

# TECHNOLOGIES SHAPING THE FUTURE



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# Regional Context

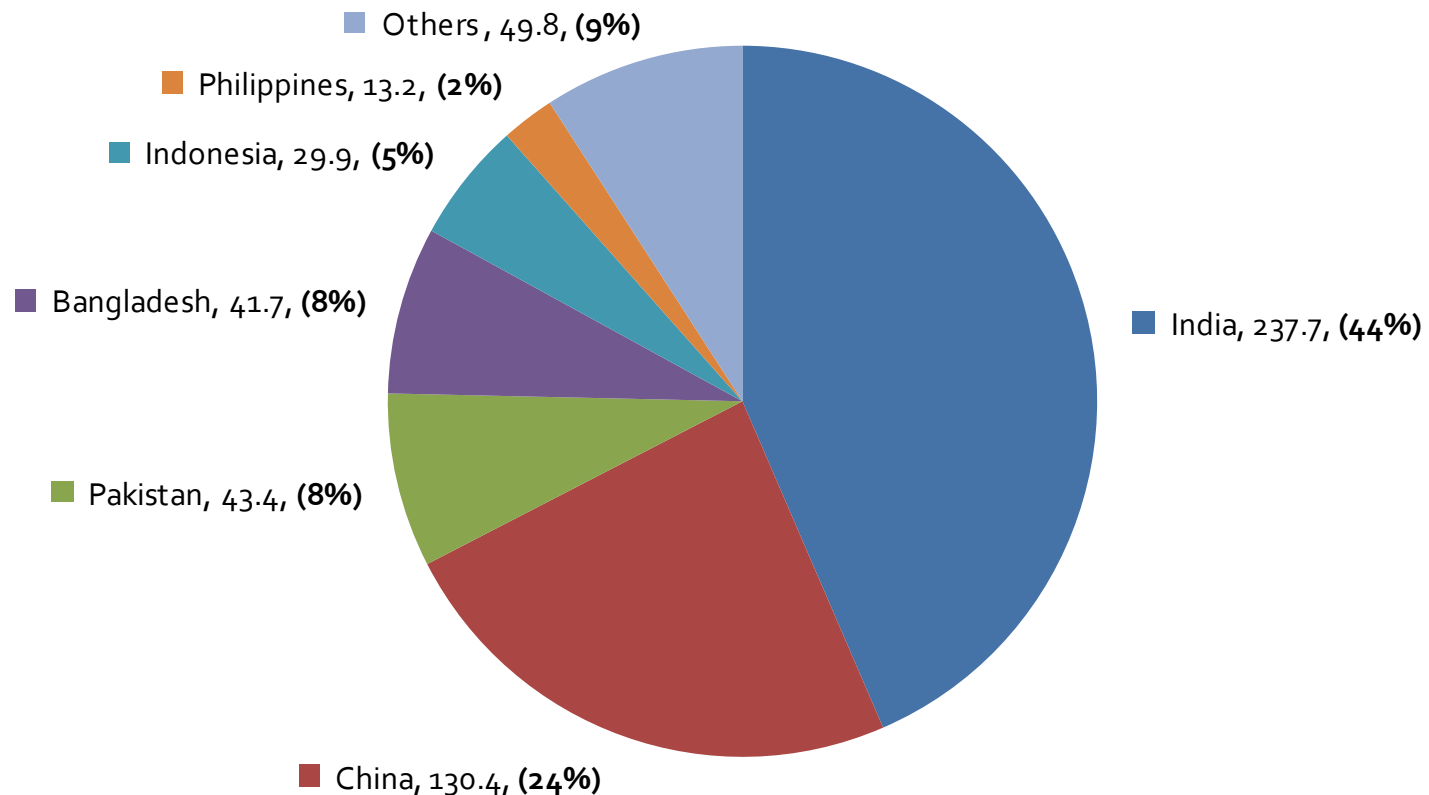


## Asia and the Pacific:

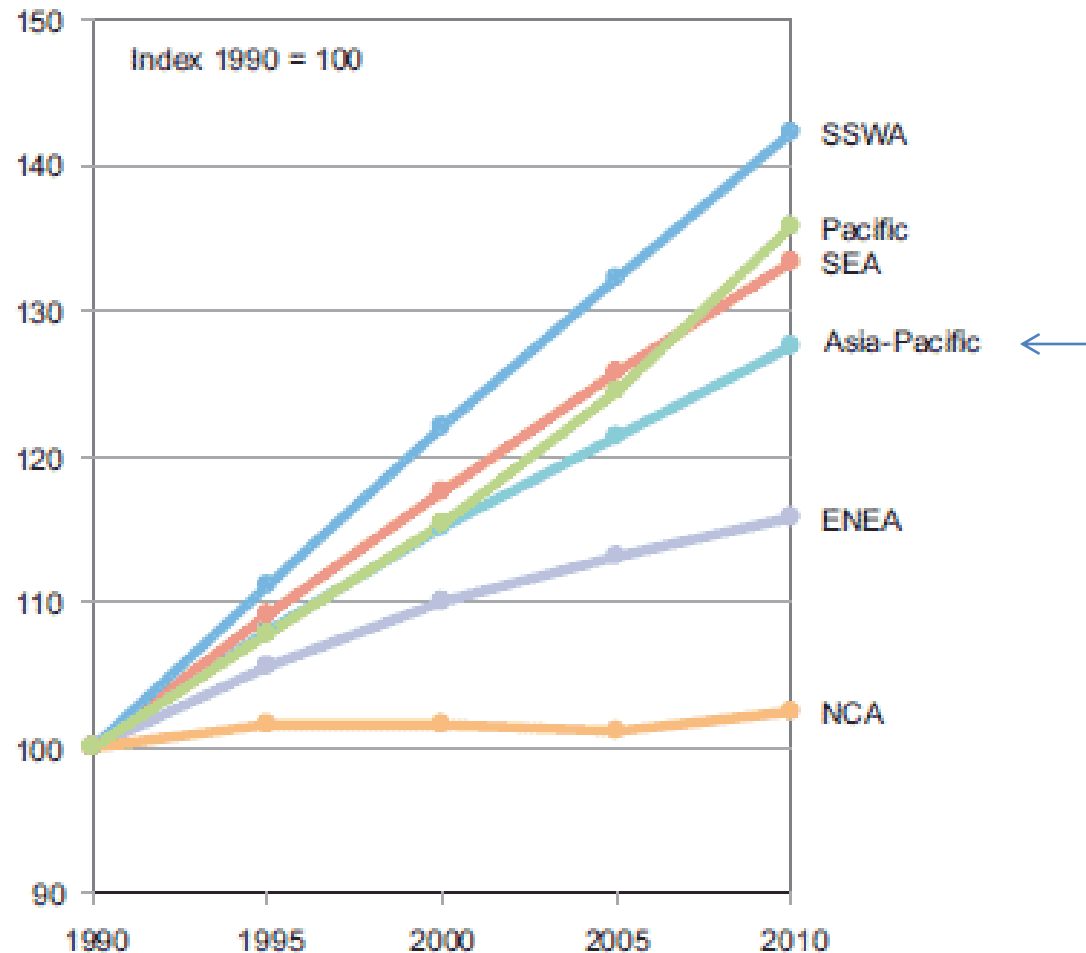
- Is home to more than two-thirds of the developing world's population
- Is home to nearly two-thirds of the developing world's undernourished population
- Has a prevalence rate of 16 percent of undernourishment, second only to that of Africa

