implement their improvement plan • Follow-up business reviews • Some have included a financing (lending) facility	• Identification of buyer needs and transmission of these to participating SMEs • Review of whether SMEs have met the requirements to become suppliers (or become a supplier in a different area) • Certification to the buyers that the SME meets their needs and facilitation of linkages with buyers • Development of the formal relationship between supplier and buyer

The *impact* from the programs reviewed include the following:

1. **Czech SDP:** From the initial pilot during 2000–2002, of the 45 companies that participated, 18 months afterward (a) 15 companies had gained new business which they attributed to the program, with these contracts worth US$18 million annually in 2003; (b) four companies had found new customers abroad; and (c) three companies had obtained contracts with a higher value added content. Only 4 companies reported no business benefits from the program.[11]

2. **Costa Rica PROVEEP:** The PROVEEP supplier development program, implemented during 2002–2009, created 403 linkages between SMEs and MNCs—120 linkages were created during the initial three-year donor-supported program, and the rest by the government's implementing agency after the donor support ended. Exports from participating SMEs increased from US$2 million to US$52 million during 2002–2005 and reached US$105 million by 2009. Technology-based MNCs operating in Costa Rica increased their purchases of local tradable goods and services as percentage of total imports

[10] For instance, BP and IFC established in Azerbaijan a joint Supplier Finance Facility of US$15 million over eight years. BP and IFC are each 40 percent shareholders in the facility, while a local bank holds 20 percent. In Africa, the Aspire facilities co-established by Shell Foundation and GroFin, a specialist financier, have participation from development finance institutions, foundations, and leading local banks such as ABSA, Diamond Bank, and Commercial Bank of Africa. The largest Aspire facilities are in South Africa (U$18 million) and Nigeria (US$30 million). (*Source:* Jenkins, B., A. Akhalkatsi, B. Roberts, and A. Gardiner. 2007. *Business Linkages: Lessons, Opportunities, and Challenges.* International Finance Corporation).

[11] Cusolito, Ana Paula, Raed Safadi, and Daria Taglioni. 2016. *Inclusive Global Value Chains: Policy Options for Small and Medium Enterprises and Low-Income Countries.* Directions in Development–Trade. Washington, DC: World Bank. © World Bank and OECD (Organisation for Economic Co-operation and Development). While the program continued beyond 2002, the specific results available are from the pilot and are for the 2000–2002 time frame.

from 1.6 percent in 2002 to 2.3 percent in 2005, surpassing the 2.1 percent target set by the project. The share of local purchases reached 2.9 percent by 2009.[12]

3. **ACG/BTC Linkages Program, Azerbaijan:** As of the end of the program, BP's[13] sourcing from local SMEs stood at US$77 million per year. The program worked with 444 SMEs.[14]

2. Buyer-Driven Innovation

Definition: Buyer driven-innovation programs are initiatives in which a buyer (large company and/or government) identifies a problem that they want solved and other firms (usually SMEs) are supported to develop potential solutions. Buyer-driven innovation differs from supplier development in that a buyer requests a solution to a given challenge as opposed to requesting inputs of a certain specification, and so there is far less prescription around the potential solution. Subsequently, these programs are an amalgam of supplier development initiatives and innovation competitions and technology challenges. A variation is where a government is the buyer and identifies and presents problems which they seek solutions for. The long-running and much-replicated U.S. Small Business Advisory Research (SBIR) Program represents this type of approach, and more recently, subnational governments have started using the same approach to seek solutions from local entrepreneurs. In this paper, we are highlighting buyer-driven innovation interventions that include an intervention on the capability side as well.

Market failure: Information failures inhibit communication between large and small firms, with large firms being conservative and unwilling to look for solutions from nontraditional providers who may have little track record. In many cases, these large companies are MNCs whose local operations may not have a record of undertaking innovation (as opposed to sales and marketing activity) within the client market. For SMEs, they face various information asymmetries in knowing who and how to interact with, and also, in coordinating innovation activity with the research sector. Additionally, the standard market failures that inhibit innovation (risk, cost, and so on), and limited absorption capacity, also apply.

Description of the intervention: There are usually two possible 'buyers' in buyer-driven innovation programs—large companies and government. The delivery model differs slightly according to which type of buyer is the focus; however, both models have some characteristics of supply chain initiatives. Interventions typically have a facilitation team that works first with buyers (large companies or governments) to identify problems/opportunities within their operations or products that have no immediate solution within the market and packages them into projects that can be worked on. These are then put out to the market to solicit potential solutions. This may use a process similar to that of competitive grants (that is, with published criteria, and a competitive selection process); however, in some cases, support is given to prospective SMEs to prepare

[12] FOMIN. 2010. "SME Suppliers for Multinational Enterprises in Costa Rica" http://www.fomin.org/en-us/HomeOld2015/Impact/ImpactEvaluations/SMESuppliers.aspx ; Gupta, R. 2015. "Macedonia: Supplier Development Program Analytical Note, Ascending the Global Value Chain by Developing Linkages among Small and Medium-Sized Enterprises (SMEs) and Multinational Corporations (MNCs)." Unpublished.
[13] The multinational petroleum company formerly called British Petroleum
[14] Jenkins, B., A. Akhalkatsi, B. Roberts, and A. Gardiner. 2007. *Business Linkages: Lessons, Opportunities, and Challenges.* International Finance Corporation.

proposals, especially if they have no experience of doing so previously or of working with large companies. These applications outline how their solutions will meet the requirements sought, and the project plan to do so. Standardized contracts and intellectual property (IP) arrangements are often part of this phase to minimize complexity, and the facilitation team may also broker potential connections to research organizations or possible joint applications.

The buyer selects the projects offering the most promising solutions. Once a solution is 'accepted', then product development by the SME is often supported financially through matching grants. SMEs may also receive commercialization advice, with regular contact between buyer and solution provider (brokered by the facilitation team) to keep projects on track and focused, and to maximize potential learnings for all parties. More general firm improvement support may also be provided to more established firms (of the type typically provided in supplier development programs) alongside innovation-related projects. The next stage depends on whether the innovation projects were technically successful—if yes, then the commissioning buyer is in a position to purchase. Projects that are successful have a ready market, and the supplier can also then leverage this contract with a large reputable firm into other sales domestically and internationally. Both buyer and supplier also learn collaboration skills that can be applied in other future activities.

For projects involving the government, the process is very similar. In some cases, solutions may be sought from one entity within the government (for example, an energy or health ministry); in others, solutions are sought from across the government but usually coordinated through the innovation/industry ministry. A growing modality is for subnational (or city-level) governments to utilize this mechanism to seek solutions to city problems (health, traffic, urban services, and so on) often through digital technologies, using it as a platform to support entrepreneurship and digital start-ups within their jurisdictions. As with large companies, there is often a need for education of potential government clients of the opportunities for engaging in this type of initiative. Procurement units, if they have a systematic approach, are generally programmed to taking a strict 'value for money' approach, and/or taking very few risks by only engaging with large, well-established providers. Meanwhile policy makers are attuned to only expecting off-the-shelf products rather than being able to seek more optimized solutions, so awareness of the possibilities needs to be raised, and champions for this approach found within the government.

The instrument is potentially more effective than standard innovation support (for example, a matching grant to undertake research and development [R&D] and develop an innovation), as it is tied to an identified and sophisticated end user.

Instruments of intervention: Demand-driven innovation programs usually involve a core facilitation team which needs to be able to liaise with large and small firms and knowledge providers and have good awareness of the commercialization process. Their role is central to the success of the program given the various information asymmetries that need to be addressed in these projects. If the buyer is the government, they need to include government officials and a 'host' government entity from which to operate. They are funded through the initiative. Specific advisory services may also be needed, (for example, commercialization advice) for the SMEs either on a case-by-case basis, or if there are general weaknesses that have been identified, these will need to be built into the program.

A matching grant is usually also provided to subsidize the innovation project as the SME may not have the internal resources to undertake a high-risk project. Although the chances of commercial success should be higher for this type of innovation project, the large company may still not purchase the output even if it is commercially successful. In the event that the buyer is prepared to commit to purchasing even before the innovation project commencing, then there may be justification in not providing a matching grant. The facilitation team may also introduce the SME to finance providers (for example, angel investors) if that is needed.

Capabilities and Markets elements: This can be standalone, or a component of a supplier development program.

Table 3: Capabilities and Markets Elements of Buyer-Driven Innovation Programs

Capabilities (Supply)	Markets (Demand)

• For SME:
  o R&D
  o Commercialization
  o Selling to large, sophisticated clients (tendering, marketing, branding, logistics, aftercare)
• For buyer:
  o Solution identification
  o Procurement from SMEs
	• Issue identification and scoping
	• Procurement from SMEs

Impact: This is a relatively new type of intervention that is increasingly, but not widely, used. Nearly all the evidence for government procurement programs is from the OECD countries and is not definitive. The BHP Billiton-Codelco World Class Supplier Program in the mining sector in Chile supported 52 suppliers and has achieved an estimated net present value of US$121 million in direct savings in the cost of inputs, goods, and services for BHP Billiton. Suppliers involved in the program benefited from new revenue generation opportunities, increased efficiency and innovation, and greater access to finance and diversified markets.

B. Export Competitiveness Programs

Definition: Export competitiveness programs aim to increase the export competitiveness of SMEs by upgrading production capabilities (for example, quality, standards, efficiency) to meet demand in export markets by taking into account competitive forces and demand characteristics in the specific value chain the SME operates in or wishes to upgrade into. These programs bring information to SMEs about market trends and characteristics of demand in international markets and include export promotion and/or development activities.[15] These programs may also seek to

[15] A 'value chain' describes the full range of value-adding activities required to bring a product or service from conception through the different phases of production, including procurement of raw materials and other inputs, assembly, physical transformation, acquisition of required services such as transport or cooling, and delivery to final consumers. *Sources:* Kaplinsky and Morris. 2001. *A Handbook for Value Chain Research.* Prepared for the IDRC.; and Webber, C. Martin and Patrick Labaste. 2010. *Building Competitiveness in Africa's Agriculture: A Guide to Value Chain Concepts and Applications.* Washington, DC: The World Bank.

connect SMEs with buyers domestically. However, most of the programs focus on export-driven development to increase economic growth by seizing larger or more developed markets.

Market failures: SMEs may not seek out information on the most relevant international market trends and demand and may not upgrade on their own, for a number of reasons:

1. **Positive externalities and spillovers:** The development of market knowledge, knowledge of technologies, and others can have spillovers such that their benefits to a sector or firms across the economy as a whole are greater than the benefits to the firm that may develop them. Examples include basic information on market trends and opportunities, market entry requirements (such as certifications required to be competitive in a certain market or sector), the development of a new organizational process that increases efficiency, and so on. Therefore, the private sector on its own may not gather and disseminate such information—especially if it involves benefiting its competitors.

2. **Uncertainty of returns to innovative and improvement activities:** Firm upgrading requires different forms of innovation—developing new management capabilities, developing and adopting new internal processes, developing new products, exploring new markets, implementing new technologies, and so on. The level of returns and the likelihood of success from these activities are often unknown by firm managers and owners, especially if they have not undertaken this type of change before. Therefore, firms may under-invest in upgrading and productivity-enhancing activities. Further, smaller firms have less margin for error should change go wrong.

3. **Information asymmetries:** This type of market failure arises from the inability of one party to monitor the performance of the other party. Asymmetric information on the capability of a business service provider may also lead to under-utilization of business services or collaboration for innovation activities by SMEs. Asymmetric information on the trustworthiness or capabilities of a partner may result in less-than-optimal cooperation among actors in a value chain or missed opportunities to exploit interactions and co-creation of new products or technology adoption with other firms, thus limiting SME upgrading.

Beyond market failures, system failures also affect SMEs' abilities to upgrade and increase their market competitiveness:

1. **Limited absorptive capacity:** As in the market failures listed earlier, firms' ability to engage in upgrading and implementing good practices is limited due to size, lack of awareness of good practices, lack of experience in innovation, path dependency, and other cognitive biases. SME owners/managers may also lack deep connections within the business community and/or with sources of knowledge or assistance. Thus, they may face challenges of upgrading and becoming competitive in a relatively isolated environment.

2. **Infrastructure failures:** Firms operate in emerging markets often face insufficient infrastructure (human and physical) and limited levels of technology in peers, suppliers, and customers. They may lack research centers; national quality infrastructure (metrology, standards, accreditation); specialized logistics (such as cold chain); and specialist training

centers. The underlying depth and breadth of education and skills in the economy may also be low.

