



The **E15** Initiative

STRENGTHENING THE GLOBAL TRADE AND INVESTMENT  
SYSTEM FOR SUSTAINABLE DEVELOPMENT



## Building Firm-level Trade Competitiveness in Emerging Economies

Sharmila Kantha

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E15 Expert Group on Reinvigorating Manufacturing:  
New Industrial Policy and the Trade System

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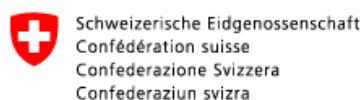
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# ABSTRACT

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Following the global financial crisis, there is a renewed policy focus on strengthening national competitiveness through macro policies. Studies show that aggregate industrial performance depends strongly on firm-level performance and capacity—a nation or an industry cannot be globally competitive unless its firms are able to compete effectively in the global marketplace. The benefits arising from internationalization of firms, particularly for small and medium enterprises (SMEs), are apparent. Many governments have instituted programs for direct interventions to support and promote competitiveness of their SMEs. But since this is a relatively new thrust area, there is insufficient understanding of the role of competitiveness at the enterprise level, and of industrial and trade policy frameworks to enhance it to enable firms to participate in global value chains.

Firm-level facts are essential to good policymaking, and such a policy focus is very relevant to firms in developing countries. For these economies, it seems as if the goal-posts for attaining global competitiveness are constantly shifting. Given the widespread gaps in infrastructure, technology, finance, and skills that manufacturing enterprises in such economies already face, the challenge for them to keep up with rapid changes in global supply chains is huge. Competitiveness is a broad term, extending to the ability of firms, industries and nations to expand their presence in global markets. In developing countries, attention must be paid to the temporal nature of competitiveness, which measures a firm's growing productivity and enables it to meet the productivity thresholds required for its further growth and eventual participation in the global economy.

Productivity of firms in developing countries is inhibited not only by lack of access to resources, skills, and infrastructure connectivity, which comprise the external environment, but also by their own internal weaknesses and limited absorptive capacity. A key constraint is firms' inability to comply with basic standards, source relevant information, and reach markets abroad. Developing economies must address strengthening the capacity of their firms to engage more effectively in the global marketplace. To enhance firm-level competitiveness, industrial and trade policies need to, first, catalyse the advance of technical and managerial know-how by firms, and second, enable them to comply with international standards. It is important to be aware of developments in international markets because this indicates the global performance criteria and kind of competition that domestic producers will have to face in accessing global value chains.

The Quality Management System (QMS) approach can be central to strengthening productivity at the firm level. QMS includes a range of tools and models, but is insufficiently dispersed among enterprises in developing countries. QMS can be diffused within a geographical location or a set of firms in a supply chain by large companies working with vendors, by introducing FDI in a sector, or through industry clusters. There is also a need to directly reach out to firms for improving their performance parameters, and to develop standardized tools for doing so. This paper suggests that developing countries should build strong institutional capacity for deploying QMS as an intrinsic management tool among their firms. An easily accessible infrastructure of dedicated institutions to disseminate, educate, and provide training to firms in quality management can help raise overall productivity levels, enabling a nation to manage its resources more efficiently. Entrepreneurship capacity building can start as early as secondary schools with the curriculum in professional, technical and higher education taking human capacity building forward. In addition, the infrastructure for assisting firms to learn about global standards and to comply with them needs to be strengthened. An institute to identify standard gaps and undertake training to assist firms in compliance through a public-private partnership would be valuable. While international development agencies have commenced work on directly addressing firm-level competitiveness in developing countries, this needs to gather momentum in a coherent manner, and be directed towards visible outcomes in terms of capacity building.

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# LIST OF ABBREVIATIONS

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ASQ	American Society for Quality
CII	Confederation of Indian Industry
EC	European Commission
EFIGE	European Firms in a Global Economy: Internal Policies for External Competitiveness
EFQM	European Foundation for Quality Management
EU	European Union
FDI	foreign direct investment
FSC	Forest Stewardship Council
G-7	Group of Seven
GAP	Good Agricultural Practice
GATT	General Agreement on Tariffs and Trade
GMP	Good Manufacturing Practice
IFC	International Finance Corporation
ISO	International Standards Organization
ITC	International Trade Centre
JUSE	Union of Japanese Scientists and Engineers
LDCs	least developed countries
MSC	Marine Stewardship Council
MSMEs	micro, small, and medium enterprises
OECD	Organisation for Economic Co-operation and Development
OEMs	original equipment manufacturers
QMS	Quality Management Systems
SMEs	small and medium enterprises
TQM	Total Quality Management
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization
US	United States
WEF	World Economic Forum
WTO	World Trade Organization

# INTRODUCTION

Following the global financial crisis, there is a renewed policy focus on strengthening national competitiveness through macro policies. However, studies show that aggregate industrial performance depends strongly on firm-level performance and capacity (Altomonte et al. 2011). A nation or an industry cannot be globally competitive unless its firms are able to compete effectively in the global marketplace. The benefits arising from internationalization of firms, particularly for small and medium enterprises (SMEs), are apparent (Jansen 2014). Many governments have instituted programs for direct interventions to support and promote competitiveness of their SMEs (Wymenga 2013). But since this is a relatively new thrust area, there is insufficient understanding of the role of competitiveness at the enterprise level, and of industrial and trade policy frameworks to enhance it to enable the participation of firms in global value chains.

