




**CEREALS EXPORT
 RESTRICTIONS IN ETHIOPIA**
*A Review of Practice, Economic
 Costs and Benefits*

November, 2019





Cereals Export Restrictions in Ethiopia – A Review of Practice, Economic Costs and Benefits

Cover page: Belaynesh and Bayush with shelled groundnuts at the Assosa Edible Oil Processing Facility, which is part of the Assosa Farmers Multipurpose Cooperative Union.

*Improved cow feed storage introduced by the Africa RISING project
| Photo credit: Africa RISING/Barry Pound |*

Practical training session for producers and development agents on fruit grafting techniques at Melkassa Agricultural Research Center. Livestock and irrigation value chains for Ethiopian smallholders (LIVES) project, practical training session for producers and development agents on fruit grafting techniques at Melkassa Agricultural Research Center. | Photo credit: ILRI |

*This page: Forage germplasm regeneration site in Zwai, Ethiopia
| Photo credit: Crop Trust/Shawn |*



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Abbreviations

AGRA	Alliance for a Green Revolution in Africa
AoA	Agreement on Agriculture
ATA	Agricultural Transformation Agency
CSA	Central Statistical Agency
EGTE	Ethiopian Grain Trade Enterprise
ERCA	Ethiopian Revenues and Customs Authority
GATT	General Agreement on Tariffs and Trade
GoE	Government of Ethiopia
HRD	Humanitarian Requirements Document
M	Million
MFN	Most-Favoured-Nation
MoANR	Ministry of Agriculture and Natural Resources
MoT	Ministry of Trade
MT	Metric Tonne
NBE	National Bank of Ethiopia
NDRMC	National Disaster Risk Management Commission
NECC	National Export Coordination Committee
TIMA	Teff International Market Access
USD	United States Dollar
VAT	Value Added Tax
WFP	World Food Programme
WTO	World Trade Organisation



Preface

During periods of production shortage, the application of restrictions and export bans on cereals and foodstuffs is common practice in many countries. The goal of such export restrictions is to secure domestic food supplies and to prevent, or at least ameliorate price increases resulting from shortages.

Ethiopia has applied *de facto* bans on grain exports regularly, over a long period of time to ‘stabilize domestic grain prices.’ Although it is possible to obtain export authorization or waivers, the guidelines are not clear about when, and under what circumstances exports should or should not be authorized.


The Government of Ethiopia lifted the maize export ban provisionally in 2014, allowing producers and investors, as opposed to traders, to export the maize they had produced during that production season following a bumper harvest that could have depressed domestic prices and hurt producers. However, the decision to lift the ban was not communicated clearly to stakeholders and the public at large. Thus, an opportunity for creating confidence among the stakeholders in a new policy environment to consider maize exports was missed. When the Ministry of Trade and Industry (MoTI) announced in late 2015 that it had temporarily banned the export of certain agricultural commodities with the objective of mitigating against the effects of drought in the country, the announcement was (and still is) interpreted to mean that the cereals ban, including maize, had been reintroduced *de facto*.

This report focuses on the administration of cereals export restrictions in Ethiopia. It examines the legal, institutional and administrative dimensions of export bans, and analyzes the economic costs as well as the benefits of export restrictions. Also highlighted is the importance of clarity on the preconditions and procedures governing the imposition and relaxation of the export bans, with the objective of fostering attractive long-term private sector investments in agricultural production and processing.

Ethiopia is one of 30 African countries that have ratified the African Continental Free Trade Area (AfCFTA), whose impact includes boosting intra-Africa trade, manufacturing exports, job creation for youth, and poverty alleviation. The country is also in the final stages of negotiations prior to joining the World Trade Organization. Thus, Ethiopia is expected to put in place a more predictable, transparent administration of its cereals export restrictions system.

At the regional level, the similarity of production and harvest seasons has been one of the disincentives to the cereals trade. This pattern however, is being disrupted by climate change and other factors such as the locust invasion and Covid-19 pandemic. While climate variability has had significant impacts on agricultural productivity and food availability, it has also created huge opportunities for increased cereals trade in the region. These developments intensify calls for countries in the region, Ethiopia included, to introduce more predictable and transparent systems that provide conditions and procedures under which cereal export bans are imposed or lifted.

The report concludes that export bans are an extreme instrument at odds with market principles. Further, the restrictions do not allow for a gradual application – a ban is either in place, prohibiting exports, or not in place, allowing exports. Alternative, export restriction



instruments exist such as export taxes (in various forms, including variable taxes), that have a lower potential for market-distortion. In addition, alternative policy instruments to export restrictions can be applied and are being applied by Ethiopia, such as subsidies, technical support to farmers and setting minimum prices. Although Ethiopian cereals export bans have not been effective in terms of stabilising prices and supply, they have created real costs in terms of friction costs as well as costs stemming from the absence of predictability and transparency. Export bans are in conflict with other Ethiopian policies – notably, the strategy to increase agricultural output and expand exports of agricultural and processed agricultural products.

We believe this report, and the regulations developed on the basis of recommendations given, serves as a framework for policy makers and stakeholders in agriculture in Ethiopia to review how the imposition and relaxation of cereal export bans are made and communicated with the aim of assisting producers, processors, traders, and exporters to make informed planting and business decisions.

A Brief Snapshot

The report is divided into four parts:

Part 1 provides a descriptive overview of the scope, time periods and objectives of cereals export bans in Ethiopia. The main objective of cereals export restrictions in Ethiopia is to increase the supply of cereals on the domestic market, thereby increasing food security and ensuring affordable prices for consumers. The exact scope of commodities covered by Ethiopia's cereals export bans is difficult to determine, due to the system's opaqueness. The periods during which bans were in place is also difficult to determine, since official sources of information are lacking, and the secondary sources provide varying information. In particular, it is difficult to determine when and whether or not bans have been lifted.

However, the main cereals subject to export bans in Ethiopia are maize and teff, although in previous years exports of wheat and sorghum have also been banned - these four crops constitute Ethiopia's most important cereals. It is unclear whether or not other cereals, such as millet or barley have been covered by the bans.

Part 2 analyzes the legal, institutional and procedural dimensions of bans and discusses their level of compliance with World Trade Organization rules. While MoTI regulates export trade and is responsible for imposing and lifting export bans in Ethiopia, the decision to impose export bans on cereals is undertaken by the National Export Coordination Committee (NECC). The background analysis prior to export ban decisions is carried out under the Prime Minister's Office and is not available to stakeholders, rendering the decision-making process non-transparent.

MoTI issues letters to other government agencies when imposing an export ban, but the record of such decisions are not publicly available. There is no direct communication of the decision to affected producers/traders/exporters and no official public announcement of the decision. Exporters usually discover the bans when they attempt to process exports, impacting their ability to properly prepare for the consequences of a ban. Currently there are no sets of rules, guidelines or procedures that govern the imposition of export bans. Producers, exporters and other stakeholders operate in an uncertain environment as they are unable to predict when a ban is likely to be imposed. Also, there is no mechanism for articulating their views before decisions on exports bans are passed.

Part 3 reviews how export bans have been used and administered in other selected countries. Export bans are an oft-used instrument, with export restrictions rising, especially during periods of world food price hikes. Normally, and differing from the Ethiopian practice, export bans are only used for short periods of time, whereas other instruments, such as export taxes, are applied over longer periods of time.

In most countries, export bans, like other types of export restrictions, are formally imposed and lifted by the requisite legal instruments and officially announced to the relevant stakeholders or the public at large, by the entity in charge. In a number of (primarily African) countries, however, informal and implicit export bans are widely used, but have been criticised for their negative impact on producers and traders. No country so far, has succeeded in building a predictable regime for export restrictions. The overall experience is that since export restrictions are

primarily used in emergency situations, it has been impossible to design a predictable system based on pre-established criteria. There is no general agreement regarding to what extent predictability is desirable: the short-term effectiveness of export restrictions is highest when a ban enters into force immediately/without prior announcement, leaving

producers with no time to adjust accordingly. However, this also implies the highest negative impact on producers, and most severe decisions on crop planting in subsequent seasons. Thus, there is a trade-off between short-term and medium to long term effectiveness of measures depending on the predictability with which measures are imposed.

Part 4 provides an economic analysis of the impact of export bans in Ethiopia, and provides a summary assessment of the costs and benefits involved; presenting a set of alternative recommendations for improving the current system of cereals export bans in Ethiopia. The export bans implemented in Ethiopia so far, have not generated any notable economic benefits.



Executive Summary

In many countries, it is common practice to apply export bans and other restrictions on cereals and foodstuffs during periods of production shortage; and Ethiopia is no exception. The main goal of such export restrictions is to ensure domestic food supplies and to prevent or at least ameliorate price increases resulting from shortages.

While the purpose of export bans is to lower the price, and increase the availability of food in the short run, critics have pointed out the negative long-term effects of export restrictions, including reduced incentives to invest in agricultural production and processing stemming from price depression as well as uncertainty about future marketability of output due to government interventions. Even in the short run, export restrictions may have undesired consequences on export markets if prices there increase.

Against this background, following a competitive procurement procedure, the Alliance for a Green Revolution in Africa (AGRA) contracted BKP Development to conduct an “economic analysis to identify options and best practices for policy processes and procedures under which cereals export restrictions are imposed and revoked and then complete a cost-benefit analysis to identify recommendations to improve policy processes and procedures.”

Work on the study commenced in February 2017. A draft report was submitted in April 2017, and validated in May 2017; the final report incorporates the comments made on the draft report as well as from discussions from the validation workshop. The report provides (a) a descriptive overview of the scope, time periods and objectives of cereals export bans in Ethiopia; (b) analyses of the legal, institutional and procedural dimensions of bans and discusses their level of compliance with WTO rules; (c) reviews how export bans have been used and administered in other selected countries; (d) provides an economic analysis of the impact of export bans in Ethiopia, and provides a summary assessment of the costs and benefits involved; presenting a set of alternative recommendations for improving the current system of cereals export bans in Ethiopia.

Overview of Export Restrictions in Ethiopia

The main objective of cereals export restrictions in Ethiopia is to increase the supply of cereals on the domestic market, thereby increasing food security and ensuring affordable prices for consumers. Due to the lack of transparency of the system, the exact scope of commodities covered by Ethiopian cereals export bans is difficult to determine. The main cereals that have been subject to export bans in Ethiopia are maize and teff, although exports of wheat and sorghum have also been banned over the past years; these four crops constitute Ethiopia’s most important cereals. Whether other cereals (e.g. millet or barley) have or have not been covered by the bans is not clear.

The periods during which bans were in place are also difficult to determine, as official sources are lacking and the different secondary sources provide varying information. In particular, it is difficult to determine when and whether or not bans are lifted. The apparent periods during which bans have been in place are shown in the following figure.

The Legal, Institutional and Administrative Dimension of Export Bans in Ethiopia

The Ministry of Trade (MoT) regulates export trade and is the institution responsible for imposing and lifting export bans in Ethiopia. However, the decision to impose export bans on cereals is made by the National Export Coordination Committee (NECC) which is chaired by the Prime Minister, and in which MoT is also a member.

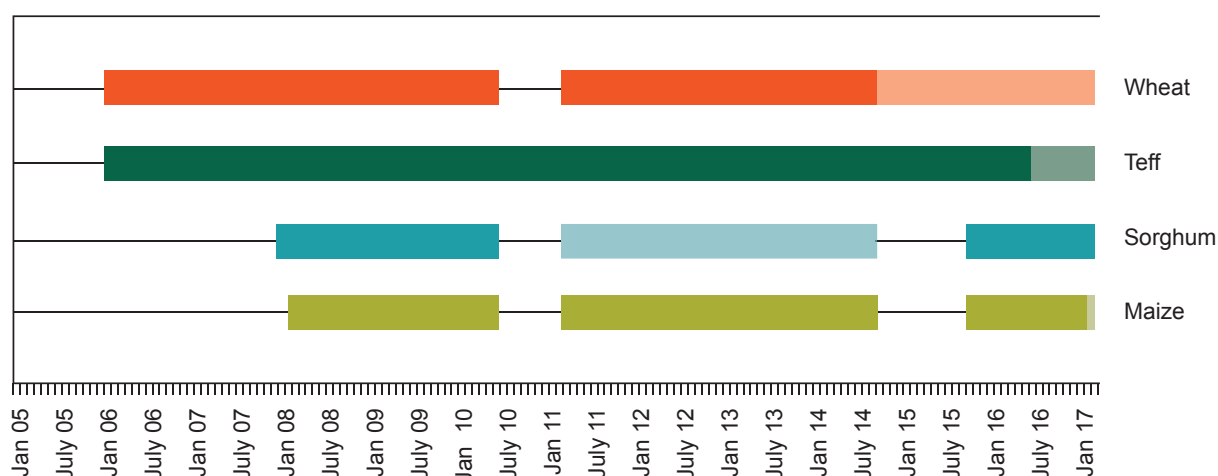
The background analysis prior to export ban decisions is carried out under the Prime Minister's Office and is not available to stakeholders, rendering the decision-making process non-transparent. There is no directorate in MoT regulating export bans on cereals. The Crop Marketing Directorate provides support to cereal exporters but does not administer export bans except to provide information where an export ban has been imposed. MoT, therefore, currently lacks the institutional set up to properly investigate the need to impose an export ban and follow up on the implementation of the ban.

MoT issues letters to other government agencies when imposing an export ban but such decisions are not publicly available. There is no direct communication of the decision to affected producers/traders/exporters and no official public announcement of the decision. Exporters usually discover the bans when they attempt to process exports impacting their ability to properly prepare for the introduction of a ban.

There are currently no sets of rules, guidelines or procedures that govern the imposition of export bans. Producers, exporters and other stakeholders are not able to predict when a ban would be imposed and operate in an uncertain environment. There is also no mechanism for their views to be heard before decisions on exports bans are passed. Ethiopia will most likely face challenges from WTO members in its WTO accession negotiations as some of the current export ban practices – particularly the one on teff and teff flour - are inconsistent with the requirements of WTO agreements. This is because WTO rules prohibit non-temporary export bans.

Experience in Other Countries

- ❖ The use of export restrictions, especially during periods of world food price hikes, is high, and export bans are an often-used instrument. Normally, and different from the



Ethiopian practice, export bans are only used for short periods of time, whereas other instruments, such as export taxes, are applied over longer periods of time.

- ❖ **Transparency:** In most countries, export bans, like other types of export restrictions, are formally imposed and lifted by the requisite legal instrument and officially announced by the entity in charge to the relevant stakeholders or the public at large. In a number of (primarily African) countries, however, informal and implicit export bans are widely used, but have been criticised for their negative impact on producers and traders.
- ❖ **Predictability:** No country has so far succeeded in building a predictable regime for export restrictions. The overall experience is that since export restrictions are primarily used in emergency situations, it has been impossible to design a predictable system based on pre-established criteria. There is no general agreement regarding to what extent predictability is desirable: the short-term effectiveness of export restrictions is highest when a ban enters immediately/without early announcement, as producers have no time to adjust. However, this also implies the highest negative impact on producers and most severe decisions on crop planting in subsequent seasons; there is thus a trade-off between short-term and medium to long term effectiveness of measures depending on the predictability with which measures are imposed.

Economic Costs and Benefits of Export Restrictions in Ethiopia

To a large extent, cereals export bans in Ethiopia were not binding, that is, even without the ban in place exports would still have been limited. The level of exports that would have taken place (not as informal cross-border trade) is too limited to have any notable economic implications in Ethiopia, in terms of exerting downward pressure on prices, stabilising supply, or influencing welfare. As a result of this, the export bans implemented in Ethiopia so far have not generated any notable economic benefits.

If export bans had been economically relevant and yielded larger results – which would have been the case if the export competitiveness of Ethiopian cereals production had been higher, and exports in the absence of a ban had also been higher – they would have resulted in (a) an aggregate welfare loss, and (b) have shifted welfare from rural households producing cereals to urban households consuming cereals. This follows both from the economic theory of export bans and numerous studies undertaken of export restrictions in Ethiopia and elsewhere, reviewed in this report. The distribution of costs and benefits is as follows:

- ❖ Net consumers of cereals (i.e. urban households, including the urban poor) receive a benefit from export bans;
- ❖ Net producers of cereals (including rural poor households) pay the cost in terms of lower producer prices;
- ❖ Intermediaries also sometimes benefit if they do not pass on the full reduction in farm-gate prices to the consumer prices.

Overall, since the benefits to urban households do not fully outweigh the losses to rural households, at the economy-wide level export bans generate a net loss; this is larger in the long run due to the fact that lower domestic prices caused by the ban act as a disincentive

to production, in terms of both planting decisions (there is an incentive to divert production to crops not subjected to a ban) and productivity enhancing and/or cultivated area expanding investments.

Ultimately, since export bans generate winners and losers, it is a policy choice for the government whether the benefits for urban consumers are weighted higher than the losses for rural households and overall welfare.

- ❖ Export bans are an extreme instrument which is at odds with market principles; it also does not allow gradual application – a ban is either in place, prohibiting exports, or not in place, allowing exports. Alternative, less market-distorting export restriction instruments exist, such as export taxes (in various forms, including variable taxes). In addition, alternative policy instruments to export restrictions can be applied and are applied by Ethiopia, such as subsidies, technical support to farmers, setting minimum prices, etc.
- ❖ Although Ethiopian cereals export bans have not been effective in terms of stabilising prices and supply, they have caused real costs in terms of friction costs as well as costs stemming from lack of predictability and transparency.
- ❖ Export bans are in conflict with other Ethiopian policies – notably, the strategy to increase agricultural output and expand exports of agricultural and processed agricultural products is in full contradiction to the export ban.

Main Recommendations

Three broad recommendations for alternative (or consecutive) policies pursuing the aim of expanding supply and stabilising prices on Ethiopia's cereals markets are put forward. The recommendations are ordered from the modest and specific to radical and broad.

Summary Recommendation 1: The identified shortcomings of the current regime of cereals export bans should be addressed. This leaves the instrument of export bans intact but reduces the friction costs associated with it. This summary recommendation aims at improving the management of export restrictions by enhancing the transparency and predictability of bans and how they are imposed and lifted. Details include:

- ❖ The government should pass a directive or regulation which sets out detailed rules and procedures on the imposition, administration and lifting of cereals export bans, including designating the government agency authorized to impose and lift bans (MoT is the recommended agency), the criteria and conditions under which export bans may be issued, the decision-making process, stakeholder consultations, and the periodical review of implementation. A suggested structure is provided in Annex A of the report.
- ❖ Each individual ban taken under the directive should then be formally imposed, amended and revoked and be made public through appropriate notification in the media, as well as on the issuing agency's website.
- ❖ While predictability is difficult to achieve, key criteria should be established, such as the forecast of a serious shortage, using the existing mechanisms under the National Disaster Risk Management Commission (NDRMC).

Summary Recommendation 2: Consider replacing export bans with variable export taxes - an instrument that is a less distorting of the market. In most situations, export bans are not an appropriate instrument to correct real or perceived failures on the cereals market; they also entail the highest welfare losses, compared to other export restrictive measures. This recommendation goes one step further by suggesting to replace export bans with a less distorting instrument. The objective would be to establish a more automated (and, hence, transparent) system, avoiding those that require discretionary decisions. For example, export quotas require allocation decisions by the administration and non-automatic export licences or permits entail high administrative costs for traders. In addition, all instruments requiring discretionary decisions entail the risk of increasing corruption. Export taxes, while certainly not perfect, might therefore be a preferable instrument. In particular, the suitability of variable export taxes should be studied; they are also one of the instruments being considered as an option for the stabilisation of food prices in the WTO.

Summary Recommendation 3: Consider the wider context of measures and consider replacing export restrictions in general by other instruments. The way to increased welfare is not through export constraints, which in the case of Ethiopia only marginally increase supply, but through increased production. Implementing this recommendation, which has been put forward by other studies in the past, will require some more research to develop a coherent concept, but a broad body of evidence, findings and specific recommendations is already available.

Finally, the importance of pursuing an integrated solution to the problem of cereals supply shortages and price volatility cannot be overstated. Thus, even if either of the first two recommendations is pursued, addressing the production side will play an important role, both in the short and long term. This also includes measures to support farmers if cereals prices go down

Ethiopian farm landscape
| photo credit: ILRI/ Apollo Habtamu |



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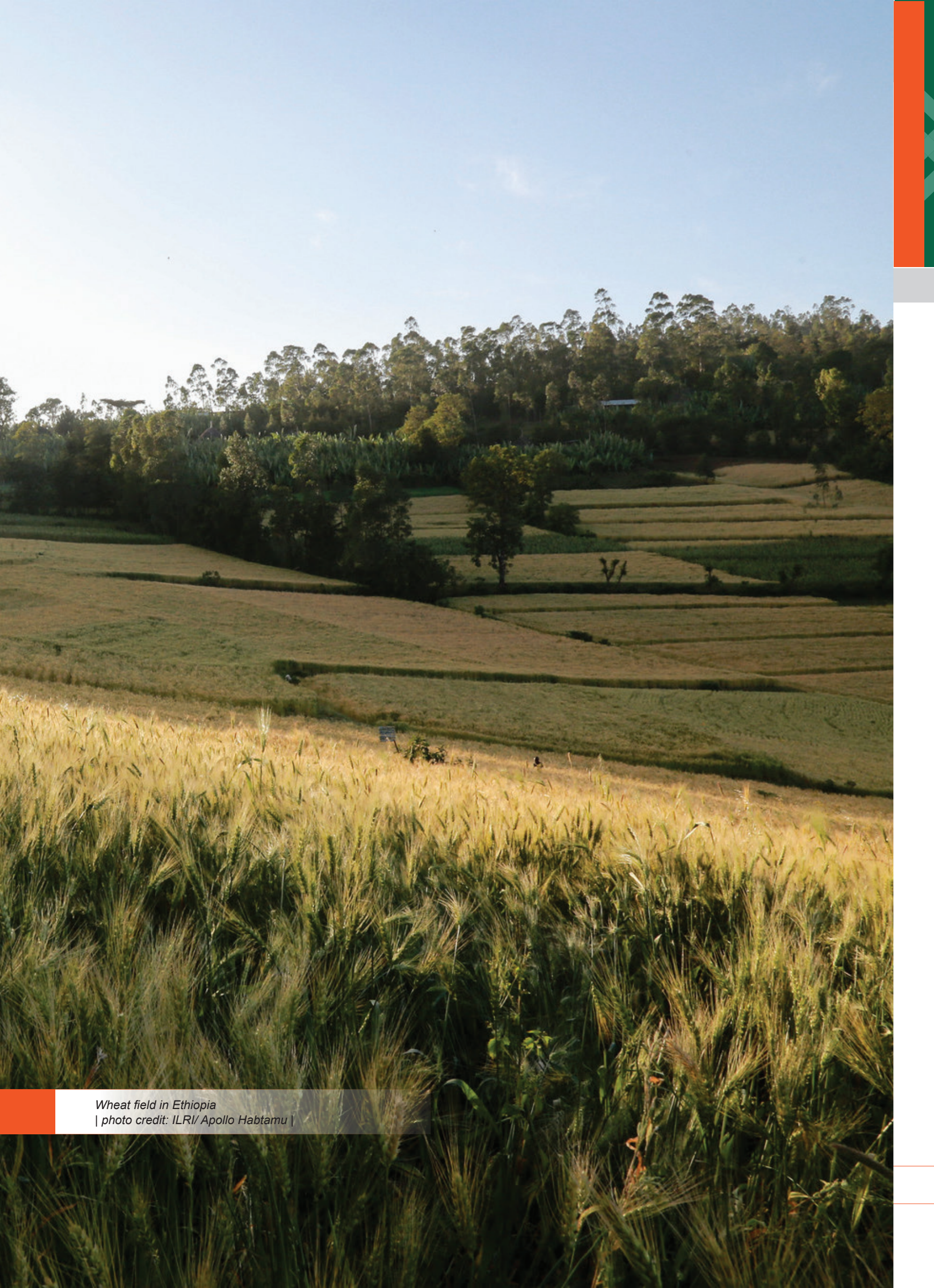
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Wheat field in Ethiopia
| photo credit: ILRI/ Apollo Habtamu |

1.0 INTRODUCTION

In many countries it is common practice to apply export bans and other restrictions on cereals and other foodstuffs during periods of production shortages. Ethiopia is no exception. The goal of export restrictions is to ensure domestic food supplies and to prevent or at least ameliorate price increases resulting from shortages.

