

1. OVERVIEW

The *Enabling the Business of Agriculture 2016* report covers 40 countries in seven regions. Ten topics have been developed to measure regulations that can impact firms in the agribusiness value chain, providing data and analysis that allow policy makers to compare their country's laws and regulations with those of others. A scoring methodology that is based on good practices in relevant regulatory dimensions has been developed for 6 of the 10 topics measured: seed, fertilizer, machinery, finance, markets and transport; the remaining topics (land, water, livestock and ICT) will be further developed and scored next year.

Enabling the Business of Agriculture promotes smart regulations that ensure safety and quality control while at the same time promote efficient regulatory processes that support agribusinesses. Regulation in agriculture is justified to address market failures and protect safety, health and the environment. But some governments do not tackle these issues through appropriate regulation. Regulations may introduce burdensome procedures that shift economic activity to

greater informality and corruption without even attaining the original objectives.¹ So it is important to assess the efficiency and quality of specific regulations. The *EBA* methodology highlights smart regulation in each of the measured areas. This methodology has been informed by an extensive literature review and consultations with experts.

For chemical fertilizers, for example, controls are necessary to prevent damage to the soil and adulterated fertilizer use but excessive tests that prolong fertilizer registration for years and cost thousands of dollars are difficult to defend.² Similarly burdensome import procedures, which require fertilizer importers to make purchases months in advance, can hinder market access. *EBA* assigns higher scores to countries with laws requiring the labeling of fertilizer and prohibiting the sale of open or mislabeled fertilizer bags. At the same time, countries that allow the private sector (including foreigners) to import fertilizers or do not require re-registration if the product has been already registered in another country are also seen as following

good practices and given high scores.

Smart regulations can improve products and services and lower costs for agribusinesses. Specific country examples in the agricultural sector show the impact of good regulatory reform on improving the supply and lowering the prices in the seed and mechanization markets in Bangladesh and Turkey,³ in the fertilizer sector in Bangladesh,⁴ Kenya⁵ and Ethiopia⁶ and in the maize industry in Eastern and Southern Africa,⁷ among others.

But apart from these country-specific examples, there are few data that can help to better understand the link between regulations and agricultural productivity on a global scale. Extensive literature on the matter focuses on the existence or quantity of regulations, but few studies look at the quality of those regulations.⁸ *EBA* attempts to fill this gap by assessing regulatory quality across a wide range of countries, thus providing a basis to understand how regulations affect economic outcomes.

Where are agribusiness regulations smarter?







A color coding system displays a synthetic measure of a country's *EBA* score in a particular topic to signal a country's adoption of good practices and areas where improvement is needed (table 1.1).

Colombia, Denmark, Greece, Poland and Spain score above average in all topics measured (dark green or green in table 1.1).⁹ In general, these countries have a higher number of smart regulations in the topics covered. Although they share a substantial number of good practices, they also have room for improvement. Colombia displays strong and efficient fertilizer registration norms, laws that support financial inclusion and adequate market regulation, but still has low safety standards for machinery. Poland has the top score for regulations related to cross-border transport, seed development and certification and fertilizer quality control, but lacks certain regulations for warehouse receipts, which would complement the existing collateral regime to obtain a loan for agriculture production.

Burkina Faso, Burundi, Ghana, Myanmar and Niger score below average on all topics (red or dark

red in table 1.1), which suggests there is room for improvement in adopting the identified good practices across several topics (box 1.1). But in most countries the performance is more mixed – there are a number of good regulatory practices and at the same time areas for improvement. Bosnia and Herzegovina has solid regulations for plant protection and fertilizer but lacks regulations for credit unions and e-money. Morocco and Mozambique have weak regulations in agricultural finance but strong regulations for the registration, certification and development of new seed varieties. Vietnam has strong regulations for fertilizer quality control and plant protection, but lags in requirements for tractor dealers and safety standards for machinery.

TABLE 1.1 Colombia, Denmark, Greece, Poland and Spain score above average in all EBA topics