An important insight on improving competitiveness is that “Nations do not produce, do not trade, do not compete; it is firms that produce, trade and compete. This simple truth makes it clear that understanding the firm-level facts is essential to good policy making” (EFIGE 2015). Such a policy focus is even more relevant for firms in developing countries. For these economies, it seems as if the goal-posts for attaining global competitiveness are constantly shifting. Given the widespread gaps in infrastructure, technology, finance, and skills that manufacturing enterprises in such economies already face, the challenge for them to keep up with rapid changes in global supply chains is huge.<sup>1</sup>

Several efforts have been undertaken in the area of firm-level competitiveness. During 2008–2012, the European Union- (EU) led European Firms in a Global Economy: Internal Policies for External Competitiveness (EFIGE) project undertook a cross-country survey to identify the “triggers” that help European firms to compete successfully overseas and suggested policy interventions to assist them further (Altomonte et al. 2012). In the late 1990s, the Confederation of Indian Industry (CII), a private sector industry organization in India, commenced a training program for firms, under which six to 12 SMEs were provided joint training for building competitiveness. The results of this program, which has covered more than 2,500 firms in over 240 clusters, have been instructive in terms of private sector endeavors for firm-level competitiveness, and we report on its overall effort in this paper.<sup>2</sup>

We consider some of these efforts for developing countries to improve firm-level competitiveness. The International Finance Corporation (IFC) and World Trade Organization (WTO) under the Aid-For-Trade Work Programme 2014–15

have studied the ability of SMEs in least developed countries (LDCs) to participate in international trade and examined how gaps can be addressed (WTO,2014). Strengthening enterprise competitiveness can be a key component of this programme.

This paper seeks to understand the framework of competitiveness, in particular in terms of its implications for international trade. We discuss issues relating to firm-level competitiveness, including its determinants; the quality tools and models to address it (especially in developing economies and for SMEs); and the importance of diffusion and learning, with a focus on growth of SMEs; and propose some specific policy interventions to improve firm-level competitiveness.

## WHAT IS FIRM-LEVEL COMPETITIVENESS?

Competitiveness is recognized as a multi-level economic concept that covers national, industry, regional, and enterprise capabilities. Essentially, the term relates to productivity, which, in turn, derives from the ability to innovate in using the available resources for increasing output, or doing more with less. Competitiveness at each level of operation is interlinked—an economy or an industry cannot be competitive unless its enterprise sector is competitive, and firms can be optimally productive only if given the right macro and industry ecosystem. In the international context, all three levels must be synergized for a nation to be able to effectively slot into trade flows. State support in determining competitiveness can be a crucial global differentiator for all firm sizes.

Altomonte et al. (2011) define firm-level competitiveness “as the ability of firms in a given country—not of the country itself—to mobilize and efficiently employ (also beyond the country’s border) the productive resources required to offer goods and services.” The European Commission (EC) defines competitiveness of enterprises as the “ability of firms to sustain and gain in market share through their

1 It is noteworthy that under Article III, General Agreement on Tariffs and Trade (GATT) 1947, national treatment is applicable to imported products. If domestic companies are not able to meet desired standards, such standards cannot be imposed on imported goods either.

2 The average cluster experienced financial benefits of Rs 31 million (~\$0.5 million), reduced customer complaints by 64 percent, customer returns by 52 percent, and break-down hours by 55 percent, among other improvements in performance indicators, and increased sales by 44 percent. The gains in productivity for an industry sector or a nation if such attainments can be rolled out to cover the majority of enterprises would be considerable (CII 2015).

cost and pricing policy, innovative use of production factors and updates to product characteristics." This is measured through the share of a manufacturer's product in the market, international or domestic (EC 2015).

Competitiveness as a term is to be distinguished from competition, which refers to the number of firms and their entry and exit in a given industry sector. Although firm-level competitiveness is closely associated with how a firm uses the resources available to it, or total factor productivity, it goes beyond this rather sterile economic definition to include other factors that determine the firm's standing in the supply chain. This would include the quality of its products, efficient processes, innovation capability, ability to meet the needs of customers through customization and on-time delivery, usage of clean energy, waste management, and adaptability, among others. Leadership and the ability to expand, as well as employee satisfaction levels, are also usually considered a part of an enterprise's inherent competitiveness (CII 2015).

