
High-Value Agricultural Exports

Christopher Cramer

Why bother to promote high-value agricultural exports?

Should policymakers in low- and middle-income countries (LMICs) make it a priority to promote a rapid rate of growth of high-value agricultural exports?

Promoting agricultural exports from LMICs may appear counter-intuitive for officials keen to accelerate structural transformation. There has often been a policy neglect of agriculture – or worse, a stifling of agriculture to finance industrialisation. And in many countries, officials have been wary about the prospects for development through promoting agricultural exports. Underpinning pessimistic policies has been a fear that exporting agricultural goods exposes a country to wild price swings and to the sapping effects of a supposed secular decline in the net barter terms of trade for primary commodities

relative to manufactured goods (what economists know as the Prebisch-Singer hypothesis). Politicians and policy officials have also taken to heart the thinking favoured by many development economists, and with good reason, that structural change is best embodied in and secured by industrialisation.

But low- and middle-income countries have enormous potential gains to make from promoting high-value agricultural exports (HVAX). This brief looks at the evidence by reviewing the literature and tracing some illustrative, comparative data.¹ It explains why HVAX may play a more developmental role now than they could perhaps have done in the past. Then it outlines key policies that have been important foundations for the relative success of some countries in securing sustained increases in export revenue from HVAX.

About the author

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¹ This brief draws on comparative analysis undertaken at UJ, and Cramer, Di John, and Sender (2022) and Cramer and Chisoro-Dube (2021).

A rose is a rose is a ... complex industrial product

Focusing on the contribution of fresh (not 'processed') high-value agricultural exports helps reveal developmental gains that are invisible in sweeping generalisations about 'agriculture'. Such a focus also helps show how changes in the global economy have blurred the distinctions imposed by the classic three-sector classification of economic activities – agriculture, manufacturing industry, and services. 'Servicification' is relatively well established: an increasing share of the final value of manufactured goods (think mobile phones) is derived from service activities. But a parallel phenomenon is the 'industrialisation of freshness': the way in which many traded fresh goods (freshly cut roses, 'ripe and ready-to-eat' avocados, 'superfood' blueberries, etc.) are effectively industrial. They are knowledge- and technology-intensive. They are industrial in the sense of Allyn Young's classic definition of the industrial: that which involves an intricate nexus between the original, primary commodity and the final good. Even the original primary commodity – for example, the genetic plant stock for blueberries grown in South Africa or Peru – is the product of elaborate research and development investments and technical innovation.

HVAX may deliver a 'triple whammy'. First, they can help alleviate the balance-of-payments constraint on sustained growth. Rather than relying too heavily on foreign aid, on jittery short-term capital inflows, or on foreign investment, the most effective way of managing the balance-of-payments constraint is to target a rapid rate of growth of export revenue. But it matters *what a country exports*. LMICs need to export those things for which there is a high income elasticity of demand internationally: things for which demand rises strongly when incomes increase.

Second, HVAX *embody* the structural transformation that developmentally minded policy officials aim to encourage. Structural

transformation involves shifting resources into economic activities with higher productivity. These have historically been associated especially with manufacturing. Changes in the global economy mean that there is increasing scope for productivity gains – as well as for spillovers and linkages – from HVAX. For instance, people in the paper and pulp industry in Brazil have come to see that, because of the significance to productivity and profitability of R&D investments in the genetic profile of eucalyptus trees, the 'pulp factory' *is the tree itself*.



Misting, light control (sleep deprivation), pest control, temperature control and reverse osmosis on an Ethiopian 'farm'

Third, HVAX production typically has high labour input requirements. The 2007 agricultural census in Chile estimated that 450 000 people were employed in cherry production, about one third of them in permanent positions. Since then, Chilean cherry exports have continued to expand, becoming the largest cherry exporter in the world in recent years. Notably, Chilean producers have introduced childcare facilities to facilitate women's employment in cherry packing in particular. In Brazil in recent years, agriculture has been a net generator of employment and was the only sector of the economy with increasing labour productivity (Arias et al. 2017).

Picking (cherry) winners

Over the past two decades or so, a number of countries have expanded agricultural exports in general quite rapidly. Figure 1 compares some of these to a leading industrialised economy agricultural exporter, Spain.

