

Global Food Crisis: Implications to Malaysia's Food Security

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*Talking points at the International Conference on Food Security
during Challenging Times*

*Organised by UPM, Université Montpellier 2 and AIM
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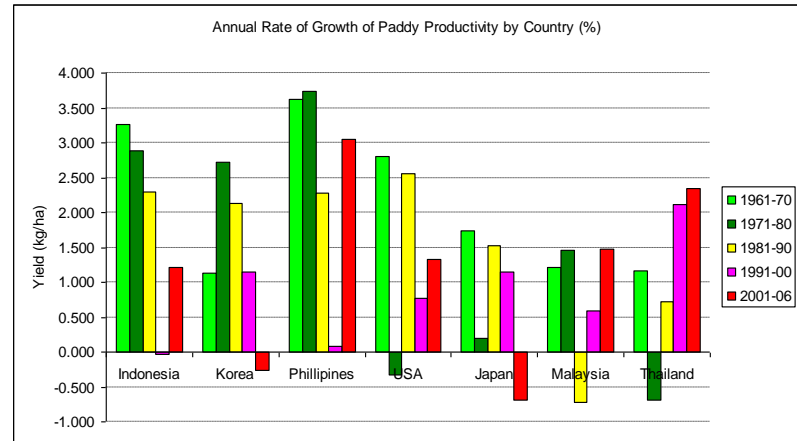
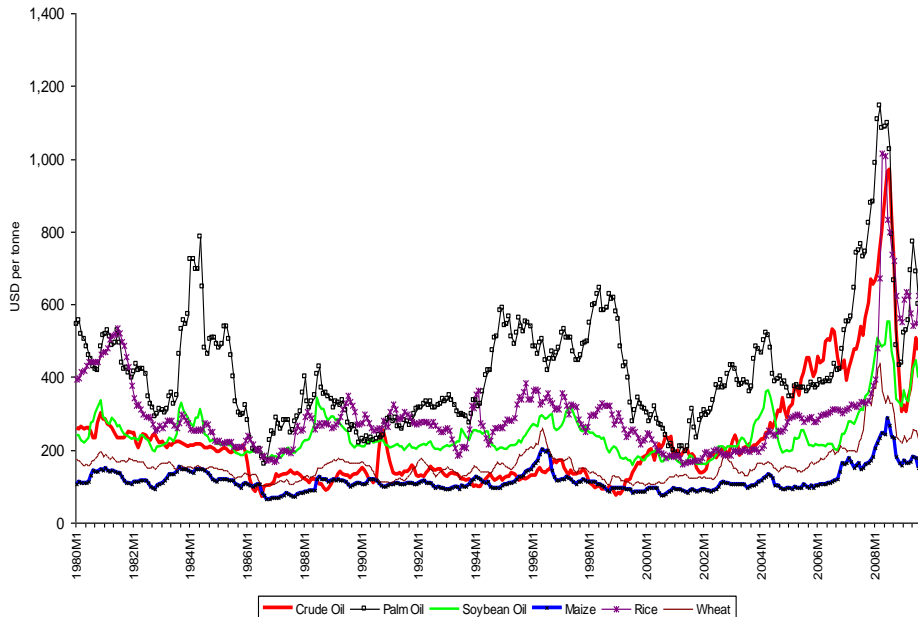
Presentation Outline

- Global food crises and causes
- Malaysia's food sector performance & security
- Implications to Malaysia's food security

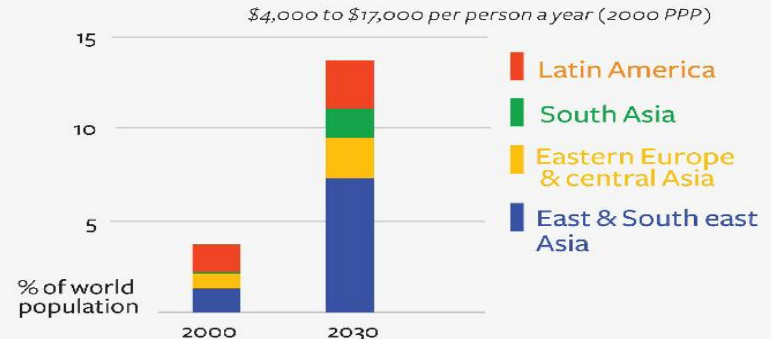
Global Food Crises

- Food supplies & demand scenario

- Upsurge & volatility in food prices
- Potential for demand growth to outstrip increases in global food production.



rise of the global middle income population



Global Food Crises - Due to changes in the fundamentals and hence food equation and technical factors

Fundamental: Combination of emerging & ongoing forces

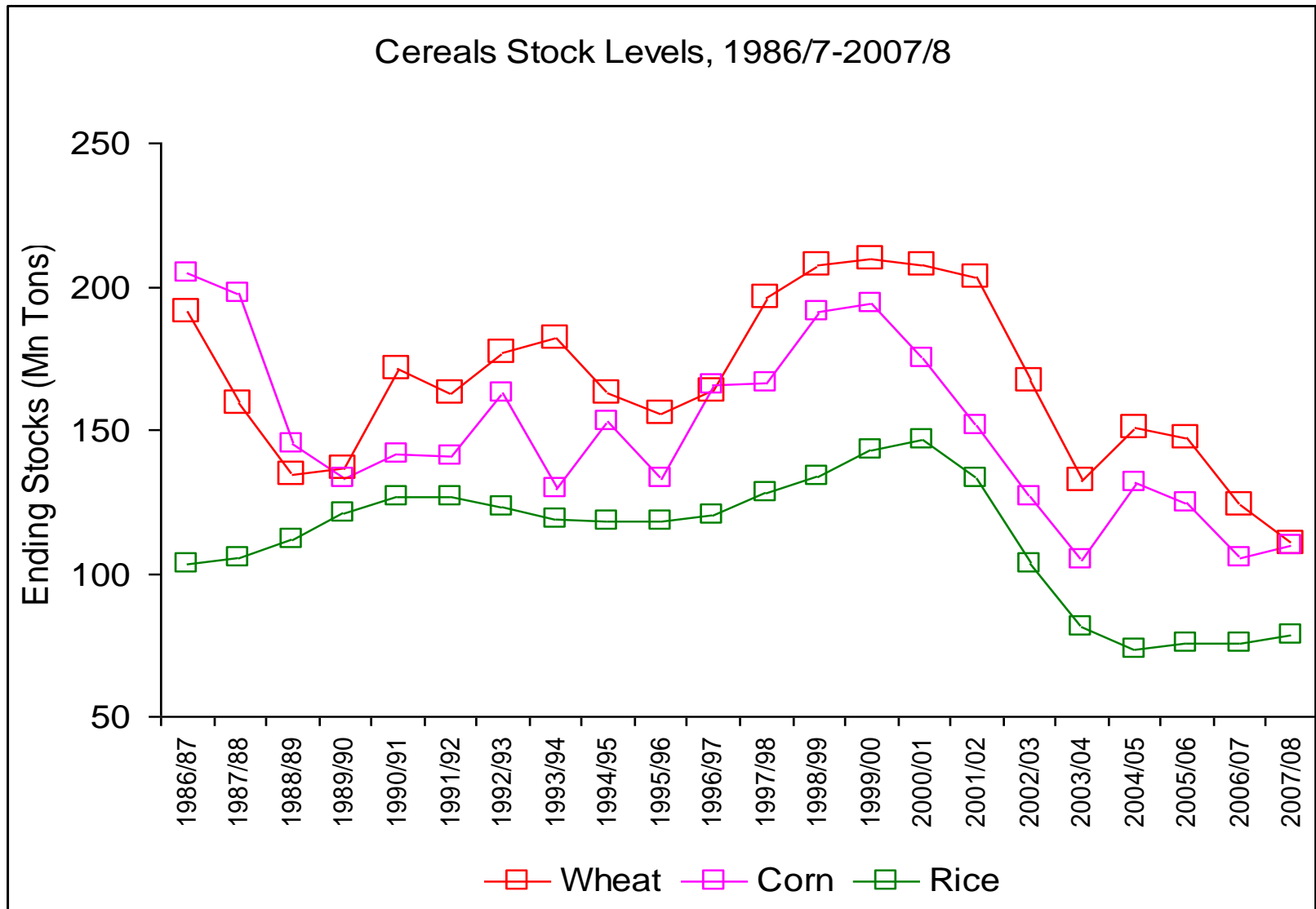
■ **Supply factors**

- Climate Change
- Depleting resources – particularly arable land and water
- High input & transport costs (energy price)
- Underinvestment in agricultural productivity & technology – limited investment in agricultural R&D - % of Agri. GDP: Malaysia (1.58%), Australia (3.38%), Japan (3.62%), Korea (1.73%), USA (2.65%)
- Declining stock level

