Increase of Vegetable Oil Consumption Under Food Regimes:
A Preceding Example of Japan to Be Compared with Rapid Increase of Vegetable Oil Availability in Asian Countries Especially in China

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Global trend of vegetables oils

- Significant availability of vegetable oils, especially in developing countries
- About 117 million tonnes produced per year (Gunstone, 2011)
- Soybean, sunflower, rapeseed, palm oil production - increased steadily into the 1980s, partly as a result of state support

- This increase accelerated in the early 1990s when key states promoted international trade of soybeans and palm oil (Hawkes et al., 2012)
In Asia: vegetable oil supply (g/capita/day) - FAO

Fat supply quantity (g/capita/day) 684 - Vegetable Oils + (Total) 2914
accessed 20130929
Shift to Asia: Soybean crush by region - USDA

"Oilseed, Soybean Crush (1000 MT)" 1964-2013
URL: http://www.fas.usda.gov/psdonline
accessed: 20130925
Shift to Asia: Palm oil import by region

URL: http://www.fas.usda.gov/psdonline
accessed: 20130925
Why focus on vegetable oils?

- Very new in human diet – little eaten a century ago, especially in solvent-extracted, highly refined form
  → Today, so much fats and oils are available and consumed, esp. by poor people - What are the forces behind?

- In Asia (esp. Japan) – little animal fat or olive oil eaten before
  → The process of rapid increase of vegetable is more visible than Western world where vegetable oil replaced previously eaten animal fat

- Previous research on production of oil crops, or on nutrition
  → However, little structural studies on driving forces behind significant increase in vegetable oil consumption
Nutrition transition (Popkin, 2002)

The shifts in dietary intake and nutritional status:

1) collecting food
2) famine
3) receding famine
4) degenerative disease, with more fat, sugar, processed foods and less fiber
5) behavioural change resulting in less fat consumption and increased carbohydrates, fruits and vegetables

Cheap oils and fats = forerunner of nutrition transition even poor nations have access to a relatively high-fat diet (Drewnowski and Popkin, 1997).
Food Regime
(Friedmann and McMichael, 1989; McMichael, 2005)

- The First Food Regime (1870 -1914) under British hegemony
  European imported wheat and meat from the settler states and
tropical raw materials from the colonies to Europe

- The Second Food Regime (1947-1973) under US hegemony
  the nation-state system was completed;
  the transnational restructuring of agricultural sectors
  the intensive meat complex and the durable foods complex
  soy-corn-animals, food aid

- The Third Food Regime (1980s? -)
  global corporate food regime
  trade liberalization and deregulation
Japan: policy drivers behind the increase of vegetable oils

- For long time, vegetable oil was used for lighting – especially in Buddhist temples (until the beginning of Meiji era: 1868-1912)

- Oldest oil pressed in Japan said to be perilla; later sesame and rapeseed; later cottonseed - Tokugawa era (1600-1868)

- Tokugawa Bakufu’s **policy on lighting oil** (1701; amended in 1770, 1791, 1832)
  - Promotion of oil crop production like rapeseed and cottonseed
  - Control on trade of oil crops like rapeseed and cottonseed
  - Control on squeezing oil
  - Control on trade of oil
1st FR: Making soybean a global commodity in occupied Manchuria

- Japanese invested overseas esp. after Sino-Japanese War (1894-95), Russo-Japanese War (1904-05), Annexation of Korea (1910)
- General trading companies (eg. Mitsui & co., ltd.) and the Japanese colonial forces (eg. South Manchuria Railway Company)
- “rapid increase of soy meal consumption triggered soy oil industry in Japan” (日本製油株式会社 1948 p.166)
- For fertilizer in modern agricultural development in Japan
- Soybeans and soy oil from Manchuria exported to Europe and USA (expansion of hydrogenated oil industry in Europe after WW1)
1st FR: Making soybean a global commodity in occupied Manchuria

- Soybean OIL – Japanese consumers didn’t like to eat at first
- Oil shortage caused by the Great Tokyo Earthquake (1923) fortunate for soybean oil dissemination as food
- Military demand for oils

(Left and below: the amount of vegetable oil usage)

<table>
<thead>
<tr>
<th>Vegetable oil usage (unit: ton)</th>
<th>1941</th>
<th>1942</th>
<th>1943</th>
<th>1944</th>
<th>1945</th>
</tr>
</thead>
<tbody>
<tr>
<td>Military</td>
<td>22,384</td>
<td>29,565</td>
<td>38,630</td>
<td>32,974</td>
<td>13,068</td>
</tr>
<tr>
<td>Food</td>
<td>55,438</td>
<td>75,094</td>
<td>52,983</td>
<td>27,026</td>
<td>9,560</td>
</tr>
<tr>
<td>Food industry</td>
<td>3,983</td>
<td>2,296</td>
<td>802</td>
<td>356</td>
<td>106</td>
</tr>
</tbody>
</table>

