

Policy Report for “Development Blossoming: Industrial Policy and Flower Exports in Ethiopia”
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1. Policy Motivation for Research:

Recent research has highlighted two important facts about the development process. First, aggregate disparities in income per capita are largely driven by differences in aggregate productivity. Second, poverty reduction is about creating jobs in larger firms. The combination of these two facts naturally leads to ask “where do jobs in larger firms come from?”, “how can government promote high productivity sectors and firms”?

These issues are poignant in the context of non-traditional agricultural exports (NTAE) in Africa. NTE has the potential to stimulate job creation for the low educated and asset-poor in rural areas, especially women, reduce the vast productivity gap in African agriculture, and offer African countries an opportunity to diversify export earnings away from the traditional agriculture exports sector. While it is generally accepted that the private sector should take a lead in developing the NTAE sector, there is less consensus over whether and, if yes, how the state should actively support the sector.

Industrial policy, e.g., the provision of subsidies and fiscal incentives, can affect both entry and productivity. It can help firms enter new markets and generates positive externalities such as knowledge spillovers, but may also weaken competitiveness by protecting inefficient firms from market pressure. However, to evaluate an industrial policy, it is not enough to ask whether a given package of incentives leads to a more or less efficient sector in the long run. Industrial policies, especially in developing countries, use scarce physical, financial and administrative resources and an appropriate industrial policy is designed to maximize the returns generated by these resources. The main question then is not only whether industrial policies should be adopted or not but how they should be designed and implemented effectively.

How should industrial policies be designed and executed? This question is especially challenging for developing countries. On the one hand, market failure is rampant in these countries. Developing economies typically lack information, experienced entrepreneurs, and diversification, so that investors cannot build on many complementary assets. On the other hand, these countries also have weak public institutions, both in terms of governance and capacity. Hence, developing countries face a dilemma. They need more proactive governments to cope with relatively more prevalent market failures, but their administrative systems often lack the resources and, at times, the incentives for effective industrial policy implementation.

Qualitative studies based on case studies have provided most of the available empirical evidence on the design and execution of specific industrial policies. The advantage of qualitative studies is their ability to embed the design and implementation of industrial policies within a broader political and administrative context. However, complementary empirical evidence – in the form of statistical analysis – on the effects and effectiveness of particular industrial policies has the potential to foster our understanding of the factors that correlate with industrial policy success and provide further guidance in the design of industrial policies. A host of conceptual difficulties and limited data on the execution of industrial policies, however, has retard progress in this area relative to other policy-relevant areas of research.

In evaluating such a policy, three fundamental questions need to be asked.

1. What would have happened in the absence of the policy?
2. Which elements of the industrial policy package have been most effective?

3. Could the policy have achieved similar results at lower costs?

These questions are, however, difficult to answer. To start with, governments target specific sectors making it very difficult to identify potential counterfactuals. Second, industrial policies are typically very complex bundles of very specific measures. The set of potential bundles to learn about is larger than the number of sectors and case studies from which we can learn from.

To make progress on these questions, this project proposed to investigate the effects of the industrial policy that has spurred the development of the Ethiopian flower sector. In 2005, Ethiopia launched an industrial policy aimed at developing a horticulture export sector; one of the most important sub-sector being floriculture. In essence potential investors were offered an attractive investment package (five-year tax holiday, duty free machinery imports, and easy access to bank loans. Further financial facilitation was made available through the involvement of the Development Bank offering 70 per cent of investment funding and easy acquisition of leased government land at \$18 per hectare).¹

Largely as a result of favourable natural conditions and the vigorous industrial policy sustaining the sector, Ethiopia is now Africa's second largest exporter of cut flowers after Kenya. The flower industry in Ethiopia has witnessed an unprecedented growth in recent years having increased exports from USD 2 million in 2004 to 104 million in 2008 and represents now more than 20% of the value of all exports from Ethiopia.

The project proposed an original angle to tackle the methodological challenges discussed above. Specifically, it proposed to integrate established economic theory on industrial growth with an original approach to the data to be used to analyse the effects of the policy. In contrast to existing empirical analysis, the project rests on a novel dataset that contains information on the universe of all approved projects in the industry. To the best of our knowledge, this project will be the first empirical study in which the overall set of potential entrants is observed and, therefore, the entry decision becomes an outcome variable as opposed to the status on which the analysis has to be conditioned upon. This opens the possibility to a new approach to study the effects, and optimal design of, industrial policies: by exploring the determinants of projects success, we can identify areas for improving the policy.

