Changing Demographics, Trade Liberalization, and Supermarket Trends Transform the Global Fresh Produce Market

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Agenda

• Overview
• Demographics: mature food markets in Europe, USA/Canada and Japan but rapid growth in the developing economies
• Market structure and the modern supermarket sector, both in developing and developed economies
• International trade in fresh produce
• Implications for fresh produce markets
Overview: Key Global Demand Trends

- Important shifts are underway in the share of global population accounted for by key regions with profound implications for food demand in upcoming decades.
- Rising incomes in developing economies should cause fresh produce demand growth to outpace demand in developed economies.
- Since the 80s: Improved market access (reduction in tariff and non-tariff barriers), facilitating international trade, and increasing competition between exporters.
- Since the 80s: FDI was liberalized, privatization, general market liberalization, and emergence of middle classes.
- Result: supermarket “revolution” in the developing world!
- Key role of FDI: Much of the growth was driven by European and Japanese chains facing saturated markets at home.
Key Global Retail Trends

• Much more rapid emergence of supermarkets in L. America and Asia than occurred in the USA and Europe. (Reardon, Thomas and Timmer, C. Peter, “The Economics of the Food System Revolution,” www.annualreviews.org.)

• Supermarkets stimulate produce imports – shelf-space must be full yr-round.

• Fragmented supply chains pose big challenges.

• Supermarkets stimulate supply chain modernization, and eventually contribute to the emergence of larger and more professional farmers and intermediaries. Need for scale!

• The drive to reduce transaction costs contributes to a gradual process of streamlining the supply chain, improving quality, safety and reducing food waste and margins.

• Competition means these gains translate into lower prices, benefiting consumers and increasing demand. Virtuous circle! Note: Walmart model, the world’s largest retailer.
Overview: Key Retail Trends

• In W. Europe and the USA/Canada, smaller store formats are growing at the highest rates, cannibalizing sales of big box stores. These formats are targeting specific convenience and/or value segments.

• This will contribute to changing market shares among leading players and more intense competition for all.

• The proliferation of store formats and e-commerce means that consumers have more choice in where they purchase produce.

• Greater competition at the buying end of the supply chain pressures upstream margins (back to growers).

• International trade gives consumers more fresh produce options every month of the year.

• Understanding consumer preferences is vital to the fight for distribution and share of stomach. Information technology!
Demographics
World Population by Region in 2012 and Projections for 2050 (in millions)

<table>
<thead>
<tr>
<th>Region</th>
<th>2012</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUROPE/RUSSIA</td>
<td>740</td>
<td>719</td>
</tr>
<tr>
<td>AMERICAS</td>
<td>954</td>
<td>1,198</td>
</tr>
<tr>
<td>AFRICA</td>
<td>1,070</td>
<td>2,192</td>
</tr>
<tr>
<td>ASIA</td>
<td></td>
<td>5,197</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>7,052</td>
</tr>
</tbody>
</table>

Sources: United Nations/World Bank's official series for 1990-2012 (October 2012), and UN official projections for 2012-2100 (UN Population Prospects, April 2011 version) (central/mid-range scenario)
## Projected population change: 2012-2050 (millions)

<table>
<thead>
<tr>
<th>REGION</th>
<th>SUB-REGION</th>
<th>Change (Millions)</th>
<th>% Share of the pop gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUROPE</td>
<td>Western Europe</td>
<td>20</td>
<td>0.9%</td>
</tr>
<tr>
<td></td>
<td>Eastern Europe/Russia</td>
<td>-41</td>
<td>-1.8%</td>
</tr>
<tr>
<td>AMERICAS</td>
<td>N. America (USA/Canada)</td>
<td>96</td>
<td>4.3%</td>
</tr>
<tr>
<td></td>
<td>Latin America</td>
<td>148</td>
<td>6.6%</td>
</tr>
<tr>
<td>AFRICA</td>
<td>Northern Africa</td>
<td>61</td>
<td>2.7%</td>
</tr>
<tr>
<td></td>
<td>Sub-Saharan Africa</td>
<td>1,061</td>
<td>47.1%</td>
</tr>
<tr>
<td>ASIA</td>
<td>China</td>
<td>-58</td>
<td>-2.6%</td>
</tr>
<tr>
<td></td>
<td>India</td>
<td>434</td>
<td>19.2%</td>
</tr>
<tr>
<td></td>
<td>Japan</td>
<td>-18</td>
<td>-0.8%</td>
</tr>
<tr>
<td></td>
<td>Other Asian countries</td>
<td>552</td>
<td>24.5%</td>
</tr>
<tr>
<td></td>
<td><strong>WORLD</strong></td>
<td><strong>2,254</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Sources: United Nations/World Bank's official series for 1990-2012 (October 2012), and UN official projections for 2012-2100 (UN Population Prospects, April 2011 version) (central scenario)
Urbanization Rates in Select Developing Countries, 2014
(Urbanization and megacities drive food demand)