# Hunger in Asia and the Pacific

91 percent of undernourished in Asia and the Pacific live in just 6 countries

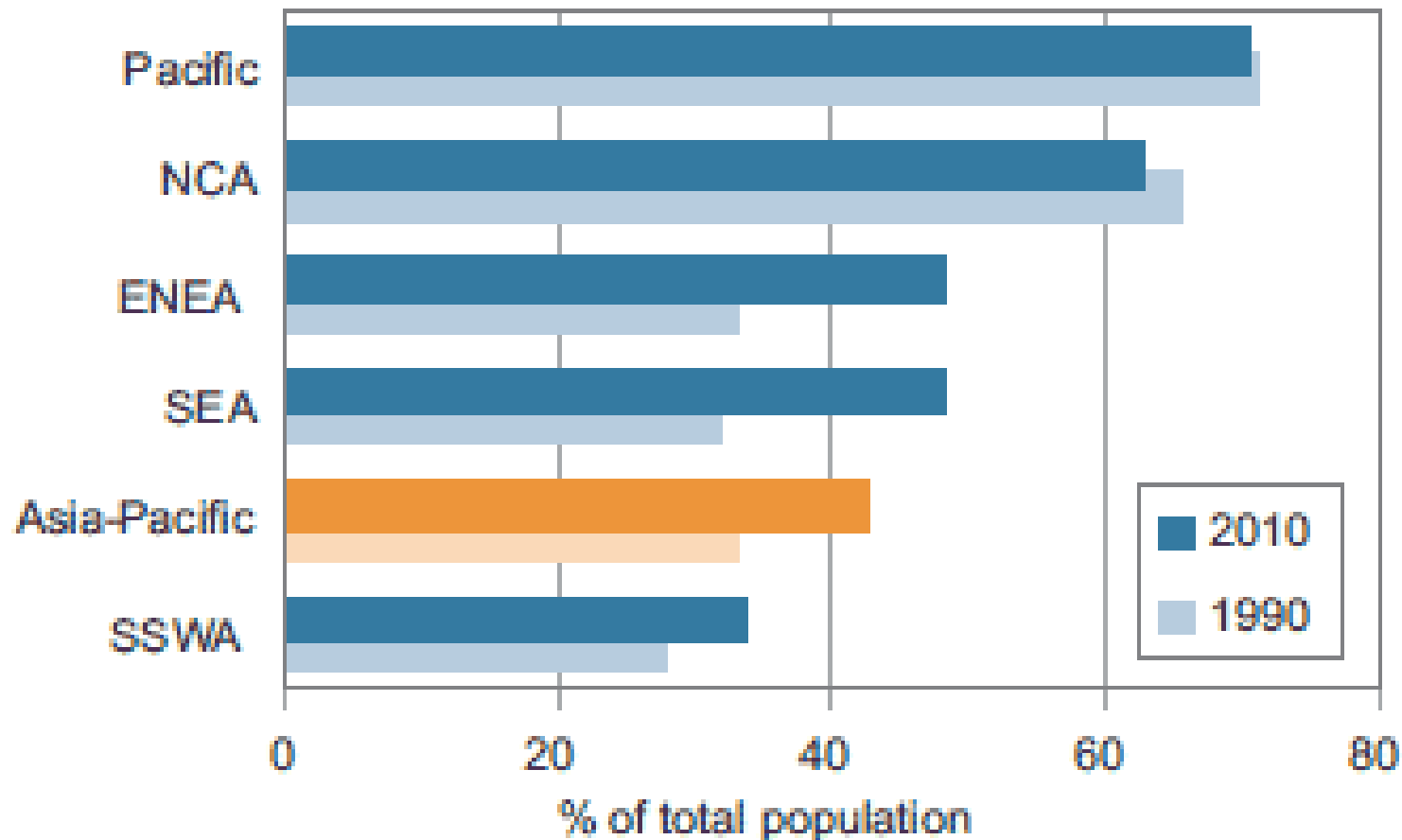


# Population Growth Continues – Rate of growth has begun to slow



(Source: UNESCAP)

# High Urbanization Rates



# Food Consumption Preferences in the Region

- Strong culture of food in the region
  - ▣ Consumers show a preference for foods that conform to local tastes
  
- Changing consumer preferences
  - A split between urban and rural food consumption and purchasing patterns is also emerging

# Drivers of Change in Food Consumption Patterns in the Region

- Growth in per capita incomes
- Urbanization
- Changing lifestyles
  - ▣ Increasing number of women in the work place
- Trade liberalization

# Drivers and their impacts on buying decisions in urban centers

## Buying Decisions

### Driver

- Growth in per-capita income



- Demand for safety and quality
- Demand for convenience
- Demand for variety
- Awareness and concern about nutrition, health and wellness



# Drivers and their impacts on buying decisions in urban centres

## Drivers

### Lifestyle Changes

- Smaller household size
- Women in the work force
- Limited time availability for meal preparation