In these definitions, competitiveness is a comparative term pertaining to the performance of an enterprise in a free-market ecosystem compared to the performance of other firms in the same industry sector or geographical area. A firm drives its competitiveness to acquire greater dominance in the market, usually through innovation. There is another way that firm-level competitiveness can be studied, and that is in a temporal manner, examining how a firm's productivity performance changes over time and at what stage it is able to meet the "performance cut-offs" for internationalization. For firms in a developing country, the temporal definition is more apt as the objective is to strengthen the absolute productive capacity of a firm in the shortest period of time, to lower its costs, raise internal efficiencies, and enable it to meet the stringent criteria of international trade. A firm's growing competitiveness level includes improved capacity, which permits it to meet the standards, specifications, and schedules that international trade demands.

Approaches to enterprise-level competitiveness are divided into a macroeconomic perspective, a business strategy perspective, and a technology and innovation perspective (Wignaraja 2002). The term thus lies at the intersection of economics, management, and shop-floor operations and engineering, which is probably a reason why it has been insufficiently studied by policymakers and economists. This is changing. For example, since the global economic crisis, the EC has taken up the mapping of data and support services for firms in member countries, while also providing assistance on conformity with international trade standards. Further, the policy framework relevant for this includes trade policy and, specifically, efforts to facilitate the espousal of systems that efficiently and cost effectively link domestic and foreign markets.<sup>3</sup>

## DETERMINANTS OF FIRM-LEVEL COMPETITIVENESS

As mentioned, firm-level competitiveness derives from national and industry sector conditions. The market environment for doing business includes political and social factors; the availability of external resources such as infrastructure and information; leadership and learning attainments and resources; and access to technological, financial, and human resources at the national and global levels, which together contribute to a firm's ability to produce optimally. At the macro level, the World Economic Forum (WEF) in its Global Competitiveness Report (GCR) series defines competitiveness as the "set of institutions, policies and factors that determine the level of productivity of a country." The 12 pillars contributing to a competitive economy identified by it are institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation (WEF 2014). In developing economies, weaknesses in these areas combine to detract from national competitiveness. For example, Switzerland ranks as the most competitive nation in the GCR index, while Malaysia at 20 is the first developing economy to figure on the list. China ranks 28 and India comes in at 71 (WEF 2014).

From the business strategy perspective of comparative competitiveness, a firm must be able to strategize effectively across the managerial domains of production, marketing, human resources, organization, and technology to succeed (Wignaraja 2002). This also implies prioritization among various tasks to improve competitiveness. Dynamic capabilities of flexibility, speed, and adaptability are increasingly sources of competitiveness in a changing global business environment.

A firm's performance is measured through different indicators such as factor productivity, share profitability, pricing, total costs, product range, efficiency, value creation, customer satisfaction, and new product development. However, firms are often insufficiently aware of models, frameworks, and specific steps that can help them achieve the best performance outcomes (Ambastha 2003). This is especially true of SMEs in developing economies. Increasingly, it is evident that policymakers need to pay focused and informed attention to this issue, an area that needs better performance in a large number of situations.

3 | A well-calibrated trade policy encourages competition from overseas while allowing domestic firms to build capability. For example, in the Indian automotive sector, the entry of overseas vehicle companies helped foster competitiveness in domestic firms; however, in the electronics sector, domestic industry has not similarly developed capabilities and the country relies heavily on imports that were freely permitted to promote the software and telecommunications sectors.



# COMPETITIVENESS IN DEVELOPING ECONOMIES

By definition, developing economies have certain low levels of income that inhibit adequate provision of institutions, infrastructure, and systems, which are the building blocks for competitiveness, particularly for international trade. The manufacturing sectors of developing economies are characterized by a large base of informal and unorganized SMEs, weak supply chain linkages, low level of education and skills of entrepreneurs and workers, and so on.

International trade represents a special challenge for firms in developing countries as such economies are often unable to establish the right institutional capacity for the purpose. This is particularly true when it comes to conforming to standards. Funds as well as technical expertise are needed to build the requisite compliance infrastructure. As new trade standards, non-tariff measures, and private standards come into play and gain in sophistication, developing countries find it even more challenging to conform. Trade standards have evolved from quality issues (ISO 9001, Good Agricultural Practice [GAP], Good Manufacturing Practice [GMP], and so on) to environmental issues (ISO 14001, and so on) and are now moving towards social, labour, and equality areas (SA 8000, Fairtrade, and so on) and further to resource sustainability issues (Marine Stewardship Council [MSC], Forest Stewardship Council [FSC], carbon labeling, and so on). For exporters in developing countries, such evolving standards act as barriers to market access. An analysis by the United Nations Industrial Development Organization (UNIDO) of food products rejected at the border by the United States (US) and EU countries found that developing countries accounted for 88 percent of rejections. Costs of compliance are substantially higher in developing countries due to inadequate capacity for certification, auditing, and product testing.<sup>4</sup>