3. **Difficulties inherent in exporting:** Entering into new markets means adjusting to new business cultures, new business relationships, possibly new procurement methods and payment terms, and many new risks, particularly for first-time exporters. As such, exporting is quite difficult. SME owners/managers who lack a network as described earlier may have particular difficulty managing these elements and risks. Further, due to their small size, SMEs may have little margin for error.

Theory of change: An export competitiveness program involves overcoming market failures described earlier by designing an intervention that provides information that has positive externalities and spillovers; informs SMEs of the types of innovations they can undertake that would have sufficient returns, given the current abilities of the enterprise and the market segments that are most promising for them; subsidizes the use of business services, attendance at trade fairs, and other activities that would add value; and may seek to provide elements of infrastructure that are missing—such as logistics and quality infrastructure. Thus, the theory of change can involve (a) prioritizing market segments and opportunities; (b) bringing to SMEs market information on market segments, quality, technologies, differentiating factors, customs and logistics, potential partners, finance, and so on in the relevant markets; (c) guiding SMEs through the process of upgrading to become more competitive in the target market segments (and in particular, the ability not only to meet initial export demands but also to sustain sales volume and quality in the medium to long term), and possibly supporting them with in-kind or financial assistance; (d) improving their access to target markets by supporting their participation in trade fairs, trade missions, 'meet the buyer' events, and others, and follow-up afterwards; and (e) helping them learn through this process.

Based on the intervention, participating SMEs should be able to export to new markets or buyers, or export new products, and sustain these exports over time. In that way, they can diversify their sources of revenue, which will help them become more resilient to shocks and increase their value-added. Exporting also introduces firms to different and sometimes better practices, which can further stimulate improvement processes. The intervention is expected to help SMEs become more productive because they are producing higher value and selling into higher-value markets and have access to business services that can help them become more efficient. These outcomes at the firm level may in turn generate additional job creation, more diversified economic activity that makes the economy more resilient to shocks, greater tax revenue, and other economic benefits.

Description of the intervention: The design of export competitiveness programs varies more widely than the design of supplier development programs. Some programs may include interventions beyond the capabilities and markets elements highlighted in this paper. (These complementary aspects are discussed in the following paragraphs). Further, programs that are called 'export', 'value chain', or 'industry' competitiveness may focus only on capabilities, only on markets, or only on aspects of the enabling environment for industry competitiveness. This paper highlights that programs that include both capabilities and markets elements may be even more effective. Evidence indicates that programs that include only one of these elements may be less effective; however, the empirical evidence is not comprehensive and is mixed (see literature review earlier).

Based on international examples and good practice, export competitiveness programs that include both capabilities and market elements typically consist of the following:

1. **Selection of the value chain(s) of focus:** The first step is to identify in which industries or value chains the program will work. This decision is typically made before project implementation begins and informs the design of the project. Several tools exist to inform the prioritization and selection of value chains—analysis of opportunities and risks in global value chains; trade competitiveness diagnostics; and others.

2. **Identifying opportunities for upgrading:** Once the value chains of focus are selected, the opportunities for upgrading are identified. This involves market segmentation and value chain analysis. Several strategic frameworks can be employed, including considering commodity versus specialty goods, Porter's Five Forces, and others.

    (a) Market segmentation identifies key market segments and key products, and their degree of value-added. It analyzes the degree of differentiation of products and market segments with respect to major competitors and identifies potential product and market segments that are currently absent. Based on this, the analysis draws conclusions on current and potential competitiveness of the SMEs that the project targets.

    (b) Value chain analysis identifies the actors in the value chain, the relationship between them (vertical and horizontal linkages), how much value is added at each stage (including inputs, production, processing, intermediaries, final sale/retail, and logistics between each of these stages), and the current comparative advantages and competitive positioning of each player or type of player in the value chain.[16] Value chain analysis also identifies business environment issues affecting the sector's competitiveness (including supporting infrastructure and legal/regulatory issues). As the value chain of each market segment will be different, some initial value chain analysis is needed to identify market segments—market segmentation and value chain analysis go together.

3. **Dialogue with the target universe of enterprises on the findings of the market segmentation and value chain analysis, opportunities for increasing value added and competitiveness, and development of a vision that the enterprises wish to pursue.** This step identifies the specific market opportunities the intervention will help the participating firms pursue, including the upgrading opportunities that seem realistic and are of interest to the enterprises. Based on this, this step reassesses demand for the intervention.

4. **Development and implementation of the intervention:** Based on what is needed for SMEs to upgrade and compete in the identified market segments, and demand from SMEs to participate in the initiative, the specific intervention is designed.

    (a) On the capabilities side, an intervention may involve individual or group training on implementing quality or other measures needed to upgrade; engagement of

[16] See Kaplinsky and Morris's Handbook for Value Chain Analysis (2002) for a more detailed discussion of value chain analysis. https://www.ids.ac.uk/ids/global/pdfs/VchNov01.pdf

industry and other specialists to advise individual SMEs on aspects of their production, and operations (including business reviews and improvement plans, and follow-up on them); establishing an industry 'center of excellence' or knowledge center; identifying relevant technologies (including production methods, equipment, and others), and promoting technology transfer and adoption within SMEs; and similar activities.

(b) On the markets side, an intervention may involve dissemination of market intelligence; participation in international trade fairs and shows; 'meet the buyer' events, other matchmaking activities; development of a common brand to market the SMEs' upgraded offer; establishing joint marketing efforts; mentoring to follow up on market leads and concrete sales; and others.

5. **Monitoring of the program**, including impact evaluations were possible.

Additional interventions, beyond the markets and capabilities activities described earlier, are likely needed to increase SMEs' competitiveness in the particular value chains. National quality infrastructure (metrology, standards, and laboratories) may need to be upgraded, and international recognition of certificates issued domestically achieved. Specific regulatory constraints may need to be eased, streamlined, or adjusted (that is, through 'smart' regulation). Logistics may need to be improved, including through contractual arrangements with a private provider when appropriate (for example, ensuring cold chain management from the primary producer through to the end market). Attracting and retaining foreign direct investment (FDI) and strengthening the full investment lifecycle (attraction, establishment, retention, linkages, and regional integration) may be a relevant goal in the sector and economy as a whole. Labor force skills may need to be improved; supply chain and other types of finance may be required; the industry's innovation ecosystem may need to be strengthened; and many others. Thus, firm-level interventions are a part of the policy mix, but the whole system for industry/value chain competitiveness should be considered.

Instruments of intervention: Export competitiveness programs typically require a core team that conducts analyses, designs the intervention, manages its implementation, and brings in additional team members as needed—individuals to deliver training; industry and other specialists to deliver advice to firms or industry players; specialists in innovation or relevant technologies; individuals to coordinate trade missions; participation in fairs and matchmaking events; and others. The core team and consultants are paid through the program's budget or the budget of the agency that implements the program. The program may include resources for SMEs to implement upgrading activities at the firm level—for instance, through in-kind technical assistance, grants, or matching grants for firms to acquire the assistance needed. The program also funds (typically on a matching basis) participation in trade missions, fairs, and other activities to explore markets. These programs may also work to establish value chain finance facilities and may fund the technical expertise to establish them as well as initial (or full) capital for the facility.

Capabilities and markets elements: Export competitiveness programs include capabilities and market elements as outlined in Table 4.

Table 4: Capabilities and Markets Elements of Export Competitiveness Programs

Capabilities (Supply)	Markets (Demand)
• Management capabilities, marketing • Product design • Packaging design • Acquisition of standards • Technology adoption • Logistics management • Others, depending on what is required to upgrade	• Identification of promising market segments • Identification of what is needed to compete in those segments • Exposure to the markets: trade missions, fairs, meet the buyer, other matchmaking • Assistance following up with contacts to make a sale, and with optimal distribution channels (for example, joint ventures, agents, licensing, and so on)

Impacts: Results achieved in export competitiveness programs reviewed for this study include the following:

1. Macedonia Competitiveness Project was implemented between 2007 and 2012 and created US$88.6 million in new export due to market linkages[17] in the apparel, light manufacturing, and information and communication technology (ICT) sectors.

2. *Brazil local productive arrangements (focus on agribusiness):* During 2004–2009, the initiative increased employment of participating firms by 17 percent, helped participating firms increase the value of their total exports by 90 percent, and the likelihood of exporting by around 8 percentage points.[18]

3. Cambodia Trade Facilitation and Competitiveness Project, which worked primarily in agriculture and food processing, fashion and handicrafts, and to a lesser extent in tourism, information technology (IT), and healthcare and beauty. The project assisted 65 enterprises and associations. The project team reports that the return on investment was US$275.5 for every dollar of grant money.[19]

4. The Ethiopia Sustainable Tourism Development Program (ESTDP) was implemented from 2012 to 2015 and reports the following impacts as of December 2015:

    (a) Increase in international tourist arrivals: Axum: 61 percent, Lalibela: 24 percent

    (b) Increase in expenditure per tourists per day: US$362

    (c) Jobs created: Axum: 2,324, Lalibela: 3,229[20]

[17] USAID. 2012. "USAID's Competitiveness Project: Final Report." on Macedonia Competitiveness Project. http://pdf.usaid.gov/pdf_docs/PA00KZ5M.pdf .
[18] Petrobelli, C., and R. Rabellotti, eds. 2006. *Upgrading to Compete: Global Value Chains, Clusters, and SMEs in Latin America.* Inter-American Development Bank and David Rockefeller Center for Latin American Studies, Harvard University. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1551498
[19] World Bank. 2013. *Cambodia - Trade Facilitation and Competitiveness.* Washington, D.C.: World Bank Group.
[20] IEG Review Team. 2016. *Ethiopia - ET-Tourism Develop. Project SIL.* Washington, D.C.: World Bank Group.

IV. Case Studies

A. Supplier Development Program in the Czech Republic

After the opening of its markets in the 1990s, the Czech Republic was very successful in attracting FDI, but less successful in creating linkages to the local economy. Local content was very low even in sectors where the Czech appeared to have high technical skills and know-how. To address this challenge, the National Czech Supplier Development Program was piloted in a first phase from 2000 to 2002 and focused on firms in the electronics sectors, including automotive electronics. It was funded in equal part by the European Union (EU) through the pre-accession *Phare* program and the Ministry of Industry and Trade of the Czech Republic for a total budget of €3 million.

The objective of the program was to improve the competitiveness of Czech SMEs to the level required to become suppliers in global value chains initially through supplying the immediate needs of MNCs and ultimately moving up the global value chain. The basic pilot program outline was designed with support from the World Bank Foreign Investment Advisory Services (FIAS) facility, the EU (as described in the following paragraphs), and was implemented by CzechInvest, the Czech investment promotion agency.

During design and implementation, the program used two advisors from the United Kingdom Trade Department under the EU Twinning Advisor Program that aimed to facilitate knowledge transfer through secondment of public officials from EU member states to accessing countries.[21] They were embedded full-time in CzechInvest to build implementation capacity, and the responsibility to deliver consulting services was eventually fully transferred to CzechInvest. An external private sector consultant, the local partner of KPMG, was contracted to undertake business reviews of companies and a panel of EU experts was established for training and consultancy support. A critical element of the program was the involvement of MNCs from the very beginning of the program, including nominating companies for participation in the program.

The pilot adopted a phased approach over two years starting with an initial list of 200 suppliers compiled by CzechInvest and vetted by MNCs. Seventy-three companies were invited to participate, and the final number of participants that received reviews and assessments was 45 companies. A salient feature of the program was the use of the European Foundation for Quality Management (EFQM) in the assessments, which is a quality management tool and provides a framework for a whole-of-business approach, within which an MNC checklist was developed focusing in more detail on key issues of importance to MNCs. The SMEs were selected based on a predefined set of criteria, including (a) relevance of the industrial sector and needs of the MNC; (b) registration of the SME in the Czech Republic; (c) financial stability and performance; (d) demonstrated commitment of company management; and (e) demonstrated quality, including ISO certification. A rigorous process to select suppliers to participate in the program had the dual benefit of ensuring a transparent selection process, avoiding accusations of bias, and also ensuring

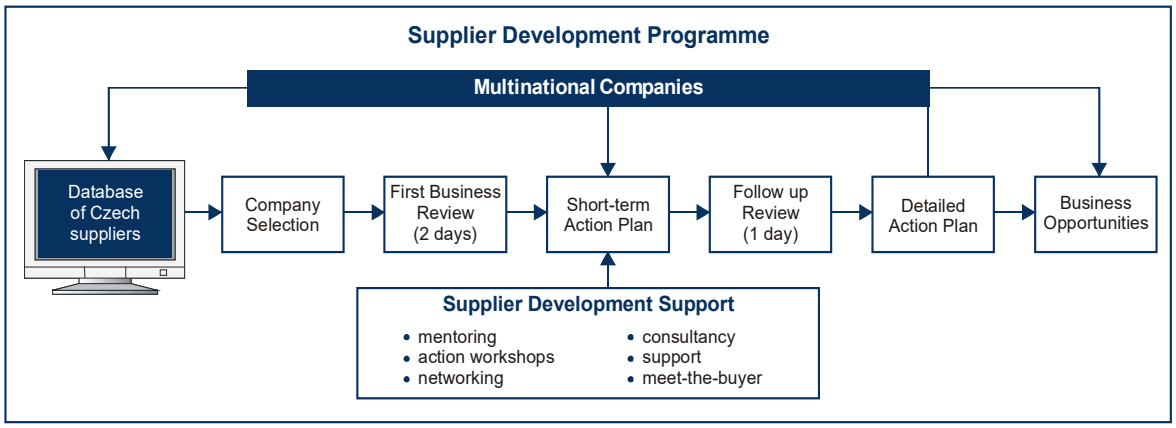
[21] Malinska, Jana, and Stephen Martin. 2016. *Manufacturing Our Future: Cases on the Future of Manufacturing.* Case 13. World Economic Forum.
http://www3.weforum.org/docs/Manufacturing_Our_Future_2016/Case_Study_13.pdf .

the selection of viable enterprises with potential for growth and strong interest and commitment to the program.