## Buying Decisions

- Demand for convenience and time-saving

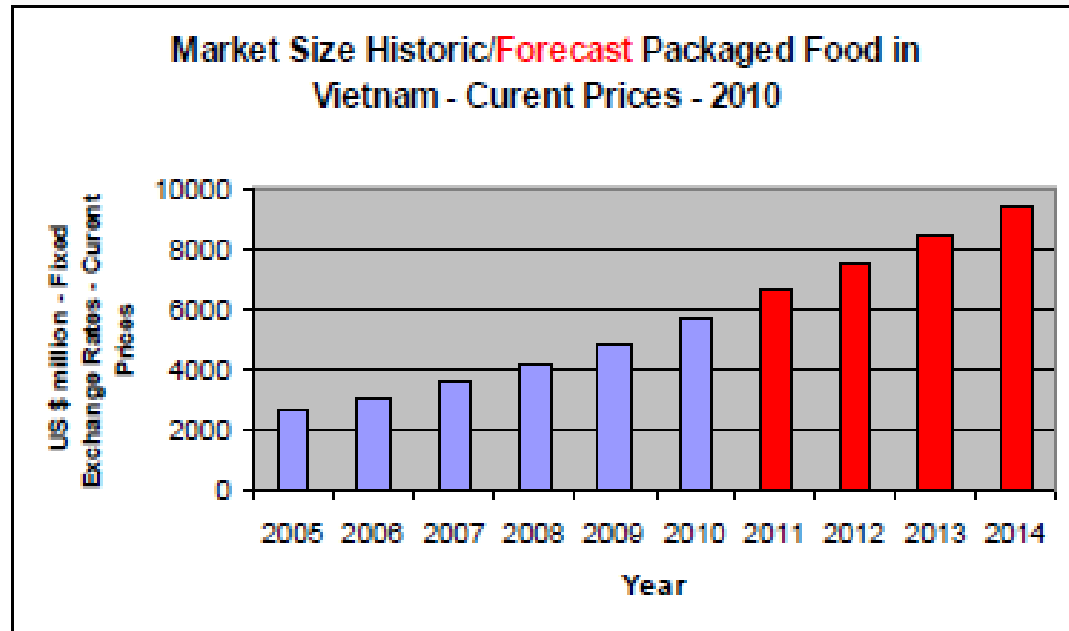
# Growing Demand for Convenience Products

- Increasing consumption of packaged food products.



# Growth in the Packaged Food Industry: Case of Vietnam

- In 2009, retail sales in the packaged food industry reached US\$4.9 billion, a 16.5% increase over 2008.



Source: Euromonitor International, 2011

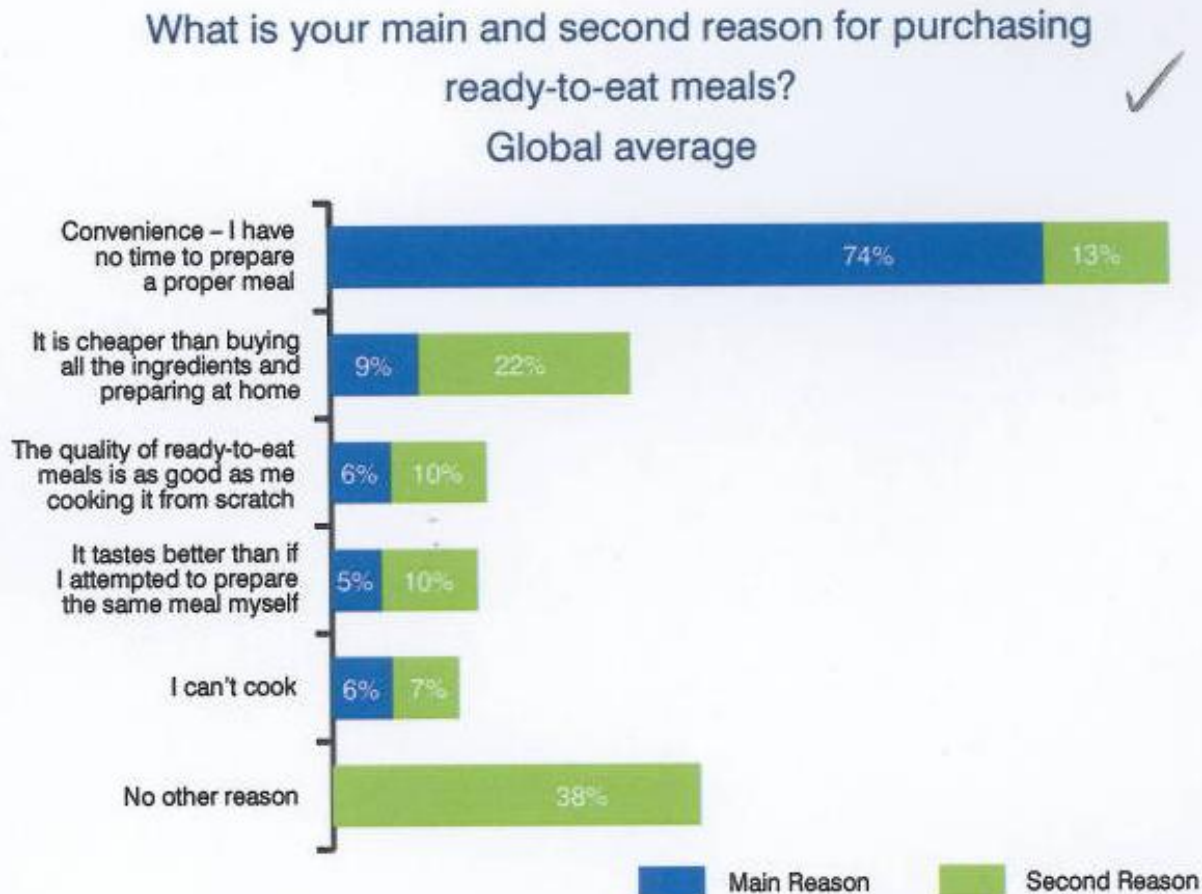
# Spending on Packaged Food Products Shows an Increasing Trend: Case of Viet Nam