An overwhelming proportion of enterprises in the world are categorized as SMEs, and these account for 60–70 percent of private sector employment. For developing economies, they play a strong role in job creation, poverty reduction, and equitable growth. The need for greater involvement of SMEs in international trade has long been realized by international institutions such as the World Bank, Organisation for Economic Co-operation and Development (OECD), UNIDO, United Nations Conference on Trade and Development (UNCTAD), and others. Participation in global value chains offers opportunities to SMEs at lower costs due to their flexibility and propensity for niche production. However, while SMEs engaged in global trade exhibit higher productivity, their survival rates in exporting are low.<sup>5</sup> SMEs are unable to identify their competitive strengths in value

chains and do not have adequate managerial and financial capacity to innovate or take up more complex tasks such as product and process design. Compliance with strict quality standards enforced by potential customers is also challenging (OECD 2008).

Dedicated policy steps are needed to enable SMEs to address these skill gaps. There are three prongs to industrial policy for firm-level competitiveness. The first is to inculcate awareness about the need and potential to build competitiveness, despite possible additional costs. The second is to support enterprises in building their productivity and efficiency and attaining technological and managerial expertise. The third prong is to assist them in participating in international trade, which would mean overcoming information asymmetries on market access, complying with standards, building linkages, and so on. The EC mapping exercise identifies services provided by the EU-27 in trade partner developing countries, including non-financial services such as seminars and workshops, staff training, trade missions, information on rules and regulations, information on market opportunities, advice, and networking platforms. They also include services entailing financial costs such as credit guarantee schemes, subsidies, tax incentives, interest subventions, and so on (Wymenga 2013). Such mapping gives an indication of the relevant steps for developing economies as well.

Solutions must be evolved to assist SMEs in strengthening managerial talent and stabilizing operational procedures for building productive capacity, on the one hand, and complying with global standards and accessing market information, on the other. These interventions can be clubbed together under Quality Management Systems (QMS). National industrial and trade policies should include a strong component of institutional infrastructure for facilitating adoption of QMS, as also to teach firms to deploy QMS tools in conformity with trade requirements.

4 The WTO-led Aid for Trade Initiative was instituted to assist developing countries in various areas, including compliance challenges. UNIDO's Trade Standards Compliance Report 2010 attempts to provide a ratings index for standards infrastructure in developing countries to identify gaps where aid may be required. However, the index measures national capacity in terms of testing, standards-setting, metrology, and so on. The capacity of firms to conform to standards should be an additional policy concern.

5 Hurdles faced by developing country SMEs in trade include access to finance, informal operations, a challenging business environment, gaps in access to information and linkages with buyers, low skill attainments, and limited access to technology and innovation, among others (Jansen 2014).



# QUALITY TOOLS AND MODELS

Quality assurance has been defined by the American Society for Quality (ASQ) as the “planned and systematic activities implemented in a quality system so that the quality requirements for a product or services will be fulfilled.” The International Standards Organization (ISO) has currently about 20,500 standards, of which the ISO 9000 series, first brought out in 1987, is the best known. It is a set of norms for the “management of the processes needed for an organization to be able to demonstrate its ability to satisfy customer needs and expectations as well as statutory and regulatory requirements on a constant basis.”

For this, a firm must institute a quality management system, which is rigorously audited to obtain the ISO 9000 certification. The ISO 9000: 2000 family of standards defines a set of eight quality principles, based on the work of quality specialists, including Edward M. Deming, Joseph P. Juran, and Kaoru Ishikawa. These principles are similar to the Total Quality Management (TQM) approach and include i) customer focus; ii) leadership; iii) involvement of people; iv) process approach; v) system approach; vi) fact-based decision-making; vii) continual improvement; and viii) mutually beneficial supplier relationships (UNIDO, NORAD, ISO and IAF 2012).

**Awareness of quality principles:** Despite a large number of institutions across the world, the awareness of quality principles and their benefits is not widespread among enterprises. About one million enterprises globally had gone through the rigorous and stringent process of obtaining ISO 9001 certification by 2009, and the total for nine Asian developing economies was less than 70,000 in December 2009. This, however, was a big jump from just 5,500 in December 2002 (UNIDO, NORAD, ISO and IAF 2012). According to the ISO Survey 2013, global ISO 9001 certifications stood at 1.13 million. Regionally, Europe with 0.48 million and East Asia and Pacific with 0.47 million were the leading players. The figure for North America was around 48,600 and for Central and South Asia 44,800.

