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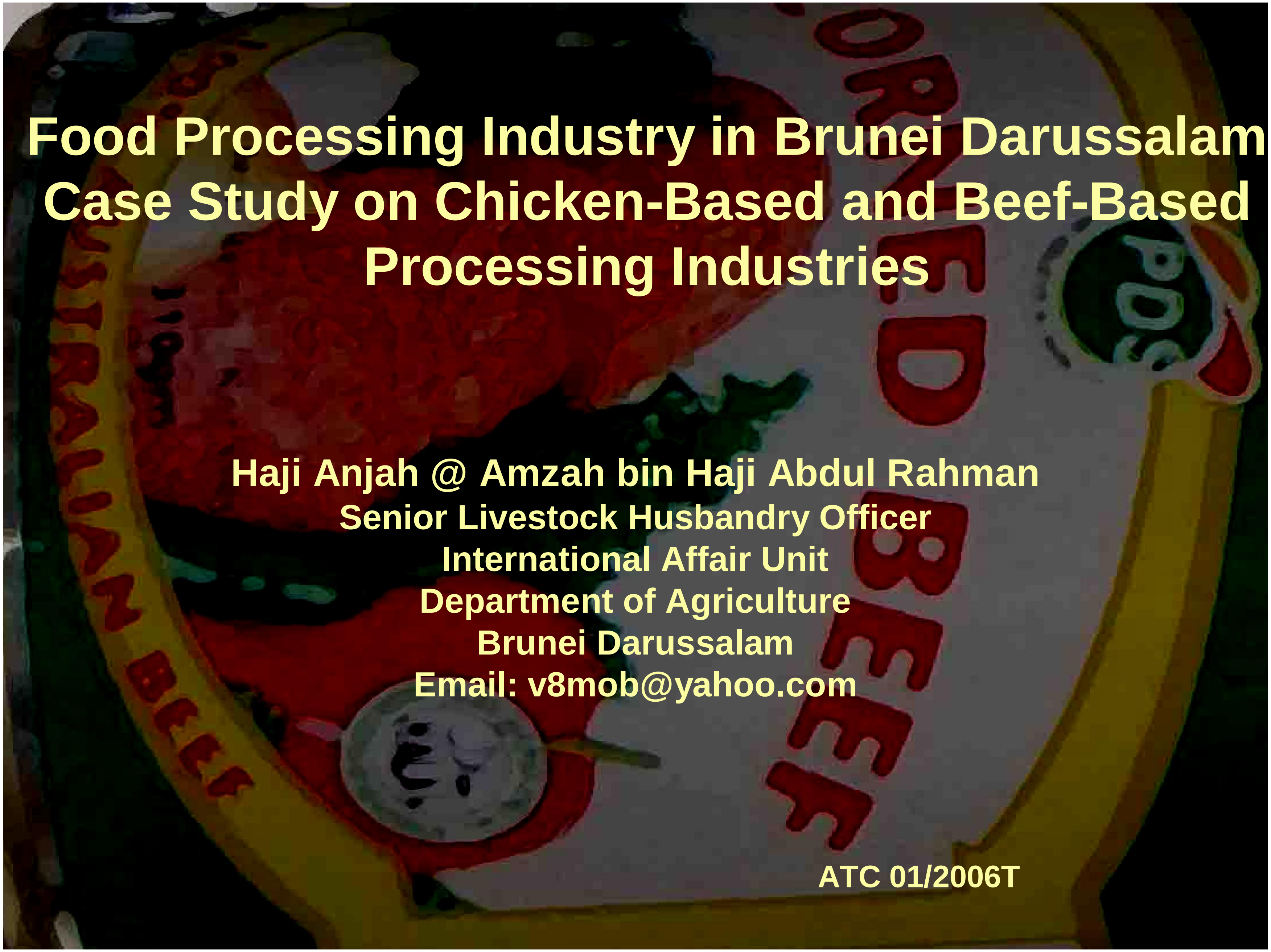

Food Processing Industry in Brunei Darussalam
Case Study on Chicken-Based and Beef-Based Processing Industries

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ARRANGEMENT OF THE PRESENTATION

CHAPTER I
OVERVIEW OF AGRICULTURAL AND FOOD PROCESSING INDUSTRY

CHAPTER 2
BEEF AND BEEF PROCESSING INDUSTRY

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CONCLUSION AND RECOMMENDATIONS

CHAPTER I

OVERVIEW OF AGRICULTURAL AND FOOD PROCESSING INDUSTRY

OVERVIEW OF AGRICULTURAL AND FOOD PROCESSING INDUSTRY

BRUNEI DARUSSALAM ECONOMIC BACKGROUND

- LOCATION: ON THE ISLAND OF BORNEO
- ECONOMICS PRACTICE: OPEN ECONOMY
- ECONOMICS STATUS: ONE OF ASIA'S HIGHEST PER CAPITA INCOMES.
- MAIN EXPORTS: OIL AND GAS, MERCHANDISE (CLOTHING, AND MACHINERY AND TRANSPORT EQUIPMENT).
- MAIN EXPORT MARKETS: EAST ASIA
- GDP CONTRIBUTORS IN 2000: SERVICES 52%, OIL AND GAS 35%.

THE SERVICES SECTOR IS ALSO AN IMPORTANT SOURCE OF EMPLOYMENT, (SOME 80% OF THE POPULATION).

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GDP Trends on Agriculture Sector

Years	Agriculture GDP(B$ Million)	(%)age From GDP
1995	88.53	1.8
1996	91.12	1.9
1997	91.32	2.0
1998	92.72	2.1
1999	113.02	1.9
2000	126.74	1.9
2001	149.83	2.2
2002	134.17	2.0
2003	145.21	2.1
2004	177.89	2.4
2005	158.99	2.3
2006	171.75	2.4

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MAJOR CONCERNS

PETROLEUM'S LARGE SHARE OF GDP.

FLUCTUATING INTERNATIONAL PRICES

THE EXISTENCE OF BIO-FUEL AS SUBSTITUTE

leaves Brunei to an eventual depletion of resources

SOURCE OF INCOME

Only Corporate Taxes And Royalties Paid By Oil & Gas Companies

No Taxes On Personal Incomes Or On Goods And Services.

GROWING UNEMPLOYMENT

- **UNOFFICIAL FIGURE OF 4.6% IN 2000 AND GOES TO 7% IN 2006**
- **THE "BRUNEIZATION" POLICY**
  - **ONLY SUCCESSFUL IN THE GOVERNMENT AND PETROLEUM SECTORS**

(*GOVERNMENT SALARIES AND BENEFITS HAVE MADE IT DIFFICULT FOR OTHER TO COMPETE*)

(AROUND 94% OF BRUNEIANS IN THE LABOUR FORCE ARE EMPLOYED BY THE PUBLIC SECTOR, INCLUDING STATE-OWNED ENTERPRISES)

Trade and Investment Policy Framework

the Sultan is the Head of State

five Councils to assist the Sultan

THE LEGISLATIVE COUNCIL

carry the force of law.

All international agreements, once ratified by the Sultan, must be adopted through national legislation to be enforceable in the country.

WTO AGREEMENTS

To date, no changes on the provisions have been made to national laws. The provisions appear to be implemented in "good faith" or on a "best efforts" basis.

TRADE AND TRADE-RELATED REFORMS

- Tariffs are low, averaging 3.1% in 2000,
  - zero for agriculture, and
  - 3.6% for non-agricultural products.

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- ASEAN) Common Effective Preferential Tariff (CEPT) scheme, Brunei has been reducing its preferential tariff rates on products included under CEPT;
  - Tariff reductions within the 0-5% range completed 2002.
  - CEPT rates on information technology products were also removed to encourage investment in the information technology sector.

Import Restrictions

Imports And Exports Prohibitions, Restrictions, And Licensing Requirements

RICE, SUGAR, AND SALT

For The Purpose Of Maintaining Food Supply

(Rice Appears To Be Subject To An Import Monopoly)

BEEF, POULTRY AND ALCOHOLIC BEVERAGES

For Religious Reasons

Export Restrictions

TIMBER

for environmental reasons.

OIL PALM, RICE, AND SUGAR

to ensure security of domestic supplies,

Other Measures Affecting Trade

- 5 year NDP, which allocates resources to particular activities; investment promotion
- the use of government resources, through its holding company, Semaun Holdings, to invest directly in priority sectors.
- BIA is also involved in industrial development.

Other Measures Affecting Trade

- TO ATTRACT INVESTMENT
  - Tax And Other Incentives.
    - No Personal Income, Goods, And Service Taxes,
    - Pioneer Status Programme (Tax Exemptions On Corporate Tax Of Up To Eight Years).
  - Provision Of Financial Assistance For Smes. The Fund Is Targeted To Agriculture And Fishery And Others Industries.
  - Corporatization And Privatization Of Some Public Sector Companies.

Other Measures Affecting Trade

- TO PROTECT CONSUMERS,
  - Price Controls On A Number Of Products, Including Rice, Sugar, Bread, Milk For Infants, Tea, Coffee, Motor Vehicles, And Cigarettes.
  - The Retail Price Of Petrol Has Been Frozen Since 1978,

Sectoral Policies

- extensive subsidization of infrastructure and inputs
  - increase self-sufficiency in the production of agricultural products, especially rice, subsidized through the end-product subsidy scheme, which ensures the purchase of locally grown paddy by the Government at an annual cost of B$200 million.
- a government import monopoly for rice paddy.
- Foreign investment is encouraged, BUT subject to a 70% foreign equity limit.

Despite the extensive subsidies,

Further Investment Does Not Appear To Have Been Forthcoming,

DUE TO

Better Employment Opportunities Elsewhere, Notably In The Public Sector, Lack Of Marketing Outlets, And Unstable Prices.

Trade Policies And Trading Partners

Brunei is

- a founding Member of the WTO
- a contracting party to the GATT since December 1993.
- ASEAN since 1984 and reduce tariffs included in its CEPT tariff to the 0-5% range by 2002; all intra-ASEAN tariff barriers will be removed by 2015.
- APEC forum as other developing country members, intends to implement free trade and investment by 2020
- BIMP–EAGA to develop priority sectors, including agriculture, forestry, fishery, air and maritime linkages, construction and tourism.

CHAPTER II

Overview Of Livestock

And

Livestock-Based Processing Industries

Status of Livestock Industry

- Livestock production the most significant contributor to agriculture economy
  - contribution is approximately 70% out of the total agricultural contribution.
- Chicken and egg are the largest contributors. Achieving almost 100% level of self-sufficient.
- The local ruminant production is very low due to its conventional method of rearing. Contributes to B$0.66 million in 2006
- Brunei relied on the importation of live animal from Australia and Sabah and Sarawak.

Status of Livestock-Based Food Processing Industry

- the total national food requirement worth B$800.00 millions
  - B$171.00 million or 21% are agro-based including livestock and crops,
  - B$17 million (15%) are fishery-based,
  - B$612.00 million (77%) are from imports.
- Out of the total, 68% or B$544.00 million are in the form of processed food and almost all of these processed food were imported.
  - » The indicators show that the contribution of imported processed food to satisfy national food requirements seems too significant to the economy.

Processing background

- Livestock-based food processing industry in Brunei Darussalam is an absolutely new business. Started late 2005
- local food processing factories is too small and limited to satisfy local needs.
- (2006) there were 106 food processors
  - 24 are of livestock-based and
  - 77 engaged in crops-based food processing industries
  - 5 Fishery
- 95% is non-commercial, small, low standard and inconsistent in term of quality and production.
- packaging is so simple, without proper labeling and instructions..
- Despite of those constraints there is still a few operators that are capable in making their way to success
  - the demand are normally great and increasing from year to year.

REAL SEVEN LIVESTOCK-BASED FOOD PROCESSORS

- 1 PURE chicken-based operator namely Ideal Food Industries Sdn Bhd,
- 2 operators concentrate fully on beef-based while
- 4 operators processed mixed chicken and beef-based.
- The total contribution by all of these seven companies was around 1,102.82 mt. worth approximately B$7.88 million in 2006.
- Out of the total production, 61% or 673.10 metric ton are chicken-based while
- 39% or 429.72 metric ton are beef-based food

Total Contribution of The Seven Livestock-Based Processors

	Chicken	Based	Beef	Based	Total		
Processors	**Qty (mt.)**	**Value (B$) M**	**Qty (mt.)**	**Value (B$) M**	**Qty (mt.)**	**Value (B$) M**	**% Cont**
PDS	14.21	0.18	0.12	1.53	0.14	$1.70	12.6
Ideal	165.90	1.18	0.00	0.00	0.17	$1.18	15.0
BMC	470.24	2.60	0.20	1.35	0.67	$3.95	60.3
Cerah	11.02	0.08	0.02	0.18	0.04	$0.26	3.2
Sabli's	11.72	0.06	0.02	0.16	0.03	$0.22	2.8
Mulaut	0.00	0.00	0.01	0.07	0.01	$0.07	0.5
Hussyn	0.00	0.00	0.06	0.49	0.06	$0.49	5.6
Total	673.10	$4.10	0.41	$3.79	1.10	$7.88	100.00
% Cont	61		39				

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Products

Total Types Of Products Produced

34 Types

- All These Types Can Be Categorized Into 10 Main Products Namely
  - Burgers, Nugget, Sausages And Frankfurter, Mince, Balls And Cakes, Cold Cut, Marinated, Cooked And Canned And Others That Includes Fillets, Rolls, Patties, Etc.