The initial two-day business review of the 45 participating companies focused on creating a short-term (six months) self-improvement plan designed to upgrade the company based on identified gaps. Significant time was also spent on getting buy-in from the company's management securing their commitment. Management carried a parallel self-assessment review using a simplified version of the EFQM. The two assessments were brought together in an interactive workshop resulting in an agreed short-term action plan. The modalities of support for the implementation of the action plans included a series of workshops focusing on tailored key areas of improvement. Those generally focused on management skills and awareness rather than technical skills around the topics of strategy and change and operational efficiency.

At the end of the six months, a second round of business reviews were conducted, this time only by KPMG and CzechInvest, and based on its results, 20 firms were selected for the final stage of more intensive individual support. Objective and transparent criteria were established for the selection process, which took account of overall company performance as well as the company's commitment and capacity for improvement demonstrated over the period of the short-term action plans. The final stage of support delivered to the short list of 20 firms was one-on-one, tailored to each company, and delivered by a mentoring team pairing an EU expert and a Czech consultant, ensuring both knowledge transfer and local expertise. Mentors helped companies with the implementation of the business plans, identified areas for external support, and acted as contacts with banks of MNCs. The second phase of support was six months within the pilot but continued longer, and the firms were charged a small standard fee equivalent to US$1,600 to increase ownership. All participants in the pilot continued to receive general support.

Figure 1. Key Steps in the Czech SDP Delivery Model[22]



At the end of the program, there was clear evidence of marked improvement in companies' performance as measured against the EFQM's international benchmarks, with 80 percent of such improvements attributed to the program.[23] Eighteen months after the end of the pilot, the 45

[22] World Bank. 2008. *International Experience in Supplier Development*. Washington, DC: World Bank. http://documents.worldbank.org/curated/en/355201468273033230/International-experience-in-supplier-development
[23] Interview with Stephen Martin, June 2017.

companies participating in the pilot were surveyed and responses were received from 42 of them. There was evidence of process and product upgrading among the participating firms. Some 15 companies had gained new business which they attributed to the program, worth over US$46 million from 2000 to 2003. The share of components sourced by MNCs participating in the program from local suppliers increased from 0 percent to 5 percent at the beginning of the pilot to 2.5 percent to 30 percent by 2004, and all 11 of the participating MNCs increased or planned to increase their local sourcing. Four firms had become new exporters, and two additional firms avoided bankruptcy, owing to the support received from the program.

Following the success of the pilot, the program was run for two more rounds, the last of which was funded entirely by the government, and eventually informed the development of the Czech National Cluster Policy and other programs. In the aftermath of the SDP, the supplier department of CzechInvest has been very closely integrated with its project and aftercare departments facilitating the identification of suppliers for greenfield or expansion investors. Many of the activities conducted under the SDP continue to this day, such as sector-level supplier databases, matching services, market screens, Supplier Days connecting business to business, and so on. As subsequent activities are more dispersed, there is less information available to study their specific effects.

Some of the lessons from the implementation of the Czech SDP program include (a) a strong emphasis on selecting companies on the basis of potential, instead of need; (b) the use of an established business review process that focuses on the total competitiveness of a firm and provides the basis for customized, holistic and streamlined approach for meeting their individual priority needs rather than providing general SME support; (c) focus on building in-house skills and transferring knowledge; and (d) effective market promotion and program awareness campaign.[24]

The lesson worth highlighting in more detail, however, is the program's strong emphasis on the demand side in terms of market linkages. The strong participation of the MNCs throughout the program was critical for its success. One of the most significant reasons for why linkages between MNCs and SMEs were not manifesting to the expected degree was the lack of knowledge about the potential demand or supply and lack of trust between MNCs and SMEs. A dozen MNCs were members of the Steering Committee, which helped select potential suppliers identify their skills gaps, and thus increase their trust in working with them. MNCs were involved through two formal groups: (a) a High-Level Advisory Council group consisting of ministers and CEOs, and (b) an MNC Focus Group made up of purchasing managers. On the flip side, the prospect of contracting with MNCs, if they met certain standards, was a key motivating force for Czech SMEs to continue with the program. While many SMEs had good technological skills, the program helped them build their capabilities to be suppliers by upgrading their communication and management skills, such as business planning, which were lagging after years of working in a planned economy.

[24] Gupta, Ravi. 2015. *Macedonia: Supplier Development Program Analytical Note.* Competitive Industries and Innovation Program.

In 2004, as part of the Enterprise Survey, data was collected from over 300 suppliers,[25] including the firms participating in the SDP program to study SME supplier capabilities and MNCs. That study found multiple benefits accruing to suppliers of MNCs above and beyond any direct support received from the MNCs and highlighted the strong market linkages aspect as a critical success factor for the SDP program. It found that MNC suppliers enjoyed a faster growth rate in sales, value added, and employment. The survey also noted a reputational effect of becoming an MNC supplier[26]: once a Czech SME was an approved supplier to an MNC, it was easier to supply affiliates in other countries, as well as to enter the value chain of other MNCs. In addition, it seems to positively affect the creditworthiness of SMEs. The study also found that to remain competitive, suppliers needed to move up the value chain, and almost half of the suppliers in the sample reported "that over time they increased the complexity and/or value added of the products they supply to MNCs operating in the country,"[27] and an even stronger effect of 60 percent was found among firms who supply MNCs operating domestically and MNCs located abroad.

Even though the study was not a targeted evaluation of the Czech SDP, it draws very relevant and important conclusions. Significantly, the study controlled for non-random selection of suppliers and found that the suppliers tend to be more productive, with a large magnitude of effect. Controlling for specific inputs used, the value added of MNC suppliers was on average double that of a comparator non-supplier group. Although with some caveats associated with the results, the study finds them compelling enough to conclude that Czech suppliers learn from their relationship with MNCs and in turn, increase their productivity. As long as MNCs do not claim the full value of this productivity through lower prices, then the associated positive effects would justify government assistance in linking domestic SMEs with MNCs.

B. Buyer-Driven Innovation in Chile: BHP Billiton-Codelco World Class Supplier Program[28]

Launched in 2008, BHP Billiton-Codelco[29] World Class Supplier Program has promoted a new build way of managing procurement from a segment of its supplier base to find innovative solutions to problems facing mining companies. At the same time, the program seeks to promote

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[25] Smarzynska, Beata, and Mariana Spatareanu. 2014. *Czech Suppliers of Multinational Corporations: Benefits and Challenges.* Washington, DC: World Bank Group. http://documents.worldbank.org/curated/en/504861468026113344/Czech-suppliers-of-multinational-corporations-benefits-and-challenges .

[26] Smarzynska, Beata, and Mariana Spatareanu. 2014. *Czech Suppliers of Multinational Corporations: Benefits and Challenges.* Washington, DC: World Bank Group. http://documents.worldbank.org/curated/en/504861468026113344/Czech-suppliers-of-multinational-corporations-benefits-and-challenges.

[27] Smarzynska, Beata, and Mariana Spatareanu. 2014. *Czech Suppliers of Multinational Corporations: Benefits and Challenges.* Washington, DC: World Bank Group. http://documents.worldbank.org/curated/en/504861468026113344/Czech-suppliers-of-multinational-corporations-benefits-and-challenges.

[28] Barnett, Andrew, and Martin Bell. 2011. *Is BHP Billiton's Cluster-Programme in Chile relevant for Africa's Mining Industry?* Policy Practice;
Pol Longo, Marina, Dane Smith, Michael Murray, Arani Grindle, and Meagan Colvin. 2016. *Shared Value Initiative – FSG*.

[29] Codelco is Chile's state-owned mining company, and as of 2016, is the largest copper producer in the world measured by volume. BHP Billiton is an Anglo-Australian mining company, the largest mining company in the world as of April 2017. It has substantial investments and operations in Chile.

SME innovation capacity and increase their competitiveness. Recognizing the rising costs due to falling ore grades, increasing water scarcity, rising energy prices, and other challenges, the Chilean mining industry needed to innovate to stay globally competitive. In this context, the World Class Supplier Program was developed to increase the innovation capabilities of local suppliers within the framework of specific projects undertaken with individual suppliers.[30]

The World Class Supplier Program was informed by insights from the mining industry's experience in Australia in the 1980s and 1990s. It was designed to both meet BHP's and Codelco's own needs for innovative solutions to problems and opportunities for growth and to promote innovation by domestic firms. One of the key features of this program is the reshaping of conventional modes of procurement from local suppliers in ways that are more specifically designed to open opportunities for these suppliers to develop innovative solutions. This is matched by parallel activities designed to strengthen their abilities to produce such innovation, including engaging external consultants to provide suppliers with advice and training about selected managerial and organizational competencies required to achieve world-class business performance, as well as establishing links with local research at universities.

The implementation process includes six steps. The process was established at BHP Billiton. When Codelco joined in 2010, each company had a division involved in managing the program.

(a) **Identifying and screening of needs and opportunities for innovative solutions:** The buyers (BHP Billiton and Codelco) each established a unit to undertake a review of potential projects across the company's operations to identify problems the company is facing for which it cannot find satisfactory solutions in the market, and which present potential, quantifiable economic benefits, or benefits in terms of health, security, environment, or community.

(b) **Prescreening of potential suppliers:** Possible suppliers are interviewed and screened both in terms of their ability to rapidly develop breakthrough solutions as well as their overall potential and commitment to achieving world-class supplier status. This is done in collaboration with external consultancy and Endeavor, a nonprofit organization supporting innovation.

(c) **Identifying core cluster groups:** A small number of selected suppliers were grouped based on type of products and services they supply to form clusters during phase I, with two to three firms in each cluster.

(d) **Integrating procurement, innovation, and capability development:** An innovation-driven procurement process was developed where specifications of what is to be purchased is tightly defined ex ante by the buyer and standardized for all competing suppliers forming the cluster.

(e) **Defining the supply requirements:** Supply requirements involved broadening the question posed to the supplier—starting with a more open-ended presentation of the

[30] Shared Value Initiative. 2015. "Shared Value in Chile: Increasing Private Sector Competitiveness by Solving Social Problems."

problem or opportunity faced by the company, not by setting out the expected solution for it.

(f) **Strengthening competencies:** The buyer funds substantial portions of the costs of consultants to provide support to upgrading participating firms' capabilities. Areas of support to suppliers include management, internal processes, strategic planning and marketing, corporate governance, culture and brand identity, and deepening innovative technical capabilities.

Some necessary conditions for this program include (a) the buyer's understanding that their competitiveness is strongly linked to the competitiveness of their suppliers, (b) the involvement of a buyer with strong purchasing power and funding to subsidize innovation, and (c) the existence of supplier firms that have potential, capability, and commitment to innovate and pursue the necessary efforts to become world-class suppliers.

As of the end of 2015, the World Class Supplier Program included 52 suppliers, and 80 projects had been developed with these suppliers. Some of the suppliers had begun to export solutions generated through their participation in the program. Data available as of the end of 2012 indicates that the 36 suppliers participating in the program had a combined total of over 5,000 employees and US$400 million in sales. The innovation projects have focused on water, energy, health, safety, environment and community, human capital and operational efficiency.[31] As of the end of 2012, the program had an estimated net present value of US$121 million in direct savings in the cost of inputs, goods, and services for BHP Billiton. Suppliers involved in the program benefited from new revenue generation opportunities, increased efficiency and innovation capabilities, and greater access to finance and diversified markets. BHP Billiton's total purchases of goods and services from local providers in Chile in 2015 amounted to US$4,992 million from 2,778 entities.[32]

Codelco, which joined the program in 2010, had a portfolio of 35 cluster projects at different stages of progress in 2015, with a target to create at least 250 world-class mining suppliers with capability to export US$10 billion in mining-related goods and services by 2035.

