# The Ethiopian Quality Standards Regime

Luigi Caloi, Admasu Shiferaw, and Eric Verhoogen*

**Abstract**

This study first provides a detailed description of the institutional arrangements and processes for setting quality standards, assessing and certifying conformity, and enforcing compliance in Ethiopia, a country that has one of the most robust quality assurance regimes of countries at its income level. Next, it examines the extent to which voluntary and mandatory standards in Ethiopia are influenced by international standards. It then sheds light on the perceptions of local firms of the process for setting quality standards, drawing on a small, qualitative interview of manufacturing firms. The study documents a concerted effort by policy makers to build a quality infrastructure that closely adheres to international best practices, with an eye both on the health, safety, and environmental considerations and on advancing competitiveness. The study finds that Ethiopian quality standards are heavily influenced by international standards. Managers perceive compliance with mandatory standards to be costly and time-consuming, while expressing mixed views about the benefits of compliance.

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# Contents

# Introduction

This study presents a detailed description of how quality standards are set in Ethiopia and analyzes how the domestic standards respond to international standards. It also draws on a small, qualitative survey of Ethiopian firms, conducted in June 2023, to shed light on how firms perceive standards and the standard-setting process. This effort to provide a detailed characterization of the standard-setting process in a single country is complementary to other efforts that have focused on particular categories of standards or have made comparisons across countries (Simcoe 2012; Wiegmann, de Vries, and Eom 2023). This study contributes to the literature on factors that shape the industrial upgrading process (reviewed by Verhoogen 2023).

The next section describes the institutional structures for the setting and enforcement of standards. The third section analyzes the influence of international standards on Ethiopian standards. The fourth section reports Ethiopian firms' views of the quality standards. The final section concludes.

# Institutional framework for quality regulation

## Agencies responsible for quality standards

Since 2010, the responsibilities for setting and certifying compliance with quality standards have been borne by four separate public agencies: the Institute of Ethiopian Standards (IES), the Ethiopian Metrology Institute (EMI), the Ethiopian Accreditation Services (EAS), and the Ethiopian Conformity Assessment Enterprise (ECAE).

Collectively, these four agencies are referred to as the national quality infrastructure (NQI). The Ministry of Trade and Regional Integration (MoTRI) oversees the four entities. MoTRI is also responsible for promoting private sector participation in the provision of conformity assessment services. As discussed later, the authority to enforce compliance—for instance, by discontinuing a product or closing down a firm—lies with MoTRI, rather than the four agencies.

Before 2010, the four entities existed, under different names,[1] but were overseen by a single agency, known first (beginning in 1972) as the Ethiopian Standards Authority (ESA) and subsequently (beginning in 1998) as the Quality and Standards Authority of Ethiopia (QSAE). The 2010 reform of the NQI recognized potential conflicts of interest in having all functional units under one agency. It was also a response to a perception that the ESA/QSAE had inadequate capacity to meet the country's growing needs for quality standardization and certification. For instance, because ESA/QSAE had very few internationally accredited laboratories, quality certification was largely conducted by foreign conformity assessment bodies (mainly from South Africa and Germany), which rendered the process too expensive and out of reach for most local firms.

The four agencies that make up the NQI have different responsibilities. The IES coordinates the development of national quality standards. It is also responsible for publicizing quality standards, providing technical training on the standards, and authorizing the use of the National Standards Mark (NSM), an indicator that a product complies with the relevant standard. The EMI is responsible for establishing national measurement systems based on the International System of Units. It also provides calibration, training, and certification services for public and private laboratories. The EAS accredits public and private agencies that provide conformity assessment and certification services, as well as providers of quality inspection and proficiency schemes. The ECAE provides conformity assessment and certification services. First accredited in 2012, the ECAE remains the leading conformity assessment body in Ethiopia, with branch offices in eight regional states.

## Development of standards

The IES develops quality standards in consultation with technical committees (TCs). The composition of TCs and their deliberation process seek to follow what is known as Good Standards Practice (GSP), in line with Annex 3 of the World Trade Organization Agreement on Technical Barriers to Trade, which includes stakeholder engagement, consensus-building, and transparent processes. Stakeholders in the context of GSP include the relevant scientific and research communities, producers of goods and services, regulatory government agencies, and consumer groups. Consensus-building implies adherence to prevailing scientific knowledge and business practices that inform the production and use of a given product. The process is also expected to be open to the public to allow for comments and feedback through websites, emails, and letters to producer and consumer associations.

The IES and the technical committees propose standards to the National Standards Council (NSC), which can approve or reject the proposals. The NSC is chaired by the Minister of Trade and Regional Integration, with the Director General of IES as secretary. The NSC also reviews the overall national quality and standardization strategy. The council includes as members: State Ministers (Vice Ministers) of the Ministries of Education, Innovation and Technology, Urban and Infrastructure, Transport and Logistics, and Health; Directors General from the Environmental Protection Agency, the Ethiopian Metrology Institute (EMI), the Manufacturing Industries Development Institute, the Ethiopian Food and Drug Authority, and the Petroleum and Energy Authority; a professor from Addis Ababa University; the Commissioner of the Ethiopian Customs Commission; and a representative of Addis Ababa Chamber of Commerce.