Total Workforce

71 WORKERS EMPLOYED

58 WORKERS (82%) FOREIGNER

13 WORKERS (18%) LOCAL.

Chapter II

Beef
And
Beef-Based Processing Industry

The Beef Industry

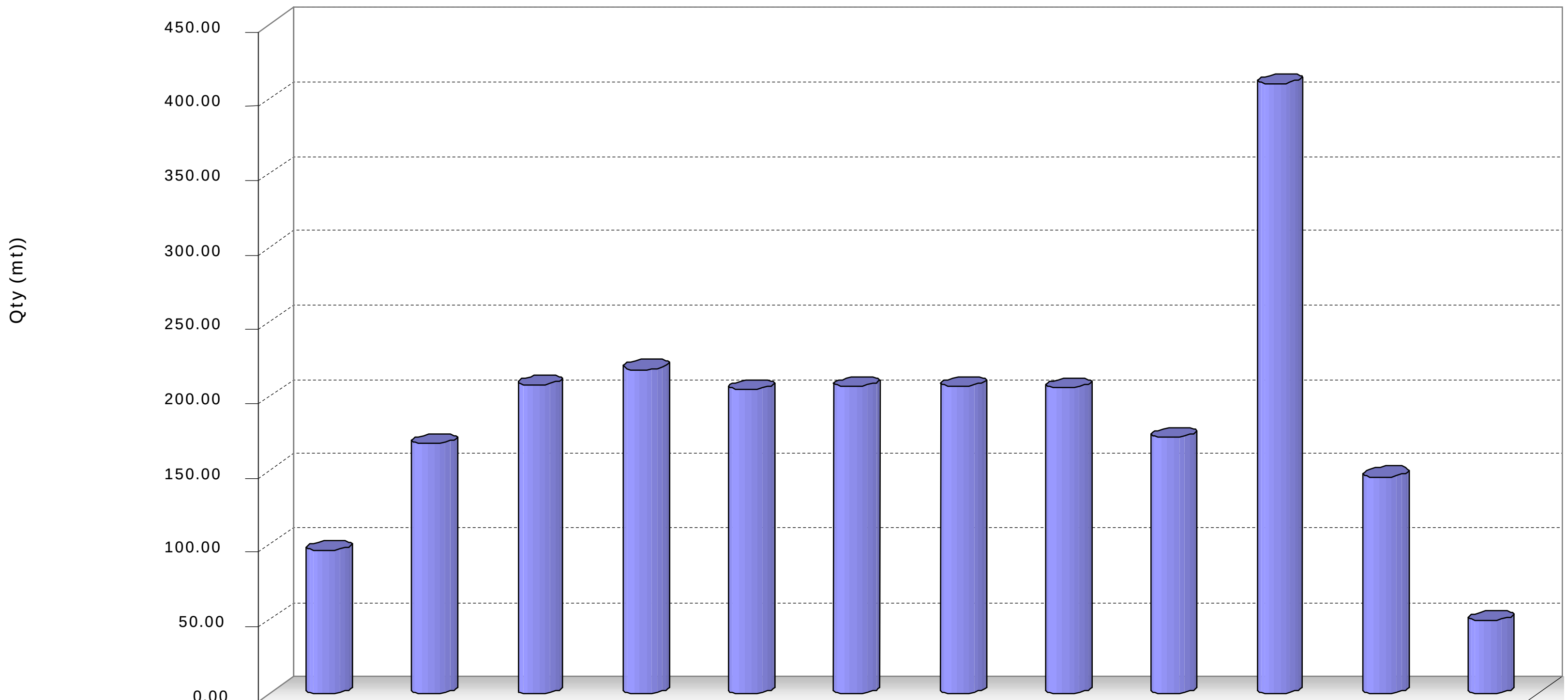
The Present Status

- The Source Of Beef
  - Import Of Live Cattle And Buffaloes From Australia, Sabah And Sarawak Of Malaysia And Slaughtered And Processed Locally.
  - Chilled And Frozen Beef
  - Few Contributions From The Local Producers.

Beef Industry 2006

– Total Consumption:	10,568 Head
– Carcass Weight:	3,385.89 mt
– Market Value (B$):	45.18 Million
– Per Capita Consumption/Year:	8.8 Kg
– Local Cattle/Buffalo:	301 Head
– Carcass Weight:	48.93 mt
– Retail Value (B$) :	0.66 Million
– Local Contribution (%):	1.4%
– Imported Live Cattle/Buffalo:	10,267 Head
– Carcass Weight:	2,308.44 mt
– C.I.F.Value (B$) :	13.14 Million
– Retail Value (B$)	35.46 Million
– Import Contribution (%):	68.2%
– Imported (Chilled & Frozen) :	1,028.53 mt
– C.I.F.Value (B$) ::	4.13 Million
– Market Value (B$) :	9.05 Million
– Import Contribution:	30.38%

The Local Beef Production Trend 1995 to 2006



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Local Production	96.00	168.38	208.00	218.05	204.45	206.90	207.05	205.83	172.53	410.78	146.18	48.93

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Imported Live Cattle And Buffalo From 1992 To 2006

Years	Buffaloes (Heads)	Cattle (Heads)
1992	1,247	7,877
1993	1,104	8,585
1994	966	7,869
1995	835	6,074
1996	890	4,868
1997	888	5,638
1998	706	6,901
1999	1,029	15,036
2000	2,469	16,663
2001	2,689	16,053
2002	3,380	20,640
2003	2,559	15,766
2004	2,377	13,962
2005	2,263	10,284
2006	1,668	8,651

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- As mentioned that almost all of the chilled and frozen beef are imported and served as the raw materials for the processing industry in Brunei. At present there are six processing operators engaged in further processed food in which two of them engaged in the processing of pure beef-based while the four operators processed a mixed of beef and chicken-based. The total production of the processed beef products in 2006 is around 0.43 metric ton worth around to B$3.79 million. In term of production quantities, the major contributors is BMC Food Industries that contributes 45% of the total supplied with a production of 0.195 metric ton worth B$1.35 million. Meanwhile PDS Abattoir Sdn. Bhd. ranked second with a share of 29% with a production of 0.13 metric ton ($1.53 million). The remaining 26% are shared by the other four operators as shown in table 5 below. All of the products produced are market locally and none for export.

The Major Beef Processing Operators in 2006

	Beef Processors	Quantities Produced (kg)	Market Values (B$)mil	Prodn Shares
1	PDS Abattoir	124.83	1.53	29%
2	BMC	195.18	1.35	45%
3	Cerah Supreme	0.025	0.18	6%
4	Sabli Group	0.019	0.16	4%
5	Mulaut Abattoir	0.01	0.01	1%
6	Hussyn Rahman.	0.06	0.49	14%
	Total	429.72	3.79	100%

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The Beef Processing Products

- All operators produced almost the same kind of products namely
  - beef burger,
  - sausages and frankfurter,
  - mince,
  - ball and cake,
  - cold cut and
  - cooked and canned beef.
- beef minced dominated the production line with 35% shared
- beef burger 28%.
- The remaining is shared among others types of products.

Processed Beef Product By Types 2006

	Products Types	Quantities (mt)	Values (B$ mil)	Average Price/kg	Shares
1	Burger	120.54	$1.01	$8.42	28%
2	Sausage / Frankfurter	20.15	$0.17	$9.96	5%
3	Mince	150.41	$1.18	$7.58	35%
4	Ball / Cake	37.93	$ 0.24	$6.20	9%
5	Cold Cut (Whole & Sliced)	24.72	$0.44	$18.17	6%
6	Cooked and Canned Beef	7355	$0.73	$8.67	17%
	Total Production	427.30	$3.77		100%

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Markets

- All beef products are for local market and none for exports.
  - Less competitive to the world markets
  - high cost of production and processing.
  - the market price is quite expensive
  - as compared with those of imports.
- Example
  - 310 grams premium quality local canned corned beef sold at an average price of B$3.80 at the Department Store as compared to B$3.10 for the same products with the same quality but imported.
- Despite of its higher prices, Still the most preferred due
  - its halalness which is certified by the Government
  - its tastes that suited best to local customers needs.
  - The demand as claimed by all the operators is increasing steadily and they have to increase their respective productions accordingly to local needs from month to month.

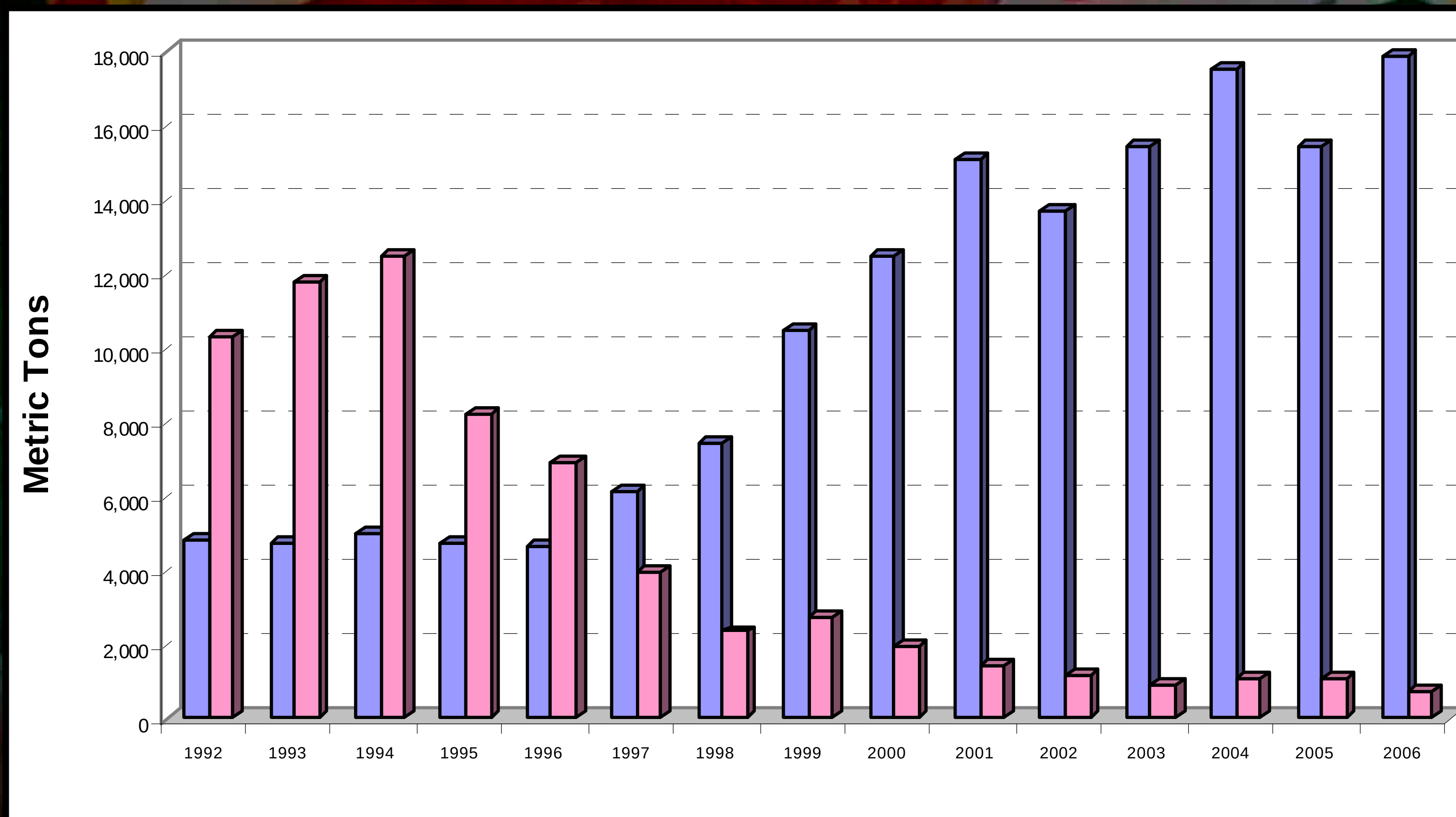
Chapter III

Chicken
And
Chicken-Based Processing Industry

BROILER PROCESSING INDUSTRY

- Broiler industry in Brunei started in 1960s with only a few farmers concentrated in a very small scale of about 100 to 200 heads of chicken per intake.
- The stocks of day old chicks, a *samson breed* was imported from Singapore.
- The rearing period took almost three months to harvest time with the preferable marketable weight of 3 kilogram.
- in 1975: the establishment of The commercial broiler - Ideal Multifeed Farm, and integrated with breeder, hatchery, layer farm and. A feed mill factory
- In early 1980, at least 3 big broiler farms emerged and a few smaller farms owned by Young Farmer Project
- In 1990, there were 178 broiler establishments throughout the state with three big integrators namely IMF, Hua Ho Agriculture Farm and Soon Lee Agriculture Farm.
- Since then these three integrators were responsible to supply the necessary inputs especially the D.O.C, feeds, veterinary medicines and others to their respective smaller clients.
- In 1997, local contribution surpassed imports due to the introduction of High Technology system of management.