■ **Demand factors**

- Income increase that led to changing lifestyle and diet
- Population growth
- Growing concern of Food safety
- Biofuels (energy price)

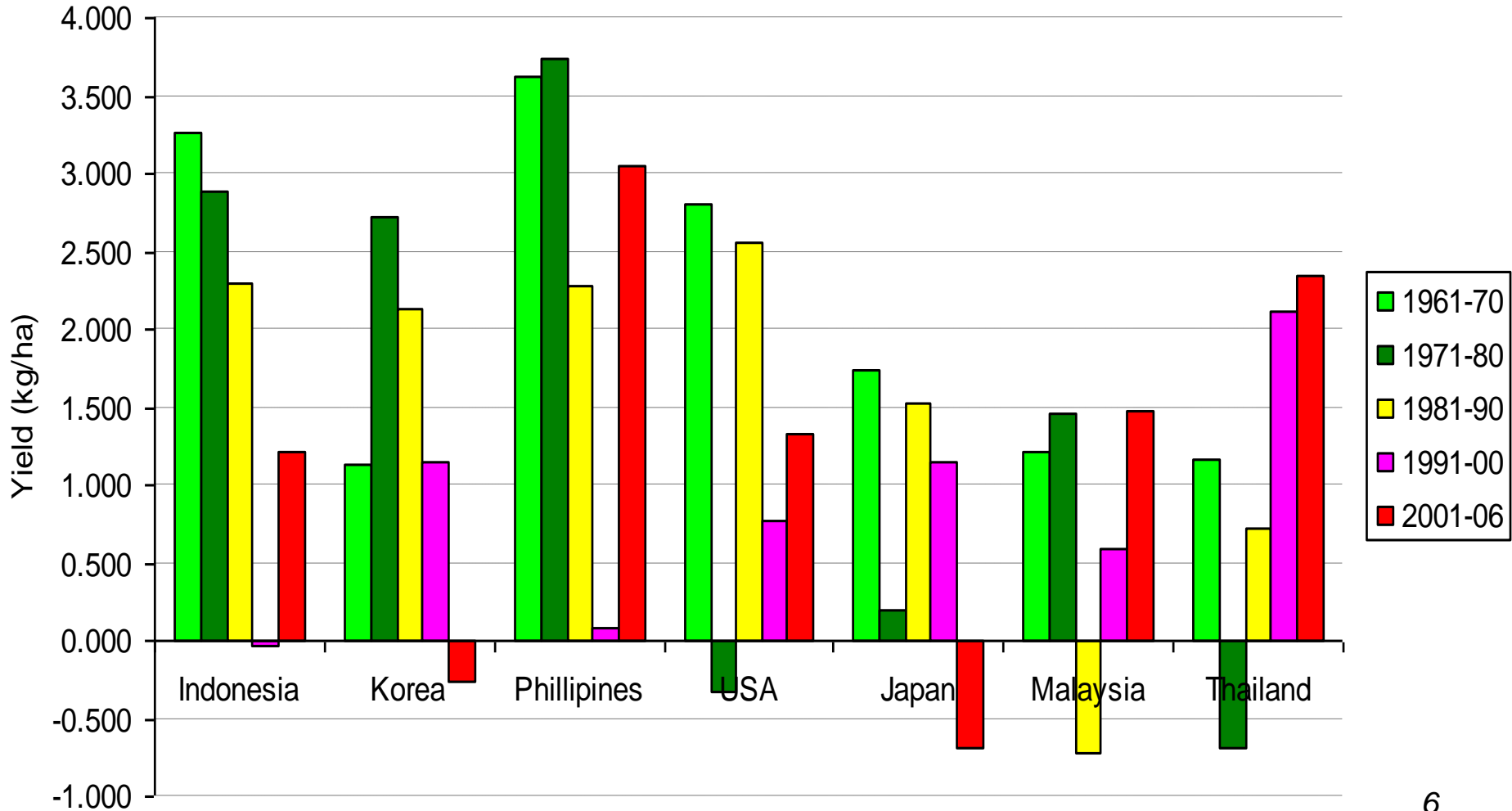
Record low level of stock ..



Source: www.usda.gov

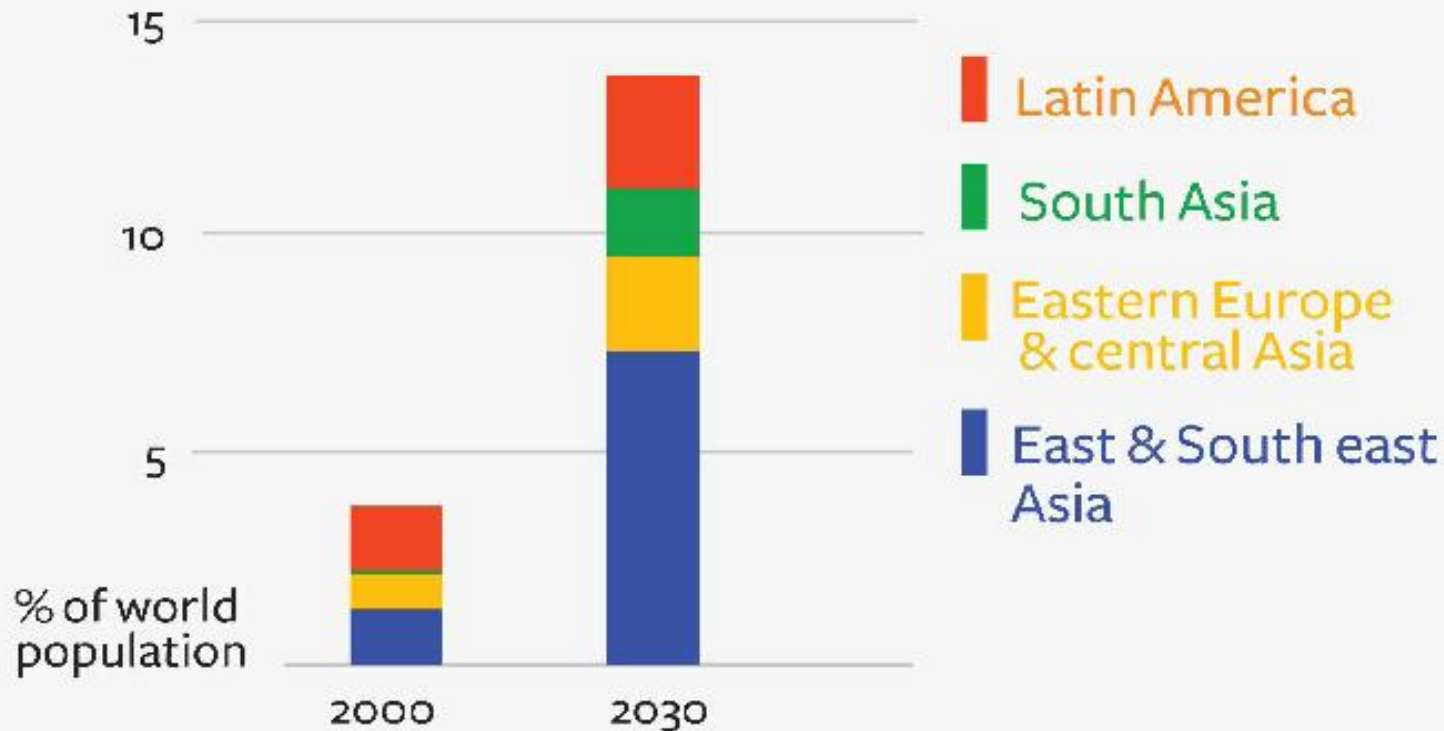
After Green Revolution in the 1960s, even the advanced economies have not shown improvement in rice productivity..