**Market Sizes - Historic/Forecast - Retail Value RSP - US\$ mn - Current Prices - Fixed 2010 Exchange Rates**

	2006	2007	2008	2009	2010	2011	2012	2013	2014
Packaged Food	3076	3590.8	4207.6	4903.5	5683.4	6621	7512.9	8408.4	9363.6
Baby Food	338.8	408.5	481.5	588.8	684	779.3	890.5	1004.3	1128.2
Bakery	375.7	442.5	527.5	614.3	720.3	848.7	974.4	1101.4	1242
Canned/Preserved Food	28	32.6	38.4	44.8	51.5	58.8	68.2	73.9	82.8
Chilled Processed Food	10.4	12	14.7	17.8	21.8	28.5	31.3	38.5	42.5
Confectionery	154.3	174.6	199.6	223.6	253.7	288.9	323.5	360.4	402.9
Dairy	535.8	607.8	692	810.1	937.9	1102.5	1264.5	1431.8	1604.3
Dried Processed Food	519.1	618.5	728.1	872	1022.8	1191.9	1350.2	1501.3	1654.5
Frozen Processed Food	42.3	51.3	62.9	75.9	91.7	110.4	129	148.8	171
Ice Cream	91.5	105	118.4	131.5	151.8	171.7	188.8	204.9	222.4
Meal Replacement	11.8	12.9	14.9	16.7	18.9	21.4	23.7	26.1	29
Noodles	505.7	600.8	709.5	850.1	996.7	1160.3	1313.1	1458.3	1605.1
Oils and Fats	441.8	524	617.5	714.2	823	958.8	1086.4	1215.4	1358.9
Pasta	6.8	7.8	8.8	9.7	10.9	12.7	14.4	16.1	17.9
Ready Meals	9.6	10.9	12.7	14.9	17.4	20.1	22.7	25.5	28.7
Sauces, Dressings and Condiments	395.4	448.4	528.8	605.8	696.9	784.5	870.5	953.5	1040.1
Snack Bars	-	-	-	-	-	-	-	-	-
Soup	0.9	1	1.2	1.3	1.5	1.7	2	2.2	2.4
Spreads	3.4	4	4.7	5.3	6.1	6.9	7.7	8.5	9.4
Sweet and Savoury Snacks	130.2	152.6	178.5	204.8	232.8	270.7	308.2	341.7	379.7

Source: Euromonitor International, 2011

# Ready-To-Eat Meals – A growing market



Base: Respondents who purchase ready-to-eat meals Note: "No other reason" is only included as a second reason

# Changing Shopping Habits



- Changing purchasing patterns and increasing reliance on retail distribution (supermarkets)