Local Production Vs Imports of Chicken



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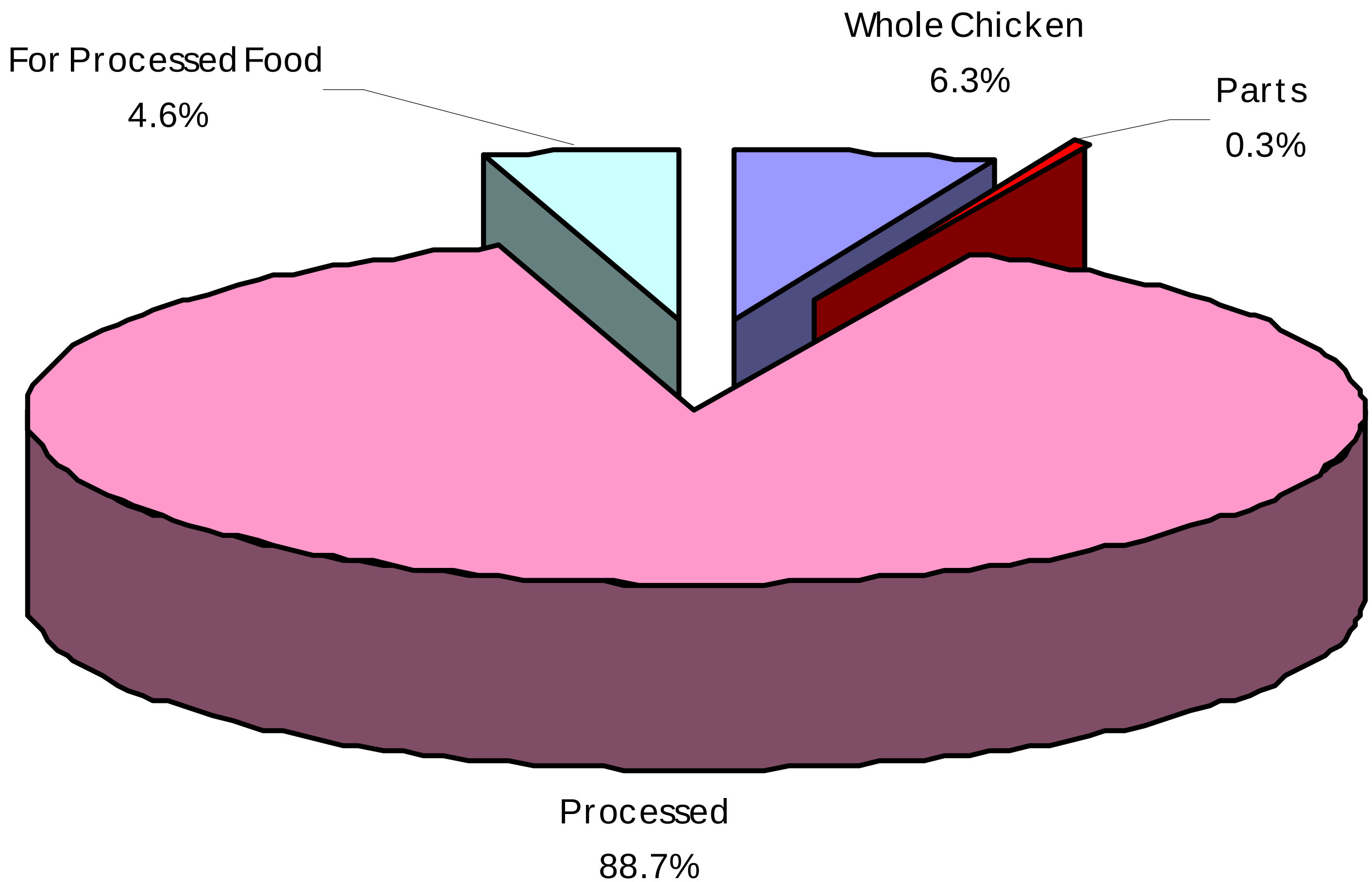
The Present Status of the Broiler Industry

– *Total Consumption:*	*18,597.53 Mt*
– *Market Value (B$) :*	*78.62 Million*
– *Per Capita Consumption/Year*	*48.56 Kg*
– *Local Production:*	*17,886.2 Mt*
– *Market Value (B$)*	*73.46 Million*
– *Percentage Contribution:*	*96.2%*
– *Import (Chilled And Frozen) :*	*711.28 Mt*
– *C.I.F. Value (B$) :*	*2.97 Million*
– *Market Value (B$) :*	*5.15 Million*
– *Percentage Contribution:*	*3.82%*

USES OF IMPORTED CHILLED AND FROZEN CHICKEN MEAT IN 2006



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The Chicken Processing Industry

- late 2005: the emergence of full line food processing industry with a new technologies and new premises.
- In 2000: the starts of partly processed chicken from whole into parts
- In 2006: only 5 full time commercial and privately owned chicken-based processing operators.
- With the total production of 673.10 metric ton (B$4.10 million).

Chicken Processors in 2006

Chicken Processors	Quantities Produced (Mt)	Market Values (B$Mil.)	Production Shares (%)
1). PDS	14.21	0.18	2%
2). Ideal	165.90	1.18	25%
3). BMC	470.24	2.60	70%
4). Cerah	11.02	0.08	2%
5). Sabli Group	11.72	0.06	2%
Total	673.10	4.09	100%

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Processed Chicken Products By Types 2006

Products Types	QTY (Mt)	Values (B$Mil)	Ave. Price	Shares
Burger	47.28	$0.33	$9.04	7%
Nugget	82.16	$0.45	$5.35	12%
Sausage / Frankfurter	375.68	$1.96	$7.69	56%
Mince	7.75	$0.05	$5.98	1%
Ball / Cake	8.22	$0.03	$3.54	1%
Cold Cut (Whole & Sliced)	9.77	$0.13	$13.83	1%
Cooked and Canned	11.72	$0.06	$4.84	2%
Others (chicken fillet, roll and patty)	130.52	$1.08	$6.49	19%
Total	673.10	$4.09	$7.09	100%

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Marketing Channel:

- THE FLOW OF PRODUCTS IS SIMPLE AND STRAIGHT FORWARD.
- ALL OPERATORS HAVE THEIR OWN RESPECTIVE OUTLETS.
- MAJORITY OF THE OPERATORS HAS ONE OR MORE MARKET OUTLETS TO SERVE TO.
- EXAMPLE: MULAUT ABATTOIR'S (PROCESSING)
  - EXPRESS FAST FOOD (SISTER'S COMPANY) WITH A FEW BRANCHES.
  - ROYAL BRUNEI CATERING, (SISTER'S COMPANY) ROYAL BRUNEI AIRLINES FOOD AND CATERING SERVICES AND ALSO OTHER VARIOUS GOVERNMENT AGENCIES AND HOTELS.
- BMC FOOD INDUSTRIES SDN. BHD, (PROCESSING)
  - BRUNEI MEAT COMPANY (RETAILING)

Promotions

- NORMALLY DONE BY THE GOVERNMENT AGENCIES OR THE INDIVIDUAL COMPANIES OR JOINT EFFORTS OF THE TWO.
- CLOSELY ASSOCIATED WITH THE HALAL PROGRAM OF THE GOVERNMENTS, THEREFORE THE PROMOTIONAL ACTIVITIES ARE NORMALLY DONE IN A JOINT EFFORTS BASIS.
- THE MOST POPULAR PROMOTIONAL APPROACHES USED IS THROUGH
    - THE EXPOSITIONS I.E. INTERNATIONAL BRUNEI HALAL EXPO 2007 HELD IN BRUNEI IN AUGUST 2007 ASIDE FROM SOME OTHERS SMALL SCALE EXPOSITIONS HELD THROUGHOUT THE COUNTRIES. THE INTERNATIONAL EXPOSITIONS HELD IN OTHER COUNTRIES ARE ALSO PARTICIPATED BY THE GOVERNMENT AND PRIVATE AGENCIES.
- THROUGH POSTERS AND BANNERS IN SOME MAJOR STREETS AND HIGHWAYS
- SERVES AS A SPONSORING AGENCIES FOR ANY MAJOR NATIONAL EVENTS.
- TELEVISION, NEWSPAPERS. AND RADIO ARE OCCASIONALLY DONE DUE TO ITS HIGH COSTS.

Conclusion

&

Recomendations

Conclusion

Conclusion

- less competitive to the world markets due to
  - its higher cost of production and processing and
  - the market price offered is quite expensive.
- The target clients are the higher end users whom preferred the best premium quality and halal.
- At present, the demand is still great and encouraging and most of the existing operators are not facing any critical problems with their marketing.
- But over time, since Brunei is a small country with small economy and population, the local demand will be fully saturated and subsequently the operators will no longer enjoy receiving the current offered prices which is definitely be going down.
- The processors have to sort outside markets for their respective products where the demand is great and more than the total capacity of the overall present operations. As known the global demand now is on the raise especially in the halal processed products which is normally associated with the processing of livestock-based products. The world population of Muslim people world wide is about 1.8 billion people and requires at least ----metric ton worth US$ --- of halal food.
- Brunei Darussalam being one of the world major players in the verification and certification of halal products should also take the advantage of these opportunities.
- Thus, the need of the local production of processed food to be accelerated is urgent agenda

Recommendations

- Brunei concentrates on his own broilers, goats, cattle and buffaloes using high technologies and modern method of production.
- Upgrading the existing conventional rearing method to high technology management.
  - Broiler: Hi-Tech. Closed House
  - goats, cattle and buffaloes need to be housed using feedlot system with cut grasses.
- more canning factories should be established, canning consumed half of the price of these products. to give pressure for more choices and styles of product presentation in the market.
- incentives in the form of knowledge and value added information should be considered given a priority . Rather than Supports in term of material which upon time left untouched and not in use..
- corporatize or privatize the state owned enterprises so that free competition can always be ensured says The monopolistic issue in commodities trading such as importation of live animals, rice, and sugar seems loosing entrepreneurs' confidence toward government efforts to develop the private sector.


THANK YOU VERY MUCH
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IMPACTS OF TRADE LIBERALIZATION ON THE FOOD PROCESSING INDUSTRIES OF INDONESIA: AN EXAMINATION OF STRUCTURE, CONDUCT, AND PERFORMANCE

(CPO, Flour, Soy beans, Meat and Fish industry)

Trade Research and Development Agency
Ministry of Trade, Republic of Indonesia

DEPARTEMEN PERDAGANGAN
REPUBLIK INDONESIA

Introduction

- A USDA Report (2003) showed that food and beverage processing industries in Indonesia amounted to US$ 10 billion in annual sales, and consisted of 4,681 businesses, varying from household business to multinational companies, and over 900,000 traditional home industries.

- Indonesia's food exports demonstrated an increasing trend for 2001 to 2005, except for fresh bovine meat, cold or frozen; edible meat; egg; dry fish; shrimp; spices, grain flour; processed chocolate and non-alcoholic beverage.

Intro…

- Imports in the food industry were dominated by dairy-based industries and flour-based industries.
- Food imports have demonstrated a positive trend during 2001-2005.
- Increases in many daily food needs have triggered increased import during 2001 to 2005. Increasing purchasing power in domestic market and relatively slow growth of domestic production led to increased imports of daily food needs.

Objectives Of Research

- To analyze the structure of food processing industry in Indonesia
- To analyze the development of Indonesia's food processing industry performance.
- To analyze the impact of trade liberalization on Indonesia's food processing industry performance.
- To formulate policy recommendation to develop Indonesia's food processing industries under trade liberalization.

