



The **E15** Initiative

# STRENGTHENING THE GLOBAL TRADE SYSTEM



## Industrial Policies in a Changing World: What Prospects for Low-Income Countries?

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

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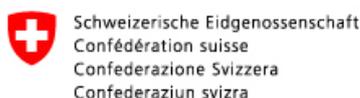
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# ABSTRACT

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Following the 2008–09 financial and economic crisis and the remarkable success of emerging global powers such as China, notably through heterodox policy choices, there is an emerging consensus among leaders about the relevance of industrial policies as a means to recalibrate economic structures if a country wants to remain competitive or make it to the next level of development. The current debate on industrial policy has mutated. Today, it is less about interventionist policies that countries need to adopt to promote economic nationalism and development. Instead, it is about putting forward ideas about technological innovation to close productivity gaps, industrial upgrading, and economic diversification. The question is therefore not whether governments should put industrial policies in place, but rather how these policies can be used in a smart way.

This debate is even more relevant for low-income countries (LICs) as they address their multiple domestic priorities and challenges, while at the same time trying to catch up with the fast-changing global landscape and the changing nature of industrialisation in a sustainable manner. This paper focuses on some industrial policies and strategies adopted by LICs and the conditions under which their objectives were achieved (or not). They include Bangladesh's successes in building up a pharmaceutical industry focusing on affordable generic drugs, and a readymade garments industry that has a large share of the world market, in addition to Ethiopia's success as an exporter of cut flowers. Looking forward, as the nature of industrialisation and trade policies change, it looks at what policies LICs may adopt to catch up with the developed world.

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# LIST OF ABBREVIATIONS

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AGOA	Africa Growth and Opportunity Act
API	active pharmaceutical ingredients
APTA	Asia-Pacific Trade Agreement
ATC	Agreement on Textile and Clothing
BITs	bilateral investment treaties
CPI	Centre for Promotion of Investment
COMESA	Common Market for Eastern and Southern Africa
DFQF	duty-free, quota-free
EBA	Everything But Arms
EOI	export-oriented industrialisation
EPAs	Economic Partnership Agreements
EPZ	export processing zone
EU	European Union
FTAs	free trade agreements
GNI	gross national income
GSP	Generalized System of Preferences
GVCs	global value chains
IFC	International Finance Corporation
IP	intellectual property
ISI	import-substitution industrialisation
LICs	low-income countries
LDC	least developed country
MFA	multi-fibre arrangement
MNCs	multinational corporations
R&D	research and development
RBI	resource-based industrialisation
RTAs	regional trade agreements
SEZ	special economic zone
SMEs	small and medium-sized enterprises
SPS	sanitary and phytosanitary
TRIPS	Trade-Related Aspects of Intellectual Property Rights
TTIP	Transatlantic Trade and Investment Partnership
TTP	Trans-Pacific Partnership
US	United States
WTO	World Trade Organization

# INTRODUCTION

It is now widely acknowledged that industrial policies have a significant role to play in a country's economic transformation (Rodrik 2008, 2010; Stiglitz 2013; Lin and Chang 2009). Yet, experiences, in particular among low-income countries (LICs), have been uneven and results have not always lived up to promises.<sup>1</sup> For instance, the spectacular rise of new manufacturing hubs, especially in East and South Asia, has significantly transformed economic outlooks in just one generation. This is in stark contrast to the marginalisation and retreat of the manufacturing sector observed elsewhere, notably in Sub-Saharan Africa.

Following the 2008–09 financial and economic crisis and the remarkable success of emerging global powers such as China, notably through heterodox policy choices, there is an emerging consensus among leaders about the relevance of industrial policies as a means to recalibrate economic structures if a country wants to remain competitive or make it to the next level of development.<sup>2</sup>

But the current debate on industrial policy has mutated. Today, it is less about interventionist policies that countries need to adopt to promote economic nationalism and development. Instead, it is about putting forward ideas about technological innovation to close productivity gaps, industrial upgrading, and economic diversification. The question is therefore not whether governments should put industrial policies in place, but rather how these policies can be used in a smart way (Stiglitz and Lin 2013).

This debate is even more relevant for LICs as they address their multiple domestic priorities and challenges, while at the same time trying to catch up with the fast-changing global landscape and the changing nature of industrialisation in a sustainable manner.

This paper focuses on some industrial policies and strategies adopted by LICs and the conditions under which their objectives were achieved (or not). Looking forward, as the nature of industrialisation and trade policies change, it looks at what policies LICs may adopt to catch up.

# INDUSTRIAL POLICIES IN LOW-INCOME COUNTRIES

This section takes stock of current debates on industrial policies and highlights some of the key conditions that have led to their success or failure in selected LICs. Most of the empirical evidence on how well industrial policies have contributed positively to economic transformation can be found in relation to high-income countries or the emerging economies in Asia or Latin America that have now joined the ranks of upper-middle income countries (Altenburg 2011). There is, however, not much evidence of successes in LICs, not because they have not pursued industrial policies, but because specific economic factors and political conditions have gone into shaping the mixed outcomes observed. In addition, most countries that achieved notable success with their industrial policies have most likely graduated out of the category of LICs. The shadow of past failures has to a great extent contributed to arguments against industrial policies. These failures also caused countries to enter into bilateral free trade agreements (FTAs) and investment treaties (BITs), which have in many ways constrained their capacity to use industrial policies as a means to address pervasive market failures and other structural economic challenges.