# Trade Liberalization has propelled development of the food processing sector

## Trends

Trade  
Liberalization  
- multi-lateral and  
regional trade  
agreements

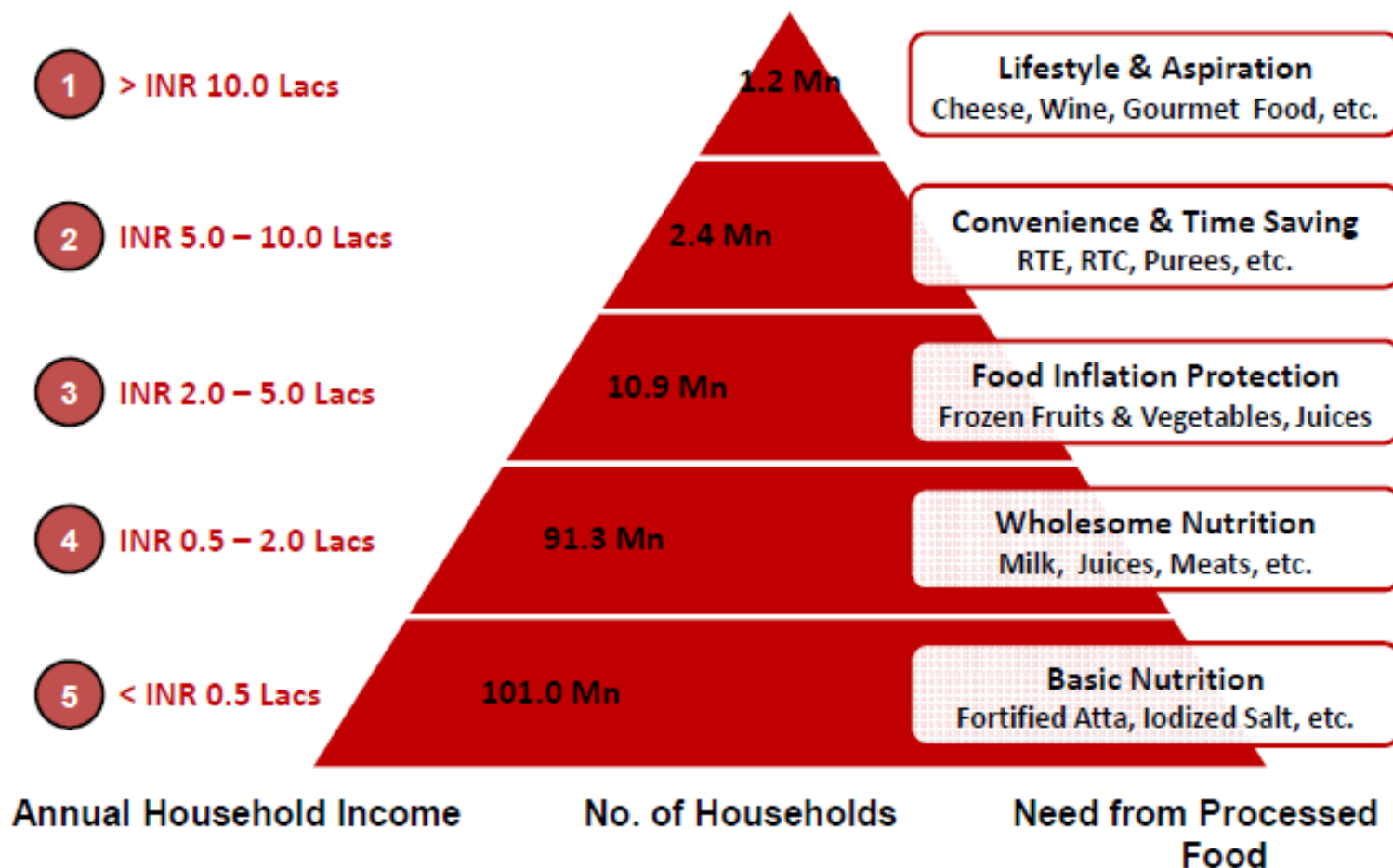