Drawing from the experience of the World Class Supplier Program, and in line with the Government of Chile's Mining Technology Road Map 2035, Foundation Chile (FCH), a nonprofit corporation that fosters Chilean business and industry growth through technological innovation and implementation, launched in 2017 an innovation brokering program, the Open Innovation Program, for the mining sector.[33] In this program, FCH (a) identifies problems that a subset of mining companies face and need solutions for, and communicates these to companies that may be able to provide innovative solutions; (b) creates a network between these companies, thus supporting SME upgrading through the establishment of partnerships; and (c) uses the relationships with suppliers/innovators to highlight to the participating mining companies new innovations that could potentially meet needs the mining companies have not yet identified or communicated. The FCH's program focuses on matchmaking and brokering, rather than supporting innovation capabilities directly. Other programs, funded by the Chilean government,

[31] BHP Billiton. "World-Class Supplier Programme in Chile." June 2013. http://www.bitc.org.uk/our-resources/case-studies/bhp-billiton-world-class-supplier-programme-chile.
[32] BHP Billiton Chile. *Mirando a largo plazo: Informe de Sustentabilidad 2015.*
[33] Meller, Patricio, and Pablo Parodi. 2017. *Del Programa de Proveedores a la Innovación Abierta en Minería.*

exist to support innovation (for example, programs at CORFO [Corporación de Fomento de la Producción], CONICYT [Comisión Nacional de Investigación Científica y Technológica], and others). Thus, the new program does not directly support capability upgrading at the firm level, but rather focuses more strongly on market linkages. The program began in January 2017 and is expected to last for three years.

C. Export Competitiveness: Macedonia Competitiveness Project

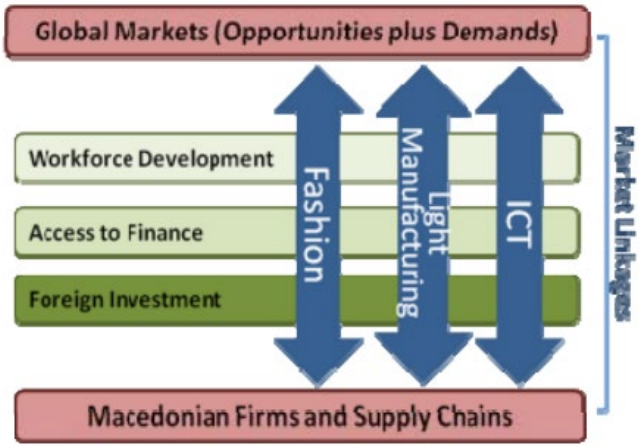
USAID funded two different competitiveness activities in the former Yugoslav Republic of Macedonia during the 2000s. The Macedonia Competitiveness Activity (MCA)[34] was implemented by Booz, Allen, and Hamilton from 2002 to 2006. Its objective was to build the competitiveness of Macedonian firms to participate in local, regional, and global markets. Its total budget was US$11.6 million and it worked with 180 companies in five industry clusters (lamb and cheese, tourism, IT, wine, and apparel). The project design was initially guided by a supply-driven cluster-development strategy but in the last two years, it moved toward a demand-driven 'market integration' approach with more explicit emphasis on the dynamics between firms and the market, rather than just between firms. It was more focused on using market feedback to adjust firm-level support and enhance firms' readiness to take advantage of market opportunities. The final evaluation notes that "both phases were critical and their combined effects led to the project's success." MCA directly contributed to US$15.4 million in additional export revenue primarily in new products and new markets, and in co-investment of at least US$12.5 million in enhancing production capacity, sales, product quality, and marketing.

The subsequent Macedonia Competitiveness Project was implemented over five years from 2007 to 2012 and built on the foundation laid by MCA. It was implemented by Carana with a total budget of US$9.5 million. It similarly aimed to stimulate foreign and domestic investment, capture higher value added export markets, and help Macedonian companies and sectors integrate into global markets. The Macedonia Competitiveness Project continued the previous approach of integrating the demand and supply sides. On the demand side, the project focus was on creating market linkages and facilitating communication of market expectations to firms, and on the supply side, on supporting firms in implementing improvements in managerial and production practices to meet market expectations.

The modalities used to achieve the project's objective included both vertical and horizontal activities. Vertical activities focused on specific sectors—apparel, light manufacturing, and ICT—which were chosen based on interviews with 60 potential buyers and investors to ascertain their interest. Horizontal activities were cross-cutting and benefited multiple sectors with the intention of setting the framework conditions for competitiveness. Those included (a) access to finance through a new Financial Platform matching firms with the right banks and products, (b) workforce development through vocational and employment preparation training, and an internship placement program; (c) facilitation of FDI, and (d) support for innovation.

[34] USAID Final Report on Macedonia Competitiveness Activity. 2006. http://pdf.usaid.gov/pdf_docs/Pdaci642.pdf

Figure 2. Conceptual Framework of Project Activities



Note: USAID 2012.[35]

The vertical sector-specific interventions were seen as justified by two main market failures preventing the formation of linkages between local suppliers and international markets. On the one hand, there was perceived to be a two-way information gap between Macedonian firms and international partners, including both a lack of information about opportunities as well as a low level of understanding about supplier requirements. On the other hand, Macedonian companies often had low capabilities to respond to market demands in terms of lead times, quality, added value through innovation, and design and use of modern technologies and practices.

To address the information gap, specific demand-side interventions that were conducted in the supported sectors included promotional fairs to raise Macedonia's profile as a business destination, international trade fairs, business-to-business events, direct networking and transaction support to convey buyer expectations to firms, visits by MNCs to Macedonia which resulted in Requests for Quotation by local companies, facilitation of initial trade deals, and so on. Export opportunities were seen as a 'carrot' for firms to participate in the program, and supply-side interventions aimed at enhancing firm capabilities were often tailored to respond to a specific 'live' market opportunity.

The suite of upgrading ('supply-side') support was variable and included—product design, operations and productivity improvements, quality assurance, certification support to meet critical industry requirements, financing support for investment in new production capacity, facilitating commercialization of innovations, and skills development, among others. All technical assistance was tailored and delivered on a cost-sharing basis. The holistic firm-level support was organized around two strategic areas: (a) helping firms build capabilities and customer base in existing product or service segments, and (b) repositioning firms or clusters to move to higher value-added segments. The creation of capabilities was often implemented through the various platforms created by the horizontal elements of the project (particularly the Financial Platform and various industry-led skills training programs), and the support was sometimes offered to groups of firms for a lower share of the cost.

[35] USAID. 2012. *Final Report on Macedonia Competitiveness Project.* http://pdf.usaid.gov/pdf_docs/PA00KZ5M.pdf .

The key performance indicators of the project included market linkages with international companies resulting in new export deals and strategic partnerships, new foreign investment, debt or equity financing for firms, adoption of modern technology and practices, and investment in students and employees. Overall, 443 firms received technical assistance to improve business and financial management practices, and 192 firms received assistance to invest in improved technologies, of which 75 firms implemented new management practices or technologies. The project generated US$145.7 million in new investments (domestic and international), US$88.6 million in new exports through market linkage activities, and through facilitated investments in products, technology, and working capital upgrades, and 3,321 new job placements through the job placement program as well as through new investments and industry-led training. The project also developed a market for the commercial delivery of financial and business advisory services, while facilitating US$78.8 million in new financing. The suite of interventions led to sustained and transformative impacts on the Macedonian economy and an ecosystem of services to help companies become more competitive. The model has been adopted by other USAID projects in Eastern Europe, Africa, and Latin America.

D. Export Competitiveness: Brazil's Local Productive Clusters[36]

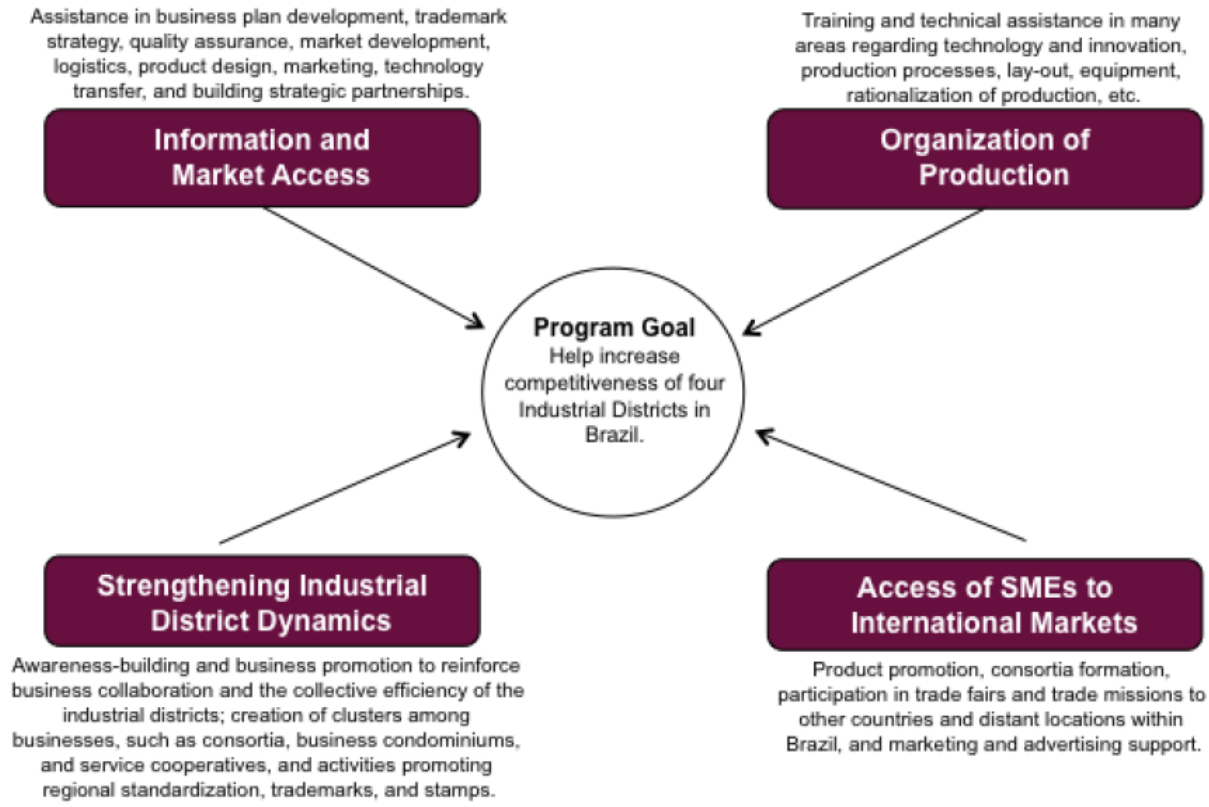
Launched in 2003, the Local Productive Clusters Program (*Arranjos Produtivos e Inovativos Locais*, APL) plays an important role in helping SMEs improve productive factors and governance in Brazil. This program supports SME development through the strengthening and integration of all agents forming the value chain. APL involves not only enterprises (producers, processers, marketers) but also public and private institutions (technical and vocational training institutes and universities, research institutes, local government, and financial intermediaries). The APL program was developed at a time when Brazil was looking for industrial development policy options that could be used as a reference for the development of a cluster-type program adapted to Brazil's realities. It aimed to enhance the competitive capabilities of the SMEs that produced goods and services in the selected industrial districts and sectors. Sectors participating in the program include clothing (25 firms), leather (285 firms), nonmetallic minerals (48 firms), machinery and equipment (19 firms), electronics and computer equipment (21 firms), furniture (130 firms), and retail and wholesale (20 firms).

The APL pilot phase was designed to last 36 months; however, it was implemented for 55 months, from September 2002 to April 2007. Initially, it assisted at least 591 SMEs across four industrial districts (Campina Grande, Nova Friburgo, Paragominas, and Tobias Barreto) in select sectors (agribusiness, clothing, and furniture industrial clusters). It also involved other participants in the supply chain, including logistics/transport, marketing, retail, and wholesale companies. The coordination mechanism for the pilot-phase cost nearly US$6 million[37] and promoted SME upgrading through access to market intelligence, product development, organization of production, entrepreneurship, and business collaboration among participant SMEs. Established government-funded platforms and services (entrepreneurship and research institutes) also supported the APL.

[36] *Main source:* FOMIN-IDB (Multilateral Investment Fund – Inter-American Development Bank). 2010. "Impact Evaluation of the Program for the Development of Industrial Districts in Brazil."
[37] Financing from Multilateral Investment Fund (US$2 million) and SEBRAE (US$4 million).

