

Broadening the Policy Scope: Cross-cutting Issues*

The policy scope of Ethiopia is expanding. In the last few years the government of Ethiopia has studied the possibility and desirability of broadening the policy scope for industrialization, and it is now ready to put this idea into practice. The policy change will be incorporated in *A Plan for Accelerated and Sustained Development to End Poverty* (PASDEP) II (2011–2015), which is the national five-year development plan currently under preparation. The broadening of policy scope is also recommended by a number of foreign experts.¹

Ethiopia's vision for industrialization is Agricultural Development Led Industrialization (ADLI). ADLI has been concretized in a series of documents such as *An Economic Development Strategy for Ethiopia* (1994), *Rural Development Policies, Strategies and Instruments* (2001), *Industrial Development Strategy* (2002), *Sustainable Development and Poverty Reduction Program* (SDPRP) 2002/03–2004/05, and PASDEP 2005/06–2009/10. ADLI is an industrialization strategy in which agriculture plays a key role in preparing various conditions for full-fledged industrialization through the provision of industrial materials, consumption goods (mainly food), demand for industrial goods, labor supply, and foreign exchange. The transformation of small subsistence farming into commercial agriculture is at the center of this strategy (chapter 5).

* This chapter was prepared for the bilateral policy dialogue held in Addis Ababa in early September 2009 between Ethiopia and Japan. It is based on the information from official documents, a series of discussions and exchange of letters with Ethiopian leaders and high officials, and studies by the GRIPS Development Forum (GDF). All responsibility for the content shall be borne by the GDF.

¹ Joseph Stiglitz (Columbia University), Dani Rodrik (Harvard University), and Justin Linn (World Bank chief economist) are said to have advised in this way. Among them, Rodrik's note for Ethiopia calls for the following revisions: (i) broadening policy scope to include more sectors for promotion; (ii) supporting "new" activities for Ethiopia rather than exports; (iii) recognition that mistakes are both unavoidable and necessary; (iv) broadening the list of policy instruments; (v) giving incentives and subsidies to "pioneers" only and not emulators; and (vi) enhancement of lines of communication and coordination with the private sector (Rodrik, 2008).

ADLI shifted from the formulation stage to serious implementation around 2002–2003. In the last several years, the government of Ethiopia has concentrated limited human and financial resources on a small number of export-oriented priority industries. These industries, such as leather and leather products, textile and garment, food processing, and floriculture, were given generous incentives and high policy attention. Among these, floriculture, which was not included in the original list of priority industries, has recorded the fastest growth in output and export, followed by leather and leather products—albeit from very low bases. Meanwhile, the results of the other two priority industries were less spectacular. The government has also actively mobilized donor assistance for these industries in drafting master plans, strengthening industrial human skills, leveling up technology, establishing research and training centers, marketing and business matching, enhancing business associations, and so on. Important tools of industrial policy, such as benchmarking, business process re-engineering (BPR), pilot projects and subsequent scaling up, and public private partnership, have been learned and implemented. More recently, *kaizen* has been added to the policy toolkit.

In all fairness, it can be said that Ethiopia in the last several years has made good progress in early industrialization and can now take up the next round of challenges. Admittedly, past performance has not been perfect and a number of unresolved issues remain. For example, the expected emergence of competitive local firms has been slow and inter-ministerial coordination is far from effective. But the government feels that enough has been learned about the tools, roadmaps and pitfalls of industrialization so that policy space can be enlarged as it formulates the development strategy for the next five years. More specifically, Ethiopia from now on will support not just selected export-oriented industries but also other industries that mainly supply domestic markets such as steel, metal processing, cement, chemicals, and pharmaceuticals. In other words, parallel promotion of exports and import substitution is about to begin.

The National Graduate Institute for Policy studies (GRIPS) policy dialogue team strongly supports the expansion of policy scope of Ethiopia accompanied by enhanced policy capability. This is in line with Dynamic Capacity Development, the idea we put forward in another paper that internal capabilities should be

selectively and strategically built up to attain concrete industrial objectives rather than generally and randomly (Ohno and Ohno, 2008). It should be emphasized that causality between policy capability and policy scope is mutual. Ethiopia can expand its policy space because its policy capability has improved but setting new policy goals in turn will require a further upgrading of policy capability.

It is in this context that the GRIPS policy dialogue team wishes to raise some cross-cutting issues and discuss organizational arrangements in industrialization for the review of the Ethiopian authorities. Broader policy space opens up greater opportunities but it also increases the risks of miscalculation, political capture, wasted resources, and macroeconomic instability. Policy makers should be fully aware of these risks in advance and take proper precautions in charting the new policy course. We will conduct this policy dialogue primarily from the perspective of high performing East Asia where proactive industrial policy is widely accepted and practiced. This does not mean, however, that East Asian good practices are always relevant in Ethiopia. The validity of each argument from East Asia must be carefully examined, with modifications if necessary, before applying to Ethiopian soil.

In the formulation of industrialization strategy, the largest difference between Ethiopia and high-performing East Asia—especially Southeast Asian economies—is the existence in the latter of large inflows of manufacturing foreign direct investment (FDI) which generates strong demand for quality, skills, logistics, institutions, infrastructure services, and the like in the national economy. This demand for local capabilities from foreign manufacturers determines the kind of policy needed for further industrialization. But such demand by FDI firms is largely absent in Ethiopia. Export orientation does expose local industries to global competition, but export alone does not produce such strong and broad pressure for local excellence.