The standards developed by IES may be voluntary (also referred to as “recommended”) or compulsory (also referred to as “mandatory”). Although not binding, the voluntary standards serve as a focal point and help to publicize—and implicitly encourage adoption of—practices that are expected of firms competing in international markets. In addition, firms that conform to the standards (as judged by a conformity assessment body such as the ECAE) are able to apply for a National Standards Mark (NSM) for the corresponding products, which is helpful for marketing purposes, even in the domestic market.

To date, the IES has introduced approximately 12,800 standards, of which 380 are compulsory. The standards are published in an annual catalogue. The catalogue also lists the prices of documents that detail the technical specifications for each standard. As discussed later, IES quality standards are often adopted from international organizations such as the International Standards Organization (ISO), the International Organization of Legal Metrology (known by its French acronym, OIML), the International Electrotechnical Commission (IEC), the Food and Agriculture Organization (FAO), and the World Health Organization (WHO). For some products—for instance, for products unique to Ethiopia such as injera (the

flatbread made from teff flour)—the technical committees formulate standards on their own, with little reference to international standards. Even in cases in which an international standard is not followed directly, the technical committees often rely on international practices in developing the standards as well as in conformity assessment procedures.

The vast majority of requests to introduce mandatory standards or convert voluntary standards to mandatory arise from regulatory agencies.[2] IES appoints a relevant TC to review each request. Each review starts with writing an impact assessment report (IAR). The IAR primarily attempts to verify the national need for a mandatory standard based on implications for human and animal health, public and worker safety, environmental quality, and tackling deceptive/fraudulent business practices. The IAR also reviews the technical capabilities of conformity assessment bodies (CABs) to certify compliance, and the enforcement capabilities of the relevant regulatory agencies. Lastly, the IAR assesses the technological change, new investment and inputs, as well as worker training that the proposed mandatory standard may entail for local firms. If the required changes are determined by the IAR and subsequent TC deliberations to be beyond current firm capabilities, the NSC may, at times, grant a grace period (from six months to two years) to affected firms to conform with a mandatory standard. Mandatory standards are typically revised automatically when the underlying international standards are revised.

## The quality certification process

Quality certification can be carried out by the Ethiopian Conformity Assessment Enterprise (ECAE), the public agency previously described, or by private certification agencies that are accredited by the Ethiopian Accreditation Services (EAS). BLESS Agri-Food Laboratory Services, a joint venture between French and local investors, which was first accredited by EAS in 2015, is the leading private agency. The ECAE and private agencies such as BLESS are referred to as conformity assessment bodies (CABs).

The quality assurance process starts with companies applying for quality certification from a CAB. Applicants go through a pre-assessment process that involves checking their legal status (such as investment permit, legal name, physical address), and in the case of food and drug companies, having a Certificate of Competence (CoC) from the Ethiopian Food and Drug Administration (EFDA). Firms typically pay the full cost of certification up front to initiate the process.

Product quality certificates and the NSM are valid for three years. During the three-year period, products subject to compulsory standards go through quarterly surveillance and annual reviews. The quarterly surveillance only involves testing product samples while the annual review involves factory inspections. Failure to meet quality standards during such interim reviews could lead to suspension or even revocation of quality certificates. After three years, firms go through a recertification process that is similar to the initial review process. As discussed later, the process of quarterly, annual, and tri-yearly reviews is generally perceived to be burdensome by firms, relative to the process in other countries, such as Kenya.

While CABs can suspend and revoke quality certification and use of the NSM, they are not authorized to discontinue a product or close down the firm because of noncompliance with mandatory standards. Such authority lies with MoTRI and other regulatory agencies such as the EFDA. In addition to receiving reports of noncompliance from CABs, MoTRI also conducts its inspection and testing though surprise visits to factory sites without coordination with CABs. MoTRI also conducts market surveillance of product quality that involves testing a random sample of products from a marketplace (not directly from the producer in question). Enforcement actions could include removing a batch from affected markets, denying market access to a product, or even closing down factories. Given the scope of the regulatory activities, the

Ethiopian government introduced a new proclamation in 2024 that allows MoTRI to authorize trade bureaus of regional states to conduct market surveillance and surprise visits to factory sites across the county. Although the CABs do not have direct enforcement authority, they contribute indirectly to enforcement by publishing on their websites a list of firms whose quality certificates have been suspended or revoked, which may have negative reputational consequences for the listed firms.

In some instances, firms that are subject to voluntary quality standards also apply for the NSM, although this is not required. Once they are authorized to use the NSM, such firms are subject to quarterly and annual reviews just like firms subject to compulsory standard. The difference is that such firms are allowed to sell their products even if they fall short of the recommended quality standard (although they may no longer use the NSM). In recent years, some big companies have started to demand the NSM from their suppliers even when the products involved are not subject to compulsory quality standards. A good example is Ethiopian Airlines, which now requires the NSM from all food vendors even if a given product may not be subject to mandatory standards. Some firms also request quality certification for new products for which there are no mandatory or recommended quality standards. Such requests often trigger IES to issue the relevant quality standards.

The technical capabilities of local conformity assessment bodies to certify products with compulsory standards are limited in some cases. For instance, ECAE has nine laboratories under its testing department, of which only five are accredited by EAS. It is not uncommon for ECAE and BLESS to send some product samples to European laboratories for specific tests for which they do not have local capabilities. This obviously increases the time and financial costs of the conformity assessment process.