II. Policy Impact

The overall effect of an industrial policy that promotes a sector depends on the balance between a variety of opposing forces:

1. Compensating for existing externalities or market failures that lead to socially sub-optimal entry – with the resulting potential benefit from the fact that higher entry increases competitive pressures and leads to exit of the least productive firms,
2. Potential deterioration in the selection of firms entering the industry stemming from misallocation of resources induced by the industrial policy.

¹ The *Investment Proclamation No. 280/2002* outlined areas/sectors reserved for government investment, only domestic investors, and areas in which foreign and/or joint investment could occur. Further, the proclamation described in detail the application for permits, the regulation with issuance of a permit, remittance of funds, investment guarantees, protection, the setup of the investment authority and its powers and organizational structure. Additional requirements for registering an entity involved in export sectors are in the *Commercial Code, Proclamation No. 166 of 1960*. The *Investment Proclamation No. 280/2002* was later adjusted and replaced by No. 373/2002, *Council of Ministers Regulations No. 84/2003*, which outlined exemption from income tax, carry forward of losses, exemption of payment of customs duty for manufacturing or agro-industrial activities.

Evidence from the study reveals how crucial it is for industrial policies to be designed in a way that integrates **incentive compatibility** considerations.² These incentive compatibility considerations have two facets:

1. **Selection** into and from the pool of applicants [particularly in the case in which the industrial policy grants access to scarce, government-owned, resources (e.g., finance, land)], and
2. **Termination** of unsuccessful projects.

A useful analogy here is with commercial loan applications. A government promoting a particular sector is like a bank: it lends resources (in this case, support which materializes in a number of different forms, e.g., land, licenses, import-duty exemptions, subsidized credit) to undertake projects. As a bank that expects the loan to be repaid, the government expects to gain from the activity of the investor through a host of direct (e.g., direct and indirect tax revenues) as well as indirect (e.g., employment generation, export revenues) channels. In both cases, the bank and the government must provide acceptable returns to perspective and solvent investors.

Commercial banks invest significant financial and human resources to select and monitor (potential) borrowers. Typically, loans are also structured in a way that can force liquidation of unsuccessful projects. Similarly, an effective industrial policy is designed to minimize the adverse selection consequences implied by subsidies and is characterized by credible mechanisms forcing the termination of unsuccessful projects.

III. Main Findings:

We examine the applications and investment license forms to start a floriculture investment venture in Ethiopia. We then confront information in the initial application with subsequent export performance of the approved project.³ The main findings are as follows:

1. **Less than 20 percent** of all projects approved eventually lead to an operational exporting farm. While it is possible more recent entry might have been hindered by a number of adverse factors (the global financial crisis, lower demand in destination markets and soaring oil prices), the overall low application-to-export rates, particularly in early cohorts of applicants and immediately after the establishment of the policy, calls for an investigation of the causes of project failures.

2. The main hypotheses that could explain low application-to-export rate are:

(i) widespread difficulties in adopting floriculture to the Ethiopian context,

(ii) misallocation of resources induced by the policy, either due to poor selection or opportunistic behaviour of investors.

² Incentive compatibility considerations naturally arise when beneficiaries of the industrial policy possess private information relevant to the prospect and execution of the project the policy intends to support.

³ Despite government support for the research and the formal endorsement by the Prime Minister's Economic Advisor's Office and the necessary agencies involved [Ethiopia Investment Agency, Ethiopia Development Bank, Ethiopia Horticulture Development Agency, Ministry of Trade and Industry], the process of acquiring the necessary data and integrating the respective agency information, has been extremely challenging. This has been primarily due to the confidential nature of the information as well as lack of a common unique identifier across the various government agencies. The data acquired still presents significant limitations that are described in detail in the companion paper.