PERFORMANCE IN
FOOD PROCESSING INDUSTRIES

Total Food Industry Company In Indonesia

Industry Code	Description	Year					Trend
		2000	2001	2002	2003	2004	(%)
ME							
151	Processing Foods	947	947	949	951	1037	1,88
152	Milk	41	39	41	39	42	0,48
153	Grain Mill Processing	832	796	799	740	746	-2,87
154	Other Food	2582	2509	2501	2440	2542	-0,59
155	Beverages	259	253	261	244	272	0,62
Total		4661	4544	4551	4414	4639	-0,38
LE							
151	Processing Foods	385	372	372	429	473	5,70
152	Milk	17	20	20	20	20	3,30
153	Grain Mill Processing	167	155	155	144	136	-4,73
154	Other Food	401	416	418	426	429	1,60
155	Beverages	58	63	65	72	78	7,53
Total		1028	1026	1030	1091	1136	2,65

Note: LE: Large Enterprise; ME: Medium Enterprise

Source: Central Biro Statistic (CBS), 2004

Number Of Workers Of Large And Medium Manufacturing By 3 Digit ISIC, 2000-2004

Industri Code	Description	Year					Trend (%)
		2000	2001	2002	2003	2004	
151	**Processing Foods**	170.218	169.198	213.621	253.914	332.893	19,09
152	**Milk**	6.897	7.904	8.991	9.287	9.602	8,58
153	**Grain Mill Processing**	97.004	91.228	83.903	77.486	74.998	-6,55
154	**Other Food**	299.620	290.019	292.660	286.224	285.902	-1,06
155	**Beverages**	23.634	25.374	25.710	26.278	29.667	5,02
Total		597.373	583.723	624.885	653.189	733.062	5,36

Source: CBS, 2004

Value Added Of Large And Medium Manufacturing By 3 Digit ISIC, 2000-2004

(Billion Rupiah)

Industri Code	Description	Year					Trend (%)
		2000	2001	2002	2003	2004	
151	**Processing Foods**	10384	15153	16836	20181	26767	24.36
152	**Milk**	1289	2050	4517	2706	3015	21.86
153	**Grain Mill Processing**	5116	5535	5543	4107	4465	-5.55
154	**Other Food**	8713	10463	11715	13411	12877	10.84
155	**Beverages**	1488	1533	1880	2052	2049	9.76
Growth (%)		-	28.7	16.6	4.9	15.8	

Source: CBS, 2004

Shares of Product Exported of Large and Medium Manufacturing By 3 Digit ISIC, 2000-2004 (%)

Industri Code	Description	Year					Trend (%)
		2000	2001	2002	2003	2004	00-04
151	**Processing Foods**	70.41	78.18	61.58	59.82	58.38	-6.22
152	**Milk**	7.99	12.09	6.49	2.08	15.46	-4.30
153	**Grain Mill Processing**	55.17	61.2	41.87	39.42	38.76	-10.83
154	**Other Food**	38.17	43.18	41.73	42.19	32.03	-3.67
155	**Beverages**	87.83	76.7	24.01	46.26	17.52	-31.13

Source: CBS, 2004

Number of Establishments by Foreign Direct Investment, 2000-2004 (unit)

	Description	2000	2001	2002	2003	2004	Trend (%) 00-04
ME							
151	Processing Foods	68	65	68	73	82	5.03
152	Milk	6	6	8	6	7	3.13
153	Grain Mill Processed	25	48	49	28	20	-9.38
154	Other Food	52	86	88	48	49	-6.78
155	Beverages	22	21	23	23	27	5.13
LE							
151	Processing Foods	61	48	49	59	71	5.23
152	Milk	6	5	6	6	7	5.03
153	Grain Mill Processed	13	26	26	17	10	-9.06
154	Other Food	35	55	56	38	40	-1.02
155	Beverages	18	12	14	20	22	9.55

Source: CBS, 2004

TRADE POLICY ISSUES

Tariff Policy

- To fulfill its commitments in the Uruguay Round, Indonesia implemented significant changes in its bound MFN tariffs over the period 1996-2003 (Minister of Finance Decree No.378/ KMK.01/1996)
- In 2004, Indonesia adopted a new tariff classification under the "ASEAN Harmonized Tariff Nomenclature" (AHTN) as part of Indonesia's commitments under AFTA (ASEAN Free Trade Agreement).
- Indonesia introduced the Tariff Harmonization Program for the period of 2005-2010. Under the Program, the average tariff reached 9.5 percent in 2006, with rates in the 0-10 percent range covering 8,365 tariff lines or 74.9 percent the total.

Indonesian Tariff

Product Name	Minimum Tariff									
	1995	1996	1999	2000	2001	2002	2003	2004	2005	2006
Animal/veg fats & oils & their cleavage products;	9.07	7.96	5.70	4.31	4.18	4.16	4.16	4.67	4.67	4.67
Beverages, spirits and vinegar.	35.52	112.84	113.45	110.72	110.72	110.72	110.72	108.90	108.90	108.90
Cocoa and cocoa preparations.	13.18	13.18	9.09	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Miscellaneous edible preparations.	19.37	19.19	17.37	7.29	7.29	7.29	7.29	7.66	7.66	7.66
Prep of meat, fish or crustaceans, molluscs etc	24.74	19.86	19.81	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Prep of vegetable, fruit, nuts or other parts of	27.04	21.65	21.59	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Prep.of cereal, flour, starch/milk; pastrycooks'	24.94	18.76	18.90	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Residues & waste from the food indust; prepr ani	5.24	4.07	4.09	1.73	1.73	1.73	1.73	1.70	1.70	1.70
Sugars and sugar confectionery.	12.01	8.54	6.97	3.75	9.45	9.45	5.00	5.00	5.00	5.00
Tobacco and manufactured tobacco substitutes	19.58	16.30	14.63	10.74	10.74	10.74	10.74	11.48	11.48	11.48

Source : WITS, Comtrade

Tariff Exemptions Or Concessions And Duty Drawbacks

- To increase the efficiency and the competitiveness of domestic industries, Indonesia provides certain tariff exemptions or concessions, in accordance with Indonesia's Custom Law (Law 10/1995)
- Some of the industries granted tariff exemptions or concessions include aircraft maintenance, public transportation, energy and telecommunications.
- Indonesia is also implementing a Duty Drawback System on the re-export of imported inputs. This policy is stipulated in the Minister of Finance decree No. 580/KMK.04/2003.

Non-tariff Measures

The most important measures still in place are :

1) regulations on the timing of imports of rice and sugar;
2) verification and other requirements for the export of tin and granite; and
3) bans on the export of logs and sand.

Incentives

- Indonesia launched its new Investment Policy (Undang-Undang Penanaman Modal) on 29 March 2007.

- This policy is a government strategy to increase investment through bureaucratic simplification, law enforcement, tax incentive, and so on.

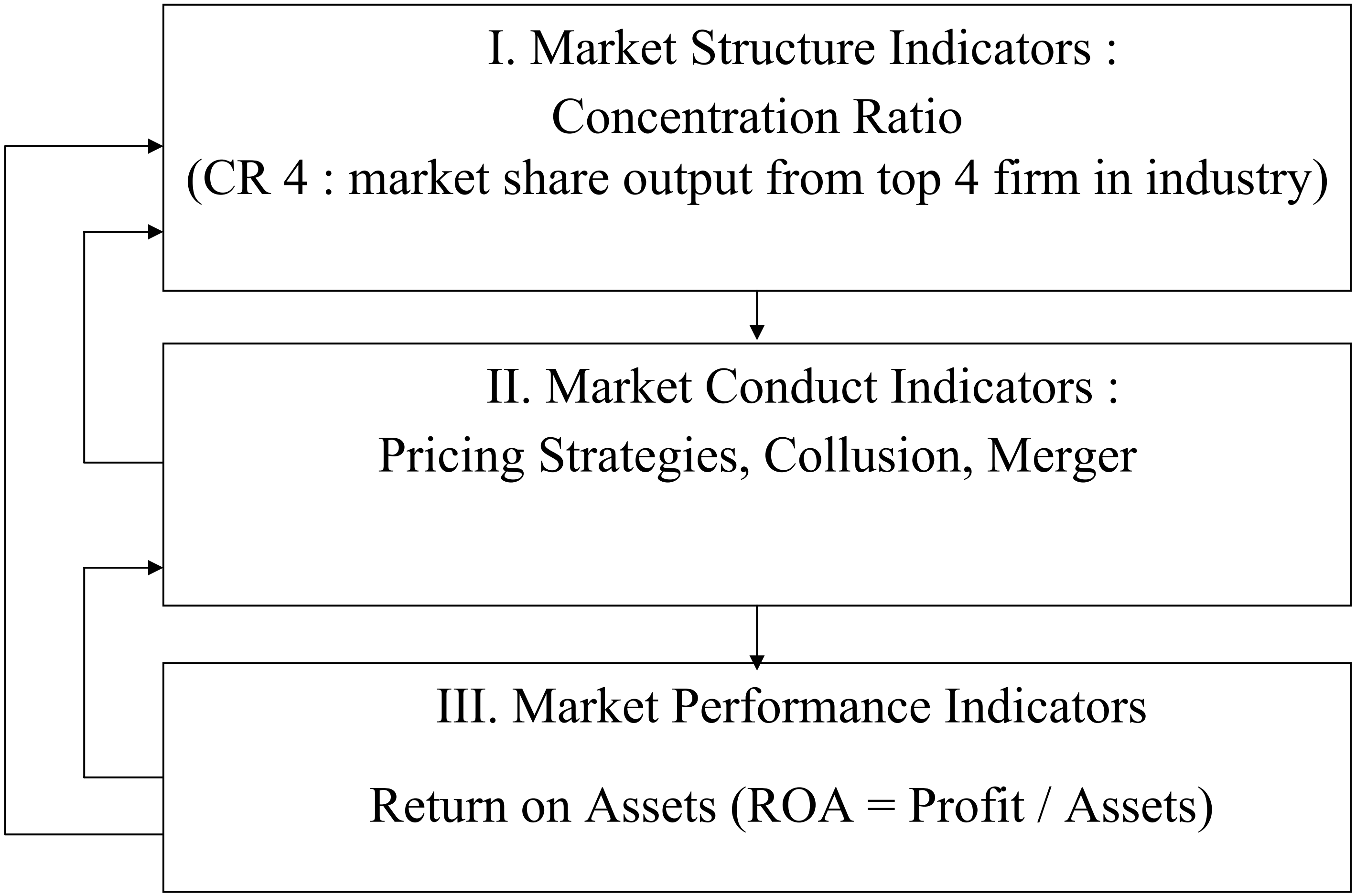
Policy and Regulation in Food Processing

- The majority of ingredients for food processing may be readily imported after satisfying Health Department regulations
- An important requirement for food imports is certification acceptable to the Muslim Association of Indonesia (MUI) that the product is *Halal*.
- Import documentation must be complete and in accordance with Government regulations to avoid costly delays.
- Import duties on most food ingredients, with the exception of sugar and rice, are five percent.

Policy and Regulation …

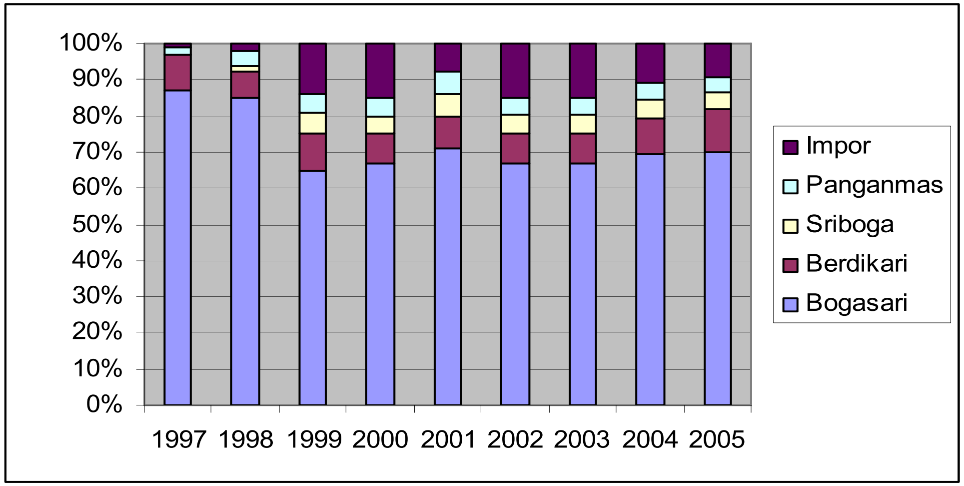
- Some ingredients may require certain documentations for import product registration at the Indonesian Food and Drug Administration (Badan Pengawas Obat-obatan dan Makanan / BPPOM), and in some cases at the Indonesian Department of Agriculture.

Research Methodology

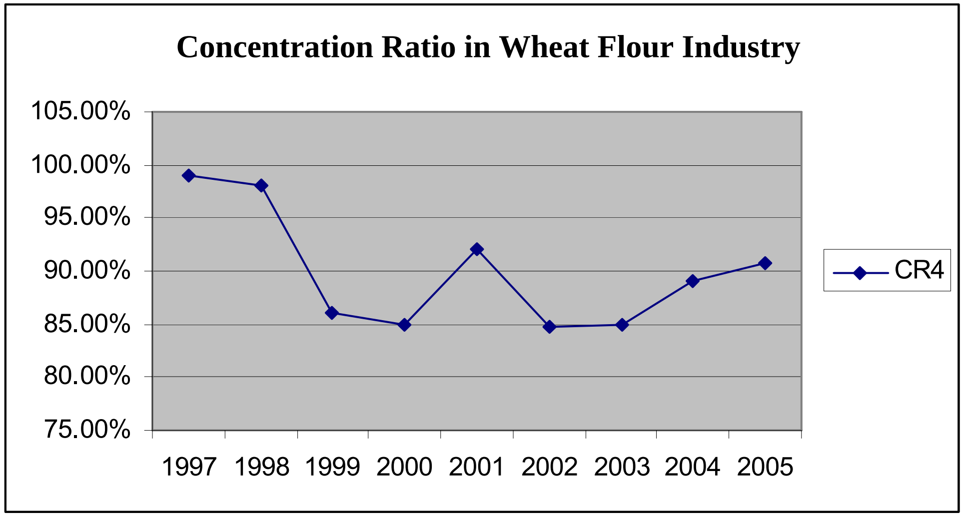


Wheat Based Industry

Market Structure



Bogasari is a main player in Indonesia's flour industry. But since 1999 imported wheat flour has become one of Bogasari's competitors.