Per capita spending on grocery retailing in 2009 in U.S. dollars

Source: Euromonitor, International.
Market Structure and the Modern Supermarket Sector
Three Waves of Supermarket Emergence

• **Early 90s take-off:** E. Asia (outside Japan and China), S. America, S. Africa, and Central Europe. Modern retail’s share of total food sales grew from 5-10% to 50-60% by the late 90s.

• **Second wave take-off, mid-late 90s:** SE Asia (outside Vietnam), Central America, and Mexico. Modern retail’s share reached 20-50% by the late 90s.

• **Third wave take-off, late 90s and 2000s:** mainly China, Vietnam, India and Russia. Big diversity in modern retail’s share by country by end of 2000s (hard to generalize).

• **Africa (outside S. Africa):** modern retail is only starting (mainly in eastern and southern Africa).

Developing countries register rapid growth in food sales from Western-style outlets

Percent increase: 1999-2005

- Supermarkets
- Fast food

Source: Euromonitor International.

Share of Total Grocery Retailing Sold in Modern Formats in Developing Regions, 1999-2009

Source: Euromonitor, International.
Africa: Sales of Top 10 Retailers, 2014 and 2019

Source: Planet Retail Ltd 2015. All Rights Reserved.
Global: Total Banner Sales and CAGR by Region, 2008-2018 (percent)

Sales (EUR bn)

- **Western Europe**
  - 2008: 1,330
  - 2013: 1,501
  - 2018f: 1,777
  - CAGR 3%

- **Africa & Mid East**
  - 2008: 1,330
  - 2013: 1,501
  - 2018f: 1,777
  - CAGR 6%

- **Asia & Oceania**
  - 2008: 530
  - 2013: 904
  - 2018f: 1,225
  - CAGR 5.8%

- **Central & E. Europe**
  - 2008: 164
  - 2013: 253
  - 2018f: 361
  - CAGR 7%

- **No. America**
  - 2008: 1,363
  - 2013: 1,688
  - 2018f: 1,957
  - CAGR 2.6%

- **L. America**
  - 2008: 142
  - 2013: 258
  - 2018f: 339
  - CAGR 5.2%

Source: Planet Retail
Supermarket Emergence in Developing Economies

• European food retailer investment in developing country markets has slowed as increasing competition and slower growth in home markets has caused firms like Tesco to retrench.

• Growth in local & regional chains throughout the developing world will likely reduce the share (not total sales) of the top European/US retailers there (homegrown chains will grow more rapidly). Locals benefit from infrastructure improvements introduced via FDIs.

• This trend is already underway. Between 2004 and 2014 the global combined share of the modern food retail market held by the top 30 grocery retailers declined from 28-23%, according to Planet Retail.
Leading Players Are Losing Share Globally

• The big gainers will be strong local and regional players - positioned in fast-growing markets in Asia, Latin America, Eastern Europe, the Middle East and Africa.

• Players such as Saigon Co-op, A101, Dairy Farm and Lotte Shopping in Asia are ones to watch, A-101 in Turkey as is Magnit in Eastern Europe.

• A series of acquisitions and market entries has enabled the likes of Cencosud in L. America to transform themselves into strong regional players. Cencosud is now the largest local player in L. America.