## SOME STYLISTED FACTS ABOUT LOW-INCOME COUNTRIES

The potential competitiveness of LICs in industrial development stems from two broad advantages. One, a significant labour cost advantage, although in many cases labour competitiveness remains a major challenge. In Ethiopia, for example, labour productivity in some companies is close to that of China or Vietnam and overall labour costs are much lower as wages are only 25 percent that of China and 50 percent that of Vietnam (World Bank 2012). Two, the availability of abundant natural resources. For instance, the supply of raw hides has been instrumental in the development of the leather industry in Kenya and Ethiopia, and mineral wealth is now at the core of industrialisation

1 | LICs are defined as those with a gross national income (GNI) per capita of US\$1,045 or less in 2013, calculated using *World Bank Atlas* data. There were 34 LICs in 2014—Afghanistan, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kenya, Democratic Republic of Korea, Liberia, Madagascar, Malawi, Mali, Mozambique, Myanmar, Nepal, Niger, Rwanda, Sierra Leone, Somalia, Tajikistan, Tanzania, Togo, Uganda, and Zimbabwe.

2 | See Rodrik (2010); Stiglitz (2013); Hausmann and Rodrik (2006)

strategies in countries such as Uganda, Tanzania, and Mozambique.

But these are not sufficient. LICs are plagued by numerous challenges that need to be addressed. It is of course understood that countries have their own specificities and economic and political realities. Five key stylised facts about LICs can be highlighted.

1. LICs are largely under-industrialised, have undiversified economic bases and are characterised by significant productivity gaps. Labour is largely unskilled and unemployed, and poverty and inequality are major challenges.
2. The local private sector, if not informal, is weak, small, and not embedded in national, regional, and global supply chains. They face demand-side constraints as a result of low levels of income and low purchasing power at home. They also face supply-side constraints due to weak productivity. They often do not benefit from the same incentives as large firms. This in turn affects their capacity to upgrade and expand production.
3. The conditions in which business operate in many LICs is fraught—(i) the business climate is stiff, as observed in the poor ranking of LICs in the World Bank's Ease of Doing Business indices; (ii) costs of transportation are high, in particular across borders; (iii) infrastructure and other utilities are insufficient and unreliable; (iv) technology and skills are not adequate; and (v) access to finance is limited.
4. While the need to correct market failures is indeed higher in LICs,<sup>3</sup> the ability of the public sector to address such failures is, however, limited (Altenburg 2011). The twin effect of market and government failures has generally created a recipe for disaster while designing industrial policies.
5. Industrial policies have largely been influenced by external actors, either because LICs have been advised by international institutions (for example, during structural adjustment programmes) or because their policies are donor-funded, in which case the poor alignment of strategies between donors and governments has led to policy fragmentation rather than coordination.

## WHAT HAS WORKED (OR NOT) AND WHY?

The scope for an extensive review of the literature on industrial policy is limited in a paper of this length. It is nonetheless necessary to briefly review different approaches adopted by LICs. Annex 1 gives a summary of the taxonomy of industrial policies in a selected group of LICs, highlighting some sectors and the conditions and challenges that impacted on the effectiveness of the policies.

Industrial policies are multi-dimensional processes, which need to be activated as a package. First, they involve domestic policies that are targeted and tailor-made to stimulate the development of specific sectors or industries. They provide incentives and support to contain market failures or negative externalities. Second, they include complementary soft policies that are cross-sectoral and inter-disciplinary given their relevance to various sectors of the economy. These consist of economic policies such as macro-economic, financial, fiscal, trade, investment, and infrastructure (including utilities) policies, social policies such as education, health or land policies, and sectoral policies such as agriculture or services policies. Finally, although not defined in the traditional sense as industrial policies, they need to factor in major policies and decisions taken by lead firms, in particular when the latter control the buyer or the supplier ends of global value chains (GVCs). Such policies have a significant impact on industrial activities within countries as they often direct investment to particular locations. This may, in turn, drive the re-engineering of the hard and soft industrial policies mentioned earlier.

Industrial policies in LICs can be organised into four broad categories—(i) import-substitution industrialisation (ISI) policies; (ii) export-oriented industrialisation (EOI) policies, which include variants such as export processing zones (EPZs), special economic zones (SEZs), and industrial clusters; (iii) resource-based industrialisation (RBI) policies; and (iv) industrialisation through innovation (for a comprehensive review of these categories, see Low and Tijaja 2013).

### Import-substitution industrialisation

Initially developed to close the gap with high-income countries, early generations of ISI were focused on producing previously imported goods and services for the local market, with the support of trade and fiscal instruments to protect new or infant industries. Policies that followed the lines developed by ISI hoped to expand specific sectors and strengthen their technology and production capabilities with a view to creating linkages and generating domestic demand. Largely adopted in many LICs, this model, however, found its limits as a result of the insufficient size of domestic markets, the introduction of permanent market distortions and support to non-viable sectors, and increasing difficulties in competing with foreign products.

Despite largely unconvincing results, some evidence, however, shows that under particular circumstances and in specific sectors, ISI has delivered successful results. This was the case in the pharmaceutical sector in Bangladesh, which is the only LIC that has managed to develop a pharmaceutical industry (Amin and Sonobe 2013). It began in the 1980s with the National Drug Policy of 1982 playing a critical role. The primary objective of the policy was public health for

3 | Often because market failures are more pervasive, their impacts have a more damaging effect due to structural weaknesses in LICs.

the poor, that is, to correct market failure in that sector,<sup>4</sup> which prevented providing affordable generic medicines to the poor.<sup>5</sup> To achieve this, a host of measures was taken to encourage local firms to enter the market. For example, the government restricted the right of multinational corporations (MNCs) to import or sell certain types of medicines (such as antacids and vitamins) that could be “easily” made locally, prohibited the sale of certain products on the local market by multinationals that did not have a physical presence, and restrained imports of substitutes for finished drugs and intermediaries when these were produced by more than two local firms. Price regulations were also introduced on 150 drugs considered as “essential” by the Drug Control Ordinance to maintain the sales price of medicines at an affordable level. Prices were fixed for finished drugs as well as for their corresponding inputs so that manufacturers could not set maximum retail prices beyond the limit fixed.<sup>6</sup> Since 1993, the number of price-controlled drugs has been reduced to 117 primary healthcare ones (Chowdhury 2010).