Annual Rate of Growth of Paddy Productivity by Country (%)



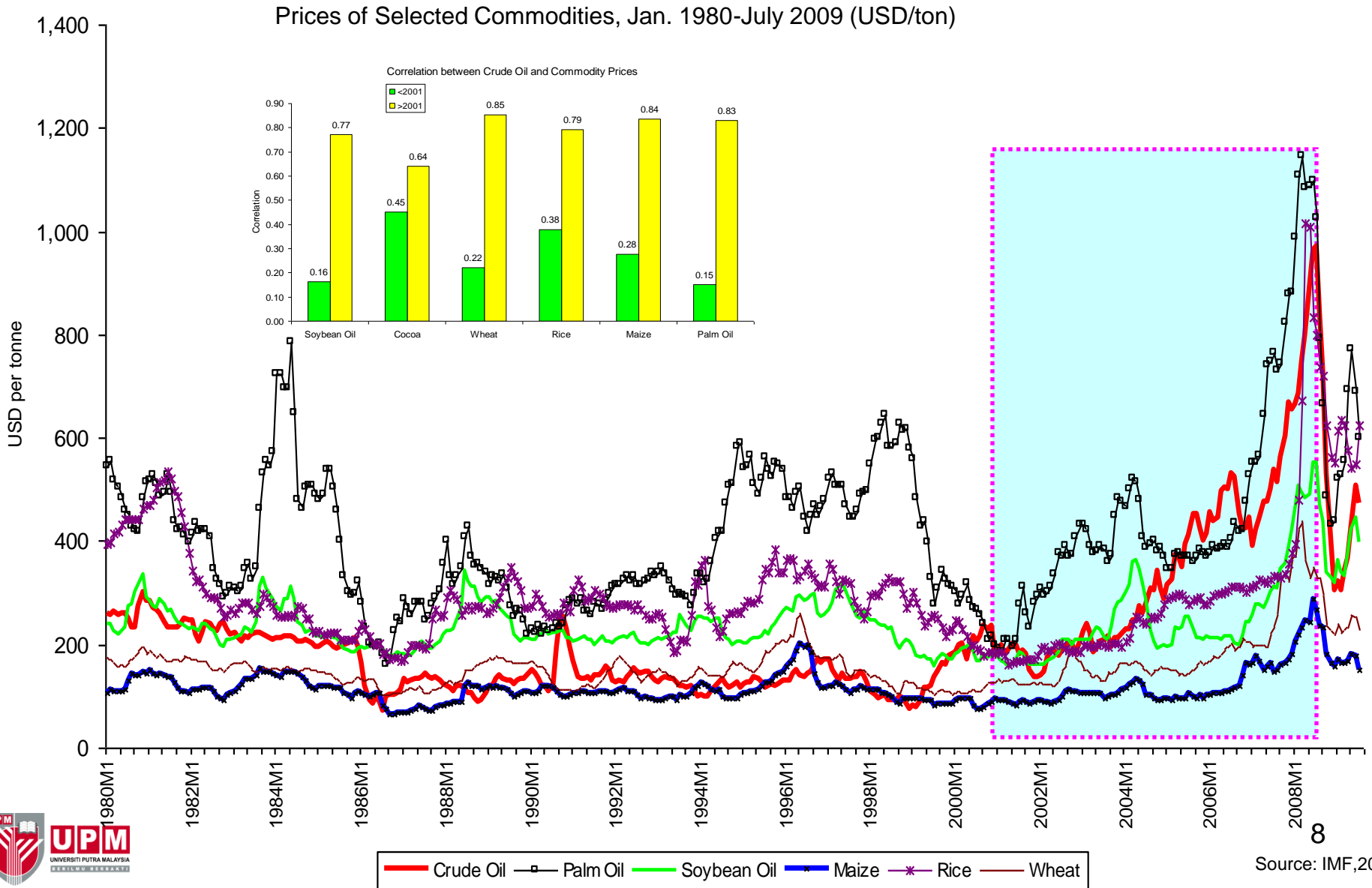
rise of the global middle income population

\$4,000 to \$17,000 per person a year (2000 PPP)

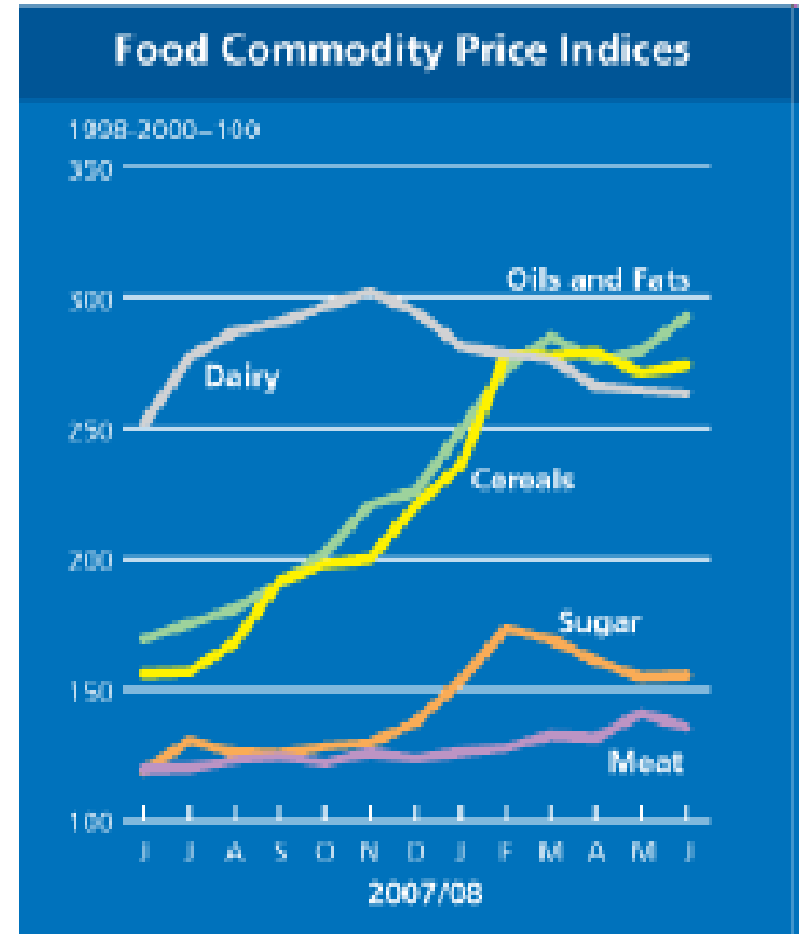
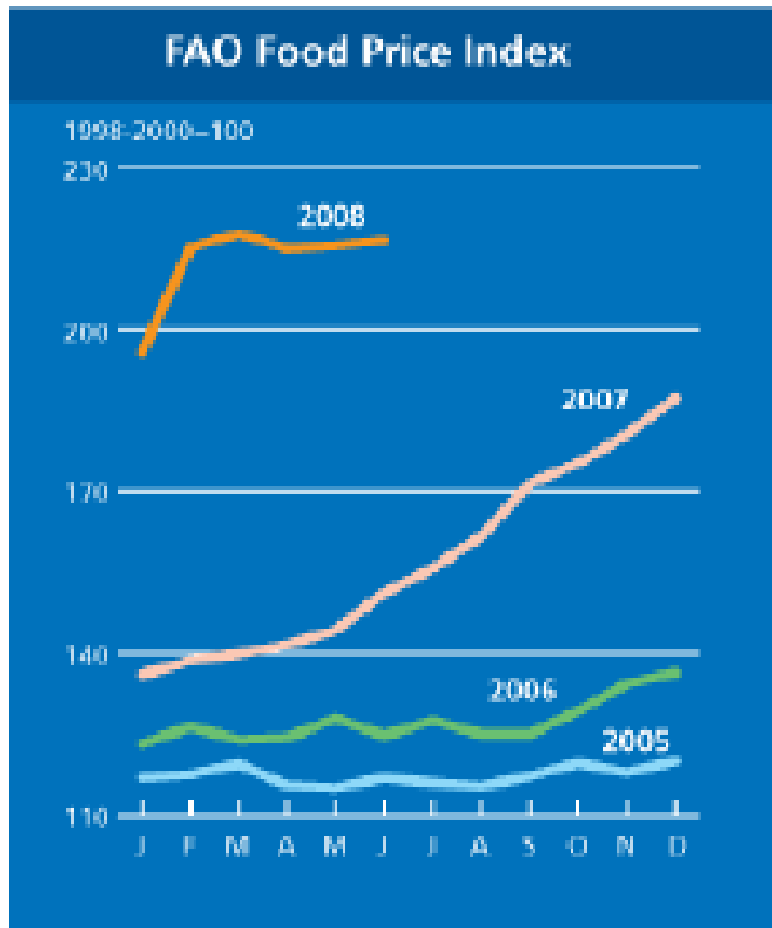


innovation in economics abare.gov.au

Changes in fundamental and technical factors were translated into upsurge and volatility in prices...