While the purpose of these types of export bans is to lower the price, and increase the availability of food in the short run, critics have pointed out the negative long-term effects of export restrictions, i.e. reduced incentives to invest in agricultural production and processing stemming from price depression as well as uncertainty about future marketability of output due to government interventions. Even in the short run, export restrictions may have undesired consequences on export markets if prices there increase.

Against this background, following a competitive procurement procedure, the Alliance for a Green Revolution in Africa (AGRA) contracted BKP Development to conduct an “economic analysis to identify options and best practices for policy processes and procedures under which cereals export restrictions are imposed and revoked and then complete a cost-benefit analysis to identify recommendations to improve policy processes and procedures.”

In line with this objective, the guiding research questions for the study were:

1. To what extent does the current cereals export restrictions regime in Ethiopia contribute to increasing the supply of cereals to Ethiopian consumers at affordable costs, in the short, medium and long term?
2. Which persons, or groups of persons, are affected by the current cereals export restrictions regime, and through which transmission channels?
3. What alternative options and/or modifications to the current regime exist, and what are their costs and benefits?

The present draft report provides responses to these questions and recommendations derived from the findings. The report is structured as follows: Section 2 provides a descriptive overview of the scope, time periods and objectives of cereals export bans in Ethiopia.

Section 3 analyses the legal, institutional and procedural dimensions of bans and discusses their level of compliance with WTO rules. Section 4 complements the analysis of the Ethiopian experience with a review of how export bans have been used and administered in selected other countries, in order to provide good and bad practices from which Ethiopia can learn. Section 5 is devoted to an economic analysis of the impact of export bans in Ethiopia, and provides a summary assessment of the costs and benefits involved, and Section 6 presents the main recommendations.



2

2.1 Objectives

Although a clearly articulated policy on export restrictions and transparent rules for their administration are lacking, based on a literature review as well as statements made and observed behaviour, it is evident that the main objective of cereal export restrictions in Ethiopia is to increase the supply of cereals on the domestic market, thereby increasing food security and ensuring affordable prices for consumers. This differs from the objectives of export restrictions for other primary goods – such as the export bans for cotton (USDA FAS 2012a) or hides and skins – which is to foster domestic value addition.

The two components which make up the overall objective – ensuring that supply and price stability, have both been applied in Ethiopia. For instance, the current ban, which has been in place since the 2016 harvest, was imposed due to the drought occasioned by the El Niño weather phenomenon, and aimed to alleviate food shortages when crop failure occurred. Conversely, the reason stated for imposing the export ban on maize in February 2011, which stayed in place until the end of 2014, were the high domestic consumer prices. This ban was justified as a tool to address price increases, respectively to correct a case where domestic cereal prices were deemed by the government to be too high. Similarly, the ban of teff exports in 2006 was justified by fears that the increased exports in response to soaring international demand for teff would lead to rapid price increases domestically¹.

2.2 Scope and Period

The exact scope of commodities covered by Ethiopian cereals export bans is almost impossible to determine. The main cereals that have been subject to export bans in Ethiopia are maize and teff, although wheat and sorghum exports have also been banned over the past years. These four crops constitute Ethiopia's most important cereals (Figure 1). As there is no written procedure on the imposition and lifting of export bans in relation to any cereal products, it is unclear whether different considerations govern export bans on the four products or, indeed, whether other cereals are also affected by the ban.

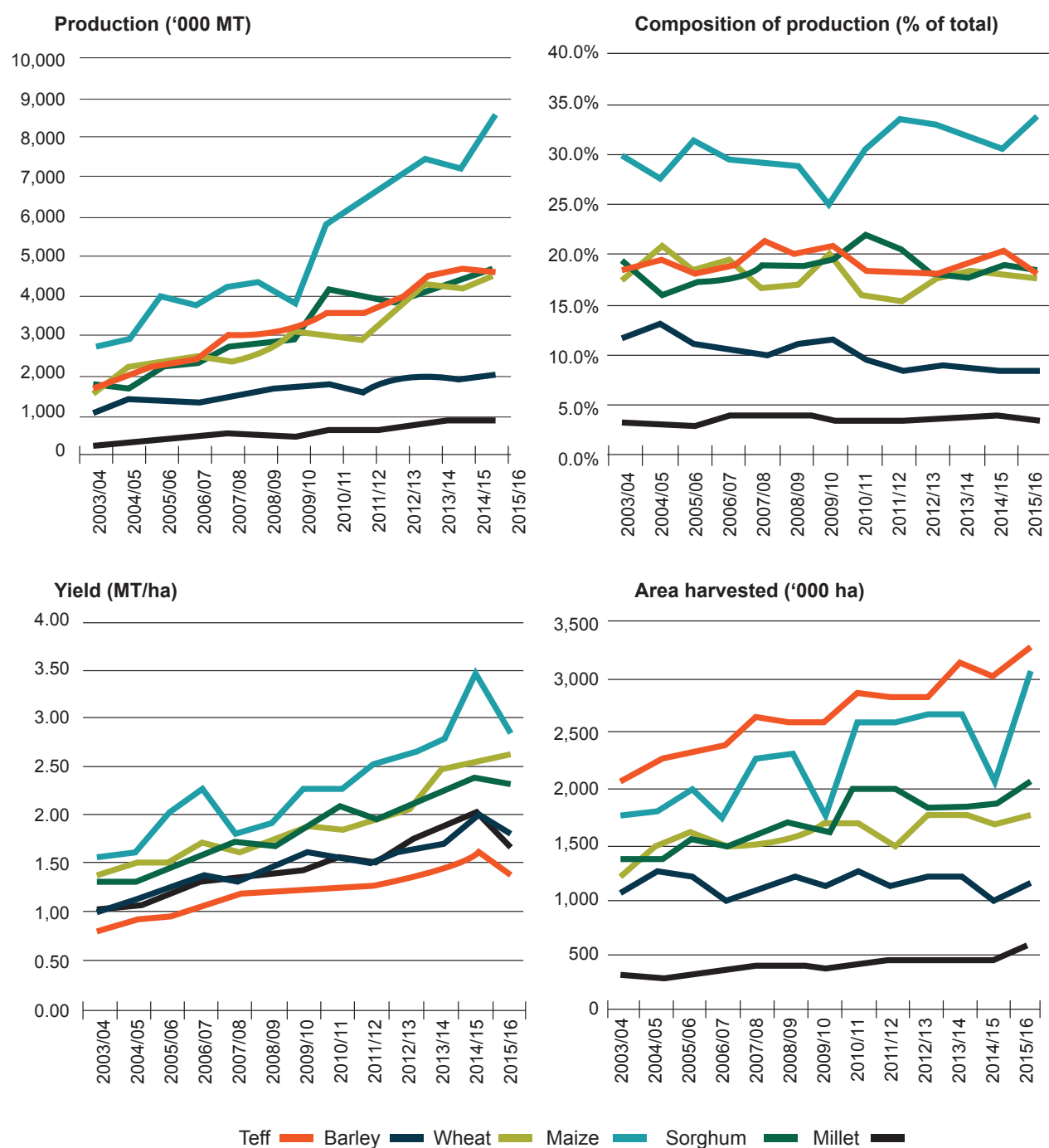
Likewise the period during which bans were in place are difficult to determine, as different sources provide different information. According to PANAPRESS, an export ban on all food cereals (maize, sorghum, wheat and teff) was imposed on 31 January 2006, with immediate effect². According to Woldie and Siddig (2009), the export ban on cereals was introduced in 2007 for an indefinite period, to stabilise domestic grain prices. Rashid (2010: 11) states that the “ban on cereal export was imposed in February 2008.” AGP-AMDe (2015: 105) report that

¹ As the Guardian noted, “the government outlawed international sales of the grain for fear of suffering the same fate as Bolivia during the recent “quinoa fever”. After being branded a superfood, demand for this Andean grain skyrocketed, increasing its price tenfold between 2009 and 2013, with some claiming this affected food security in the Andes.” See “Teff could be the next quinoa as Ethiopia boosts exports”, *The Guardian*, 14 October 2016.

² “Ethiopia bans export of grains”, PANAPRESS, 31 January 2006. Available at: <http://www.panapress.com/Ethiopia-bans-export-of-grains--13-578573-17-lang1-index.html>.

“The Government also banned export of teff, wheat, maize and sorghum initially (i.e., Dec. 2006) and later expanded the ban to all cereals (June 2008).” AGRA (2014: 36) states: “2009, faced with high food price inflation, the Ethiopian government banned the export of maize and sorghum.” In addition to the cereals ban, mentioned above, an export ban on maize was imposed in February 2011.

Figure 1: Selected statistics for Ethiopian cereals production, 2004-2016



Source: Central Statistical Authority, Agricultural Sample Surveys, various years; see Table 7 in annex B.

There is uncertainty about whether and to what extent the ban has been lifted since then. Thus, it appears that overall, the cereals ban has not been lifted; for example, Aragie et al. (2016: 5) mention that it “is still operational”. According to information provided by MoT, the general export ban on cereals is no longer applied in practice, although it apparently has not been revoked formally. Converseley, for selected individual crops the bans appear to have been lifted – at least partly and temporarily.

For example, against the background of a bumper maize harvest that could potentially depress domestic prices and hurt producers, the government provisionally lifted the maize export ban in November 2014 by allowing producers and investors (as opposed to traders and smallholder farmers) to export the maize produced in the 2013/14 and 2014/15 production seasons. However, whether or not the decision to lift the ban had been communicated to stakeholders (and the public at large) was not clear. Neither was it widely and repeatedly communicated in a way to create confidence in a new policy environment for stakeholders to seriously consider maize exports. The only official communication of the GoE decision to lift the maize export ban was a letter from the Ministry of Trade to the Ministry of Agriculture in which the former requested the latter to provide a volume of production for this season by each investor engaged in maize production in the country.

Likewise, the (de facto) reintroduction of the ban in late 2015 was neither clear nor widely communicated. The Ministry of Trade announced that it had “temporarily” banned the export of maize and sorghum with the objective of mitigating the effects of the drought in the country; this announcement was understood to be a reimposition of the maize and sorghum export ban.

In March 2017, the ban appeared to have been partially lifted again, at least to a certain extent. Based on a request by a union of cooperatives that had secured a contract to sell 10,000 MT of maize to Kenya, but had been informed that such an export was not possible under the ban, the Ministry of Trade (MoT) announced that cooperatives could export maize that they had collected from their respective members. This announcement was made by the State Minister of Trade at a public symposium³ but was not communicated through the official channels – like the letter issued by MoT when imposing the ban in October 2015. In addition, the World Food Programme (WFP) obtained permission to export 50,000 MT of maize.

The Ministry also announced that 18 cooperatives were permitted to export up to 28,000 tons of maize collected from their members and announced that commercial farms would also be allowed to export their own harvests of maize. Subsequently, two companies have so far been allowed to export but only one of these companies has actually exported approximately 28,000 tons from March to May 2017.

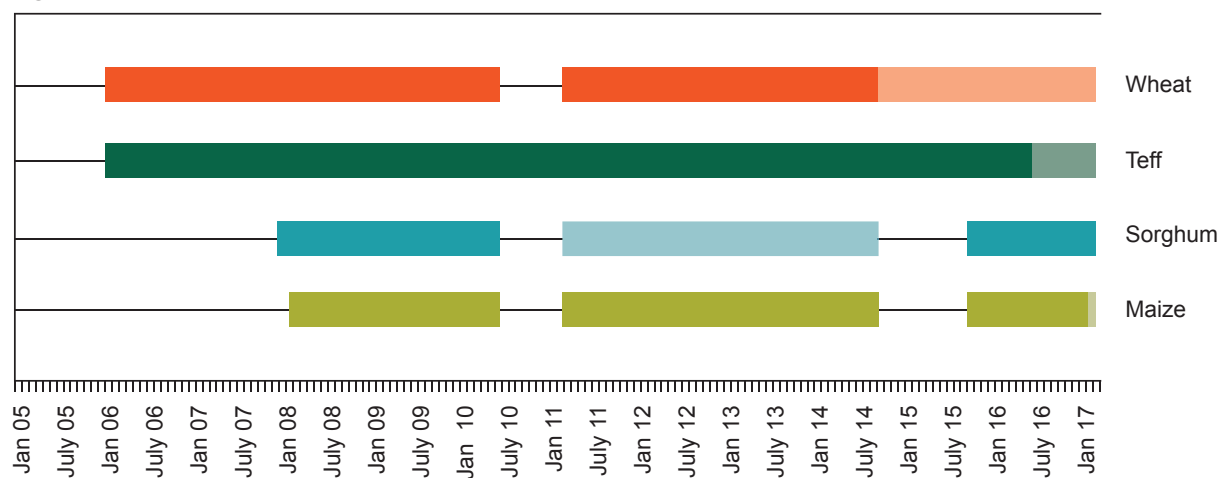
For teff, both the national and international media in 2015 and 2016 reported that the ban, which had been imposed in January 2006, was lifted. However, these reports appear to refer to the exports allowed for the (then 48) commercial farms participating in ATA’s Teff International Market Access (TIMA) project⁴.

³ The announcement was made by H.E. the State-Minister of Trade, Ato Ayana Zewdie, at the 4th National Cooperatives’ Exhibition, Bazaar and Symposium, held on February 7, 2017.

⁴ See, for example, *Addis Fortune*, 04 May 2015; *CNN*, 18 December 2015; *The Guardian*, 14 October 2016.

Figure 2 provides an overview of the (likely) time periods during which cereals export bans were in place in Ethiopia. Lighter shades refer to periods where a ban was either in place partially (such as for teff since mid-2016 or maize most recently), or where the existence of a ban could not be firmly established due to lack of information.

Figure 2: Periods of Ethiopian cereals export bans



Source: Compiled by the authors.

2.3 Complementary Policy Measures

In addition to export bans, the government has used various other policy instruments aimed at stabilising the food supply and prices. In particular, the following short-term measures have been used (Rashid 2010; Rashid and Lemma 2014; AGP-AMDe 2015: 104f; Aragie et al. 2016):

1. The re-introduction of urban food rationing and provision of subsidized imported wheat: The government provides subsidies on imported wheat for poor urban consumers⁵. For example, in 2007 a USD \$800 M annual subsidy on petroleum products was removed and used to keep grain prices under control, by providing 25kg of subsidized wheat per month to low-income urban dwellers (Woldie/Siddig 2009: 4, 7)⁶;
2. An informal suspension of local procurement for price stabilisation and humanitarian purposes, including by the WFP⁷;
3. Direct government imports of wheat for open market sales and stabilisation of prices below increasing market rates – Aragie et al. note that prices to traders were less than 50% of market rates. Therefore, the “program was abandoned quickly for being too costly and for failing to achieve its purposes due to the bad behaviour of some of the traders” (2016: 5);

⁵ As Benson et al. (2014: 24) note, the “subsidy program operates by offering wheat at lower than cost to industrial millers and bakers at one subsidy level and directly to urban consumers through kebele shops at a slightly lower subsidized price (higher subsidy).”

⁶ A detailed description of the wheat subsidy and its functioning is presented in AGP-AMDe 2015 (105-112).

⁷ Note, however, that government procurement has also been used as an instrument in periods where harvests were exceptionally good and prices collapsed. For example, “Government instructed EGTE to make local purchases in 2003 when maize prices collapsed” (Rashid 2010: 13).

4. Tax policy measures were also taken such as the exemption of grains from value added tax (VAT)(cf. Woldie/Siddig 2009);
5. Price controls on 17 commodities, including cereals, from January to June 2011 (AGP-AMDe 2015: 105).

In addition, a number of longer-term measures were taken with the aim of increasing the output of cereals, both for domestic supply as well as exports. For example, the Ministry of Agriculture and Natural Resources (MoANR) and ATA have various ongoing initiatives to increase production of maize, teff and wheat through a variety of measures aiming at increasing productivity, including improved access to inputs, agricultural advisory services, output markets, agricultural financing, and the introduction to farmers to promising new production techniques (cf. Benson et al. 2014).



Soil and water conservation through collective action in Guba-Lafto district
| Photo credit: ILRI/Amede |

3.0 Export Restrictions in Ethiopia – the Legal, Institutional and Administrative Dimension

Many countries have mechanisms in place to impose export restrictions, particularly on foodstuffs, when the requisite conditions arise. Countries usually introduce a set mechanism that governs export bans. This mechanism details the conditions that necessitate the imposition of export bans, how to evaluate whether such conditions are met, how and for how long such bans are introduced, review and appeal processes for affected producers (businesses), and conditions that result in the lifting of the imposed export bans.

In Ethiopia, the Ministry of Trade has the overall responsibility of regulating foreign trade. Although Proclamation 916/2015 – which provides the duties and responsibilities of federal organs – does not expressly list imposing and lifting export bans as one of the duties of the Ministry of Trade, it is safe to assume that the Ministry’s powers include this authority. However, the current practice is ad hoc, whereby the Ministry imposes and lifts export bans through letters (circulars) sent out to other government agencies. There is no formal procedure in place to assess the need to impose and lift export bans, leaving producers particularly vulnerable. Applying export bans on an ad-hoc basis in the absence of an established mechanism of determining the need for imposing and lifting the restriction results in a highly unpredictable production and trading system. This adversely impacts production and market-planning as producers are uncertain when such export bans will be introduced and lifted. This, as is addressed in detail in Section 5 below, in turn can cause a reduction in the number of producers engaged in cereals and foodstuffs production. This is particularly true for commercial producers who have the option of investing in other more predictable production or trading areas. It can also deter potential new entrants into agricultural production. This is particularly pertinent to Ethiopia as it is endeavouring to attract greater foreign investment in the sector.

On a secondary note, it is also worthwhile to consider the issue of export bans on cereals in light of Ethiopia’s stated goal of acceding to the World Trade Organization (WTO) and its engagement in regional trade integration initiatives. A well-established principle under WTO rules is the general prohibition of export bans. However, temporary export restrictions are permitted “to prevent or relieve critical shortages of foodstuffs”. There are two important considerations here. First, the measure has to be temporary, which means that such measures should be lifted when conditions improve. Second, the WTO requires a transparent and predictable application of rules and procedures governing trade. This means that export bans should be applied in a transparent and predictable manner. During its accession negotiations, WTO member countries are likely to request Ethiopia to demonstrate that its export banning procedures are transparent and predictable.

3.1 Institutional Set Up and the Administration of Export Bans

3.1.1 Background

The main institutions involved in the production and export of cereals are MoANR and MoT. According to article 43(1) of the Commercial Registration and Business Licensing Proclamation 980 of 2016, the Ministry of Trade regulates import and export trade and has the authority to “ban importation into or exportation from Ethiopia of certain goods and services”⁸.

The current export ban on maize and sorghum was instated via a letter issued by MoT on October 21, 2015. This was preceded by a letter from MoANR in September 2015 requesting MoT to impose a ban, citing an expected food shortage arising from the El Niño weather phenomenon which affected the rainy season that year. The ban took effect immediately but exporters who had pre-registered contracts were allowed to fulfil their obligations under the contracts.

The export ban letter from MoT was addressed to the National Bank of Ethiopia (NBE) and the Ethiopian Revenues and Customs Authority (ERCA) for enforcement. NBE in turn issued letters to commercial banks informing them of the export ban decision. Commercial banks then stopped issuing letters of credit to process exports of maize and sorghum. ERCA also monitors that these products are not exported in breach of MoT’s decision.

The export ban on maize was re-introduced only after a year as a previous export ban on maize was only lifted in November 2014 by the MoT. That ban had been in place since March 2011 when it was introduced to combat high domestic prices. The ban was not fully lifted but allowed commercial maize farmers to export their own harvest and instructed the former Ethiopian Grain Trade Enterprise to buy maize from farmers and export while “reviewing domestic price trends”. A ban on all grain exports was first imposed in February 2008 but was lifted with respect to cereals in July 2010.

While this is the formal procedure of determining and implementing the ban, the actual decision-making process is reportedly quite different. MoT indicates that the actual export ban decision was made at the Prime Minister’s Office under the auspices of the National Export Coordination Committee (NECC). NECC is chaired by the Prime Minister and oversees all export activities in the country. NECC reached the decision to impose the export ban based on harvest forecasts and expected food shortages. The MoT letter formalised this process by making an official decision to impose the export ban on maize and sorghum.

This indicates that the export ban decision was made at the highest executive level. Indeed Article 43 of Proclamation 980 of 2016, requires a decision on export bans to be approved by the highest executive body – i.e. the Council of Ministers. NECC may not comprise all ministries and hence the export ban decision may not be technically approved by the Council of Ministers, but rather by the NECC and the Prime Minister. This is not a significant procedural issue as the Prime Minister heads both the Council of Ministers and NECC, but it is a further

⁸ Article 43 (1) of the (new) Commercial Registration and Business Licensing Proclamation 980 of 2016.

illustration of the need to clearly identify and stipulate the authority and duties of the various agencies involved in imposing and administering export bans.

It is, however, unclear who initiated the export ban issue at the NECC meetings and where in the Prime Minister's Office the study (report) on the need to impose the cereals export ban was carried out. The Crop Marketing Directorate at MoT became aware of the decision after it was passed by NECC and its experts had not been involved in the assessment undertaken by the Prime Minister's Office. The study team has also not been able to identify the specific details included in such assessments and the parameters used to determine whether or not to impose the export ban.

3.1.2 Institutional Set up

The first step involved in the export ban decision-making process is to determine the food security status in Ethiopia. MoANR is the primary agency overseeing agricultural production in the country. However, the Ministry, does not compile agricultural production and forecast data, but rather relies on data collection and forecast analysis undertaken by the Central Statistical Agency (CSA) and the National Disaster Risk Management Commission (NDRMC).