Domestic conditions in Bangladesh both at the time the policy was introduced and over the three decades it has been sustained played a determining role in its success. It is worth highlighting three fundamental conditions that were in place when the policy was initiated. First, the policy was drafted by a team of professionals with considerable expertise and knowledge of the challenges in the sector, and also of what would be economically and policy feasible in Bangladesh at that time. Second, the country had existing capabilities and skills with scientific, production, and management knowledge as well as training facilities.<sup>7</sup> This was crucial because skilled labour could move from multinationals to local firms. A continued focus on upgrading capabilities, developing skills, and learning advanced technology was key to sustaining the industry over time. Third, banks provided access to finance to support investment in machinery and other equipment, which was essential for local firms to be competitive.

Bangladesh's policy focus was equally important. It chose the market segment of generic medicines, which is not capital and high-tech intensive. It then decided to continue to import the active pharmaceutical ingredients (API),<sup>8</sup> which are the most important elements in generic medicines, to focus on a simple production process, that is, mixing and pressing into tablets, and sales and marketing. Finally, it made the strategic choice to support the indigenous private sector in production, rather than creating a state-run monopoly to produce and distribute drugs (like in Sri Lanka, where the policy failed).

Not all medicines were affected by this policy, so multinationals adjusted their production to cover products that were not restricted. The other key element of the policy was the importance placed on training young cadres and transferring know-how and technical skills from foreign firms to the local industry to allow the diffusion of knowledge. The strategy was partly supported by intellectual property (IP) conditions benefiting the country. Under the 1994

World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), least developed countries (LDCs) are exempted from enforcing IP rights on pharmaceutical products until 2016 (an extension is currently being sought). This conferred some production advantages on Bangladesh, which benefited from domestic patent-free production rights, as well as some export advantages, notably to other LDCs, non-WTO members, and to countries where the drugs produced were not under patent. In general, essential drugs (which are mostly produced in Bangladesh) are not patented.

The policy is viewed as successful today. The sector is considered the most technologically advanced in Bangladesh; the quality of medicines has improved substantially, raising confidence in them; and the prices of essential medicines has remained affordable. Today, 97 percent of domestic demand for medicines is covered by local production of generic medicines against 35 percent in 1982, and the number of companies has doubled, employing about 100,000 people. Bangladesh exports generic medicines to 85 countries, including the United States (US) and some European countries.

The lessons from Bangladesh's success suggest that policy focus and choice of sector are critical to the success of ISI. Public health is an area where market failure is particularly prominent. Strategies to support local industries to meet the government's priorities have delivered positive results because they were framed in a way there was little room for rent capture through strict price and market controls. It was somehow based on performance. In Bangladesh, the objective was primarily one of public health, through the development of a domestic pharmaceutical industry. However, the current model is starting to show its limits, given the rising price of inputs, competition from other producers of generic medicines, and difficulties to move up the value chain, despite the leverage provided by the WTO

4 | The market for medicines is very complex and highly regulated internationally, notably through patent protection and licensing, which confer significant monopoly powers to multinationals. This, in turn, leads to increases in prices, which vary significantly across countries as a result of various forms of (licensing) agreements between local firms and multinationals. LICs in particular are highly affected by the market structure for medicines.

5 | The pharmaceutical industry in Bangladesh focused on the production and sales of generic medicines, not in high-tech, capital-intensive drugs that required capabilities it did not have.

6 | Changes in these level prices are decided by the Drug Control Committee.

7 | The University of Dhaka started pharmaceutical education in 1964. Over time, the university introduced courses in pharmacology, pharmaceutical chemistry, and pharmaceutical technology. This provided a wide pool of human resources, initially for multinationals, but subsequently for local producers.

8 | Pharmaceutical companies in Bangladesh began producing APIs only in recent years.

waiver on TRIPS.<sup>9</sup> To sustain the sector in the long term, Bangladesh will have to recalibrate its support, ensuring that some forms of “temporary support” provided so far evolve to avoid inefficiencies as the pharmaceutical policy framework changes. For example, it is still unclear how industries will be sustained when the 2016 WTO waiver terminates, especially if foreign firms start applying for patents after 2016.

The other key lesson from the story of Bangladesh is the importance of technological learning, transfer of know-how, and skills upgrading. With new opportunities to plug into global value chains, there is scope to use targeted IS policies as incubators for such technological learning, upgrading, and diversification. Again, the scope for success will depend on the sector and on the objective of the support.

### Export-oriented industrialisation

EOI is focused on the production of manufactured goods destined for foreign markets. Partly as a result of the failure of ISI and partly to emulate the success stories in East Asia, a number of LICs have embraced EOI to diversify their economies. The apparel sector, where labour costs were low, provided opportunities to a number of LICs, in the 1980s and 1990s as the market regulated by the Agreement on Textile and Clothing (ATC) until 2005.

In an attempt to go around some of the challenges linked to poor business environments, many LICs have set up EPZs, clusters, SEZs, and industrial parks, whose objectives are to provide exporting companies with easier access to land, ready-to-use buildings, infrastructure facilities, and fiscal incentives to reduce the costs of inputs.<sup>10</sup> They are also intended to create “clusters” where small companies located close to larger ones can benefit from scale economies, business opportunities, and reduced transactional costs. In Madagascar, for instance, the enactment of the EPZ Act in 1989 was a key initiative that led to significant growth of the garment industry—in ten years, the number of firms increased 26 times. Today, agro-processing sectors are using the same facilities to develop new activities (AEO 2013).