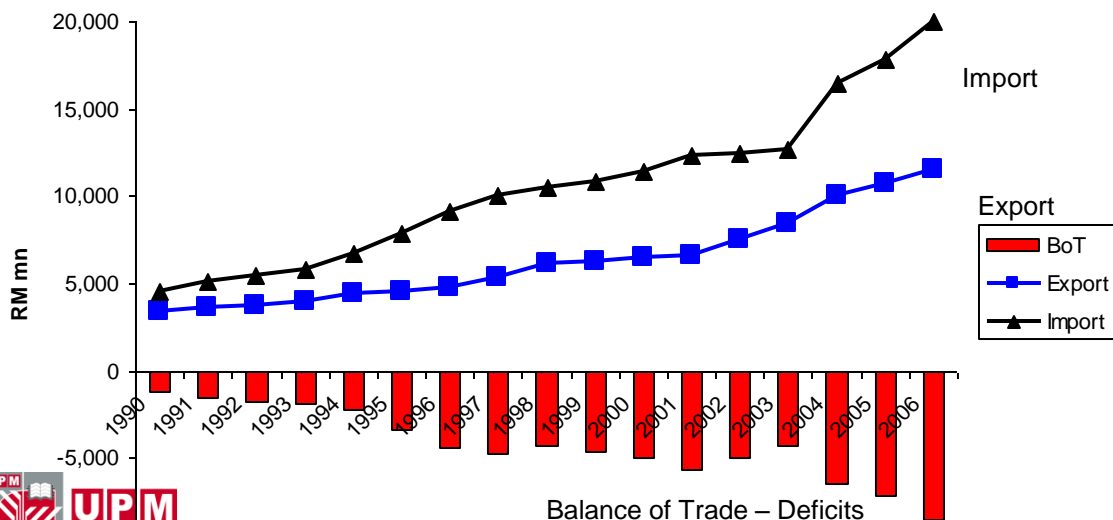
After the spike, prices are levelling, but remain high



Source: FAO, World Food Situation, July 2008

Food sector in Malaysia: Malaysia's comparative advantage lies in export crops such as palm oil, rubber and cocoa. Malaysia has been a net importer of food for more than four decades.

Item	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2007
Public development expenditure on agriculture ^a	23.6	20.0	26.0	24.0	22.0	21.3	17.1	7.4	4.2	5.8	3.8
Agriculture contribution to GDP ^b	33.3	26.9	29.0	27.7	22.9	20.9	18.7	10.3	8.9	8.2	7.7
Growth rate of GDP ^c	na	6.3	5.5	7.1	8.6	5.8	8.0	6.7	8.7	4.7	6.1
Agriculture	na	4.0	6.8	4.8	3.9	3.4	5.4	4.6	2.0	1.2	3.8
Construction	na	17.9	4.1	6.6	12.6	8.1	8.3	0.4	13.3	-1.1	2
Manufacturing	na	11.1	9.9	11.6	13.5	4.9	12.2	13.7	13.3	9.1	5.1
Service	na	7.4	4.7	9.3	6.6	5.1	8.2	4.9	7.7	4.1	8.5
Agriculture share of employment ^d	67.6	62.9	55.7	46.9	39.7	34.8	26.0	18.7	15.2	12.9	14.8
Agriculture share of total exports ^e	62.1	51.0	55.0	48.3	39.7	28.3	7.9	11.7	6.1	7.0	8.7
Rubber	55.1	38.7	33.4	21.9	16.4	7.6	3.8	2.6	0.7	1.1	1.2
Palm oil	2.9	3.3	6.0	16.3	11.1	12.7	7.1	6.8	3.5	3.6	5.2
Share of food from total exports	3.5	5.3	5.5	6.4	3.6	4.4	4.3	2.4	1.7	2.0	2.3
Share of food imports of total imports	26.0	22.3	18.3	16.4	10.4	10.1	5.8	4.1	3.7	4.1	4.6



The food deficit of Malaysia grew from RM1bn (1990) to RM8bn (2006). Food security is a major concern.

1997 and 2008 crises warranted a closer relook at food security issue

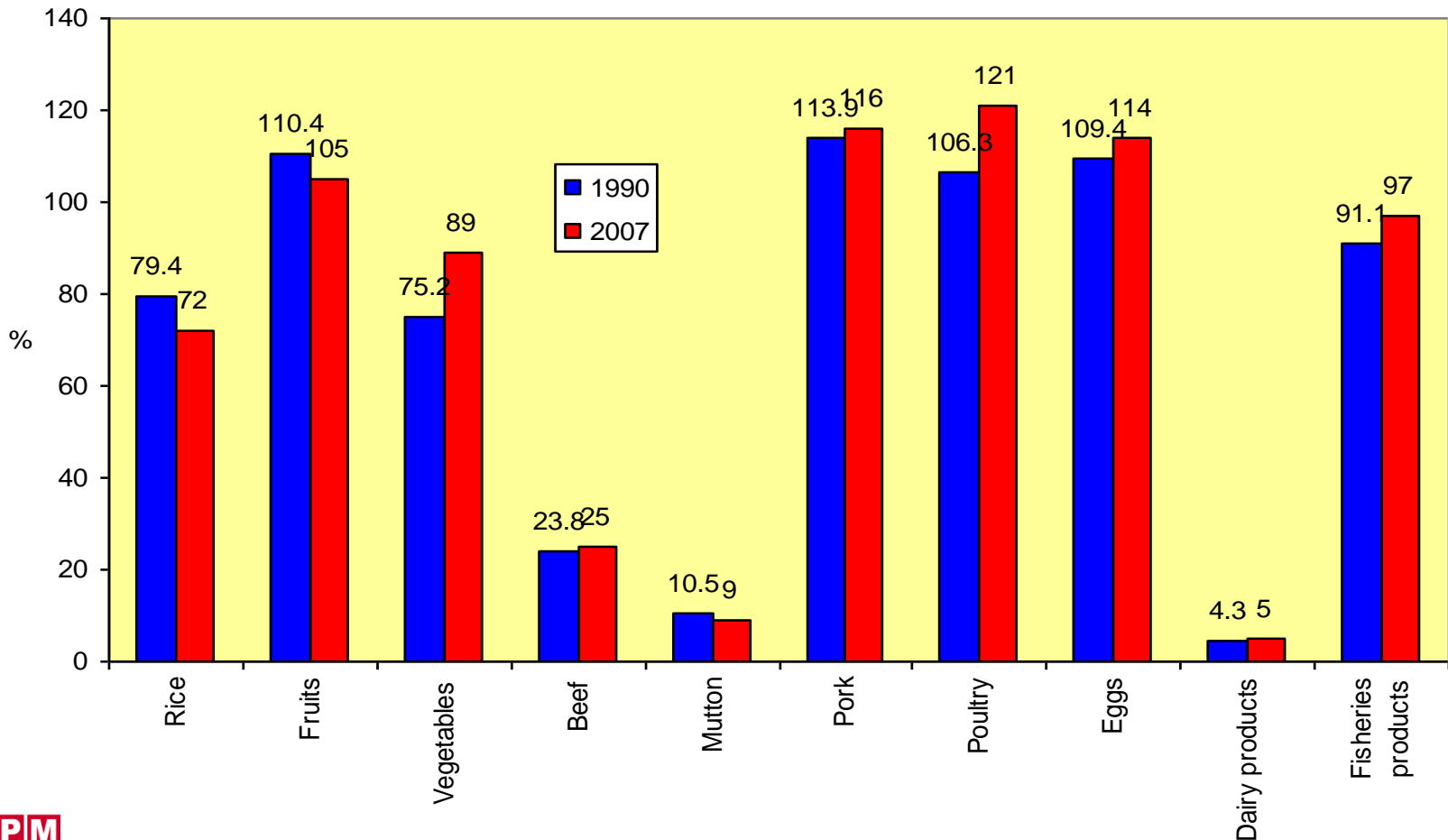
Food Security

- **Food security exists when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life** (World Food Summit, 1996).
- **Working definition:** Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life.
- **Food insecurity** exists when people do not have adequate physical, social or economic access to food as defined above (FAO 2003).
- It has four major dimensions:
 - **AVAILABILITY** of sufficient quantities of food of appropriate quality, supplied through domestic production or imports;
 - **ACCESS** by households and individuals to adequate resources to acquire appropriate foods for a nutritious diet;
 - **UTILIZATION** of food through adequate diet, water, sanitation, and health care; and
 - **STABILITY** (Availability + Access)