On the other hand, NDRMC leads and coordinates annual comprehensive agricultural production assessments with a view to ascertaining the level of food security nationwide.⁹ The agricultural and food security assessment forms part of an overall assessment that also includes health, nutrition, education, and water, sanitation and hygiene. This assessment is normally carried out in November of each year to enable a better assessment of the main Meher¹⁰ harvest season. It involves coordination with sector federal and regional agencies, such as MoANR and regional agriculture bureaus, and sending out teams to all regions of Ethiopia to conduct field assessments. Teams conduct these field assessments and compile and organise the data in line with the administrative structures – at Kebele, Woreda, and Zone levels. The assessments are then compiled for each region in consultation with the regional administrations. The regional reports are in turn synthesised to create a national report called the Humanitarian Requirements Document (HRD). The HRD is presented to the National Disaster Prevention and Preparation Committee chaired by the Deputy Prime Minister for approval. It then forms the basis for disaster risk activities for the relevant year. The annual assessment is augmented by a review in February during the Belg season.

On the regulatory side, MoT appears to have an incomplete structure when it comes to regulating trade in cereals and other crops. The Ministry's activities are organised under a trade regulation and a trade promotion wing. While there is a Crop Marketing Directorate under the trade promotion wing, this Directorate's activities focus on market linkages, identification of market oriented commodities and export as opposed to regulation of trade. There is no directorate that specifically regulates the trade of cereals and other crops. This is without prejudice to the overall authority of MoT to regulate exports from Ethiopia.

⁹ Interview with Zinet Ahmed, Disaster Response and Rehabilitation Expert, NDRMC.

¹⁰ The Meher harvest (characterized by the main rainy season from June – September) is the main agricultural harvest season in most parts of Ethiopia. The Belg season is the secondary season with smaller rains from February to May

Another consideration is the little (if any) engagement of the Crop Marketing Directorate in the analysis and decision-making of introducing and lifting export bans on cereals. The Directorate's activities are focused on supporting the marketing of cereals, oil seeds and pulses. Specific duties include assisting traders solve logistics problems; assisting in solving problems associated with product delivery, sample taking, and quality certification in commodity market centre and warehouse operations; issuing permits for crop product samples; and supplying requested information and advising on crop marketing issues.¹¹

NECC was set up in 2003 with the aim of promoting exports and improving coordination among government agencies involved in exports.¹² It is chaired by the Prime Minister and comprises representatives of government agencies with a role in export trade, including MoT. The Committee meets monthly and focuses on passing decisions to solve constraints (Oqubay 2015: 99-102). A recent example of a decision by NECC is its decision instructing VAT refunds to exporters to be made within seven days after the request.¹³ The decisions of NECC are likely to be implemented straightaway as they are made by the highest executive organ of the government – the Office of the Prime Minister.

3.1.3 Legal Authority

The main legislation that defines the powers and duties of federal executive organs in Ethiopia is Proclamation No. 916 of 2015, which lays down the power and duties of each federal ministry and regulatory agencies.

Article 22 lists the powers and duties of the Ministry of Trade. The provision states the Ministry has the following powers and duties when it comes to foreign trade:

- ❖ support the promotion and development of export trade and support exporters
- ❖ establish a system to ensure export or import goods are sold or bought at the appropriate price
- ❖ control the qualities of export and import goods; prohibit the importation and exportation of goods that do not conform with the required standards


While the provision states that MoT can prohibit exports of goods that do not comply with standards, it does not list the restriction or prohibition of exports for other justifiable grounds as one of MoT's powers. The previous proclamation on the powers and duties of federal executive organs (Proclamation No. 691 of 2010) contained the same list of powers and duties of MoT.

The general authority to prohibit the export (and import) of goods is curiously stipulated in the Commercial Registration and Business Licensing Proclamation No. 980 of 2016. As the title of the proclamation indicates, this law was issued to legislate commercial registration and business licensing procedures and requirements but not to endow MoT with additional powers.

¹¹ List displayed on a board at the offices of the Crop Marketing Directorate at the Ministry of Trade.

¹² Oqubay (2015: 99-102). The study team could not find the instrument that established NECC and relied on secondary sources in their examination of NECC activities.

¹³ "Committee Recommends faster VAT refunds, improving process for textile manufacturing", *Capital Ethiopia Newspaper*, February 13, 2017; <http://capitalethiopia.com/2017/02/13/committee-recommends-faster-vat-refunds-improving-process-textile-manufacturing/#.WO4dX9KGPb0>, last accessed on April 12, 2017.



However, Article 43(1) states that MoT has the authority to prohibit the export and import of goods. This authority is attached to two conditions. First, the decision must be in the national interest. Second, the measure has to be approved by the Council of Ministers.

The fact that the general authority to prohibit exports and imports was not listed under the powers and duties of Executive Organs proclamations is a glaring omission and it seems MoT is trying to remedy the error by including this authority under the commercial registration and business licensing proclamation. This, however, is not the appropriate place for defining powers of MoT and adds to the opaqueness of the export ban decision making process discussed in the previous section.

3.1.4 Administration of Export Bans

As discussed above, MoT normally sends a letter stating the imposition of the ban to NBE and ERCA for enforcement, and the ban is then indirectly enforced by commercial banks when they stop processing letters of credit for export of the concerned cereals. There is no direct communication of the decision to the affected producers/traders/exporters and no official public announcement of the decision. For instance, new proclamations and regulations at the federal level are officially published in the Federal Negarit Gazeta. But there is no similar mechanism where official decisions of government agencies are published. Producers and exporters discover the decision from other sources, or from their respective commercial banks, at a later date.

The lack of properly publicising new administrative measures is not unique to the ban on exports or the operations of MoT. This is common practice in most government agencies where affected parties find out about new measures when they are applied with respect to them.

An important consideration with respect to the administration of export bans is how and when they are lifted. The provision in the Commercial Registration and Business Licensing Proclamation does not provide detailed conditions for when an export ban is lifted. There are no rules that prescribe the determination of whether to continue or cease export bans. The letters issued by MoT to impose export bans so far have not contained time-limited prohibitions, nor have they provided that an export ban will be lifted when conditions improve. It may be obvious to say that export bans should be lifted when the conditions that caused their introduction no longer exist, but this determination can be subjective. In addition, MoT and NECC do not seem to make periodic structured and systemic reviews of the prevailing conditions and the impact of the ban to alleviate these conditions. MoT may therefore continue to impose the export ban as it will not have evidence that it is no longer necessary to maintain it.

This creates further uncertainty on cereals producers/traders/exporters as they cannot be assured that an introduced export ban will be lifted as soon as the conditions for its imposition have ceased.

3.1.5 Views of Producers/traders/exporters

The study team interviewed two commercial maize farms (including a company with two large commercial farms producing maize and other crops) and cooperative unions that trade in maize by collecting from farmers (via primary farmers' cooperatives) and selling it to various buyers.

The stakeholders stated in interviews that there was little consultation and information exchange between government agencies, farmers and traders before decisions, such as the export ban, were passed by the government. They were in agreement that prior consultations should be done to collect the views of producers to plan their affairs ahead of the implementation of the decisions.

The representative of the large commercial farm stated that his company had found buyers in Sudan and the Gulf countries previously for its maize.¹⁴ But the enterprise has not pursued foreign markets strongly due to the uncertainty over whether or not it can export its product annually. He noted that they could build sustained relationships with foreign buyers if the market was open. He further stated that upon agreement, exports may be banned during periods of food shortage but that such measures should be lifted as soon as conditions improved. However, the current system is not designed to respond quickly.

The current system affects the decisions of domestic farmers, as export bans (coupled with low domestic prices) have resulted in substantial losses in previous years.

The stakeholders indicated that one alternative to providing stability in the domestic market and ensuring better market access was to increase domestic market linkages between producers and domestic agro processors.

The head of one cooperative union was of the opinion that the export of cereals should not be always permitted but that it should be allowed in years of surplus production as a means to



Cabbage production in rural Sidama, Ethiopia
| photo credit: ILRI/Ketema Yilma |

stabilise domestic markets and protect producers from low prices during surplus production years.

On the other hand, the commercial farm owner was of the opinion that allowing cereals exports would be an incentive to increase production. He further stated that the government should gather full information on agricultural production before passing decisions that affect production and marketing.

3.1.6 Limitations of the current export ban mechanism

It is clear from the discussions above that the decision-making process is not transparent and does not include all the stakeholders involved in cereals production, marketing and exports. NECC and MoT (as far as the study team could determine) have based their decisions on the information they have gathered themselves but have not undertaken consultations with all the stakeholders in the sector. In terms of information, the NDRMC's thorough agricultural and food security assessment provides appropriate current and relevant data on the status of food production in the country. This assessment is the foundation of the country's food security requirements every year. The findings of the assessment as compiled under the annual Humanitarian Requirements Document will undoubtedly be considered by NECC in deciding whether or not to impose an export ban. Nevertheless, data is either lacking or unreliable, notably on production forecasts; this is one issue which negatively impacts on the predictability of decisions to either impose or lift import bans.

Furthermore, it does not appear that NECC consults stakeholders in cereals production nor takes their input into consideration in its decision-making process. The study team interviewed private cereal producers as well as cooperative unions active in the sector, and all interviewees disclosed that they had not been consulted on the proposed ban prior to its announcement. In some instances, exporters only learnt about the export ban when they went to their banks to inquire about the processes required for possible maize exports.

The fact that the decision making process is not public (at least with respect to stakeholders in the sector) and involves only government agencies also makes it difficult for producers and exporters to have their opinions heard. It was recently reported that NECC would be restructured to include private sector actors as members.¹⁵ This is a positive push towards having meaningful stakeholder consultations.

There are no established guidelines, procedures and criteria to determine an export ban. This means producers and exporters cannot anticipate an imminent decision to impose an export ban by examining prevalent production and market conditions.

3.1.7 Recommendations

The government should set out detailed rules and procedures on the imposition, administration and lifting of export bans on cereals in a regulation or directive. This should include the criteria and conditions under which bans may be issued, rules for determining the duration of the ban,

¹⁵ "National Export Council to be Restructured", *The Reporter Newspaper (English Version)*, February 18, 2017; <http://www.thereporterethiopia.com/content/national-export-council-be-restructured>, last accessed on April 12, 2017

the decision-making process, stakeholder consultations, official notification of the decision and type of information to be provided (including, among others, the specific commodities covered by the ban, its time of entry and duration, and transition arrangements), and the periodical review of implementation. The issues that should be covered in this instrument are discussed in detail in Annex A.

In terms of the agency to regulate export restrictions, MoT is the logical choice here as it regulates export trade. An alternative could be NECC. As a body comprising various stakeholders in charge of different aspects of exports, NECC might be a good alternative as it can serve as a forum to examine the issue of export bans among the various stakeholders and could pass decisions at the highest executive level. However, the fact that NECC is not legally constituted would mean its decisions would need to be formalized by a legal entity in order to be properly enforced. It therefore seems more appropriate to endow MoT with the mandate to impose and lift export bans and restrictions.

There is also a need for timely and accurate data for deciding on the imposition and lifting of export bans, as well as the need to integrate such data into an integrated information system from which decisions could be taken.

All of these measures need to be examined not only from the perspective of ensuring food supplies in the country but also examining the impact of the present system of control on private investments in agricultural production. It is doubtful that commercial investors, foreign or domestic, would be attracted to invest in the production of cereals if they were uncertain as to whether or not they could sell their product “freely” and get a fair return on their investment. Temporary export bans are used by several countries but usually follow pre-determined procedures that are applied in a transparent manner (see Section 4 below).

3.2 WTO Rules on Export Restrictions

3.2.1 General Provisions

The General Agreement on Tariffs and Trade (GATT) is the founding agreement of the WTO. It contains provisions covering export (and other) restrictions. The main provision dealing with quantitative restrictions, Article XI(1), reads “No prohibitions or restrictions other than duties, taxes or other charges, [...] shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party.” The article therefore requires WTO members to eliminate all other prohibitions and quantitative restrictions on exports. Measures other than these, including outright export bans are not allowed under GATT. On the other hand, export taxes fall under the permitted measures and hence are not subject to elimination under Article XI of GATT.

GATT Article XI(2)(a) provides an exception to the ban of export restrictions by allowing WTO members to impose them temporarily “to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting contracting party”. The Agreement on Agriculture (AoA) of the WTO also contains provisions on export restrictions, although these do not apply

to developing countries except those that are net exporters of the commodity concerned (Article 12(2) of the AoA).¹⁶

The other exceptions to the prohibition on quantitative restrictions are found under Articles XX, XXI, and XII of GATT. Article XX deals with cases where export restrictions are applied with a view to conserve exhaustible natural resources, when the specific export control is necessary to ensure essential quantities of such materials to a domestic processing industry during periods when the domestic price of such materials is held below the world price as part of a governmental stabilization plan, and in cases where the control on exports is essential to the acquisition or distribution of products in general or local short supply. However, the Article also stipulates that if such measures are inconsistent with other GATT principles they should be stopped when conditions that made the controls necessary (under Article XX) no longer exist. This means that the export restriction measure should be discontinued where the condition that necessitated its issuance has ceased.

GATT Article XXI allows the use of export controls in the case of security exceptions, and Article XII (Article XVIII for developing countries) permit members to apply restrictions to safeguard their balance of payments. Finally, Article XIII requires the application of export restrictions to be on a non-discriminatory basis. This means that a WTO Member that applies an export restriction must apply the measure equally with regard to its exports to all other countries. It cannot apply less-restrictive measures with respect to one country to the exclusion of other WTO Members. This is a reverse application of the Most-Favoured-Nation (MFN) principle, which is one of the bedrock principles of the WTO system.

Article 12(1) of the WTO Agreement on Agriculture stipulates that when members impose export restrictions on foodstuffs, they must accord due consideration to the effects of such prohibitions or restrictions on importing Members' food security. They are also required to notify the WTO Committee on Agriculture before introducing export restrictions on foodstuffs and must consult with Members likely to be affected by the measure. Article 12(2) provides, however, that the requirements of Article 12(1) are applicable to developing countries only in cases where the country taking the measure is a net food exporter of the specific foodstuff.

An examination of the stipulations of article 43(1) of the Commercial Registration and Business Licensing proclamation in light of these GATT provisions indicates that it is likely to be challenged as being too broad. The only condition to be fulfilled (in addition to approval by the Council of Ministers) to impose an export ban is that the decision is in the "national interest". The term can be broadly interpreted to include conditions that go beyond the specific conditions laid down in the GATT provisions dealing with export restrictions.

3.2.2 Considerations regarding Specific Crops

Cereal export bans imposed in Ethiopia have applied differently for teff and teff flour on the one hand, and maize and sorghum on the other.

¹⁶ A discussion is ongoing about a potential strengthening of WTO disciplines on export restrictions on food. See Sharma (2011) or Anania (2013) for detailed treatments of the issues and proposals.

Teff

The export of teff and teff flour has been banned since at least February 2008, when a general ban on grain exports was introduced. The ban on teff has two notable exceptions. Teff is exported to Israel for the benefit of the Ethiopian Jewish community that live in Israel. The export to Israel is carried out only by the Ethiopian Agricultural Businesses Corporation (incorporating the former EGTE).

Second, the ATA project called TIMA potentially opens up teff exports worldwide, particularly with a view to penetrating the gluten-free food market. The project identified commercial farms that were willing to dedicate a certain area of land to new Teff production for the sole purpose of exporting it under the scheme.

Other than these two programs, the export of teff and teff flour is prohibited. The main reason for this is to secure domestic supplies as teff is the most common staple crop in Ethiopia. However, Article XI of GATT does not support indefinite export bans and hence the export ban on teff is inconsistent with the provision and hence GATT. In addition, the exclusion of developing countries under Article 12(2) of the Agreement on Agriculture does not apply here as Ethiopia is a net exporter of teff.

This does not, however, mean that Ethiopia will automatically be required to lift the ban if it was to accede to the WTO. Teff is a staple throughout the country and attracts much higher prices than other cereals. This means it is considered a sensitive product for Ethiopia. A number of countries that have acceded to the WTO have been allowed to maintain export bans on products they consider to be sensitive (see next section). Ethiopia can follow their example and negotiate an exception to its teff export ban. Another option is to convert the export ban either into a less-restrictive measure (such as an export quota) which is less likely to face a strong challenge from WTO Members during accession negotiations given the sensitivity of the product.

Maize and Sorghum

As mentioned, export bans on maize and sorghum (particularly on maize) have been imposed and lifted over the past several years. The main cause to impose export bans has been food shortages occurring due to rain failure during cropping seasons. However, the ban on maize exports in 2008 was imposed due to a rapid price increase on the domestic market. Price increase is not one of the exceptions listed under Article XI(2) of GATT and Ethiopia could face challenges if price increase is the basis for future export bans. On the other hand, the current ban was imposed to alleviate impending food shortage and this falls squarely under the exception of Article XI(2).

The other main consideration here is whether or not the ban is temporary as stipulated under Article XI(2). The WTO's dispute panel has ruled that for a measure to be considered "temporary", it has to be applied "for a limited time under limited circumstances".¹⁷ In instances where export bans are not temporary they have to be justified under one of the exceptions listed under Articles XX, XXI, and XII of GATT.

¹⁷ *WTO Dispute Settlement Panel Report on China – Raw Materials, as quoted in "GATT 1994 Analytical Index", https://www.wto.org/english/res_e/booksp_e/analytic_index_e/gatt1994_05_e.htm*

3.2.3 WTO Accession Negotiations

Ethiopia will face scrutiny of its trade regime during the WTO accession negotiations. This means that the export ban on cereals is likely to be raised and challenged during this process. In particular, Ethiopia could face challenges from neighbouring countries that are WTO members. These countries view Ethiopia's domestic cereals production – particularly maize – as a potential import source and have previously expressed their interest to purchase maize from Ethiopia. They may therefore see the accession negotiations as a good opportunity to gain access to the country's cereals market.

An examination of the Working Party reports of WTO-acceded countries (countries that joined the organization after its formation in 1995) show that WTO Members in most instances required acceding countries to remedy their WTO-inconsistent export restrictive measures. They normally require acceding countries to commit to cease specific export restrictive measures and make express commitments to abide by Article XI of GATT and Article 12 of the Agreement on Agriculture in future. Some countries have even made WTO-Plus commitments¹⁸ to stop or limit the use of export taxes (which are normally allowed under WTO rules). For instance, China agreed to impose export taxes only on a list of agreed products while Lithuania committed to eliminate all export taxes within an agreed timeline. Ukraine and Vietnam also negotiated maximum export tax rates on some metal products.

On the other hand, Nepal was allowed to maintain an export ban on raw hides and skins and raw wool. During its negotiations Nepal stated that the ban on these products “had been temporarily applied and Nepal intended to lift this export restriction at an appropriate time.” This was accepted by WTO Members and Nepal was not required to lift these export bans. It should be noted here that while Nepal stated that the export ban was temporary, it did not provide the conditions that caused the export ban to be imposed in the first place and neither did it commit to lifting the ban when the conditions no longer require it.

These instances demonstrate that treatment of export restrictions in accession negotiations is dependent on the offensive interest of WTO Members. In cases where WTO Members have a vested interest, they can request acceding countries to even make WTO-Plus commitments by limiting or eliminating export taxes. But in cases that are of less interest to them, they may not even require WTO inconsistent measures to be stopped.

3.2.4 Conclusion and Recommendations

The current export ban on maize and sorghum fulfils the requirement that is imposed “to prevent or relieve critical shortages” as per GATT Article XI(2)(a) and hence is consistent with WTO rules. However, the ban on teff exports does not fulfil the conditions set out under the provision for two reasons. First, its imposition continuously for several years (albeit with the notable exception of exports to Israel), means that it cannot be considered as “temporary”. Second, it is difficult to demonstrate prevention or relieving of critical shortage to justify a long term export ban.

¹⁸ *WTO Plus Commitments* – are commitments that go beyond what is required to bring a measure into consistency with WTO rules.

If the export ban on teff is to be maintained, Ethiopia should therefore devise a strategy to demonstrate the need to maintain it and convince WTO members during its accession negotiations. Ethiopia should also negotiate to not waive the right to impose export restrictions as permitted under Article XI(2)(a) of GATT.



Water catchment in Adi Nihib, Mek'ele, Ethiopia
| photo credit: NBDC; www.flickr.com/photos/nilebdc/ |

4.0 The Administration of Export Bans – The Experience of Other Countries

The use of export restrictions, especially during periods of world food price hikes, is high. Demeke et al. (2009) found that 25 out of 81 countries surveyed applied restrictions on exports during the 2007-08 food price crisis. Based on a new database covering 36 countries and 555 measures, Estrades et al. (2017) found that the main measures applied over the period 2005 to 2014 were export bans (35% of total measures), followed by export taxes (23%) and export quotas (19%); they also found that export taxes on average last longer – 3.5 years – than export bans, which are normally implemented for shorter periods. The Ethiopian practice, which has seen extended periods of export bans in place, clearly deviates from this (also see Section 5.3.5 below).

For the present study, the most interesting aspect of other countries' experience with export bans is how they were implemented and administered.¹⁹ Based on the review of the Ethiopian practice undertaken above, we distinguish between transparency and notification issues, and predictability. The focus of the review is on export bans as opposed to other export restrictions.

4.1 Transparency and Notification

In most countries, export bans, like other types of export restrictions, are formally imposed and lifted by the requisite legal instrument and officially announced by the entity in charge to the relevant stakeholders or the public at large. For example:²⁰

measures in Argentina are passed through ministerial resolutions or decrees, which are published in the Official Gazette and on the internet;²¹

- ❖ in India, measures are implemented through notifications by the Directorate General for Foreign Trade of the Ministry of Commerce and Industry, which are published both on the internet and in the Official Gazette;
- ❖ in Kazakhstan and Russia, measures are imposed through Government Resolutions;²³
- ❖ in Pakistan, export bans are made by the Government (either the Ministry of Commerce or the Trade Development Authority) through an Order and published in the Official Gazette.

¹⁹ The economic effects of selected cases are nevertheless also considered in Section 5 below in order to relate the Ethiopian experience with other countries.

²⁰ For more examples, see OECD (2015) and the OECD Inventory of restrictions on exports of Primary Agricultural Products, available at: <http://qdd.oecd.org/subject.aspx?subject=8F4CFFA0-3A25-43F2-A778-E8FEE81D89E2>.

²¹ An example is <http://www.infoleg.gov.ar/infolegInternet/anexos/125000-129999/129167/norma.htm> (in Spanish).

²² For example, the wheat export ban in February 2007 (measure foreseen to be in place until December 2007, but extended in October 2007), is available here: <http://dgftcom.nic.in/exim/2000/not/not06/not4406.htm>.

²³ Examples (in Russian) are available at <http://www.zakon.kz/185448-mjert-obsuzhdaet-vozmozhnost-vvedenija.html> (Kazakhstan) and <https://rg.ru/2010/08/05/zapret-exporta-site.html> (Russia).

