

# The role of public–private coordination: the case of sweet cherries in Argentina 2000–2020

Growth of  
sweet cherry  
exports in  
Argentina

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## Abstract

**Purpose** – The purpose of this paper is to understand the sustained growth of sweet cherry exports in recent years in Argentina and to what extent the coordination mechanisms between public and private institutions can explain the growth.

**Design/methodology/approach** – The research method used in the paper is descriptive and based on in-depth interviews with producers, agencies and institutions from the cherry industry. Qualitative results are complemented with analysis of key market data.

**Findings** – The sweet cherry industry in Argentina underwent a shake up with entry of new vertically integrated players and the technological upgrade of traditional producers that resulted in an export boom. The transformation of the industry was induced by the global market conditions and, more importantly, the promotion and complementarities achieved through a strong public–private partnership. Despite the constant increase in global demand for counter-season cherries, exports from Argentina are currently struggling to sustain growth. Among various bottlenecks, the authors find the instability of government policies (e.g. labor law, tax system, economic and trade policies) as the main cause for the slowdown in investment and expansion of the planted area.

**Research limitations/implications** – The paper highlights the importance of understanding the growth process of an industry and the different ways in which public and private sectors can enhance export performance. The relationship between the success of private–public partnerships and the particular configuration and characteristics of the industry deserve further study. The usual limitations from single-case studies apply.

**Originality/value** – The study has two contributions. First, the study uncovers the economics underlying the development and configuration of the sweet cherry industry in Argentina. Second, the study documents a successful case of private–public partnership to boost exports and reach new markets.

**Keywords** Agrifood markets, Exports, Public goods, Agribusiness, Argentina, Public-private collaboration

**Paper type** Research paper

## 1. Introduction

The sweet cherry industry stands out as a unique case among the deciduous fruit value chains in Argentina. While the rest of the fresh fruit industries did not achieve their export potential, the production and exports of sweet cherries has been growing at outstanding pace in recent years. This article documents the makeover of the industry aided by in-depth interviews with key stakeholders from the private sector, government and agencies. This paper identifies two main factors responsible for the growth of cherry exports. First, new business strategies followed by players in the industry. Second, the successful private–public work that led to opening the Chinese market. In a sense, the process of the cherry industry in



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Argentina fits the paradigm of modern agriculture in which firms customize value chains to new market demands and governments adjust to facilitate growth [1].

The cherry value chain changed due to both the modernization of traditional producers and the entry of new players with the latest technology and the best global practices. Most new projects located in the Upper Valley and Middle Valley (UVMV) of the provinces of Río Negro and Neuquén, a region known for the production of apples and pears, but without significant experience in the production of sweet cherries. New projects were implemented by vertically integrated companies that focused exclusively on the export market. These companies are relatively new and many of their founders came from sectors not related to agriculture.

The export success is highly explained by events that arose from the joint work between the public and the private sectors. The creation of the Integrated Producers Argentinean Cherries Association (CAPCI), spearheaded by the provincial government of Neuquén and businesspersons from the UVMV area, was instrumental in coordinating activities between provincial and national agencies that resulted in the opening of the Chinese market and the generation of other public goods [2]. The operation of CAPCI and its effective interaction with different government agencies constitutes an anomaly in the Argentine institutional context.

To evaluate the performance of the sweet cherry industry in Argentina, it is helpful to weigh two different scenarios that help in terms of counterfactual analysis. First, relative to other fruit industries, e.g. pears and apples (UVMV's main fruit production), export growth is significantly higher for sweet cherries. Second, China's economic growth has led to an unprecedented boom in cherries global demand that did not happen to other fruits produced in the country. Hence, one must compare Argentina with the other cherry-exporting countries in the Southern Hemisphere (SH). While the growth of Chilean cherry exports is unique and renders Argentina's growth almost insignificant, the growth of exports in New Zealand and Australia has been slower, shining some light and suggesting an overall success story for Argentina's sweet cherry industry.

Despite the recent growth, the outlook for cherries in Argentina is still unclear. On the one hand, the necessary conditions for sustained development appear to be satisfied. Global demand for counter-season cherries (exports from the SH) continues to grow; there is abundant availability of irrigated land with a good microclimate for production – a business sector with expertise, commercial contacts and a good track record of public–private articulation dealing with potential bottlenecks. On the other hand, these necessary conditions do not seem to be sufficient. The country's macroeconomic problems are reflected in the lacking performance of the capital market and in the instability of government policies. The main consequence of this macroeconomic volatility has been a significant slowdown of both investments and expansion of the planted area.

The structure of the rest of the paper is as follows. Below, we briefly describe the methodology in the paper. [Section 2](#) describes the global cherry market and the key features underlying supply and demand. [Section 3](#) describes the methodology and examines the sweet cherry industry in Argentina, the overhaul process toward the export market and its relative performance within the SH. [Section 4](#) details the role of public–private activities in the takeoff of Argentine cherry exports. [Section 5](#) presents the challenges to growth. Conclusions are in [Section 6](#).

### *1.1 Methodology*

The study combines economic research with information from in-depth interviews with key stakeholders from the cherry industry. We conducted several semi-structured interviews with general managers of five of the most important firms in the industry, government agents and stakeholders from agencies and associations in the industry (see [Table A1](#) in the [Annex](#)). There were several interviews with each agent and the focus of the questions varied based on

their background and position. Interviews with general managers focused on reasons underlying changes to business strategies followed by their firms, while interviews with agents from public and private agencies focused on the detailed institutional history leading to the opening of the Chinese market, going back to CAPCI's inception and general industry knowledge. All interviews addressed the identification of the key actors, industry specific data that may not be publicly available, information on production technologies, main challenges and future prospects of the industry. Even though single-case study methodology is limited in its generalizability, this study serves as a benchmark on collaboration between the public and the private sectors.

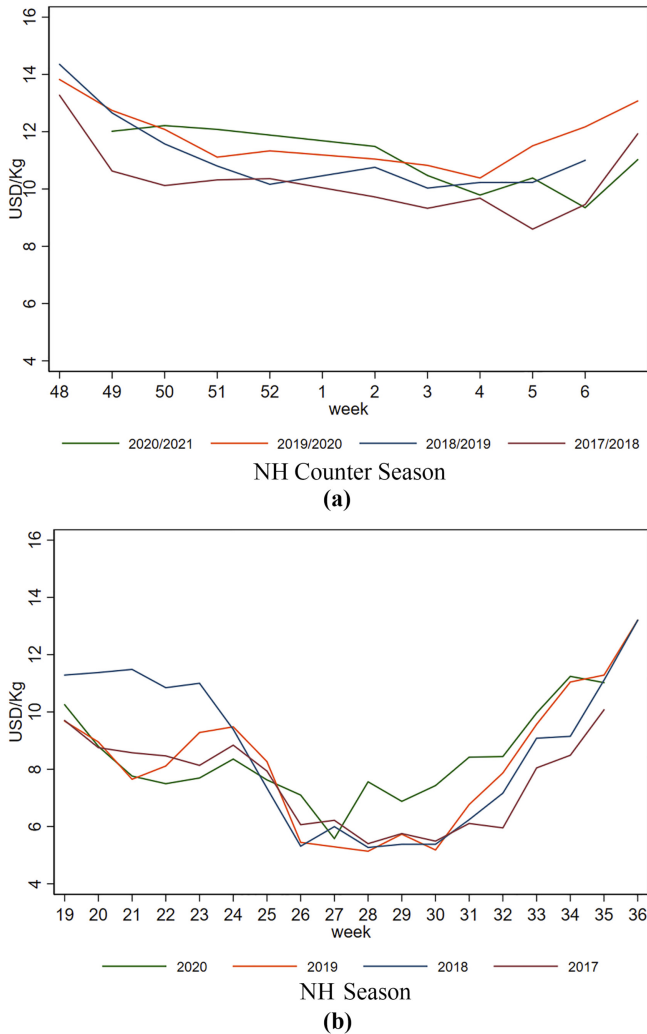
## 2. The global market. Demand and supply

Sweet cherries are highly perishable, and unlike with other fresh fruit, sweet cherries' quality declines drastically after harvest [3]. Handling of post-harvest and logistics become critical in the value chain and recent innovations (mainly the use of modified atmosphere packing and improvements in cold storage) have widened the time window between harvest and consumption to approximately 45–50 days (Correia *et al.*, 2017).