Ad-hoc and disorganized processes, lack of vision for growth, and dismal productivity characterize the vast proportion of enterprises in the informal sectors of developing economies. A simple example demonstrates the need for implementing systems and processes in production processes. Suppose a machine is used in a factory as part of a product line and needs to be greased on a regular basis. The machine operator may wait until it stops, try to figure out why it has stopped, then indent the greasing material from the store and grease the machine. All this while, the product line is

halted, resulting in production losses. On the other hand, in a fact-based decision-making system, data would be deployed to understand when the machine would be due for greasing, the relevant raw material would be procured in advance, and a regular maintenance cycle would be instituted. This may seem like a simple improvement, but such process standardization and stability is not readily understood by managers, particularly in small firms, leading to poor outcomes in terms of delivery schedules, defects and rejections from customers, and cost escalations. Process standards are key to improving firm-level competitiveness; interestingly, process standards include those that are now increasingly becoming relevant to link up with global value chains. Therefore, it may be worthwhile to particularly focus on process standards when making efforts to improve competitiveness and meet relevant standards.

6 | Most countries have developed national level standards and accreditation bodies that provide certifications to firms under the ISO systems. The ASQ, the European Foundation for Quality Management (EFQM), the Union of Japanese Scientists and Engineers (JUSE), Japan Institute of Plant Maintenance, and so on are among the private sector organizations offering training and consultancy services to firms on competitiveness. These services go beyond QMS processes to instigate management strategies over the medium- and long-term for continued growth and organizational excellence, including environmental sustainability, commitment to society, and breakthrough innovations that enable organizations to emerge as leaders in their chosen area of operation. Some of the awards instituted by such organisations (the Deming Award by JUSE, EFQM Business Excellence, CII-EXIM Bank Award for Business Excellence, and so on) are prestigious and globally recognised. Terms such as TQM, Six Sigma, Lean Manufacturing, Kaizen, 5S, and others refer to systems, usually in the manufacturing sector, that stabilize operations, reduce wastage and deficient products, speed up processes, and make them more efficient.

7 | The ISO Survey 2013 data is not comparable with the data for certifications in developing economies in 2009.

8 | Author's conversation with C. Narasimhan, former President, Sundaram Clayton, in 2006.

# DIFFUSION OF LEARNING

The absorptive capacity of firms is critical to the diffusion of learning on competitiveness. Firms that are able to meet the productivity cut-off for international trade generally exhibit organizational capabilities in the areas of innovation—including human capital and research and development (R&D) engagement—adequate capital, professional management, and ownership structures with affiliation to a foreign company (Altomonte et al. 2012).

Enterprise capability building may be led through diverse means.

- (i) Large companies often engage in extending support to their vendors and supply chain participants.<sup>9</sup>
- (ii) Industry clusters linked by common facilities and similar resource advantages can be an effective format for building the competitiveness of member enterprises. Linkages, spillovers, and synergies across firms and institutions help to diffuse competitiveness practices.<sup>10</sup>

(iii) Foreign direct investment (FDI) is well recognized for its spillover impact on vendors as also on competitor firms in the host country.

(iv) Institutions are primary sources for learning, particularly for large companies aspiring to engage in international trade that are able to allocate the financial, human, and time resources required.

SMEs present a vast landscape where the concepts of QMS are largely unknown, and even if known, are often unaffordable. Acquiring QMS capabilities requires a certain amount of time where the diverse operational functions of an enterprise have to be synergized. Most industrialized nations offer policy and institutional support to SMEs, which most often are directed towards meeting finance and

9 The intervention of Maruti Suzuki India Ltd in working with its suppliers is a classic case of developing a supply chain where none existed, partnering with vendors to upgrade their internal capabilities, and disseminating systems and processes down the supply chain (Bhargava 2011). The same large company-led ancillary development system is also seen in Indian manufacturing segments such as steel, aviation, and capital goods.

10 Some examples of these are Silicon Valley, the Tirupur hosiery cluster in India, industrial clusters in China for various products, and so on. The World Bank provides a toolkit for cluster-based competitiveness initiatives, which extends to value chains (2009).

## BOX 1:

### Case Study of Maruti – Quality across the Supply Chain

The Indian government set up Maruti Udyog Ltd in 1981 to produce a “people’s car.” At the time, the Indian automobile sector was heavily regulated with three passenger vehicle companies producing three car models. These companies were not permitted to import technology or develop new models, and prices were controlled by the government. Maruti entered into a partnership with Suzuki Motor Corporation, Japan, for producing 100,000 cars when the capacity of the country as a whole was 40,000 vehicles annually. Originally, the vehicles were assembled from semi-knocked-down kits procured from Japan, but as per the contract, the share of local components was to increase to 95 percent in five years. Component firms were lacking in India since there was no market and the existing three companies manufactured the components they used. Maruti opted to outsource parts, which entailed setting up new firms.