Similar to other cluster development programs, the APL started with policy interventions supported by private and public sector agents elaborating strategic development plans, facilitating interaction between various agents, and identifying local leaders who would be responsible for executing the plans. During this initial phase, training, workshops, and managerial technical assistance were some of the key activities provided to SMEs in collaboration with public local/federal technical training centers and R&D institutes. In the second phase, beneficiary firms received support to improve their performance, including training and technology transfer, and/or creating sector-specific technology centers. The third phase of the APL pilot-phase included trade promotion services (fairs, business rounds, exhibitions) in Brazil and in foreign markets, also leveraging support from local and federal resources and platforms.

Figure 3. Structure of the APL Program



Source: Industrial Districts' Donors' Memorandum, June 2007.

The direct impact on participants varied from district to district, but relevant progress in participants' development was observed. These included an increase in production volumes and sales, greater innovation and productivity, an increase in the number of employees and their average wages, and the development of sector governance. The impact evaluation conducted for from 2004 to 2009[38] indicates that the APL policy increased the employment level of direct beneficiary firms by 17 percent compared with the control group. It also found that the policy

[38] Garone, Lucas Figal, and Alessandro Maffioli. 2016. "Impact Evaluation of Cluster Programs: An Application to the Arranjos Productivos Locais Policy in Brazil."

helped beneficiaries increase the value of their total exports by 90 percent and the likelihood of exporting by around 8 percentage points. Furthermore, these positive effects seemed to be constant or even increasing over time during the years after receiving the support from the APL program.

Regarding spillover effects, results revealed a more complex dynamic. On the one hand, there was partial evidence of a negative indirect effect on employment in the first year after program implementation. On the other hand, positive spillover effects on the value of total exports and the likelihood of exporting were observed. These latter effects became significantly relevant in the medium and long term, reaching 15 percent and 2 percentage points, respectively, in the sixth year after the inception program. Finally, an analysis of the heterogeneity of effects showed consistent patterns using different criteria to disaggregate the sample (industry, location, and size of firms) and confirmed the positive effects on the analysis of the entire sample.

Since the pilot-phase, the APL concept has evolved significantly, and it is today a flagship SME development program that has been scaled up in Brazil and introduced in other countries in Latin America, Europe, and Asia.

V. Findings and Emerging Practices

The concepts behind the interventions described earlier and the case studies demonstrate several points that are key for practitioners to design and implement these types of programs, and also highlight gaps in which further research is required. Additionally, as the case studies focus on programs that have been successfully implemented and achieved some results, they omit more recent programs that have been designed and are in early stages of implementation at the World Bank Group. This section synthesizes findings from the case studies and other research done for this paper, presents emerging practices in World Bank Group that incorporate strengthening of capabilities and market linkages for enterprise upgrading, and concludes with areas for further research that would better enable practitioners to design and implement such programs.

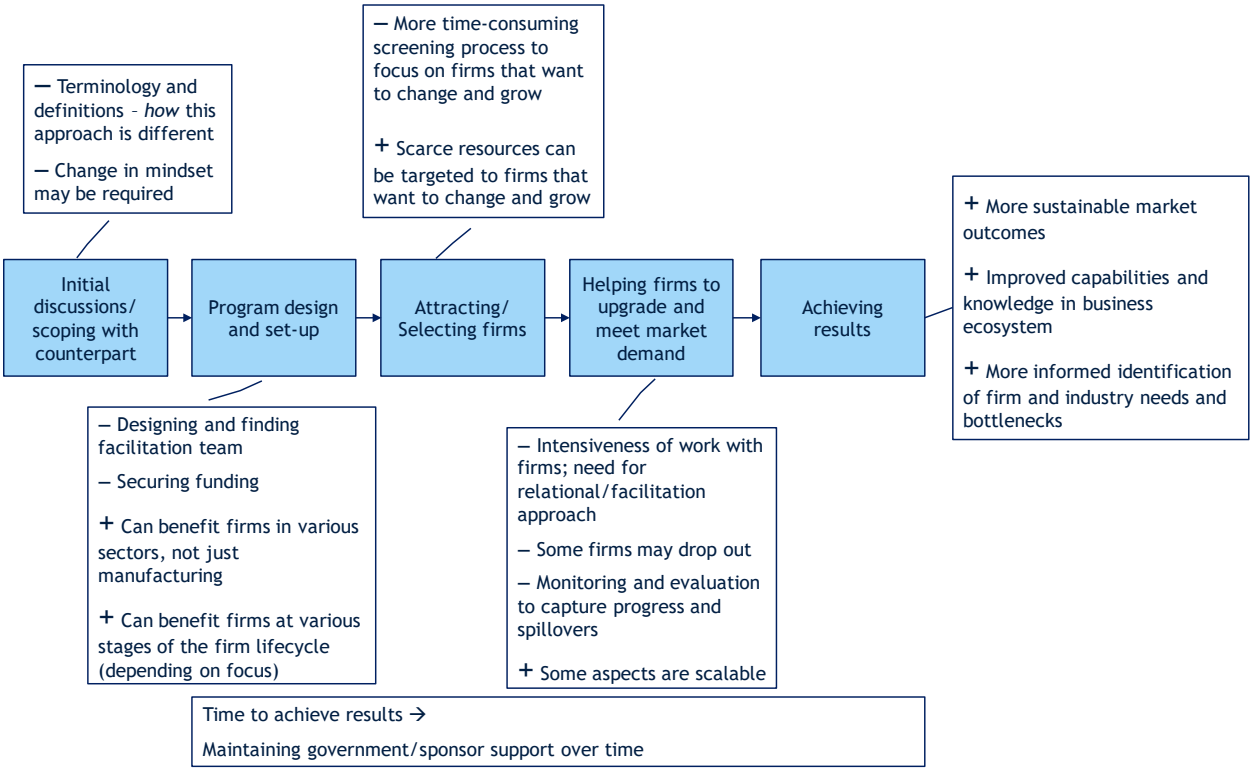
A. Observations and Implications for Practitioners

Programs that incorporate strengthening SME capabilities with enhancing market linkages present a trade-off between being more complex and costlier to implement and potentially driving larger and more sustainable long-term results because of their focus on creating market relationships. On the positive side, these programs, if run well, bring supply and demand together, potentially creating sustainable markets. Interventions that focus exclusively on the capabilities (supply-side) or market (demand-side) build up a part of this ecosystem, but stop short of creating markets.[39] However, programs that incorporate capabilities and market linkages are more complex and take time to achieve this success.

Figure 4 summarizes the issues that are discussed in the text of this section, around the program lifecycle.

[39] Examples of programs that focus on one or the other include innovation competitions/programs, matching grants for business development services, certifications, clustering (without the market element), and training on the supply side (not exhaustive), and export promotion through trade fairs and missions, market information, and others on the demand side (not exhaustive).

Figure 4. Issues and Benefits in Programs that Incorporate Capabilities and Markets



1. Considerations on Complexity, Cost, and Time to Achieve Results

Programs linking capabilities and markets require a facilitation function, which would be costly. The facilitation role is required to bring firms and markets together, and success depends largely on the quality of this role. This role is in addition to the team that would be required under a simpler program to conduct project management activities (for example, administering grants, competition, training, and so on)—which is also still needed—and any expert assistance for firm upgrading or market development. This requirement increases the costs of implementing the program—and stakeholders may query their value-add. The professionals required to fill this facilitation role need to have the skills and experience to work well with buyers/market actors and suppliers. The program may need to pay a premium for individuals who have these skills, which may also be scarce and hard to find, especially in lower-income economies.

Further, the investment in the facilitation role is not likely to show immediate results. Program inputs by the facilitation team in terms of number of meetings, connections made, market opportunities identified, and so on can be tracked. But these do not capture the real value that the facilitation team provides in terms of understanding market needs and how to translate those into upgrading at the firm level. Likewise, outputs at the firm level may be tracked (number of improvement plans, consulting services, and so on), but this also does not capture the value that the *market-informed* nature of such outputs brings. In other words, in the first year or so of implementation, the program may look similar to a program that disburses matching grants for certifications, business plans, and so on, that are not as well-informed by markets and capabilities.

In fact, it is likely to look worse than such a program, because they take longer to get up and running.

It should be noted that the World Bank Group's Trade and Competitiveness Global Practice is supporting initiatives that explicitly target capacity building of the type of personnel who could undertake this facilitation role even in low capacity countries—for instance, the Haiti Business Development and Investment Project (P123974) , which has subsequently formed the basis for a number of competitiveness initiatives. Capacity building of personnel for facilitation roles is also ongoing in the Croatia Strategic Analysis and Competitive Positioning Project (P161105), and the Kazakhstan SME Competitiveness Project (P147705) and is in progress elsewhere.

These programs require considerable analysis and assessment work upfront to understand the existing capabilities and the market demand, and proactivity to generate participation in the program. This requires a more active role by the program implementers—which tend to be governments or government proxies. For instance, just defining the universe of suppliers that could be good candidates for a supplier development program may take six months or more, and requires substantial effort—to develop a database of suppliers, gather data on them, conduct site visits, and so on.

Given these features, these programs require a mindset change, from a program that disburses grants or other assistance to relationship-based model whose effectiveness depends, at least partially, on the quality of the relationships and linkages.

The programs are also by their nature more exclusionary. They aim at the subset of firms that is willing and able to engage in real change and grow. These are not programs to provide subsidies for subsistence entrepreneurship or other social (as different from economic) objectives. They will likely result in more sustainable social outcomes—jobs, income growth, and so on—but through their work with firms that present a strong economic rationale for benefiting from the intervention. Thus, the upfront work with SMEs is needed to differentiate firms that are interested in and have potential to change and meet the demands of the market from those that are looking for a grant to lower some of their costs.

As such, to attract and select participants, the process is more complex than designing, opening, and marketing a call for applications/proposals. The criteria for participation in the program is set (as with any program) and firms apply. But there is likely to be a higher selection criteria for participation as discussed earlier.

During program implementation, there may be milestones that participating enterprises need to meet or else they cannot proceed in the program. As the intervention works more in-depth with firms—requiring more resources—it is useful to ensure over the program's life that the firms are indeed using the inputs provided by the program to achieve results (both for political and economic reasons). For instance, if a program is helping firms implement improvement plans, the firms may need to achieve certain benchmarks to be eligible for the next phase of the program. Firms may self-select out of the program if they want to go in a different direction based on their business strategy or management decision, or they may not be able to reach the program goals.

It may also take more time to see results—to set up the beneficiary selection process, consult with the market, undertake firm-level diagnostics, deliver a first set of interventions, and deliver subsequent interventions. This is a sequential process. Thus, to maintain political and other support for the program, the programs need to have robust monitoring and evaluation—showing what the program is delivering, how those inputs or outputs are expected to achieve results, and how it is performing along the way. There also needs to be a way to track spillovers from the program, which would track additional aspects of the economic impact on the broader economy. To manage the time horizons to achieve the results in terms of commercial relationships and sales, this monitoring and evaluation data should be packaged and presented to broad stakeholders at regular intervals. Further, monitoring and evaluation data would be crucial to maintaining support for the program through political transitions (for example, a new government coming in after elections). Given the nature of these types of programs, they can collect much more detailed firm-level data over extended periods of time, because they are interacting with and adding value to, participant SMEs on an ongoing basis.

An additional consideration related to monitoring and evaluation is that some indicators may change once the program is in implementation. Evolutions in markets and demand, or additional market information that may not have been available in detail during project design, may indicate that the opportunities for upgrading may be in a different or additional area than was identified during project design. While as much analysis as possible should be done upfront to design a robust intervention, markets are ever-changing, and there is the possibility that a project may need to go through a minor restructuring to change or update monitoring and evaluation indicators or targets.

These programs may also require high-level change in large buyers, which may not in some cases be realistic. For instance, supplier development or buyer-driven innovation programs may require changes in MNCs' procurement practices, or at least will need sign-on by global R&D units that may not be located in typical World Bank Group client countries. The local MNC may not typically have capex budget or 'innovation' procurement responsibilities internally, so these will need to be obtained. Governments may find it controversial to use scarce resources to support upgrades in suppliers to support products that would benefit MNCs (it might be argued that MNCs can pay for their own innovations). This is where some co-funding for the programs—by buyers and SME developers both of whom will potentially benefit—is appropriate and helpful.

For buyer-driven innovation, especially when the government is the buyer, this may also require a major change in procurement practices. This is why it is useful to ring-fence such activities to a certain segment of government spending, a certain agency, within a special grant program, and so on. For programs such as World Bank loans in which the government may hire the facilitation team, the selection process for that facilitation team would need to ensure it captures quality as well as cost. Quality- and cost-based selection is incorporated into World Bank procurement processes but may require even more focus on quality.