Another notable feature of the institutional environment is that in certain industries such as food and chemicals it is mandatory to have an in-house lab certified by EMI. Interviews with staff at ECAE and BLESS suggest that a growing number of firms have invested in lab equipment to bring themselves into conformity with these requirements.

## How international standards influence Ethiopian standards

This section examines the extent to which IES incorporates standards from international bodies into the standards it issues. The discussion classifies the domestic standards based on their degree of "relatedness" to international standards. It begins with voluntary standards and then turns to mandatory standards.

### Voluntary standards

The IES's most recent annual catalogue of voluntary standards, from 2023, includes 11,528 standards. For each standard, the catalogue indicates which of the following categories a standard fall into:

1. Identical in content and structure to an International Organization for Standardization (ISO) standard.
2. Identical in content and structure to an International Organization of Legal Metrology (OIML) standard.
3. Identical in content and structure to an International Electrotechnical Commission (IEC) standard.
4. Identical in content and structure to a joint ISO-IEC standard.

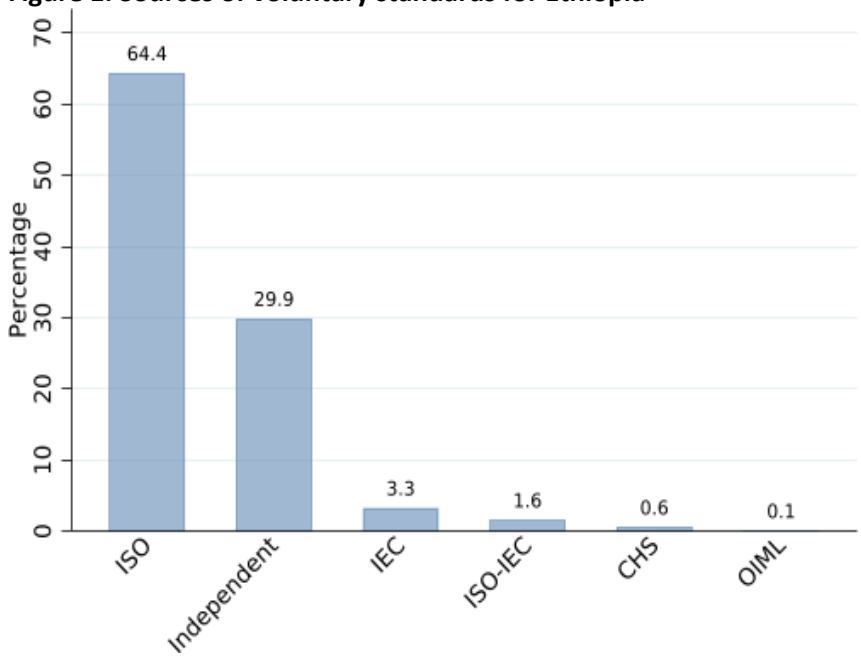
5. Drawn from (possibly with modifications) a Core Humanitarian Standard on Quality and Accountability (CHS) standard.
6. Independent (Ethiopia-specific).

Analysis using this categorization from the IES finds that most voluntary standards are adopted directly from international organizations. Specifically, the analysis reveals that the 11,528 standards can be classified as follows:

- 7,420 (64.4 percent) are identical in content and structure to ISO standards.
- 380 (3.3 percent) are identical in content and structure to IEC standards.
- 190 (1.6 percent) are identical in content and structure to joint ISO-IEC standards.
- 73 (0.6 percent) are drawn from (possibly with modifications) CHS standards.
- 14 (0.1 percent) are identical in content and structure to OIML standards.
- 3,451 (29.9 percent) are independent Ethiopian standards.

Figure 1 presents a bar chart of these shares. It is striking that nearly two-thirds of the voluntary standards published by the IES come directly from the ISO. Discussions with IES experts indicate that this is largely because developing standards from scratch can be very expensive, requiring months and potentially years of research and preparation.

**Figure 1. Sources of voluntary standards for Ethiopia**




*Source:* Original analysis of information from Institute of Ethiopian Standards (IES) 2023 catalogue of voluntary standards.
*Note:* The figure displays the percentage of Ethiopian voluntary standards that are identical to standards from the indicated international organization. CHS = Core Humanitarian Standard on Quality and Accountability; IEC = International Electrotechnical Commission; ISO = International Organization for Standardization; ISO-IEC = joint ISO and IEC standard; OIML = International Organization of Legal Metrology. Independent standards are those that are not indicated as being drawn directly from an international organization.

## Compulsory standards

The 2023 catalogue of Compulsory Ethiopian Standards (CES) lists 328 standards. In some cases, only a subset of clauses in the published standard are mandatory. This analysis classifies a standard that has any mandatory clauses as mandatory. According to IES experts, mandatory clauses are technical regulations that primarily address health, safety, environmental, and fraud considerations. Because of limited regulatory capacity, regulatory agencies prioritize violations of mandatory clauses in imposing legal sanctions on nonconforming firms. Conformity assessment bodies, however, consider the entire mandatory standard, regardless of whether particular clauses are mandatory, in issuing quality certifications.