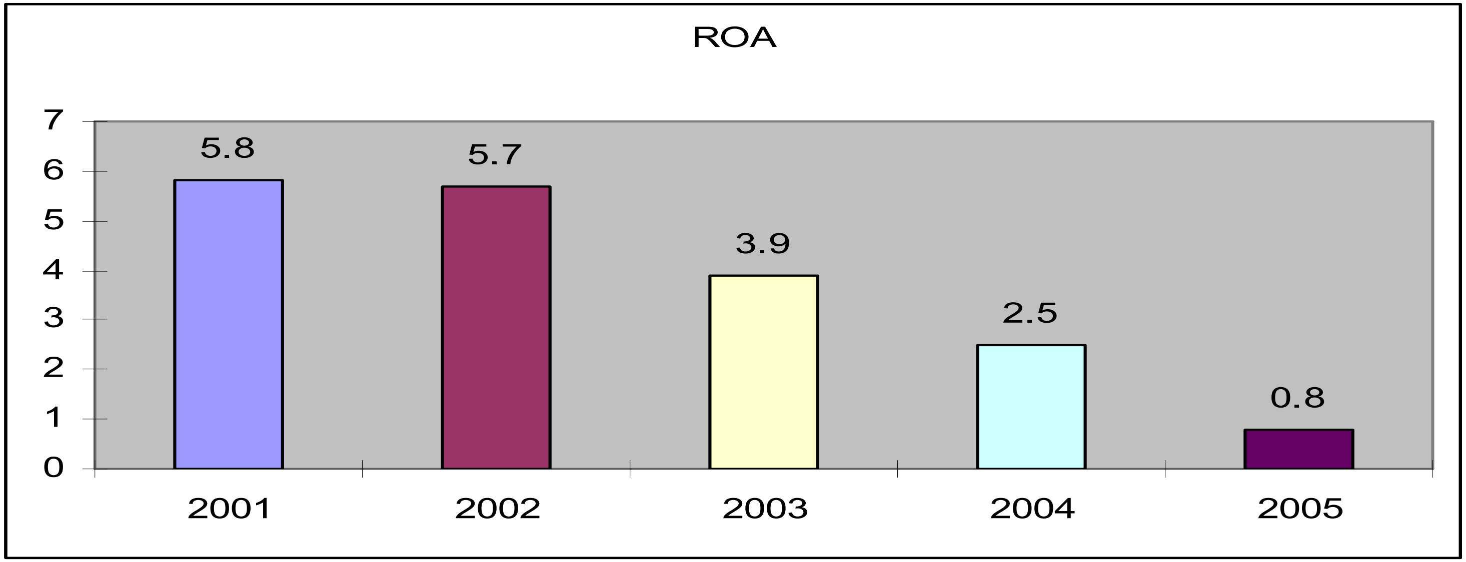
The market share of the top 4 firms tended to decrease from 1997 to 2005.

Source : BPS, calculated

Market Conduct

- Marketing Strategy → Product Differentiation→ trademark and product specification such as low, middle and high protein.
- Vertical Integration happened in one of the wheat flour firms with Indofood.
- The mid-sized wheat flour firms will witness mergers if there is trade liberalization in the flour market to strengthen the industry.

Market Performance

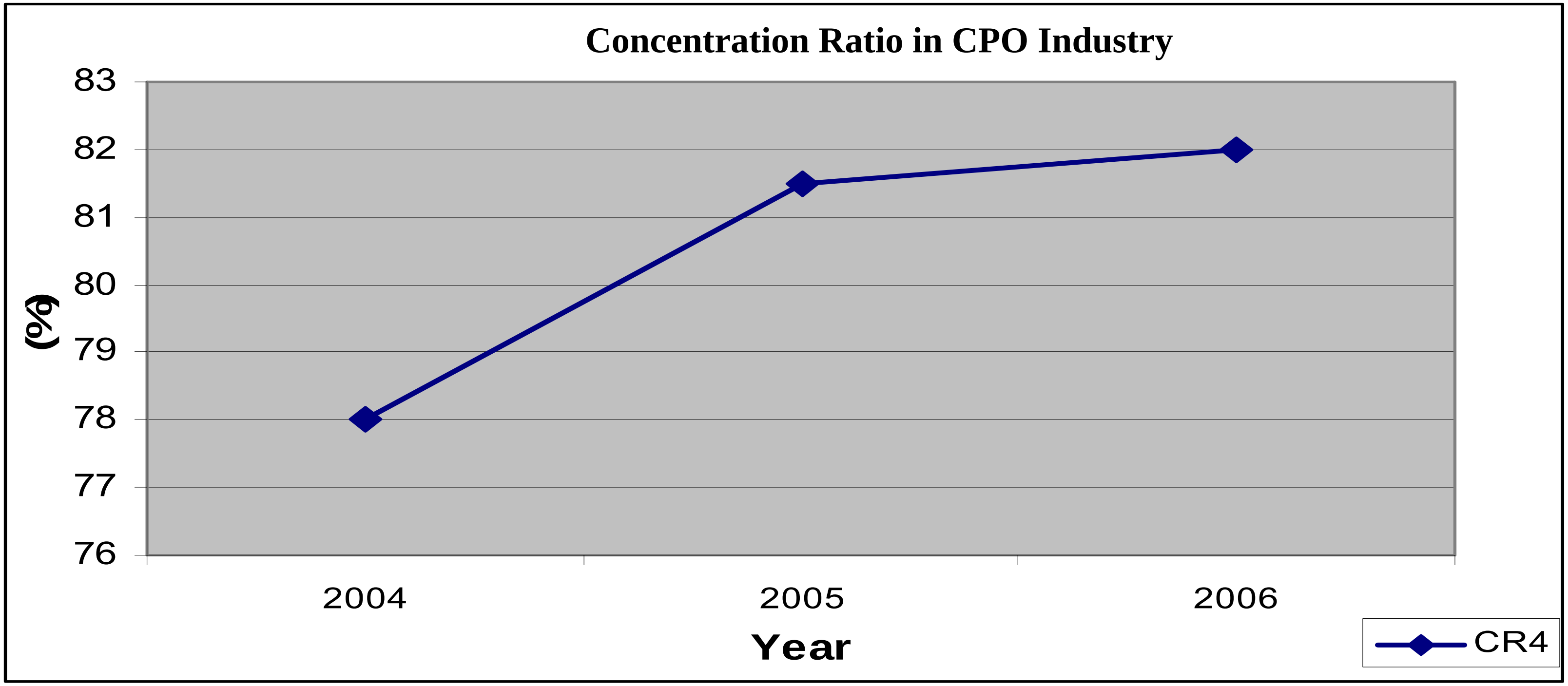


Source: Indofood (2006)

- The Return on Assets in the wheat flour industry decreased over 2001 to 2005.
- Related with market structure → changes in the biggest industries in wheat flour → more distribution in market share among the top four industry.

Crude Palm Oil Industry

Market Structure

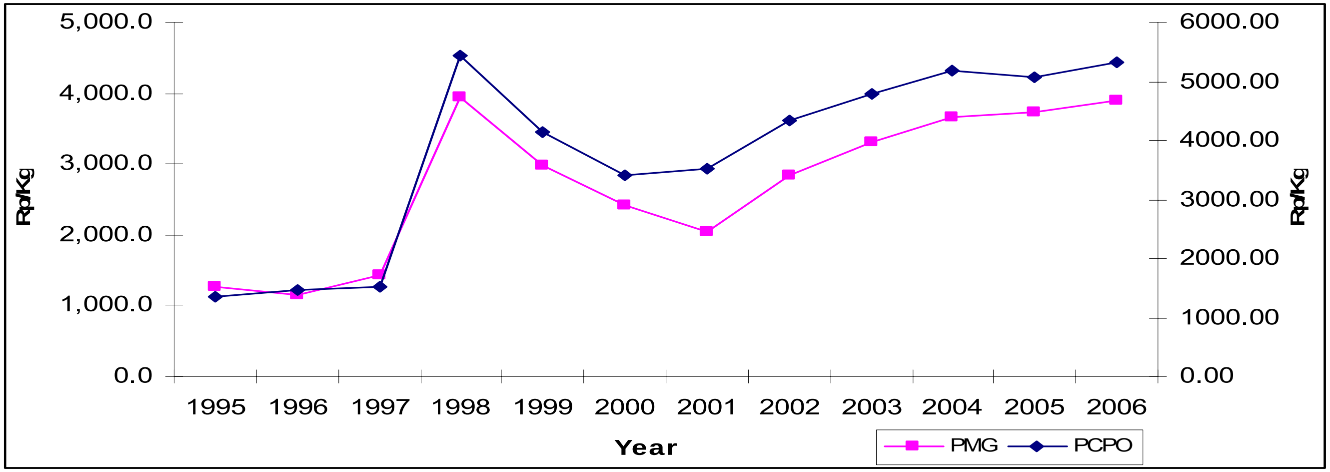


- Market concentration among the top four CPO firms tended to increase for the last 2 years, subject to vertical integration.

Market Conduct

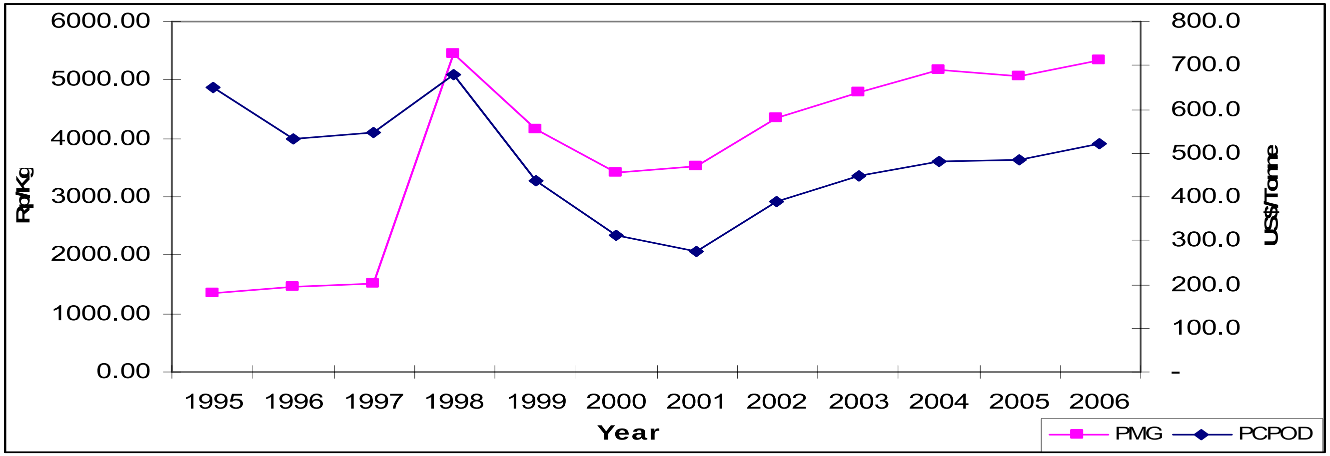
- Palm oil is one of the commodities that has raw materials from domestic sources → the behavior of the industry in response to liberalization is through cooperation between big firms to strengthen market share and set the price.
- Major groups are typically vertically integrated, owning primary production, processing and distribution facilities : Vertical integration happens between palm oil industry and cooking oil.
- Marketing Strategy → Product Differentiation → Trademark and product specification such as low, middle and high fat.

Market Performance



Development of Cooking oil and CPO Domestic Price

The domestic cooking oil price has a similar trend with the domestic CPO price.



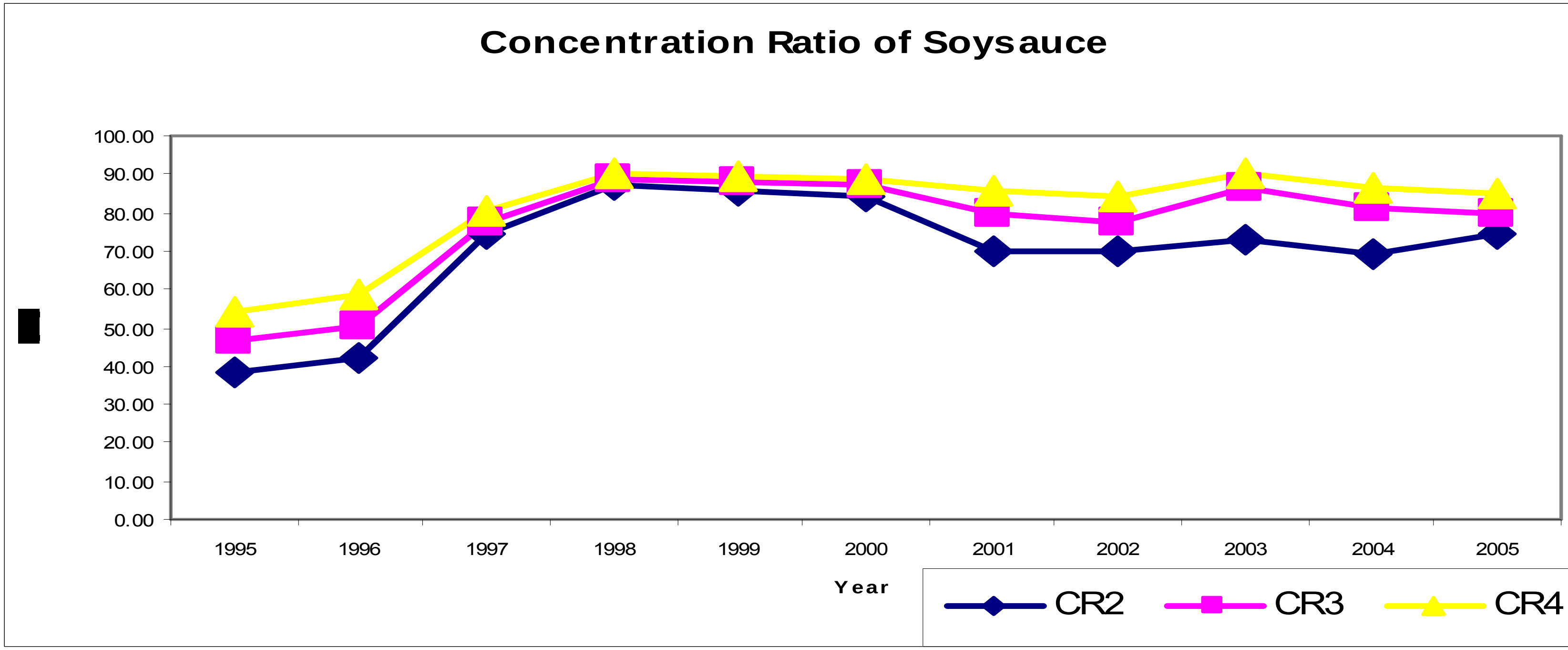
Development of Cooking Oil and CPO World Price

The world cooking oil price has a similar trend with the world CPO price.