In a number of (primarily African) countries, however, informal and implicit export bans are widely used. For example:

- ❖ In Burkina Faso, in December 2011, the Ministry of Agriculture prohibited “irregular” exports of cereals, without defining what constituted an irregularity. An “official said there were no formal bans – but at certain times the demands for documentation at the borders may intensify and become unreasonable. The private sector perception is that maize export bans are common, if not decreed or gazetted (and in that sense ‘informal’). But clearly high-level instructions are passed down to field agents on the roads and at borders to detain exports. The GoBF will not readily admit this, but major coarse grain traders stated that seasonal bans on maize exports were in force in four of five recent marketing seasons” (AGRA 2014: 7);
- ❖ In Benin and Mali, it was reported that exports were denied at the border during the period 2007 to 2012 (AGRA 2014: 59);
- ❖ In January 2012, Togo stated that staple crops being exported from Togo required an export permit, which was not always granted (AGRA 2014: 59);
- ❖ In Tanzania, “There is often great confusion about when a ban is or is not in place” (Stryker/Amin 2012: 25; also see Barreiro-Hurle 2012). Thus, in 2014 it was not clear if the export ban on maize had been lifted or not: “Export bans have supposedly been lifted, but the GoT should now raise the awareness of government implementing agents and the private sector as to the status of agricultural trade controls. [...] One key informant noted that some parts of Tanzania don’t even know until months later that bans have been removed, and government officials continue to enforce the ban after its removal” (AGRA 2014: 116 & 131).

The implication of the lack of transparency on the imposition and lifting of export restrictions is increased uncertainty among producers and traders (also see Barreiro-Hurle 2012: 8), that could result in significant real losses when traders find out about bans once they have already engaged in export contracts.

Unfortunately, Ethiopia currently is aligned to the African practice, as has been explained in Section 3 above. However, as export restrictions pursue a perfectly legitimate policy goal (even if the suitability of the instrument is doubtful, as will be shown in the next chapter), there is no justification as to why its implementation should not follow the principles of good governance, which include transparent application and publication of the imposition, amendment and lifting of any measures.

4.2 Predictability

No country has so far succeeded in building a regime for export restrictions that is predictable. The overall experience is that, since export restrictions are primarily used in emergency situations, it has been impossible to design a predictable system based on pre-established criteria.

Conversely, examples of ad hoc export restrictive measures abound. Most of these refer to the food price crisis of 2007-08, which prompted a large number of export restrictions; however, some measures are more recent:

- ❖ Egypt, India, Pakistan and Vietnam imposed a ban or steeply hiked minimum prices in 2008 but later lifted or promised to end the export restrictions (Demeke et al. 2009: 10);
- ❖ Kazakhstan first levied export taxes on wheat in March 2008, only to impose a time-bound ban shortly thereafter, valid during the period 15 April 2008 to 01 September 2008 (Dollive 2008: 14);
- ❖ Tanzania imposed and lifted no less than six export bans from 2006 to 2012 (Stryker/Amin 2012: 25). Following the lifting of export bans in 2012 the government introduced an export permit requirement which became another barrier to export. In July 2016, after the Ministry of Agriculture had issued a temporary suspension of export permits for staple foods, it was requested to explain the effect of this de facto ban, in response to which the temporary suspension on export permits was lifted again, but relaxed only for processed food products and not cereals (MIRA Reform Status, November 2016);
- ❖ Ukraine imposed a grain export ban in March 2007. This was revoked in September 2007, when the government announced that a quota of 200,000 MT of wheat would be allowed from November 2007 to March 2008. In April 2008, the quota was widened significantly to 1.2 million MT to be exported over 2 months (cf. Dollive 2008: 9).

Indeed, there is no general agreement as to what extent predictability is desirable. For example, AGRA has recommended:

“Any change in the current situation (of no export bans in place) needs to be signaled clearly and widely and preferably publicly debated prior to the imposition of new bans. Barring that, clear rules need to be established for the conditions under which a staple crop export ban would be re-instituted” (AGRA 2014: 116).

However, others have noted that such signalling comes at a cost: if transition periods are announced, traders have time to circumvent the measures. For example, “Exports of maize from Tanzania to Kenya in the month of June 2011, after the ban had been announced but before it went into effect, are estimated at close to 50,000 MT, which was to be expected with the new harvest coming in, prices very high in Nairobi, and traders anticipating the ban.” (Stryker/Amin 2012: 31f; emphasis added).

Thus, the short-term effectiveness of export restrictions is highest when a ban enters immediately/without early announcement, and producers have no time to adjust. In line with this, most countries – indeed all that were reviewed for the present study (Argentina, India, Kazakhstan, Pakistan and Russia) – had imposed export bans with immediate effect. However, this also implies the highest negative impact on producers and most severe decisions on crop planting in subsequent seasons; there is thus a trade-off between short-term and medium to long-term effectiveness of measures depending on the predictability with which measures are imposed.

However, this only applies to the imposition of bans. For the lifting of bans, predictability is unambiguously positive, not least because it ensures that measures are in place for not longer than necessary. Unfortunately, a review of other countries' experiences has not revealed good practice in this regard. The definition of criteria for the lifting (and possibly also the imposition) of export restrictions (including bans) is therefore to a certain extent pioneering work, but nevertheless important. In addition, predictability can be enhanced by formally involving, or at least consulting, stakeholders in the decision-making process. Again, this is something not done by most countries.

A number of countries have used different export restrictions in combination or switched between them. For example, Argentina has used normal and variable export taxes, quotas and bans for wheat, maize and other exports; India has used minimum export prices, bans and export taxes for rice; Egypt and Vietnam have used bans, quotas and taxes on rice while Pakistan has used the same instruments on wheat. Typically, this is a sign of ad hoc policy implementation, where one measure is applied, fails to achieve the expected effect and is exchanged for, or complemented with another instrument. An example is Argentina. There, export restrictions began in March 2007 in the form of an administrative measure, i.e. the closing of the export registry. When the register was reopened in November 2007, "exporters rushed to registry, expecting the change to be temporary" (Dollive 2008: 15). Also in November, an export tax on wheat, maize and soybeans was introduced; the government increased this tax three times until March 2008 as part of an overall strategy to keep local prices low and generate revenue that would allow the government to redistribute the agricultural sector's disproportionate wealth to the people most vulnerable to price hikes. Meanwhile, the registry had been closed again in mid-February 2008, creating a de facto banning of exports. However, following protests from farmers, the tax was lifted again in July 2008 (Demeke et al. 2009: 10).

The Argentinean measures created a high level of uncertainty and unpredictability. Not only did the level of intervention within one instrument change over time (export taxes were increased and lowered), but it was also used in conjunction with other instruments.

The lesson to be learnt from this practice is that the government should minimise the use of different export restrictions, for various reasons: First, it increases uncertainty for producers and traders. Second, the administrative and compliance costs multiply. Third, it becomes difficult to assess the effectiveness of policies and to determine when measures should be lifted again – in Argentina the lifting of measures was in response to political pressure by farmers, not driven by an analysis of whether or not they were still required.

Finally, the delicate relationship between predictability and trust needs to be stressed, which is difficult to build but easy to destroy. Even in Ghana – which has not (at least not yet) resorted to food export bans, but imposes export taxes as well as an export licensing system – traders and investors do not fully trust that the current policy will remain in force if external market dynamics change. Specifically, a major "concern of speculators and traders is the existing export licensing system, which is set up to allow for trade policy changes without warning in response to political or food security pressures. Traders are apprehensive, as they have been burned by sudden changes in trade policies in the past" (AGRA 2014: 58).

The lesson for Ethiopia from this observation is that a credible system with high-level political backing should be established, that is difficult to change on the whim of individual ministries.





*Tesfaye displays fodder-beat harvest in his farm
Africa RISING field day in Hosaena, Ethiopia
| photo credit: ILRI/Apollo Habtamu |*



5

5.0 Costs and Benefits of Export Restrictions in Ethiopia – the Economic Dimension

5.1 Methodological Considerations

The purpose of the economic analysis is to complement the legal, institutional and administrative assessment undertaken in Section 3 with an estimate of the economic effects of the current system of export restrictions in Ethiopia, i.e. to conduct a cost-benefit analysis of the impact of the existing mode of introducing and lifting export bans on producers and traders, but also on government (respectively administration), and consumers. Although the object of the study is not to assess the costs and benefits of having an export control regime per se, the relevant findings of such overall impact studies will also need to be reflected, as the absence of an export control system constitutes a benchmark against which costs and benefits can be compared.

In order to assess costs and benefits, the following three time horizons are distinguished:

- ❖ Short-term effects are those that result if an export ban, or its removal, is announced and takes effect within the season, i.e. after planting. In this case, production output is fixed and not affected by the ban or its removal;
- ❖ Medium-term effects are those that occur from one season to the next, where producers can adjust their planting decisions to a government measure; and
- ❖ Long-term effects are those which result if, in addition to producers' planting decisions, longer term investment decisions are also taken into consideration, including those relating to productivity increases, such as mechanisation or use of enhanced seeds and inputs, and those relating to the area under cultivation.

With regard to the persons or groups affected (positively or negatively) by export restrictions, the following ones are distinguished:

- ❖ Producers and traders of the concerned commodities in Ethiopia can be affected, mostly negatively, by the costs to comply with export restrictions, as well as lost profits resulting from lower prices caused by the restrictions;
- ❖ Consumers in Ethiopia may benefit, at least in the short term, from enhanced availability of the concerned commodities and lower prices, unless the commodities are used for different purposes or not put to sale. Potentially a distinction between rural and urban consumers and/or by income group will have to be made in order to assess the distributive impact of export restrictions;
- ❖ The Government, respectively the administration in charge of implementing the system are also affected both negatively, due to the need to spend resources on the administration, and positively by potential generation of revenues (depending on the type of export restriction used);

- ❖ Aggregating the effects of export restrictions for the various groups identified above allows to consider the costs and benefits for Ethiopia overall, in particular in terms of the welfare impact and the food security situation;
- ❖ Finally, to the extent that export restrictions (if they are binding) reduce the supply of the commodities concerned in other countries, importers and consumers there are also affected by the restrictions. Although overall, Ethiopia can be considered as a “small economy” in term of its cereals exports to the world market, and export restrictions will therefore have no noticeable impact on world market supply or prices, this might be different in Ethiopia’s main target markets, i.e. in particular the neighbouring countries to which Ethiopian cereals are mostly sold. In these countries, reduced cereals imports from Ethiopia resulting from the restrictions may increase prices and thus harm consumers.
- ❖ In order to assess the relative costs and benefits of the cereals export bans, comparators, respectively alternative scenarios, must be defined. The basic counterfactual scenario is the absence of any export restriction regime, and it is considered in the study at least as a theoretical scenario although it may not presently be considered by the authorities as a practical option.
- ❖ On a more practical level, various different types of export restrictions are considered, against which the current regime can be compared. The types of export restrictions to be considered are:²⁴
- ❖ **Export quotas**, where the government sets a certain quantity for a commodity which can be exported, but prohibiting exports (or setting high export taxes) above the quota level;
- ❖ **Export taxes**, which make exports less profitable for producers/traders compared to sales on the domestic market. The size of the effect depends on the level of tax. A prohibitive (high) tax brings exports to zero, thus having the same effect as a ban. The level at which a tax becomes prohibitive depends on the price on the target market – if the sum of the producer price plus the transaction costs (trader commissions, transport etc.), import taxes in the target market and the export tax exceed the domestic price in the target market, exports will be reduced to zero.
- ❖ Furthermore, within **export bans**, different implementation modalities can be considered, such as the formal prohibition of exports by law or decree, or the de facto prohibition of exports through administrative practice, such as the non-issuance of export permits. These different types of export bans imply varying degrees of transparency and predictability, and therefore set different incentives or disincentives for producers, and yield different costs and benefits. Considering the Ethiopian practice, we distinguish between the current system based on discrete administrative implementation with a rule-based official regime.

²⁴ A more comprehensive explanation of the economics related to the various instruments is provided in the next section.

In terms of the research design, the study combines a literature review and some limited research based on raw data with interviews of stakeholders. In the literature review, although the number of studies that have investigated the impact of export restrictions on cereals in Ethiopia is limited, two additional areas of relevant literature have been considered: First, a number of studies have investigated the impact of different other policy measures in Ethiopia aimed at stabilising prices and availability of cereals (or food in general). Second, a large number of studies have addressed the impact of restrictions placed on cereals exports in other countries. The findings of these studies are reflected in the analysis presented below.

Interviews, in turn, have been used to provide anecdotal evidence of the responses of producers and traders to export restrictions and the implications of the current unpredictable and intransparent regime.

5.2 Export Restrictions – Theoretical View

The three main types of export restrictions are bans, quotas and taxes. Although Ethiopia has so far used mostly bans for cereals, it is helpful to briefly compare the theoretical implications of the three export restriction instruments.²⁵ For the sake of simplicity, this section presents the theory graphically in a partial equilibrium, which concentrates only on the effects on the cereals market, without considering the second-order effects which export bans can have on other product and factor markets, and the economy in general. Importantly, the theoretical consideration presented in the following also disregards any effects that might arise from the administration on the instrument. In other words, it is assumed that the implementation of measures does not introduce any “friction costs” (e.g. in terms of compliance for sector stakeholders and in terms of costs for the government to administer the measures) nor any disincentives stemming from increased uncertainty. It is obvious that such issues have significant practical relevance, as has been shown in Section 3, but these are not reflected in the economic theory as presented here below.

5.2.1 Economic Effects of Export Bans, Quotas, and Taxes

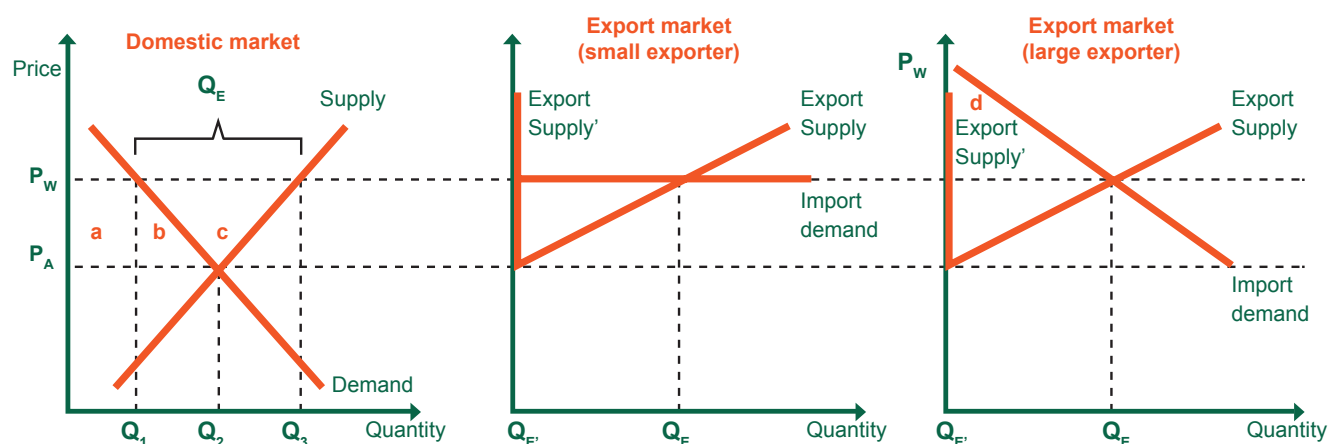
Figure 3 shows the implications of an export ban on a country’s own domestic market as well as on the export market under two assumptions. If the country is a small exporter, it will not be able to affect the price pW ²⁶ on the export market (second panel); conversely, policy decisions of a large exporter do have implications on the price in the export market (third panel). Without an export ban, and assuming that the export market/world market price pW is higher than the domestic equilibrium price pA , producers will produce Q_3 , of which Q_1 will be sold at the price pW on the domestic market and QE (equal to the difference between production Q_3 and domestic sales Q_1) will be exported and sold also at pW . An export ban means that the volume exported QE is reduced to zero, i.e. the export supply is turned to the left, with export supply’ being zero regardless of the price on the export market. Domestically, the price drops to P_A , at which Q_2 is sold. Due to the lower price, production drops from Q_3 to Q_2 , while

25 For other and more detailed theoretical treatment of export restrictions, see e.g. Abbott (2011), Liefert et al. (2011) and Minot (2013).

26 If pW is not higher than pA , the country is not competitive internationally and will not export. In such a situation the export ban would not be binding, i.e. it would have no effect on markets.

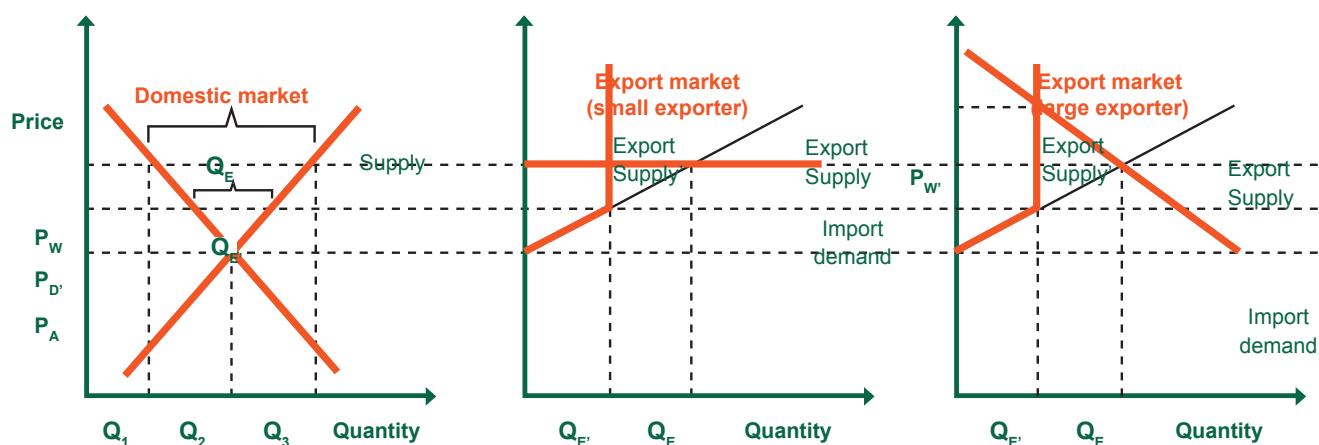
demand increases from Q_1 to Q_2 . The domestic welfare effects are an increase in consumer welfare equivalent to the area $a+b$, whereas producer welfare is reduced by $a+b+c$, leading to a domestic welfare loss caused by the ban of c . In addition, if the country is a large exporter, a welfare loss of d will occur in the export market.

Figure 3: Export ban – graphic representation



Export quotas function in similar ways to an export ban; in effect, the latter is just the extreme form of the former, with a quota set at zero. Therefore, the economic impact is comparable (Figure 4). Setting a maximum export volume of Q_E which is smaller than the free market export volume of Q_E means that the export supply curve becomes vertical at that level. Domestically, as the supply is increased by the difference between Q_E and $Q_{E'}$, the price decreases from P_W to $P_{D'}$ (which is above the autarky price p_A). The welfare of consumers increases by $a+b$ (less than under the export ban), and producer welfare decreases by $a+b+c$ (also less than under the ban); total domestic welfare thus decreases by c . Abroad, like a ban the quota will only have a welfare impact if the country is a large exporter and its decisions will thus have an impact on the price in the export market (which would increase to $P_{W'}$). If that is the case, welfare abroad will decrease by $d+e$, again less than under the export ban.

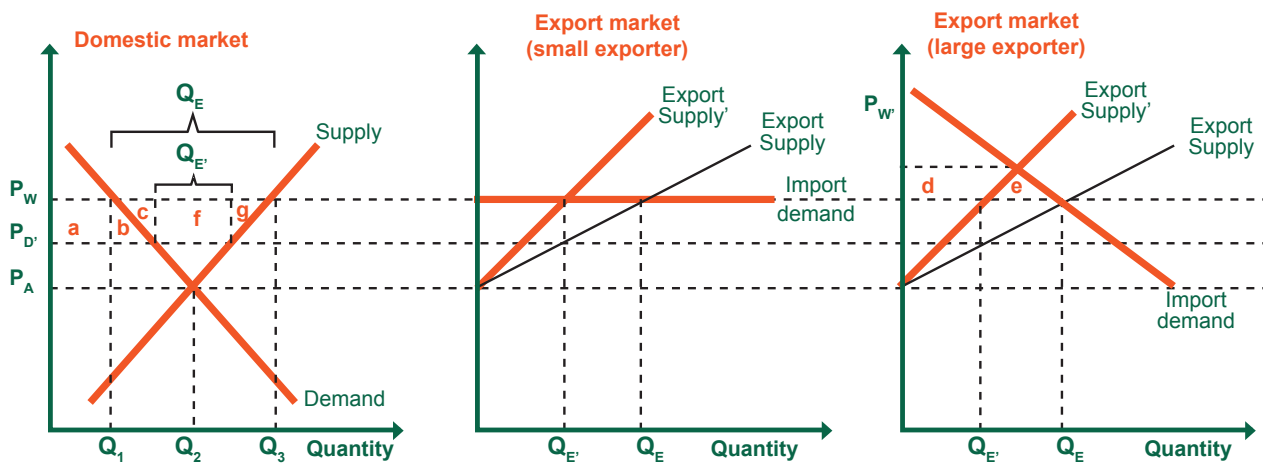
Figure 4: Export quota – graphic representation



Export taxes reduce exports because they increase the price of exports in the export market, thereby making them less competitive.²⁷ The export supply curve is thus shifted or turned to the left (second panel in Figure 5, where the export tax has been set so as to attain an export volume equivalent to the export quota above). As a result, exports reduce to Q_E' at the fixed world market price p_W in the case of a small exporter. The domestic price decreases to p_D' , as in the case of the export quota, but less than under the export ban. A first difference to the quota is that, if the world market price increases, exports will also increase (whereas they will stay the same in the case of a quota), and domestic prices will also rise. Unlike the ban or quota, an export tax thus does not fully isolate the domestic market from the export (or world) market, but only reduces the pass-through of world market price shifts to the domestic market.

The welfare implications of an export tax also differ from a quota: The welfare of consumers increases by $a+b$ (identical to the quota), and producer welfare decreases by $a+b+c+f+g$ (also identical to the quota²⁸); however, the government also collects a tax of Q_E' time $P_W - P_D'$, equivalent to area f . Thus total domestic welfare only decreases by $c+g$, which is less than under the export quota (area c in Figure 4 above). Abroad, if the exporter is large, welfare will decrease by $d+e$, less than under the quota.

Figure 5: Export tax – graphic representation




Comparing the effects of the three types of export restrictions, it can be summarised that:

- ❖ All types of export restrictions reduce overall domestic welfare because the welfare gains for consumers do not fully offset the welfare/profit losses for producers (and government revenue, in the case of a tax). They also reduce welfare in export markets if the country imposing the measure is a large exporter, in a sense that changes in its exports have an impact on prices on the export market;
- ❖ The economic effects of an export ban are stronger than those of quantitative restrictions or export taxes. Export bans and quotas work identically, with a ban constituting the

27 For a more detailed analysis of export taxes, see Piermartini (2004).

28 In Figure 5, $c+f+g$ is equivalent to c in Figure 4.



extreme case of a quota (a quota of zero); they fully isolate the domestic market from price changes on the export/world market. Export taxes provide a lower degree of protections against price fluctuations but are less market distorting and hence result in lower welfare losses than quotas or bans.

5.2.2 Short-term, Medium-term and Long-term Effects

In the short term, binding, and effectively enforced, export restrictions exert a downward pressure on the domestic price of the commodity concerned, as the volume of output normally destined for exports will be offered on the domestic market. Therefore, supply will increase, and prices will drop, benefitting buyers but reducing the profits of producers. The assumption here is, however, that any excess supply caused by the export restrictions will indeed be offered on the domestic market and not be stored, nor be sold for alternative uses (e.g. maize sold for the production of biofuel). Another aspect to be considered is the price wedge between prices at the farm gate and the retail price which the consumer pays. If the export restrictions entail administrative costs for traders/middlemen, or if there is lack of competition in the sector, then retail prices might not go down as expected, as transaction costs and/or profits of intermediaries rise.