Food Security

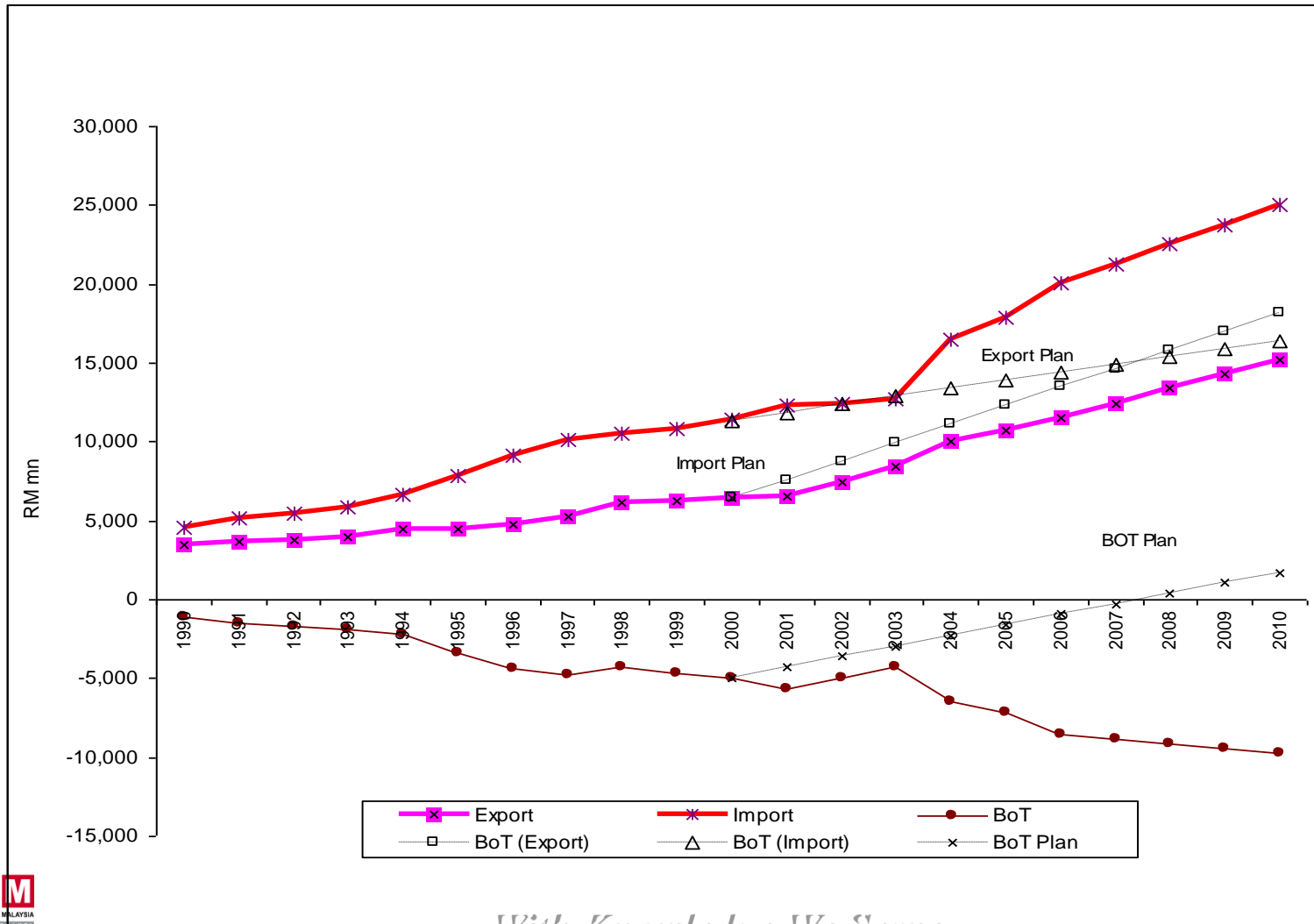
Availability: *Self-sufficiency levels for poultry, eggs, pork, and fruits.*

Self Sufficiency Levels for Selected Food, 1990 dan 2007 (%)



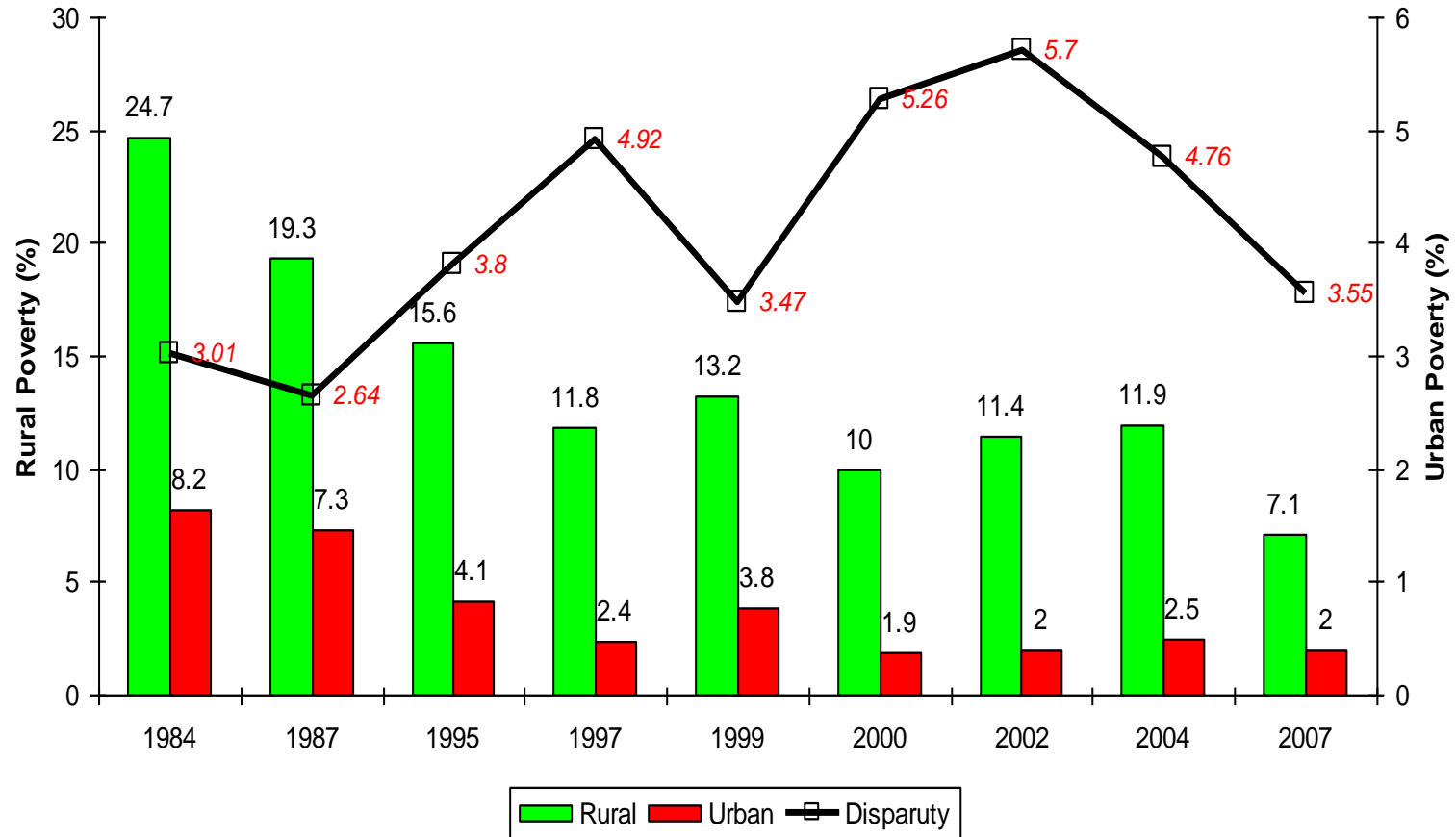
Food Security: Availability

Malaysia has always been a net importer of food...Trade deficit increased from RM1.1 bn (1990) to RM8.5 (2006). Export increased from RM3.4 bn to RM11.5bn (an increase of 233%), Import from RM4.5bn to RM20bn (increase by 330%). Rate of growth : **Export 7.8% vs import 10.6%**. Food deficits are widening with time.