Supply constraints imply that market prices vary significantly according to the harvest season in each hemisphere. The Northern Hemisphere (NH) season runs from May to late August (weeks 18–36), with most harvesting happening in June and July (weeks 24–32). The SH season runs from late October to the end of February, with most of the harvest during December and January [4]. Given the current technology, global markets have four months with very low to no availability of cherries (March–April and September–October). Thus, prices fluctuate predictably within each season depending on the week that the fruit comes into market. For example, Figure 1 shows that USA retail prices for sweet cherries follow a U-shaped pattern within a season. Price variations within each season can be greater than 50% in the counter season and 100% in the NH season. The figures also show that price levels differ across seasons. On average, counter-season prices are 35% higher than in the NH summer (weeks 19–36).

Figure 2 shows similar patterns for prices received by Chilean exporters in the Chinese wholesale market during the 2019–2020 season [5]. Prices decrease as the available supply of cherries from different regions is added to the market. The early cherry is harvested in October and November and air-shipped to cash in on of the excess demand in the market. The volume traded in the early market is very low and is restricted to certain cultivars from low latitude areas. Prices shown in Figure 2 are averages and include differences in quality. For example, after the Chinese New Year (CNY, Week 4 in the figure), the market was shut down due to Coronavirus disease 2019 (COVID-19) pandemic restrictions (Weeks 5 and 6) and the oversupply, together with the decline in quality due to the passage of time negatively affected the prices received by producers at the end of the season. Typically, the supply of late cherries in February is scarce and leads to higher prices than those shown in Figure 2, although still lower than prices of the early cherry (panel (a) of Figure 1). On the other hand, the CNY is a very important event with a spike in demand that is not reflected in the figure, in part, because countries plan the arrival of their production to match the additional demand. Exports from Argentina and Chile to China during CNY are usually shipped by sea, but New Zealand and Australia target 90% of their supply for dates close to CNY, sending most of the production by plane.

On the demand side, the global demand for sweet cherries is closely tied to economic growth. The large populations of Southeast Asia that joined the middle class explain most of the growth of the global market. Markets like the USA and Europe are important, but they seem to have plateaued in terms of volume and willingness to pay. The Asian market involves both higher volumes and willingness to pay. The price differential with respect the USA and

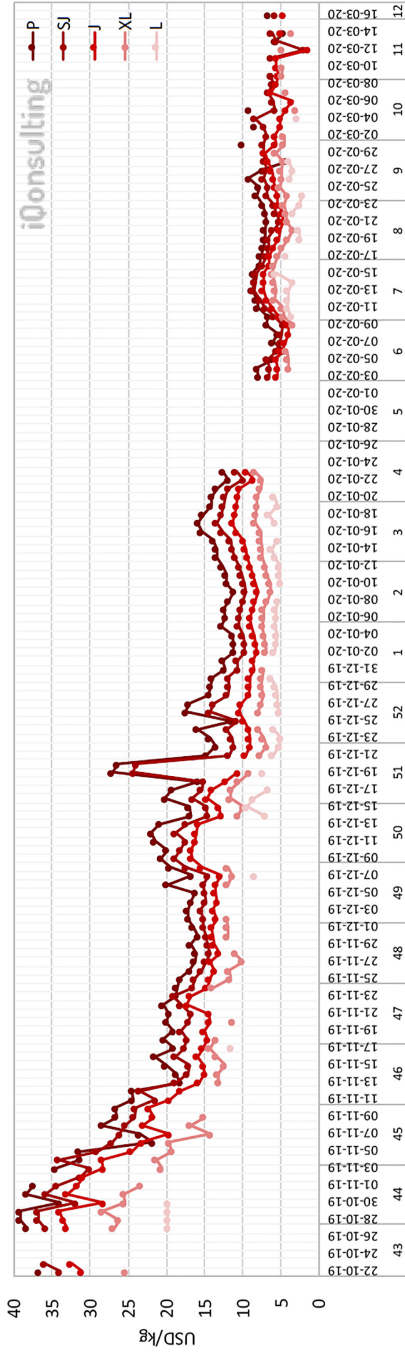


**Figure 1.** Sweet cherry weekly retail prices in the USA (US\$/Kg)

Source(s): USDA

Europe is more noticeable in the higher calibers (greater than 28 mm). For example, the volume exported from the SH (sales to the NH) grew 48.4% between 2008 and 2018 and 90% between the 2018/2019 and 2020/2021 seasons and is due exclusively to new demand from China.

Greater willingness to pay in Southeast Asia is linked to cultural factors. The cherry tree is a revered tree (celebrations are held during its flowering, for example) traditionally linked to culture, art and cinema. Fresh cherries are seen as an “aspirational” luxury product to enjoy at special times (CNY, Christmas) and as gifts. In turn, the color red epitomizes good luck and prosperity in China. In the past, sweet cherries were consumed only during season, but the possibility of importing from the SH led to a high demand for counter-season cherries. Chilean entrepreneurs (e.g. Garcés Fruit) seized the opportunity in the period 1985–1995 and



**Note(s):** Large (22-24mm), Extra Large (24-26mm), Jumbo (26-28mm), Super Jumbo (28-30) and Premium (> 30mm) sizes. The discontinuity in prices shows the closure of the market due to the Covid-19 pandemic after the Chinese New Year (January 24)

**Source(s):** iQonsulting

## Growth of sweet cherry exports in Argentina

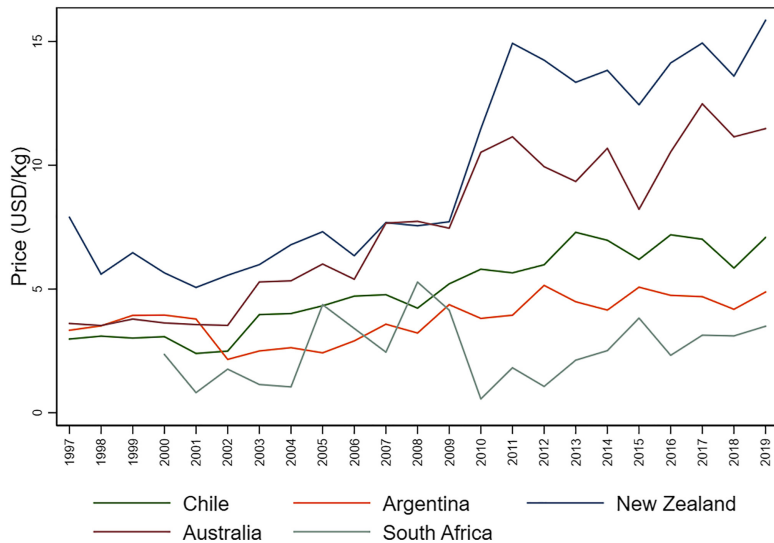
**Figure 2.** Average daily opening prices by size; Jiangnan market (Guangzhou, China) and exports from Chile (2019)/2020 season

managed to provide high-quality cherries to the USA and Taiwan. These pioneers were followed by other entrepreneurs in Chile and Argentina. In July 2007, Chile signed the cherry export protocol to China, lowering the import tariff to 0% in 2015, and since then, trade of sweet cherries between Chile and China has not stopped increasing (Aguación, 2021).

For the last 25 years, worldwide production of cherry grew steadily trailing global demand and the pattern of increasing prices appears to have stabilized in recent years (Figure 3). The feasibility of cherry production is mostly determined by climate and logistic requirements. Current production is mainly concentrated in the NH (94%) and supply from the SH is primarily covered by Chile (90%), followed by Argentina, New Zealand, South Africa and, to a lesser extent, Australia (Figure 4).

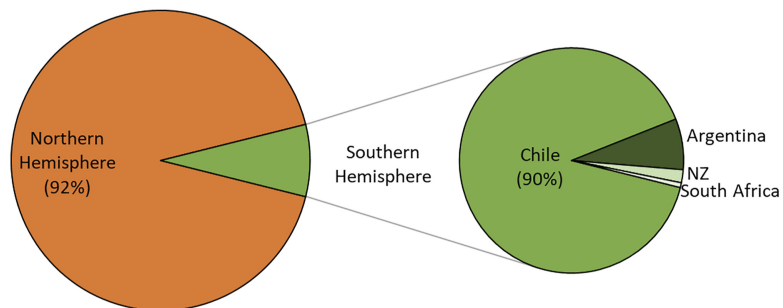
### 3. The cherry industry in Argentina

Natural conditions for cherry production in Argentina are excellent: a combination of soil quality, unlimited access to water for irrigation and a dry climate generate a low burden of



**Figure 3.** Sweet cherry Free on Board (FOB) prices: SH exporters 1997–2019

Source(s): UN Comtrade Database (November 2020)



**Figure 4.** Sweet cherry world production: stock of planted hectares, 2018

Source(s): FAOStats

pests. The production of cherries in Argentina is located in four areas that differ in latitudes and hence harvesting times (see [Figure A1](#) in the [Annex](#)). Picking starts in late October-mid November in the region of north Mendoza province, followed by the UVMV area in the provinces of Río Negro and Neuquén. Fruit production has been one of the main activities in these three provinces: pears and apples in UVMV (Río Negro and Neuquén) and peach, plum and grapes in Mendoza. Further south in the Patagonia, the mid-season (December and first weeks of January) and late season (third week of January to February) production happens in the provinces of Chubut (Sarmiento and the Lower Valley of the Chubut River, VIRCH) and Santa Cruz. The latest and southernmost cherries in the world are produced in the town of Los Antiguos (46° 55 'south latitude).