## Impact

- Increased FDI in the food industry
- Greater market access
- Growth

# The Indian Consumer's Needs from Processed Food

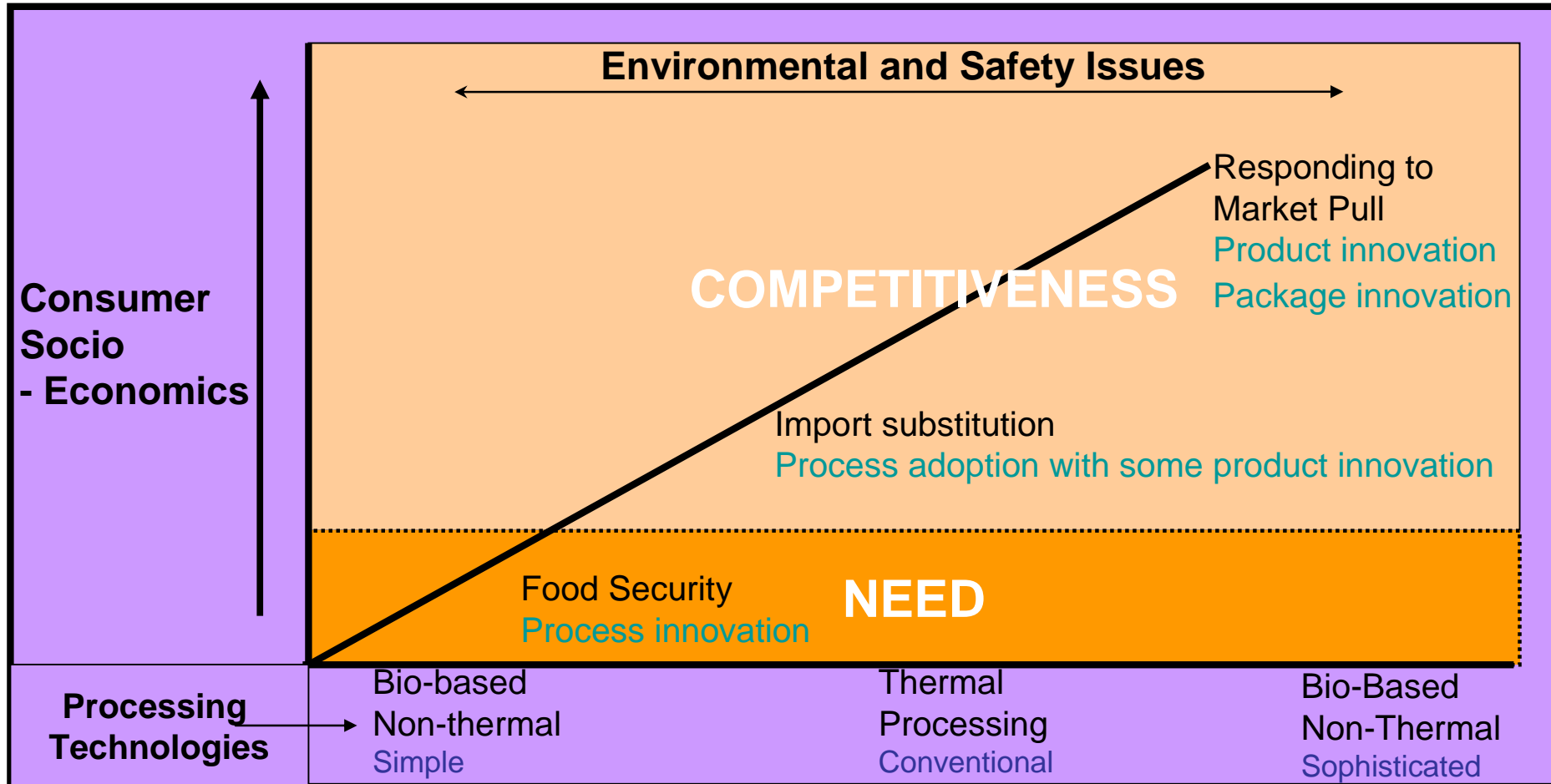