Unlike the voluntary standards, these mandatory standards are not labeled by the IES as adopted from international standards, and the analysis must exercise some discretion in categorizing them. This exercise focuses on the 86 compulsory standards that correspond to the manufacturing sector.[3] Each standard is classified according to its degree of international alignment, into four categories:

- Complete adoption of international standard. These are identical or nearly identical to an international standard.
- References in introduction. These are not identical to international standards but cite them as references in the introduction.
- International standards in mandatory clauses. These refer to international standards or are closely related to international standards in at least one of their mandatory clauses, usually for testing methodologies.[4]
- Independent (Ethiopia-specific). These are not identical in wording to an international standard and contain no reference to international standards either in their introductions or in their mandatory clauses.

Several steps were taken to classify the 86 CES standards into these categories. The exercise first noted any international standards explicitly referenced in the text of the standard, either in the introduction or in the body of text. It also searched online for international standards that closely match the name and abstract of the CES standard. In doing so, it searched not only the standards-issuing bodies mentioned earlier (ISO, IEC, OIML, CHS) but also any other standards posted online, including from the Codex Alimentarius issued by a joint commission of the Food and Agriculture Organization (FAO) and the World Health Organization (WHO), as well as European Standards (acronym EN) issued by European standards bodies. These steps readily identify almost all standards in categories 1–3.

Before classifying a standard as "Independent (Ethiopia-specific)," a further round of searches was conducted. The Ethiopian standards documents list the category of standards in the International Classification of Standards (ICS) to which the standard belongs. All ISO standards in the same ICS category were reviewed to determine whether a mandatory clause of the Ethiopian standard shares language with and/or uses similar test methods as one of them. A similar exercise was carried out for standards from the International Organization of Legal Metrology (OIML) and the International Electrotechnical Commission (IEC). If after this step a standard had no overlap in language or testing methodology with an international standard, it was coded as domestic-only.

An important caveat to this exercise is that it is possible that an Ethiopian standard was influenced by an international standard but the classification exercise failed to detect the influence. This is unlikely, but the

probability is non-zero. In this sense, this analysis provides a lower bound on the influence of international standards on Ethiopian compulsory standards.

Consider some examples. In the first category, Compulsory Ethiopian Standard (CES) 101, "Steel for the reinforcement of concrete, part 2: ribbed bars," is identical in wording and even document formatting to ISO standard 6935-2:2019, which has the same title. Figure 2 presents images of the two standards side by side. In the second category, figure 3 presents an image of a standard (for "Concrete blocks–hollow and solid concrete blocks specification") that refers to international standards (in this case IS 2185 (Part 1): 2005 from the Indian Bureau of Standards and ASTM C90-14 from ASTIM, a standards organization based in the United States) in the introduction. In the third category, figure 4 presents an example of a standard (for "Refined palm olein oil") that refers to international standards in a mandatory clause involving testing procedures.

**Figure 2. Example of identical compulsory Ethiopian and international standards**

a. Excerpt from Compulsory Ethiopian Standard 101 ("Steel for the reinforcement of concrete—Part 2: Ribbed Bars")

b. Excerpt from ISO 6935-2 (with identical title to Ethiopian standard)

ETHIOPIAN STANDARD CES 101

**Steel for the reinforcement of concrete —**

Part 2:
**Ribbed bars**

**1 Scope**

This document specifies technical requirements for ribbed bars to be used as reinforcement in concrete. It is applicable to steel delivered in the form of bars, coils and de-coiled products. This document covers both weldable and non-weldable steels. It does not apply to ribbed bars produced from finished products, such as plates and railway rails.

The production process is at the discretion of the manufacturer.

**2 Normative references**

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/TR 9769, *Steel and iron — Review of available methods of analysis*

ISO 14284, *Steel and iron — Sampling and preparation of samples for the determination of chemical composition*

ISO 15630-1, *Steel for the reinforcement and prestressing of concrete — Test methods — Part 1: Reinforcing bars, rods and wire*

INTERNATIONAL STANDARD ISO 6935-2:2019(E)

**Steel for the reinforcement of concrete —**

Part 2:
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**1 Scope**

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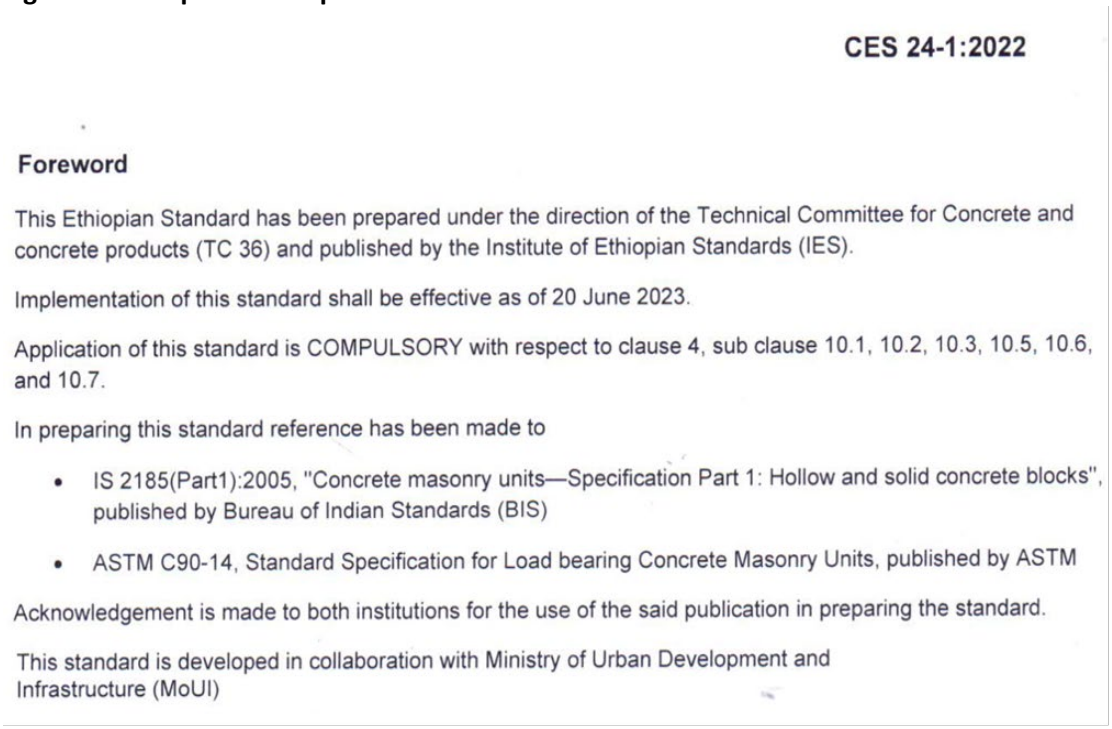
ISO/TR 9769, *Steel and iron — Review of available methods of analysis*