Maruti vendors had to adapt to Japanese production models and adhere to Japanese quality norms to begin with. India began its reform process in 1991 and several global car companies then entered the market. Thus, Maruti and the CII, with the help of Japanese institutions, jointly embarked on a program of competitiveness and excellence for supplier firms. ISO 9000 was the first certification that the supplier firms had to obtain, and Maruti and CII assisted them in understanding and applying the concepts of quality management. The first phase of 1987 to 1992 stressed standardization and avoidance of errors in the manufacturing process. In the second phase, quality concepts were introduced to two “clusters” of 10–12 firms each. Y. Tsuda, who led the program, began with the concept of “exactness,” which took two years for the firms to understand and implement. The entire process of learning competitiveness tools took several years, and ended with setting goals and formulating strategy for the medium term. The supply chain for Maruti as a whole became faster and more efficient with less wastage and fewer rejects.

Many of the firms which took part in the competitiveness program went on to achieve success as suppliers to major overseas original equipment manufacturers (OEMs) and Tier 1 companies. Some of them have become global players, undertaking mergers and acquisitions overseas and setting up their own R&D and design centers.

Source: Kantha (2013).

technology needs. Assistance to SMEs for international trade is a relatively new area for development organizations, and is often event-based (Wymenga 2013).

Policies regarding institutions for awareness building, education, training, and entrepreneurship development are a vital gap in the overall industrial policy support system for developed as well as developing economies. Further, policies which directly contribute to building the strength of firms to engage in international trade and comply with stringent and evolving standards are just beginning to emerge as a development tool.

Another complicating factor emerging in international markets is the importance of private standards to link with global value chains. This has also recently been emphasized in the Group of Seven (G-7) Declaration.<sup>11</sup> In the Indian context, a training institute has been established with government support, to be operated by the Quality Council of India and the CII. One of the tasks will be to identify gaps in domestic and global market standards for specific products so that targeted training may help firms to bridge the gap through implementing relevant process standards and product standards. Such efforts need to be made in other developing economies as well, and diverse efforts need to be linked up to enhance synergy and share information, solutions, and expertise.

## SUGGESTIONS

The 2008–2012 EFIGE project, which mapped the competitiveness characteristics of European firms, recommended policy directions for escalating their ability to compete internationally. Pointing out that firms are heterogeneous within industries and countries, it came to the significant conclusion that the critical role of small firms in employment and productivity growth arises from the process of their own expansion, rather than from their mere presence, and, therefore, suggested that policies should be directed at helping firms grow rather than just survive. Policies should be aimed at fostering innovation, opening access to finance, promoting human resources, boosting management, and encouraging FDI and international engagement. It also suggested that promotion of productivity growth and competitiveness should target specific structural aspects so that the “right” set of characteristics are encouraged in firms, emphasizing that internationalization would follow as a natural outcome when these competencies are acquired (EFIGE 2015).<sup>12</sup> In this context, it is useful to bear in mind the experience from India where SMEs defined in terms of specified investment threshold levels are provided support through policies such as tax incentives, funding access, and others. These policies have in practice discouraged them from

growing beyond an artificially ordained threshold because incentives are not available after it (Ministry of MSME 2014).

Industrial and trade policies in developing countries could take into account the general findings from developed countries that are beginning to initiate a different composition of support services for their firms to build trade competitiveness. The EU and UNIDO have conducted mapping exercises of different kinds to identify and analyze existing support services for firms engaging in international trade. The 2008 OECD survey of the role of government in supporting SMEs in international trade found that the chief concerns pertained to improvement of technology and innovation capacity; lack of adequate finance and human capital; low capacity to respond to standards and certification requirements; and poor management of intellectual property rights; among others. OECD policy recommendations included raising the awareness of the benefits of participation in global value chains, ensuring adequate financing for working capital and for acquiring certifications, promoting technological upgradation, adopting product and process standards without excessive burdens, boosting skill attainments, attracting FDI, and so on. It also suggests that the WTO Aid for Trade program include assistance for building productive capacity in addition to trade policy formulation (OECD 2008).

In developing countries, governments are aware of the need to address issues such as access to finance, marketing, and technology for all firms, including SMEs, as also for enterprises in international trade.<sup>13</sup> Recognizing the need for productivity enhancement, the private sector has also engaged in offering programs in QMS. For example, the CII provides institutional support for strengthening QMS to access international markets, maintains a portal on standards information, assists in overseas business networking, and so on. This experience indicates that policies for competitiveness deliver the best results when undertaken through combined government and private sector institutional efforts. Further, the time span for success of

11 | G-7 Leaders' Declaration, Schloss Elmau, Germany, 8 June 2015.