Food Security

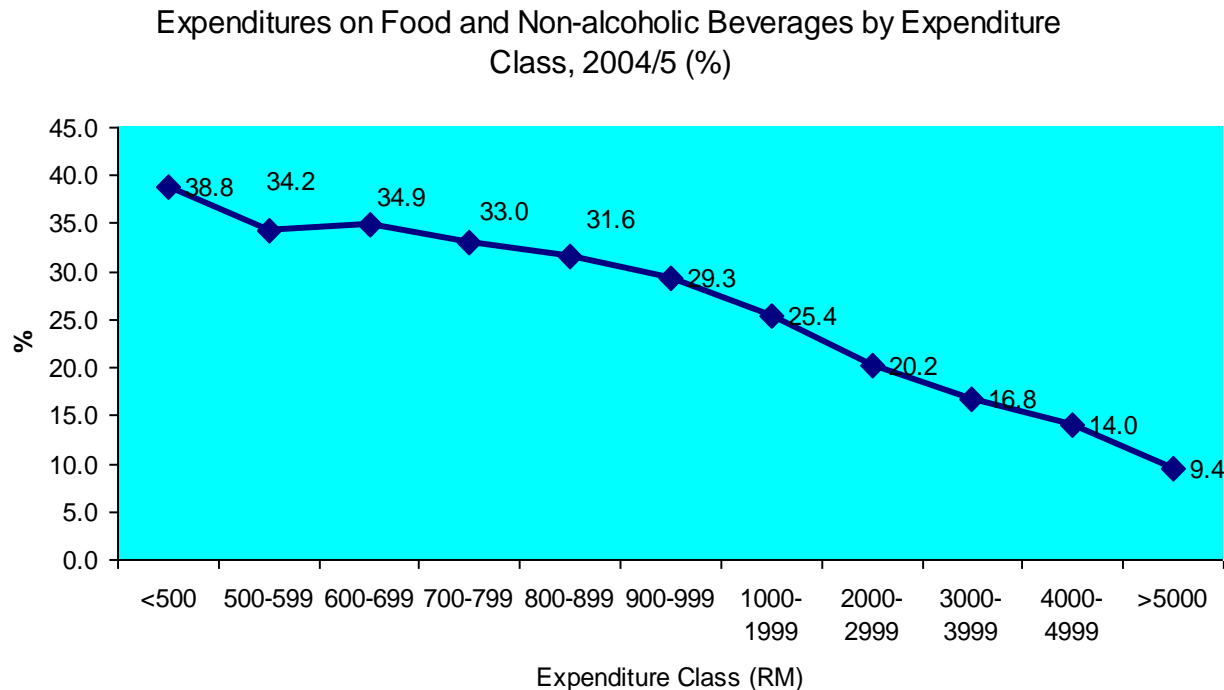
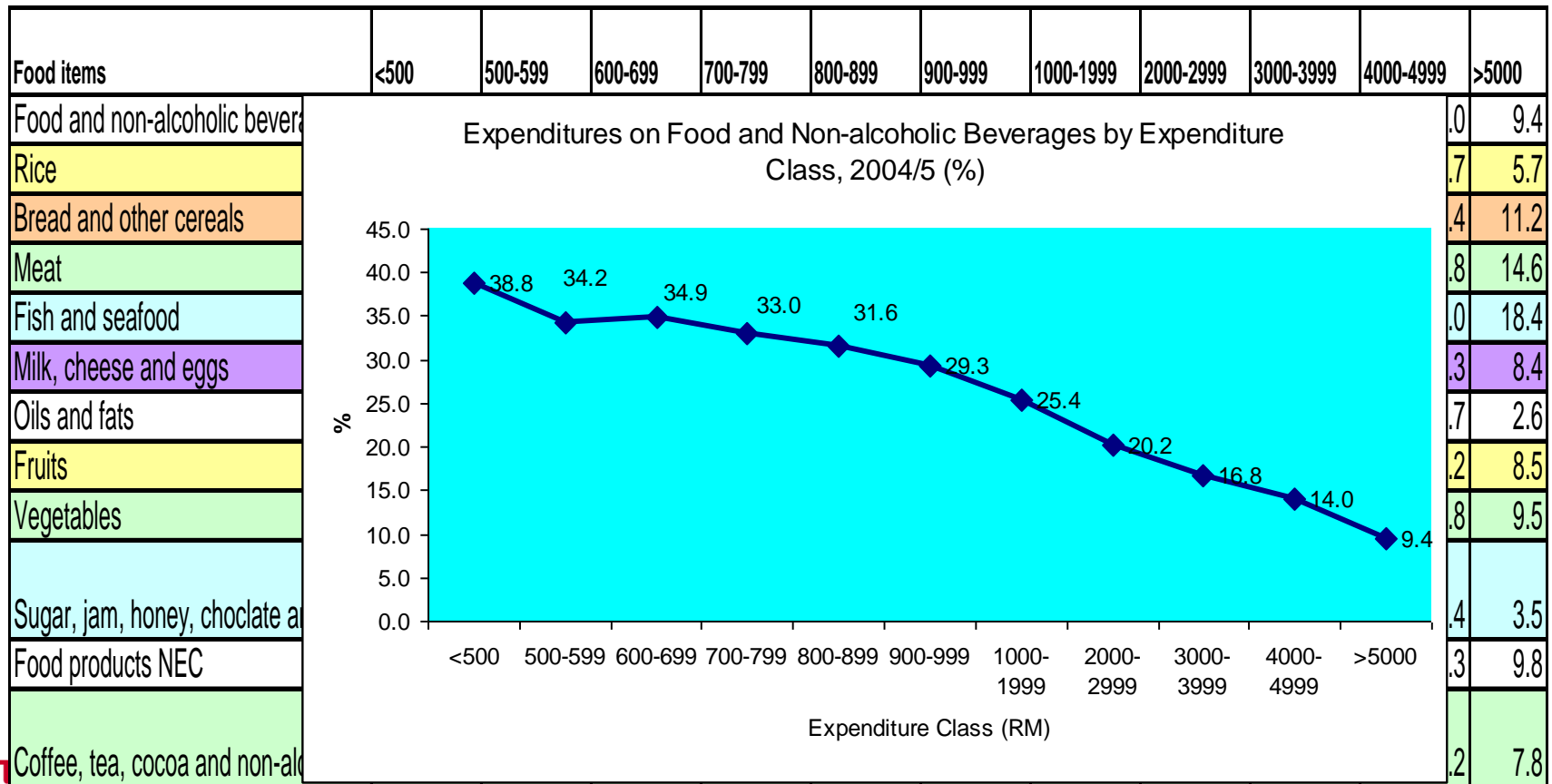
Food Access - Poverty declined significantly but inequality widens. Hard core poverty declined from 91,700 (1999) to 67,300 (2004).



Food Security

Food Access - Poor household (<RM300) spends about 1/3 of their total expenditure on food vs 9% for high income consumers (>RM5,000). A total 17% of food expenditure is on staple (rice). That means, price changes will affect the poor most ..Zalila and Khor (2004), the poor spends 97% on necessities. Hence, little margin for adjustment should food prices increase..

Household Monthly Expenditure by Group, 2004/5 (%)



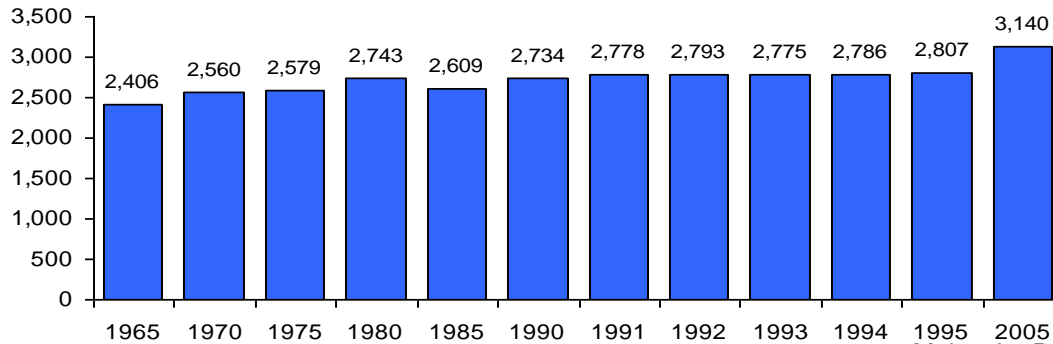
Food Security

Utilisation

- Utilisation of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met.
- **Dietary consumption in the developing countries are lower than the developed countries.**

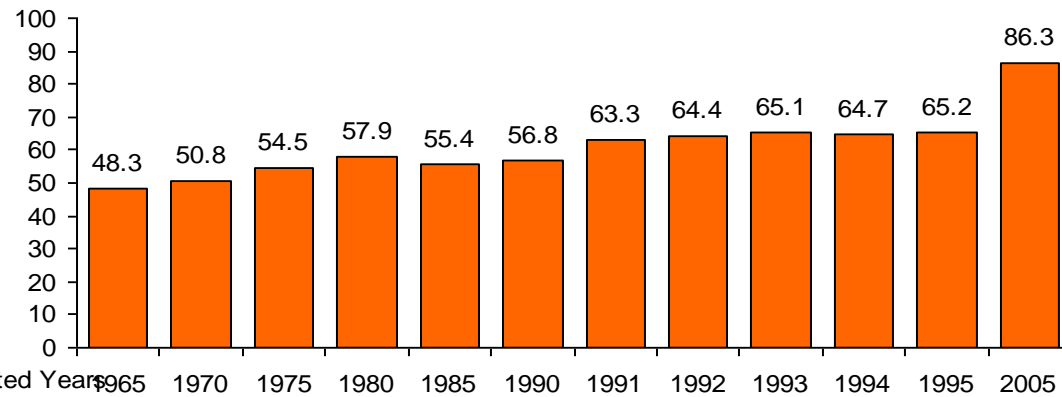
Country	Dietary Energy Consumption (kcal/person/day)	Dietary Protein Consumption (g/person/day)	Dietary Fat Consumption (g/person/day)
Malaysia	2860	77	87
Brunei Darussalam	3210	93	92
Cambodia	2160	54	34
Indonesia	2440	53	46
Thailand	2490	57	56
Philippines	2470	58	48
Germany	3510	124	164
Japan	2750	91	85
USA	3830	116	164
Source: FAO (2008)			