ISO 14284, *Steel and iron — Sampling and preparation of samples for the determination of chemical composition*

ISO 15630-1, *Steel for the reinforcement and prestressing of concrete — Test methods — Part 1: Reinforcing bars, rods and wire*

*Source:* IES Compulsory Ethiopian Standard 101 (refer to figure 2, panel a) and International Organization for Standardization (ISO) Standard ISO 6935-2 (refer to figure 2, panel b).

**Figure 3. Example of Ethiopian standard that references international standards**



CES 24-1:2022

**Foreword**

This Ethiopian Standard has been prepared under the direction of the Technical Committee for Concrete and concrete products (TC 36) and published by the Institute of Ethiopian Standards (IES).

Implementation of this standard shall be effective as of 20 June 2023.

Application of this standard is COMPULSORY with respect to clause 4, sub clause 10.1, 10.2, 10.3, 10.5, 10.6, and 10.7.

In preparing this standard reference has been made to

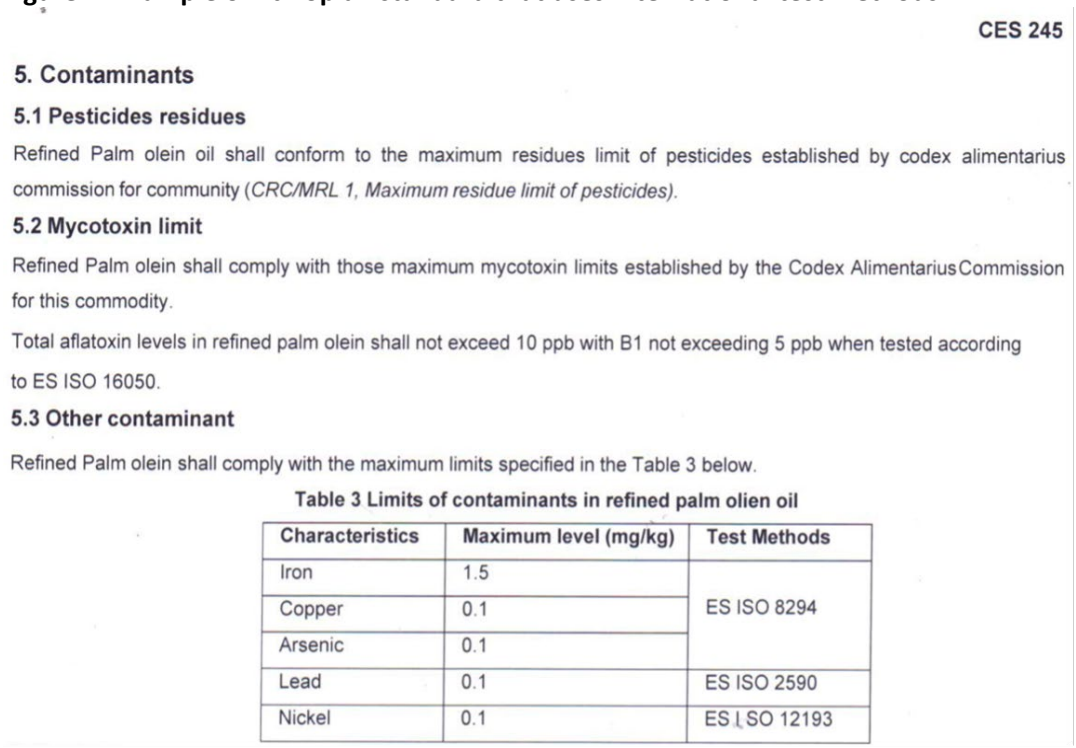
- IS 2185(Part1):2005, "Concrete masonry units—Specification Part 1: Hollow and solid concrete blocks", published by Bureau of Indian Standards (BIS)
- ASTM C90-14, Standard Specification for Load bearing Concrete Masonry Units, published by ASTM

Acknowledgement is made to both institutions for the use of the said publication in preparing the standard.

This standard is developed in collaboration with Ministry of Urban Development and Infrastructure (MoUI)

*Source:* Compulsory Ethiopian Standard 24-1:2022 ("Concrete blocks—hollow and solid concrete blocks specification").