In this chapter we present a number of cross-cutting issues as a checklist to stimulate discussion among policy makers. Additionally, the next chapter deals with issues related to organizational arrangements for effective policy making. When concrete ideas and cases are offered, they are meant to be references and

initial suggestions rather than final recommendations. Our discussion covers the existing export-oriented priority industries as well as the proposed import substitution industries located in or near the urban center. Rural industrialization, a topic of great importance in ADLI, is beyond the scope of the present chapter.

Below, we address six issues that may become important as Ethiopia's policy capability is raised and its policy scope is enlarged. Each issue contains a few sub-issues, which are summarized in introductory boxes.

6-1. Policy framework and structure

- 1-1. Ethiopia has an industrial vision but strategy, action plan, and review remain incomplete.
- 1-2. The industrial chapter of the next PASDEP, and the five-year industrial implementation plan to be prepared by the Ministry of Trade and Industry (MOTI), should state clearly the direction of industrialization strategy in the next five years.
- 1-3. All three levels of industrial policy (general, responsive, pro-active) should be strengthened.

Industrialization strategy should have a layered structure that runs from general to specific and from long-term to short-term. These layers are normally called vision, strategy, and action plan. The vision is a long-term goal often expressed in a slogan such as “becoming an industrialized country by 2020” or “attaining middle income by 2025.” The strategy, also called the master plan or the roadmap, is a document that typically covers the next three to five years and contains policy principles, priority sectors, time tables, policy instruments, and so on, to give details on the road to achieve the vision. The action plan is a list or a matrix of concrete actions that must be taken typically within one to three years with clear designation of action content, performance criteria, deadlines, and responsible organizations. In relatively advanced countries where industrial policy is effectively managed by responsible officials or organizations, an explicit action plan may be replaced by the

continuous process of policy initiatives and adjustments (chapter 9). Furthermore, a review mechanism (“monitoring and evaluation”) must be installed to ensure implementation and facilitate necessary adjustments. Review may take various forms including commissioned reports by external experts, a high-level government committee, and formal or informal internal review by the ministry in charge.

In Ethiopia, ADLI sets the fundamental direction and the Industrial Development Strategy (IDS) (2002) states key principles such as private sector initiative, export orientation, strong state guidance, and so forth, and specifies priority sectors. Together, ADLI and IDS stipulate the basics of industrialization strategy that can remain valid for a long time beyond the five-year cycle of PASDEP. These correspond to the “vision” and part of the “strategy” mentioned above. Meanwhile, industrial master plans have been compiled for the priority industries. Quality and structure of these master plans differ greatly—partly because they reflect distinct characteristics of each sector but mostly because they were commissioned to different donors with different methodologies. For action plan and review, the monthly Export Steering Committee and MOTI’s regular contacts with the business community (business associations and individual enterprises) are the instruments for monitoring implementation, identifying problems and coming up with solutions.

ADLI and IDS are comprehensive and flexible enough to accommodate most policy shifts and therefore can continue to guide industrialization for a decade or two to come. What is required additionally is the statement of policy elaborations and adjustments that become necessary every few to several years, such as the proposed introduction of import substitution, due to changing circumstances and rising policy capability. Instead of drafting an overall industrial master plan separately, we suggest that the industrial chapter of the next PASDEP and the five-year industrial implementation plan, which will be prepared by MOTI after the approval of the next PASDEP, should serve this purpose. To do this, the content of both documents must coincide, with the one being the executive summary of the other, and must be based on the discussion and agreement of all main stakeholders in advance. This means that such stakeholder meetings should be held frequently between now and the completion of the five-year implementation plan. The industrial chapter of the current PASDEP, as it is written, is not strategic enough to set the medium-term

policy direction.

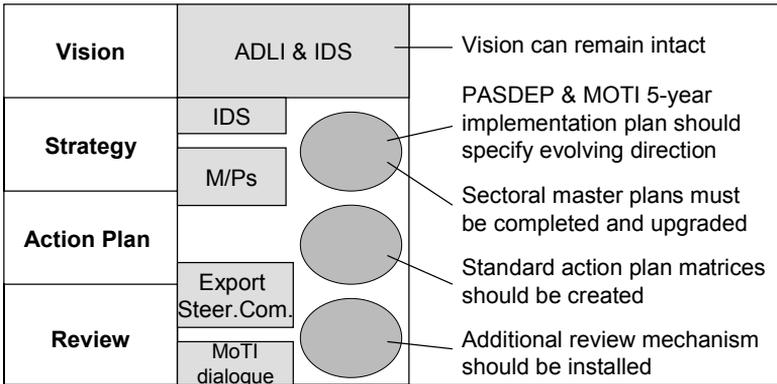
Over time, the master plans of priority industries should be drafted (if missing) or revised (if they already exist) by imposing minimum common orientation and minimum common structure that reflect the overall direction of ADLI, IDS and PASDEP but allowing sufficient room for the unique features of each sector.² Given the limited human and financial resource and donor support, the number of master plans should be relatively small and perhaps should not exceed ten. They should be drafted for the existing export-oriented industries as well as the proposed import substitution industries.