Over the medium and long term farmers will adjust their production in response to price signals as well as indications and uncertainty about future price changes induced by a ban. This normally involves the switching to alternative, more profitable commodities not affected by the ban. The impact of this is that supply of cereals covered by the ban is reduced, exerting an upward pressure on prices.

The effect of an export ban on production output follows from the effect on prices. However, if export restrictions are announced (unexpectedly) within season, i.e. after planting, output for the season will not be affected, and the full effect will be on prices (under the assumption, stated above, that total output will be marketed domestically for food consumption), but across seasons production might shift to more profitable crops and/or those that are not, or are unlikely to be, affected by export restrictions or other profit-reducing policy measures.

In conclusion, the short-term effects of export restrictions are stronger than longer term effects, as the reaction of producers will have a countervailing effect. This also means that such restrictions, and in particular the strongest type, i.e. bans, should only be applied as short-term instruments, whereas they are ineffective to correct actual or perceived market failures in the longer term.

5.2.3 Policy Alternatives to Export Restrictions

Export restrictions are only one policy instrument to ensure adequate supply of cereals among several others. Other points of entry for government intervention might directly address the level of imports and/or the level of production. This is because domestic supply is the sum of domestic production plus imports, less exports, and intervening into any of the three components of domestic supply therefore impacts on the level of supply. This also means that, in principle, interventions into exports, production, and imports can substitute each other, and a comprehensive policy approach therefore needs to be broader than export bans or even export restrictions.

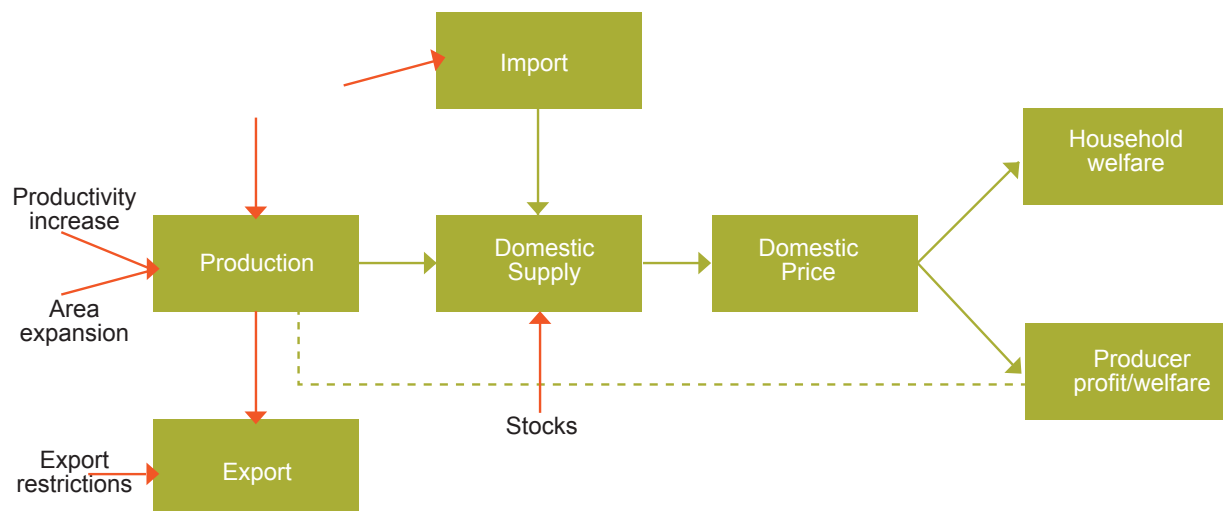
Cattle market in Mi'eso area
Mieso, Mirab Hararghe Zone of the Oromia
Region, Ethiopia
| photo credit: ILRI/Apollo Habtamu |





Figure 6 provides a simple causal model of the various policies aiming at ensuring an adequate supply of foodstuffs. Export restrictions directly aim at reducing exports, thus increasing domestic supply and reducing domestic prices, which in turn reduce producer welfare (profits), thereby setting incentives for producers to reduce production (the dotted arrow in the figure). Initial alternative policy instruments are measures to increase production, either by increasing productivity or by expanding the area. Subsidies can be provided for production and imports and have a direct impact on price and supply. Finally, government keeping stocks and selling them in times of reduced production stabilises supply directly.²⁹

Figure 6: “Theory of change” for supply increasing policy interventions



As mentioned above (Section 2.3), the Ethiopian government has used most of these instruments. However, the various alternative policy instruments are not perfect substitutes to each other. For example, measures to increase productivity only expand output in the medium term but do not provide short-term relief in the face of acute crises, such as the price hikes seen in 2007-08 or 2010-11. Subsidies, on the other hand, require sizeable financing which many developing countries simply do not have. In Ethiopia, the distribution of subsidised wheat caused a significant strain on public finances.

Nevertheless, a comprehensive review of the use of cereals export bans would not only have to consider procedural and administrative improvements but also the possible use of alternative policy instruments altogether to achieve the stated objectives. Such a comprehensive review approach is beyond the scope of the present study but would be important to be undertaken if the government is interested in optimising its policy for ensuring cereals supply in combination with increased exports.³⁰

²⁹ For a detailed analyses of the Ethiopian food reserve policy and practice, see Rashid and Lemma (2011) and Häberli (2013).
³⁰ Mitra and Josling (2009), Sharma (2011), and Anania (2013) provide concise overviews of different instruments.

5.3 An Estimate of the Effects of Cereal Export Restrictions in Ethiopia

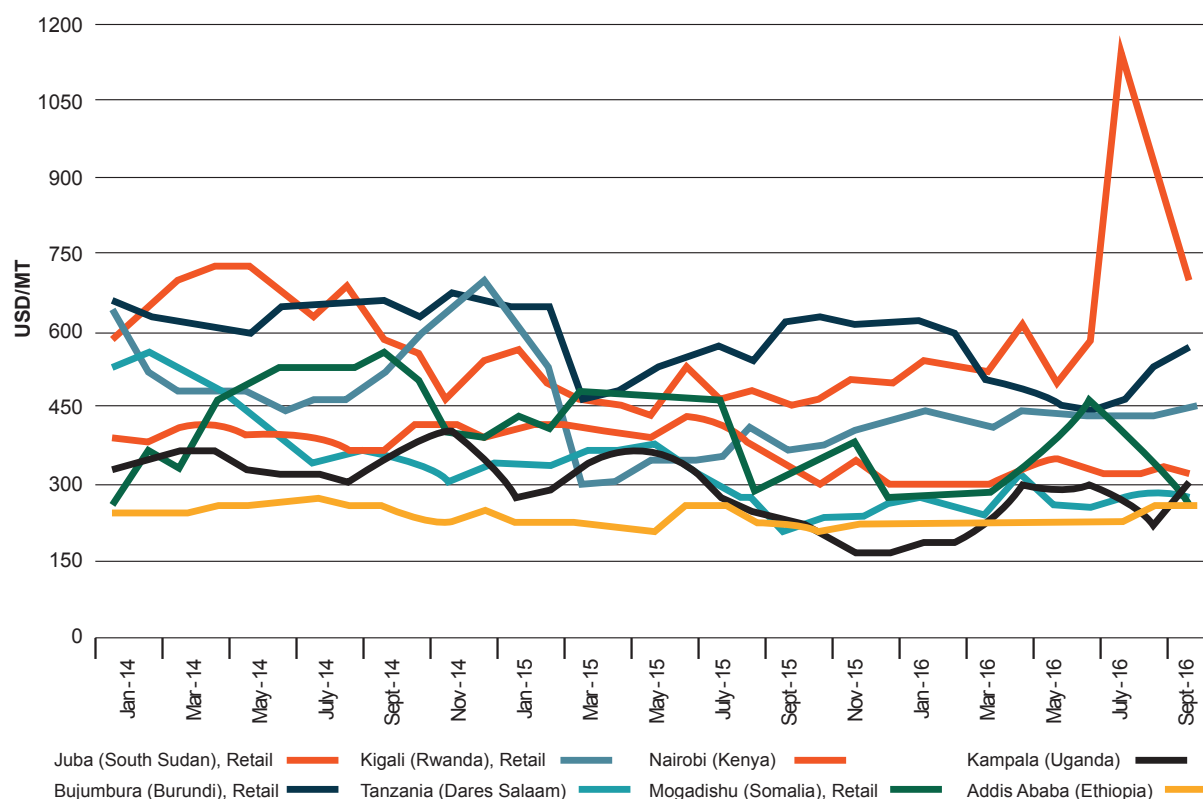
5.3.1 Have Export Bans Been Binding?

Export bans can only have an effect if they are binding, i.e. if without the ban there would have been exports. Although it is difficult to establish a counterfactual, two indicators for an ineffective ban are, first, a situation where the domestic market price is above the export parity price, and second, the absence of exports even during periods where no ban is in place. The following paragraphs first review the price indicator for selected commodities³¹, followed by an estimate of the second indicator

Estimate of price competitiveness

Maize: Depending on the source, maize wholesale prices in Addis Ababa have indeed been below most other East African markets over the period 2014 to 2016 (Figure 7), but it should be noted that the information on price levels does not appear to be very robust, as different statistics provide different price levels.³²

Figure 7: Wholesale price of maize in selected East African markets, 2014 – 2016



Source: FSNWG-MAS (October 2016).

³¹ For teff, given the limited international trade taking place, the required price data and corresponding analysis are not available.

³² Thus, according to the latest (January 2017) issue of the East Africa Crossborder Trade Bulletin (FSNWG-MAS 2017), the wholesale price of maize in Addis Ababa appears to be higher than in most other regional markets.

However, even where the domestic market price is lower than export market prices, this does not mean that exports would be competitive; for this, transport and other costs as well as import duties in the destination market need to be taken into account.

Based on this, most studies in the past found that maize exports from Ethiopia would not normally have been competitive (nor would imports of maize have been competitive, as the domestic prices stayed between the import and export parity prices (Rashid 2010; Rashid et al. 2011; Minot 2013; AGP-AMDe 2015: 100). More recently, based on calculations by ATA's Maize Surplus Market Linkage Project undertaken in October 2016, due to transport, freight and packaging costs, the export price of Ethiopian maize in Kenya, South Sudan, Tanzania and Uganda would have been above the import parity price in these countries and hence exports would have been uncompetitive (ATA 2016).

Recently, one case of a failed export transaction shows the fragility of export competitiveness of Ethiopian maize. A union of cooperatives was able to secure an order for 10,000 MT of maize to be delivered at Moyale in Kenya at USD 325 per ton, which would have been profitable considering the local market price of about USD 270. However, by the time the export transaction had been approved, the price at Moyale had dropped to USD 270 per ton, at which level export was no longer profitable and therefore, although a permit had been obtained in the meantime, no transaction took place. However, the most recent exports to Kenya attracted prices of USD 320 and USD 360 per ton, respectively.

One indication that the export ban has been binding at least to some extent is the fact that sizeable cross-border exports to Kenya and Somalia have taken place consistently, including during the time of the ban (FSNWG-MAS 2012ff). Most recently, cross-border (including informal) exports of maize have been sizeable: For 2016, when no formal maize exports were registered, cross-border exports from Ethiopia to Kenya and Somalia exceeded 15,000 MT, although such exports appear to have been much more limited in previous years,³³ however for the period 2003 to 2008, they were estimated at between 10,000 MT and 20,000 MT years (cf. Minot 2013). Also, AGP-AMDe note that “despite the ban [a] substantial amount of maize and other cereals [was] smuggled through [the] boarder [sic!] to neighboring countries” (2015: 114). Again, this indicates that at least in certain years, when harvests in Ethiopia are good (and there are shortages in neighbouring countries), Ethiopian maize production is competitive, and the export ban could be binding. At the same time, the fact that notable cross-border exports take place indicates that the ban is not fully enforced or effective.³⁴

Sorghum: For Sorghum, a detailed analysis of the market potential undertaken by Demeke and Di Marcantonio state that “export opportunities are limited because of the country’s low level of productivity, significant unmet local demand and insignificant export opportunity (except in the form of a small cross-border trade)” (2013: 15). Only a minority of output – 11.5% (AATF 2011, as cited in Demeke/Di Marcantonio 2013) – is marketed in the first place, and exports mostly take place through informal cross-border trade, mostly with Sudan and Somalia (Demeke/Di Marcantonio 2013; FSNWG-MAS 2016). Overall, Demeke and Di Marcantonio conclude that

33 Calculated by the authors based on FSNWG-MAS (2016; 2017).

34 Various studies of African countries have determined that it is virtually impossible to effectively implement an export ban (e.g., Stryker/Amin 2012; AGRA 2014; Amin/Stryker 2015).

“export is not an option because of high transport and transaction costs. Limited quantity of sorghum available for export and lack of export facilitating infrastructure and institutions (e.g. safety and quality standards) may also imply the country cannot be export competitive” (2013: 25). Nevertheless, this analysis appears to be overly pessimistic, as some exports have taken place over the years (Table 1). It therefore appears that, as in the case of maize, the export ban is binding in some years, when the harvest is good and domestic prices low, but not in others.

Wheat: A similar finding applies to wheat. The domestic price has barely been below the export parity price – only briefly during the times of greatest price volatility and increase, i.e. in 2007/08 and 2011 (AGP-AMDe 2015: 99). Also, similar to sorghum the marketable surplus remains low, at about 20% (Wakeyo/Lanos 2014: 47). Nevertheless, it cannot be disregarded that in some years the export of wheat could have been profitable. For example, Wakeyo and Lanos find that “In 2010, the export ban was not in place and wheat was exported to neighbouring countries; wheat production increased, suggesting that the restrictive trade policy had a hindering effect on production” (2014: vi). Some anecdotal evidence reported limited cross-border exports of wheat taking place even under the ban.

Summary: The review of prices shows that an export ban may have been binding in certain periods but not in others. Essentially, when harvests are good in Ethiopia but not so in neighbouring countries, they appear to have been binding. Exports to other countries would have been uncompetitive in any case. Also, relatively limited yield/productivity, high transportation costs and low marketing – for most crops, the commercialised share of production is 20% and lower – also contribute to a limited binding level of cereals export bans in Ethiopia.

Comparison of exports in years with and without ban

Considering the second indicator for determining whether the ban has been binding, that is, a difference in the level of exports between periods with and without ban, Table 1 below shows that exports of cereals from Ethiopia since 2001 have been limited mostly to sorghum, maize and, in recent years, limited amounts of teff. The volatility of exports has been high – in particular for sorghum and maize. Compared to domestic production (Table 2 below) exports have been low. In particular, the highest exports registered over the past 15 years – for maize, 36,000 MT in 2010 and 60,000 MT in 2011, and for sorghum, 22,000 MT in 2010 and 2011 – may have been sales to the World Food Programme for distribution as food aid (Minot 2013: 6).

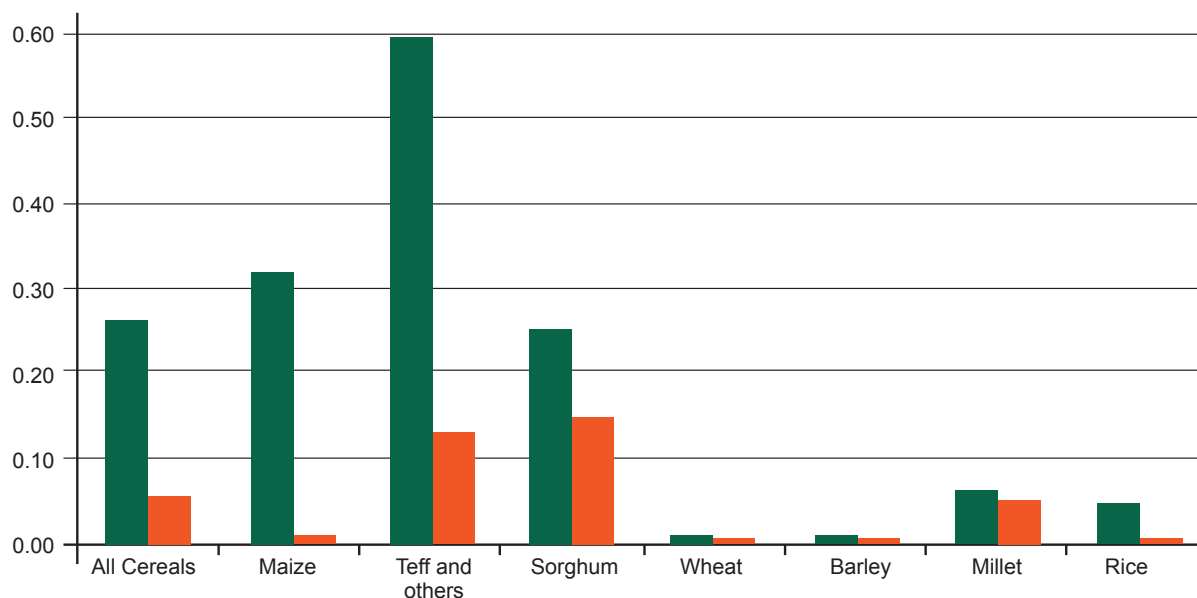
Nevertheless, despite the very low levels of exports compare to production – which have never exceeded 1% for any crop in any year³⁵ – there appears to be a systematic link between export bans and the share of production being exported, for most cereals (Figure 8). Average exports of all cereals were 0.26% of production in the years without a ban but only 0.05% in years with a ban. For maize and teff, the difference is even higher: 0.32% vs. 0.0% in the case of maize, and 0.60% vs. 0.13% in the case of teff. Conversely, for wheat, millet and barley there is no difference between years with and without ban; indeed, exports of these commodities have been negligible even in years without ban, suggesting that the ban has not been binding³⁶.

35 Exports of teff and other cereals n.e.s. reached 1.00% in 2002 and 1.01% in 2005, and exports of maize 0.99% in 2011; see Table 8 in Annex B.

36 Note that UN COMTRADE data report wheat exports of 7,087 MT in 2012 (cf. Wakeyo/Lanos 2014), which would nevertheless only constitute 0.20% of Ethiopian wheat production in that year.

Furthermore, even for commodities where there is a difference between the levels exported between periods with and without ban, the levels of exports are very low – always below 1% of production, with indicates that export bans have had little real impact.

Figure 8: Share of Ethiopian cereals production being exported, periods with export ban vs. periods without ban (%)



Source: Table 8 in Annex B.

In sum, therefore, one can conclude that the cereals export bans have been binding, but only to a limited extent – not in every year, not for every crop, and only affecting a very limited share of output.

Participants visit a water harvesting structure, Ethiopia
| photo credit: ILRI/A field-day organized by Wollo University, Sirinka |



Table 1: Ethiopian imports and exports of cereals, 2001-2016 (MT)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Exports																
Wheat	7	94	58	28	291	0	1	35	1	5	39	0	0	0	0	0
Maize	5,298	14,150	747	11,405	1,711	333	1	0	35,994	60,148	1	434	1	434	1	434
Sorghum	691	1,313	1,426	2,086	2,641	1,318	2,402	2,226	21,786	21,828	7,263	2,870	14,107	6,538	3,280	3,280
Barley	40	107	82	178	126	111	141	88	17	1	2	0	1	1	1	2
Rice			5					23	12	8						4
Teff																2,013
Others	10,203	17,375	12,926	16,192	31,109	6,517	463	136	1,391	242	114	198	24,136	5,104	2,190	2,190
Imports																
Wheat	742,717	449,186	1,574,503	574,662	982,602	328,306	384,127	1,100,050	1,111,522	1,048,694	1,076,297	967,753	1,234,586	937,573	1,199,891	2,475,980
Maize	9,340	3,188	11,582	11,348	50	79	3,325	34,624	5,213	2,667	2,155	3,452	2,856	4,232	4,123	5,235
Sorghum	22,210	0	247	4,606				252,697	69,770	113,260	33,790	3,720	45,040	52,100	125,070	112,634
Barley	5,775						0	0	1	41	7	13,200	13	23,612	31,107	14,590
Rice	11,793	11,118	20,454	20,292	17,302	30,909	45,413	22,419	30,926	43,248	81,816	122,884	153,760	187,723	275,470	311,827
Teff																
Others	3,625	14	265	152	66	2,965	42	108	1,319	104	233	325	9	4	7	132
Balance																
Wheat	-742,710	-449,092	-1,574,445	-574,633	-982,311	-328,305	-384,127	-1,100,015	-1,111,522	-1,048,689	-1,076,297	-967,715	-1,234,586	-937,573	-1,199,891	-2,475,980
Maize	-4,042	10,962	-10,836	57	1,661	254	-3,324	-34,624	-5,213	33,327	57,993	-3,452	-2,856	-4,231	-3,689	-5,235
Sorghum	-21,519	1,313	1,180	-2,519	2,641	1,318	2,402	-250,471	-69,770	-91,474	-11,962	3,543	-42,170	-37,993	-118,532	-109,354
Barley	-5,735	107	82	178	126	111	141	88	25	-24	-7	-13,198	-12	-23,611	-31,107	-14,588
Rice	-11,793	-11,118	-20,449	-20,292	-17,302	-30,909	-45,413	-22,419	-30,926	-43,224	-81,804	-122,875	-153,760	-187,723	-275,470	-311,823
Teff	0	0	0	0	0	0	0	0	0	0	0	0	1,589	2,981	2,640	2,013
Others	6,578	17,361	12,661	16,040	31,043	3,552	421	28	-1,288	1,287	9	-211	189	24,132	5,097	2,058

Source: Authors' calculations based on ERCA import and export statistics.