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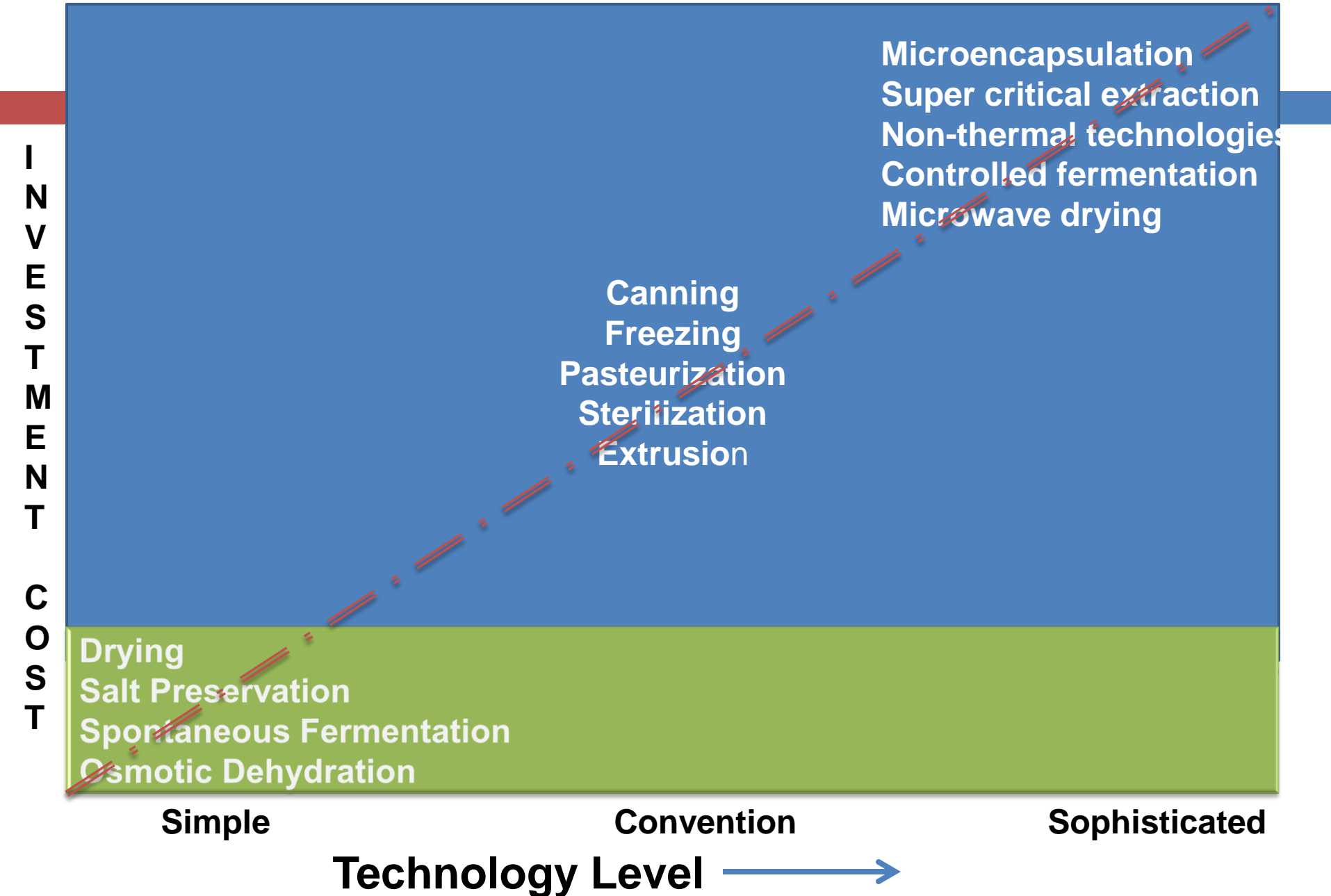
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# The Horizon for the Food Processing Sector: Development Perspective