COUNTRY	 SEEDS	 FERTILIZER	 MACHINERY	 FINANCE	 MARKETS	 TRANSPORT
BANGLADESH	●	●	●	●	●	●
BOLIVIA	●	●	●	●	●	●
BOSNIA AND HERZEGOVINA	●	●	●	●	●	●
BURKINA FASO	●	●	●	●	●	●
BURUNDI	●	●	●	●	●	●
CAMBODIA	●	●	●	●	●	●
CHILE	●	●	●	N/A	●	●
COLOMBIA	●	●	●	●	●	●
CÔTE D'IVOIRE	●	●	●	●	●	●
DENMARK	●	●	●	N/A	●	●
ETHIOPIA	●	●	●	●	●	●
GEORGIA	●	●	●	●	●	●
GHANA	●	●	●	●	●	●
GREECE	●	●	●	N/A	●	●
GUATEMALA	●	●	●	●	●	●
JORDAN	●	●	●	●	●	●
KENYA	●	●	●	●	●	●
KYRGYZ REPUBLIC	●	●	●	●	●	●
LAO PDR	●	●	●	●	●	●
MALI	●	●	●	●	●	●
MOROCCO	●	●	●	●	●	●
MOZAMBIQUE	●	●	●	●	●	●
MYANMAR	●	●	●	●	●	●
NEPAL	●	●	●	●	●	●
NICARAGUA	●	●	●	●	●	●
NIGER	●	●	●	●	●	●
PHILIPPINES	●	●	●	●	●	●
POLAND	●	●	●	N/A	●	●
RUSSIAN FEDERATION	●	●	●	N/A	●	●
RWANDA	●	●	●	●	●	●
SPAIN	●	●	●	N/A	●	●
SRI LANKA	●	●	●	●	●	●
SUDAN	●	●	●	●	●	●
TAJIKISTAN	●	●	●	●	●	●
TANZANIA	●	●	●	●	●	●
TURKEY	●	●	●	●	●	●
UGANDA	●	●	●	●	●	●
UKRAINE	●	●	●	●	●	●
VIETNAM	●	●	●	●	●	●
ZAMBIA	●	●	●	●	●	●

- Top performing countries, defined as those with topic scores above 85, indicating a high number of good practices in place as measured by EBA.
- Countries with a score above the sample average in a particular topic.
- Countries with a score below the sample average in a particular topic.
- Countries with topic scores below 30, indicating a low number of good practices.

High-income countries—Chile, Denmark, Greece, Poland, Russian Federation and Spain— are not measured under EBA finance indicators (see Topic Data Notes in appendix 2).

BOX 1.1 Several good regulatory practices have been identified across topic areas

<p>Seed</p> <ul style="list-style-type: none"> ✓ Variety release committee with representation of the private sector, which meets shortly after each cropping season. ✓ The availability online of an official variety catalog updated after each cropping season and specifying agro-ecological zones. ✓ Availability of initial seed classes to the private sector, which is granted access to breeder and foundation seed, and to material stored in the national gene bank. ✓ In countries where the certification is compulsory, official fee schedules for certification activities are publicly available, and nongovernmental inspectors and/or laboratories can be accredited to carry out part or all of seed certification activities. 	<p>Fertilizer</p> <ul style="list-style-type: none"> ✓ Efficient and affordable fertilizer registration for companies, without the need for re-registration. ✓ Timely availability of fertilizer by the private sector through streamlined import procedures. ✓ Good quality fertilizer by requiring appropriate labeling and prohibiting open fertilizer bags. 	<p>Machinery</p> <ul style="list-style-type: none"> ✓ Streamlined import procedures to facilitate timely availability and delivery of agricultural tractors. ✓ Appropriate testing of agricultural machinery to ensure imported tractors suit country conditions. ✓ Tractor registration and appropriate after-sales service to improve tractor durability. ✓ Compliance with national and international performance standards to ensure high-quality tractors. ✓ Enforcement of safety standards such as roll-over protective structures and seatbelts.
<p>Finance</p> <ul style="list-style-type: none"> ✓ Effective microfinance institutions by balancing supervision and the ability to take deposits. ✓ Reliable credit unions complying with disclosure and liquidity standards. ✓ Payments and other financial services accessible digitally and through retail agents. ✓ Electronic receipts issued by warehouse operators that farmers can pledge to secure a loan. 	<p>Markets</p> <ul style="list-style-type: none"> ✓ Robust phytosanitary protection framework, including national surveillance activities, pest lists, pest risk analysis and domestic and import quarantine procedures. ✓ Efficient and affordable requirements to export major agricultural products, including membership, licensing and per-shipment documentation. ✓ Laws that do not obstruct the production or sale of agricultural goods domestically and a legal environment that facilitates the establishment and commercial operations of farmers' organizations. 	<p>Transport</p> <ul style="list-style-type: none"> ✓ Promotion of fair competition and professionalism by establishing quality criteria for access to the transport sector through efficient licensing and mandatory technical inspections. ✓ Increased competition in the domestic market by reducing additional discriminatory requirements and granting transport rights to foreign trucking companies. ✓ Reduced market distortions by discouraging queueing systems and price interventions and promoting freight exchange platforms for road transport services. ✓ Facilitation of cross-border transport by harmonizing or mutually recognizing road transport standards among regional trading partners.

How do regions perform?

The regulatory quality and efficiency of OECD high-income countries stand out in all topics as measured by *EBA*, followed by Latin America

and the Caribbean and Europe and Central Asia (figure 1.1). South Asia and Sub-Saharan Africa show levels of regulatory strength that are lower or equal to the *EBA* global average across all measured areas. The two

countries in the *EBA* sample from the Middle East and North Africa region—Jordan and Morocco—combine fairly strong regulations on seed and markets, with insufficient legal coverage in finance.

