The Global Produce Industry – Implications for the United Kingdom

Miguel I. Gómez and Jie Li
Dyson School of Applied Economics and Management
Cornell University

London Produce Show
London, June 2018
Quiz...

What is the share of imports in UK fruit consumption?

And in UK vegetable consumption?
Quiz...

What is the most imported fruit in the UK? What is its share in total edible fruit imports?

What is the most imported vegetable in the US? What is its share in total vegetable imports?
Agenda

- Drivers and trends of international trade of fruits and vegetables (F&Vs)
- UK F&V trade situation
  - UK imports
  - UK exports
- Other factors affecting UK F&V trade
# Factors Influencing Trade

<table>
<thead>
<tr>
<th>Supply</th>
<th>Demand</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate</td>
<td>Rising incomes</td>
<td>Common agricultural policy in the EU</td>
</tr>
<tr>
<td>Location</td>
<td>Urbanization</td>
<td>Trade liberalization in NAFTA countries</td>
</tr>
<tr>
<td>Technology</td>
<td>Increasing middle-class population</td>
<td>New Trade Agreements</td>
</tr>
<tr>
<td>Costs</td>
<td>Year round demand for fresh produce</td>
<td></td>
</tr>
<tr>
<td>Factor endowment</td>
<td>Increasing health concerns</td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Increasing trade of fresh produce due to lower prices and improved quality resulting from lower tariffs and improved technology.
World Population

World Population by Region in 2017 and Projections for 2050 (in millions)

The Age of Urbanization

**COUNTRIES ARE BECOMING MUCH MORE URBANIZED**

City populations are growing by 65 million every year.

This is equivalent to 7 new Chicagos every year.

**WITH EMERGING MARKETS TAKING THE LEAD**

440 cities in emerging markets will account for nearly half of global GDP growth by 2025.

2.5 billion people will live in Asian cities by 2025—that’s half of all urbanites in the world.

By 2025, 46 of the world’s 200 top cities will be in China.

By 2025, the economy of Tianjin will be the same size as Sweden’s.

**EMERGING ECONOMIES ARE BECOMING MAJOR FORCES**

By 2025, emerging economies will grow 75% faster than developed nations.

Emerging economies are taking a larger share of the world economy.

1/3 today

1/2 by 2025

**GROWTH OF THE URBAN CONSUMER CLASS**

150% increase in annual consumption in emerging markets, 2010 to 2030.

620 million people exited poverty in the last 20 years.

The London Produce Show | June 6–8, 2018 | Grosvenor House Park Lane London
Consumption Trends—Vegetables

Per capita vegetable consumption (kg/year)

Source: FAOSTAT, Author’s calculations based on food disappearance data
Consumption Trends—Fruits

Per capita fruit consumption (kg/year)

Canada
U.S.
China, mainland
Korea (South)
Japan
UK
Ireland
The Netherlands

Source: FAOSTAT, Author’s calculations based on food disappearance data
2016 Organic Fresh Produce Industry

Organic outperformed conventional counterparts in every core market

• **Developed regions**—steady growth
• **Developing regions**—fast growth
• China increased by 30% in 2016; South Africa increased by 16%
• **Driving factors**—broader availability in retail, development of E-commerce and more direct sellers
• **Consumer segments**—healthy eaters, allergy sufferers, parents with young children
Steady growth since recession—£2.2 billion, up 6 percent in sales

• Strong growth through independent outlets and home delivery

• 30% sales taking place online or on the high street
  
  Sales in supermarkets rose by 4.2% to £1.5bn
  Sales in independents rose by 9.7% to £359m
  Sales in home delivery services rose by 9.5% to £286m

• Fresh produce accounted for 24% of the total sales

• Driving by consumers increasing value of trust, transparency and traceability of organic products

Source: Food Navigator.com, 2018; Soil Association, 2017
Global Exports of Fresh Fruits and Vegetables, Billion Dollars, 2001-2016

Source: GATS, USDA (HS codes fruit: 0803-0810; vegetables: 0702-0709); potatoes excluded

Trade growth driven by higher value F&V

$110 bl. vs $35 bl.
• Substantial trade growth after signing of NAFTA
• Intraregional vegetable trade dominant
• Exports primarily to Asian countries
• Imports from Southern Hemisphere and equatorial regions - juice and off-season fresh fruits

• Leading destination market (50% import share) and supplier (40% export share)
• Intraregional vegetable trade dominant
• Imports of fruit and fruit juice from peripheral countries and ex-colonies

• Substantial growth since the mid-90s; rising population and incomes, and policy changes
• Dominated by Chinese exports and Japanese imports
• Increasing imports of fruits and vegetables from Southeast Asian

Source: Global Trade Patterns in Fruits and Vegetables, ERS, USDA
UK F&V Trade Situation
Growth in Regional Trade Agreements (RTAs) Around the World, 1961-2018

Source: Regional Trade Agreements Information System (RTA-IS)
UK Fresh Produce Production Basics

Home production of vegetables

• Account for 54% of total UK supply in 2016
• Fairly constant production level between 2.5 to 3 million tons
• Worth £1.3bn in 2016
• Field grown vegetables rising £107m; protected vegetables fell £13m
• Carrots and cabbages account for 90% of total UK supply
UK Fresh Produce Production Basics