PMG : Price of Cooking Oil PCPO : Price of CPO

Soybean Based Industry

Market Structure



Source : CBS, 2004, (calculated)

- Market concentration for the soy sauce industries has tended to increase, through strengthening strategy such as mergers and acquisitions.

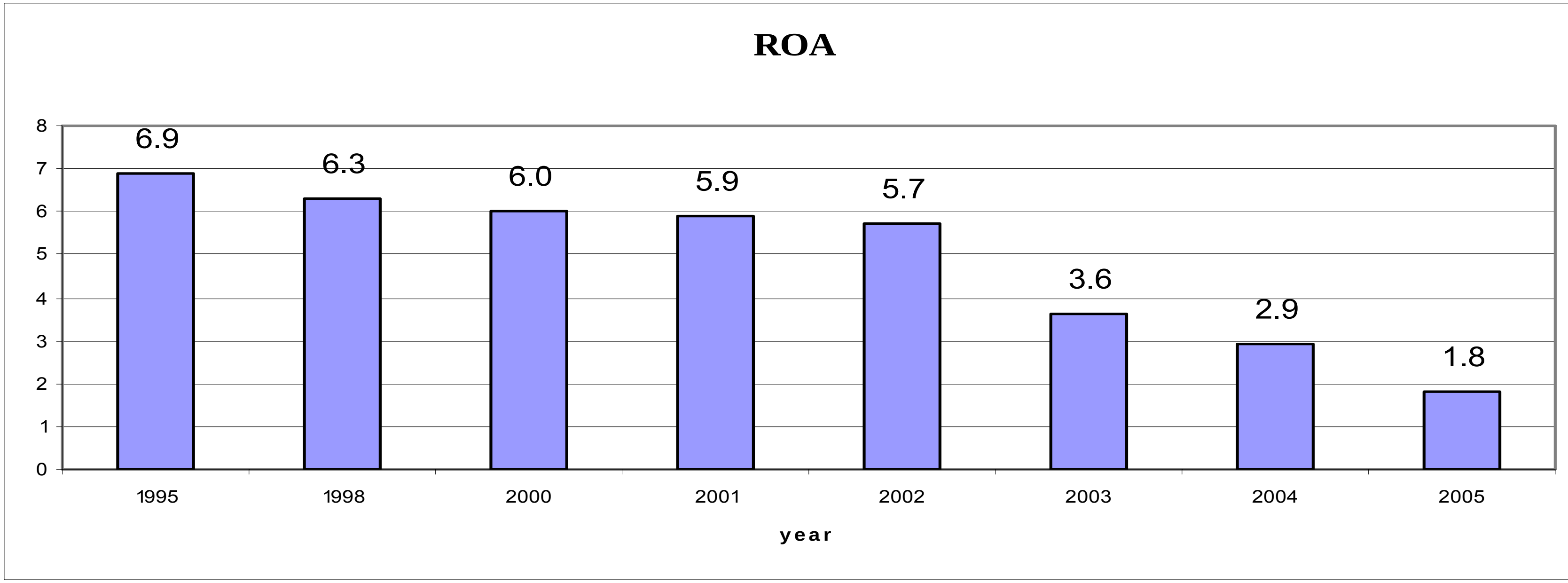
Market Conduct

- Mergers and acquisitions have been a strategy to strengthen market structure.

- Example : PT Heinz ABC Indonesia is a joint venture company that mingles ABC great brands with HJ Heinz Companies in 1999. Products under ABC brands have been market leaders in Indonesia for soy sauce, tomato ketchup, chili sauce, syrup, sardines, etc.

- PT. Heinz ABC has also expanded its market through strategic acquisition of top-ranked frozen snacks in the US and international favorites such as Honig dried soups in the Netherlands and ABC soy sauce in Indonesia (The world's second-largest soy sauce brand).

Market Performance

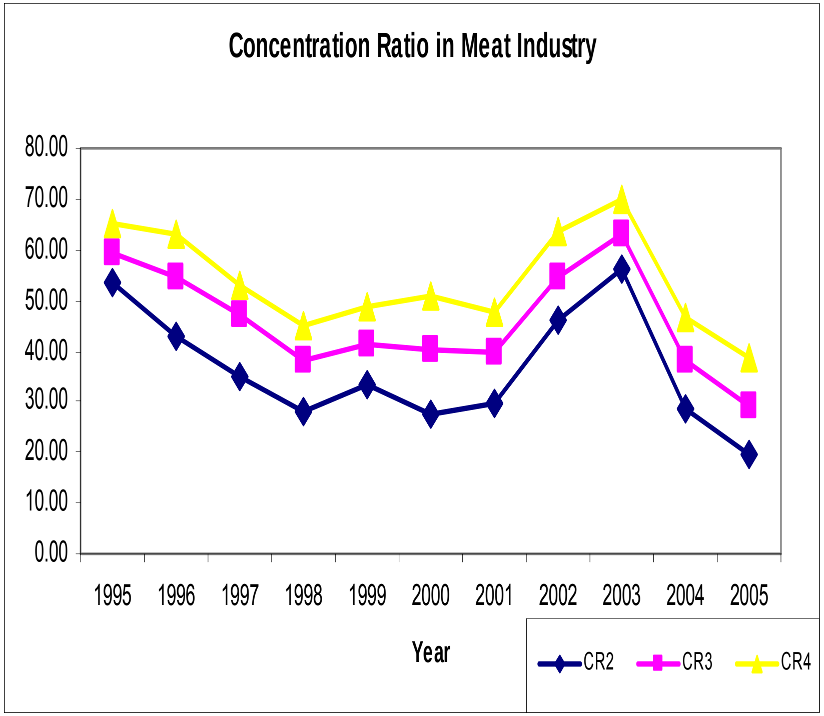


Source : CBS, 2004, (calculated)

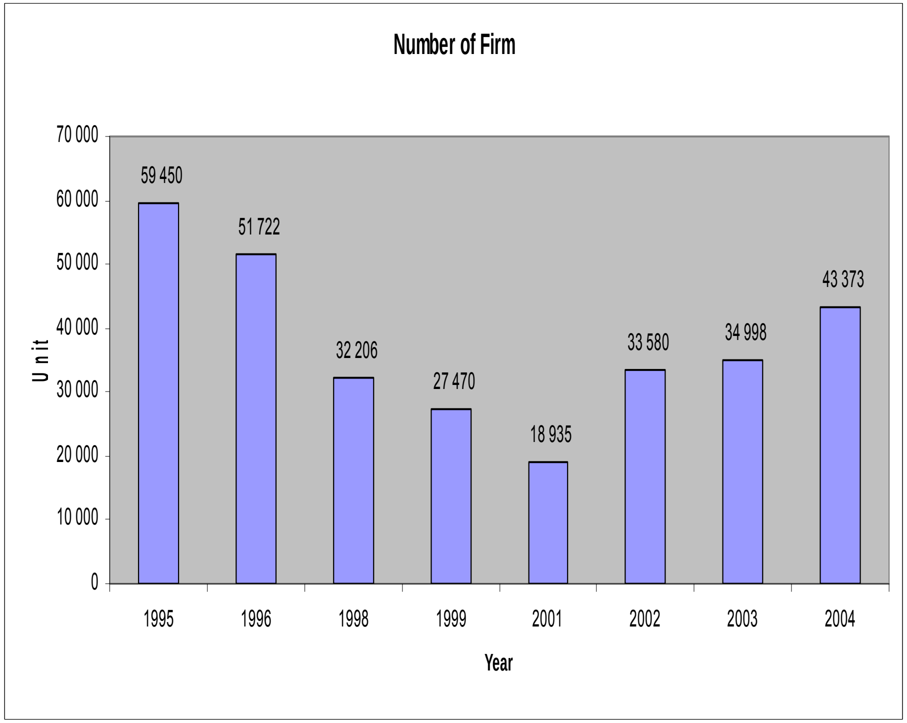
- ROA for soy sauce industries has tend to decrease
- ROA = sales growth rate / earning per share growth rate (Rajan, 1986)

Meat Based Industry

Market Structure



Source : CBS, 2004, (calculated)



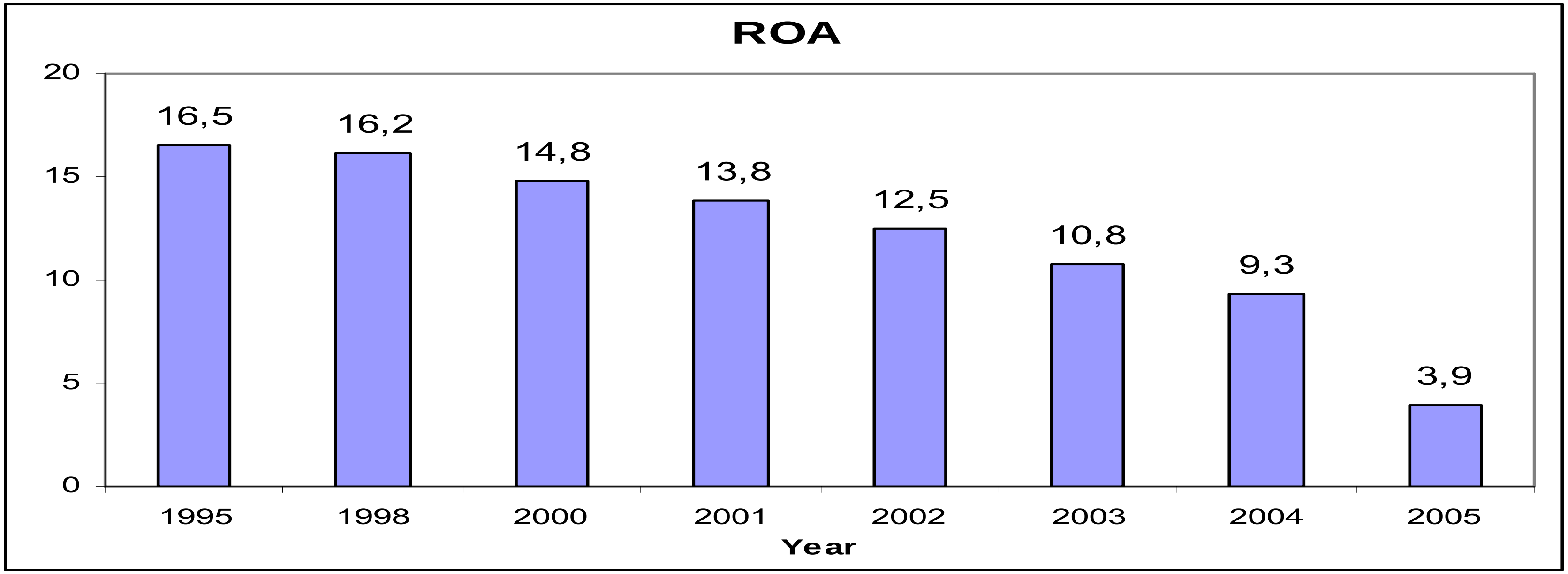
- Market concentration for meat-based industries has tended to decrease, subject to numbers of firm

Market Conduct

- Merger and vertical integration are strategy to strengthen market share.

- Example Charoen Phokphan : integration between livestock and its nugget and sausage products. Charoen Phokphan in the meat industry has a market share of 23%.