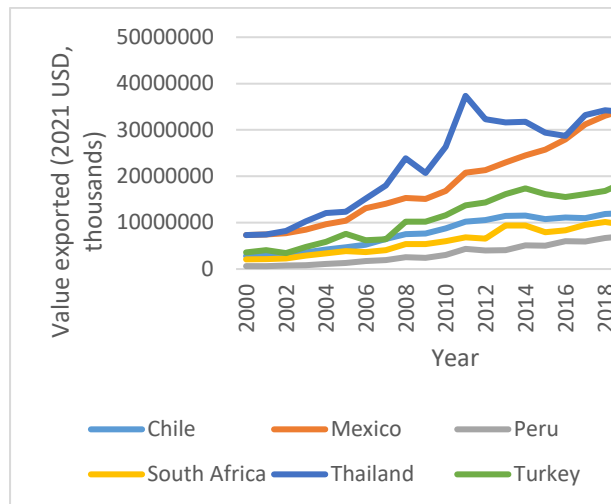


Figure 1: Growth in agricultural export earnings (\$US), 2000 to 2021

That figure may begin to suggest the wide variation in performance internationally in recent years, but another way to see this is to look at specific exports. Figure 2, for example, shows how dramatic the growth in Peruvian blueberry exports has been.

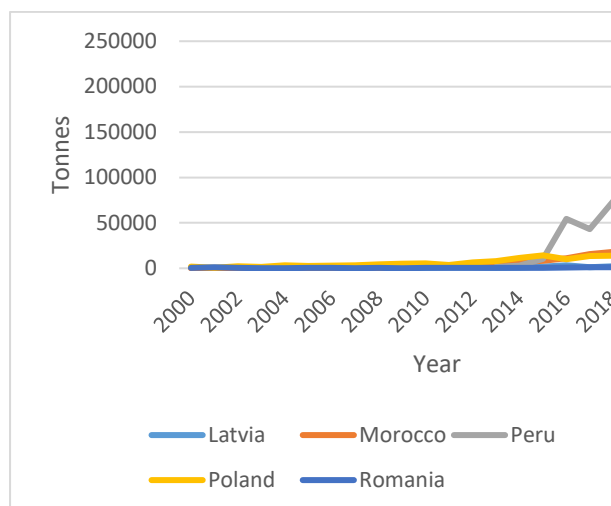


Figure 2: Blueberry exports, selected countries (volume, tonnes) 2000 to 2021

Source: FAOSTAT

'Fresh is the thing that matters': how policy has made a difference

'Fresh is the thing that matters to consumers. So you look at all these folks, and they're all very motivated to have a stable supply ... to have a predictable system. And it's just this continuous evolution up the spectrum of control to something that's more predictable, less risky.' This is how one of the founders of a leading US business, Plenty, captures something that is well known among those with an interest in HVAX: the importance – and the difficulty – of securing a reliable supply of high-quality output that meets stringent international sanitary and phytosanitary (SPS) standards in demanding markets. Underpinning success in these markets is an array of firm- and economy-level improvements – in productivity and quality management, traceability, negotiated trade deals, infrastructure, skills and know-how, and incentive structures. Simple indicators of 'comparative advantage' are too static and limited to capture what has been important to the relative success of firms in some countries, and the relative lack of success elsewhere. Favourable natural endowments – agro-climatic conditions, freedom from particular pests – are helpful, but not nearly enough.

Government policy determines the success or failure of HVAX performance. Key areas in which policy matters include supporting access to markets, encouraging coordination among exporters on coherent practices, fostering the development of knowledge over extended periods of time, and investing in export-oriented productive infrastructure. A key feature of the more striking success stories of recent years is that they do not come out of the blue: they are the result of a patient build-up of infrastructure and capabilities. Governments therefore need to take a relatively long-term view.