In 2019, the planted area of cherry trees in Argentina was slightly higher than 2,200 hectares, and the annual production reached 11,600 tons, of which 55% was exported. Although total planted area in the country has not changed in the last 20 years, orchards and packing houses have gone through a significant renovation process. The common thread among producers has been a focus on high-quality production and a competitive supply chain. Innovations included the use of new cultivars, plant management systems that increased yield, drip irrigation, protection against rain and hail and better cultural and fertilization practices. Innovations in post-harvest handling, quick cooling, packing and logistics are also equally important.

Cherry production in Argentina was originally located in the provinces of Mendoza and Chubut, and most of it was sold in the fresh domestic market or the processed food industry [6]. In the late 1990s and during 2000–2010, a wave of new investment projects started. These were vertically integrated projects (production, packing and marketing) with the unique goal of producing high-quality cherries to export to the NH. Firms with outdated orchards exited the market. New investments came from existing orchards that updated cultivars and technology and new orchards on previously unused lands. According to the 2002 and 2018 National Agricultural Censuses, the loss of hectares in Mendoza (–38%) was offset by new orchards in Río Negro and Chubut (+72% and +57%, respectively).

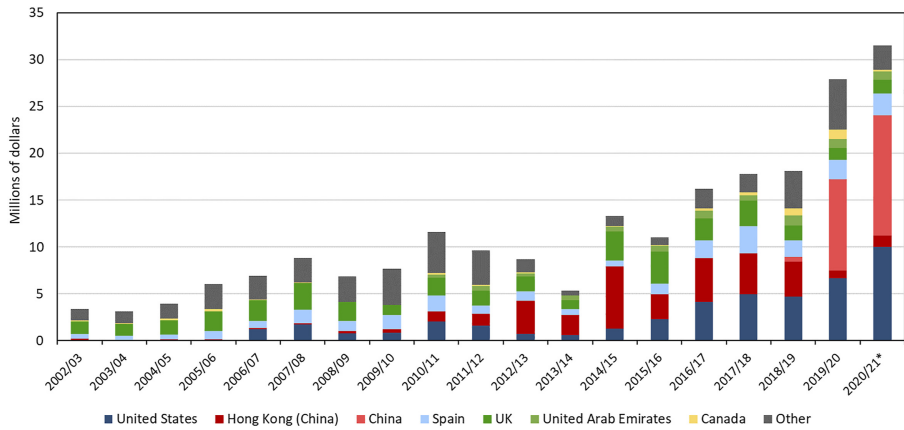
New investments boosted yields and export quality production. In the last decades, Argentine exporters have positioned themselves in international markets as suppliers of premium cherries. As an added bonus, a large share of the new production in Argentina happens in the early and late seasons, which allows producers to capture, controlling for quality, higher prices in Asian markets.

[Figure 5](#) shows the sustained growth of cherry exports in Argentina. Imports from China explain the jump in growth in the last two seasons. In the 2020/2021 season, cherry exports experienced an annual growth in volume and quantity of 13%, higher than the average annual growth rates between the 2002/2003 and 2019/2020 seasons (12.5% in value and 7.3% in volume).

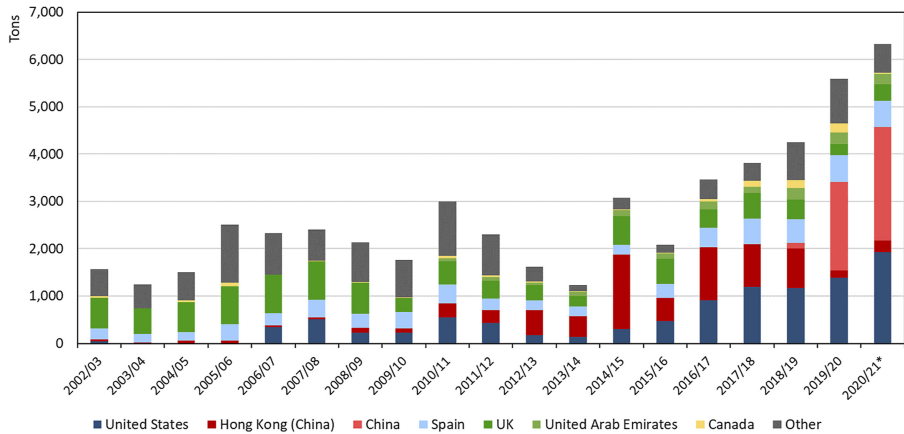
The transformation of the cherry industry in Argentina was not uniform. While in provinces in the Patagonia prevailed the reconversion of existing orchards and the entry of new export-oriented producers, in Mendoza very few producers sought a strategy change toward the production of high-quality cherries ([Tacchini, 2005](#)). This can be seen in the difference between the distribution of plantings in the country and the distribution of exports across regions. In 2019/2020, 50% of the exports came from the UVMV region, 33% from Chubut and 16% from Santa Cruz. Only 5% of the exports came from Mendoza, despite having 40% of the planted hectares in the country. [Table A2](#) in the [Annex](#) shows the drastic change in regional exports between 2002 and 2014. While the value of exports in Mendoza fell at an annual rate of 2%, it grew in Río Negro (53%), Neuquén (33%), Chubut (19%) and Santa Cruz (33%).

### *3.1 Export performance relative to other fresh fruits*

The growth of the cherry industry stands out relative to other fresh fruits in Argentina. In terms of production, between 2007–2008 and 2017–2019 the cultivated area dropped sharply



(a)



(b)

**Figure 5.** Argentine sweet cherry exports by season (2002–2021)

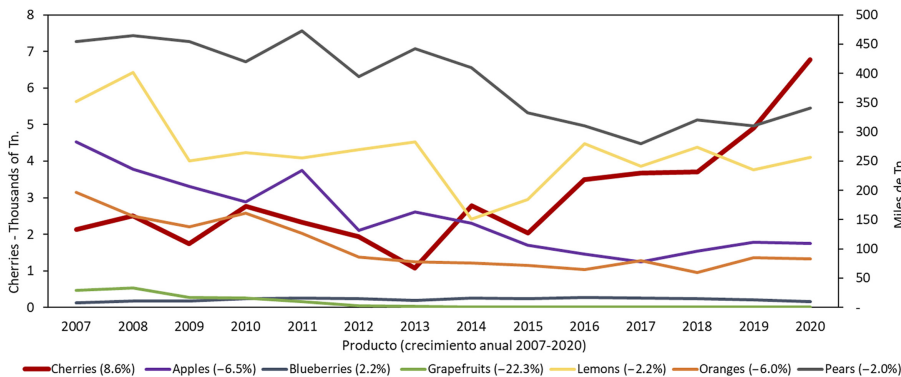
**Note(s):** Cherry season: from October to March. \*: Estimated values. Export destinations for the months of February and March 2021 projected with the average participation of the last four seasons

**Source(s):** Indec

for apples (−28%), pears (−14%), grapefruits (−53%), oranges (−5%) and blueberries (−37%). In contrast, areas for cherries (+4%) and lemons (+23%) increased (*Frutas de Argentina, 2020*). As *Figure 6* shows, exported volume displayed a similar pattern. Even though the cherry industry is small compared to other fruits, it had an average annual growth rate of 8.6% in 2007–2020, while the rest of the fruits, with the exception of blueberries (2.2%), had negative growth [7].