Malaysia: Per Caput Supply of Calories (per day) (g), Selected Years

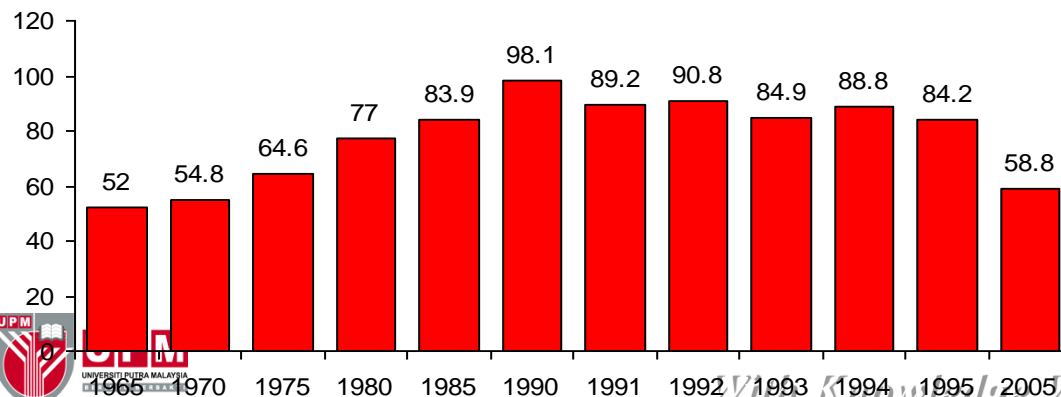


As economy progresses, dietary consumption changes...More calories, protein but declining consumption of fats

Malaysia: Per Caput Supply of Protein (per day) (g), Selected Years



Malaysia: Per Caput Supply of Fat (per day) (g), Selected Years



Implications to Malaysia's Food Security

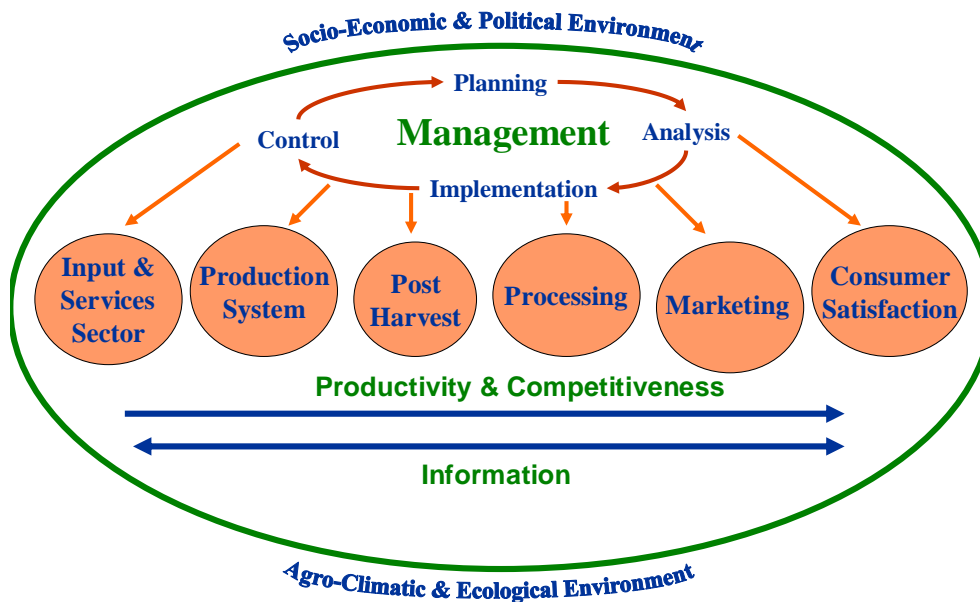
Implications to Malaysia's Food Security: an example of a good policy framework to work on.....

Twin Track Approach	Availability	Access and Utilization	Stability
Rural Development/ productivity enhancement	<p>Enhancing food supply to the most vulnerable</p> <p>Improving rural food production especially by small-scale farmers</p> <p>Investing in rural infrastructure</p> <p>Investing in rural markets</p> <p>Revitalization of livestock sector</p> <p>Resource rehabilitation and conservation</p> <p>Enhancing income and other entitlements to food</p>	<p>Re-establishing rural institutions</p> <p>Enhancing access to assets</p> <p>Ensuring access to land</p> <p>Reviving rural financial systems</p> <p>Strengthening the labour market</p> <p>Mechanisms to ensure safe food</p> <p>Social rehabilitation programmes</p>	<p>Diversifying agriculture and employment</p> <p>Monitoring food security and vulnerability</p> <p>Dealing with the structural causes of food insecurity</p> <p>Reintegrating refugees and displaced people</p> <p>Developing risk analysis and management</p> <p>Reviving access to credit system and savings mechanisms</p>
Direct and Immediate Access to Food	<p>Food Aid</p> <p>Seed/input relief</p> <p>Restocking livestock capital</p> <p>Enabling Market Revival</p>	<p>Transfers: Food/Cash based</p> <p>Asset redistribution</p> <p>Social rehabilitation programmes</p> <p>Nutrition intervention programmes</p>	<p>Re-establishing social safety nets</p> <p>Monitoring immediate vulnerability and intervention impact</p> <p>Peace-building efforts</p>

¹ See P. Pingali, L. Alinovi and Jacky Sutton (2005): Food Security in Complex Emergencies: Building Food Systems Resilience.

Food security is not only production issue, but also post-harvest, consumption, processing and marketing issues...therefore, requires both sustainable production and consumption.

The scope of agriculture has changed from production oriented to supply-value chain oriented. The performance depends on the socio-economic and political environment as well as agro-climatic and ecological environment.



- Involves from plough to plate, farm to table, or cradle to grave.
- Must be business driven and technology oriented to improve productivity and competitiveness, and sustainable to conserve the environment.

Implications to Malaysia's Food Security: a policy diamond for a transforming economy

Provide safety nets; payments for environmental services to create conservation incentives.

Safety nets & Environmental Services

Promote rural non-farm economy to confront rural employment problem; enhance skills to give access to jobs offered by the growth of rural non-farm economy.

Sustainable Production

Rural non-farm economy; Skills for non-farm economy

- **Innovation** - More investment in R&D & intensify TOT to improve productivity
- **Entrepreneurship** – commercial farming practices

Sustainable Consumption

Promote efficient post-harvest, processing, marketing & consumption activities

Terima Kasih
Thank You



The Fundamentals..

Supply sector

- ***weather-related production shortfalls***
- ***stock level***
- ***increase in energy prices affecting food in two ways:***
 - (i) ***Increase in cost of inputs/production, transportation***
 - (ii) ***Competition for agricultural land (and hence water) for biofuel feedstock production***
 - ***US subsidises ethanol production (corn-based hence reduces the acreage for wheat, hence the price of wheat increases)***
 - ***subsidies to biofuels (bioethanol and biodiesel)***
 - ***OECD USD 11-12 bn***
- ***neglect on agriculture particularly in the developing countries – no major breakthroughs after the Green Revolution in the 1960s***
- ***Cheaper food imported foods (eg. cereals are heavily subsidised)***
- ***Climate change***
- ***Depletion of resources; land and water***

Technical Factors

- ***Speculative activities, attractive commodity prices vs equity in US***
- ***Precautionary demand; panic buying***
- ***Public agencies strategies – (BERNAS, BULOG and NFA) forward buying in large quantities***