12 | The EU offers support services for the internationalization of SMEs under its Market Access Database, Enterprise Europe Network and European Small Business Portal, including technology transfer, advice on EU law and standards, innovation, and so on. Since the EFIGE project is relatively recent, policy initiatives for productivity enhancement are not yet clearly defined. The ISO 2013 Survey throws up an interesting data point—certifications in China numbered over 330,000, while the US had just around 35,000, Germany 40,000, and Italy more than 160,000. Indian certifications stood at around 41,000. This indicates a link between certifications and trade engagement and further research is required to validate this, which is beyond the scope of this paper.

13 | In India, the Quality Council of India, the National Productivity Council, the National Manufacturing Competitiveness Council, and the National Board for Quality Promotion are government bodies that undertake training programs for micro, small, and medium enterprises (MSMEs) on quality assurance and quality technology tools. The Bureau of Indian Standards develops standards for different products.

efforts in developing and disseminating training programs for specific situations such as sustainability, waste management, innovation, and internationalization can be long and a set of best practices needs to be evolved to compress training. A third learning from CII interventions is that scaling up can be challenging due to insufficient awareness, lack of adequate skilled trainers, and the absence of funding support.

Governments should devise policies that would address such gaps. Some policy interventions that could be considered are given below.

**Entrepreneurship development:** The overwhelming proportion of small establishments in developing countries demonstrates inherent entrepreneurial capacities in the working age population, but the informal nature of establishments inhibits growth and productivity. Entrepreneurship can be encouraged through educational programs commencing at the secondary school level that would familiarize prospective entrepreneurs with the basic operations involved in setting up their own businesses. Specialized entrepreneurship development courses should be offered in professional colleges and technical institutes, using step-wise upgrading of capacities with a view to linking up with global value chains.

**Developing a quality culture:** Developing country enterprises should be made aware of the benefits and tools of QMS so that haphazard and irregular operations can be minimized. Such awareness-building exercises can commence as part of school learning, going on to be offered in a more stylized fashion at the institutional level. Accordingly, industry clusters, parks, and corridors should include institutions that propagate and disseminate QMS tailored to international trade requirements.

**Training and consultancy services:** Since QMS learning programs can extend for several months, continued engagement with participating enterprises is required. Handholding, guiding, and counseling may be conducted through institutions or organisations that are widely dispersed and accessible in most industrial hubs. Regular course work should be offered for quality, productivity, and innovation, and attainments should be monitored so that an enterprise can inculcate the right processes through all its operations with a vision of expanding internationally. In addition, there has to be emphasis on upgrading of the capacity of managers in larger firms.

#### BOX 2:

##### Private Sector Interventions – CII Centers of Excellence

The CII's centers of excellence are a good example of how an organization can raise awareness on quality in both industry and government in a developing country, while contributing to building competitiveness for enterprises.

The CII took up firm-level competitiveness in 1986 when Indian firms operated in a market environment that was largely bereft of competition, protected from imports by high tariffs, and subject to controlled access to raw materials. Firms suffered from low competitiveness. The CII helped an Indian company obtain the first ISO certification in 1993. The Quality Council of India was set up in 1998 with the CII as one of its founding partners. The CII Institute of Quality (IQ) was established in Bengaluru in 2001 as the first center of excellence for services on firm-level competitiveness. It provides training and counseling services to firms in the areas of business excellence, total quality management, total productive maintenance, lean management, Six Sigma, industrial and legal metrology, and conformity assessment and standards.

The CII-IQ also provides training on accreditation standards and support to inspection and certification agencies. It helps in developing industry-level standards. Assessments, training trainers, training intra-firm facilitators, and audits are conducted by the institute (CII 2015a).

The CII has further set up institutes to address specific areas of competitiveness, including competitiveness of SMEs, green business for energy and water management, and sustainable development for carbon emissions. There are also centers of excellence focusing on water management and conservation, food and agriculture, logistics management, and leadership. More centers are proposed for skill development and entrepreneurship capacity building. The CII institutional infrastructure is the only one of its kind in India, providing holistic training and counseling services to enterprises on competitiveness.

For international trade information, the CII co-operates with the Bureau of Indian Standards and American National Standards Institute for sharing information on standards, conformity assessment, technical regulations, and other trade-related information in India and the US. This provides Indian firms with data available on the US Standards Portal. A joint training institute has been established with the Quality Council of India and CII as coordinators for improving the capabilities of Indian firms in specifically identified sectors to meet the standards prevailing in international markets and to improve firm-level competitiveness through process standards.