To strengthen action plans and reviews, the current works by the Export Steering Committee and MOTI's regular interaction with priority industries should be supplemented by the compilation of standard action plan matrices for each priority industry. These matrices should contain actions, sub-actions, performance criteria, deadlines, and designations of responsible organizations. They may be attached to the sectoral master plan or produced separately from it.³ Moreover, there should be a formal mechanism to regularly review and adjust the implementation of these action plan matrices. For this reason, the action plan and the review mechanism should be created simultaneously as inseparable and mutually dependent policy tools. Possible enhancement of Ethiopian industrial policy structure is summarized in Figure 6-1.

² The existing master plans for leather and leather products (assisted by UNIDO) and textile and garment (assisted by China), for example, have very different style and structure. It is suggested that the government should be involved more deeply in the initial design of industrial master plans so the minimum level of conformity is ensured. At the same time, requiring all master plans to have the same chapter structure, as practiced in Vietnam, is going too far in imposing uniformity.

³ The standard action matrix format can be seen in the first automotive industry action matrices of Thailand and the Triangle of Hope action plan matrices of Zambia (for improving investment climate). The former are incorporated in the automotive master plan while the latter are produced as a separate document submitted to the Government at regular intervals.

Figure 6-1. Possible Enhancement of Industrial Policy Structure



Industrialization strategy should properly address three aspects. The first is the establishment of a stable, transparent and business-friendly environment for domestic and foreign investors (i.e., cutting red tapes and leveling the playing field). The second is ensuring quick response to the requirements of the business community. Whenever there is a need or a problem, the government should act promptly to supply what is needed or remove what is impeding business activities. Ethiopia has already made significant progress in these two areas by implementing BPR aggressively in every ministry and agency. However, these aspects are still basic and passive.

The third aspect of industrialization strategy is the creation of dynamic comparative advantage in which proactive policy makers generate new industrial strengths and guide investors towards new activities under close coordination with private partners (“public private partnership”) but without necessarily waiting for their move (chapter 1). Such proactive industrial policy, which anticipates and creates dynamic comparative advantage, is commonly practiced in East Asia but still remain controversial among Western donors. The disagreement arises from the fundamentally different views about the role of government vis-à-vis the market in economic development. We believe that pro-activeness is essential for the effectiveness of industrialization strategy, but it requires deeper knowledge and higher policy capability than the other two. The industrialization strategy of Ethiopia, consisting of the MOTI’s industrial implementation plan and sectoral master plans, should enhance all these aspects, especially the last.

6-2. Past review and future evaluation

- 2-1. There should be an *ex post* review of export industry promotion.
- 2-2. There should be *ex ante* analyses of proposed import substitution industrialization.

As Ethiopia expands its policy scope from a few export-oriented industries to the inclusion of import substitution industries, there is a need to review the past and evaluate the future as soon as practically possible in formulating industrial policy orientation for 2011–2015. Review here is different from the reviewing mechanism of action plans mentioned above.

In the last several years, Ethiopia targeted its human and financial resources to the promotion of a few export-oriented priority industries. Promotion tools included cheap land, preference in taxes and import duties, bank loans, foreign exchange allocation, research and testing facilities, training programs, close consultation with businesses, quick trouble-shooting, and concentrated use of official development assistance (ODA) for these purposes. The result of this generous policy package should be assessed before Ethiopia takes the next bold step in industrialization strategy. It is essential to document what has been offered to promote these industries and what progress has been made in industrial performance. It is also necessary to numerically compare the explicit and implicit costs of promotion relative to the direct and indirect benefits that accrued to the national economy. Although precise determination of these costs and benefits may be difficult, best estimates should be produced with available information and data. Studies should be conducted for leather and leather products, textile and garment, and floriculture. For food processing, one or two concrete agro products may be selected for this analysis.

At the same time, there should be preliminary studies of the import substitution industries that will be promoted during the next PASDEP cycle. For each industry, there should be assessment of the domestic situation, global and regional trends, Ethiopia's potential, hurdles and pitfalls to be overcome, and possible strategic

orientation for promoting the industry.

We propose these studies, which should be completed within several months, to help deepen industrial policy debate in Ethiopia and draft the industrial chapter of the next PASDEP. They should also be used as preliminary input to the subsequent drafting or revision of sectoral master plans and the feasibility studies to be conducted for import substitution industries (see next section). Since the preparation of master plans and feasibility studies will take time, these studies should be used to start policy debate as soon as possible.

Both of these studies—past review and future evaluation—should ideally be commissioned to independent and neutral Ethiopian researchers outside the government. For each industry, a medium-sized report should be submitted to the government and should also be circulated openly and widely. These reports may be published in one collected volume. The reports should be neither too theoretical nor too narrative. They should be sufficiently analytical and contain concrete numbers and estimates.

MOTI should cooperate with the drafting process of these studies by supplying data and information, but it should not take the lead in determining the content. First, MOTI is too occupied with its existing workload. Second, a self-assessment of industrial policies by MOTI is not nearly as convincing as an assessment by respectable outsiders. Third, evaluation of industrial policies by Ethiopian researchers at universities and research institutes, rather than government officials or foreign experts, will contribute to the strengthening of local research capability and the building of constructive relationships between the government and academia (as we see in Tanzania, for example). The Ethiopian government needs to foster its ties with local academics to strengthen its own capacity to design and implement industrialization strategies in the future. Assistance by donors and foreign experts may be sought if necessary, but, again, they should not dominate the outcome of the report.