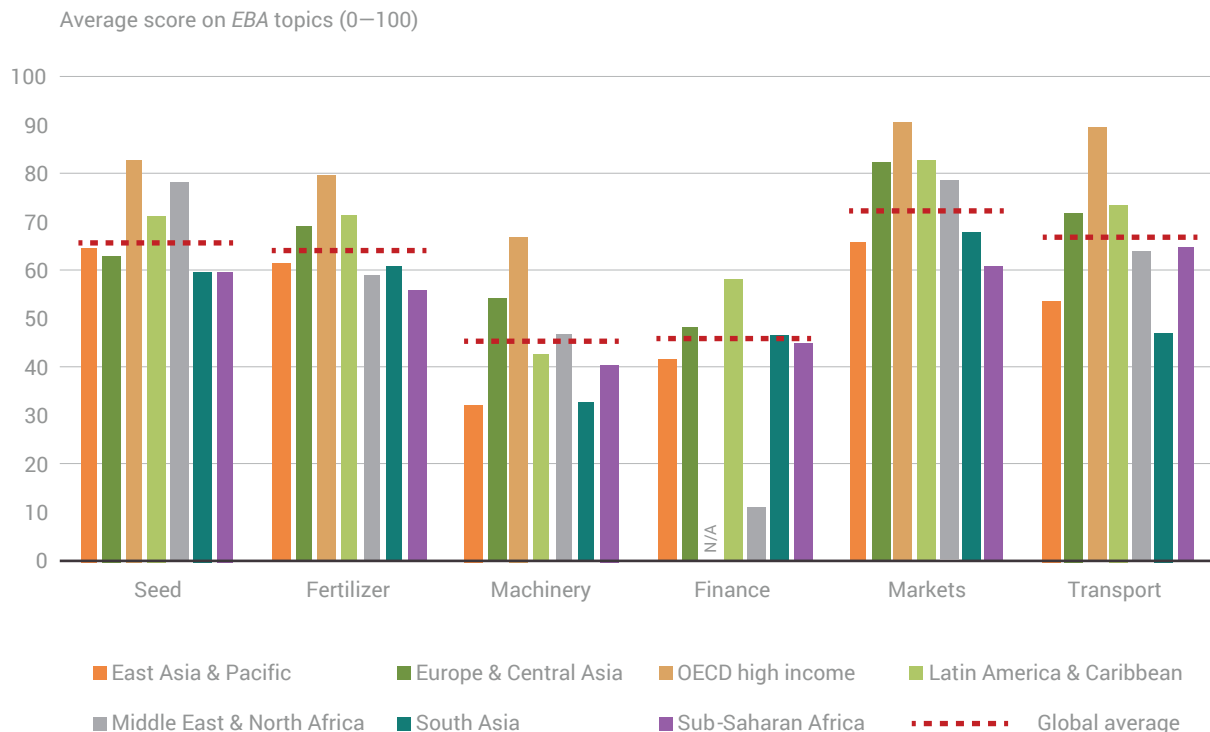
Variation is also observed among countries within a region. In Sub-Saharan Africa, Kenya and Tanzania perform above average, driven mainly by their good regulations in place for machinery and finance, while Niger and Burundi are among the countries with fewer good practices in agribusiness regulation overall (figure 1.2).

How do agribusiness regulations vary across levels of income and agricultural development?

A country's regulations are linked to its growth¹⁰ and development.¹¹ High-income countries have better agribusiness regulations across the areas measured by *EBA* topics than lower-income countries (figure 1.3). The correlation found between country income levels and average scores is quite strong across topics.¹²

The relevance of agriculture in an economy varies significantly across countries. *EBA* uses a classification of agricultural transformation that combines agriculture's contribution to GDP and the share of population dedicated to agriculture. The countries are divided in three groups: agriculture-based, transforming and urbanized.¹³ Urbanized countries have on average smarter regulations for agribusiness than transforming

FIGURE 1.1 Regional performance on *EBA* indicators



Source: *EBA* database.