One of the characteristics of EOI is that while firms are relatively easy to attract, they are quite difficult to retain over time because they tend to be footlose. Doing both requires different sets of policies and support mechanisms. Strategies have been most successful when inscribed within a broader industrial strategy, with complementary efforts (i) to stimulate backward and forward linkages, (ii) to retain firms by supporting upgrading, in terms of process, product, functions or value chains, and (iii) to strengthen partnerships with large firms to ensure transfer of know-how and skills from low- to high-productivity sectors. Failure to do so resulted, for example, in the collapse of the textile sector in Kenya in the 1980s when the multi-fibre arrangement (MFA) was dismantled. Many investors relocated their industries elsewhere, although Kenya as an LIC (but not LDC) was assured market access to the European Union (EU) under the Cotonou Agreement and was eligible for Africa Growth and

Opportunity Act (AGOA) preferences to the US market. In contrast, Bangladesh succeeded because of targeted support mechanisms, both to attract and retain investment, and because of its skills development programme.

Bangladesh began garment production in 1979, when a new firm entered into a technical cooperation agreement with Daewoo, a leading Korean garment producer, to train skilled young Bangladeshi employees in specific technology and management skills. The garment industry continued to grow with such learning and training abroad. Initially, domestic and external factors, such as a large flexible and adaptable labour force, an open market policy towards exports, incentives to attract foreign direct investment (FDI), and benefits from the MFA to access the EU and US markets contributed to support garment production. In addition, three policies put in place in 1980 were very helpful. They were (i) the introduction of bonded warehouses to store imported inputs, which allowed firms to delay paying customs duties;<sup>11</sup> (ii) the introduction of back-to-back letters of credit to enable exporters to pay for the import of inputs on the basis of export orders; and (iii) cash subsidies (25 percent cash compensation) for the use of local fabrics as inputs for exports of readymade garments. Export manufacturers did not have to bear the cost of imported inputs during production. Today, Bangladesh is the second largest exporter of clothing after China, and has more than 5,000 garment industries, which employ around 3.5 million people (WTO 2013).

In less than two decades, Ethiopia has become the second largest African producer of cut flowers (after Kenya) for the export market.<sup>12</sup> This followed major economic reforms introduced in 1993, which opened the country's trade and investment regimes to private capital (both domestic and foreign).<sup>13</sup> Ethiopia then embarked on a selective export promotion strategy, based on its agriculture-led

9 Bangladesh is a beneficiary of the TRIPS Council decision extending the transition period during which LDCs do not have to protect or enforce patents and undisclosed information relating to pharmaceuticals until 2016. In line with this flexibility, the department of patents, designs and trademark suspended the granting of pharmaceutical patents through an administrative order in 2008.

10 Imported inputs, including capital goods, are generally subject to tax rebates and exempt from import duties.

11 Duty drawback was available for export-oriented units that did not take advantage of bonded warehouse facilities.

12 Ethiopia began entering the flower export market in the mid-1990s.

13 According to Joosten (2007) and Weissleder (2009), the main export promotion policies and regulations to attract FDI were (i) no minimum capital requirement if foreign investors exported more than 75 percent of their products; (ii) foreign investors were allowed to hire expatriates, fully repatriate capital, and remit profits and dividends; (iii) capital goods and construction materials were exempted from import duties and from paying sales and excise tax for export commodities; and (iv) FDI projects exporting at least 50 percent of their production were exempted from income tax for two to six years.

industrialisation.<sup>14</sup> Its main challenges, however, were linked to access to land, finance, and weak infrastructure and logistics. Though not initially among the priority sectors (Gebreyesus and Iizuka 2010), incentives were later provided to the cut-flower sector under the export promotion strategy, which focused on targeted support in three areas meant to relieve it from major bottlenecks and create favourable conditions compared to neighbouring flower exporters such as Kenya and Uganda.<sup>15</sup> These were (i) leasing out government-owned land close to the airport at very cheap rates (US\$20 per annum per hectare);<sup>16</sup> (ii) providing long-term credit at low interest rates (fixed at 7.5 percent);<sup>17</sup> and (iii) addressing the challenge of logistics (that is, cargo space, post-harvest cold chain facilities, and so on) and coordinating air transport (the largest running cost component). While Ethiopian Airlines, the national company, has guaranteed cargo space by leasing planes to cut-flower exporting companies at subsidized rates, competitive cool chain management still remains a challenge.<sup>18</sup> The development of this sector required extensively upgrading capabilities to meet increasing demands and standards, which was largely encouraged through partnerships with the Dutch government.

Trade policies and rules played a key role in supporting the development of EOI in many LICs. They helped to direct the location of sectors such as apparel, which relied on cheap unskilled labour and access to markets. But as quotas were removed in 2004, China became the main apparel hub due to its capacity to produce on a massive scale. Orders shifted to South and Southeast Asian countries, such as Bangladesh, Cambodia and Vietnam, in part due to strong government policies to ease entry to the industry, support infrastructure investment, impart skills training, and provide significant incentives for upgrading. Their proximity to China, a key source for imported raw materials, was also important. Bangladesh, for instance, exports duty-free quota-free (DFQF) to Japan, Australia, and the EU, and since 2006 benefits from duty concessions in the Chinese market under the Asia-Pacific Trade Agreement (APTA) for a wide range of products, including knitwear and woven products. In Africa, preferential trade policies granted by the US with the AGOA in 2000, and by the EU through the Everything-but-Arms Initiative to LDCs have partly mitigated the "China effect" by extending a comfortable margin of preferences to LICs over large developing country producers.<sup>19</sup>

Lessons from the success of Bangladesh and Ethiopia suggest that EOI has worked in LICs when support was effectively targeted towards giving specific and tailor-made incentives to investors to enter the market, and at the same time putting in place sustainable policies to retain them and provide conditions for them to upgrade and move up the quality and value ladder.

### Resource-based industrialisation

RBI requires very specific types of industrial policies. Policies to attract FDI in mining differ significantly from what is required to attract industries that use mining as an input to

create linkages. So far, resource-rich LICs have focused much of their attention, and rightly so, on ensuring they get a better share of revenues from their resources. To encourage industrialisation, they have used policies such as export restrictions to discourage exports of unprocessed products, or tied in local content requirements on procurement and employment in new or renegotiated mining contracts. This has not worked well, partly because the policies were not focused on the right groups of stakeholders. Miners are not necessarily manufacturers, and are not likely to be turned into manufacturers despite all incentives given to them.