6-3. Time dimension of industrial promotion

- 3-1. Industrial promotion must always be temporary with a pre-announced graduation schedule.
- 3-2. Time-bound support measures should be available to all producers, whether pioneers or copycats.
- 3-3. A long-term liberalization roadmap should be prepared in anticipation of the World Trade Organization (WTO) accession.

Industrialization strategy must balance the requirement of international integration with the requirement of local industry promotion. Policy makers must give proper weight to liberalization and integration vis-à-vis the amount and duration of support to local firms so that the policy package as a whole generates strong incentive for producers to work hard rather than shut down their factories or resort to political lobbying. Opening the country without regard to the competitiveness of domestic private industries is suicidal. Protecting local industries without the prospect of graduation is equally disastrous. Striking a balance between accepting global integration and promotion of local industry is a delicate matter. Concrete solutions must be discovered for each industry in each country.

Another inherent aspect of industrialization strategy is its temporary nature. Industrial promotion can never be permanent—if it is, the policy has failed. Priority industries may receive generous assistance for a time but not forever. The typical duration of intensive promotion is several years but it may be shorter or longer depending on the case. Promotion must end when it becomes clear that the industry has either succeeded or failed in gaining international competitiveness—in either case, additional support cannot be justified. Ideally, the duration of industrial promotion should be pre-announced and strategically linked to the internationally committed liberalization schedule of that industry. Promotion must be terminated when the time comes regardless of success or failure of that industry. As Prof. Rodrik remarks, the government must accept the fact that mistakes are unavoidable in industrial policy and that not all supported industries can be winners (Footnote 1).

Previously, Japan and Korea adopted the infant industry promotion strategy of using

temporary tariff protection to shield domestic firms until they gained international competitiveness. In the early 21st century, however, latecomer countries are no longer allowed to use heavy protection to promote domestic industries. This does not mean that industrial promotion is no longer possible, but it does mean that promotion must take a different form. There exist a large number of measures for strengthening industrial capability without violating any international commitments—such as education and training, technology transfer, public private partnership, promotion of small and medium enterprises, development finance, efficient logistics and distribution, industrial estates, FDI marketing, and reliable power and transport. None of the policy measures we discuss violates WTO or any other international rules.

In Ethiopia, a few export-oriented industries have enjoyed incentives and subsidies in the last several years. In addition, MOTI has worked very closely with industry associations and individual firms in the priority industries to assess business strategies, report monthly exports, mobilize donors' assistance, conduct benchmarking, trouble-shoot problems, and so on. Young officials in the Textile and Leather Development Center (now upgraded to the Textile and Apparel Institute) of MOTI, who routinely visit member firms in these sectors, seem to know the ins and outs of the strategies and problems of individual firms. In the early stage of industrialization, such intensive public support and guidance is laudable. However, at some point, perhaps relatively soon, private firms must graduate from this heavy dose of guidance and assistance and make their own business decisions at their own cost and risk. Technical and financial aid from the government and donors should be reduced in appropriate steps. The (revised) master plan of each of these industries should have a chapter to discuss such graduation.

One related issue raised by Prof. Rodrik is how to allocate industrial support measures among producers. He argues that incentives and subsidies should be given only to “pioneers” who start “new activities” (in the context of Ethiopia) but not to emulators who follow pioneers without taking risks themselves.

The key developmental question that a prospective investor needs to be asked before granting him incentives is not whether his project is

export-oriented, but whether it is new to the Ethiopian economy—either a product not previously produced in Ethiopia or a significant technological upgrading of an existing product... It is the pioneer firms that bear the cost of discovery—can a particular activity operate profitably in Ethiopian conditions?—and of putting Ethiopia on the global radar screen of investors. So it is they who need the subsidy, and not the followers who simply emulate the success—if success is what they experienced—of the pioneers. Crudely put, the (rhetorical) question is whether the 91st firm investing in flowers still needs a tax break. (Rodrik, 2008, pp.6–7)

While this argument may have some theoretical merit, we do not think it is practical or fair. In reality, it is administratively impossible to determine who is pioneering and who is not. Mere order does not tell us the amount of new value created or new risks taken, because the tenth investor may well be crucial rather than the first. If support is given only to the first x investors, this will spawn a distorted incentive to go first and exclude others regardless of whether the first movers have proper managerial and technical capability. Such a race for initial privilege is called *license hunting* and encourages rent seeking and cartelization. The Ethiopian government does not have the capacity to rank firms according to the amount of value created, and even if it did, it should not waste its precious time and human resources on such ranking.

Industrial promotion measures must be available to all producers that satisfy the announced criteria defining eligible activities whether they are the first investor or the 91st. As argued above, support measures must be time-bound and phased out after a number of pre-specified years. But while these measures last, all eligible producers should be able to access them. In fact, this is the only administratively manageable and politically acceptable way of conducting industrial promotion in a low-income developing country. If further selection is desired, support may be linked to some readily recognizable performance criteria (such as output or export volume) so that competition among producers may be engendered. However, this type of industrial policy is a fairly advanced one and should not be attempted by a government without high capability, transparency, a sufficient toolkit, and strong trust and constructive cooperation with the business community.