- Japanese government consolidated all vegetable oil industry under its control during WW2 (1940)

日本製油株式会社 (1948) 『黄金の花 日本製油株式会社沿革史』新潮社
2nd FR: Nation-state promoting soybean production

Japan controlled major oil production sites (Manchuria soybean, Sumatra and Malaya palm oil) -> US promoted domestic soybean production.
2nd FR: **Nations-states promoting consumption of veg. oils**

- the “Westernisation” of the Japanese diet post-WW2
  
  = a successful example of the effects of the Agricultural Trade Development and Assistance Act (so-called PL-480) in the 2nd Food Regime

- to develop market for US wheat and soybean

  → promoted vegetable oils via
  
  “kitchen cars”,
  
  “frying-pan” campaigns,
  
  nutritional advice,

2nd FR: Nation-state promoting soybean consumption via food aid

- Trade liberalisation of oil crops in the 1960s (soybean, rapeseed, palm oil, etc.)
- Deregulation of foreign investment into Japan (1969)
  ➔ rush of fastfood restaurant to Japan

Opening of Fast food Chains in Japan (Kozuka, 1999: 218)

<table>
<thead>
<tr>
<th>food</th>
<th>chain</th>
</tr>
</thead>
<tbody>
<tr>
<td>hamburger</td>
<td>McDonalds (1971), Lotteria (1972), Mos Burger (1972)</td>
</tr>
<tr>
<td>pizza</td>
<td>Pizza Hut (1973), Shakey’s (1974)</td>
</tr>
<tr>
<td>donuts</td>
<td>Mister Donut (1971), Dunkin' Donuts (1971)</td>
</tr>
<tr>
<td>fried chicken</td>
<td>Kentucky Fried Chicken (1970)</td>
</tr>
<tr>
<td>ice cream</td>
<td>31 Ice Cream (1974), Dairy Queen (1972)</td>
</tr>
</tbody>
</table>

- Japanese food industry developed based on ample wheat, sugar, and oil
  ➔ eg. instant noodle (chicken ramen 1958, cup noodle 1971; margarine, curry roux, sweets (ice cream, chocolate)
Global Corporate FR: Japanese capitals going abroad

- Plaza Accord (1985): intervened currency markets to depreciate the USD against the Japanese yen and German Deutsche Mark.
- Maekawa report (1986): policy recommendation for the Japanese government to promote outbound FDI, and increase imports of agricultural products (including processed food)
- then GATT AoA, WTO, etc. etc.

Maiji and Ajinomoto active globally, esp. in Asia
Shift to the “Global Corporate Food Regime”

China – oils

- China - admitted to WTO in 2001
- removed soybeans from “strategic commodities”
- promoted import of soybeans, FDI
  → Large, modern crushing facilities have been built mostly in the Southern cost by Cargill, ADM, Bunge, etc.

Map: Cargill in China

* Headquarters
* Branches
* Starched and Sweeteners
* Feed mill
* Oilseeds crushing
* Texturizing Solutions
* ARA
* Refined Oils
* Steel Processing
* Integrated broiler supply chain

- Cargill locations in mainland China: 52
- Cargill employees: 7,000+

Shift to the “Global Corporate Food Regime”

China – oils

- **Instant noodle industry** = the major user of imported palm oil in China
- almost zero until the 1980s;
  - FDI from Taiwan and Japan → the largest producer today

http://instantnoodles.org/report/index.html as of 20140524
Instant noodle market size in Asia

Instant noodle market size in Asia
(excluding No.1 China and No.2 Indonesia)

Shift to the “Global Corporate Food Regime”

**India - oils**

- Liberalisation of 1991-93 in response to IMF/WB
- Liberalisation of 1994 in response to GATT/WTO
- Rapid increase of palm and some soybean oil imports
- Traditionally, sesame and rapeseed/mustard seeds crushed locally using *ghani*, mortar-and-pestle powered by animals (Achaya, 1994)
- Change in regulation on oils to be made into *Vanaspati*:
  - 1930s to 1947 - originally made of 100% groundnut oil produced in India
  - 1947 - regulation to use 5% refined sesame oil
  - 1957 - encouraged cottonseed oil to promote cottonseed crushing in India
  - 1960s - the government allowed the import of soybean oil under PL-480 for vanaspati production
  - 1994 - liberalisation of palm oil import, and lower tariffs on palm oil import specified to vanaspati production, etc.

Food Use Domestic Consumption (1000 MT) in India

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Conclusion and further research:

- global oils *replacing* domestic small-scale farmers and oil processors, and *replacing* the type of oils people eat from traditional unrefined oils to solvent-extracted and highly-refined industrially processed oils (esp. soybean and palm)

Point to raise today:

- because oil (and also fat) can substitute petroleum, its production and supply are influenced by drivers far beyond food and nutrition.
- large part of added oil is eaten as "invisible fat" mainly in processed food. Development of food industry plays significant roles.
Major reference


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