Table 2: Production, area harvested and yield of cereals in Ethiopia, 2001-2014

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	CAGR 2001-07	CAGR 2008-14
Area harvested ('000 ha)	7,949	6,619	8,456	8,692	9,320	8,062	8,470	9,138	9,209	9,660	9,558	9,575	9,802	10,124	1.1%	1.7%
Barley	938	821	1,075	1,255	1,209	998	1,019	985	1,129	1,047	948	1,019	1,019	994	1.4%	0.2%
Cereals, nes	2,200	1,863	2,776	2,932	3,168	2,213	2,438	2,993	2,589	2,761	2,731	2,730	3,017	3,016	1.7%	0.1%
Maize	1,893	1,507	1,791	1,802	1,950	1,526	1,695	1,767	1,772	1,963	2,055	2,013	1,995	2,115	-1.8%	3.0%
Millet	347	281	305	314	335	391	374	399	369	408	433	432	455	454	1.3%	2.2%
Rice, paddy	8	8	7	7	6	6	6	35	48	30	31	42	34	47	-5.1%	5.1%
Sorghum	1,359	1,133	1,336	1,284	1,254	1,468	1,464	1,534	1,619	1,898	1,924	1,711	1,677	1,835	1.2%	3.0%
Wheat	1,204	1,006	1,166	1,099	1,398	1,460	1,474	1,425	1,684	1,553	1,437	1,628	1,606	1,664	3.4%	2.6%
Production ('000 MT)	9,529	8,965	9,494	10,101	12,693	12,632	12,200	13,223	15,501	17,714	18,760	19,608	21,514	23,557	4.2%	10.1%
Barley	1,017	1,184	1,087	1,376	1,398	1,410	1,271	1,352	1,750	1,703	1,585	1,782	1,908	1,953	3.8%	6.3%
Cereals, nes	1,737	1,644	1,943	2,118	3,082	2,289	2,405	2,565	3,179	3,483	3,498	3,765	4,419	4,751	5.6%	10.8%
Maize	3,298	2,826	2,744	2,906	3,912	4,030	3,337	3,776	3,897	4,986	6,069	6,158	6,492	7,235	0.2%	11.4%
Millet	316	306	305	333	397	500	397	484	524	635	652	742	849	915	3.9%	11.2%
Rice, paddy	15	15	13	12	11	11	11	71	103	90	89	121	92	132	-5.1%	10.8%
Sorghum	1,549	1,546	1,784	1,742	1,716	2,174	2,316	2,659	2,971	3,960	3,951	3,604	3,829	4,339	6.9%	8.5%
Wheat	1,596	1,444	1,618	1,614	2,177	2,219	2,463	2,314	3,076	2,856	2,916	3,435	3,925	4,232	7.5%	10.6%
Yield (MT/ha)	1.26	1.44	1.25	1.31	1.44	1.59	1.48	1.57	1.75	1.99	2.06	2.15	2.27	2.39	2.7%	7.2%
Barley	1.08	1.44	1.01	1.1	1.16	1.41	1.25	1.37	1.55	1.63	1.67	1.75	1.87	1.97	2.4%	6.2%
Cereals, nes	0.79	0.88	0.7	0.72	0.97	1.03	0.99	0.86	1.23	1.26	1.28	1.38	1.46	1.58	3.8%	10.7%
Maize	1.74	1.88	1.53	1.61	2.01	2.64	1.97	2.14	2.2	2.54	2.95	3.06	3.25	3.42	2.1%	8.2%
Millet	0.91	1.09	1	1.06	1.19	1.28	1.06	1.21	1.42	1.56	1.51	1.72	1.87	2.02	2.6%	8.8%
Rice, paddy	1.84	2	1.81	1.85	1.8	1.75	1.84	2.05	2.16	3.03	2.89	2.89	2.73	2.81	0.0%	5.4%
Sorghum	1.14	1.37	1.34	1.36	1.37	1.48	1.58	1.73	1.84	2.09	2.05	2.11	2.28	2.37	5.6%	5.3%
Wheat	1.33	1.44	1.39	1.47	1.56	1.52	1.67	1.62	1.83	1.84	2.03	2.11	2.44	2.54	3.9%	7.8%

Source: Authors' calculations based on FAOSTAT data.

5.3.2 Effects on Prices and Production

As mentioned, in the short-run analysis, by definition, cereals output is fixed due to the time gap between planting and harvest; therefore domestic supply – the sum of domestic production and imports, less exports – will increase by the amount of production that cannot be exported under the ban. In the medium and long-term scenarios, production will respond to incentives set by export restrictions, in particular, if the export ban leads to a reduction in prices, production will decrease. For determining the wider effects of a ban, in particular the welfare effects, it is thus essential to first estimate the impact of an export ban on supply and production.

In order to do this, it is first necessary to determine the linkage between prices and output, i.e. to what extent will prices drop if supply increases, and to what extent will production decrease if prices are lowered?

Short-term analysis

Benson et al. (2014) found that an increase in cereals production creates a considerable price depressing effect. For maize and teff, an increase in output of 1% leads to a reduction in the price of about 0.9% (Table 3). For wheat, the effect is more limited because, unlike for maize and teff, the production increase partly replaces wheat imports so that the increase in supply on the domestic market is lower than the production increase.

Table 3: Elasticity of cereals prices in response to changes in production

	Increase in outputs (%)	Reduction in price (%)	Derived elasticity
Maize	11.8	-10.7	-0.907
Teff	14.0	-13.2	-0.943
Wheat	14.0	-6.9	-0.493

Source: Authors' calculations based on Benson et al. (2014: 11f).

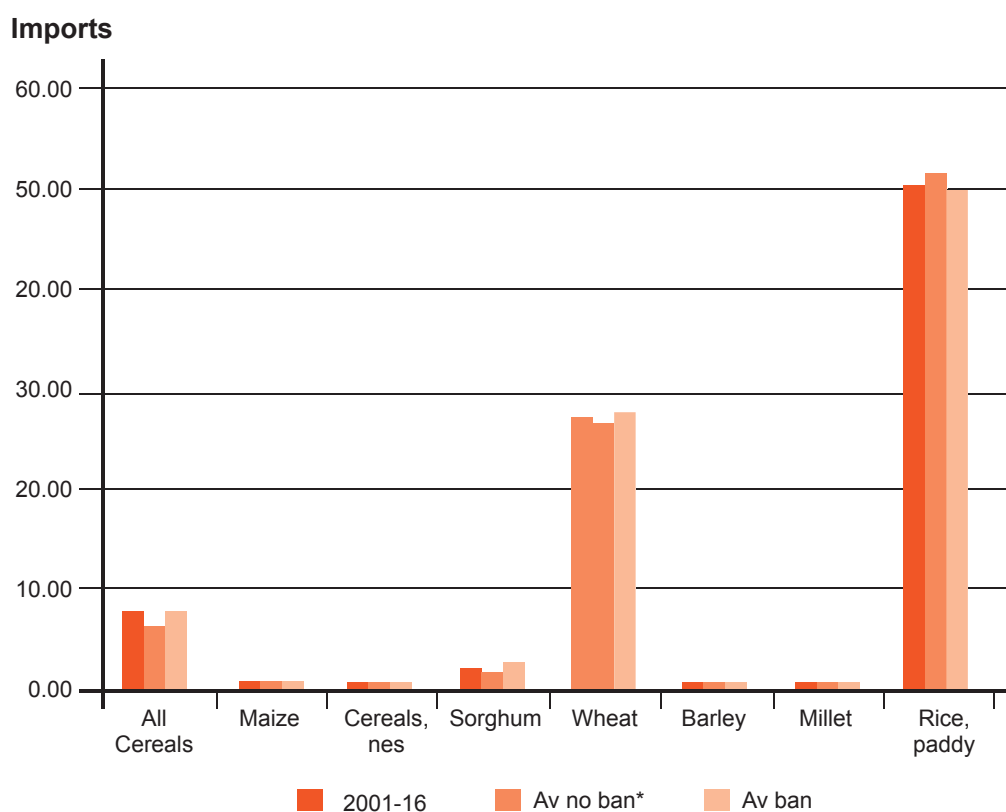
Benson et al. (2014: 28ff) also use their CGE model to undertake a simple analysis of allowing exports. This analysis assumes that exports of 300,000 MT to 600,000 MT respectively take place – constituting 7.4% and 14.8%, respectively, of the total national production of 4.1 million MT. However, changes in international prices and Ethiopian competitiveness factors are not considered in the analysis. As such, their assumption is that domestic supply would be displaced fully by the assumed exports.³⁷ This results in a sharp increase of the domestic price level by 6.8% and 14.6% – very much in line with the price elasticities as calculated in Table 3 above – which drives overall price increases; other cereals then become relatively cheaper.

³⁷ As the authors note: "These exports are imposed arbitrarily on the model—that is, they do not arise from a change in the comparative advantage of Ethiopia with regard to international maize markets. Simply, those quantities of maize were removed from the local supply of maize for the country and instead directed toward export markets" (Benson et al. 2014: 29).

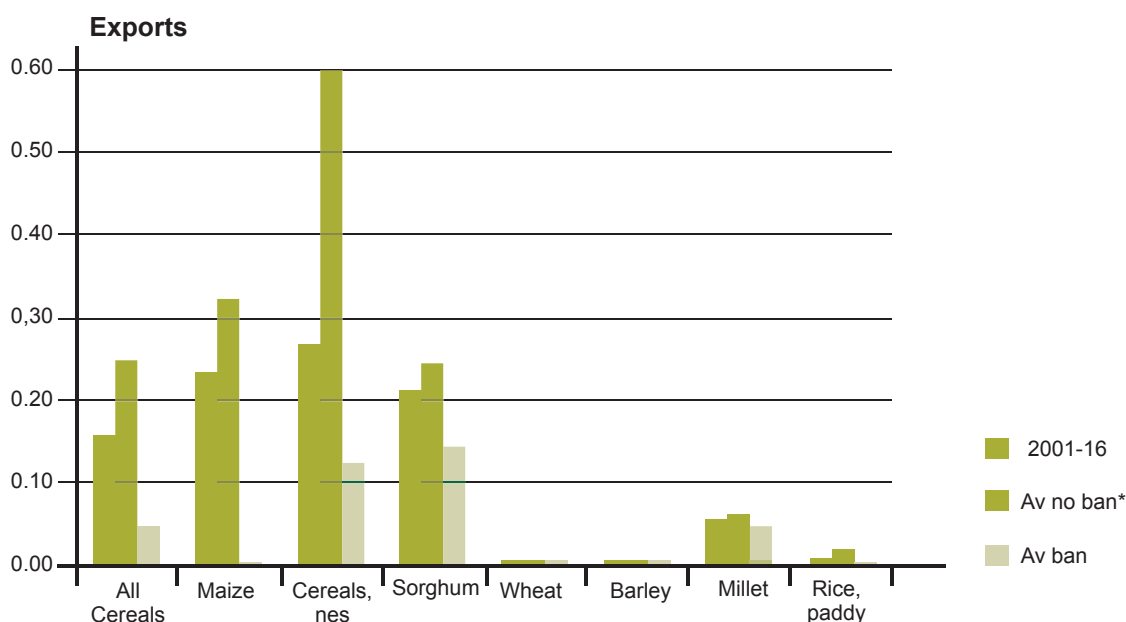
However, the export volumes assumed by Benson et al. are far from actual export volumes, in fact, as mentioned above, no export of any cereal has ever surpassed 1% of domestic production, even in the absence of an export ban,³⁸ and the analysis in the previous section has shown that the export competitiveness of Ethiopian cereals has always been marginal.

Figure 9 shows the share of imports and exports in Ethiopia's supply of various cereals. As can be seen, international trade of cereals in Ethiopia plays a limited role in general. Only for rice and wheat are imports notable (constituting 50% and about 28% of total supply on the Ethiopian market). The share of exports in total supply is very small for all products; over the 16-year period since 2001, exports of no crop have surpassed 0.27% of supply (the average for all cereals was 0.16% - average annual exports of 26,000 MT out of a total supply of 16.5 million MT), and even in times where no export ban was in place, exports did not surpass 0.24% on average for all cereals, 0.60% for teff and other cereals (average annual exports of 15,000 MT out of a total supply of 2.5 million MT), 0.32% for maize (exports 13,000 MT/total supply 4.1 million MT), and 0.25% for sorghum (exports 6,000 MT/total supply 2.5 million MT). These values are almost identical to the ones reported in Figure 8 above due to the fact that domestic production and total supply for these crops are virtually the same due to the low levels of imports.

Figure 9: Share of Ethiopian cereals supply being imported and exported, periods with export ban vs. periods without ban (%)



38 If instead of production the marketable surplus is taken as the basis, the shares increase in certain years with larger exports to up to 8.7% (AGP-AMDe 2015: 115).



* No ban for teff and others: 2001-2005; 2016; all other crops: 2001-2007, 2010-2011, 2015
 Source: Authors' calculations based on: Production 2001-2014: FAOSTAT; 2015-2016: USDA (2016; 2017); Exports & Imports: ERCA. Details see Table 9 in Annex B.

Applying the elasticities derived from Benson et al. (see Table 3 above),³⁹ the impact of export bans on prices as transmitted through the increase in domestic supply caused by the full diversion of existing exports to the domestic market cannot have exceeded the maximum values as reported in Table 4. This means that as a result of the export ban on teff, domestic prices cannot have been reduced by more than 0.96%, and maize prices by more than 0.91%, and even less for other commodities. To illustrate this impact: if the observed retail price for a quintal of maize in Addis was ETB 556 in January 2016 (with the export ban on maize in place), it would have been not higher than ETB 562 without the ban. In short, the impact of export bans on domestic price levels has been minimal.

Table 4: Impact of export ban on domestic prices in Ethiopia

	Effect of ban on supply (change in %)		Elasticity	Change in domestic price (%)	
	vs average in "no ban" years	vs highest export share over 2001-16		Average	Maximum
Maize	0.32	1	-0.907	-0.29	-0.91
Teff & cereals nes	0.6	1.02	-0.943	-0.57	-0.96
Sorghum	0.25	0.55	-1	-0.25	-0.55
Wheat	0	0.01	-0.493	0	0
Barley	0.01	0.01	-1	-0.01	-0.01
Millet	0.06	0.29	-1	-0.06	-0.29
Rice	0.02	0.02	-0.5	-0.01	-0.01

Source: Calculations by the authors

Medium-term analysis

For the medium term scenario, where producers can adjust output in response to the export ban,⁴⁰ Aragie et al. (2016)⁴¹ find that a world market food price increase of 10% would lead to an increase of 3.30% for cereals consumer prices in Ethiopia – the shock partially being absorbed by an appreciation of the Birr and a reduction of marketing margins – if no export-reducing measures are taken, and by 1.23% if a cereals export ban is imposed; in other words, the export ban has a price-depressing effect of -2.07% compared to the baseline (Table 5). The export ban would also be successful in diverting domestic production from exports to the domestic market and thereby holding supply on the domestic market constant (in fact, increasing it by 0.1%, compared to a contraction of 0.62% without the export ban), but this would come at the expense of a contraction of domestic cereals production by -1.61%, of which -1.33% would be attributable to the ban. Production would shift to other food products not subjected to the ban, as well as non-food products and services.

In sum, then, if producers can adjust their planting decisions to the export ban, the price-reducing effect of the ban remains very limited, at roughly 2%. This finding is of the same order of magnitude as for the short-term analysis presented above, and also with the analysis of AGP-AMDe, which concludes that “in general, [the] export ban of both wheat and maize [is] unlikely to have [a] visible effect” (2015: 114).

These findings are also in line with the literature studying the experience of other countries.⁴² For example, Abbott (2011), reviewing actual price development during the 2007-08 global food crisis, finds “countries that restricted trade were much more susceptible to food inflation, and to world agricultural commodity price changes reaching consumers.” Porteous (2012) arrives at the same finding in his study of maize export bans in 12 Eastern and Southern African countries. International price shocks spill over onto the domestic market, and export restrictions, while slightly attenuating these shocks, do not succeed in keeping domestic food prices stable.

40 That this is indeed the case was shown by Makombe and Kropp for Tanzania. Their survey of farmers' reactions to maize bans in Tanzania showed that: “While none of the respondents indicate that they stopped producing maize because of the bans, 43 percent indicated that they decreased maize production and started growing other crops. Approximately 63 percent of respondents now produce maize only for household consumption” (2016: 2).

41 Aragie et al. (2016: 9) use a different terminology regarding the time frames – the “medium term” in the present study is referred to as “short term”, and the “short term” as “instantaneous/immediate term”. The study to date is the most detailed and comprehensive on cereals export bans in Ethiopia.

42 For example, Diao and Kennedy (2016) for Tanzania.

Table 5: Effects of a 10% world food price increase and export ban on prices and supply in Ethiopia
(percentage point changes compared to baseline)

	Producer price	Export/Import price	Supply price	Consumer price	Production	Export sales	Domestic sales	Imports	Total supply
10% world food price increase, no export ban									
Cereals	3.89	6.25	4.06	3.30	-0.28	1.42	-0.32	-3.42	-0.62
Other food	3.48	6.25	3.03	2.68	0.31	3.82	-0.34	-7.72	-0.53
Industry	-1.50	-3.41	-2.45	-2.42	-2.79	-4.40	-2.25	2.31	0.55
Services	-1.37	-3.41	-1.88	-1.83	-0.41	-2.70	-0.27	2.61	0.55
10% world food price increase with export ban									
Cereals	1.21	5.34	1.59	1.23	-1.61	-99.00	0.75	-5.81	0.10
Other food	2.55	5.34	2.10	1.87	0.42	4.09	-0.26	-6.84	-0.42
Industry	-0.98	-2.22	-1.59	-1.58	-1.80	-2.99	-1.40	1.49	0.38
Services	-0.84	-2.22	-1.18	-1.15	-0.24	-1.83	-0.14	1.77	0.40
Net effect of export ban									
Cereals	-2.68	-0.91	-2.47	-2.07	-1.33	-100	1.07	-2.39	0.72
Other food	-0.93	-0.91	-0.93	-0.81	0.11	0.27	0.08	0.88	0.11
Industry	0.52	1.19	0.86	0.84	0.99	1.41	0.85	-0.82	-0.17
Services	0.53	1.19	0.70	0.68	0.17	0.87	0.13	-0.84	-0.15

Source: Aragie et al. (2016): Tables 1 and 2, and authors' calculations.

Some studies find evidence for countries where export restrictions during times of high international prices were effective in maintaining domestic prices lower than countries which did not use such measures. However, these successful countries are primarily large net exporters of grains such as Bangladesh, China, and Indonesia for rice, and China, India, Turkey, and Japan for wheat (Anania 2013; Anderson et al. 2013; Aragie et al. 2016: 3) – a situation which does not apply to Ethiopia.

Long-term analysis

A detailed analysis of the long-term effects of export bans on prices and production is beyond the scope of this study. However, research on Ethiopia has confirmed that “Export bans provide strong disincentives to participating and investing in the private grain trade, as well as indirectly making processor-access to raw material supplies less certain. Bans also discourage farmer investments in expanded maize production” (AGRA 2014: 16); similar findings have been made by studies on export bans in other countries.⁴³ In addition, several studies found that the general environment (of which export bans are only one part) for cereals production in Ethiopia is one of disincentives, although these disincentives appear to have become smaller over time. For example, Demeke (2012) found this for maize, Demeke and Di Marcantonio (2013) for sorghum, and Wakeyo and Lanos (2014) for wheat. These research findings indicate that the long-term effects of the export ban on prices and production are comparable to the medium-term effects.

5.3.3 Consumption, Welfare and Poverty Effects

The effects of an export ban on consumption and welfare, and therefore also on poverty, mostly derive from the price effects. Given the very limited effect of export bans on cereal prices in Ethiopia, as shown in the previous section, it should be expected that welfare implications are also limited.

Short-term analysis

In the short run, to the extent that an export ban does not increase production but reduces prices (even if only to a limited extent), it has an unambiguously positive impact on the consumption and welfare of urban households, including the urban poor – both increase as a result of the lower market prices. However, the rural poor, who are cereals producers, are negatively affected by the price reduction, and therefore welfare decreases; these immediate effects were also found by Aragie et al. (2016: 21).⁴⁴ The effect on cereals consumption in rural areas is theoretically undetermined – lower incomes would have a reducing effect on consumption whereas the lower prices might induce them to sell less on the market and consume more within the household, thereby increasing consumption.

⁴³ In particular, a number of studies have shown this for Tanzania (AGRA 2014: 131; Makombe/Kropp 2016) and Malawi (Aragie et al. 2016a).

⁴⁴ Aragie et al. (2016a: 11) find in a study of export bans in Malawi, that medium-sized and larger scale farms (i.e., commercial farms) lose out most because the share of their production being marketed is larger than for smallholder farmers, and they are therefore more vulnerable to the price reductions induced by the ban.



Table 6 shows the impact of a 10% world food price increase on consumption in Ethiopia, with and without an export ban in place, and also singles out the effect of the ban. As can be seen, the ban would increase consumption of cereals both in rural areas (to a lesser extent) and urban areas (to a higher extent), but it would be insufficient to offset the negative effect for urban households caused by the world food price increase in the first place. For rural households, it would lead to a net increase in cereals consumption, presumably due their switching from sales of produced cereals to own consumption.

Table 6: Effects of a 10% world food price increase and export ban on consumption in Ethiopia (percentage point changes compared to baseline)

	Rural areas	Urban areas	All
10% world food price increase, no export ban			
Cereals	-1.30	-0.01	-3.17
Other food	-0.72	-0.27	-2.70
Industry	0.64	1.55	-1.07
Services	0.63	1.08	-1.15
10% world food price increase with export ban			
Cereals	-0.12	0.87	-1.56
Other food	-0.56	-0.27	-1.85
Industry	0.42	1.01	-0.68
Services	0.39	0.68	-0.76
Net effect of export ban			
Cereals	1.18	0.88	1.61
Other food	0.16	0.00	0.85
Industry	-0.22	-0.54	0.39
Services	-0.24	-0.40	0.39

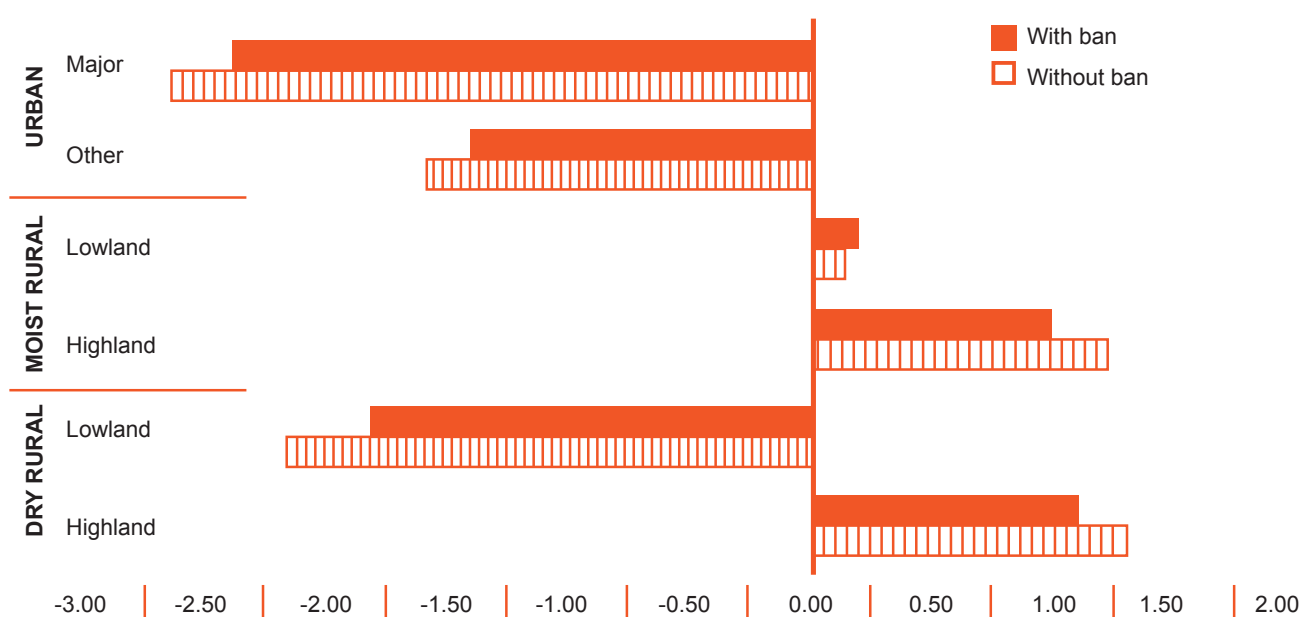
Source: Aragie et al. (2016): Table 3, and authors' calculations.