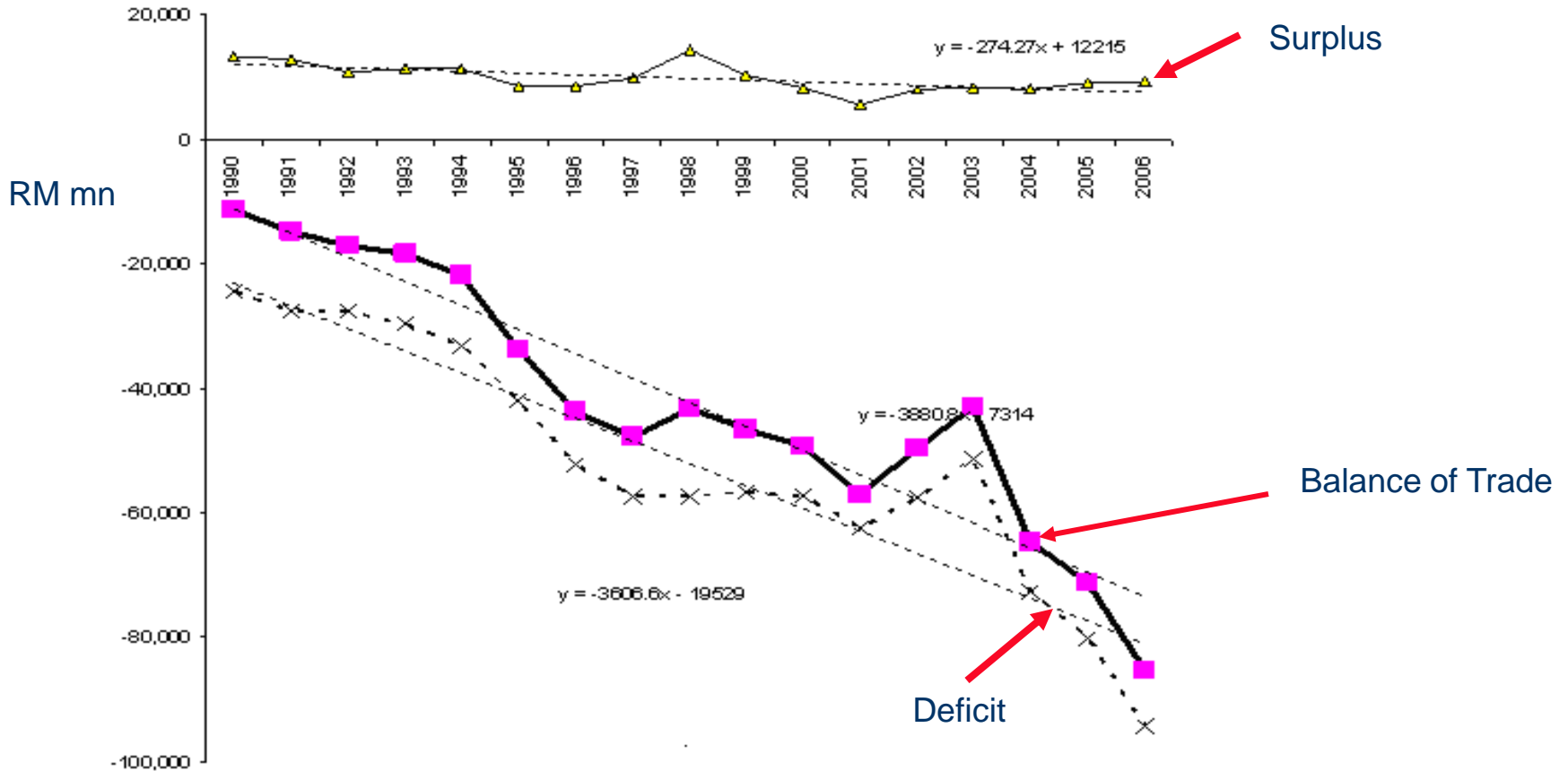
The Fundamentals..

Demand

- ***Changing structure of demand – as income increases, life style and dietary habits change. More demands for meat, dairy products which intensifies the demand for feed grains and strengthening linkages among different food commodities***
- ***Impact of fast growth economies – China, India and Brazil***
- ***Demand from the poor also increased due to economic growth***

Food Security: Availability

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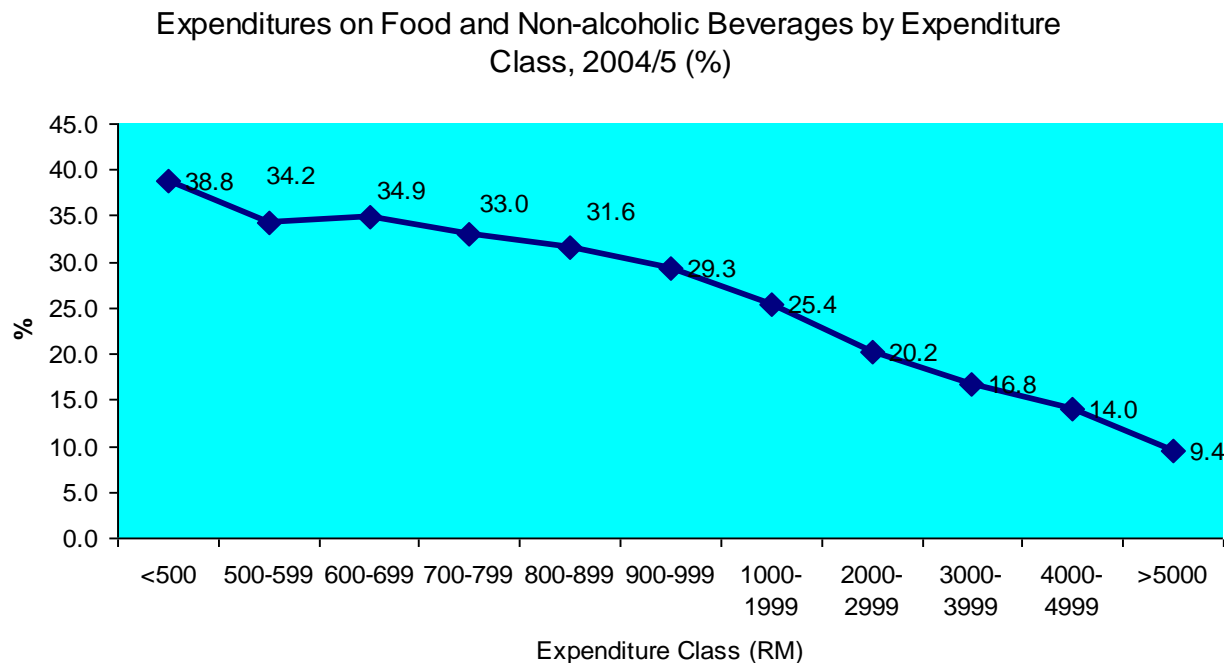


Food Security

Food Access - Household monthly expenditure by group 2004/05 (RM)

Household Monthly Expenditure by Group, 2004/5 (RM)

Expenditure group	<500	500-599	600-699	700-799	800-899	900-999	1000-1999	2000-2999	3000-3999	4000-4999	>5000
Food and non-alcoholic beverages	147	189	227	248	267	278	370	487	574	621	705
Rice	25	30	33	33	36	35	36	37	39	48	40
Bread and other cereals	17	24	26	28	28	31	42	54	66	71	79
Meat	11	17	22	28	33	32	50	73	88	98	103
Fish and seafood	31	39	46	53	59	64	80	102	117	112	130
Milk, cheese and eggs	9	14	18	16	18	20	29	40	48	58	59
Oils and fats	7	18									
Fruits	1	60									
Vegetables	1	67									
Sugar, jam, honey, chocolate and confectionery	1	25									
Food products NEC	9	69									
Coffee, tea, cocoa and alcoholic beverages	5	55									
Alcoholic beverages and tobacco	7	67									
Clothing and footwear	5	162									
Housing, water, electricity, gas	3	1,400									
Furnishings, household equipment	5	364									
Health	1	138									
Transport	3	2,080									
Communication	7	392									
Recreation services and culture	0	461									
Education	4	201									
Restaurants and Hotels	0	651									
Miscellaneous goods and services	5	867									
Average monthly expenditure	1	7,488									



The Role of Agriculture in New Economic Model (NEM)

• Strategic Reform Initiative

• Outcome

Coherent 'Big push' to boost transformation and growth

1. Re-energising the private sector
2. Developing quality workforce and reducing dependency on foreign labour
3. Creating a competitive domestic economy
4. Strengthening of the public sector
5. Transparent and market-friendly affirmative action
6. Building knowledge base and infrastructure
7. Enhancing sources of growth
8. Ensuring sustainability of growth

Agriculture is relevant in most of the initiatives.

CHARACTERISTICS OF MALAYSIA IN 2020

- Market led economy
- Well-governed
- Regionally Integrated
- Entrepreneurship
- Innovative