Market Performance

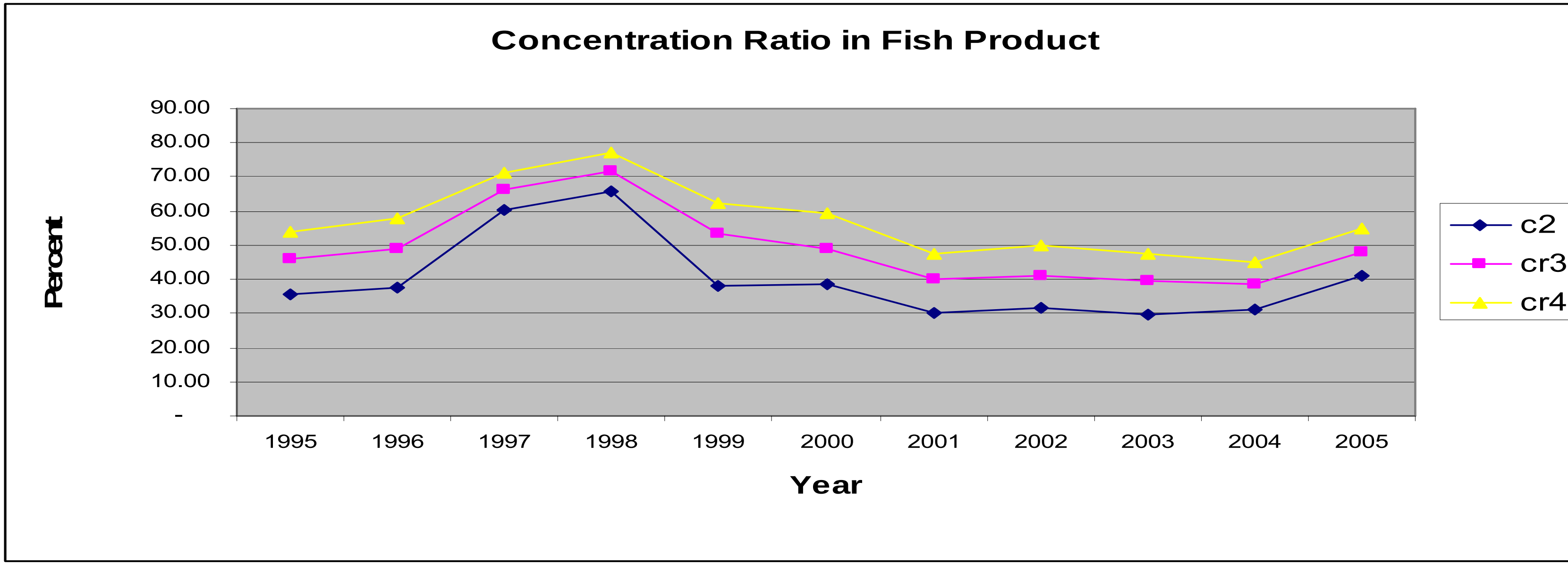


Source : CBS, 2004, (calculated)

- ROA for meat-based industries has tend to decrease, subject to decreases in market share.

Fish Based Industry

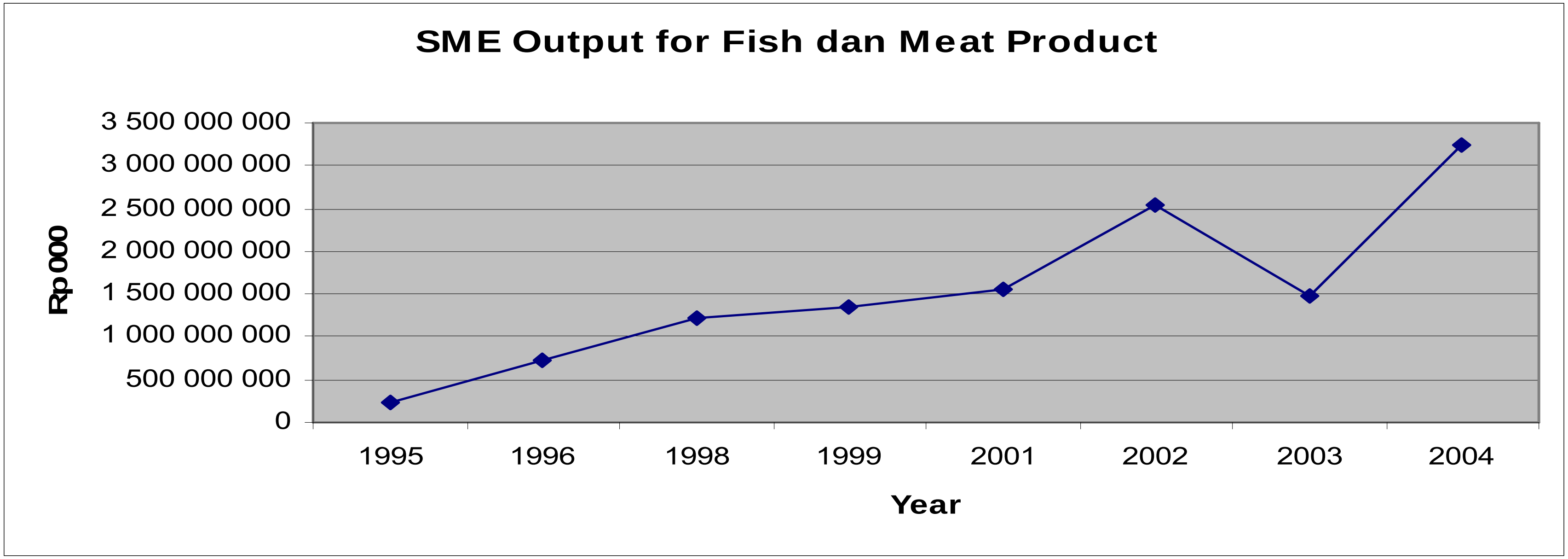
Market Structure



Source : CBS, 2004, (calculated)

- Market concentration for fish-based industries tend to be stable, with no significant increases in imported goods.

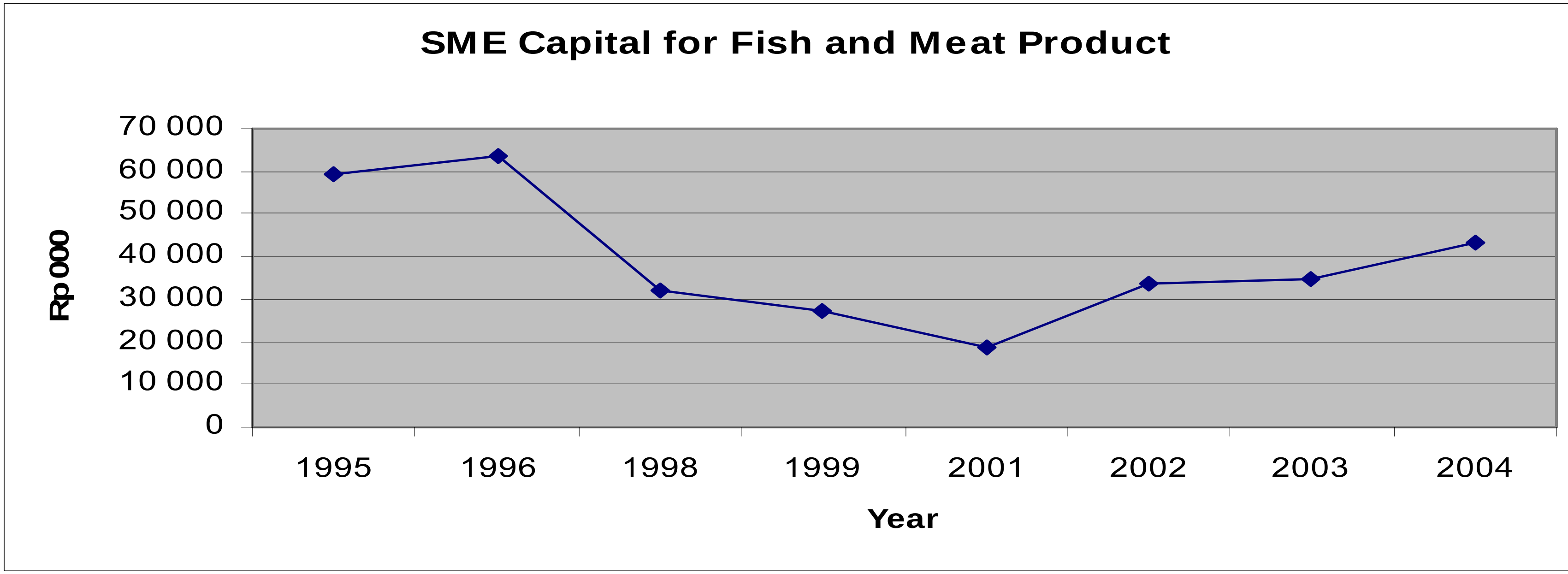
Market Conduct



Source : CBS, 2004, (calculated)

- Output for fish-based industries has tend to increase, subject to increased productivity of domestic producers.

Market Performance



Source : CBS, 2004, (calculated)

- Capital accumulation for fish (and meat) based industries has fluctuated, with slight decreases, subject to equal market share.

Conclusion

- The market structure for Indonesian food industries is more concentrated after liberalization → Oligopolistic market is the main characteristic, with decreased market share trends for the biggest player.
- Vertical integration and acquisition is a main strategy to strengthen market performance in Indonesia.
- Liberalization tends to decrease the return on assets or capital accumulation for Indonesian food industries.

Recommendation

- Needs policy to decreases market concentration, to eliminate firm power to set the price

THANK YOU

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MARKET LIBERALIZATI0N & ITS RELATIONSHIP WITH MARKET STRUCTURE, CONDUCT AND PERFORMANCE OF FOOD PROCESSING INDUSTRIES IN MALAYSIA

by

Abu Kasim Ali

Chubashini Suntharalingam

Asia-Pacific Economic Cooperation

Presentation Outline

- The Food Processing Industry (FPI) in Malaysia
- Scope of Study
- Objectives of Study
- Methodology
- Overview of Malaysian SMEs
- Sauces, dressings and condiments segment
- Sweet and Savoury Snacks Segment
- Conclusion
- Recommendations

The Food Processing Industry (FPI) in Malaysia

Introduction

The Malaysian FPI comprises the following segments:

- **Cocoa and cocoa products**
- **Cereals and flour based products**
- **Processed fish and seafood products**
- **Processed livestock products**
- **Processed fruits and vegetables**
- **Sugar and sugar confectionery**
- **Dairy products**
- **Coffee**
- **Tea**
- **Spices**
- **Edible products and preparations**

The Growth Areas in the MFPI

- FPI - targeted as a sector for greater development & promotion in the Malaysian manufacturing sector

- Major processed food segments identified as growth areas
  - Livestock & dairy
  - Marine
  - Cereal or flour based
  - Pepper & pepper based
  - Fruits and vegetables
  - Chocolate & sugar confectionaries
  - Palm oil-based
  - **Convenience foods**

Current Status of Malaysia's Food Processing Industry (MFPI)

- **The FPI accounts for 1.6 % of Malaysia's total exports of manufactured goods**

- **10 % of Malaysia's manufacturing output**

Source: Malaysia's Trade Performance Report 2006

- **Processed foods are exported to 80 countries ~ annual export value > than RM5 billion***

  Source: Food and Beverage FMM – MATRADE Industry Directory, 2005-2006

 * US1.00 = RM3.45

Exports of Processed Food

- RM2.8 billion (1996) → RM7.8 billion (2005)
- AAGR - 11.3%
- Seafood, cocoa and cocoa preparations, prepared cereal & flour preparations
- Factors contributing to the increment in export rate:
  - Increasing acceptance of Malaysia's processed foods in the international market
  - Expansion of food processing activities

Malaysia's top export destinations in 2006

- **Singapore - RM1.16 billion**
  - prepared cereals and flour preparations

- **USA - RM597.6 million**
  - cocoa & cocoa preparations, processed seafood & prepared cereals and flour preparations

- **Indonesia - RM586 million**
  - sugar and sugar confectionary cocoa & prepared cereals and flour preparations

Malaysia's top export destinations in 2006 – Cont'

- **Japan - RM364.1 million**
  - **cocoa & cocoa preparations, prepared cereals & flour preparations and processed seafood**
- **Netherlands - RM339.9 million**
  - **cocoa & cocoa preparations, processed seafood, and prepared or preserved vegetables & fruits**

Source: Malaysia's Trade Performance Report 2006

Number of Establishments in the MFPI

- **Total: 2,000**
- **Breakdown of food segments:**
  - **1323 establishments - Cereal and flour based products (grain, bakery and noodle products)**
  - **440 establishments - Other food products' (sugar, ice, nuts & nut products, snacks, crackers & chips)**
  - **131 establishments - Fish & fish products' segment**

Employment in MFPI

- **Total : 81,000 workers**
- **40% - cereal and flour based products' segment**
- **20% - Other food products' segment**
- **11% - Fish & fish products' segment,**
- **3 segments collectively employ 71% of total workforce in the MFPI.**

Scope of Study

- FPI - targeted as a sector for greater development & promotion in the Malaysian manufacturing sector
- The growth rate of Malaysia's processed foods' exports increased by 12% - RM2,754 million (1996) to RM7,822 million (2005) surpassed the growth rate of import processed foods at 8% over the same period
- These figures could indicate that the MFPI has benefited from liberalized trading environment
- However, no comprehensive & analytical marketing studies carried to study the effects of market liberalization on these industries
- This study aims to analyze the SCP of the convenience food sector within the MFPI

Why Convenience Foods?