Traditional way of ploughing a farm plot
| photo credit: Africa RISING/Barry Pound |

Figure 10 takes the analysis one step further and presents the impact of the world food price increase and the export ban on welfare in different regions of Ethiopia. As can be seen, without the export ban, the welfare of urban households and rural households in dry lowland areas suffers – these are net consumers of cereals. Conversely, net producers/sellers in the highland areas benefit from the higher prices. The effect of the export ban slightly attenuates the effects of the price shock, but only to a limited extent. For example, welfare in major urban areas would reduce by about -2.6% as a result of the price increase, and as a result of the ban the welfare reduction is limited to about -2.4%; similar effects can be observed for the other regions.

Figure 10: Impact of food price increase and export ban on welfare in different regions in Ethiopia



Source: Aragie et al. (2016): Figure 3.

By and large, these findings are in line with both the theoretical considerations presented in section 5.2 above and the impact analysis on prices in the previous section: consumers of cereals benefit from the ban while producers suffer a loss, as theory predicts,⁴⁵ but the magnitude of the impact is negligible.

Medium- and long-term analysis

In the longer term, the price suppressing effect of an export ban decreases production – in the medium term because other crops are planted, and in the long term because investments in increasing the area harvested and productivity enhancements are not undertaken – which will have a price increasing effect, which in turn leads to smaller medium-to long-term effectiveness of the ban in terms of consumption and welfare, when compared to the short-term effects.

⁴⁵ Studies of export bans in other countries reach similar conclusions, e.g. Stryker and Amin (2012), Ilomo (2015) or Diao and Kennedy (2016) for Tanzania.

Thus as expected, medium-term effects found by Aragie et al. (2016) are considerably weaker – i.e. rural households are less negatively affected, and urban households benefit less – than in the short-term scenario. This is unsurprising, because in the short term producers cannot adjust their production patterns so as to ameliorate the negative implications. With fixed cereals production, price and welfare effects are stronger than if producers could respond by reducing cereals production.

The conclusion of limited welfare effects of the export ban is also corroborated by the results of the analysis by Benson et al. (2014). Their modelling of the introduction of maize exports shows relatively limited welfare effects – overall per capita consumption will reduce by -0.03% in the case of exporting 300,000 MT of maize and by -0.02% in the case of exporting 600,000 MT. Effects differ across household groups, with the rural poor being the most negatively affected – although to a limited extent of -0.37% in case of the higher exports – and the rural non-poor most positively – again by a low level of 0.12% in case of the higher exports (Benson et al. 2014: 30). The rural non-poor would benefit most as they are net-sellers of maize and thus benefit from the higher prices caused by the exports. The impact on the poverty headcount of maize exports is also very limited – an increase of 0.06% in case of the lower exports, and an increase of 0.01% in the higher export case (Benson et al. 2014: 30).

Finally, in an earlier CGE analysis, using the standard GTAP Africa model, Woldie and Siddig found that the cereals export ban “has a devastating impact as the country was likely to lose welfare equivalent of \$ 148 million” (2009: 15); GDP is estimated to contract by -9.47% in value terms. It appears, however, that the study has conceptual issues, and many of the results appear unreasonable – such as an increase of domestic wheat production resulting after the ban; increases in output of other sectors by an order of magnitude that is clearly exaggerated (e.g. more than 10% for textiles, light & heavy manufacturing, and 40% for oilseeds); a reduction in household demand for all sectors, including cereals; sharp reductions in imports and exports (by 7-8% in value terms). As a result, the finding on welfare reduction should be treated with care.

In sum, following from the low effects of export bans on cereals prices, the impact on welfare in Ethiopia is minimal, even disaggregating between rural and urban poor and non-poor households.

5.3.4 Effects on Export Markets

Although it is not a key focus of the present study, it should also be noted that export restrictions can have effects beyond the border – as they reduce supply on export markets they can drive up prices there. This effect was studied in particular in the context of the 2008 global food crisis. Several studies found that export restrictions contributed significantly increasing food prices in importing countries (e.g. Dollive 2008) as well as to the extent of world food price increases.⁴⁷

For example, Timmer (2008) found that the increase in the world rice price was attributable primarily to export restrictions imposed by the large traders and not justifiably based on supply,

46 See Mitra and Josling (2009); Abbott (2011). Anania (2013) provides a brief review of the literature.

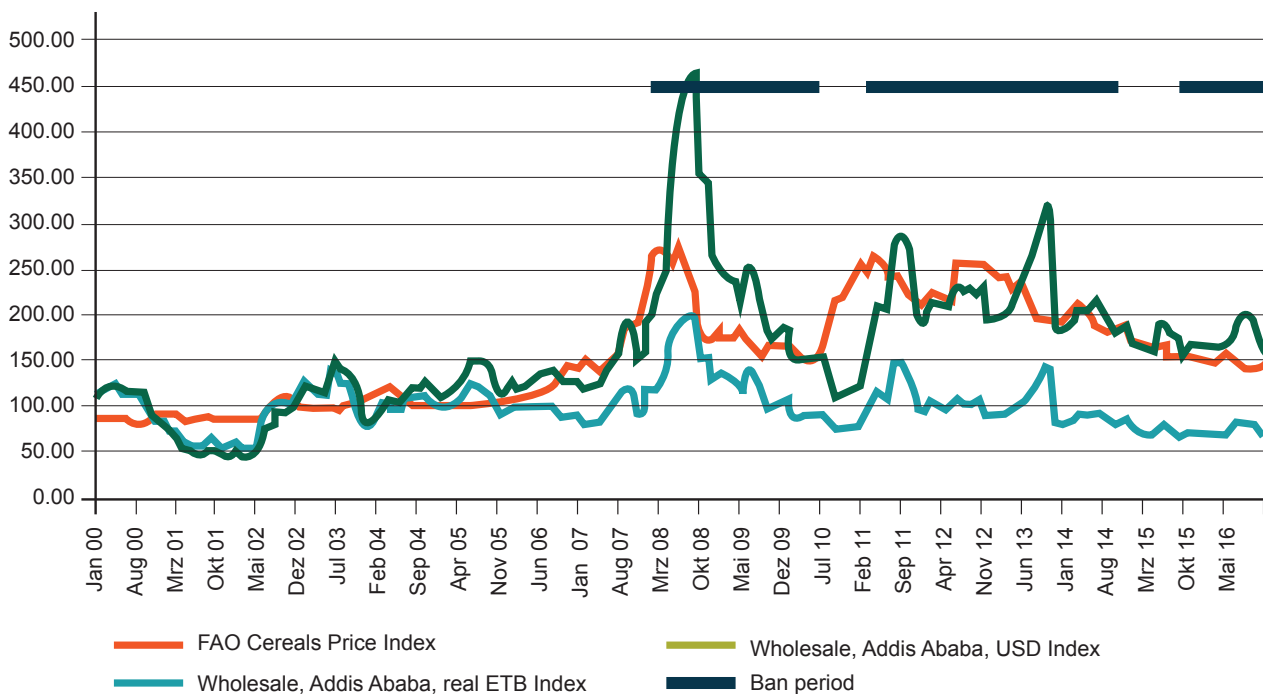
use and stocks worldwide. It has been argued that restrictions on the export of rice across Asia contributed to an increase in global rice prices by about 75% (cf. Economist, 27 March 2008). Also, “when Kazakhstan threatened to limit wheat exports, some wheat prices soared by 25%. Joseph Glauber, chief economist at America’s Department of Agriculture, reckons that restraints on the export of wheat may have added as much as 20% to wholesale prices—although not as much at the retail level” (Economist, 27 March 2008).

However, due to the limited levels of cereals exports that would have taken place without the ban in place, the Ethiopian ban is unlikely to have created serious distortions in regional export markets, except potentially in the border regions, where the market share of Ethiopian exports could have been more significant.

5.3.5 Have Periods of Export Bans been Appropriate?

The objective of Ethiopia’s cereals export bans has primarily been to stabilise prices. Apart from the fact, as shown below, that they have not been effective in this regard, they would also have been in place for lengthy periods. Taking the case of maize as an example, regardless of which price index is used as the basis, there is no justification from a price stabilisation perspective to maintain export bans for as long as they were in force in practice (Figure 11): The ban imposed in February 2008 could have been lifted in December 2008, while the ban imposed in 2011 would have been lifted in early 2012, and for the current ban there was no justification in terms of price developments in the first place.

Figure 11: Maize price indices and Ethiopian maize export bans, 2000-2016



Note: Average prices 2002-2004 = 100.

Source: Authors’ calculations based on FAO (FAO cereals price index) and EGTE (wholesale prices, Addis Ababa).

A key reason for the excessively long periods during which bans are in place, as described in detail in section 3 above, is the practice of imposing bans for an indefinite period of time coupled with the lack of a periodic review system.

The implication of the long periods is that friction costs and the negative effects of uncertainty are increased, whereas the economic benefits of the ban in terms of price stabilisation and absorbing the shock of high prices for urban consumers, as noted above, are very limited. Thus, the longer an export ban is in place, the more negative its cost-benefit balance becomes.

5.4 Summary – the Costs and Benefits of Export Bans in Ethiopia

The economic analysis of the Ethiopian cereals bans undertaken in this section yields five main findings.

First, the bans to a large extent were not binding, i.e. even without the ban in place exports would have been limited. The level of exports that would have taken place (and that actually take place as informal cross-border trade) is too limited to have any notable economic implications in terms of exerting downward pressure on prices, stabilising supply, or influencing welfare in Ethiopia. This finding has important implications for the justification of bans: their imposition “was based on the assumption that the production estimates were correct and that prices had increased because of exports” (Rashid 2010: 11) – but this assumption is mostly not fulfilled, as the analysis of the impact of export changes on domestic price levels undertaken above (Section 5.3.2) shows. Ethiopia’s cereals exports are too small to influence the domestic market price (also see Rashid 2010 for a similar conclusion). As a result of this, the export bans implemented in Ethiopia so far have not generated any notable economic benefits.

Second, if export bans had been economically relevant and yielded larger results – which would have been the case if the export competitiveness of Ethiopian cereals production had been higher, and exports in the absence of a ban had also therefore been higher – they would have resulted in (a) an aggregate welfare loss, and (b) have shifted welfare from rural households producing cereals to urban households consuming cereals.

This follows both from the economic theory of export bans as summarised in Section 5.2 and numerous studies undertaken of export restrictions in Ethiopia and elsewhere.⁴⁷ In terms of costs and benefits, while net consumers of cereals (i.e. urban households, including the urban poor) receive a benefit from export bans, net producers of cereals (incl. rural poor households) pay the cost in terms of lower producer prices. Intermediaries also sometimes beneficiaries if they do not pass on the full reduction in farm-gate prices to the consumer prices.

Overall, since the benefits for the urban households do not fully outweigh the losses for rural households, at the economy-wide level export bans generate a net loss; this is larger in the longer run due to the fact that lower domestic prices caused by the ban act as a disincentive to production, in terms of both planting decisions (there is an incentive to divert production to

⁴⁷ For example, Nogués (2008) estimates that without export restrictions in Argentina during 2007-08 GDP would have been 2-4% higher, and agricultural employment would have increased by 300,000.

crops not subjected to a ban) and productivity enhancing and/or cultivated area expanding investments. Ultimately, since export bans generate winners and losers, it is a policy choice for the government whether the benefits for urban consumers are weighted higher than the losses for rural households and overall welfare.

Third, export bans are an extreme instrument which is at odds with market principles; it also does not allow gradual application – a ban is either in place, prohibiting exports, or not in place, allowing exports. Alternative, less market distorting export restriction instruments which also offer the possibility of fine-tuning exist, such as export taxes (in various forms, including variable taxes). In addition further policy instruments other than export restrictions can be applied – and are applied by Ethiopia, such as subsidies, technical support to farmers, setting minimum prices, etc. – serving the same objectives as export restrictions. Like the second finding, this finding is somewhat theoretical in the Ethiopian context where export bans have mostly been non-binding, but going forward, considering the increases in yield and output that have been achieved over the years, it might become a practical matter in the not too distant future.

Fourth, and this is a practical finding again, although Ethiopian cereals export bans have not been effective in terms of stabilising prices and supply, and have thus not created a real benefit, they have caused real costs in terms of friction costs as well as costs stemming from lack of predictability and transparency. For example, a comparative analysis by AGRA finds that “Traders often find ways to get around the restrictions, but their costs rise because they have to bribe officials to do so” (AGRA 2014: 8).⁴⁸ On the other hand, a benefit from the mere imposition of export restrictions, regardless of whether or not they are effective, can be the signalling effect: by showing the (urban) poor that the government is doing something, unrest can be avoided (cf. Anania 2013).⁴⁹

Fifth, export bans clearly conflict with other Ethiopian policies – notably, the strategy to increase agricultural output and expand exports of agricultural and processed agricultural products is in full contradiction to the export ban.

48 This is further explained by Stryker and Amin for export bans in Tanzania. They find that the export ban is “widely violated when it is imposed, but these violations have a cost. They transfer income from producers to those who receive bribes in order to allow maize-laden trucks to pass, to those who take the risks of continuing to export maize, and to the additional costs involved with loading and unloading, and traversing panya routes in smaller vehicles. [...] The increased price difference is absorbed by bribes, returns to risk-taking by traders, and higher transport costs. These increased costs of marketing and trade benefit only the receivers of bribes, though even they are also being compensated for greater risks” (Stryker/Amin 2012: 32 & 35).

49 Less benignly, one could follow Mitra and Josling and state that “The ostensible reason for such bans is food security, but as mentioned above, this might mask political motives. Low food prices might be an effective way to win political support” (2009: 8).

Mother and baby camel in Afar, Ethiopia
| photo credit: ILRI |





6

6.0 Main Recommendations

Based on the findings of the institutional and economic analyses undertaken in this study, as well as the brief review of the practice in other countries, three broad recommendations for alternative (or consecutive) policies pursuing the aim of expanding supply and stabilising prices on Ethiopia's cereals markets are put forward. The recommendations are ordered from the modest and specific to radical and broad.

Summary Recommendation 1: The identified shortcomings of the current regime of cereals export bans should be addressed. This leaves the instrument of export bans intact but reduces the friction costs associated with it.

This summary recommendation aims at improving the management of export restrictions by enhancing the transparency and predictability of bans and how they are imposed and lifted. Details are provided in Section 3 and include the following:

- ❖ The government should pass a directive or regulation which sets out detailed rules and procedures on the imposition, administration and lifting of cereals export bans, including designating the government agency authorized to impose and lift bans (MoT is recommended to be that agency), the criteria and conditions under which export bans may be issued, the decision making process, stakeholder consultations, and the periodical review of implementation. A suggested structure is provided in Annex A.
- ❖ Each individual ban taken under the directive should then be formally imposed, amended and revoked and be made public through appropriate notification in the media, as well as on the issuing agency's website.
- ❖ While predictability is difficult to achieve, key criteria should be established, such as the forecast of a serious shortage, using the existing mechanisms under the NDRMC. There is a need for timely and accurate data for deciding on the imposition and lifting of export bans, as well as the need to integrate such data into an integrated information system based on which decisions could be taken.

This recommendation is based on ample evidence for the negative and disruptive consequences of the current ad hoc and opaque system, shown in this and previous studies, and is also in line with earlier recommendations. For example, as early as 2010 IFPRI recommended that the government should define "a clear and transparent role for government [...], gradually shifting away from ad hoc stabilization efforts" (IFPRI 2010: 3). More recently, the MIRA policy note to GoE recommended to (1) lift the maize export ban for producers as well as processors and traders; (2) announce the lifting of the ban ahead of time; and (3) long term put in place a Directive/Guidelines to streamline the policy processes and procedures under which cereals export restrictions is lifted and revoked.

Summary Recommendation 2: Consider replacing export bans with a less market distorting instrument of export restrictions, such as variable export taxes.

As the analysis has shown, export bans are the strongest and most disruptive type of export restrictions, and are not in line with market principles. In most situations, they are not an appropriate instrument to correct real or perceived failures on the cereals market; they also entail the highest welfare losses, compared to other export restrictive measures. This recommendation thus goes one step further by suggesting the replacement of export bans with a less distorting instrument. The objective would be to establish a more automated (and, hence, transparent) system, avoiding those that require discretionary decisions. For example, export quotas need allocation decisions by the administration; non-automatic export licences or permits entail high administrative costs for traders. In addition, all instruments requiring discretionary decisions entail the risk of increasing corruption. Export taxes, while certainly not being perfect, might therefore be a preferable instrument. In particular, the suitability of variable export taxes should be studied. These are preferable to ad valorem export taxes where the policy objective is price stabilisation. On the other hand, they are institutionally more demanding than plain ad valorem export taxes, but the systems in place in Ethiopia for determining cereals output and prices are already quite developed, and the implementation of a variable export tax might be feasible. It should also be noted that variable export taxes are one of the instruments being considered as an option for the stabilisation of food prices in the WTO.

Summary Recommendation 3: Consider the wider context of measures and replace export restrictions in general with other instruments. The way to increased welfare is not through export constraints, which in the case of Ethiopia only marginally increases supply, but through increased production.

Implementing this recommendation, which has been put forward by other studies in the past (e.g. AGRA 2014), will require more research to develop a coherent concept, although a broad body of evidence, findings and specific recommendations are already available.

Some indicative findings are available. For example, Benson et al. (2014) studied the long-term economic impact of increases between 11.8% and 14.0% of teff, wheat and maize and found that the Ethiopian economy would be 1.36% larger if production of all three crops was increased. With regard to welfare effects, they found:

“The impact of these cereal initiatives on the consumption and welfare of various household groups in the country are uniformly positive—higher consumption and reduced poverty. However, different household groups benefit depending on which cereal sees its production levels rise. Teff production increases will provide greatest benefits for urban consumers, particularly poor urban households, while the economic benefits of increases in maize production will principally flow to rural households, both poor maize consumers and maize producers. The benefits of increased wheat production are more evenly shared” (Benson et al. 2014: vii).

Specifically, based on an increase in the production of all three crops, per capita real consumption of the urban poor increases most, by 1.63%, followed by the rural poor (1.45%), whereas non-poor households increase their consumption slightly less (Benson et. 2014: 13). In terms of poverty reduction, however, rural areas benefit more than urban areas as the production increase translates into income growth; thus, the rural poverty headcount decreases by 2.22% whereas urban poverty only by 0.93% (Benson et. 2014: 14), driven by the price reduction effect.

A number of other relevant studies have been referred to in this report,⁵⁰ these need to be updated and integrated into a coherent cereals policy.

Finally, regardless of the above recommendations taken up by the government, the importance of pursuing an integrated solution to the problem of cereals supply shortages and price volatility cannot be overstated. Thus, even if either of the first two recommendations is pursued, addressing the production side will play an important role, both in the short and long term. This also includes measures to support farmers should cereals prices drop.



*Ploughing with cattle in southwestern Ethiopia
Creating new options for cultivating lands.
More oxen for ploughing means less labour for farmers
In Ethiopia's Ghibe valley, ILRI-led Tsetse Fly control methods have allowed cattle to flourish in an area previously almost uninhabitable for them. This has encouraged more farming in the area, relieving to a degree population and soil erosion pressures in higher, Tsetse free, elevations. Such is the impact this has had on the livelihood of farmer Worku Mengiste that he is now able to employ two casual labourers to do work he previously did himself. Here he watches on as they plough his field.
| Photo credit: ILRI/Stevie Mann |*

50 These include, for example, IFPRI (2010), Demeke (2012), Demeka and Di Marcantonio (2013), Wakeyo and Lanos (2014), Abate et al. (2015), and AGP-AMDe (2015).

REFERENCES

- AATF (African Agricultural Technology Foundation) 2011: Feasibility Study on Striga Control in Sorghum, Nairobi.
- Abate, Tsedeke/Shiferaw, Bekele/Menkir, Abebe et al. 2015: "Factors that transformed maize productivity in Ethiopia", in *Food Security* (2015) 7: 965.
- Abbott, Philip C. 2011: "Export Restrictions as Stabilization Responses to Food Crisis," in: *American Journal of Agricultural Economics* 94 (2): 428-434.
- AGP-AMDe 2015: "Food Price Hike and Policy Responses in Ethiopia: Impact of Wheat Subsidy and Cereals Export Ban," in: *AGP-AMDe: Papers Presented at Forum in Agricultural Price Policy in Context of Rapid Growth in Ethiopia*, March 2015, 93-128.
- AGRA 2014: An assessment of agricultural policy and regulatory constraints to agribusiness investment in Burkina Faso, Ethiopia, Ghana, Nigeria and Tanzania. Nairobi: AGRA.
- Amin, Mukhtar/Stryker, J. Dirck 2015: Policy Options for Emergency Food Importation in Tanzania. Revised Final Report, NAFKA/SERA/AIRD, March 2015.
- Anania, Giovanni 2013. Agricultural Export Restrictions and the WTO What Options do Policy-Makers Have for Promoting Food Security?, ICTSD Issue Paper No. 50, November 2013.
- Aragie, Emerta A./Balié, Jean/Magrini, Emiliano, Morales, Cristian 2016: Can a cereal export ban affect a net food-importing economy? The case of Ethiopia, Food and Agriculture Organization (FAO), November 2016.
- Aragie, Emerta/Pauw, Karl/Pernechele, Valentina 2016a: Achieving food security and industrial development in Malawi: Are export restrictions the solution?, IFPRI Malawi Strategy Support Program Working Paper 15, July 2016.
- ATA 2016: Maize Surplus Market Linkage Project. Overview for the Prime Minister, 31 October 2016.
- Barreiro-Hurle, J. 2012: Analysis of incentives and disincentives for maize in the United Republic of Tanzania. Technical notes series, MAFAP, FAO, Rome.
- Benson, Todd/Engida, Ermias/Thurlow, James 2014: The Economywide Effects of Teff, Wheat, and Maize Production Increases in Ethiopia Results of Economywide Modeling, IFPRI Discussion Paper 01366, August 2014.
- Bouët, Antoine/Laborde, David 2010: "The economics of export taxes in a context of food security," in: *OECD: The Economic Impact of Export Restrictions on Raw Materials*, Paris: OECD Trade Policy Studies, Trade and Agriculture Division, 59-78.
- Calvo, Paula A. 2014: "Welfare impact of wheat export restrictions in Argentina: Non-parametric analysis on urban households," in: *Trade Policies, Household Welfare and Poverty Alleviation:*

Case Studies from the Virtual Institute Academic Network. United Nations, New York and Geneva. Available at <http://vi.unctad.org/tap/docs/chapters/argentina.pdf>.

“Cereal export ban lifted in Ethiopia”, IRIN News, 13 July 2010. Available at: <http://www.irinnews.org/report/89811/brief-cereal-export-ban-lifted-ethiopia>.

“Committee Recommends faster VAT refunds, improving process for textile manufacturing”, Capital Ethiopia, 13 February 2017. Available at: <http://capitalethiopia.com/2017/02/13/committee-recommends-faster-vat-refunds-improving-process-textile-manufacturing/#.WO4dX9KGPb0>.

Demeke, Mulat 2012: Analysis of incentives and disincentives for maize in Ethiopia. Draft Version, Technical notes series, MAFAP, FAO, Rome, October 2012.