Breaking into overseas markets for HVAX involves supportive trade relations and clear and effective protocols for meeting SPS

standards. A good example of the latter is Argentina's development, through public-private coordination efforts, of an SPS protocol that helped the country expand cherry exports to China from 3% to 38% of Chinese cherry imports between 2018 and 2021, despite Argentina paying a hefty tariff compared to competitors exporting to China. Contrast that with complaints in South Africa that the government had simply stalled on signing an Apple Export Protocol with China before 2014, and had taken far too long to reach agreement on acceptable levels of fungicide and chemical residues on apple exports; it took eighteen years for South African apples to gain access to China.

But Argentina's SPS protocol success belies the fact that Argentina has struggled with HVAX, partly because it has negotiated relatively few favourable trade deals. Argentinian exports of blueberries, cherries and lemons, for example, have all suffered from high import tariffs. For example, lemon exports to the EU pay a 9.6% tariff, while Chilean and South African exports pay no tariff. But South African HVAX producers complained in interviews that, despite some effort, the country's Department of Trade and Industry had not invested enough in teams of trade negotiators, by comparison with the 'armada' of negotiators that they observed Latin American exporters benefiting from.

No country can secure sustained increases in HVAX earnings without clear coordination of producers around quality measures, market access and standards. That coordination may be private or public or – as is often the case – both. In Chile, this has involved organisations like ProChile, Fundacion Chile, ASOEX, Viñas de Chile and others. ProChile has supported YouTubers and social media influencers in promoting Chilean fresh exports to South Korea, backing efforts to develop narratives around product origin that have been key to product visibility and acceptability; and key Korean buyers have also been supported on structured visits to Chilean vineyards. More

generally, ProChile organises trade shows, builds and shares its contacts list, and facilitates travel by exporters.

In South Africa, the relative weakness of public-sector efforts to support HVAX has been a significant problem. A partial exception is citrus exports, the expansion of which in recent years owes much to the formation of the Citrus Growers Association (CGA) in the late 1990s. The CGA eventually succeeded in pushing the state to enforce a statutory membership levy and, over time, began to build its own R&D agency, compensating for the dwindling capabilities of the national Agricultural Research Council.

Access to markets is only of limited value if a country lacks know-how, experience, and the ability to produce a reliable supply of high-quality goods. Developing capabilities is a system-wide matter, beyond individual firms, and extends to an ecosystem of knowledge production in institutes, firms and public research agencies. Developing the codified and tacit knowledge needed for HVAX success takes considerable time and investment. A particularly effective public organisation, like Brazil's Embrapa, might be at the heart of this system, with a strong, applied research ethos, but Embrapa has never acted in isolation. Sometimes it has been more central to learning and innovation (as through its soy research programme, Embrapa Soja), while at other times it has played a different supportive role later in the process (as in the genetic research underpinning innovations in eucalyptus and the paper and pulp industry) (Figueredo 2014). Delegates from Brazilian agricultural export associations visiting London in 2022 emphasised that their successes up to that point had been underpinned by support and learning over several decades. Brazil's transformation from a food-insecure nation to one of the world's largest agricultural exporters goes back to national food security threats in the 1970s, when a range of institutional and policy interventions began to develop momentum. A World Bank study

summarised the key features of Embrapa's success: sustained and substantial government funding; investment in the organisation's people, to the point where 80% of Embrapa's 2 400 research staff have PhDs (Figueredo 2014); a focus on research excellence and international collaborations; and an open intellectual property rights policy that promoted the diffusion rather than private capture of innovations (Correa and Schmidt 2014).

Chile's recent HVAX performance also built on a much longer period of developing the institutional, infrastructural, knowledge and individual firm capabilities required. ProChile began as an export-promotion institute in 1974 and began investing in R&D to support berry production in the 1980s. CORFO, the production development corporation, developed a fruit production plan in the 1960s, the Institute for Agricultural Research and Chilean universities started expanding technical training programmes for the fruit sector around the same time, while the Chile-California programme, funded by the Ford Foundation in 1965, also accelerated Chilean learning that would underpin the growth of fruit production and exports.

Underpinning the expansion of high-value agricultural exports is infrastructure: a reliable supply of high-quality exports requires a reliable supply of energy, water and transport infrastructure, as well as, increasingly, internet services. Chilean fruit exports are, for example, hampered by long distances to import markets, yet they benefit from logistics costs that are lower than most of the country's competitors. And fruit exporters can get produce to ports easily – with the expansion of domestic airports and port networks, no fruit travels more than 250 km by land to reach a port (Bamber and Fernandez-Stark 2016).