Home production of fruits

• Account for 8.5% of total UK supply in 2016
• Increasing production over the past 15 years
• At 777,000 tons in 2016
• Worth £670m in 2016
• Apple production at 180,000 tons, accounting for 42% of market share

COX  Bramley  Worcester Pearmain  Spartan
UK trade in different food groups, 2016

Source: HM Revenue and Customs.
UK VEGETABLE TRADE, 1999-2017

Source: UN Comtrade Database

Source: UN Comtrade Database

londonproduceshow.co.uk | June 6-8, 2018 | Grosvenor House Park Lane London
UK FRUIT TRADE, 1999-2017

Source: UN Comtrade Database
## UK Leading Fresh F&V Import Suppliers ($ Million)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>2029</td>
<td>2053</td>
<td>2128</td>
<td>2225</td>
<td>2101</td>
<td>20%</td>
<td>4%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1497</td>
<td>1489</td>
<td>1345</td>
<td>1264</td>
<td>1269</td>
<td>12%</td>
<td>-15%</td>
</tr>
<tr>
<td>Germany</td>
<td>337</td>
<td>444</td>
<td>482</td>
<td>553</td>
<td>569</td>
<td>5%</td>
<td>69%</td>
</tr>
<tr>
<td>France</td>
<td>574</td>
<td>496</td>
<td>463</td>
<td>464</td>
<td>441</td>
<td>4%</td>
<td>-23%</td>
</tr>
<tr>
<td>Belgium</td>
<td>426</td>
<td>397</td>
<td>368</td>
<td>349</td>
<td>352</td>
<td>3%</td>
<td>-17%</td>
</tr>
<tr>
<td>USA</td>
<td>324</td>
<td>372</td>
<td>376</td>
<td>399</td>
<td>396</td>
<td>4%</td>
<td>22%</td>
</tr>
</tbody>
</table>

Source: UN Comtrade database and author’s calculation, including fresh and processed fruits and veggies.
Vegetable Imports Situation

Source: ITC
Imports of Fruits

Source: ITC Trade Map
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>266</td>
<td>238</td>
<td>241</td>
<td>238</td>
<td>239</td>
<td>48% -10%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>76</td>
<td>70</td>
<td>75</td>
<td>78</td>
<td>88</td>
<td>10% 16%</td>
</tr>
<tr>
<td>France</td>
<td>51</td>
<td>46</td>
<td>53</td>
<td>66</td>
<td>79</td>
<td>7%  55%</td>
</tr>
<tr>
<td>Egypt</td>
<td>135</td>
<td>148</td>
<td>120</td>
<td>107</td>
<td>65</td>
<td>6%  -52%</td>
</tr>
<tr>
<td>Spain</td>
<td>49</td>
<td>46</td>
<td>53</td>
<td>49</td>
<td>54</td>
<td>4%  10%</td>
</tr>
</tbody>
</table>

Source: UN Comtrade database and author’s calculation, including fresh and processed fruits and vegs
Country Focus – Spain (Millions Dollars)

Source: UN Comtrade database and author’s calculation, including fresh and processed fruits and veggies
Country Focus: Germany, a Fast-Growing Supplier to the UK

Source: UN Comtrade database and author’s calculation, including fresh and processed fruits and veggies
Exports of Vegetables
Exports of Fruits

Prospects for market diversification for a product exported by United Kingdom in 2016
Product: 08 Edible fruit and nuts; peel of citrus fruit or melons

Annual growth of partner countries' imports from the world between 2012-2016, %

Share of partner countries in United Kingdom's exports, 2016, %
OTHER FACTORS affecting F&V Trade in the UK
Trade Between the UK and The EU

- EU countries remain major trading partners
- Distance is important, trade value with Ireland is much higher than with Italy or Spain, even though Ireland’s economy is much smaller
- Share of UK exports to EU has generally been declining

After leaving the EU
- Negotiate new trade agreement with EU countries
- If no trade deal is negotiated and trade under WTO rules, then UK would have to impose (and pay) tariffs and face other barriers to trade

Pending Trade Policies
How might Brexit affect food prices?

- Around 30% of the value of food purchased by households is imported
- Two types of impacts
  - Changes in exchange rates
  - Changes in import/export tariffs
- UK consumers likely to pay more for F&V because the sterling has depreciated relative to other currencies
- Changes in import/export tariffs for fresh produce are uncertain
- There is a great deal of uncertainty over what the nature of the UK’s post-Brexit trading arrangements will be
THE STERLING AND FOOD PRICES

Source: Institute for Fiscal Studies, 2017
TRADE BETWEEN UK AND NON-EU COUNTRIES

The UK trades with non-EU countries under WTO rules

Looking to Strengthen ties with Non EU like China, India, United States, Australia, and New Zealand

- Trade relationship with the US has strengthened in recent years
  - Vegs export: 14% growth over the past five years
  - Fruits export: 15%
- Export to some Middle eastern enjoys a trade surplus
- Growing demand from Asia, African countries
The produce industry is becoming rapidly globalized.

The UK industry has benefited substantially from increased trade (both exports and imports).

Brexit likely to have impacts on F&V prices and therefore on the structure of the industry – but it depends on pending trade policies.

Consumers are the big winners of increased trade.
Thank you!

Questions? Comments?

Contact information
Cornell University
E: mig7@cornell.edu
P: 607.255.8159