The contrast in growth rates between sweet cherries and other fresh fruits is even more drastic when we look at export values (*Figure 7*). The exported value of cherries in the 2007–2020 period increased at an average annual rate of 11.2%, while the other fruits ranged between −26% (grapefruit) and +0.6% (lemon). One of the main factors that explain the higher growth in value relative to volume is that prices increased driven by global demand



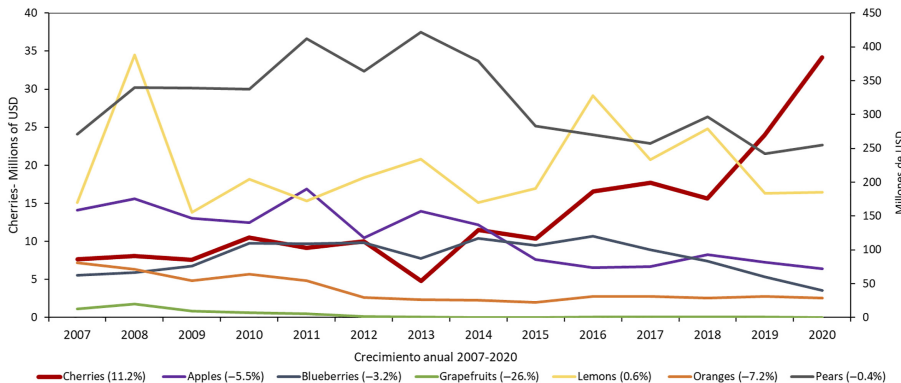


Growth of sweet cherry exports in Argentina

**Figure 6.** Argentine fresh fruit exports (in tons)

**Note(s):** Exports based on calendar year

**Source(s):** INDEC



**Figure 7.** Argentine fresh fruit exports (in millions of dollars)

**Note(s):** Exports based on calendar year

**Source(s):** INDEC

and the higher quality of Argentine cherries. The improvement in quality was due to a better varietal mix. New cultivars are genetically superior in terms of organoleptic quality (taste, firmness, flavor, size, etc.). For example, Lapins, Sweetheart, Santina and Royal Down cherries are larger and considered tastier than Bing and Summerland cultivars, which had been produced previously, mainly in Mendoza (San Martino *et al.*, 2005).

The disparity between the export performance of the cherries sector and the top fruit industries is striking. Apple and pear producers face similar conditions to those faced by cherry producers in the UVMV area. However, apple and pear’s planted area and exports are in decline despite the growth of their global market and the increase in exports by competing countries in the SH (Frutas de Argentina, 2020). Note, though, that the data reflect a picture of the average producer. Producer heterogeneity in the pear and apple industry is higher than in the cherry industry. While the vast majority of pear and apple producers have not updated their orchards and packing houses, a small group of firms managed to apply state-of-the-art technology and management practices to harvest high-quality fruit with comparable yields to those of competitive countries (Stubrin *et al.*, 2021).

Table 1 shows the main producers of cherries in the country and the scale of their investments. These projects involve between 10 and 200 hectares and it is estimated that each hectare of cherry with high technology and rain covers may require an investment of approximately 70–80 thousand dollars, the equivalent of planting 2 hectares of apples or pears. The dominance of returns in sweet cherry exports with respect to apples is clear when comparing the relationship between the FOB price and the cost of production in gate of each one: while sweet cherries have ratio around 2.80, apples' is 1.22.

### 3.2 Relative performance in the Southern Hemisphere

Similar to what happened in other countries in the SH, the growth of the cherry industry in Argentina has been demand led. However, there are noteworthy differences between these countries. Chile's process began earlier and investment projects are several orders of magnitude greater than in Argentina and New Zealand. Chile has positioned itself as the fourth largest producer in the world with 45,000 hectares planted (AGUACCION, 2021). In Argentina, the stock of planted hectares is less than Chile's annual flow of new hectares (3,000 hectares added in 2020). Comparing statistics at the unit of production level produce the same results. While the largest integrated producer in Chile owns 1,500 hectares, in Argentina the largest producer has less than 300 hectares.

In any case, Chile's exceptional growth is unrivaled by any other country in the world. In a short time, it became the first world exporter with 366,000 tons in 2020/2021, with 96% of the exports of cherries from the SH (Table 2). Since the 2008/2009 season, the marginal growth of Chile's exports has gone exclusively to China. Chilean cherry exports to China between 1999 and 2019 grew at an average annual rate of 31%, while exports to the USA grew only at a rate of 2% annually. The effort to export to the Asian market stems from the more attractive prices and continually growing demand volume. However, businesspersons as well as government agencies in Chile believe this leaves producers too vulnerable to the volatility of the Chinese market (iQonsulting, 2021). Recent events seem to confirm this fear. In the 2019/

Firm - holding	Region	Year [1]	Has [2]
María Lorine Bombal	Mendoza	1985	55
Carleti - Alberto	Mendoza	1995	30
Guizzo Frutas Frescas	Mendoza	1995	60
Carleti Hermanos	Mendoza	1995	250
Southern Crops by Río Alara	Mendoza	2010	104
Huerta (SH Delfina Cherries)*	Neuquén	1998	55
Miele**	Río Negro	1998	35
Ceco	Río Negro	2004	70
Pincen	Neuquén	2005	21
Extraberries	Río Negro	2008	153
Vista Alegre	Neuquén	2012	200
Kleppe***	Río Negro	2012	36
Cooperativa Patagonia Austral de Productores Integrados de Cerezas	Chubut	2000	100
Extraberries	Chubut	2005	128
Cooperativa Agrofrutícola El Oasis	Sta Cruz	1988	50
Southern Crops by Río Alara	Sta Cruz	1999	80
<i>Total</i>			<i>1,427</i>

**Note(s):** Approximate values. [1] Approximate start of activity, main orchard or acquisition. [2] Hectares planted at different moments in time (approximate). \*: Huerta packs and exports for other producers and in total they reach 50–60 has of production. \*\*: Since 2020, Miele transferred its assets to the Sabbag Group. \*\*\*: Corresponds to the date of acquisition of Salentein Fruits assets

**Table 1.** Main integrated cherry producers. 2020

2020 and 2020/2021 seasons, events related to COVID-19 plummeted the demand, and therefore, the prices received by Chilean producers.

Compared to Chile, the cherry industry in Argentina grew significantly less and the dynamics of its growth are more similar to what happened in New Zealand. Since the early 2000s, New Zealand has increased its planted area at an approximate rate of 4% per year to about 750 hectares (90% are located in the Central Otago region). Not only did implanted area increase, but total production improved through new cultivars, rootstocks and training systems that allowed for a higher density of plants per hectare, allowing yields to grow at 7% per year between 2000 and 2016. The structure and size of orchards and packing in New Zealand are similar to those in Argentina: productive units of between 20 and 150 hectares and packing capacity between 400 and 1,200 tons per year (Coriolis, 2018). For example, the vertically integrated firm *Hortinvest* is developing three projects that, in total, cover 175 hectares of production as well as a packing and refrigeration facility. This scale is similar to Argentina's (Dziedzic and Błaszczuk, 2019).

Table 2 shows a drop in New Zealand exports in recent seasons, mainly due to weather problems, obscuring the trend of the last 20 years. Exports in the 1996–2016 period grew at significant annual rates both in volume (+14%) and value (+17%), similar to those of Argentina (Figure 5). While New Zealand exports almost exclusively to Southeast Asia (Taiwan, China, Hong Kong, Vietnam and Thailand), Argentina exports a significant share to North America (31%) and Europe (15%). Unlike the rest of exporting countries in the SH, New Zealand and Australia have positioned their cherries in the premium segment and receive higher prices than Chile, Argentina and South Africa. In the case of New Zealand, domestic studies have identified cherries as a strategic product for the future, which should be reflected in higher production and exports in the coming years (Coriolis, 2018).

In other words, even though the growth of the cherry industry in the last 20 years in Argentina seems low compared to Chile, Argentina became the second largest exporter in the SH and the value chain has gone through an extraordinary process considering, as we argue below, the context of Argentina's macroeconomic instability and low private investment in the country.

### 3.3 The Argentine reconversion process

New investment in cherry orchards, packing facilities and equipment in Argentina materialized primarily in the UVMV region and, to a lesser extent, in the provinces of Chubut and Santa Cruz. Up to the mid-1990s, the UVMV area was specialized almost exclusively in the production of pears and apples. The only cherry orchard, located in Vista Alegre (Neuquén), was a 20 hectares experimental project owned by Moño Azul, a leading vertically integrated company specialized in pears and apples.

	2015/16	2016/17	2017/18	2018/19	2019/20	Var 19/20 vs 18/19	% 2019/20
Chile	83,765	95,289	186,504	179,928	228,548	27%	94%
Argentina	2,089	3,744	4,231	4,950	6,904	39%	3%
Australia*	5,841	2,803	4,275	5,500	4,400	-20%	2%
New Zealand*	3,962	3,996	4,931	4,950	2,300	-54%	1%
South Africa*	895	671	728	619	154	-75%	0%
Total	96,552	106,503	200,669	195,947	242,306	24%	100%

**Note(s):** Season from September to the end of August. \* Estimates

**Source(s):** Cherries 2020/21 Yearbook, iQonsulting (data from SAG – ASOEX, MAG, Stats New Zealand, CherryGrowersAustralia INC, TradeMap)

**Table 2.**  
SH exports, by country  
of origin (in tons)

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Starting in 1997–1998, the UVMV area experienced a wave of new firms with projects to grow sweet cherries to export in the NH's counter season. The region had, and still has, plenty of unfarmed land with easy irrigation from the rivers Río Negro and Río Neuquén. These new projects shared features like full vertical integration and funding from outside agricultural business units and were strategic to promote successful cooperation between private firms and coordination between the public and private agencies.