In the medium to long run, there should be an overall industrial master plan (in addition to those for individual sectors) with mutually consistent schedules for industrial promotion and international integration. The timing of WTO entry must also be an integral part of this roadmap. Negotiations for WTO accession are complex and time consuming. Moreover, large existing members of WTO tend to impose unreasonable opening conditions, which they themselves do not abide by, on small new members. As a result, most negotiating governments become too pre-occupied with document preparation, legal adjustments, diplomatic battles, and the like and forget about building linkage between industrialization strategy and integration strategy. This is a big mistake. Trade liberalization with a deadline is a challenge as well as an opportunity for industrial promotion. To effectively cope with this challenge and opportunity and make WTO accession meaningful for national development, there must be a clear roadmap for industrial promotion in advance.

The literature on the order of economic liberalization informs us that there is a proper liberalization sequence that must be followed to avoid macroeconomic crisis. Liberalization must start with domestic markets such as local goods, services, and labor. Then it must be followed by the liberalization of domestic finance. Capital-account liberalization must come at the end when all domestic markets are liberated and function reasonably well (McKinnon, 1993). Another important lesson from the developing world is that factors that contribute to resilience of the real-sector economy, such as growth potential, structural diversity, and regional integration, can greatly enhance the capacity of the national economy to withstand global shocks under integration. Ethiopia's liberalization schedule must have a proper macroeconomic sequence and must be synchronized with the progress of its industrialization strategy.

6-4. Import substitution

- 4-1. Import substitution must avoid the risks of *policy misjudgment and political capture*.
- 4-2. Technical details are key to the success of import substitution. A high-quality feasibility study (F/S) or master plan should be prepared for each import substitution industry to be promoted.

As Ethiopia embarks on import substitution, we would like to draw the attention of Ethiopian authorities to its well known risks. All arguments in the previous section regarding the temporary nature of promotion apply to import substitution. In addition, even greater precautions must be taken because import substitution is a riskier policy area than export promotion.

Import substitution is riskier than export promotion because the Ethiopian government can regulate domestic markets more easily than global markets. It can restrict entry, use subsidies and taxes that affect prices and profits, and introduce standards for quality, safety, the environment, and so on, that also influence business outcome. While exporters can hardly lobby for larger overseas markets or higher commodity prices, producers that sell domestically can often ask the government to do something about their plight. To the extent that the government has policy instruments to directly affect domestic markets, import substitution is more subject to *policy misjudgment* and *political capture* than export promotion. This is precisely why neoclassical economists dislike import substitution. Although import substitution may be a beautiful idea theoretically, they contend that it cannot be implemented effectively because (i) the government does not know the right industries to promote; and (ii) the policy will surely be captured by political interest groups. Anne Krueger, the former World Bank chief economist and champion of trade liberalization, states:

The problem with the [infant industry] argument, as a basis for policy, is that it fails to provide any guidance as to how to distinguish between an infant that will grow up and a would-be producer seeking protection

because it is privately profitable... The infant industry argument also is an excellent example of a theory that is nonoperational because criteria for bureaucrats to identify cases have not been put forward. (Krueger, 1997, p.12)

No matter how careful economists are, special interests always will seize their research results in supporting their own objectives. And, no matter how sophisticated and careful research findings are, there always will be politicians formulating, and non-economists administering, policies. (*ibid*, p.19)

Today, the neoclassical ideology is no longer dominant as before and few would support Krueger's extreme pessimism over the capacity and intention of the government. Furthermore, as mentioned above, industrial promotion in our age is conducted with an array of WTO-consistent policy instruments rather than high tariffs and non-tariff barriers. Even so, the risks highlighted by Krueger are real and should not be ignored. Where we should differ from Krueger is the policy conclusion. We know that both market and government are imperfect. The fact that bureaucrats may not know the selection criteria and policy may be hijacked by rent seekers should not lead us to entirely abandon import substitution. We should proceed with utmost care to avoid these obvious risks. Policy capability is not given but can be improved over time.

Policy misjudgment must be minimized by sufficient learning in advance and readiness to abandon support of projects that fail in actual implementation. Ethiopia should study the nitty-gritty of each targeted import substitution industry to reduce expectable risks and wastes prior to the approval of concrete projects or promotion measures. A good F/S should be conducted and a good master plan should be prepared by experienced experts for each targeted import substitution industry. Political capture must be prevented by strong leadership that punishes rent seeking and encourages value creation. Democratic developmentalism (DD), the political regime adopted by the Ethiopian government for national development, aims to institutionalize precisely such a policy orientation. As long as this policy direction is firmly in place, Ethiopian economic policy is less likely to be captured

into endless protection of inefficient industries.