Demeke Mulat/Di Marcantonio, F. 2013: Analysis of incentives and disincentives for sorghum in Ethiopia. Draft Version, Technical notes series, MAFAP, FAO, Rome, January 2013.

Demeke, Mulat/Pangrazio, Guendalina/Maetz, Materne 2009: Country responses to the food security crisis: Nature and preliminary implications of the policies pursued, Rome: FAO.

Diao, Xinshen/Kennedy, Adam 2016: “Economywide Impact of Maize Export Bans on Agricultural Growth and Household Welfare in Tanzania: A Dynamic Computable General Equilibrium Model Analysis,” in: *Development Policy Review* 34:1, 101-134.

Dollive, Kendall 2008; *The Impact of Export Restraints on Rising Grain Prices*, August 2008.

Dorosh, Paul A./Ahmed, Hashim 2009: *Foreign Exchange Rationing, Wheat Markets and Food Security in Ethiopia*, ESSP 2 Discussion Paper 004, Washington/Addis Ababa: IFPRI/EDRI, October 2009.

Estrades, Carmen/Flores, Manuel/Lezama, Guillermo 2017: *The role of export restrictions in agricultural trade*, IATRC Commissioned Paper 20, April 2017. Available at: <http://iatrc.umn.edu/the-role-of-export-restrictions-in-agricultural-trade/>.

“Ethiopia bans export of grains”, PANAPRESS, 31 January 2006. Available at: <http://www.panapress.com/Ethiopia-bans-export-of-grains--13-578573-17-lang1-index.html>.

FEWS NET 2009ff: *Ethiopia Price Bulletins*, available at <http://www.fews.net/east-africa/ethiopia>.

Food Across Borders 2013: *Brief #2: Export Restrictions*, Accra.

FSNWG-MAS 2012ff: *East Africa Crossborder Trade Bulletins*, various issues.

“Government to Resume Teff Exports with 180,000q1 by Next Fiscal Year,” *Addis Fortune* 16: 783, 04 May 2015. Available at: <http://addisfortune.net/articles/government-to-resume-teff-exports-with-180000q1-by-next-fiscal-year/>.

Häberli, Christian 2013: *Ethiopia’s Food Reserve Policies and Practice*, NCCR Working Paper No 2013/02

IFPRI 2010: *Maize Value Chain Potential in Ethiopia. Constraints and Opportunities for*

Enhancing the System, IFPRI Working Paper, July 2010.

Ilomo, Mesia 2015: Welfare Effect of Cereal Export Bans in the United Republic of Tanzania. Available at: <https://vi.unctad.org/tap/docs/other/tanzania.pdf>.

Karapinar, Baris 2010: Export Restrictions and the WTO Law: “Regulatory Deficiency” or “Unintended Policy Space”. Available at https://www.wto.org/english/res_e/publications_e/wtr10_21may10_e.htm.

Liefert, William M./Westcott, Paul/Wainio, John 2011: “Alternative Policies to Agricultural Export Bans that are Less Market-Distorting,” in: *American Journal of Agricultural Economics* 94 (2): 435-441.

Makombe, Wilfred/Kropp, Jaclyn D. 2016: The Effects of Tanzanian Maize Export Bans on Producers’ Welfare and Food Security, Paper prepared for presentation at the Agricultural & Applied Economics Association’s 2016 AAEA Annual Meeting, Boston, MA, July 31 – August 2, 2016.

Martin, Will/Anderson, Kym 2011: “Export Restrictions and Price Insulation During Commodity Price Booms,” in: *American Journal of Agricultural Economics* 94 (2): 422-427.

Minot, Nicholas 2013: Grain Export Bans in Theory and in Practice. Draft Policy Note, Washington, DC: International Food Policy Research Institute.

Mitra, Siddharta/Josling, Tim 2009: Agricultural Export Restrictions: Welfare Implications and Trade Disciplines, IPC Position Paper, Washington: International Food & Agricultural Trade Policy Council, January 2009.

“National Export Council to be Restructured”, *The Reporter*, 18 February 2017; <http://www.thereporterethiopia.com/content/national-export-council-be-restructured>.

Nogués, Julio J. 2008: The Domestic Impact of Export Restrictions: The Case of Argentina, IPC Position Paper, Washington: International Food & Agricultural Trade Policy Council, July 2008.

OECD 2015: Methodological note to the Inventory of restrictions on exports of Primary Agricultural Products, last updated 13 March 2015, Paris: OECD.

Oqubay, Arkebe 2015: *Made in Africa: Industrial Policy in Ethiopia*, Oxford etc.: Oxford University Press, July 2015.

Piermartini, Roberta 2004: The Role of Export Taxes in the Field of Primary Commodities, WTO Discussion Paper, Geneva: WTO.

Porteous, Obie C. 2012: Empirical Effects of Short-Term Export Bans: The Case of African Maize, Draft Working Paper, September 2012. Available at: <http://are.berkeley.edu/fields/ae/porteous2012.pdf>.

Rashid, Shahidur 2010: Staple Food Prices in Ethiopia. Prepared for the COMESA policy seminar on “Variation in staple food prices: Causes, consequence, and policy options”, Maputo, Mozambique, 25–26 January 2010 under the African Agricultural Marketing Project (AAMP)

Rashid, Shahidur/Lemma, Solomon 2011: Strategic Grain Reserves in Ethiopia. Institutional Design and Operational Performance, IFPRI Discussion Paper 01054, Washington, DC: International Food Policy Research Institute, January 2011.

Rashid, Shahidur/Lemma, Solomon 2014: Public Wheat Imports to Ethiopia since 2008: The Rationales and Cost-Effectiveness, Washington, DC: International Food Policy Research Institute.

Sharma, Ramesh 2011: Food Export Restrictions: Review of the 2007-2010 Experience and Considerations for Disciplining Restrictive Measures, FAO Commodity and Trade Policy Research Working Paper, No. 32.

Sheldon, Ian 2011: "Agricultural Export Restrictions: Summary," in: American Journal of Agricultural Economics 94 (2): 442-443.

Solleder, Olga 2013: Trade Effects of Export Taxes, Graduate Institute of International and Development Studies, Working Paper No: 08/2013, April 2013.

Stryker, Dirck/Amin, Mukhtar 2012: Study of Policy Options for Increasing Tanzanian Exports of Maize and Rice in East Africa While Improving Its Food Security to the Year 2025. Revised Final Report, NAFAKA/AIRD, 25 July 2012.

Tanaka, Tetsuji/Hosoe, Nobuhiro 2011: What Drove the Crop Price Hikes in the Food Crisis? GRIPS Policy Research Center Discussion Paper 11-16, December 2011.

"Teff could be the next quinoa as Ethiopia boosts exports", The Guardian, 14 October 2016. Available at <https://www.theguardian.com/sustainable-business/2016/oct/14/teff-quinoa-ethiopia-boosts-exports-food-africa>.

"Teff, the Ethiopian superfood that used to be banned", CNN, 18 December 2015. Available at <http://www.cnn.com/2015/12/18/africa/ethiopian-superfood-teff/>.

Timmer, C. Peter 2008: Causes of High Food Prices, ADB Economics Working Paper Series 128, Manila: Asian Development Bank, October 2008.

USDA FAS 2012-2016: Grain and Feed Annual Reports, GAIN Report Nos. ET 1201, ET 1301, ET 1401, ET-1503, ET1608.

USDA FAS 2012a: Ban on Cotton Exports Lifted, GAIN Report No. ET 1204, 06 July 2012.

Wakeyo M.B./Lanos B. 2014: Analysis of price incentives for wheat in Ethiopia for the time period 2005-2012. Technical notes series, MAFAP, Rome: FAO, April 2014.

Woldie, Getachew A./Siddig, Khalid 2009: The impact of banning export of cereals in response to soaring food prices: Evidences from Ethiopia using the new GTAP African database. MPRA Paper No. 18241, October 2009, MPRA - Munich Personal RePEc Archive. Available at: http://mpra.ub.uni-muenchen.de/18241/1/MPRA_paper_18241.pdf.

WTO 2010: World Trade Report 2010. Trade in Natural Resources, Geneva: WTO.

ANNEX A: GUIDELINE ON THE CONTENTS OF A REGULATION/DIRECTIVE TO GOVERN EXPORT BANS ON CEREALS

1. Authorised agency

The regulation or directive should clearly designate the government agency authorised to issue and lift export bans. Under the current regulatory regime, the obvious candidate is the Ministry of Trade, which regulates exports from the country. MoT is the logical choice as it regulates the country's export trade.

It is therefore recommended that MoT be designated as the ministry responsible for export bans. The directive should also indicate which directorate in MoT should administer export bans or confer the powers and responsibilities to MoT to designate a responsible unit/directorate for the administration of export restrictions. The Ministry should then designate an existing unit (such as the Crop Marketing Directorate) or establish a new unit to administer export bans and restrictions on cereals.

2. Decision-making processes, criteria and specific conditions to impose, maintain and lift export bans

The regulation or directive should also set out the decision-making processes, criteria and specific conditions to be met prior to an export ban.

The decision making process should begin with the collection of agricultural production data, in particular, the seasonal forecasts. Currently the two sources are the CSA sample survey and the NDRMC's assessment. MoANR should take the lead in collecting agricultural production data for the purposes of determining the need to impose, maintain or lift export bans. The analysis of the collected data should involve MoANR, MoT, the Prime Minister's Office and NDRMC.

Data analysis should be accompanied by examination of other factors affecting food security and domestic prices. These include domestic, regional and global cereal prices and price trends, weather patterns and other measures that affect cereals production and prices. The examination of these factors will determine the likelihood of food shortages, price hikes, and impact on domestic supplies, which will then be used to make the final determination on the need to impose an export ban. Analysis of these factors while an export ban is in place will help determine whether the export ban should be maintained or lifted.

While these factors may not be easy to quantify strictly, general thresholds should be set to accord greater transparency to the decision-making process. Consideration should be given to WTO rules when defining these parameters to avoid potential inconsistencies.

3. Consultation and notification

The instrument should also provide for prior notification of a proposed decision on export bans (whether it be to impose or lift them) to concerned stakeholders. These should include farmer

cooperatives, commercial farms, government administrative agencies involved in agricultural production, traders and exporters (including the Ethiopian Agricultural Business Corporation), and private sector associations (such as the Ethiopian Chamber of Commerce and Sectoral Associations..

Once stakeholders are notified, they should be given sufficient opportunity to provide their opinion on the proposed decision. This requirement is without prejudice to taking urgent emergency measures that require immediate action to prevent potential harm.

4. Transitional arrangements

The directive should stipulate that exporters with pre-existing contractual obligations will be permitted to export to fulfil such obligations. This will allow exporters to avoid defaulting on such contracts and minimize potential losses arising from terminating pre-existing contracts.

5. Official publication

When a decision to impose, modify or lift an export ban is made, this decision should be officially published via a directive or other instrument by MoT. This will allow any interested party to easily find out if a ban is in place currently and learn the specific details of the ban.

6. Duration of export ban and periodic review

Export bans should be time-bound. Issuing a time-bound export ban provides greater transparency to producers and traders, who can plan accordingly. In addition, there should be a review of the decision at regular intervals. For instance, a quarterly review of an export ban issued for a year may show that the conditions that necessitated the ban no longer exist. The ban can therefore be lifted even before the one year period approaches.

A review may also show that the export ban does not have the desired effect and indicate the need to amend or replace it with another measure or lift the measure altogether.

ANNEX B: TABLES

Table 7: Production, area harvested and yield of selected cereals, Ethiopia, 2003-2016

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	CAGR 2004-08	CAGR	2008-16
Area harvested ('000 ha)	7,736	8,373	8,935	9,526	9,686	9,161	10,729	10,410	10,734	11,025	10,077	11,753	4.4%	4.4%	2.8%	
Teff	2,063	2,233	2,359	2,634	2,573	2,589	2,848	2,805	2,829	3,117	3,016	3,258	5.7%	5.7%	3.4%	
Barley	1,075	1,255	1,209	1,127	1,184	1,129	1,210	1,097	1,194	1,206	994	1,142	-3.5%	-3.5%	-0.5%	
Wheat	1,166	1,457	1,570	1,474	1,535	1,684	1,671	1,500	1,776	1,750	1,664	1,744	0.7%	0.7%	1.8%	
Maize	1,791	1,802	1,950	2,280	2,306	1,772	2,573	2,581	2,669	2,679	2,115	3,039	8.2%	8.2%	4.0%	
Sorghum	1,336	1,311	1,512	1,464	1,595	1,619	2,017	1,993	1,835	1,819	1,835	2,005	6.7%	6.7%	2.6%	
Millet	305	315	335	401	409	369	410	433	432	455	454	565	8.4%	8.4%	4.7%	
Production ('000 MT)	9,226	10,557	12,462	14,259	15,063	15,398	19,018	19,242	20,926	23,212	23,425	25,333	10.5%	10.5%	7.7%	
Teff	1,687	2,048	2,247	2,438	3,025	3,179	3,539	3,529	3,833	4,491	4,751	4,587	13.9%	13.9%	5.9%	
Barley	1,087	1,376	1,398	1,467	1,650	1,750	1,820	1,672	1,907	2,053	1,953	2,062	2.2%	2.2%	3.2%	
Wheat	1,618	2,177	2,307	2,382	2,609	3,076	3,077	2,972	3,641	4,254	4,232	4,550	3.0%	3.0%	8.3%	
Maize	2,744	2,906	3,912	4,162	4,333	3,897	5,796	6,446	6,973	7,451	7,235	8,579	12.7%	12.7%	10.3%	
Sorghum	1,784	1,718	2,200	2,316	2,842	2,971	4,149	3,972	3,830	4,114	4,339	4,615	16.1%	16.1%	7.2%	
Millet	305	333	397	484	560	524	636	652	743	850	915	941	17.4%	17.4%	7.7%	
Yield (MT/ha)	1.18	1.25	1.37	1.52	1.48	1.54	1.74	1.79	1.90	2.08	2.31	2.10	5.9%	5.9%	4.6%	
Teff	0.82	0.92	0.95	1.01	1.15	1.23	1.24	1.26	1.35	1.44	1.58	1.41	7.8%	7.8%	2.4%	
Barley	1.01	1.1	1.16	1.33	1.3	1.55	1.5	1.52	1.6	1.7	1.97	1.81	5.9%	5.9%	3.8%	
Wheat	1.39	1.49	1.47	1.67	1.6	1.83	1.84	1.98	2.05	2.43	2.54	2.61	2.3%	2.3%	6.3%	
Maize	1.53	1.61	2.01	2.23	1.83	2.2	2.25	2.5	2.61	2.78	3.42	2.82	4.2%	4.2%	6.0%	
Sorghum	1.34	1.31	1.46	1.58	1.69	1.84	2.06	1.99	2.09	2.26	2.37	2.3	8.7%	8.7%	4.5%	
Millet	1	1.06	1.19	1.34	1.37	1.42	1.55	1.5	1.72	1.87	2.02	1.66	8.2%	8.2%	2.8%	
Production (% of total)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Teff	18.3%	19.4%	18.0%	21.2%	20.4%	20.6%	18.6%	18.3%	18.3%	19.3%	20.3%	18.1%	18.1%			
Barley	11.8%	13.0%	11.2%	10.3%	11.0%	11.4%	9.6%	8.7%	9.1%	8.8%	8.3%	8.1%	8.1%			
Wheat	17.5%	20.6%	18.5%	16.7%	17.3%	20.0%	16.2%	15.4%	17.4%	18.3%	18.1%	18.0%	18.0%			
Maize	29.7%	27.5%	31.4%	29.4%	28.8%	25.3%	30.5%	33.5%	33.3%	32.1%	30.9%	33.9%	33.9%			
Sorghum	19.3%	16.3%	17.7%	18.8%	18.9%	19.3%	21.8%	20.6%	18.3%	17.7%	18.5%	18.2%	18.2%			
Millet	3.3%	3.2%	3.2%	3.8%	3.7%	3.4%	3.3%	3.4%	3.5%	3.7%	3.9%	3.7%	3.7%			

Source: Authors' calculations based on CSA Agricultural Surveys, various years.
Note: Data for 2006/07, 2009/10 and 2014/15 are for Meher season only, due to lack of data for Belg season.

Table 8: Share of cereals production exported from Ethiopia, 2001-2016

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Av no ban*	Av w/ban
Production ('000 MT)	9,529	8,965	9,494	10,101	12,693	12,632	12,200	13,223	15,501	17,714	18,760	19,608	21,514	23,557	22,080	17,651	13,231	18,171
Maize	3,298	2,826	2,744	2,906	3,912	4,030	3,337	3,776	3,897	4,986	6,069	6,158	6,492	7,235	6,500	5,050	4,061	5,435
Cereals, nes	1,737	1,644	1,943	2,118	3,082	2,289	2,405	2,565	3,179	3,483	3,498	3,765	4,419	4,751	4,330	4,260	2,464	3,468
Sorghum	1,549	1,546	1,784	1,742	1,716	2,174	2,316	2,659	2,971	3,960	3,951	3,604	3,829	4,339	4,000	2,600	2,474	3,334
Wheat	1,596	1,444	1,618	1,614	2,177	2,219	2,463	2,314	3,076	2,856	2,916	3,435	3,925	4,232	4,400	3,500	2,330	3,414
Barley	1,017	1,184	1,087	1,376	1,398	1,410	1,271	1,352	1,750	1,703	1,585	1,782	1,908	1,953	2,100	1,857	1,413	1,767
Millet	316	306	305	333	397	500	397	484	524	635	652	742	849	915	750	384	459	650
Rice, paddy	15	15	13	12	11	11	11	71	103	90	89	121	92	132	..	..	30	104
Exports (MT)	16,240	33,038	15,244	29,890	35,877	8,280	3,007	2,486	57	59,217	82,231	7,426	4,657	41,227	14,716	7,489	34,485	9,696
Maize	5,298	14,150	747	11,405	1,711	333	1	0		35,994	60,148			1	434		13,022	0
Teff and others	9,669	16,484	12,301	16,117	31,050	6,360	369	95	15	1,379	208	99	1,730	26,273	7,385	3,298	14,820	4,391
Sorghum	691	1,313	1,426	2,086	2,641	1,318	2,402	2,226		21,786	21,828	7,263	2,870	14,107	6,538	3,280	6,203	4,958
Wheat	7	94	58	28	291	0	1	35	1	5		39	0		0	0	54	12
Barley	40	107	82	178	126	111	141	88	25	17	1	2	0	1		2	89	20
Millet	534	891	625	75	58	157	93	41	16	12	34	15	57	844	359	905	284	313
Rice			5							23	12	8		0		4	13	2
Exports/Production (%)	0.17	0.37	0.16	0.30	0.28	0.07	0.02	0.02	0.00	0.33	0.44	0.04	0.02	0.18	0.07	0.04	0.26	0.05
Maize	0.16	0.5	0.03	0.39	0.04	0.01	0	0	0	0.72	0.99	0	0	0	0.01	0	0.32	0
Teff and others	0.56	1	0.63	0.76	1.01	0.28	0.02	0	0	0.04	0.01	0	0.04	0.55	0.17	0.08	0.6	0.13
Sorghum	0.04	0.08	0.08	0.12	0.15	0.06	0.1	0.08	0	0.55	0.55	0.2	0.07	0.33	0.16	0.13	0.25	0.15
Wheat	0	0.01	0	0	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0	0	0	0	0	0	0	0.01	0
Millet	0.17	0.29	0.2	0.02	0.01	0.03	0.02	0.01	0	0	0.01	0	0.01	0.09	0.05	0.24	0.06	0.05
Rice	0	0	0.04	0	0	0	0	0	0	0.03	0.01	0.01	0	0	..	..	0.04	0

* No ban for teff and others: 2001-2005; 2016; all other crops: 2001-2007, 2010-2011, 2015
Sources: Authors' calculations based on: Production 2001-2014: FAOSTAT; 2015-2016: USDA (2016; 2017); Exports: ERCA.

Table 9: Share of Ethiopian cereals supply being imported and exported, 2001-2016

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Av no ban*	Av w/ban	2001-16
Production ('000 MT)	9,529	8,965	9,494	10,101	12,693	12,632	12,200	13,223	15,501	17,714	18,760	19,608	21,514	23,557	22,080	17,651	13,231	18,171	15,333
Maize	3,298	2,826	2,744	2,906	3,912	4,030	3,337	3,776	3,897	4,986	6,069	6,158	6,492	7,235	6,500	5,050	4,061	5,435	4,576
Cereals, nes	1,737	1,644	1,943	2,118	3,082	2,289	2,405	2,565	3,179	3,483	3,498	3,765	4,419	4,751	4,330	4,260	2,464	3,468	3,092
Sorghum	1,549	1,546	1,784	1,742	1,716	2,174	2,316	2,659	2,971	3,960	3,951	3,604	3,829	4,339	4,000	2,600	2,474	3,334	2,796
Wheat	1,596	1,444	1,618	1,614	2,177	2,219	2,463	2,314	3,076	2,856	2,916	3,435	3,925	4,232	4,400	3,500	2,330	3,414	2,737
Barley	1,017	1,184	1,087	1,376	1,398	1,410	1,271	1,352	1,750	1,703	1,585	1,782	1,908	1,953	2,100	1,857	1,413	1,767	1,546
Millet	316	306	305	333	397	500	397	484	524	635	652	742	849	915	750	384	459	650	531
Rice, paddy	15	15	13	12	11	11	11	71	103	90	89	121	92	132	..	..	30	104	56
Exports ('000 MT)	16	33	15	30	36	8	3	2	0	59	82	7	5	41	15	7	34	10	26
Maize	5	14	1	11	2	0	0	0	36	60	60			0	0		13	0	11
Teff and others	10	16	12	16	31	6	0	0	0	1	0	0	2	26	7	3	15	4	8
Sorghum	1	1	1	2	3	1	2	2	22	22	22	7	3	14	7	3	6	5	6
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Millet	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Rice										0	0	0	0	0	0	0	0	0	0
Imports ('000 MT)	795	464	1,607	611	1,000	362	433	1,410	1,219	1,208	1,194	1,111	1,436	1,205	1,636	2,920	923	1,516	1,148
Maize	9	3	12	11	0	0	3	35	5	3	2	3	3	4	4	5	5	9	6
Teff and others	4	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	1	1	1
Sorghum	22	0	0	5				253	70	113	34	4	45	52	125	113	43	89	64
Wheat	743	449	1,575	575	983	328	384	1,100	1,112	1,049	1,076	968	1,235	938	1,200	2,476	836	1,305	1,012
Barley	6							0	0	0	0	13	0	24	31	15	7	9	8
Millet								0	0	0	0	0	0	0	0	0	0	0	0
Rice	12	11	20	20	17	31	45	22	31	43	82	123	154	188	275	312	31	104	57

* No ban for teff and others: 2001-2005; 2016; all other crops: 2001-2007, 2010-2011, 2015

Sources: Authors' calculations based on: Production 2001-2014: FAOSTAT; 2015-2016: USDA (2016; 2017); Exports and Imports: ERCA.

Next page photo: ILCA Debre-Birhan, station established in 1979. The Highland team adapted the traditional maresha plough normally pulled by two oxen to a modified plough drawn by a single ox. Oct., 1983 Debre-Birhan Ethiopia | photo credit: ILRI |