The new ventures started from scratch with orchards of at least 30 hectares to take advantage of economies of scale in own packing facilities. A consequence of the vertical integration strategies followed by the new ventures in the UVMV is a very low proportion of independent producers today. This is in stark contrast to what happens in the pears and apples industry, where there is mix of fully integrated producers (e.g. Moño Azul, PAD) and independent producers who sell their fruit to packing houses or simply outsource packing and cold services from third parties (e.g. Agro Fresh SA). The different equilibria in these two value chains can be explained by the presence of specific investments (asset specificity) with high-transaction costs and the different stages in the product life cycle, which are mutually reinforcing (Williamson, 1975, 1985; Heil *et al.*, 1991, Meirelles de Souza Filho and Varela Miranda, 2019). Asset specificity and transaction costs are also present in the apple and pear industry, but they are not as relevant as in cherries. In addition, the apple and pear industry developed and evolved to the current configuration for almost a century.

These chicken-egg coordination problems are very common in new markets or industries where investments or specific assets such as cherry packing technology are involved. Packing and cold equipment in cherries is only used for about two or three weeks a year and the proximity between the packing house and the field where it is harvested is very important (location specificity). The location limitation and the high intensity of the harvesting and packing activities work against the provision of packing services to third parties by integrated producers or even the hiring of specialized third parties. In case of doing so, the reception of the fruit, the labeling, and the pre-shipment refrigeration must be fine-tuned to preserve quality and traceability of each supplier. That is, the costs of coordination and the risk of errors are significantly large. A potential independent producer faces the uncertainty of not being able to secure packing and marketing services and, therefore, having to sell its retail production locally at a considerably lower price. At the same time, investment in packing by an independent entrepreneur also makes little sense if there are no orchards with available fruit nearby or the possibility of long-term supply agreements with cherry producers that could justify the investment.

The structure of the industry of for-export sweet cherries in Argentina is consistent with the predictions of the transaction cost theory. Vertical integration in the UVMV was the consequence of the null development of the industry and, at the same time, the cause of such void. Vertical integration dominates the use of detailed and long-term contracts as a solution to hold-up. On the one hand, costs associated with the drafting of contracts together with the institutional development of the legal system (efficiency, monetary cost and speed of response) make it harder to lower transaction costs (Joskow, 1985). On the other hand, factors other than hold-up may have an influence on the vertical integration decision, such as gross income tax (sales tax) which benefits structures that minimize spot market transactions (Vroegindewey *et al.*, 2018).

There are already some signs in the region of specialized firms entering the market. The new players are typically small- and medium-sized pear and apple growers who add a few hectares of cherry on an experimental basis and require third-party packing services with excess capacity. It is very likely that, as the size of the sector grows and pioneer companies mature, a trend will emerge toward a less integrated chain, like the pear and apple value chain (Stigler, 1951).

In the provinces of Santa Cruz and Chubut, the development process had similarities and differences to that of UVMV. On the one hand, new projects such as *Frutos de los*

*Lagos/Extraberries* and *Southern Crops by Río Alara* followed the model of full vertical integration and a minimum scale of at least 50 hectares. On the other hand, traditional, small and independent producers, who used to sell their production in the domestic market, restructured their orchards and worked in cooperatives to gain efficiency in packing and marketing. The *Southern Patagonia Cooperative of Integrated Cherry Producers* of Gaiman was founded in 2000 to consolidate the production of 12 small producers and become one of the most important cherry exporters. With a packing capacity of 1.000 tons, it processes approximately 70% of the fruit from the VIRCH valley in Chubut. Producers deliver the fruit individually to the packing facility and the cooperative implements traceability and quality control to determine destination (70% of the total production is exported).

Similarly, the *Cooperativa El Oasis* from Los Antiguos was created in 1988 and as of today brings together 17 small producers that consolidate 50 hectares of production. In its origins, producers sold exclusively to the domestic market and packed the fruit in the field at the time of harvest. The cooperative did not have a strategic role and simply aggregated demand to bargain better prices for inputs (boxes, fertilizers, etc.). In 1994, partners obtained a loan from the Inter-American Development Bank to invest in a packing plant and refocus their business. The cooperative began to implement fertilization and joint pruning programs to standardize quality among producers and market in the domestic and export market under the brand name “Cerezas Los Antiguos”. In 2015, the cooperative invested in a state-of-the-art packing facility that, by improving handling and selection, doubled the packed volume with the same amount of labor and increased the share of export quality production from 15 to 60%. The cooperative and its partners continue to expand the implanted land, although at a slower rate than they anticipated due to lack of financing.

The coordination issues and timing of investments mentioned previously for the UVMV region seems to have played out differently in the south. Cherry producers were already in the business selling to the domestic market. The need of a packing facility and marketing overseas came later, when exporting became their main goal and forming a cooperative was a natural step for these small producers. Instead, the chicken-egg problem in the UVMV was more severe. It is possible to conceive a government agency as a coordinating agent, investing in a packing infrastructure to provide services to third parties and thus encourage the emergence of small independent producers. Beyond the operational viability in the provision of goods and services by the Government, new orchards require between 3.5 and 5 years to reach full production, and unless the packing facility is built in advance of planting, producers will face uncertainty and risk when deciding to invest. In addition, solving the packing service bottleneck is not enough. Small producers will have to figure out marketing of their fruit abroad and, possibly, require the establishment of an export cooperative (Devaux *et al.*, 2018).

The apple and pear industry in the UVMV is a good benchmark for the hypothetical scenario mentioned earlier. Between 2007 and 2015, the Government built packing and cold storage facilities in the cities of Cervantes, Fernández Oro and Campo Grande in Río Negro to help producers that had little bargaining power hiring packing and cold services. Producers of pears and apples were already in business at the time of the Government intervention. The experience failed due to implementation problems and none of those facilities operates as planned originally.

Another feature shared by new projects in the cherry industry is the background of investment partners. Most of the entrepreneurs come from non-agricultural industries and/or have few years of experience in fruit growing. In the case of *Miele*, the production of sweet cherries is part of a diversification strategy within the fruit industry that began in 1992, and its main shareholder comes from the construction sector. Ownership in other companies comes from industries like oil and energy (*Cerezas Argentinas* and *Frutos de los Lagos* in 1998, *Vista Alegre SRL* in 2012) or even pharmacies (*Ceco S.A.*). Only recently, new projects seem to

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involve expansions of traditional, integrated, pear and apple companies (e.g. *Klepppe*) that try to take advantage of complementarities and economies of scope.

There are several reasons to think that production of sweet cherries could be complementary to the production of pears and apples. From a marketing point of view, clients in destination markets (e.g. supermarkets) value suppliers with a wide portfolio of fresh fruits. On the production side, the spreading of harvest time makes it possible to smooth expenses and improve working capital management [8]. In the case of packing and cold facilities, the economies of scope include administration and infrastructure fixed costs, though sorting equipment is fruit specific and requires different packing lines. Similarly, trading and managerial skills are scarce assets that constitute a source of economies of scope. Other reasons to expand the fruit portfolio lie in reducing the idiosyncratic risks of each fruit (price and harvest) that cannot be eliminated in insurance or financial markets.

The pattern of new entrepreneurs from outside the fruit industry seems to be the result of a combination of factors such as the acquisition of knowledge by pioneers embedded in international markets (Artopoulos *et al.*, 2005) and capital market failures. Some of the pioneers in the industry have been entrepreneurs with vision and connection with emerging demand (*foreign embeddedness*) for new exotic fruits (e.g. Carlos Enriquez from *Vista Alegre SRL*, Alejandro Zimmerman from *Río Alara* and the *Extraberries* group), either because of professional exposure or because of previous experiences in other markets (e.g. blueberries in the case of *Extraberries*).

The capital market in Argentina provides limited instruments to diversify risks, the cost of credit is high and there are limited long-term financing options for firms in the industry. The result can be, for example, that entrepreneurs with high returns from outside the agribusiness industry try to reduce their portfolio risk by investing into sweet cherry ventures. In turn, the lack of financing is one of the reasons why successful companies in the apple and pear sector cannot restructure or expand into other activities such as cherries to exploit synergies. Some entrepreneurs in the pome fruit sector managed to convert their orchards, but the yields are too low to self-finance the development of new business units like cherries.

Lastly, a key element in the reconversion of the cherry industry was the creation of institutions that support private initiatives. Production for export requires the establishment of protocols with different countries, public goods that increase efficiency in the value chain and controls by government agencies. The firms involved in the cherry industry came together, with the help of the provincial governments, and created the CAPCI in October 2014. The creation of CAPCI is a milestone responsible for a chain of successful public-private initiatives in the industry and represents an interesting case study in itself.

