

# The transformation of food value chains and the rise of e-commerce before & during COVID-19

Thomas Reardon

APEC Workshop on Food Value Chains

July 1, 2021

# 1. Tree trunk: Supermarket Revolution

## 1.1. Path of the supermarket revolution

a) US: takeoff 1920s-1930s

b) Developing Asia & LAC: takeoff 1970s-1990s

## 1.2. Demand-side drivers in developing Asia & LAC

a) Shoppers wanted to save time: urbanization & women working

b) Easier & easier to get to supermarkets: transport

**c) Harder & harder to get to wet-markets: laws, traffic**

**d) Food safety shocks drove shoppers to supermarkets: meat, fruit, milk crises**

**e) Human disease risks drove shoppers to supermarkets: avian flu**

## 1.3. Supply-side drivers in developing Asia & LAC

a) Technology & business organization change “**fast-tracked**” by transfer from earlier innovators (in US/Europe)

b) Supermarket diffusion “**fast-tracked**” by intensive FDI & competitive domestic investment

c) Supermarket penetration “**fast-tracked**” by adapting to dense cities: small formats into dense cities; home delivery

d) Supermarket competitiveness with traditional retail **“fast-tracked”** by procurement system modernization

e) Procurement change **“fast-tracked”** by help from supply chain partners: “modernized dedicated wholesalers” & 3PLS

**1.4. Modern wholesale/retail chains even treat SMEs (in retail/food service) as a market**

... e.g., Cash&carry chains (e.g. Metro) supply small shops & restaurants

## 2. Tree Branches:

e-procurement then e-commerce

**2.1. Digital/computer revolution: 1950s/60s**

**2.2. Digitalization of internal firm operations, 1970s on**

**2.3. Rise of e-procurement (digitalization of supply links with suppliers), 1980s on**

**2.4. Rise of digital B2B firms (as logical extension of e-procurement rise), 1990s on**

**... e.g., SoftBank & Yahoo FDI into China: Alibaba, 1999, as B2B**

## **2.5. Rise of e-commerce (B2C), US, 1990s-2000s on; developing Asia & LAC, 2000s-2010s on**

**a) Demand-side drivers similar to supermarket revolution, but in new contexts:**

**... intensifying urban congestion**

**... rapid spread of smart phones/computers**

**... role of human disease (again) but bigger:**

**→ SARS 2003 as big accelerator (Alibaba e-commerce starts in response)**

**→ SARS-2 2020: COVID-19 as big accelerator (huge jump in e-commerce)**

**b) Supply-side drivers similar to supermarket revolution, but in new contexts:**

**b.1) technology transfer (again)**

**b.2) Pivoting by supermarkets & e-commerce:**

**... E-commerce firms add supermarkets**

**... supermarket chains add e-commerce**

**→ Pivoting intensified by COVID-19**

### **b.3.) Again, FDI is a big driver ...**

**... but now not just US/Europe but also  
Asia/LAC**

**... and domestic firms & MNCs**

- Intense investment competition (again) fast-tracks diffusion (now of e-commerce)**
- intense Mergers & Acquisitions  
(Walmart/Flipkart)**
- ALL accelerated & intensified by COVID-19**

## **2.6. Pivoting by food industry firms facilitated by co-pivoting by supply chain partners (again)**

### **a) Rapid rise of “delivery intermediaries”**

**(e.g., Rappi in LAC, like Instacart in US)**

### **b) Co-pivoting by 3PLS**

**... COVID-19: retooling/pivoting (e.g., Uber, Bykea in India and Pakistan) from transport of people to food**

**→ All accelerated by COVID-19**

## **2.7. Large firms & delivery intermediaries facilitate SME's survival/pivoting**

**(again ... recall cash&carries during early supermarket revolution)**

- a) SMEs adopt e-commerce (e.g, with Facebook)**
  - b) SMEs use delivery intermediaries with apps (Swiggy with small restaurants in India)**
  - c) Farmers adopt e-commerce or use to sell to consumers and processors (Malaysia, Indonesia)**
  - d) Wholesale markets adopt B2B**
  - e) Wholesalers become e-procurement firms (e.g., Ninjacart, India)**
- All accelerated with COVID-19**

# 3. Conclusions

- a) Rapid transformation of retail first by supermarket revolution then e-commerce**
- b) Accelerated by COVID-19 (but already all the trends were in place)**
- c) Probable that will continue in rapid expansion**