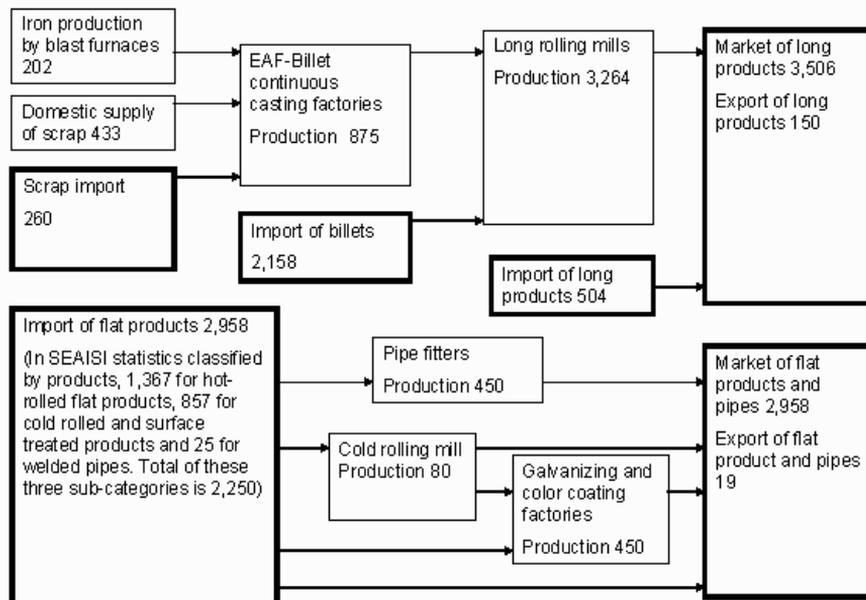
Take the steel industry, for example. It is widely known that promoting the steel industry in latecomer countries is not an easy task (Kawabata, 2007). The steel industry consists of a wide range of activities from the cottage industry of long bar rolling with primitive technology to integrated steel mills with gigantic scale and frontline technology. Production is broadly divided into long steel and flat steel, each with many upstream and downstream processes. Each process in turn can be performed by various technologies and types of equipment with certain pros and cons. The market is subdivided into high, medium, and low quality products, each requiring different investments and technologies. The quality of raw materials (iron ore, cokes, scrap metal, etc.) largely determines the quality of output, while transport and logistics determine cost competitiveness. The demand size relative to efficient equipment capacity, the state of competition, and world business cycles are crucial determinants of profitability. Reduction of operational waste and downtime also contributes greatly to high yield and low cost. Environmental concern must be addressed as a matter of high priority. The role of government differs from one steel production process to another, and it should diminish over time as private firms grow and become competitive.

In such a complex industry, financial outcome depends crucially on the right choice of details—technology, production capacity, equipment type, input procurement, mill location, forward and backward linkage, factory management, training, targeted markets and customers, timing of investment, taxes and tariffs, finance, and so on. In Vietnam, for example, the nation's first modern flat cold rolling mill in Phu My could not supply to FDI customers such as Sanyo, Honda, and Yamaha because it did not have the right equipment for surface treatment, and its marketing was insufficient to meet customer needs. Hoa Phat, a local private business group, purchased a cheap electrical furnace from China to produce billets (intermediate input for steel bars and wire rods), but it later found out that the furnace capacity was too small for efficient operation and cost reduction. An enormous amount of money can be wasted and bankruptcies can soar if these technical details are not set right.

Before Ethiopia begins to promote the steel industry, the current status of the domestic steel market should be grasped with respect to material flows (input-output relations among processes), quality and technology, market segmentation, transport and logistics, operational efficiency, and so on. The compilation of a material flow chart, as shown in Figure 6-2 for Vietnam, is the very first step for this purpose. In many latecomer countries experiencing construction booms, demand for construction steel (bars, wire rods, galvanized flat steel) is strong while domestic supply is limited. While a few rolling mills may spontaneously emerge, the import bill for billets and finished construction steel surges. In the early stage, the steel industry should develop from long steel to flat steel, from downstream to upstream, and from low quality to medium quality. Another lesson from East Asia is the importance of steel market intermediaries, such as “coil centers” for flat steel and steel bar processors for long steel, in creating an efficient supply chain of the industry.

The government should not invest directly in production facilities but should manage markets and private investors, both local and FDI, to minimize inappropriate investments, cope with external shocks, and stabilize the market as much as possible (the global steel market is inherently unstable so it is impossible to eliminate all shocks and fluctuations). The history of the steel industry shows that private investments cannot always be regarded as efficient or environment-friendly. Many mistakes can be made in large and indivisible investments in steel. Oftentimes, too many investments are made in technology that is outdated or too small for achieving efficiency, which overcrowds the market and damages the environment. The government must acquire sufficient capability to monitor and regulate private investments in the early stage of steel industry development.

Figure 6-2. Material Flows of the Vietnamese Iron and Steel Industry, 2005



Unit: 1000 tons. Source: Author compiled from SE AISI (2006a, 2006b)
Source: Kawabata (2007), p.9.

This is just a sketch of some of the problems in promoting the steel industry. Full details must be given in a thick feasibility study report or a master plan prepared by experienced steel experts. The same can also be said for any import substitution industry other than steel. If a full F/S or a master plan takes too much time, a preliminary study should be organized as a starter as suggested in section 6-2 above.⁴

⁴ MOTI created master plans (the “strategic plan” and the “business plan”) for chemicals (mainly soap and detergent) and pharmaceuticals in 2007. Strategic studies and documents also exist for cement and paper and pulp. Drafting was done by Ethiopian experts with occasional help from the German Engineering Capacity Building Program (ECBP).