**Figure 4. Example of Ethiopian standard that uses international test methods**



CES 245

**5. Contaminants**

**5.1 Pesticides residues**

Refined Palm olein oil shall conform to the maximum residues limit of pesticides established by codex alimentarius commission for community (*CRC/MRL 1, Maximum residue limit of pesticides).*

**5.2 Mycotoxin limit**

Refined Palm olein shall comply with those maximum mycotoxin limits established by the Codex Alimentarius Commission for this commodity.

Total aflatoxin levels in refined palm olein shall not exceed 10 ppb with B1 not exceeding 5 ppb when tested according to ES ISO 16050.

**5.3 Other contaminant**

Refined Palm olein shall comply with the maximum limits specified in the Table 3 below.

**Table 3 Limits of contaminants in refined palm olien oil**

| Characteristics | Maximum level (mg/kg) | Test Methods |
|---|---|---|
| Iron | 1.5 | ES ISO 8294 |
| Copper | 0.1 | |
| Arsenic | 0.1 | |
| Lead | 0.1 | ES ISO 2590 |
| Nickel | 0.1 | ES ISO 12193 |

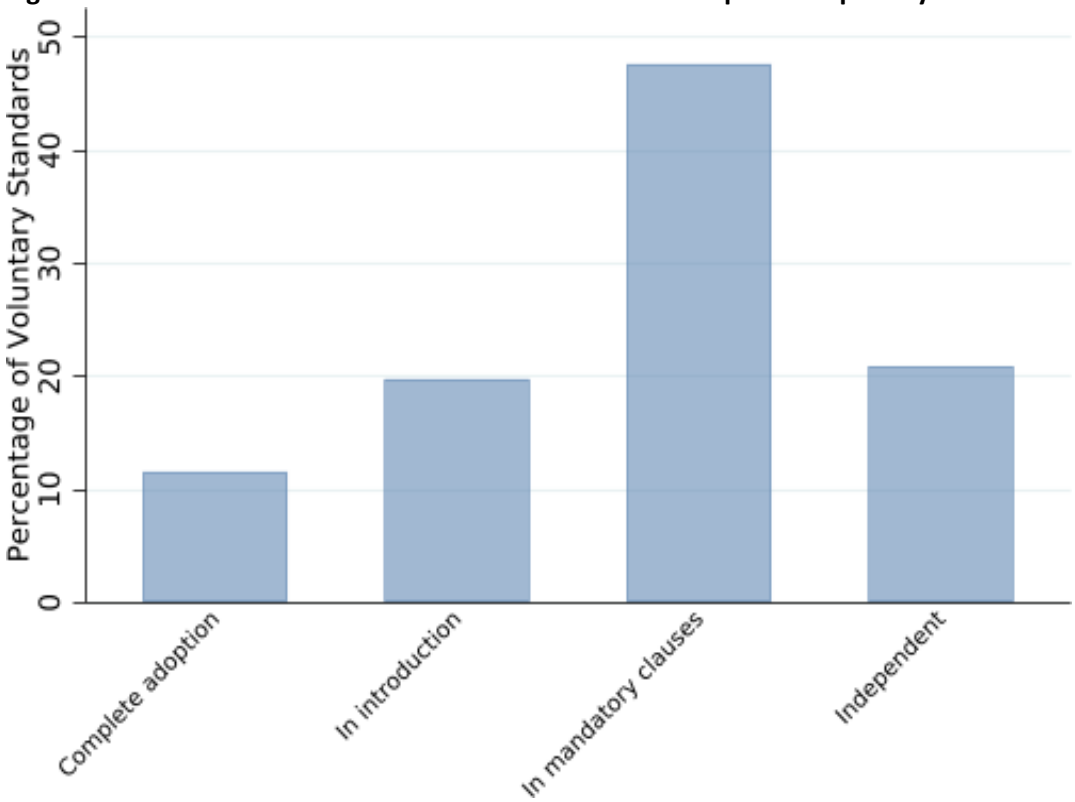
*Source:* IES Compulsory Ethiopian Standard (CES) 245 (Refined palm olein oil).

Using the procedure outlined earlier, the analysis finds that the 86 compulsory manufacturing standards can be classified as follows:

1. Complete adoption of international standard: 10 standards (11.6 percent).
2. References in introduction: 17 standards (19.8 percent).
3. International standards in mandatory clauses: 41 standards (47.67 percent).
4. Independent (Ethiopia-specific). 18 standards (20.93 percent).

Figure 5 presents a bar chart of these shares. The final round of the search does not significantly change the classification. If this round is excluded and the analysis instead focuses only on Ethiopian standards that are identical to international standards or that directly cite an international standard in the introduction or body of the text of a standard, then corresponding numbers would be: 9 standards in category 1, 17 in category 2, 40 in category 3, and 20 in category 4.