#### **4. The role of collaboration between private parties and between the public and the private sector**

The creation of CAPCI was triggered by a series of meetings between businessmen from the cherry industry in the province of Neuquén and the governor in 2012. Businessmen lobbied for the improvement of Neuquén's airport and the need to establish a phytosanitary protocol with China to be able to export directly. At that time, China's high demand in terms of volume and willingness to pay were evident and the only way to enter this market was through indirect sales to Hong Kong.

As a result, the Government of Neuquén, through PyME-ADENEU Center (agency that supports small and mid-size firms) of the Ministry of Production, mobilized resources and decided to support the development of the cherry industry. On October 4, 2014, the PyME-ADENEU Center and the Federal Investment Council (CFI) organized the first International Cherry Symposium and CAPCI is launched. In total, 95% of the producing, packing and

trading companies in the five cherry-exporting provinces are members of CAPCI. Its objective is to coordinate and integrate visions and be the main voice for the needs of the sector when interacting with government agencies. It also spearheads actions such as training and helping new members in need of know-how and expertise from more experienced members.

The greatest breakthrough achieved by the cherry industry in Argentina was the trade negotiations with China. Exports to China represented 3% of total exports in 2018/2019 and increased to 38% in the 2020/2021 season, with 62 producers and 19 packing facilities able to carry out the phytosanitary protocol required to export cherries to China.

Many stakeholders believe that the success of CAPCI stems from the fact that the private sector needs were simple and uniform: institutional support to foster foreign trade. The restructuring of the sector during the 2000–2010 period helped achieving homogeneity among producers and this has simplified the task of CAPCI compared to chambers in industries with heterogeneous members with diverse objectives.

The comparison with the private–public interaction in the apple and pear industries is revealing. Despite its greater size and importance in the regional economy, the attempts by the apple and pear industry to reverse the lack of competitiveness have been in vain (Stubrin *et al.*, 2021). Failed initiatives include the public packing and cold storage facilities mentioned in the previous section as well as attempts to agree on a common strategy for the value chain by producers, the national government and the provincial governments of Neuquén and Río Negro. For example, one of the most recent endeavors encouraged a model of associativism (cooperatives) as a core strategy. Private and public agencies presented a white paper on fruit growing to federal officials in 2018. However, it did not reach enough internal and governmental support and lost traction. The difficulty to achieve consensus within members in a given industry can be associated to the degree of heterogeneity among them (scale, goals, technology and resources). In that sense, the biggest advantage of the cherry industry in Argentina resides in the parallels among producers. They all pursue similar business models looking to export as much production as possible.

#### *4.1 Trade with China: milestones, players and challenges*

In 2012, the Government of Argentina requested China to open markets for a group of selected fresh fruits, through the negotiating and signing of phytosanitary protocols for each fruit. As is usual in these negotiations, Argentina set an order of priority and decided that pome fruit (apples and pears) be negotiated first, followed by blueberry, cherry and table grapes. The negotiation process underlying the final ranking is not fully clear. It certainly includes political and strategic considerations (i.e. likelihood of reaching agreement quickly) as well as resolving possible tension between size of an industry and the benefits from signing the protocol. For example, the apple and pear industry may be the largest industry in terms of production and employment in the group; however, the benefits from opening trade with China could be larger for the cherry industry. In any case, the final ranking meant that the trade with China for cherries would not materialize for several years, since the negotiation of a fruit could not begin until the protocol of the previous fruit were signed.

Despite the delay, and in parallel to the official channel, the PyME-ADENEU Center (later CAPCI) and cherry entrepreneurs actively lobbied to prepare for the actions to take once the other protocols had been approved. They participated in international fairs, stated the interest in trading with China to government agencies and importers through written communications, engaged in calls and meetings with officials and the main chamber of importers in China and with distributors and supermarkets. At the local level, the CAPCI sent fruit samples during the season to national officials and the provincial governments and emphasized the readiness of the sector to export to China. In addition, CAPCI extended an invitation to visit productive establishments to officials in the Embassy of China in Buenos Aires.

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Unexpectedly, the Argentine Government reprioritized table grape, placing it after pome fruit and delaying the process for two additional years. In 2014, the apple and pear protocol was signed with China. The protocol for table grapes was signed in May 2017 and finally the protocol for blueberries on December 28, 2017. The formal procedures for cherries began in 2018 with exchanges between the Argentine and Chinese phytosanitary agencies. Argentina sent a dossier with information related to the cultivation of cherries, from production areas, to pest management and information on the role of the phytosanitary agency Servicio Nacional de Sanidad y Calidad Agroalimentaria (SENASA). Then, China sent out the list of pests of interest that should be included in the phytosanitary protocol with the required management practices.

At the same time, CAPCI and SENASA set up a working group roundtable to figure out solutions to potential unsatisfied demands on pest management. This series of meetings is one of the clearest examples of successful joint work and public-private coordination. The group set the recognition of an Area Free of Fruit Flies (AFFF) as a priority.

Argentina's management of the fruit fly is done through the National Program for the Control and Eradication of Fruit Fly (PROCEM) of SENASA. The PROCEM coordinates actions between provincial governments, Instituto Nacional de Tecnología Agropecuaria (INTA), National Universities, producer associations, non-governmental agencies and international organizations. The program is based on trapping and sampling of found specimens. In 1999, the Andean-Patagonian valleys region (including parts of Mendoza and the entire Patagonia) was declared AFFF. International negotiations require that the exporting country had studied and found the production area as AFFF. However, the free area status is a necessary condition and not sufficient to avoid quarantine requirements by the importing country. The importing country must check that its own requirements are met to explicitly acknowledge AFFF.

At the working roundtable, the parties worked together to formulate a systems-approach alternative plan to be adopted in case China did not automatically acknowledge the AFFF. They came up with a mitigation plan that would increase the density of traps and, at the same time, the monitoring and inspection resources. The strategy implied a higher cost for the private sector (more traps) and SENASA, since they needed to generate an additional record to that of PROCEM.

The local management of some pests was favorably accepted by China, although more work was needed to obtain AFFF recognition. In November 2018, officials from China visited cherry orchards and packing establishments in the provinces of Mendoza, Río Negro and Neuquén. This first inspection was a milestone due to the joint effort between SENASA (who set the agenda), CAPCI and other agents that financed part of the cost of the visit. One of the main objectives of the inspection was to show officials how the fruit fly was managed, focusing the discussion on the density of traps, to validate the systems-approach proposal that emerged from the working roundtable. As harvest season was underway, CAPCI and other organizations tried to speed up the signature of the phytosanitary protocol and financed the visit of a third Chinese official to draft a protocol as the field inspection was happening. The mitigation plan conceived at the working roundtable was approved by China and the draft protocol included the need for further negotiations.

This is when the parallel lobbying efforts by CAPCI and PyME-ADENEU Center all the years leading up to 2018 paid off. In particular, the industry managed to reach President Macri, who streamlined the efforts by suggesting to jointly signing the protocol at the G20 summit in Argentina with Chinese President Xi Jinping. On December 2, 2018, Argentina and China signed the Sweet Cherries Phytosanitary Protocol. The last step needed to export directly without quarantine treatment is AFFF recognition.

In January 2019, a second Chinese group validated the export process and monitored that the mitigation plan had been properly implemented. Officials inspected the first shipments from Neuquén, visited orchards with a higher density of traps and verified the effectiveness of the monitoring system. The mission then moved to perform the same tasks in Santa Cruz and Chubut. The first shipments left with quarantine treatment right after this visit.



After the first shipments of the 2018/2019 season, producers sought the recognition of AFFF before the season ended. To achieve this, a third inspection had to be completed before the end of March 2019, since once the season ends, traps are discarded and inspections are meaningless. CAPCI made multiple efforts (calls, notes, etc.) but the visit did not materialize and negotiations between phytosanitary officials continued during 2019. In particular, SENASA sent two documents (translated with financial support from CAPCI and Cámara Argentina de Fruticultores Integrados (CAFI)) to Chinese officials with an exhaustive detail of the background and procedural manuals of PROCEM and its implementation. The third inspection was completed in November 2019, and due to internal times required by the Chinese agency, the AFFF recognition was not achieved in time, so all 2019/20 exports had to be made by sea with quarantine treatment in transit.

Finally, on March 18, 2020, China certified the AFFF and exports to China in the 2020/2021 season would not require quarantine treatment reducing costs (e.g. packaging and quarantine treatment in refrigerated containers) and allowing faster shipment by air. The AFFF includes all potential “host” crops in the area and, therefore, generates a positive externality on pears, apples and table grapes exports to China (no quarantine treatment required). Additionally, subsequent negotiations of other host crops, such as plum and other stone fruits, will already have AFFF recognition automatically incorporated.