**Financing for capacity building:** Learning QMS can be expensive and enterprises in developing countries would often not be able to afford such investment. It is important to devise financing options to enable entrepreneurs to access learning courses. In addition, innovative models offering online courses, distance education, or mobile teachers can be explored by countries, depending on what suits them best.

**Training of trainers:** Availability of trainers is a big gap that needs to be addressed at the policy level. More courses are required in engineering and management colleges.

**Standards and certifications:** Developing countries often lack adequate institutional capacity in terms of laboratories, and accreditation and certification bodies. Firms often need to send products long distances or incur high costs to acquire conformity certificates for international standards, including private standards that are emphasized by lead firms in global value chains. Training, information, and counseling for meeting these standards is also necessary. Product clusters may include institutes to provide certification services. It is also important to set up institutions that will identify gaps between domestic and global standards in products of competitive advantage and help improve process standards for exporter firms. These institutions could link up with international organisations such as the International Trade Centre (ITC) and UNCTAD, which are trying to fill this gap. Lead global firms, which are establishing their own private standards, can assist SMEs in other countries, which are part of their supply chains, to conform. One example of this is efforts undertaken by textile and garment importer firms after the devastating Rana Plaza fire in Bangladesh.

**Role of international development agencies:** International development agencies have taken up the task of identifying services available to firms in developing countries to enhance their participation in global trade and value chains. Such efforts can be intensified and directed towards building firm-level capacities. Funding and knowledge resources may be channeled into working with governments and local organisations to expand the institutional infrastructure supporting competitiveness services. As mentioned earlier, the WTO's Aid for Trade program may consider extending institutional support to enterprises in global markets where trade, investment, and value chains are now becoming increasingly interlinked. Further, the scope of trade policies has extended beyond the border to internal policies such as standards, together with institutional and infrastructural development that support both trade and domestic production through timely responses and facilitation of all production activities. In this context, the focus on competitiveness acquires a global dimension, not just a domestic one. Particularly because of foreign investment, value chains, the growing interdependence between nations in economic activities, and policies to improve competitiveness are intertwined with international trade and investment policies. These different policies need to be considered together as a supportive and complementary package.

## CONCLUSION

Competitiveness is a broad term, extending to the ability of nations and industries to expand their presence in global markets. In the context of developing countries, attention must be accorded to the temporal nature of competitiveness, which measures a firm's growing productivity and enables it to meet the productivity thresholds required for further growth and eventual participation in the global economy.

Productivity of firms in developing countries is inhibited not only by lack of access to resources, skills, and infrastructure connectivity, which comprise the external environment, but also by their own internal weaknesses and limited absorptive capacity. A key constraint is firms' inability to comply with basic standards, source relevant information, and reach markets abroad. Developed countries are increasingly aware of the need for direct state intervention for accelerating firm-level competitiveness and a supportive institutional framework for SMEs is emerging through various initiatives, particularly following the global economic crisis. Developing economies must also address strengthening the capacity of firms to engage more effectively in the global marketplace.

To enhance firm-level competitiveness, industrial and trade policies need a dual-pronged approach to, first, support the advance of technical and managerial know-how of firms, and second, to enable them to comply with international standards. It is important to keep in mind developments in international markets because this indicates global performance criteria and the kind of competition that domestic producers will have to face in accessing global value chains.

The QMS approach can be central to strengthening productivity at the firm level. QMS, which includes a range of tools and models, is insufficiently dispersed among enterprises in developing countries though it is a core component of stable and efficient operations. QMS can be diffused in a geographical location or a set of firms in a supply chain by large companies working with vendors, by introducing FDI in a sector, or through industry clusters. However, there is a need to directly reach out to firms for improving their performance parameters and to develop standardized tools for doing so.

This paper suggests that developing countries should build strong institutional capacity for deploying QMS as an intrinsic management tool among their firms. An easily accessible infrastructure of dedicated institutions to disseminate, educate, and provide training to firms in quality management can help raise overall productivity levels in a nation, enabling it to manage its resources more efficiently.



Entrepreneurship capacity building can start as early as secondary schools with the curriculum in professional, technical and higher education taking it forward. In addition, the infrastructure for assisting firms to learn about global standards and comply with them needs to be strengthened. An institute to identify standard gaps and undertake training to assist firms in compliance through a public-private partnerships would be valuable. Such an institution has been set up in India by the CII and Quality Council of India, and similar cooperation including international development organizations would strengthen the effort.

International development agencies have commenced work on directly addressing firm-level competitiveness in developing countries. This needs to gather momentum in a coherent manner, and be directed towards visible outcomes in terms of capacity building.

As mega-regionals and private standards increasingly determine the competitiveness and export capabilities of nations, facilitating firm-level competencies for compliance will assume greater importance. Given the imminence of these new trade agreements, this is a task that development agencies and developing nations must take up sooner rather than later.

## ADDITIONAL RESOURCES

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