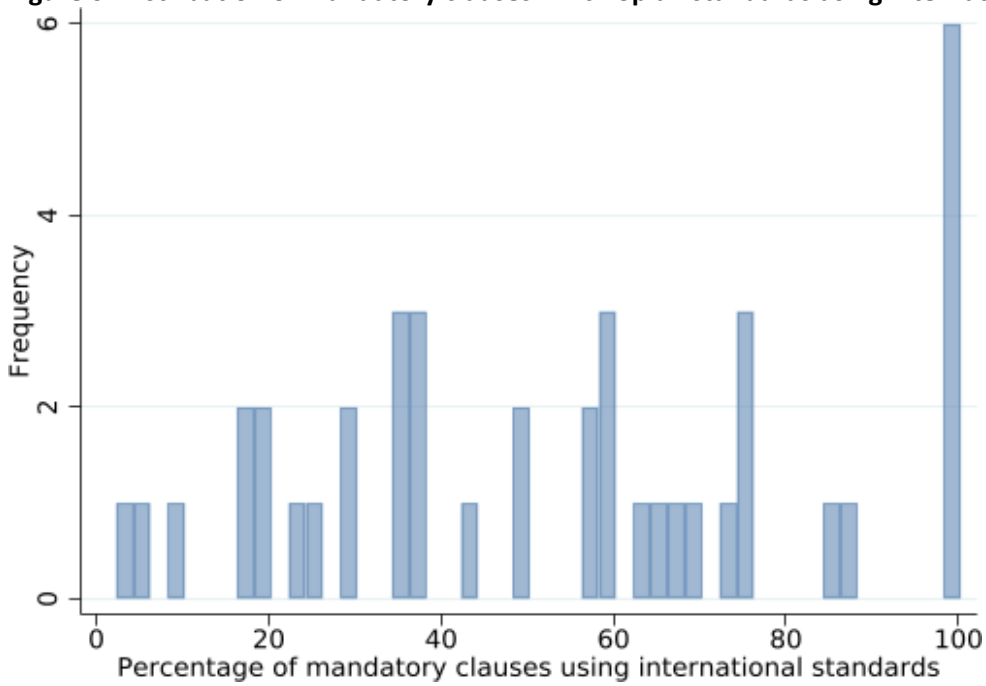
**Figure 5. Classification of international relatedness of Ethiopia's compulsory standards**




*Source:* Original analysis of information from IES 2023 Catalogue of Compulsory Ethiopian Standards.
*Note:* The figure displays the share of compulsory Ethiopian standards falling into four categories: (1) complete adoption of international standard, (2) references in introduction, (3) international standards in mandatory clauses, (4) independent (Ethiopia-specific).

As a final exercise, for the 41 standards in category 3, the analysis considered each mandatory clause in the Ethiopian standard and determined whether it utilizes a testing methodology from an international standard. For each standard, the share of mandatory clauses that utilize such methodologies was then calculated. Figure 6 presents a histogram of these shares. The shares of mandatory clauses that use testing methodologies from international standards are fairly widely distributed, with a spike at 100 percent.

**Figure 6. Distribution of mandatory clauses in Ethiopian standards using international test methods**




*Source:* Original analysis of information from IES 2023 Catalogue of Compulsory Ethiopian Standards.
*Note:* The histogram depicts the frequency of percentages of mandatory clauses that utilize international testing standards among the 41 standards in category 3 ("international standards in mandatory clauses").

Overall, these results indicate that the Ethiopian compulsory standards are heavily influenced by international standards. Although the analysis has focused on manufacturing, it seems likely that a similar degree of influence would be observed in other sectors, including construction.

The considerable influence of international standards in part reflects the fact that many standards that are currently mandatory were first introduced by IES as voluntary standards, which, as discussed, are overwhelmingly adopted directly from international standards. However, although the Ethiopian standards often explicitly refer to international standards and adopt their testing methodologies, the test performance levels required for products to be certified may still differ. It is beyond the scope of this short study to analyze the test performance levels standard by standard; this will be a useful exercise to carry out in the future.

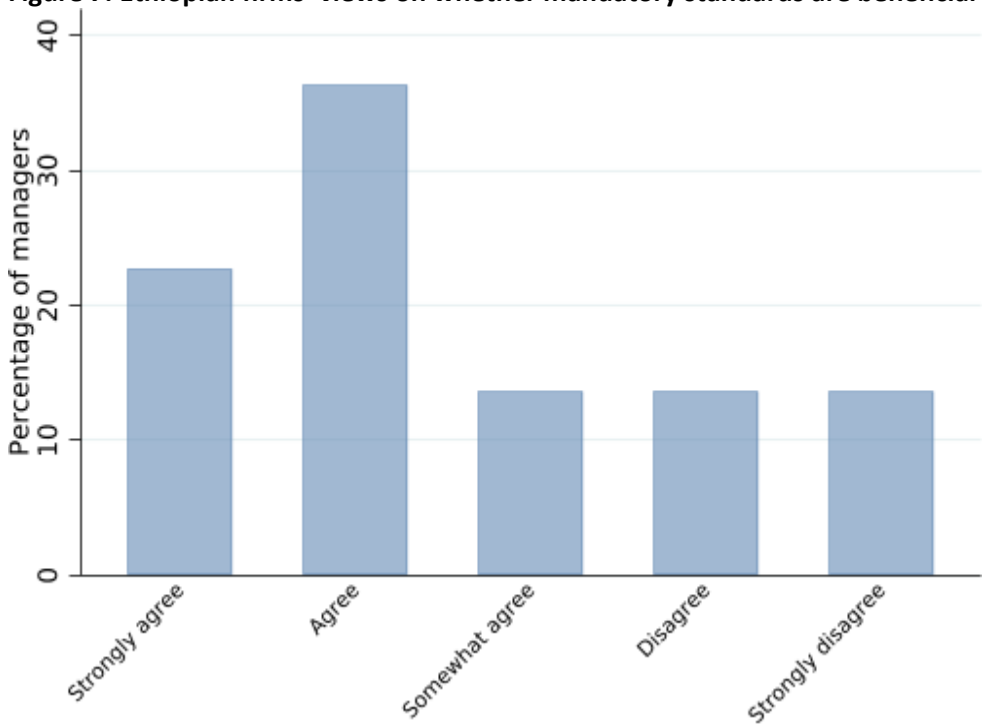
## Firms' perceptions of the quality assurance process