To shed light on the relative importance of these factors, we investigate factors that correlate with project failure. We find very large differences in **behaviour**, **decisions** and **outcomes** between domestic owned projects and projects involving foreign investors. In particular:

2.1. Domestic investors are **less likely** to fill the investment agency application forms (the first administrative process for a firm to be eligible for the incentive package and to export). This application form is meant to contain the information necessary to assess the economic viability of the project, i.e., it corresponds to the screening stage of the application;

2.2 Conditional on filling the form, projects of domestic investors are **less likely** to being implemented, become operational and reach the export stage. This difference in performance holds true at each stage of the process unconditionally as well as conditionally on the previous stage status;

2.3 Finally, domestic investors respond to the industrial policy by **increasing** the capital-labor ratio of proposed projects (i.e., as stated on the application forms) – but not of realized projects relative to foreign investors.

What could account for these differences? Relative to foreign investors, domestic investor might

1. Be relatively more financially constrained;
2. Lack other necessary capabilities to establish successful flower farms (e.g., technical knowledge and marketing linkages);
3. Being selected along factors other than economic viability of their project (e.g., due to connections favouring the applicant and/or comparative advantage in diverting resources granted by the industrial policy).

IV. Policy Implications: It is all about implementation!

Ethiopia has shown serious commitment to an agenda of industrial development and has flexed the right political determination by creating sector-specific institutions. There was a high level recognition in the Government that the lack of competitive industries was seen as a key bottleneck for prosperity and therefore engaged in exceptional program building across various sectors, of which commercial agriculture was identified as a priority one.

The lessons learnt can be applied to a broad range of sectors that the government intends to extend support (sugar, leather, textile and garments, commercial large farms). To improve on the success, however, policy makers must pay more attention to **implementation**. The following are important take-away:

1. A sound industrial policy must make explicit **commitments** regarding termination of unsuccessful projects. In practice, we recognize that it is very difficult to establish credible commitments to withdraw support and terminate unsuccessful projects, particularly in highly uncertain contexts characterized by relative weak administrative capacity. Ex-ante **transparency** with respect to the allocation of support (e.g., by making compulsory the publication of information about support granted to specific projects as well as results, possibly on industry association web pages, frequent status updates to development bank, quarterly visit by horticultural development agency to monitor progress, and credible punishment mechanisms to reduce misreporting) makes it easier to commit to withdraw support to unsuccessful projects.

2. The Development Bank has continuously provided financial support to the sector, lacking the necessary **know-how** (and, possibly, incentives) to screen and monitor financed floriculture projects. The process of project evaluation must be more formal: a pre-determined set of criteria must be set to judge potential projects and monitor their progress. A competent agriculture investment lending team is necessary to assess, screen and monitor the projects. Clear rules need to be established a priori to handle out finance at subsidized rate.
3. The capacity of federal institutions to deal with significant demand of land from investors has to be strengthened. To help strengthening capacity, there must be an ex-ante credible commitment to the available allotment and amount of land (or other scarce resources made available for the sector, e.g., licenses). The key challenge has been capacity at the federal level to execute land leases. Given Ethiopia's federal system capacity support grants needs to be in place for execution as this causes a significant hindrance for project takeoff (e.g., several areas lacked electricity and could not get access until proper land lease documents were provided).
4. An **integrated monitoring system** must be set up to monitor the success of individual projects. For example, in the case of floriculture – an industry almost entirely focused on export market – import and export customs records provide useful information on project status and performance. It would be relatively straightforward to verify if a farm has been importing equipment necessary to start production (i.e., is progressing towards implementation) and/or whether export activity has commenced and how the export revenues generated compare with projections laid out in the application forms. These data can be used by investment bank officers to monitor loans. Alternative solutions might, instead, rely on the establishment of a separate and autonomous office with the task of auditing the implementation of the industrial policy.
5. Termination of unsuccessful projects is the most drastic form of ex-post **incentives**. An integrated monitoring system allows for the establishment of more fine-tuned incentives. For example, land lease rates could be made contingent on export success and/or employment generation.

V. Intended Audience and Dissemination

We believe these findings speak to a wide range of audience – government, academia and the private sector. In particular, government authorities intending on starting a new sector especially in fragile and post-conflict state's should take these findings seriously.

Can send to agencies in Ethiopia (EIA, EHDA, Ministry of Trade and Industry – through EDRI – can provide contacts), other countries in Africa starting flower sector (Zambia, Uganda, Tanzania, Rwanda – should be vital for them to understand), post-conflict states (DR C, Angola, Sierra-Leone) as well multilateral organizations (FAO, IFPRI, IFAD, IFC, WB etc)

VI. Further Readings and References

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