Source: Global Trend and Forecast 2015: Getting Closer to the Customer
Global Retail Is Changing Faster Than Ever

Global Top 3 Retailers by Total Sales, Planet Retail Prediction

*Total Sales, not just grocery

<table>
<thead>
<tr>
<th>Company</th>
<th>2014 Sales</th>
<th>2014 Outlets</th>
<th>2019f Sales</th>
<th>2019f Outlets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walmart</td>
<td>531</td>
<td>11,574</td>
<td>648</td>
<td>14,885</td>
</tr>
<tr>
<td>Carrefour</td>
<td>138</td>
<td>10,965</td>
<td>239</td>
<td>?</td>
</tr>
<tr>
<td>Tesco</td>
<td>119</td>
<td>8,022</td>
<td>172</td>
<td>14,176</td>
</tr>
<tr>
<td>Costco</td>
<td>118</td>
<td>663</td>
<td>164</td>
<td>794</td>
</tr>
<tr>
<td>Schwarz Group</td>
<td>118</td>
<td>11,264</td>
<td>154</td>
<td>12,886</td>
</tr>
<tr>
<td>Seven &amp; I</td>
<td>117</td>
<td>36,290</td>
<td>144</td>
<td>44,830</td>
</tr>
<tr>
<td>Kroger</td>
<td>112</td>
<td>3,747</td>
<td>139</td>
<td>10,842</td>
</tr>
<tr>
<td>AEON</td>
<td>103</td>
<td>18,347</td>
<td>135</td>
<td>3,754</td>
</tr>
<tr>
<td>Metro Group</td>
<td>100</td>
<td>2,310</td>
<td>123</td>
<td>21,815</td>
</tr>
<tr>
<td>Amazon</td>
<td>98</td>
<td>--</td>
<td>120</td>
<td>2,623</td>
</tr>
</tbody>
</table>

Source: Global Trend and Forecast 2015: Getting Closer to the Customer. *Not all grocery, this is total sales.
Market Structure: Trends in W. European Retailing and Focus on UK
Western Europe: Top 10 Grocery Players by Total Sales, 2013e and 2018f (EUR bn)

Source: Planet Retail
Key Forces Driving Change

• An aging population, smaller household sizes, rising fuel prices, and growing unwillingness to spend leisure time shopping are leading to the growing importance of convenience and discount.

• At the same time, e-commerce has eroded the traditional strengths of big-box stores - wide product range and attractive pricing.

• Grocery e-commerce has serious profitability issues. Its growth means shoppers moving from a highly profitable channel (bricks and mortar stores) to one that is less profitable. The solution is to incentivize shoppers to collect from store. In the UK e-commerce sales are expected to increase 13% between 2013-18.

• Retail has now gone beyond store, online, mobile, and tablets. Consumers are becoming channel and device-agnostic, making the provision of seamless shopping experiences across all channels and touch points imperative.

Market Structure in W. Europe

• Stores remain vital in delivering modern shopping experiences, but need to be re-energized. Many retailers will look to cut back on their store estates or reinvent them to stay consumer-relevant.

• However, this is adding operational complexity and leading to revaluation of expansion and global strategies.

• Discount growth will also continue to drive hypermarket operators to invest in competitive pricing and discount corners e.g. Tesco, Carrefour, Auchan.

• But, trends are not always universal. Rapid c-store expansion and a roll-out of the drive-through concept are not happening to anything like the same extent in Germany, for example.

Market Structure in W. Europe

• What to do with the hypermarket format remains one of the key challenges for the region. Although reports of its death have been greatly exaggerated – retailers are working hard on evolving the format, with initiatives ranging from the introduction of foodservice brands to dedicated discount zones and scaling back some non-food categories.

• Convenience will remain Western Europe’s fastest-growing bricks and mortar channel. Even so, it will continue to be dwarfed by the hypermarket & superstore channel with sales amounting to EUR386B (USD534B) in 2018, compared to EUR72B (USD100B) for the c-store sector.

### UK: Top 10 Grocery Players by Sales, 2013e and 2018f (GBP bn)

<table>
<thead>
<tr>
<th>Player</th>
<th>2013e</th>
<th>2018f</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tesco</td>
<td>47.1</td>
<td>52.4</td>
<td>2.2%</td>
</tr>
<tr>
<td>Sainsbury</td>
<td>26.3</td>
<td>32.1</td>
<td>4.1%</td>
</tr>
<tr>
<td>Walmart</td>
<td>25.8</td>
<td>31.5</td>
<td>4.0%</td>
</tr>
<tr>
<td>Morrisons</td>
<td>19.5</td>
<td>22.3</td>
<td>2.7%</td>
</tr>
<tr>
<td>Marks &amp; Spencer</td>
<td>10.5</td>
<td>12.9</td>
<td>4.2%</td>
</tr>
<tr>
<td>Co-operative Group</td>
<td>8.4</td>
<td>9.8</td>
<td>3.1%</td>
</tr>
<tr>
<td>Waitrose</td>
<td>6.2</td>
<td>8.3</td>
<td>5.9%</td>
</tr>
<tr>
<td>Aldi</td>
<td>3.9</td>
<td>6.8</td>
<td>11.8%</td>
</tr>
<tr>
<td>Schwarz Group</td>
<td>3.3</td>
<td>5.2</td>
<td>9.3%</td>
</tr>
<tr>
<td>Iceland</td>
<td>2.7</td>
<td>3.4</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