To attract companies in beneficiation-related activities, incentives and support programmes need to be targeted to manufacturers and not to miners—adding value to ores is often very capital intensive, knowledge intensive, and requires some specific logistical infrastructure that resource-rich LICs do not always have in place. The case of Mozal, an aluminium smelter put up in Mozambique, is interesting. While Mozambique did not produce a single tonne of bauxite at the time the project was developed, it managed to attract one of the biggest FDIs in its history through a combination of fiscal and financial incentives, cheap energy (aluminium smelting is highly energy intensive), and market factors, such as a secured market for its aluminium (Japan, through a joint venture with Mitsubishi). In spite of its important contribution to the economy of Mozambique, Mozal's attempt to create domestic linkages, notably with local small and medium enterprises (SMEs) through the SME Empowerment Linkages programme has remained quite limited in scope and structure.<sup>20</sup> It is estimated to

- 14 | Its main products were coffee, livestock, kat, oilseeds, vegetables, and flowers.
- 15 | The list of priority sectors is updated over time, and the cut flower industry was added.
- 16 | The average tenure period is 27.5 years, and a maximum of 90 years. In a survey conducted in 2008, 83 percent of farms reported they leased their land from the government (see Gebreyesus and Iizuka 2012).
- 17 | For example, investors could borrow up to 70:30 debt-equity ratio with no collateral requirements.
- 18 | See Abebe and Schaefer (2013). There are only two private cold truck providers that provide shuttle service from farm to growers, which is not sufficient to meet the needs of the growing sector (Lubelo 2010).
- 19 | Applied tariffs on textiles and clothing are quite high in the EU (average of 6.9 percent on textiles and 12 percent on clothing in 2014) and the US (average 13.1 percent on apparel, and up to 32 percent on clothing in 2014).
- 20 | From 2001, there was a joint Mozal, Centre for Promotion of Investment (CPI), and International Finance Corporation (IFC) programme that attempted to develop Mozambican firms so that they could be eligible to participate in the enlargement of the plant (Mozal II) through matching grants. In total, 16 small and medium-sized enterprises (SMEs) were trained and 28 contracts were awarded for about US\$5 million. The programme continued in 2003, with the opening of the Beluluane Industrial Park close to Mozal. In this phase, 45 SMEs were trained and companies gained contracts worth US\$13 million. However, it is estimated that the programme focused on a small niche of local firms, which were dependent on Mozal and did not manage to develop innovative activities around the cluster. It is also criticized for favouring a few SMEs for political reasons.

have created about 3,000 indirect jobs, but its linkages with the rest of the economy in the form of technological capabilities and learning is insufficient. Nevertheless, Mozal created opportunities for more than 200 suppliers of inputs to its operations in areas such as metallurgical services, transportation, auto mechanical and electrical products, and services and construction, although the majority of the enterprises were somehow linked to companies related to the South African aluminium establishment in Richards Bay and elsewhere (Castel-Branco and Goldin 2003).

Other measures to stimulate local transformation or employment met with limited success. Local employment requirements, for example, are quite difficult to meet without the availability of trained labour locally. It is the same with local sourcing requirements. In Zambia, it led to some cosmetic changes—mining companies outsourced the supply of inputs to local intermediaries, who then imported them. On paper, mining companies qualify for the local content requirement, but in practice it does not serve the intended purpose of adding value to natural resources or of incentivising backward linkages in the mining industry.

The lesson from Mozambique suggests that what matters in RBI is being competitive in linkages industries, and less so in mining activities per se. While factor endowment is certainly an advantage, as experiences from Chile, South Africa, or Botswana have shown, it is, however, not sufficient in itself. The types of incentives and conditions in place to attract and retain beneficiation and transformation industries therefore determine the success of RBI.

## CHANGING NATURE OF INDUSTRIALISATION AND EVOLVING TRADING SYSTEM

The changing nature of industrialisation, combined with a rapidly evolving global trading architecture, has significant bearings on the ability of countries, particularly LICs, to make policy choices to foster their industrial development. Fragmentation of production modes has caused a global dispersion of production activities into value chains or production networks. Investment flows have also followed this trend, moving from a country focus to networks or chains. As a result, there has been a sharp increase of trade in intermediaries and tasks.

Few firms from LICs have managed to plug into global value chains (GVCs) in a sustainable manner. If they did, they remained trapped on a low rung of the value ladder and struggled to move up. It is also not surprising that a significant share of FDI flows to many LICs, notably mineral-rich countries in Africa, has concentrated on specific sectors such as mining and hydrocarbons, where location matters more than anything else, Value-added and manufacturing activities have received little attention from investors. It reflects a profound and growing divide between LICs and the rest of the world, and shows how important and urgent it is to adjust to these new industrialisation imperatives.

As the production ecosystem evolves, so do the rules of the game. Recent years have seen a proliferation of bilateral and regional trade agreements (RTAs) between developed and developing countries, and also among developed countries, as a way to deepen trade relationships. The mega-regional trade negotiations, notably the Trans-Pacific Partnership (TPP) between the US and 11 countries on both sides of the Pacific;<sup>21</sup> the Transatlantic Trade and Investment Partnership (TTIP) between the EU and the US; and the Regional Comprehensive Economic Partnership among 10 members of the Association of Southeast Asian Nations (ASEAN) and China, India, Australia, Japan, South Korea, and New Zealand, illustrate this trend.<sup>22</sup> The TPP and TTIP are expected to be both (i) WTO plus agreements, going deeper than what is provided for in WTO agreements on issues such as regulations, standards, norms, licensing practices, domestic taxes, government procurement, rules on investment, and rules on state-trading enterprises; and (ii) WTO extra agreements, addressing issues that do not fall within the realm of WTO agreements, such as the environment, labour rights, data protection and privacy, and competition.