The phytosanitary protocol and the AFFF recognition would not have been possible without CAPCI's involvement in financing and coordinating activities between the different agencies involved. During 2020, CAPCI continued to support and work closely with SENASA to be able to carry out air shipments and to guarantee operations while fulfilling COVID-19 isolation restrictions. CAPCI drafted a model for pandemic operations protocol and each jurisdiction adapted it to its needs.

#### 4.2 Other CAPCI activities

CAPCI engaged in many other activities beyond the opening of the Chinese market. In their meetings with the national government, CAPCI lobbied for the opening of additional markets (eg. Mexico, South Korea and Taiwan, among others), reduction of tariffs (e.g. Thailand to reduce its import tariff by 40%) and promotion of cherry exports through support and participation in international fairs and business meetings jointly with the Agroindustry, Foreign Ministry and SENASA. Additionally, CAPCI participated and actively promoted trade negotiations between Mercosur-EU and Mercosur-India, among others.

CAPCI also participates in “Certificación Alimentos Argentinos”, a seal of the Argentine Government for food products that comply with specific protocols and seek to signal such “differentiated” quality to the market. This requires coordination among members to comply with the requirements in the protocol. In 2020, CAPCI participated in the creation of “Frutas de Argentinas” together with other fruit chambers of the country (citrus (Federcitrus)), pears and apples (CAFI) and blueberries (Argentinean Blueberry Committee (ABC)). Frutas Argentinas seeks to establish an agenda to increase fresh fruits exports with promotion and improving the competitiveness through changes to the actual labor and tax regimes in the country.

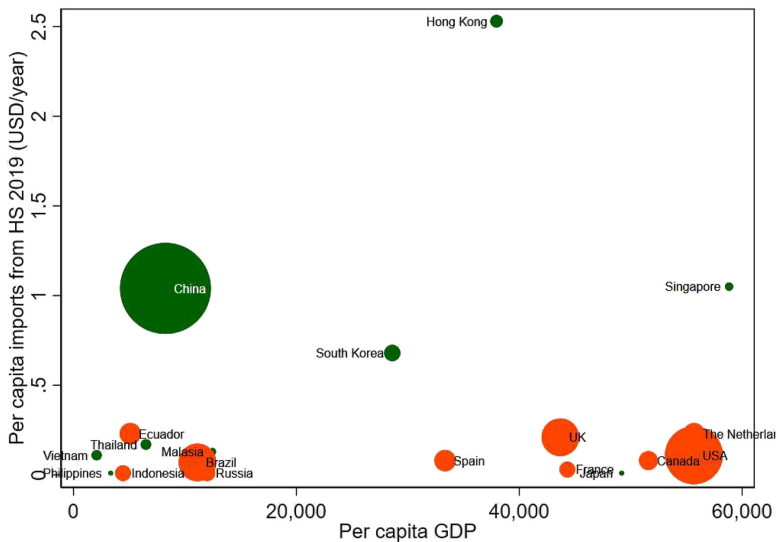
Last, CAPCI still takes an active role in promoting activities that require coordination among private firms and avoid inefficient outcomes from *free-riding*. For example, CAPCI keeps promoting, together with PyME-ADENEU Center, the use of Neuquén airport to ship cherries, the registration in SENASA of active principles to be used in the production of cherries and the organization of “Cherry Day”, an annual meeting of cherry stakeholders that fosters information sharing and discussions on the challenges for the industry.

**5. Bottlenecks and industry challenges**

The global sweet cherry market offers great opportunities for producers in Argentina. Supply from the SH continues to grow at high rates (mainly in Chile) and prices have still not been affected by the increased production. Some producers fear a drop in international prices due to excess supply in the near future. This is exactly what happened to the blueberry market when Perú increased production exponentially (Ghezzi and Stein, 2021). However, Figure 8 may provide hints that Cherries are different and global demand will keep growing. The figure shows the link between economic development and cherry imports from the NH in the counter season. Per capita spending on cherries in Western countries appears to have peaked at levels similar to those in less-developed countries. However, the relationship between gross domestic product (GDP) and per capita spending for Asian countries is positive and the uncertainty centers on the future Chinese per capita consumption. Economic growth could bring Chinese consumption to levels similar to Hong Kong or Singapore. The most optimistic views hope that it will be similar to Hong Kong, since the two countries share cultural ties, the conception of the cherry as a luxury good and the celebration of the CNY.

The scenario of continued growth in demand from China (conditional on the growth of its economy) is optimistic and plausible. Unlike Chile, Argentina has suitable and irrigated free land to expand its offer. The entrepreneurial know-how and the quality of the existing production are excellent. In this context, CAPCI’s aspiration to achieve 10,000 hectares to export in the next five years does not seem far-fetched and would imply exports worth 290 million dollars per year. However, the future is highly uncertain and the presence of country-specific bottlenecks has led to little investments in 2020 and 2021.

Producers acknowledge the good performance of the industry and share optimistic view in terms of global market. However, they also identify various frictions that prevent the growth of the industry. There is consensus that the cost of financing long-term projects in Argentina is the main barrier to investment in new orchards and packing facilities in Argentina. The difference in country risk between Argentina and Chile (13% points as of March 2021) reveals that Argentina’s competitors do not face the same constraint. Cherry



**Figure 8.** GDP, market size and per capita spending on imported sweet cherries from the SH (US\$/capita, FOB exporter, 2019)

Source(s): FAOStats

production technology is increasingly capital intensive and requires greater investment per hectare (e.g. nets for climate protection anti-frost irrigation systems). In addition, investments in production make sense to the extent that cherries receive adequate post-harvest treatment, packing and logistics, which also requires large investments. Thus, vertically integrated firms require significant financial backing to develop new projects. Growth with own resources is slow and may not allow to take full advantage of the window of opportunity offered by demand from China.

The lack of access to financing also applies to producers of other fruits that may be interested in diversifying and taking advantage of the economies of scope of producing and exporting various fruits. Sweet cherries may be an attractive investment for current fruit producers (e.g. the apple and pear industry in UVMV), but they face low profitability and cannot use own cash flows to finance organic growth. A scenario with a low cost of capital would not only allow an increase in the planted area but would accelerate the natural evolution of the value chain, developing an industry where integrated companies coexist with independent producers, packers and marketers focused on their competitive advantages and aggregating demand to increase efficiency. Naturally, the cost of capital summarizes and masks several issues that concern investors that are associated to the country's economy and macroeconomic policy.

The nature of a cherry project is long term and investors must consider the risk of tax and regulatory changes (e.g. labor taxes, export taxes and refunds) that affect its profitability. In a way, capital-intensive investments in cherry and fresh fruit projects in general have high sunk costs and a cash flow structure similar to that of mining and oil extraction. Unlike the latter, there are no special laws that guarantee stability in the tax regime at the time of investment. In addition to the volatility in government policies, the concern of producers points to the high level of tax rates, the cost of services (e.g. energy) and labor costs that affect fruit growing profitability.

An additional bottleneck identified by producers is the shortage of nurseries. There is agreement among players that today it would be impossible to double the planted area in one year. However, doubts prevail regarding the cause of the lack of high-quality cultivars and plants. Some consider that the main problem is tied to the financing and that, if solved, the nurseries could grow and meet the demand from new producers immediately. Unlike the geographic specificity that exists in investments in packing and planting, a nursery located in one point of the country (e.g. Mendoza) could supply producers throughout the country.

Trade policy can also slow down the growth process in the industry. Table 3 shows import tariffs faced by SH cherry exporters in the main markets. Except in those markets that have been equally open to all countries (the USA, Canada, Hong Kong and the United Arab Emirates), Argentina is at a disadvantage of at least 10% points in the tariff with respect to any competitor country. As with the efforts to open the Chinese market, CAPCI works constantly trying to influence the agenda when it comes to Argentine trade negotiations. However, Argentina's trade and foreign policy is exogenous to the cherry industry.

	China	USA	Canada	Hong Kong	UK	Spain	E.A.U	Thailand	India
Chile	0%	0%	0%	0%	0%	0%	0%	0%	30%
Argentina	10%	0%	0%	0%	12%	12%	0%	40%	30%
New Zealand	0%	0%	0%	0%	12%	12%	0%	0%	30%
Australia	0%	0%	0%	0%	12%	12%	0%	0%	30%
South Africa	10%	0%	0%	0%	0%	0%	0%	40%	30%

Source(s): Market Access Map

**Table 3.**  
Customs duties for  
fresh cherries (HS  
080929,%)

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Another bottleneck affecting the fresh fruit sector in general is the slim pool of professional management with sufficient motivation and training to handle large-scale production projects. The quality of managers in fruit growing is generally poor although the issue seems to be less significant in new vertically integrated cherry ventures. Programming and projecting activities in the long term is difficult and the result is the proliferation of informal family businesses with little training. Similar problems arise in Mendoza, where cherry production was traditionally oriented toward industry and the domestic market. Changing the work culture to encourage quality export and business knowledge proved difficult and the cherry business was co-opted by other crops, such as grapes.