Source: Planet Retail
UK: Channel Sizes by Banner Sales, 2008e-2018f (GBP bn)

- **Hypermarkets & Superstores**: 88.9 (2008e), 105.9 (2013e), 117.8 (2018f)
  - 2013e-2018f CAGR: 2.2%

- **Supermarkets & Neighbourhood Stores**: 18.3 (2008e), 22.0 (2013e), 25.2 (2018f)
  - 2013e-2018f CAGR: 2.7%

- **Discount Stores**: 6.4 (2008e), 12.2 (2013e), 20.0 (2018f)
  - 2013e-2018f CAGR: 10.5%

- **Convenience & Forecourt Stores**: 18.2 (2008e), 27.1 (2013e), 37.0 (2018f)
  - 2013e-2018f CAGR: 6.5%

- **Cash & Carries and Wholesale Clubs**: 7.8 (2008e), 9.5 (2013e), 10.6 (2018f)
  - 2013e-2018f CAGR: 2.3%

Source: Planet Retail
By 2018, Tesco will remain more than double the size of its major convenience rivals combined. Tesco achieved critical mass in 2002 when it bought the T&S business, including One Stop, Supercigs, and Dillons.

Note: f – forecast, e - estimate. Waitrose numbers include standalone Little Waitrose outlets and those trading at motorway service stations.

Source: Planet Retail
Hard discounters are growing in popularity as they increasingly move into the mainstream. Schwarz Group’s Lidl is projected to have more outlets than Aldi – despite the latter’s faster pace of expansion.
Trends in Global Fresh Produce Trade
US Fresh Produce International Trade: Imports and Exports by Key Category, $Millions US, 1994-2014

- **Imports: Fresh Veg**
- **Imports: Other Fresh Fruit**
- **Imports: Bananas/plantains**
- **Exports: Fresh Veg**
- **Exports: Fresh Fruit**

Source: US GATS online queries, BICO-10.
Global Exports of Fresh Fruits and Vegetables, Billion Dollars, 2001-2013E (excludes potatoes)

Source: Compiled by Jan Kees Boon of Fruit & Vegetable Facts utilizing data from Eurostat and UN Comtrade (HS codes fruit: 0803-0810; vegetables: 0702-0709)
Global Exports of Fresh Fruits and Vegetables, Million Metric Tons, 2001-2013\textsuperscript{E} (excludes potatoes)

Source: Compiled by Jan Kees Boon of Fruit & Vegetable Facts utilizing data from Eurostat and UN Comtrade (HS codes fruit: 0803-0810; vegetables: 0702-0709)
Exports of Fresh Fruit, Top 6 Countries, (based on 2012) rankings, Billion Dollars, 2001-2012

Source: Compiled by Jan Kees Boon of Fruit & Vegetable Facts utilizing UN Comtrade data (HS codes fruit 0803-0810)
Imports of Fresh Fruit, Top 6 Countries, (based on 2012 rankings), Billion Dollars, 2001-2012

Source: Compiled by Jan Kees Boon of Fruit & Vegetable Facts utilizing UN Comtrade data (HS codes fruit 0803-0810)
Exports of Fresh Fruit, Top 6 Items, (based on 2012 rankings), Million Metric Tons, 2004-2012

Source: Compiled by Jan Kees Boon of Fruit & Vegetable Facts utilizing UN Comtrade data (HS codes fruit: 0803-0810)
Exports of Fresh Vegetables, Top 6 Countries, (based on 2012 rankings), Billion Dollars, 2001-2012 (excludes potatoes)

Source: Compiled by Jan Kees Boon of Fruit & Vegetable Facts utilizing UN Comtrade data (HS codes vegetables: 0702-0709)
Imports of Fresh Vegetables, Top 6 Countries, (based on 2012 rankings), Billion Dollars, 2001-2012

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Exports of Fresh Vegetables, Top 6 Items, (based on 2012 rankings), Million Metric Tons, 2004-2012 (excludes potatoes)