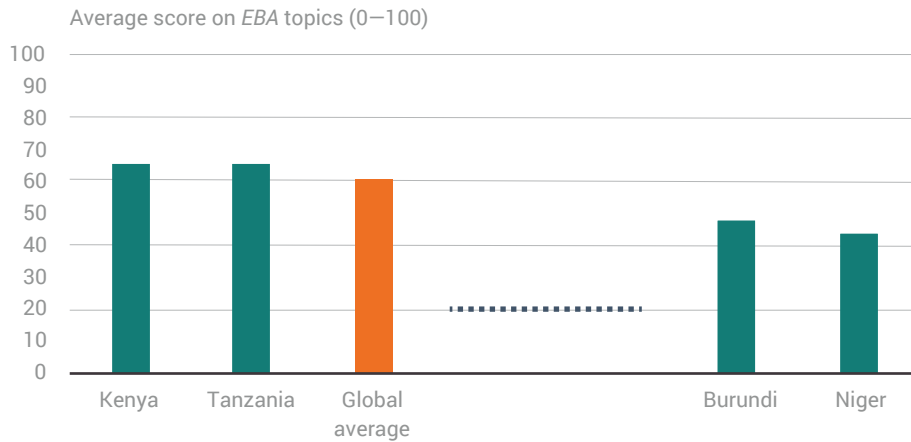
Note: The *EBA* sample covers countries in East Asia and the Pacific (5), Europe and Central Asia (7), Latin America and the Caribbean (4), Middle East and North Africa (2), OECD high income (5), South Asia (3) and Sub-Saharan Africa (14). OECD high-income countries are not measured under the finance topic.

and agriculture-based countries economic growth and agricultural transformation. (figure 1.4). As more data are collected over time, measuring agribusiness regulations and reforms may shed light on the relationships among regulations,

What is the relationship between efficiency and the quality of regulations?

EBA captures three key aspects of the agribusiness sector: operations,

FIGURE 1.2 In Sub-Saharan Africa, countries show different levels of regulatory good practices



Source: *EBA* database.

FIGURE 1.3 High-income countries have regulations in place which reflect a higher regulatory quality



Source: *EBA* database.

Note: The *EBA* sample covers high-income (6), upper-middle-income (4), lower-middle-income (19) and low-income (11) countries.

quality control and trade (see *Methodology* in appendix 1). Better regulation for market access contributes to firm creation, market efficiency and competition,¹⁴ with concrete evidence in the agricultural sector.¹⁵ Well-designed regulations improve outcomes while enhancing agricultural productivity.¹⁶ Efficient rules on exports and imports can improve the quantity, quality, and variety of food at lower prices.¹⁷ While the importance of these three areas

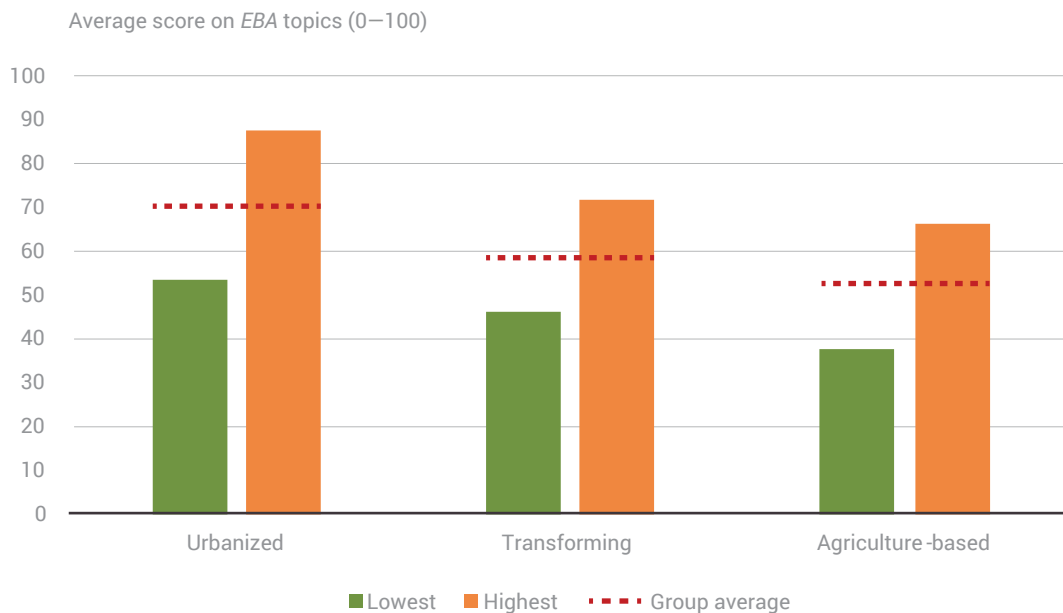
has been demonstrated, it is not clear whether they come at the expense of each other—whether rules that promote easy and nondiscriminatory entry into the market are compatible with rules that enhance safety and quality control.

EBA data clearly show that countries performing well on operations across topics also have strong laws for quality control (figure 1.5). Good regulations

promote quality while helping the market work efficiently; they are complements rather than substitutes. And countries with higher scores on operations also tend to have effective and more streamlined trade requirements (figure 1.6).

EBA also measures the efficiency of administrative procedures, such as fertilizer and seed registration, with their corresponding time and cost components. Countries with

FIGURE 1.4 Urbanized countries have a better *EBA* performance than transforming and agriculture-based countries



Source: *EBA* database.