6-5. Industrial clusters and corridors

- 5-1. There are many definitions of industrial clusters and corridors. Applicability of each to Ethiopia should be carefully examined.
- 5-2. The idea that related projects and programs should be implemented collectively in certain geographical areas is useful in building agro food parks and other industrial zones.

The concept of *industrial cluster*, as practiced in policy formulation, can be classified into several different approaches.

- (i) *Innovation through interaction between top-level researchers and businesses*—proximity of high tech firms and top-level research institutes or universities, under an effective local leader, is expected to generate new products or even new industries. Michael Porter’s cluster approach and the industrial cluster initiative of Japan’s Ministry of Economy, Trade and Industry (METI) belong to this category. Commercialization of advanced technology is anticipated. Silicon Valley in California and Zhongguancun in Beijing are typical examples.
- (ii) *Agglomeration of related firms for effective inter-industry linkage*—producers with input-output relations, such as buyers- sellers and assemblers-part suppliers, gather for efficient trading, information sharing, and sharing of input and output markets. Kuchiki’s (2008) “flow chart approach” is an attempt by policy makers to establish an industrial park, provide local capability and infrastructure services, and invite an anchor firm and a multitude of suppliers. To succeed, this approach must be accompanied by proper incentives, training, FDI marketing, FDI-local firm linkage, technology transfer, and so on.
- (iii) *Concentration of small producers belonging to the same industry*—this kind of cluster, consisting of small and family enterprises, often emerges spontaneously in both urban and rural areas. Trade villages specializing

in shoe making, ceramic production, etc. are such examples. According to Sonobe and Otsuka (2006), these clusters typically evolve in three stages: initiation, quantitative expansion, and productivity breakthrough.

- (iv) *A broad definition of industry that includes supporting industries and supporting services*—in the cluster-based industrial development strategy in Malaysia’s Second Industrial Master Plan 1996–2005 (IMP2), an industrial cluster is defined as “an agglomeration of inter-linked or related activities comprising industries, suppliers, critical supporting business services, requisite infrastructure and institutions” (IMP2, p.23). This is a functional agglomeration that may not necessarily be located in one small geographical area.
- (v) *An industrial estate*—sometimes the term industrial cluster is used synonymously with an industrial estate (an industrial park, a special economic zone, an export processing zone, etc), a delineated area with rental plots and necessary infrastructure developed and operated by a private or state-owned management company.⁵

The related concept of *industrial corridor* also has different meanings:

- (vi) *Building international transport infrastructure*—this typically involves the construction of a road that usually connects hinterland or landlocked countries with a sea port. Development programs and private investments may follow the construction of such a road, but not always.
- (vii) *Asian Industrial Corridor Initiative*—the Japanese METI is launching an initiative to create new cross-border industrial regions in Southeast Asia and India by consciously combining transport infrastructure with other policy components such as public private partnership, efficient logistics, human resource development, electronic trading, speedy customs clearance,

⁵ In Vietnam, the term *cum cong nghiep*, which translates as “industrial cluster,” means a small industrial park without boundary fences. This terminology is creating confusion when Vietnamese officials and researchers discuss industrial cluster-based development strategies.

etc. in comprehensive regional development planning.

- (viii) *Food processing industry zones*—in Ethiopia, the term *growth corridor* is used as an idea to link agro-ecological potentials with infrastructure and markets, including the building of several industrial zones specializing in food processing in rural areas or near local cities.
- (xi) *Rural economic areas linked with an urban center*—when a city provides industrial goods and employment opportunities to surrounding rural areas which in turn supply agro products and labor, the resulting economic zone with a hub city can be called an industrial corridor.⁶ In Ethiopia, Addis Ababa and its vicinity is a naturally arising industrial corridor. The federal government has a plan to create similar industrial corridors in other parts of the country.

Since industrial clusters and corridors have many definitions, the user of these terms should be careful not to mix different meanings. Some of them are useful for Ethiopia's industrial development, but others are not. Numbers (i) and (vii) are too advanced for Ethiopia's reality. Number (ii) can serve as a reference in building industrial zones to attract foreign investment, but perhaps on a smaller scale than in East Asia. Number (iii) is useful in formulating small and medium enterprise (SME) policy. Number (vi) gives another entirely different perspective on development along a transport corridor such as the Djibouti-Addis Ababa highway.

In Ethiopia, number (xi) is guiding the regional development plan of the federal government but the plan remains broad and ambiguous. This idea must be followed up with regional development plans with concrete projects. Separately, the establishment of integrated agro food parks, proposed in the food processing master plan draft, may take advantage of some of these concepts selectively. The idea that regional development must integrate all related programs by different ministries and donors into an organic whole is a sound one. Policy coordination required for this

⁶ This is the definition of industrial corridor which Prime Minister Meles explained to us in our policy dialogue.

initiative should be provided jointly by MOTI and the Ministry of Agriculture and Rural Development (MOARD).