A dramatic case of high-value agricultural export growth has been Peru's development of the northern coastal zone. This region has been transformed from desert into a highly

productive area. The government began investing in irrigation infrastructure during the 1980s; by 2017, 25 000 hectares were covered by irrigation schemes and the area is a major exporter of asparagus, avocados, blueberries and grapes. In 2010, for example, Peru exported virtually no blueberries: by 2020, it was the world's biggest blueberry exporter.

One of the most important features of Ethiopia's initially rapid expansion of cut-flower exports was expanding investment in the state-owned Ethiopian Airlines (EAL) and Bole International Airport Ababa. Cut flowers need to be brought to the airport quickly, held in appropriate cold-storage facilities, and dispatched rapidly as air freight. The expansion of the cut-flower export industry (which had also benefited from extremely cheap leases of state-owned land and from Development Bank of Ethiopia credit, not to mention Dutch state-backed concessional credit to Dutch investors) benefited greatly from investments in cold-storage facilities and the EAL freight fleet. Connections between new cut-flower firms and the airline spun new forward linkages to related fresh exports (herbs, fruit and vegetables).



However, the infrastructure picture for Ethiopian HVAX was not entirely rosy. For several years, neither the federal nor regional government followed through, for example, on pledges to grade the road leading through the

Upper Awash Valley and connecting a string of export farms in the valley with the Addis trade hub. Delaying grading the road caused financial losses to firms along the valley trying to transport vacuum-packed exports by truck, as the vacuum bags burst on the poor surface.

In South Africa, under-investment in electricity, rail and ports infrastructure has seriously weakened prospects even for the relatively successful producers of citrus exports. Evidence is piling up of the disintegration of South African infrastructure – from the frustration of the SA Roads Federation with the number of potholes in the country's roads, which have increased from 15 million to 25 million in five years, to the South African Institute for Civil Engineering (SAICE) Infrastructure Report Cards, which record the lack of maintenance, absence of long-term infrastructure planning, lack of data collection and under-financing (Ludidi 2022; Fogel 2022). Citrus and berry exporters are often at the sharp end of this decline, and the situation is compounded by repeated industrial action at the country's ports, which costs millions per day and threatens the viability of businesses and the jobs they have created.

Priorities

HVAX can deliver a triple whammy: mitigating the balance-of-payments constraint on sustained growth, accelerating the process of structural transformation, and generating jobs – often in areas where they are especially needed. Variation in HVAX performance helps highlight what it takes to support a rapid rate of growth of HVAX. It is a competitive and difficult endeavour that takes considerable time, as shown by the evidence from Brazil, Chile and elsewhere. Alongside the macroeconomic policies that support export expansion – including treating a competitive exchange rate as a form of industrial policy

(Guzman et al. 2018) – governments need to focus their efforts on the following priorities. First, having identified specific areas with the highest potential for HVAX expansion, transport, energy, telecommunications and water infrastructure is of critical importance – not only building the basic infrastructure, but (as examples from Ethiopia and South Africa have shown) improving and maintaining it. Second, governments need to support an accelerated acquisition of skills and know-how. There is a lot that may be done in the relatively short term to attract the right people into HVAX firms, but over the longer term a concerted effort is required to build up a 'knowledge ecosystem'. And third, governments have proven important both in supporting the reputation of firms in a country to meet SPS standards, and to improve access to markets. It is extremely easy for governments – and private firms – to take their eye off the ball, thereby institutionalising government commitment to HVAX matters. Argentina's experience with blueberry exports in recent years illustrates the point. Argentine blueberry exports halved in 2022 compared to previous averages. "We didn't have the vision to take advantage of our position ... We didn't increase our volumes back then because no one thought that the world would consume so much blueberry ... Our fruit is no longer competitive," is how one industry insider puts it.²

While the constraints ultimately may be social and political, this is no reason for officials across a range of countries not to take very seriously the developmental potential of expanding high-value agricultural exports.

²

<https://www.freshplaza.com/asia/article/9478849/argentina-s-blueberry-exports-halved-in-2022/>

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