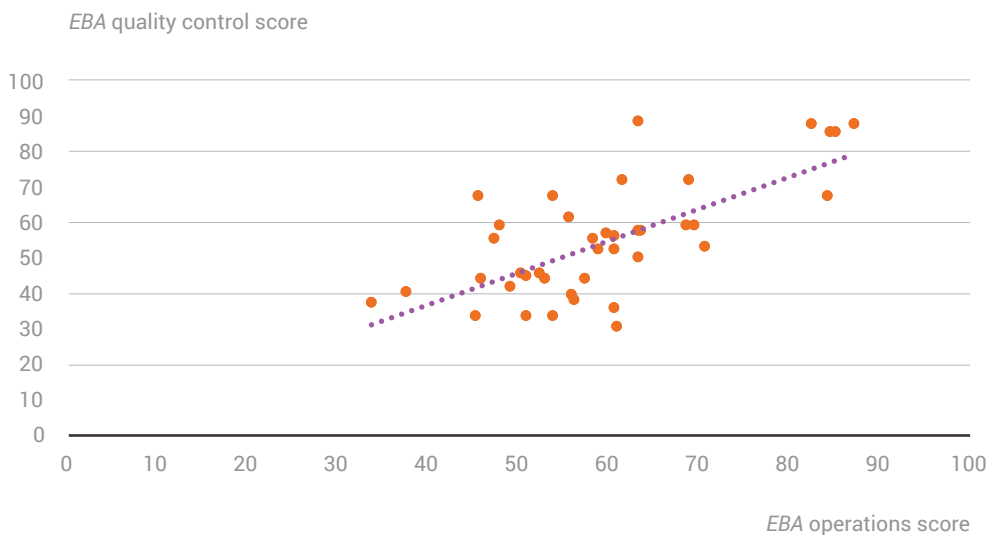
Note: *EBA* countries are divided into three groups. Urbanized countries have a contribution of agriculture to GDP below 25% and a share of active population in agriculture below 25%: Bosnia and Herzegovina, Chile, Colombia, Denmark, Georgia, Greece, Jordan, Kyrgyz Republic, Morocco, Nicaragua, Poland, Russian Federation, Spain and Ukraine. Transforming countries have a contribution of agriculture to GDP below 25% and a share of active population in agriculture over 25%: Bangladesh, Bolivia, Côte d'Ivoire, Ghana, Guatemala, Lao PDR, Sri Lanka, the Philippines, Tajikistan, Turkey, Vietnam and Zambia. Agriculture-based countries have a contribution of agriculture to GDP over 25% and a share of active population in agriculture over 50%: Burkina Faso, Burundi, Cambodia, Ethiopia, Kenya, Mali, Mozambique, Myanmar, Nepal, Niger, Rwanda, Sudan, Tanzania and Uganda.

stronger regulations for market operations in a particular area display different levels of efficiency in those processes. While some regions pay an efficiency cost (in actual cost or time) to put the regulations in place, others combine regulatory strength with procedural efficiency.

those in East Asia and the Pacific to comply with similar requirements (in regulatory quality) to register fertilizer products (figure 1.8).

In registering new seed varieties, for example, firms in Latin America and the Caribbean pay a much higher cost than firms in the Middle East and North Africa to adhere to similar rules that guarantee an effective and safe registration process (figure 1.7). Companies in South Asia spend more time than

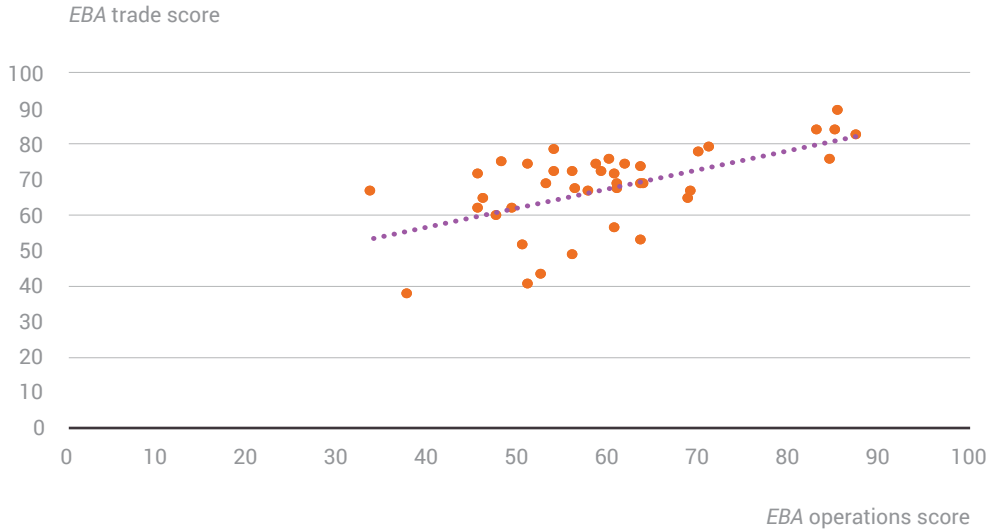
FIGURE 1.5 Countries with smarter regulations on market operations also promote quality control



Source: EBA database.