The concept(s) of industrial clusters and industrial corridors most useful for Ethiopia's development strategy should be identified, modified (if necessary), and integrated into the next PASDEP. Industrial estates for local investors and those aimed at inviting FDI generally require different conditions. While both may commonly require good administration, land preparation, access road, power, water, and a reliable labor supply, local investors may need more managerial, technical, and financial support, while harnessing FDI dynamism may require strategic FDI marketing, an appropriate incentive package, quick and low-cost access to global markets, and so on. Specific requirements also differ from one industry to another and even from one FDI firm to another. A development strategy should be drafted with these different requirements in mind.

6-6. SME promotion

- 6-1. SME promotion should clarify targeted firms and activities.
- 6-2. SME promotion policy with clear targets and based on relevant international experiences should be created and strengthened as the key component of industrialization strategy.

SME promotion is a popular industrial policy tool around the world but its content and results differ greatly across countries. Most countries produce few results because they fail to identify proper goals and lack concrete knowledge of how to conduct effective promotion. Ethiopia's SME policy also remains underdeveloped. Its goal must be re-defined with clarity and concreteness and its policy instruments and mechanism must be strengthened by learning selectively from successful countries.

The objectives of SME policy can be broadly divided into the generation of income and job opportunities for the general population (poverty reduction) and the

selective support of excellent SMEs to become creators of internal value and competitors in global markets (competitiveness). Both of these objectives are important and may be pursued in parallel, but the goals, strategies, and instruments they require are significantly different and should not be mixed.

In Japan, where both large enterprises and SMEs are historically well developed, the purpose of SME policy in the post-WW2 period shifted gradually from the protection of SMEs against exploitation by large parent firms to the encouragement of innovation by SMEs as a source of global competitiveness. Japanese policy instruments and mechanisms are highly complex, combining multiple channels for public private partnership, participatory policy making (“deliberation councils”), technical assistance, financial support, repeated consultation, and so on. The *Shindan* System (enterprise diagnosis and advisory system), established in 1948 to officially train and certify SME management consultants, is well developed and effective in Japan.⁷ However, the Japanese model is probably too difficult for most developing countries to adopt initially.

In Malaysia and Thailand, where the economy is highly industrialized but dominated by FDI firms in electronics, automobile and other machinery industries, the main policy goal is to increase internal value and replace foreigners with local managers, engineers, and designers. SME promotion is at the core of this strategy, together with R&D, education, technology transfer, national brand creation, etc. SME Corporation Malaysia, the lead agency for SME promotion in Malaysia, has a large number of grant and loan programs for SMEs that implement concrete and verifiable activities to improve productivity and expand business. Although different from the Japanese approach and institutionally much simpler, we consider the Malaysian programs to be one of the best SME policy packages in the world. They are clearly aimed at boosting international competitiveness and not poverty reduction.⁸

⁷ For the details of the Japanese *Shindan* System and efforts to replicate it in Thailand, Malaysia, and Vietnam, see Ohno (2010).

⁸ For updated accounts of supporting industry promotion, which is an advanced form of SME support, in Malaysia and Thailand, see Vietnam Development Forum and Goodwill Consultant JSC (2010).

Table 6-1. Malaysia's SME Support Programs
(Small and Medium Industries Development Corporation)

Eligibility	Enterprises with more than 60% local capital, with annual sales less than RM25m, and fewer than 150 employees.
Grants	Provided for industrial linkage, business planning, product and process improvement, logistic services, overseas marketing, obtaining quality certification, improved packaging, design, labeling, halal products, etc.
Soft loans	Provided for factory relocation, ICT, etc.
Selection	"Concept papers" submitted by enterprises are evaluated by SMIDEC within 14 days and benefits disbursed within 20 working days.
Monitoring	Proposed actions are monitored after 3, 6, and 12 months, and benefits may be withdrawn if they are not implemented.
Industrial Linkage Program	Database of 18,000 companies; annual matchmaking events with the participation of over 250 local suppliers and MNCs; pioneer status with 100% tax exemption for five years and other tax privileges.

Source: Ohno, ed. (2006). Also see www.smidec.gov.my/index.jsp.

In a poor agricultural country where industrial development remains primitive and FDI absorption is limited, SME promotion covers virtually the entire industrialization strategy because almost all producers are micro or small. The term SME promotion may be too broad and ambiguous for such a country. Goals, targeted firms, and policy instruments for such promotion must be realistic and relevant to the local situation, and must be quite different from those in more advanced countries.

Ethiopia's SME policy needs to target both poverty reduction and international competitiveness. These two directions are in principle separable, and should be drafted and implemented as different strategies. The first package, which should be available to all eligible enterprises in urban or rural areas, must provide general support such as elementary management, technology, accounting, information, marketing, etc. The second package should be designed more strategically and offered conditionally only to those enterprises that demonstrate willingness and potential to excel, with an appropriate monitoring mechanism. It is necessary to re-define and re-classify SME promotion into separate policy components whose responsibilities should be assigned to different organizations (ministries and agencies). For each, legal and policy frameworks, executing and supporting organizations, industrial human resource development, management and technology assistance, finance, and enterprise matching and marketing should be clarified.

At present, Federal Micro and Small Enterprise Development Agency (FeMSEDA)'s workshop programs are mainly directed at nationwide poverty reduction while the work conducted at the Leather and Leather Products Technology Institute (LLPTI) and the Textile and Apparel Institute, with donor assistance, is directed at producing excellence.