If successfully concluded, these agreements will profoundly modify trade rules, with a significant impact on non-members, particularly LICs. First, they will erode the current margin of trade preferences, notably on products such as apparel and agro-processing, where, so far, unilateral preferential regimes such as those given to LDCs under the Generalized System of Preferences (GSP) or under the AGOA, in the case of the US, have conferred some comfortable advantages to many LICs. But, more importantly, they will arguably lead to significant regulatory convergence or equivalence. This can be an advantage if it reduces the costs of meeting standards, or a disadvantage as LICs are most likely to face higher standards and would have to adopt and adapt to them and new regulations if they want to continue to trade competitively in these markets.

In an increasingly globalised world, one cannot ignore the magnifying impacts of international trade dynamics on

21 | These are Japan, Canada, Australia, Singapore, Mexico, Chile, New Zealand, Brunei, Peru, Vietnam, and Malaysia.

22 | These are Brunei, Myanmar, Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

domestic policies. In this regard, mega regionals and other comprehensive FTAs are likely to have a significant bearing on LICs. As foreign markets become more open, certain types of temporary protectionist support to domestic industries might have the reverse effect of negatively affecting the competitiveness of the firms they were aimed at boosting. For example, they may raise domestic prices, making domestic products less competitive, therefore potentially defying the purpose of industrial policies. LICs need to factor in these dynamics and their potential effects while defining their industrial policies.

Albeit challenging, these could potentially open up new opportunities for LICs as latecomers. Depending on their stage of industrialisation, it may allow them to leapfrog some production processes and frame their industrial policies in a way that would allow them to specialize in activities that fit better their current factor endowments, and comparative and competitive advantages. The importance of capabilities—that is, the combination of particular skills and technological know-how and the availability of complementary inputs, technology, cost-effective logistics, quality infrastructure, and functioning and well-governed institutions—should not be underestimated, and they should be strongly embedded in industrial policies as they determine the background against which investment decisions are made and operations are located.

## WAY FORWARD: POLICY CHOICES AVAILABLE TO LICs

As mentioned in the previous section, there is no lack of policy instruments to address these challenges, although it is true that LICs operate in a much more regulated trading environment today than what was historically available to industrialised countries when they climbed the ladder of development. Further, LICs are constrained, to some extent, by rules to which they have themselves adhered to. For instance, the WTO has reaffirmed the limits contained in the General Agreement on Tariffs and Trade (GATT) and established procedures to limit the use of certain policy instruments, such as export restrictions or trade-related investment measures.<sup>23</sup> Similarly, the TRIPS Agreement regulates the conditions under which technology, patents, industrial designs, or copyrights may be used. The conclusion of FTAs such as the Economic Partnership Agreements (EPAs) has further circumscribed the policy space of some African LICs because they have committed to eliminate tariff barriers on at least 75 percent of products imported from the EU and to limit the use of export taxes. Lastly, BITs provide

additional rights for foreign investors to contest measures that national governments may take in favour of their local industries.

That said, however, at the WTO, developing countries, and in particular LICs, maintain significant degrees of flexibility, notably (i) under numerous exceptions provisions in different agreements, which take into account the special circumstances that LICs may face; (ii) under “special and differential treatment” provisions allowing LICs to derogate from the application of the some provisions of the agreements;<sup>24</sup> and (iii) under special exemptions or waivers giving LICs longer transitional periods to implement certain agreements, such as TRIPS (see Annex 2 for some examples of industrial and trade policy compatibility).

Given this, the lack of policy space seems to be less of a problem. Therefore, what matters are the following features.

- (i) LICs need to use the full scope of policies available to them. To what extent can they broaden and deepen the use of existing policy instruments and space, and combine them in an effective and creative manner to support their industrialisation strategies that fit changing global challenges? To achieve this, policies need to encourage transformation of economic structures and foster endogenous diversification strategies to develop a solid and sustainable industrial base. At the same time, they must keep pace with the exigencies of global production networks. This will require constant re-engineering of domestic policies as the global trade and industrial landscape evolves.
- (ii) LICs must have a good balance in the policy mix. They have to find the appropriate balance between hard versus soft industrial policies, as well as between vertical (sector-specific) and horizontal policies, in a smart and flexible way to allow facilitating and guiding strategies that favour the development of a sustainable industrial base.
- (iii) LICs must have the capacity to embrace policy shifts as the economic situation changes domestically and as international trade dynamics evolve. Moreover, LICs are not expected to remain LICs forever. The challenge is to put in place adaptive strategies and a policy orientation that move away from the “LIC logic” as countries evolve to different stages of industrial and economic development.

23 While export taxes are not forbidden by the GATT, export quotas and other voluntary export restraints are not permitted. The Agreement on Trade-Related Investment Measures (TRIMs) complements Article III of the GATT on treatment accorded to investment. An illustrative list of potential measures that may contravene the Agreement includes measures such as local procurement requirements, domestic manufacturing requirements, trade balancing requirements, licensing requirements, and local equity requirements.

24 For a comprehensive analysis of industrial disciplines and the WTO, see the Report of the First Expert Group Meeting on Reinvigorating Manufacturing: New Industrial Policy and the Trading System.

Drawing from the conditions of success of ISI policies in the pharmaceutical sector in Bangladesh, for instance, it seems important to match policies and support against performance. Preferably, some forms of support should be time bound to avoid feeding inefficient industries and ensure sustainability in the longer term. The challenges that Bangladesh is likely to face as the waiver expires for LDCs and as competition increases from outside point to that inward-looking policies are successful only if they are used as incubators for more innovation-related activities that can develop their own niche markets where they are competitive. But such policies need to evolve as conditions change.