Note: The figure compares the operations score with the quality control score. The correlation between the two scores is 0.70. The correlation is significant at 5% after controlling for income per capita. The operations score is an average of the scores of indicators classified in the operations category. The quality control score is an average of the scores of indicators classified under the quality control category.

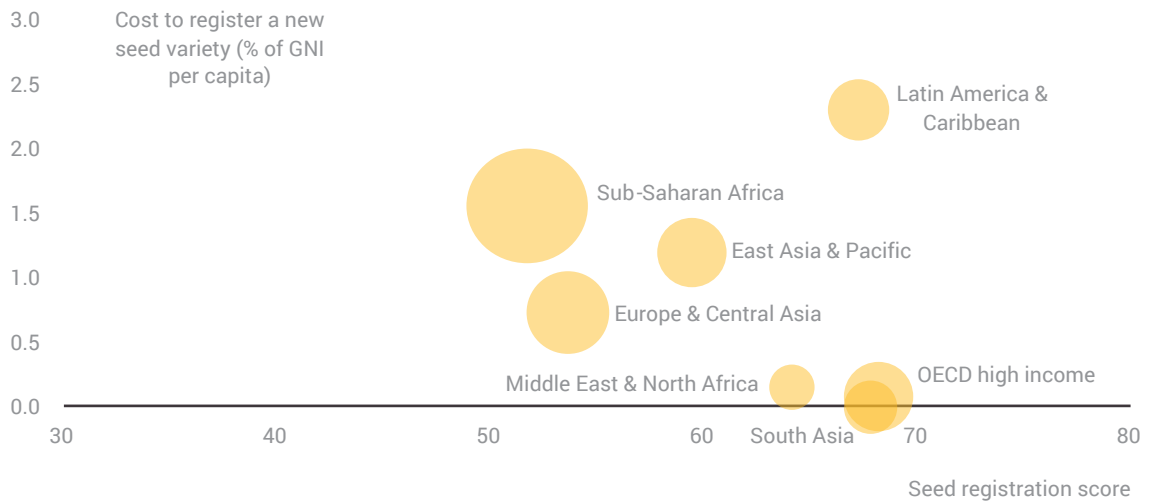
FIGURE 1.6 Better rules on market operations are associated with more efficient trade requirements



Source: EBA database.

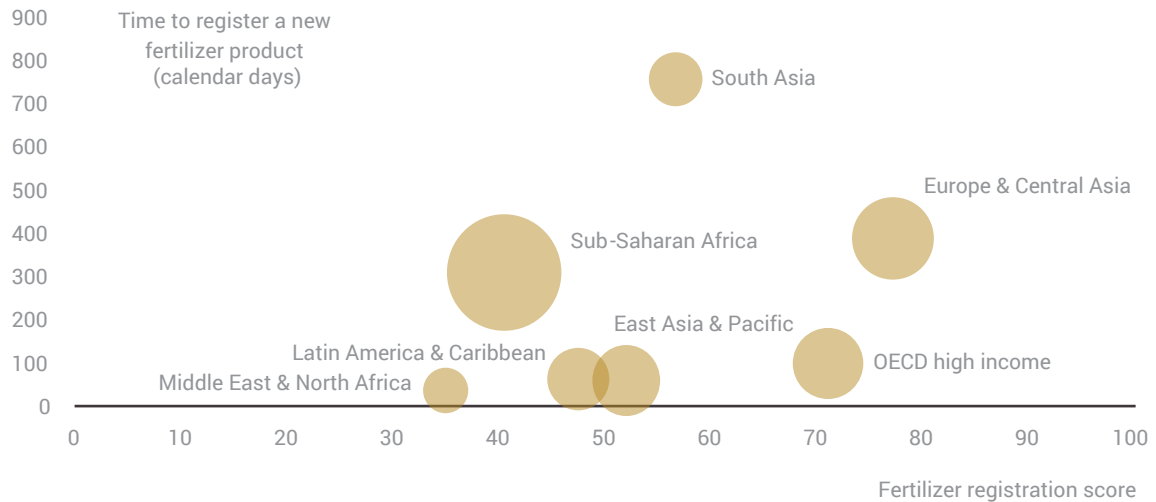
Note: The figure compares the operations score with the trade score. The correlation between the two scores is 0.59. The correlation is significant at 1% after controlling for income per capita.

FIGURE 1.7 Regions with similar rules show different costs for registering a new seed variety



Source: EBA database.

FIGURE 1.8 Regions with similar rules have different time durations in fertilizer registration



Source: EBA database.