# Technologies and Technological Approaches



# Focus on sustainability

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- Innovations that bring in a focus sustainability and environmental preservation will be key:
  - ▣ Efficient use of water
  - ▣ Efficient use of energy
  - ▣ Waste reduction or prevention
  - ▣ Re-use and recycling in processing operations
  - ▣ Waste recovery

# Technical Enabling Factors

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- Scientific developments in a range of disciplines
  - ▣ molecular biology, genomics, bioinformatics, nanoscience, environmental, material and computer sciences
- Innovations that improve the efficiency of food preservation and processing technologies
- Diagnostic systems that facilitate precise, sensitive and efficient food safety monitoring.

# Technical Enabling Factors

- Information and communication technology
  - ▣ Food safety monitoring
  - ▣ Logistics
  - ▣ Access to markets
  - ▣ Access to information
  
- Packaging Innovations,
  - ▣ Different sizes and forms
  - ▣ Affordable
  - ▣ Environmentally sound

# Enabling Policy Environment

- Policies and incentives that:
  - ▣ promote the uptake and adoption of more efficient and processing technologies;
  - ▣ facilitate access to credit for micro and small food processing enterprises;
  - ▣ attract FDI in agro-processing
  - ▣ facilitate trade
  - ▣ support science and technology research and development, as well as networking and information exchange among scientists and technologists

# Enabling Policy Environment

- Policies that govern food safety
  - ▣ Development and enforcement of regulations that govern food safety
  - ▣ Implementation of integrated quality management systems including GAP, HACCP and GMP that assure safety in food chains
  
- Policies that provide for environmental sustainability
  - ▣ Re-use and recycling of by-products and waste streams
  - ▣ Incentives to stimulate the application of clean technologies

# Role of FAO



- Technical capacity development to assure clean, efficient and environmentally friendly value chain development;
- Assistance with policy and strategy development geared toward improving value addition, import substitution and competitiveness



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# THANK YOU



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