In the case of EOI or RBI policies, lessons drawn from the conditions of success reveal that firms generally base their choice of location (such as costs of inputs) on the criteria of production efficiency, with support targeting bottlenecks such as access to finance, land, or logistics, and market access conditions. They do this either because of trade preferences (in the case of Africa, the AGOA and EBA) or because markets linked to supply chains are near. They follow the needs and trajectories of lead firms, often well established in GVCs. This means constantly re-engineering industrial policies in an active and creative manner to retain companies, and requires a more forward-looking approach because of the roaming nature of production networks. Bangladesh managed to do so in the readymade garment sector by activating flexibilities available in international trade agreements, such as the use of cash subsidies for the use of local fabrics for readymade garments for exports.

The case of the cut-flower industry in Ethiopia also offers an inspiring lesson. The government leased state-owned land close to the airport at cheap rates to companies; provided subsidised interest rates; offered low shipment costs for companies using the national airline; and the Development Bank of Ethiopia provided credit on favourable terms to companies in partnership with a local firm. At the same time, the Dutch government provided private sector investment grants to partnerships between Dutch companies and local producers. Currently, Ethiopia is not a member of the WTO and does not have FTAs with its key markets. However, should Ethiopia conclude such agreements in the future, these will have implications for its margins of manoeuvre to implement such policies.

As the global trading landscape evolves, and given the dynamics in the mega-regional negotiations, there is a need for LICs to forge strategic responses, and where possible build strategic alliances to avoid being left in a situation where they have no choice but to adapt to new regulatory frameworks without adequate preparation. In a situation where attempts may be made to multilateralize such rules, LICs, with other like-minded countries, have to be proactive at the WTO. This will be essential to ensure that the multilateral framework can help them go through the processes of ensuring transparency and maintaining the necessary flexibilities needed for developing it.

## ANNEX 1:

### Types of Industrial Policies Adopted by Selected Low-income Countries

Industrial policy	Country	Key sectors	Key conditions	Key challenges
Import-substitution policies	Bangladesh	Pharmaceutical sector	<p>Started in the 1980 with a specific focus on generic medicines Enactment of National Drug Policy, 1982</p> <p>Restrictions on</p> <ul style="list-style-type: none"> <li>right of MNCs to sell certain types of medicines that the government decided were priorities for local production;</li> <li>sales of certain products if MNCs did not have a physical presence; and</li> <li>imports of substitutes for finished drugs and intermediaries produced locally</li> </ul>	<ul style="list-style-type: none"> <li>Corruption</li> <li>Strong lobbies from multinationals</li> <li>Poor labour conditions and regulations</li> <li>Supply-side constraints</li> <li>Weaknesses in the design of particular preferential schemes in developed markets</li> </ul>
Import-substitution policies	Kenya	<ul style="list-style-type: none"> <li>Food processing</li> <li>Textile and garments</li> <li>Metal processing industries</li> <li>Fabrication of consumer goods</li> </ul>	<ul style="list-style-type: none"> <li>Soon after independence, a number of regulatory measures and institutions were set up to provide direct support and tariff protection to the industrial sector (both local and foreign); stimulate local industries (Kenya Industrial Estate Programme, 1967) and employment of indigenous population (Industrial and Commercial Development Corporation, 1971); and restrict certain types of trade and trade zones to Africans (Trade Licensing Act, 1967)</li> <li>Special regime to attract FDI through repatriation of profits and fast-track approval of applications for foreign companies</li> </ul>	<ul style="list-style-type: none"> <li>Mixed results: Incentives framework created a strong anti-export bias and favoured production for local markets</li> <li>Size of domestic market too small for sustainable policy without support</li> <li>Oil price shock in 1977 coupled with macroeconomic instability deteriorated external terms of trade, and therefore crippled the industrial sector</li> <li>Protection strategy reduced competition within domestic economy, exacerbated rent capture by small group of industries that operated under capacity, but benefited from high profits</li> <li>Textile sector collapsed in 1980</li> <li>Food processing and metal processing industries survived</li> </ul>
	Ethiopia	<p>Agro-processing</p> <p>Fertilizer manufacturing</p>	<p>Low wages; good climatic conditions</p> <p>Second largest deposit of potash</p> <p>Expected to produce for local market</p>	<p>Price controls (high) affect farmers' productivity (discourages increasing productivity)</p> <p>High input prices for seeds and fertilizers</p> <p>Weak sanitary and phytosanitary (SPS) and food safety standards for agribusiness</p> <p>Access to land remains difficult for investors</p> <p>Poor trade logistics such as access to port facilities</p> <p>Access to finance</p> <p>Skills (including entrepreneurial) shortages</p>