Are agribusiness regulations discriminating against the private sector, foreign or small companies?

Participation and investment in agriculture by private sector enterprises—big or small, domestic or foreign—can generate such benefits as higher productivity and access to capital and markets.¹⁸ But these benefits depend on a wide range of factors including regulatory measures to improve both the business climate and the effective competition; for low-income and middle-income countries it is essential to avoid discriminating against different types of investors.¹⁹

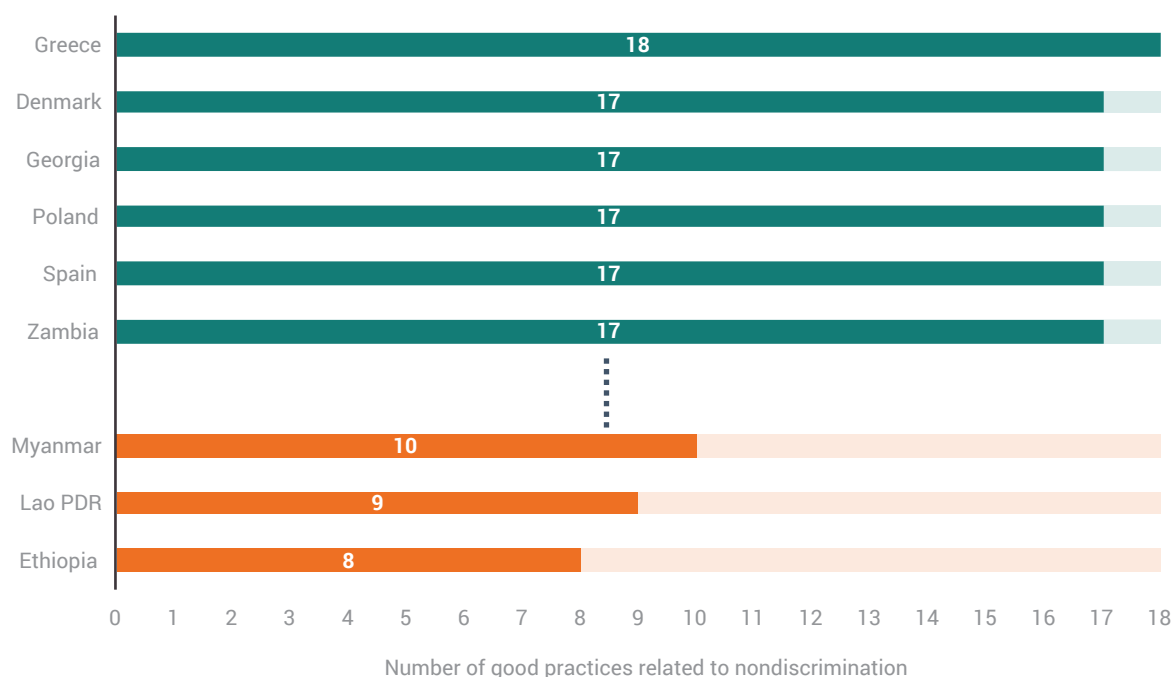
To measure regulatory discrimination against the private

sector, EBA data cover the eligibility of private companies to import machinery, register fertilizer, produce breeder or foundation seeds and be accredited in seed certification. The data also cover the possibility for foreign companies to import fertilizers or perform transport activities in the country. And they cover a minimum capital requirement to start a farmers’ cooperative or a minimum number of trucks to establish a trucking company, which could impede small players in the market (see Alternative ways of presenting the data in appendix 3).

In general, countries perform well in terms of nondiscrimination, with an average of 14 of 18 good practices embedded in the countries’ relevant laws and

regulations. Greece, Denmark, Georgia, Poland, Spain and Zambia have the highest number of non-discriminatory regulations in place while Ethiopia, the Lao People’s Democratic Republic and Myanmar have the fewest (figure 1.9). More than 95% of countries allow the private sector to import tractors and fertilizers, but only a third allow them to carry out the seed certification process. While 38 countries allow foreign companies to transport goods into their country from outside, only 4 allow them to transport goods between two locations within the country.

FIGURE 1.9 Agribusiness rules in Greece are the least discriminatory, while Ethiopia, Lao PDR and Myanmar have potential to improve



Source: EBA database.

Is regulatory information accessible for agribusiness?