This section provides descriptive evidence on Ethiopian managers' perceptions of the quality assurance process. The analysis is based on semi-structured interviews conducted in the summer of 2023 with managers of 22 manufacturing firms that had gone through a conformity assessment process for mandatory standards. The sample is made up of 15 firms that were certified by ECAE and 7 firms that were certified by BLESS. Questions were open-ended. The responses were classified into the categories described below, which required some judgment. While the results of such free-flowing interviews are open to differing interpretations, qualitative evidence of this type can nevertheless provide useful insights into how the quality compliance process works in practice.

Managers generally found the quality certification process to be burdensome. In response to a survey question about the challenges of getting quality certification for the first time, 21 of the 22 firms described the process as complex, time-consuming or expensive, or some combination of those adjectives. (The remaining firm did not respond to the question.) Views were a bit more mixed about the difficulty of receiving a renewal of certification. Approximately one-third of firms described the process as relatively easy, while the others found it to be complex and/or time-consuming. But the managers of the surveyed firms uniformly (again, 21 out of 22 firms, with 1 firm not responding) found the renewal process to be expensive. Based on data from 6 firms, the direct cost of renewing a quality certificate varies from Br20,000 to Br45,000, with an average cost of Br34,500 per product (approximately $650 per product at the prevailing exchange rate). Although it was not possible to collect similar data on the direct cost of certification for the first time, it is expected to be significantly higher. Managers reported that the certification process typically took two to three months to complete. Approximately 30 percent completed it within two months. About two-thirds completed the process within three months.

There was more heterogeneity in views about the benefits of the certification process. For instance, in assessing whether compliance with mandatory standards improved product quality, 41 percent of managers reported no change or only a minor change in quality. The remaining 59 percent reported quality improvements, of which 14 percent indicated moderate change and 45 percent reported a major change. In all, 59 percent of managers either agreed or strongly agreed with the statement that "compliance with mandatory standards was beneficial to the firm." At the same time, 27 percent of managers either disagreed or strongly disagreed with that statement. Figure 7 plots the full set of responses to this question. Regarding managers' own assessment of firm performance, 31 percent indicated improvements in sales and productivity following certification, 50 percent reported improvements in sales and market share, while the remaining 18 percent reported no benefits at all.

**Figure 7. Ethiopian firms' views on whether mandatory standards are beneficial**




*Source:* Original survey of Ethiopian firms conducted by in Summer 2023.
*Note:* The figure depicts the distribution of firms' agreement or disagreement to the statement "Compliance with mandatory standards was beneficial to the firm." Responses are from semi-structured interviews with managers of 22 manufacturing firms that went through a conformity assessment process for mandatory standards.

Some managers also voiced some complaints about corruption among auditors of conformity assessment bodies (CABs), which is perceived to add to the cost of compliance. Given the reportedly high cost of compliance with mandatory standards, some managers also complained about unfair competition from informal firms that sell similar products without the NSM or using a counterfeit NSM. On the other hand, about 64 percent of respondents reported having received support from government agencies in the form of technical support and training, which seems consistent with the missions of NQI institutions.

## Conclusion

This short study has sought to contribute in three ways to understanding about the role of quality standards in development. First, it has reviewed the institutional organization of standard-setting in Ethiopia, a country that has one of the most robust quality assurance regimes of countries at its income level. Second, it has analyzed the extent to which the standards adopted by Ethiopia are influenced by international standards. Third, it has presented evidence from a small semi-structured survey about how Ethiopian managers view the quality-assurance process.

The study has two main findings. The first is that Ethiopian quality standards are heavily influenced by international standards. This is especially true for the large set of voluntary standards. But a smaller, more consequential, set of compulsory standards are also significantly influenced by international standards. The second main finding is that Ethiopian managers view the standards as costly and time-consuming to

comply with. Views on the benefits of the standards are mixed. But managers are nearly unanimous that the standards are burdensome.

An important question raised by the findings is whether standards in Ethiopia are set at an economically appropriate level of stringency. Analysis of this important question is a topic for future work.

## Notes

[1] Before 2010, the IES was known as the Ethiopian Standards Agency (ESA), the EAS was known as Ethiopian National Accreditation Office (ENAO), and the EMI was known as National Metrology Institute of Ethiopia (NMIE). Only the ECAE retained its name following the 2010 reform.

[2] A request for mandatory standard could technically originate from anywhere, including consumer groups, individual firms, and research institutes, in addition to regulatory agencies.

[3] This study does not observe a direct mapping from standards to firms to which they apply. In forming the list of standards to focus on, this study selected all standards that in the authors' best judgment appear to apply to manufacturing firms.

[4] If a standard cites an international standard in the introduction, it is included in category 2 and excluded from category 3.

## References

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