The lack of well-managed fruit firms may explain the low level of foreign investment via mergers and acquisitions and that many of those that took place in the past have failed (). In turn, the greenfield FDI process in Argentina faces higher costs than in other Latin American countries (country, managerial and legal security risks) or is even limited by restrictions on the purchase of land by foreign companies. Some of the local producers claim to have been approached by Chinese or Chilean firms willing to make investments in cherry projects in Argentina. However, the initial interest never led to actual investments.

The bottlenecks identified above are mainly country specific and cast doubts on the future of the cherry industry in Argentina. The global market looks promising and the stakeholders within the industry have built the necessary institutions to strengthen growth. The lack of financing and unpredictable economic policies make up the main problems faced by the industry. Aside from general economic policy, the Government may consider targeted policies to alleviate these constraints. For example, it is possible to implement subsidized financing for investment projects as well as reducing taxes and implementing changes to labor regulations. These are sector-specific policies that are costly in terms of public funds and a proper cost-benefit analysis is required.

## 6. Conclusions

The surprising performance of Argentine cherry exports in recent years rests on three pillars: (1) the growing demand for counter-season cherries from the NH, (2) the vision and initiative of private entrepreneurs to adjust business strategies to grow for-export sweet cherries and (3) in the public and private institutions that helped the growth process by solving coordination problems and the provision of public goods.

The dynamics underlying the growth of the cherry industry point to the key role of institutions. While other fruit industries have shrunk, sweet cherries exports grew at an average annual rate of 13% between 2002/2003 and 2020/2021 seasons. The PyME-ADENEU Center and CAPCI acted rapidly detecting needs and facilitating solutions to each problem faced by the industry. The opening of the Chinese market constitutes a good example of how these institutions generate virtuous public-private dynamics to face challenges that require coordination between many agencies. As in other successful cases (e.g. blueberries in Uruguay. See [Pittaluga et al., 2014](#)), the fact that CAPCI members shared a single objective allowed them to remain focused and avoid business disputes and frictions. A strong and cohesive private sector leading the way facilitates the collaboration with public agencies.

The growth of Argentinean cherry exports is overshadowed by the extraordinary performance of Chilean exports. However, the performance of the industry in Argentina is outstanding once country-specific bottlenecks like macroeconomic volatility and the high cost of capital are taken into account. The comparison with countries without such bottlenecks (e.g. New Zealand and Australia) as well as with other fresh fruits industries operating in the same country reinforces the idea that the cherry export boom was distinctive.

Successful institutional coordination is rare in developing countries such as Argentina. Understanding the conditions under which it has been achieved in the case of cherries

provides a useful benchmark for other industries. Actions to emulate include the setting of few but clear goals when coordinating activities, being proactive to anticipate events and deviations from any plan of action, and centralization of coordinated work in a leader with aligned incentives. Note that, however, some of the characteristics that lead to success are exogenous to the decision-makers and may help or weaken the collaboration outcome. In the case of cherries, the high homogeneity among firms (age, size and technology) and the constant growth of market demand were positive factors that help lubricating and increasing the coordination incentives between all stakeholders.

As discussed in [Section 5](#), there are variables outside the industry that may limit the growth potential of the sector and, therefore, may prevent coordination success. In the case of the Argentine cherries, the Government can help by improving macroeconomic stability and consider domestic policies that lead to an increase in access to credit markets, reductions of the tax burden, flexible and professional labor markets and more international trade negotiations.

### Notes

1. As stated by [Mesquita Moreira and Stein \(2019\)](#), “To succeed in modern agriculture, firms need to innovate and customize products and value chains to changing market requirements. Governments, in turn, must customize the supply of public goods to match private sector needs.”
2. The industry structure and the collaboration process between the public and private sector in the Argentine cherry industry resembles that of the blueberries cluster in Uruguay. The latter is characterized by relatively new firms that joined forces in 2007 and created an institution to facilitate exports (Unión de Productores y Exportadores de Frutas de Uruguay (UPEFRUY)). They later partnered with the public sector agencies to work and meet United States Department of Agriculture (USDA) phytosanitary requirements that would allow them to export to the USA market ([Pittaluga et al., 2014](#)).
3. Sweet and sour cherries are two different species. Sweet cherries (*Prunus avium*) are consumed fresh while sour cherries (*Prunus cerasus*) are sold dried, frozen and used to cook or as ingredients in industrial processes. Sweet cherries account for about 60% of the world production. This work focuses on sweet cherries only and sometimes uses cherries and sweet cherries interchangeably.
4. Greenhouse production allows China to produce in April. However, this is very expensive and still not used much.
5. The price pattern displayed in the figure is similar for Argentine. Detailed wholesale data are not available for other SH countries, yet Chile represents more than 90% of the exports from the SH.
6. Cherries that end up processed do not lack taste but are inferior in other quality dimensions relevant for fresh consumption (i.e. color, size and strength). Producers typically have low plant density (tall trees) and no hail or rain protection.
7. The apparent contradiction in the growth of the planted area of lemon and the fall of its export is due to the increase in production for industry use, which, in this sector only, is generally more profitable than the fresh fruit segment.
8. The timing of cherry sales is such that it can finance the harvesting and packing expenses of apple and pears that happen between two and four months later.

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## Databases

World Bank dataset, available at: <https://databank.bancomundial.org/home.aspx>.

FAOStat database, available at: <http://www.fao.org/faostat/en/>.

Consultas del Comercio Exterior de Bienes, available at: <https://comex.indec.gob.ar>.

Market Access Map, Market Access Conditions database, available at: <https://www.macmap.org>.

UN Comtrade Database, available at: <https://comtrade.un.org/>.

## Further reading

Aggio, C., Milesi, D., Verre, V., Zanazzi, L. and Lengyel, M. (2022), "Rise and fall (and recovery?) of the blueberry business in Argentina: an analysis of private and public-private strategies", *Journal of Agribusiness in Developing and Emerging Economies*, Vol. ahead-of-print No. ahead-of-print, doi: [10.1108/JADEE-10-2021-0270](https://doi.org/10.1108/JADEE-10-2021-0270).

## Annex

#	Interviewee	Position	Place of residence
1	Alejandro Zimmerman	President of CAPCI, founder and CEO Southern Crops by Rio Alara	Tandil, Bs As
2	Aníbal Caminiti	Executive Manager, CAPCI	Neuquén
3	Carlos Enriquez	CEO and Shareholder, Vista Alegre SRL	Neuquén
4	Agustín Jaureguiberry	General Manager, Cerezas Argentinas (until 06/2020)	General Roca, Río Negro
5	Hernán De Bellis	Manager of International Trade and Logistics, Extraberries (Cerezas Argentinas and Frutos de los Lagos)	Buenos Aires
6	Julián Cervera	General Manager, Centro PyME-ADENEU	Neuquén
7	Facundo Lopez Raggi	Industry and Production Minister, Province of Neuquén	Neuquén
8	Martín Delucis	Director of Agriculture International Trade, National Direction of Vegetal Protection, SENASA	Buenos Aires
9	Hugo Sánchez	President and CEO, Grupo Prima SA	General Roca, Río Negro
10	Federico Guerendiain	Partner and General Manager, Cooperativa El Oasis	Gaiman, Chubut
11	Facundo Fernandez	Undersecretary of Fruit Growing, Province of Río Negro	Allen, Río Negro
12	Carlos Banacloy	Production Minister, Province of Río Negro	Viedma, Río Negro

**Table A1.**  
Interviews



**Figure A1.**  
Cherry production in  
Argentina

**Note(s):** [https://www.google.com/maps/d/edit?mid=1lkuMsVFHe3\\_uV2VIQoRmpYdqQ37B13Uk&usp=sharing](https://www.google.com/maps/d/edit?mid=1lkuMsVFHe3_uV2VIQoRmpYdqQ37B13Uk&usp=sharing)



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Growth of  
sweet cherry  
exports in  
Argentina

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	2002	2006	2010	2014	2002–2014% change
Mendoza	2,523	3,141	3,632	1,957	–2%
Neuquén	77	720	896	2,300	33%
Río Negro	29	898	3,285	4,681	53%
Chubut	196	657	1,292	1,534	19%
Santa Cruz	40	600	167	1,212	33%

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**Table A2.**  
Cherry exports by  
province, 2002–2014

**Source(s):** Ministry of Finance, calendar year

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