Access to information about agribusiness regulations and requirements is also important. Across topics, *EBA* data measure whether governments make regulatory information available to the public, such as the specific licensing requirements, the official fee schedule of various regulatory processes and the catalogs of registered seed varieties or fertilizer products. Also taken into consideration is whether the information and services are accessible online or electronically

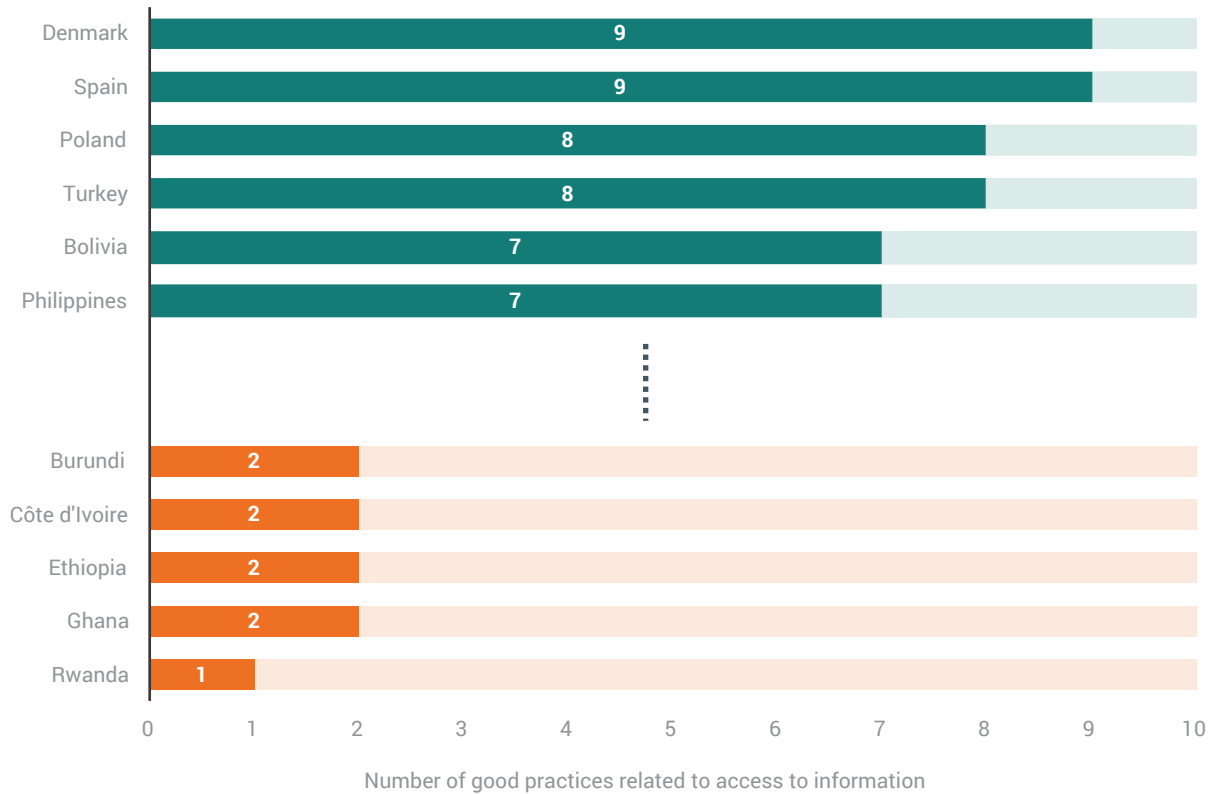
(see *Alternative ways of presenting the data* in appendix 3).

Denmark and Spain comply with 9 of the possible 10 good practices. Rwanda (with only one) and Burundi, Côte d'Ivoire, Ethiopia and Ghana (with two) can still improve to make regulatory information more accessible for participants in the agribusiness value chain (figure 1.10). While 75% of the countries have official catalogs listing new seed varieties or fertilizer products, fewer than half make them available online.

Notes

1. Clark 2014; Van Stel and others 2007.
2. Gisselquist and Van Der Meer 2001.
3. Gisselquist and Grether 2000.
4. Lio and Liu 2008.
5. Freeman and Kaguongo 2003.
6. Spielman and others 2011.
7. Langyintuo and others 2010.
8. Literature on the association between quality of regulation and the productivity of considered agricultural inputs includes Lio and Liu (2008) and Kraay and others (2010), using governance indicators

FIGURE 1.10 Specific information on requirements for agribusiness are most accessible in Denmark and Spain and least accessible in Rwanda



Source: EBA database.

produced by Kaufmann and others (2006) in 199 countries.

9. High-income countries—Chile, Denmark, Greece, Poland, Russian Federation and Spain—are not measured under the *EBA* finance indicators.
10. Divanbeigi and Ramalho 2015; Eiffert 2009.
11. Acemoglu and others 2005; Aghion and Burlauf 2009.
12. The correlation between income per capita and the

average of *EBA* scores in the 6 topics is 0.59.

13. See note in figure 1.4.
14. Ciccone and Papaioannou 2007; Klapper and others 2006; Sarria-Allende and Fisma 2004.
15. See papers cited in endnote 2-6 for examples.
16. See endnote 8.
17. Moïsé and others 2013.
18. FAO 2014.
19. Global Harvest Initiative 2011; FAO 2012.

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