Also, initial discussions on these programs may be complex due to the terminology used. Competitiveness, value chains, clusters, firm-level upgrading—are all terms that have been used for many years within the government and development community. However, they have a certain meaning in programs that incorporate capabilities and markets. Existing cluster programs may not have a strong focus on linkages with demand. Industry competitiveness programs may focus on the enabling environment (regulations, infrastructure, and so on) and not on firm-level upgrading.

Thus, there may be a need for clarifications and more detail in discussions with governments/project sponsors.

2. Additional Potential Benefits

The rationale for pursuing and implementing programs that combine capabilities and markets are that they are expected to result in more sustainable commercial relationships, which contributes to economic growth and job creation. They may also create knowledge and technology spillovers in the economy and better information flows. Linkages with MNCs and export markets expose SMEs to more sophisticated demand. With the pace and breadth of technological change that is occurring globally, technology diffusion is growing more important as the distance between firms at the technological frontier and laggards appear to be growing wider. MNCs have long been a vital source of technology diffusion, for instance, through supplier relationships or through staff learning best practice then leaving and starting their own firms. Similarly, exporting exposes domestic firms to good global practices and to competition in a very direct way. Thus, programs that help link firms to demand from MNCs and export markets prepare firms to engage in additional upgrading and innovation, enable the technological base of the economy to grow, enable good management practices to spill over to other firms in the economy (for example, through a beneficiary's supplier network), and others.

These programs are also not just about manufacturing. For instance, such an approach of combining capabilities and markets has recently been taken in projects in the tourism sector (see section B in this chapter). The approach is applicable to competitiveness in value chains—service exports, supplying services and goods in extractives industries, and others. Services developed by these programs may range from knowledge-intensive, such as engineering and environmental services (for example, in the mining sector), to construction and transportation, recruitment, site maintenance, catering, laundry services, and so on for any value chain.

The programs can also benefit firms in various stages of the lifecycle. Supplier development programs are likely to be more geared toward established SMEs. However, buyer-driven innovation can target start-ups, and export competitiveness programs can target younger firms as well.

The programs include some aspects that are scalable. There can be economies of scale in diagnostics and facilitation/relationship-building. Some of the knowledge products and market intelligence produced through the program would have spillovers to other companies. This knowledge can be packaged and disseminated more broadly. However, these programs also require more resources to help each company, which limits scalability in the intervention itself (that is, number of firms that can be supported with a given amount of program funding.)

These programs potentially build soft infrastructure that can be utilized in other programs and initiatives. They build capabilities to conduct firm-level diagnostics, develop relationships with MNCs, procure innovative solutions in the government, conduct market segmentation, identify competitive factors in certain industries, and so on. They may harness the abilities of industry associations, and in working with the associations build their capacity further. These programs also provide insight into how firms are growing and what barriers they are facing. This insight may —and should—be used to identify and improve regulatory aspects, logistics issues, skills, issues,

transportation and communications issues, and others. Burdensome procedures or regulations can be observed through firms' market interactions and any difficulties they have. This provides more informative insights than simply asking firms about their difficulties. Thus, the programs build not only firm-level capabilities, but also capabilities within the enterprise ecosystem.

Last, despite the differences in approach on the market development side, there is commonality in approach in SME upgrading, and the same general sequence and instruments can be utilized across each program, assuming the advisory capacity is available. These would include an initial diagnostic to assess performance and areas for improvement, and then regular assessments against these diagnostics, advisory, and potentially financial support for common key areas of capability, group training plus potentially individual coaching and mentoring. Each project may also need to include project/industry specific elements (for example, specific standards, technology or training), however, the best practice core offering around which these would be added is common to all initiatives.

B. Emerging World Bank Group Practices

A growing number of World Bank Group projects are taking approaches similar to those presented in this note. Although not many World Bank Group projects are included in the table of interventions, there are several emerging practices that combine creation of capabilities and strengthening market linkages for SME upgrading. These are described in the following paragraphs.

1. Promoting Enterprise Upgrading in Agribusiness

Global market trends in the food and beverage sectors offer significant opportunities for business creation and economic growth. Domestic demand for ready-to-consume food products is growing in most developing markets and agroprocessing SMEs can be significant drivers of job creation—the World Bank Group estimates that each additional job in agroprocessing creates 2.8 more jobs in the larger economy. Investment in agroprocessing can also improve women's economic empowerment as women make up the majority of the workforce in the sector.[40]

Agroprocessing SMEs in developing countries face several challenges, including the following:

- **Lack of market knowledge:** Agroprocessing entrepreneurs often do not realize their growth potential due to a limited understanding of how to best position themselves in formal markets with high levels of competition.

- **Lack of financing:** Lenders often perceive agroprocessing SMEs as high-risk investments. This leads to short payment periods, high interest rates, and high collateral requirements, which are challenging for these enterprises to meet.

- **Inadequate technology:** Agroprocessing SMEs require facilities to test products for bacteria and nutritional contents, as well as technology to package them adequately. The

[40] World Bank Group. *Agribusiness Entrepreneurship Program: Promoting Growth Entrepreneurs in Agro-Processing.* https://www.infodev.org/infodev-files/agribusiness-entrepreneurship-program-brochure.pdf

scarce availability of this technology limits product and process innovation and impedes government certification.

- **Lack of know-how:** Agroprocessing SMEs often do not have access to the skills required for efficient manufacturing, sourcing and distribution, financial management, and market positioning.

- **Limited networks:** Many agroprocessing SMEs have limited access to key actors in the agricultural value chain, including producers, government regulators, and buyers.

- **Poor knowledge of polices and regulations:** Agroprocessing SMEs are often unaware of regulations and laws that apply to their business and may inadvertently fail to comply.

In response, the World Bank Group has developed its agribusiness centers that provide market linkages, early-stage financing, facilities, and business coaching to growth-oriented SMEs that generate between US$30,000 and US$300,000 in annual sales. The delivery approach focuses on building local institutional capacity—based upon public-private partnerships—to generate a bottom-up catalytic effect in the local market. Furthermore, they generate revenue through a combination of fees and success-sharing mechanisms—a business model that limits significantly reliance on public subsidy over time.

The approach is not a one-size-fits all solution. However, the design and implementation of every intervention follows a common set of principles. They are driven by market dynamics; target value-adding, high-growth potential entrepreneurs in agribusiness; facilitate backward and forward market linkages in the value chain; increase the investment readiness of entrepreneurs; and are co-created for the local context, leveraging local ownership, public-private partnership, and international experience throughout the design and implementation process.

In particular, this includes Agribusiness Entrepreneurship Centers (AECs) which aim to increase the competitiveness and growth of agribusiness SMEs by providing holistic and tailored services to SMEs selected through a competitive process. The integrated package of services includes the following:

1. **Market linkages:** Market information, marketing skills, and market linkages throughout the value chain.

2. **Finance:** Financial management skills and access to appropriate financing products.

3. **Business services:** Business center, mentoring and coaching, and assistance with navigating regulatory requirements, standards, and compliance.

4. **Network:** Agribusiness entrepreneur networks, competitions, and fairs.

5. **Technology:** Technology information, training, and technology access.

The success of the AECs is measured by the growth of the supported agroprocessing enterprises—defined by revenue and job creation—its impact on farmers' income and the integration of business model, product and process innovations into the economy at large.

2. Increased Competitiveness in Tourism

Globally, the World Tourism Organization in the United Nations (UNWTO) estimates that direct, indirect, and induced impacts of tourism generated 10 percent of global GDP, one in eleven jobs and 30 percent of global services exports. The year 2016 represented the seventh year of consecutive growth in the number of international tourist arrivals around the globe, setting a new record with 1.235 billion arrivals.[41] Travel for holidays, recreation, and other forms of leisure accounted for just over half of international tourist arrivals. The tourism sector presents opportunities for upgrading SMEs involved in the direct provision of services to tourists, as well as through linkages with value chains in which they operate—including agribusiness and food products, handicrafts, transport, and more. Tourism also presents potential to bring greater economic growth and job opportunities to rural or other areas that may not present comparative advantages for industry, but may have natural, cultural, or other assets on which a competitive tourism destination can be built. Thus, tourism can make an impact on reducing poverty and promoting shared prosperity.

The tourism sector presents coordination challenges, in which multiple assets and service providers need to come together to increase the competitiveness of a country's tourism sector and the destination(s) within it—attractions, accommodations, quality of service (including knowledge and skills), transport infrastructure, infrastructure, and utilities (electricity, water, internet connectivity). If an area has an advantage upon which to build a competitive destination but these elements do not come together, the destination may not get off the ground. On the other hand, if governments, development partners, and enterprises invest to bring these elements together in a destination that does not have a basis on which to build competitiveness, or information does not reach the relevant market channels, then the investment may not yield returns. Furthermore, the actors that need to coordinate to increase competitiveness (local governments; ministries in charge of transport, culture, and so on; ministry of finance; educational institutions; and many others) may not have the same sort of market orientation that an entrepreneur would have to test a product and bring it to market.

Therefore, the sector presents a scenario in which policy makers wish to invest in increasing competitiveness of a destination they may think should be attractive or presents opportunities upon which to build competitiveness (an 'if you build it, they will come' approach), but the service offerings or investments may not be consistent with what the market demands (who will come, and why).

Practitioners wishing to help countries develop their tourism sectors and destinations are then faced with the challenge of bringing in the demand element—answering the question of who will come, why, and what is needed to attract them. Then, investments can be made in increasing capabilities and service offerings to fill the gaps between what the area already offers, and how it can be more competitive in the market segments relevant to it.

[41] UNWTO (The World Tourism Organization). 2017. "Sustained Growth in International Tourism despite Challenges." Press Release 17003, January. http://www2.unwto.org/press-release/2017-01-17/sustained-growth-international-tourism-despite-challenges .

Several World Bank Group projects in the tourism sector are taking an approach that more closely links supply and demand.[42] These projects look at which market segments of tourists are coming to the country or destination, identify priority market segments, and then work to upgrade the destination's offer to better meet this demand. The approach includes the following steps, which include both supply- and demand-side elements:

1. **Identification of destinations**[43] (supply side—where the SMEs operate): One of the first steps in a project focusing on upgrading in the tourism sector is to identify which destinations the project will focus on. Prioritization criteria can include existing level of demand, strategic importance of the destination, opportunities for regional integration (especially in a small economy), readiness of the destination, and likely socioeconomic impact (reducing poverty, improving shared prosperity, and so on) of upgrading the destination. If appropriate, given the context, a whole country can be considered as a destination.

2. **Market segmentation** (demand side—what markets are relevant): Tourism demand is captured first by identifying relevant market segments of tourists. Market segments can be activity-based (for example, spa tourism, seaside tourism, cultural tourism, and so on) or behavioral (for example, organized active tourists, independent active tourists, hard adventure tourists, domestic short break tourists, regional short break tourists, and organized large group explorers). Activity-based market segments tend to focus more on supply (what tourism offer is motivating tourists to come), while behavioral market segments focus more on demand—the characteristics of the tourists themselves and what motivates tourists to visit a destination.

3. **Value chain analysis** (merging supply and demand): Once market segments are identified, then value chain analysis is conducted to examine how the tourists learn about a destination, how they plan their visit, what they do and where they stay during the visit, how they travel back, and how they recollect and share their experience. Value chain analysis further identifies what these tourists demand at each stage, how well the destination(s) currently meets the demand, and what potential gaps may be for a destination to increase competitiveness in that market segment.

4. **Upgrading destinations to meet demand (supply side):** Based on the analysis earlier, then interventions are designed to help destination stakeholders—including, but not limited to SMEs—upgrade their offering to better compete in the priority market segments, based on what those segments demand. Interventions that work with individual SMEs or groups of SMEs may include assistance with marketing, helping firms to develop new services

[42] World Bank projects that incorporate elements of the approach described here include the FYR Macedonia Local and Regional Competitiveness Project (P154263); Madagascar Second Integrated Poles and Corridor Project (P113971); Benin Cross Border Tourism and Competitiveness Project (P149117); OECS Competitiveness Project (P152117); Senegal Growth and Export Development (P146469); and Indonesia Tourism Development Program (P157599). IFC Advisory Services projects that incorporate aspects of this approach include Buddhist Circuit Tourism: Facilitating Growth Corridors in UP and Bihar (580727); Tourism Investment Generation Saint Lucia (581548); and Tourism Growth Peru (602024).

[43] Not all tourism projects must work at the destination level. However, as this paper focuses on interventions that work to increase SME capacity and include an explicit market linkages element, this necessarily results in an approach focused on destinations.