Source: Compiled by Jan Kees Boon of Fruit & Vegetable Facts utilizing UN Comtrade data (HS codes vegetables: 0702-0709)
China’s Trade Balance with the U.S. in Horticulture*

million current U.S. dollars

* Processed and fresh fruit/veg, nuts, flowers and ornamentals

<table>
<thead>
<tr>
<th>Year</th>
<th>Exports to US</th>
<th>Imports from US</th>
<th>Trade Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>69</td>
<td>41</td>
<td>28</td>
</tr>
<tr>
<td>2002</td>
<td>91</td>
<td>50</td>
<td>41</td>
</tr>
<tr>
<td>2003</td>
<td>135</td>
<td>50</td>
<td>85</td>
</tr>
<tr>
<td>2004</td>
<td>181</td>
<td>73</td>
<td>107</td>
</tr>
<tr>
<td>2005</td>
<td>188</td>
<td>140</td>
<td>48</td>
</tr>
<tr>
<td>2006</td>
<td>250</td>
<td>137</td>
<td>112</td>
</tr>
<tr>
<td>2007</td>
<td>275</td>
<td>119</td>
<td>157</td>
</tr>
<tr>
<td>2008</td>
<td>273</td>
<td>153</td>
<td>120</td>
</tr>
<tr>
<td>2009</td>
<td>310</td>
<td>216</td>
<td>94</td>
</tr>
<tr>
<td>2010</td>
<td>397</td>
<td>248</td>
<td>149</td>
</tr>
<tr>
<td>2011</td>
<td>389</td>
<td>349</td>
<td>40</td>
</tr>
</tbody>
</table>

Source: ARE Update Sep/Oct 2013 17(1):9-11
US Imports of Fresh Fruit and Vegetables from Mexico, 1993-2014 (excludes canned, frozen, juice and dried)

Source: USDA/FAS GATS
Implications for fresh produce markets
Factors Affecting Demand for Fresh Produce

- Commodity price, consumer income, prices of substitutes and complements, population growth rates, ethnicity, culture
- Quality: appearance, flavor, color, shape and size
- Info on produce selection, ripening, recipes
- Convenience in prep, usage; packaging role
- Shelf-life, postharvest technology
- Consistent availability, year-round supply
- New marketing channels: supermarkets in developing countries, foodservice, e-commerce, c-stores, etc.
Accelerated pace of change

Channel blurring means more competition for retailers and the need for suppliers to develop the right products and packaging for specific channels, and to provide marketing support.

Margin pressure at all levels of the food system!

Many produce suppliers facing lower profits while being asked to do more.

Growing food safety, traceability and sustainability expectations all increase costs.

Mergers are up and will continue as more competitive markets means consolidation at all levels of the supply chain.

More than ever it is necessary for firms to differentiate, get out of commodity trap or not be caught in the deadly “middle.”

Need for major investments in info tech systems to improve productivity & efficiency and streamline the supply chain.
Technological change will be transformational!

- Information technology
- Big data
- Precision farming
- Sensors
- Drones
- New varieties
- Mobile
- Consumer insights
- Social media aids in targeting consumers
- Supply chain-wide data sharing
• After a period of rapid growth, international produce trade has recently been increasing in value but not quantity. Slow economic growth rates in the developed economies and the key import markets have contributed.

• More rapid economic growth in many developing economies will increase their share of total trade in the long-run. However, in the short-run, growth is slowing in key markets like Brazil and Mexico. China will grow rapidly but not as rapidly as in the past.

• However, expansion in modern supermarket retailing in developing economies in and of itself will stimulate import demand.

• Market access is constantly improving. This means more exporters will be competing in many markets. Improving market access in Asia benefits many countries, especially from the Americas, both Latin and N. American.
• In developed economies produce markets are relatively mature. However, expansion in smaller store formats may help put produce more within arm’s reach of consumers and improve demand.

• Focus on healthy eating may bear fruit, especially if economic growth stimulates incomes.

• Global consumer preferences increasingly value: food safety, flavor, appearance and other quality variables, yr-round presence, convenience in packaging and consumption, brands if achieve consistency.

• Awareness of social justice and “sustainability” is on the rise and will increase buyer expectations with growers.

• Exporters must be in touch with consumer trends and work in collaboration with key import partners to meet consumer preferences via omni-channel strategies.