Industrial policy	Country	Key sectors	Key conditions	Key challenges
Export-oriented policies (including EPZ, SEZ, clusters, industrial parks, and the like)	Kenya	Textiles	<ul style="list-style-type: none"> <li>• Tax holidays; subsidized infrastructure (including utilities); lower wages; flexible labour market; fast-track administrative procedures</li> <li>• EPZ Act, 1996</li> <li>• Labour market flexibility and lower wages</li> <li>• Adopted a growth pole strategy to develop at least two SEZs and five industrial parks</li> <li>• Development of a corridor project (Lamu Port corridor project); two SEZs and five industrial parks; labour market; fast-track administrative procedures; under capacity, but beneficial</li> </ul> <p>Access to markets</p> <ul style="list-style-type: none"> <li>• AGOA in 2001</li> <li>• Common Market for Eastern and Southern Africa (COMESA) regional market</li> <li>• East African Community</li> <li>• Creation of a number of institutional and market-oriented activities in 1993 to provide tax incentives on inputs to exporting industries and encourage companies producing for exports; simplified tariff structures</li> <li>• National Industrial Policy 2011–15; Vision 2030</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of competitiveness, due to high inputs and energy costs, low productivity levels, and limited linkages among sectors</li> <li>• Heavy regulation and administrative burden due to low level of coordination across ministries and other industrial policy organizations</li> <li>• Low levels of domestic and foreign investments; inappropriate technology; poor infrastructure and logistics; expensive and limited access to finance; inadequate research and development (R&amp;D) to support innovation</li> <li>• Low investment; poor product quality; lack of market outlets</li> <li>• Influx of second-hand clothes</li> </ul>
	Rwanda	Commodity processing for exports	<ul style="list-style-type: none"> <li>• First five-year strategy developed in 2006; second strategy in 2011–16</li> <li>• Industrial policy has three priorities: (a) increase domestic production for local consumption; (b) improve export competitiveness; (c) create enabling environment</li> <li>• Rwanda Development Board set up in 2008 to provide exporters with trade and market information; and act as one-stop-shop for investors</li> <li>• Good governance and zero tolerance for corruption</li> <li>• Institutional frameworks set up in 2010 include SME development policy; trade policy; and competition policy</li> <li>• Improving business climate complements industrial policy</li> <li>• Effective private-public dialogue through Industrial Development and Export Council, which provides a platform for all stakeholders to discuss industrial policy and reviews implementation of policies</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure; financing human and capital development</li> <li>• Lack of R&amp;D; low technological transfer</li> <li>• High costs of raw materials</li> <li>• High logistics and transport costs (landlocked country)</li> </ul>

Industrial policy	Country	Key sectors	Key conditions	Key challenges
<b>Export-oriented policies (including EPZ, SEZ, clusters, industrial parks, and the like)</b>	Ethiopia	Cut-flower industry	<ul style="list-style-type: none"> <li>Government facilitated land access through cheap land leases</li> <li>Loans available at low interest rates</li> <li>Air freight at cheap interest rates; cheap land lease</li> </ul>	Logistics and cool chain management challenges
		Apparel sector	<ul style="list-style-type: none"> <li>Cheap labour; labour competitiveness quite good</li> <li>Labour cost advantage; access to Djibouti port; access to markets (AGOA, EBA); favorable policies of global buyers</li> <li>Backward linkages: availability of high quality cotton</li> </ul>	Poor supply chain logistics; access to port (Djibouti) expensive; poor infrastructure Access to finance Administrative red-tape; unskilled labour; poor access to finance for SMEs; poor infrastructure and transport logistics Inadequate supply of utilities (such as energy)
		Footwear	<ul style="list-style-type: none"> <li>Footwear: availability of hides;</li> <li>Export taxes: 150% on raw hides</li> <li>Access to markets duty-free, quota-free (DFQF)</li> </ul>	Difficult access to rural land for commercial production of cattle for hides; cattle diseases Poor trade logistics Skills shortages
	Bangladesh	Apparel	<p>Started in the 1970s with special access to markets:</p> <ul style="list-style-type: none"> <li>&gt; MFA</li> <li>&gt; EBA (EU) in 2001</li> <li>&gt; Setting up of EPZ</li> </ul> <p>Policies of global buyers were a key factor Role of institutions</p>	Rules of origin sometimes too stringent Poor working conditions
Madagascar	Textile and garments	<p>EPZ Act (1989) Market access</p> <ul style="list-style-type: none"> <li>- Cotonou Agreement</li> <li>- AGOA (eligible since 2000 but suspended in 2010 and reinstated from 1 Jan 2015)</li> <li>- EPA (signed in 2009)</li> </ul>	Political instability Severe economic crisis resulting from political crisis Suspension from AGOA in 2010 Weak local industrial tissue Displacement of small local producers due to imports of second-hand clothes EPZs are "enclaves"	
<b>Resource-based industries</b>	Mozambique	Aluminium smelting, Mozal Gas industry	Cheap energy Cheap labour Gas-to-liquid plant	All bauxite imported

## ANNEX 2:

Some Examples of Industrial Policies in Low-income Countries and their Relation to WTO Rules

Type of industrial policy	Examples	Key policy instruments	Implications for the multilateral trading system
<b>ISI</b>	Pharmaceutical sector in Bangladesh	<ul style="list-style-type: none"> <li>Restrictions on right of MNCs to import and sell certain types of medicines (essential medicines)</li> <li>Sales of certain products (essential medicines) prohibited by MNCs if no physical presence</li> <li>Price regulations on essential medicines</li> <li>Imports of substitutes for finished products and intermediaries restricted if produced by two or more local firms</li> <li>Suspension of granting pharmaceutical patents in 2008</li> </ul>	<ul style="list-style-type: none"> <li>May be permitted on grounds of public health (provision of essential medicines, in particular given Doha Development Agenda declaration on TRIPS and Public Health) (2001).</li> <li>TRIMS does not allow discrimination against foreign investors unless it can be justified under relevant exception provisions</li> <li>Article XX of the GATT, however, allows countries to adopt measures necessary to protect human health.</li> <li>WTO waiver for LDCs under TRIPS (until 2016)</li> </ul>
<b>EOI (including EPZ and clusters)</b>	Textile sector in Bangladesh	<ul style="list-style-type: none"> <li>EPZ Scheme</li> <li>Cash incentives for use of local fabrics for exports of readymade garments</li> <li>Establishment of duty drawback schemes</li> <li>Setting up of bonded warehouses for exporters</li> </ul>	<ul style="list-style-type: none"> <li>EPZs are not prohibited at the WTO</li> <li>LDCs (and LICs with GNP per capita &lt;\$1,000 per annum) are permitted the use of export subsidies</li> <li>Duty drawback schemes are WTO compatible</li> </ul>
	Cut flower industry in Ethiopia	<ul style="list-style-type: none"> <li>Cheap land lease rates</li> <li>Subsidised interest rates on loans</li> <li>Air freight reduced for cut-flower exporters</li> </ul>	Ethiopia is not a WTO member

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