(activities, tour packages, and so on), upgrading skills and customer service, fostering linkages (for example, between a restaurant and local agribusiness producers), and others. There is typically also a component that funds improvements in infrastructure (water, electricity, sewerage, national transport, local transport) as basic elements of tourists' travel and experience at the destination. This goes beyond the interventions discussed in this paper and reiterates the point made earlier that additional interventions, beyond firm-level activities, are likely needed to increase SMEs' competitiveness in the particular value chains.

5. **Building capacity to reassess demand and priorities on an ongoing basis (supply and demand):** To incorporate demand on a continuous basis and use it to inform additional upgrading activities, capacity needs to be built. This typically falls within the role of a destination management structure (can be an official organization or another type). Destination management capacity should be built to engage with industry/destination stakeholders to identify the destination's vision and set objectives, capture market trends, learn from experience, and adjust the destination's strategy accordingly.

C. Knowledge Needs

This paper aims to provide new knowledge on types of interventions that connect capabilities (supply) and markets (demand). As noted in the literature review (Annex 2), there is a lack of empirical evidence on these types of programs. As discussed in the description of the types of programs, the types of value chain governance determine how firms access markets, and therefore, affect the design of the programs. As noted in the findings, the programs require specific type of implementation skills and structure geared toward providing a facilitation and relational program. Areas identified for additional research draw on both of these aspects.

Impact of the interventions: Additional research is needed to more deeply identify the impacts of the interventions described in this paper. Although the literature review provides some guidance, there is not enough empirical evidence on the impacts of the types of programs described here, isolated from other factors that also affect the sectors in which the programs work to assess these impacts versus their costs. A body of more rigorous impact evaluations would enable conclusions to be drawn on the interventions' impact, effectiveness, efficiency, and pros and cons compared to other types of interventions. While impact evaluations are being built into more World Bank Group and donor operations (that is, IDB's handbook on cluster evaluation), impact evaluations are notoriously difficult to design and implement in the types of programs described in this note. This is because the vast majority of these programs have multiple interventions implemented simultaneously so the magnitude and direction of impact of each individual intervention is difficult to isolate from the interconnected effects of the overall program, as well as the general context. Sectorwide or economy-wide interventions are also difficult to study due to the challenge in constructing a counterfactual. Programs that include firm-level support are more amenable to randomization either through oversubscription design based on a set of eligibility criteria or through the implementation of the program in multiple stages.

Implications of value chain governance: This paper has examined what type of program would be appropriate based on the governance of the value chain, differentiating between buyer-driven and supplier-driven value chains. Five types of value chain governance have been identified in the

literature, but practical examples and implications of this type of governance are not readily available. It would be worthwhile to look further into how value chain governance can be identified and defined, and the implications for design of programs that link capabilities and markets. This is especially important given the increasing complexity of global value chains, the role of the digital economy in manufacturing ('industry 4.0'), and the increasing integration of services and manufacturing.

Cost and implementation structure for the interventions: Implementing these types of interventions require a team skilled in private sector development, with facilitation capabilities. This is a higher-cost model than one of a grant administrator, as may be found in programs that only focus on capabilities (for example, matching grants for business development services) or only on markets (for example, matching grants for participation in trade fairs). It would be useful for practitioners to have a rough idea or typology of the cost structure for implementation. While the cost structure would differ depending on the country context, estimates for the level of effort for the core facilitation team, diagnostics, or intervention per company, and other elements required to implement the project would be very useful. Likewise, a 'typical' implementation structure would be useful—for instance, which elements of the program should be delivered by the core facilitation team, which should be outsourced, and a model terms of reference for each.

Annex 1: Long List of SME Upgrading Programs that Incorporate Demand Linkages

The following table presents the long list of programs that were identified as relevant for this paper. From these, the four case studies were chosen. However, all of the programs listed may provide useful examples and insights for practitioners interested in the approach assessed in this paper.

	Program	Objective of the Program	Years of Implementation	By whom	Demand-Side Intervention (linking firms with markets)	Supply-Side Intervention (firm capabilities)	Results	Comments and Source
1. Linking firms with specific market opportunity								
	1.a. Supplier Development Programs							
1	Costa Rica PROVEEP	To develop local suppliers	2000–2005	Joint with companies, agencies, and IDB; led by Chamber of Industry (CINDE)	Web-based portal for linkages	National agency supporting SME suppliers	120 linkages, exports from US$2 to US$52 million, MNCs increased local sourcing from 1.6 percent to 2.3 percent	SME readiness was explained as main factor for successful linkages so firm capabilities could have driven linkages. *Source:* Macedonia Analytical Note
2	Czech Republic, CzechInvest	To improve competitiveness of local SMEs to participate in global value chains	2000–2002 pilot phase, later morphed into Cluster Policy and other programs	EU Phase scheme, led by CzechInvest	MNCs input on requirements	Company selection and business review and intensive support for enhancement of supplier capabilities	15 companies (out of 45) had gained new business worth US$18 million annually	There is some evidence that compared to similar firms those that do become suppliers are more productive and grow faster. *Source:* See case study for full list of sources
3	Rio Tinto, Simandou Guinea	Increase the capabilities of local SMEs to provide goods and services for the construction and operation of Simandou mine	2012–2017	IFC Advisory Services	Local content policy, technical assistance to Rio Tinto on local supplier opportunities, database matching suppliers	SME capabilities assessments and diagnostics, based on which technical assistance for capability creation and implementation of action plans,	Results-to-date include 283 jobs supported, US$2.0 million of financing facilitated, and US$1.6 million of sales revenue	The Advisory services project is still active, however, IFC investment exercised a put option in October and sold its stake in the mine.

	Program	Objective of the Program	Years of Implement ation	By whom	Demand-Side Intervention (linking firms with markets)	Supply-Side Intervention (firm capabilities)	Results	Comments and Source
						coaching, mentoring, Business Edge training		*Source:* Rio Tinto TA and Local Supplier Development Project – IFC AS (598587)
4	Peru LNG	To identify new market opportunities for local SMEs and increase the local content of Peru LNG	2010–2012	IFC Advisory Services	Work with Peru LNG on their structure and incentives for local content, database of SMEs, and prospective matches	Business and management training and mentoring for local SMEs to meet PLNGs standards and ultimately get contracts with other investors too	US$4 million in contract, 70 participating SMEs increase their revenues by 20 percent, 288 jobs supported, US$1.6 million of financing facilitated	*Source:* Peru LNG Linkages Project – IFC AS (566909) – internal only, not publicly disclosed
5	Mexico automotive sector (various programs)	Build capabilities of SMEs to become suppliers to transnational corporations (TNCs) in the automotive industry	2006–2008	Federal programs (STATE-SONORA; SIIAAS; CEDIAM)	Knowledge and technology transfer from TNCs to local suppliers (SMEs)	R&D funding, business management TA, marketing, market intelligence.	Knowledge and capabilities acquired allowed some local SMEs not only to participate in higher niches of the auto value chain, but also to diversify their activities and clients, supplying other Mexican and TNCs beyond automotive industry.	Other initiatives were implemented as well, including by investors directly, such as with Ford. *Source:* Local institutions, local networks and the upgrading challenge. Mobilizing regional assets to supply the global auto industry in Northern Mexico
2. Export Competitiveness Programs								
6	Moldova Agricultural Competitiveness and Enterprise Development	To increase the competitiveness of the agricultural sector, with a particular focus	2011–2016	USAID and Millennium Challenge Corporation implemented by DAI	Linking buyers and trading partners with producers through trade shows and	Production, postharvest, and business training to meet buyers' requirements, also enabling	US$26 million in agricultural exports, 3,000 farmers adopted new techniques, resulting in US$15	*Source:* DAI project summary for ACED

	Program	Objective of the Program	Years of Implement ation	By whom	Demand-Side Intervention (linking firms with markets)	Supply-Side Intervention (firm capabilities)	Results	Comments and Source
		on the production, processing and marketing of high-value agricultural crops			contacts made during market studies, identifying buyers' requirements	environment, such as sanitary and phytosanitary (SPS) regulations, and certification programs	million invested in new production and postharvest facilities	
7	Macedonia Competitiveness Project	To stimulate foreign and domestic investment, capture higher-value export markets, and generate new jobs	2007–2012	USAID, implemented by Carana	Market fairs to promote Macedonia, direct linkages to firms, market engagement (that is, facilitated dialog between sellers and buyers to clarify requirements)	Financing for firms for capacity expansion, productivity upgrades, and product development.	US$88.6 million in new export due to market linkages, 3,321 new jobs, US$145.7 million in new domestic and international investments	Sectors: apparel, light manufacturing, and ICT *Source:* USAID final report . See case study for more information
8	Brazil – Local Productive Arrangements (*Arranjos Produtivos Locais*)	Create jobs and support SME development through the strengthening and integration of all agents in the value chain	Pilot implemente d from 2002 to 2007; currently scaled up as a flagship SME program	Minas Gerais and São Paulo state. Supported by IDB.	Diagnostic assessments of firm networks, actual and potential connections with domestic and international markets, market research, and studies of production chains.	Training, technical assistance, seminars, trade missions for individual firms or groups of firms, export promotion, technology transfer, and/or creating sector specific technology centers, and other club goods.	Over 2004–2009, employment level of direct beneficiary firms higher by 17 percent compared to the control group. Value of total exports was higher by 90 percent and the likelihood of exporting by 8 percent.	Sectors of focus were agribusiness, clothing, and furniture. First phase, development of strategic business plans from both public and private agents, facilitating interaction between them and plan execution. Firm-level assistance as a second phase, and market promotion as a third. *Source:* Impact Evaluation FOMIN-IDB, see case study for more details

	Program	Objective of the Program	Years of Implementation	By whom	Demand-Side Intervention (linking firms with markets)	Supply-Side Intervention (firm capabilities)	Results	Comments and Source
9	Kenya Green Market Textile Apparel	Rebrand Kenya as a hub for energy efficient green production	2015 to present	Ministry of Industrialization and Energy Development, Kenya Association of Manufacturers	Information about green market requirements from buyers Links to green market opportunities and market access for SMEs	Energy audits to identify opportunities for upgrading Concessionary financing through local banks to address energy efficiency issues	No results reported yet, too soon to tell	World Bank conducted a situation analysis in 2014, which resulted in the implementation strategy *Source:* T&C Competitive Sectors brief
10	Agribusiness Entrepreneurship Centers	Business incubators and accelerators for agroprocessing entrepreneurs	Tanzania, since 2014; Nepal, since 2014	Each center is implemented by private entity with support from InfoDev, World Bank Group	Market research and links backward and forward in value chain—partnerships with potential buyers	Early stage financing business and technical training; networks facilities (very rigorous selection process including entrepreneurial traits)	Improvements in sales, production and access to finance, for example, one company doubled sales in six months	Two centers so far, about to open a third one in Zambia and others in the pipeline *Source:* Agribusiness Entrepreneurship Program (InfoDev)
11	Cambodia Agri-Sector Support Project, plus a follow on just on rice, Rice Sector Support Project	Technical and marketing assistance to modernize the rice sector and create links to markets increasing exports	2009–2013	IFC Advisory Services	Facilitating export deals, visits to other countries, study tours, trade shows, matchmaking events, buyer visits; lead firms invested	Upgrading processing equipment facilitating certification standards; waste reduction and energy efficiency	Exports of rice increased for 20,000 metric tons in 2009 to 500,000 in 2015	External factor was the duty-free access to the EU market. First phase focused on technical upgrading, while second phase was all about marketing and linkages *Source:* Cambodia Agri-Sector Support Project – IFC AS (567107) – internal only, not disclosed
12	Cambodia Trade Facilitation and	Reduce transaction costs	2005–2013	World Bank grant to the	Trips to explore export	Support to achieve market standards	65 enterprises and associations	Matching grants were given to firms in multiple sectors

	Program	Objective of the Program	Years of Implement ation	By whom	Demand-Side Intervention (linking firms with markets)	Supply-Side Intervention (firm capabilities)	Results	Comments and Source
	Competitiveness Project	associated with trade and investment and facilitate access of enterprises to export markets		Government of Cambodia	opportunities and meet buyers, mail off samples and promotion materials	or evidence of compliance with standards, preparation of export plans and funding of activities to execute it	received support, and return on investment was calculated as US$275.5 for every dollar of grant money	and the Implementation Completion and Results Report notes that return on some sectors (such as rice) was much higher than in others and recommends focusing on a single sector in the future *Source:* WB Cambodia Trade Facilitation and Competitiveness (P089196)
13	West Bank and Gaza Olive Oil Supply Chain Development	Strengthen a cluster of olive oil enterprises by improving product quality, supply chain efficiency, and export marketing.	2007–2009	IFC Advisory, with funding from Private Enterprise Partnership for Middle East and Africa, multidonor trust fund, with a focus on SME development	Bottling companies participated in trade fairs and missions, food exhibition; marketing research, training on trading practices and procedures	Quality certification for processing and bottling firms, training on testing, harvest, and postharvest techniques for farmers, strengthening enterprise support institutions	Five companies received certification, eight companies increased exports by 35 percent, almost US$1 million in new exports	The project facilitated a link with an IFC investment client, Wadi Food Co. (Egypt), their procurement director initiated commercial and off-taking relationships with the bottling companies *Source:* PEP-MENA 2007 Annual report; World Bank Group Olive Oil Project, IFC AS (539164) – internal, not disclosed
14	Open Africa: Enterprise Development Program	Connecting remote areas with travel markets by identifying products and clustering entrepreneurs into branded networks	Six countries in Southern Africa 1999 to present	Open Africa	Links for existing enterprises to access markets using Open Africa's routes as platforms	Program offers business development and mentorship, including business concepts, product development, and branding	58 routes in six countries, supporting 2,620 business and 28, 490 jobs	*Source:* Open Africa website

	Program	Objective of the Program	Years of Implement ation	By whom	Demand-Side Intervention (linking firms with markets)	Supply-Side Intervention (firm capabilities)	Results	Comments and Source
15	Ethiopia Sustainable Tourism Development Program (ESTDP)	To enhance the quality and variety of tourism projects and services to increase tourist visits, foreign exchange earnings, and jobs	Axum and Lalibela regions 2009–2015	World Bank loan to the government of Ethiopia	Multipronged approach including infrastructure (access to sites), marketing, and product development	Enhanced quality of products/services and expanded offerings (for example, new tour packages, improvement of variety in the menus at restaurants, improved entertainment offerings for tourist establishments, and diversified craft goods for the tourism market)	Percentage increase in international tourist arrivals Axum: 61 percent Lalibela: 24 percent Increase in expenditure per tourists per day US$362 Jobs created Axum: 2,324 Lalibela: 3,229	Interesting multipronged approach to tourism development, including destination and market development, institutional development and capacity building, and SME competitiveness support *Source:* Ethiopia Sustainable Tourism Development Program (P098132)
16	Vietnam SME Assistance Center	Supporting SMEs to improve competitiveness and integrate into world economy	Vietnam 2013 to present	Government run center (Ministry of Planning and Agency on Enterprise Development, SME Center), with support from Japan International Cooperation Agency	Business promotion, including finding potential buyer, bridging gap b/w buyer requirements, and firm capabilities and contracting	3-in-1: Advance training (7 days), onsite support (6 months), (business promotion, 1 year)	150 firms benefited so far	*Source:* The Assistance Center for Small and Medium Enterprises in the South of Vietnam
17	Malaysia SME Corp. Business Linkage Program	To identify synergies and establish links between SMEs	Ongoing	SME Corporation of Malaysia	Business matching sessions conducted at	Through complementary programs offered by SME Corp.	As at December 31, 2016, the program had generated a total of RM 714.7	*Source:* Website of Business Linkages (Bling) Program

	Program	Objective of the Program	Years of Implement ation	By whom	Demand-Side Intervention (linking firms with markets)	Supply-Side Intervention (firm capabilities)	Results	Comments and Source
		and large companies, MNCs and government-linked companies for vertical growth opportunities			annual flagship events, as well as, leveraging on various other platforms and opportunities	(mentoring, expert advisory, innovation and technology adoption, others)	million (US$169 million equivalent) in potential sales through 481 sessions involving 443 SMEs	

Annex 2: Literature Review

Empirical evidence consistently shows that exporting firms are more productive than non-exporters. However, the reason why such patterns are observed, and the direction of causality, are debated. Similarly, firm innovation and export behavior are generally seen as interrelated with evidence that innovative firms are more likely to be exporters, while exporters are more likely to be innovators.[44] But again, the causal relationship between the two is still being explored.

Further, the potential relationship between these behaviors and policy interventions that seek to address multiple SME objectives appears relatively unexplored, and we found few academic literature or empirical research specifically focused on the type of interventions discussed in this paper—those that combine capability-building and market linkages. However, the existing literature does point toward the existence of learning-by-exporting (exporting as a way to increase firm-level capabilities) and the importance of combining interventions to increase exports with interventions on the capabilities side.

A number of studies argue that the higher productivity of exporters is primarily due to a process of learning by exporting. In these cases, market linkages help firms further develop their capabilities. Exporting is a conduit of technology transfer from abroad. The new knowledge raises exporters' productivity compared to their insulated domestic counterparts and generates spillovers to the rest of the economy.[45]

- Blalock and Gertler (2004)[46] find that Indonesian firms experience a jump in productivity of 3 to 5 percent following the initiation of exporting. This increase does not disappear if the manufacturer stops exporting. The timing of the performance improvement suggests causality and supports the learning by exporting hypothesis.

- Van Biesebroeck (2003)[47] also finds evidence of learning in nine Sub-Saharan countries where firms increase their productivity after entering export markets and scale economies are shown to be an important channel for productivity growth.

- Atkin, Khandelval, and Osman (2016),[48] based on a randomized experiment of small rug manufacturers in Egypt and find evidence of learning by exporting, whereby exporting improves technical efficiency. Matching was facilitated between a random selection of Egyptian firms and foreign buyers. Treatment firms reported 16–26 percent higher profits

[44] Tuhin, R. 2016. "Modelling the Relationship between Innovation and Exporting: Evidence from Australian SMEs."
[45] Other papers reviewed for this study include Aw, Chung, and Roberts (2000); Bernard and Jensen (1999); Bernard and Jensen (2004); Clerides, Lach, and Tybout (1996); Delgado, Farinas, and Ruano (2002); and Grazzi and Moschella (2016).
[46] Blalock, Garrick, and Paul J. Gertler. 2004. "Learning from Exporting Revisited in a Less Developed Setting." *Journal of Development Economics* 75 (2): 397–416.
[47] Biesebroeck, Johannes Van. 2003. "Exporting Raises Productivity in Sub-Saharan African Manufacturing Plants." NBER Working Paper Series 10020. http://www.nber.org/papers/w10020.
[48] Atkin, David, Amit K. Khandelwal, and Adam Osman. 2017. "Exporting and Firm Performance: Evidence from a Randomized Experiment." *The Quarterly Journal of Economics* 132 (2): 551–615. https://doi.org/10.1093/qje/qjx002.

and exhibited large improvements in quality compared to firms in the control group. Profit results from the analysis suggest that demand-side constraints may be a critical barrier to firm growth in developing countries and can be mitigated through market access initiatives.

- De Loecker (2012)[49] uses microdata from Slovenia and finds evidence of substantial productivity gains from entering export markets. The effects of exporting on productivity differ substantially across producers and point to heterogeneity in the impact of exporting on firm performance.

Some authors have tried to explain the difference in results of whether exporting impacts firm capabilities and productivity. Van Biesebroeck (2003) puts forth the hypothesis that heterogeneity in the level of an economy's development might explain the different findings. Earlier work analyzes firms in developed and middle-income countries that are likely to be as efficient as their trading counterparts, while exporters from lower-income countries have a much steeper learning curve and more to learn from their trading partners. De Loecker (2012) argues that similar studies usually rely on the assumption that productivity evolves exogenously, while he accommodates endogenous productivity processes, such as learning by doing. He states that current methods may be biased toward rejecting such a model and adjusting for this bias could alter their conclusions.

There is also a substantial body of literature on the significance of firm-level capabilities and on interventions that link firms with markets. However, there is little literature on interventions that include both capabilities and market elements. A recent publication by the Inter-American Development Bank, The Impact Evaluation of Cluster Development Programs: Methods and Practices (2016, Maffioli, Pietrobelli, and Stucchi, eds.) presents a methodology for such evaluations and shows positive results for three clusters.

Looking at each element—capabilities and markets—separately, a larger body of literature emerges. A select few papers on firm-level capabilities include the following:

- Petrobelli and Rabellotti (2006)[50]find that the paths different firms take to compete and their outcomes ("high and low roads to competitiveness") can be explained by the different capabilities of firms to upgrade (citing earlier literature).

- Bruhn, Karlan, Schoar (2010)[51] argue that management capabilities (referred to in the paper as "managerial capital," encompassing talent for managing, managerial ability) can affect productivity, as well as quantities of labor and capital used in the firm, affecting firm growth.

[49] Loecker, Jan De. 2013. "Detecting Learning by Exporting." *American Economic Journal: Microeconomics* 5 (3): 1–21.
[50] Pietrobelli, Carlo, and Roberta Rabellotti. 2006. *Upgrading to Compete Global Value Chains, Clusters and SMEs in Latin America.* Harvard University Press.
[51] Bruhn, M., D. Karlan, and A. Schoar. 2010. "What Capital Is Missing in Developing Countries?" *The American Economic Review* 100 (2). In *Papers and Proceedings of The One Hundred Twenty Second Annual Meeting Of The American Economic Association* (May 2010): 629–633. https://www.jstor.org/stable/27805071?seq=1#page_scan_tab_contents.

- Bruhn, Karlan, and Schoar (2016)[52] show that consulting services improve SME performance. A randomized control trial was conducted in Mexico on a program that provides one year of management consulting services to firms. A survey just after the end of the program shows improved accounting, marketing, entrepreneurial spirit, and productivity. Further, two to five years after the intervention, administrative data from Social Security Institute shows 50 percent increase in employees and wage bill.

Further, impact evaluations of training programs and matching grants for business development services show some success. However, there is also substantial debate on the true impacts of SME support instruments, including matching grants for business development services, implemented by the World Bank Group—as documented in the World Bank Group Independent Evaluation Group's report 'The Big Business of Small Enterprises' (2014).

Regarding interventions that focus only on markets, evidence suggests that participation in trade missions and fairs has an impact only when other elements of capability strengthening and support to develop market linkages are present. For instance, consider the following:

- Spence (2003) and Spence and Crick (2001)[53] finds that specific knowledge about the targeted markets should be acquired before participating in the trade missions; communication with potential business partners should be established before participating in the trade missions; and the business relationships established before and during the trade missions should be cultivated through regular contacts using not only communication technology, but also regular visits. Spence (2003) concludes that "overseas trade missions contribute to the generation of incremental sales in foreign markets by enhancing the relationship-building process between business partner." [54]

- Seringhaus and Mayer (1988) find that trade missions are a potentially useful export marketing tool, however, their use seems contingent upon management style—pointing to capabilities needs.[55]

- Head and Ries (2010), in a paper looking at evidence from Canada, find that export missions do not seem to cause an increase in trade even though the country exports and imports above-normal amounts to countries to which it sent trade missions.[56]

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[52] Bruhn, M., D. Karlan, and A. Schoar. 2016. "The Impact of Consulting Services on Small and Medium Enterprises: Evidence from a Randomized Trial in Mexico." http://karlan.yale.edu/sites/default/files/consultingmexico_bks_feb2016.pdf.

[53] Spence, Martine. M., and Dave Crick. 2001. "An Investigation into UK Firms' Use of Trade Missions." *Marketing Intelligence & Planning* 19 (7): 464–474.

[54] Spence, M. M. 2003. "Evaluating Export Promotion Programmes: U.K. Overseas Trade Missions and Export Performance." *Small Business Economics* 20: 83. https://link.springer.com/article/10.1023%2FA%3A1020200621988?LI=true.

[55] Seringhaus, F. H. Rolf, and Charles S. Mayer. 1988. "Different Approaches to Foreign Market Entry between Users and Non-Users of Trade Missions." *European Journal of Marketing* 22 (10): 7–18. ISSN: 0309-0566. http://www.emeraldinsight.com/doi/abs/10.1108/EUM0000000005300

[56] Head, Keith, and John Ries. 2010. "Do Trade Missions Increase Trade?" *Canadian Journal of Economics* 43 (3): 754–775. http://onlinelibrary.wiley.com/doi/10.1111/j.1540-5982.2010.01593.x/full.

- Bernard and Jensen (2004),[57] cited earlier, finds that state export promotion expenditures have no significant effect on the probability of exporting. Plant characteristics, especially those indicative of past success, strongly increase the probability of exporting, as does changing industries.

Therefore, while there is little evidence on the specific type of intervention we are examining, there is a substantial body of evidence that leads us to believe that such interventions may have advantages over single-dimension (purely capabilities, purely markets) interventions.

[57] Bernard, A. and J. Jensen. 2004. "Why Some Firms Export." *The Review of Economics and Statistics* 86 (2): 561–569.


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