- Widely demanded
- Achieved high global retail sale of US$40.1 billion in 2003, expected to grow to US$46.3 billion in 2007
- Advanced packaging techniques & sophisticated methods of preserving fresh foods → enabled Malaysian-prepared foods to penetrate overseas markets

Convenience Foods of Malaysia

- Foods in this sector:
  - Ready-to-cook & ready-to-serve products
  - Frozen meals or snacks
  - Retort-pouch-foods
  - Recipe-based ethnic foods & related ingredients - sauces, dried food stuffs and spices.

- Examples:
  - Asian style breads - ‘roti canai’
  - Steamed buns
  - Samosa
  - Curry puff
  - Pizza
  - Frozen dumpling

Objectives of Study

- **Major objective**
  To evaluate the market efficiency of Malaysia's food processing industry in terms of SCP resulting from trade liberalization

- **Specific objectives**
  - **To assess the market S & P of the sauces, condiments and dressings &, snacks and chips segments in Malaysia**

Specific Objectives – Cont'

Specific Objectives

s **To determine the market P of the sauces, condiments and dressings &, snacks and chips segments in Malaysia**

s **To analyze the impact of trade liberalization on the Malaysian FPI, including SMEs**

s **To recommend policies and strategies in order to increase market efficiency of the processed food industry in Malaysia**

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Methodology
- Approach & Data Sources

- **Measures of Market Structure**
- ***Measures of Market Conduct***
- ***Measures of Market Performance***
- **Secondary & *Primary data***

Overview of Malaysian SMEs

- **Definition - 2 criterias:**
  - **Number of full time employees**
  - **Annual sales turnover**

- **Out of 523,132 establishments:**
  - **SMEs accounted for 518,996 establishments (99.2 %)**
  - **Large enterprises (LEs) accounted 4,136 business establishments (0.8 %)**

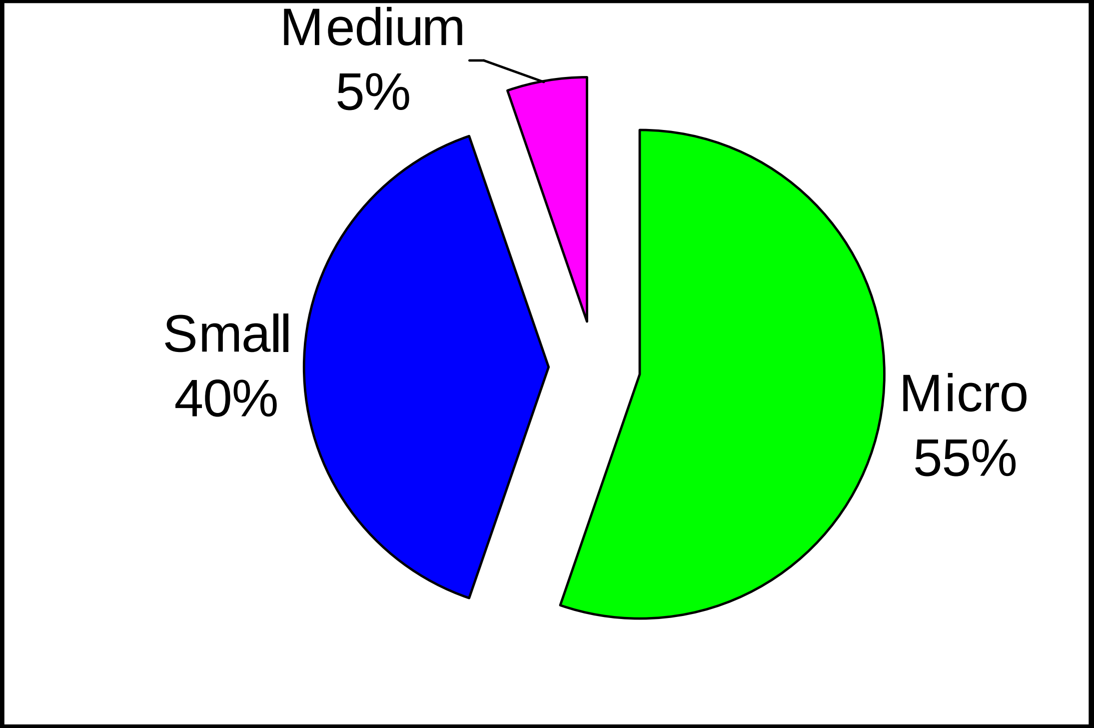
Source: Baseline Census of Establishments and Enterprises

Overview of Malaysian SMEs

- **SMEs by Sectors:**
  - **Services (449,004 establishments) - Largest numbers of SMEs**
  - **Manufacturing (37,886)**
  - **Agriculture (32,126)**

Food Processing Industry falls under the manufacturing sector

SMEs in Manufacturing Sector by Size



SMEs in the Manufacturing Sector by State

State	SMEs	%
Selangor	7,439	19.7
Johor	5,191	13.7
W.P. Kuala Lumpur	5,136	13.6
Perak	3,389	8.9
Pulau Pinang	2,287	6.0
Kedah	2,361	6.2
Sarawak	2,342	6.2
Kelantan	1,861	6.2
Pahang	1,751	4.9
Terengganu	1,637	4.6
Melaka	1,538	4.3
Sabah	1,420	4.1
Negeri Sembilan	1,186	3.8
Perlis	328	3.1
Total	**37,866**	**100**

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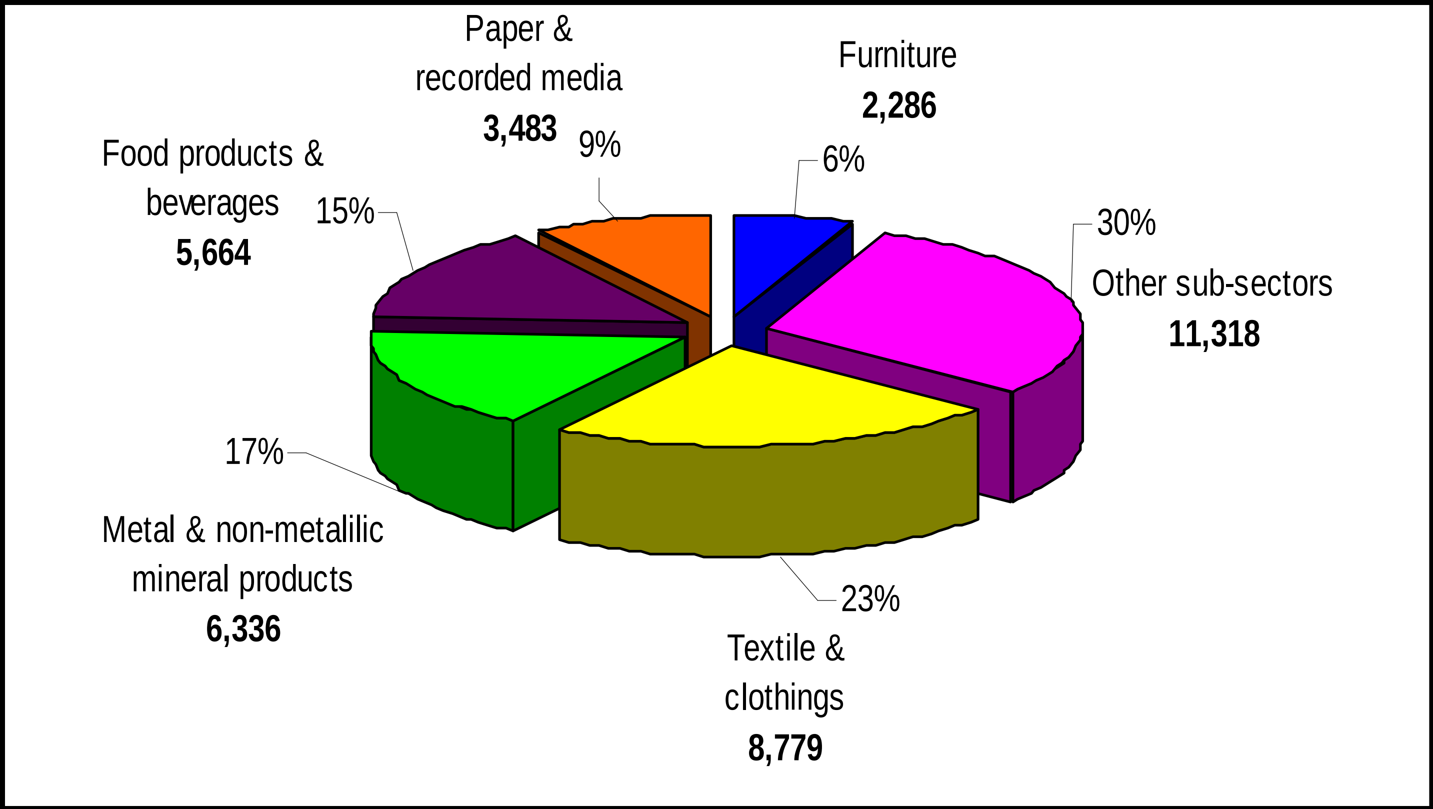
Output and Value Added of SMEs in The Manufacturing Sector

Size	No of entrprs	%	Output (RM bil)	%	Value added (RM bil)	%
Total SMEs	37,866	100	192	100	48	100
Micro	20,952	55	4	2	2	3
Small	14,955	40	68	36	22	46
Medium	1,959	5	119	62	24	51

SMEs in Major Manufacturing Segments



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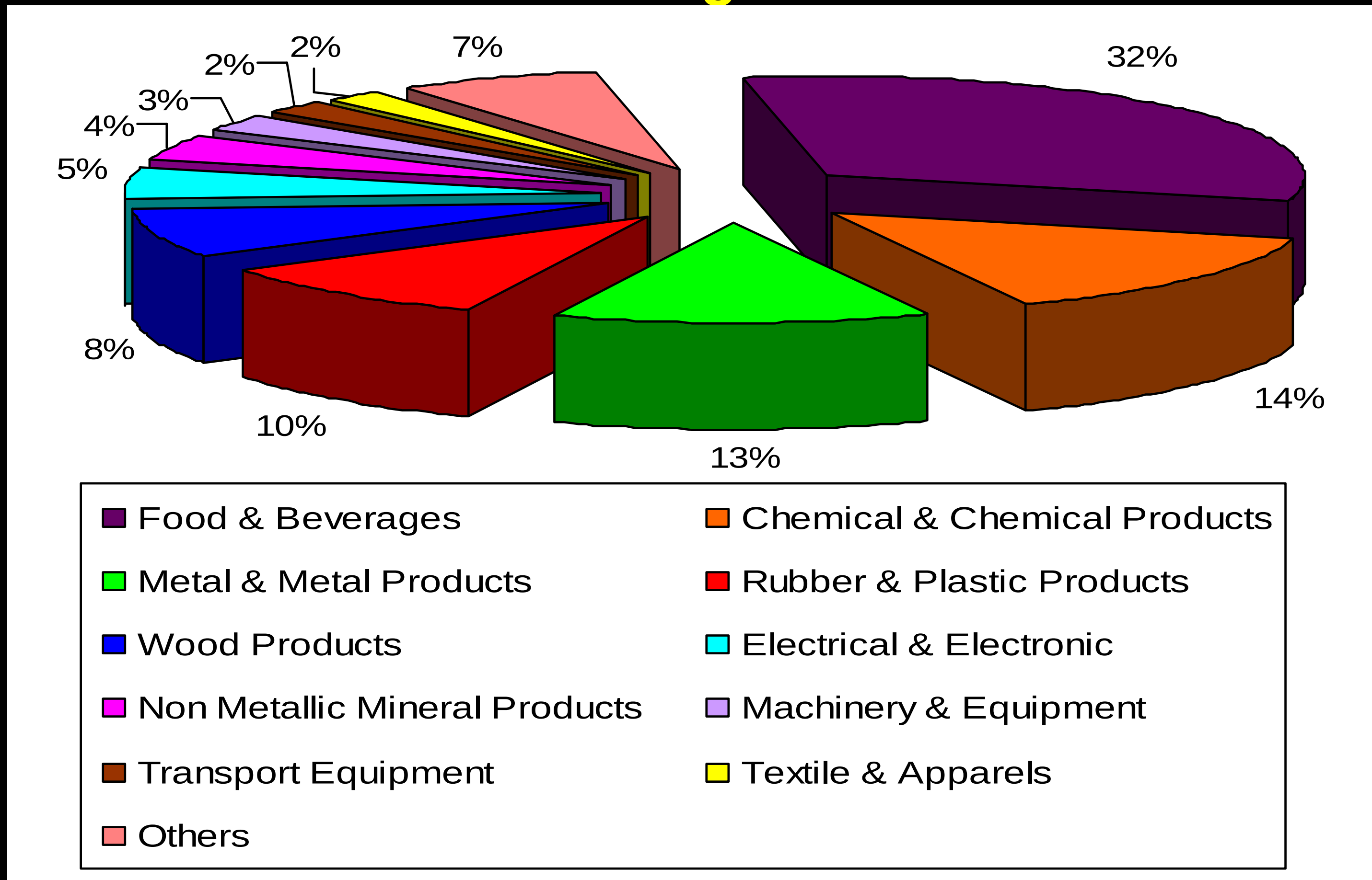
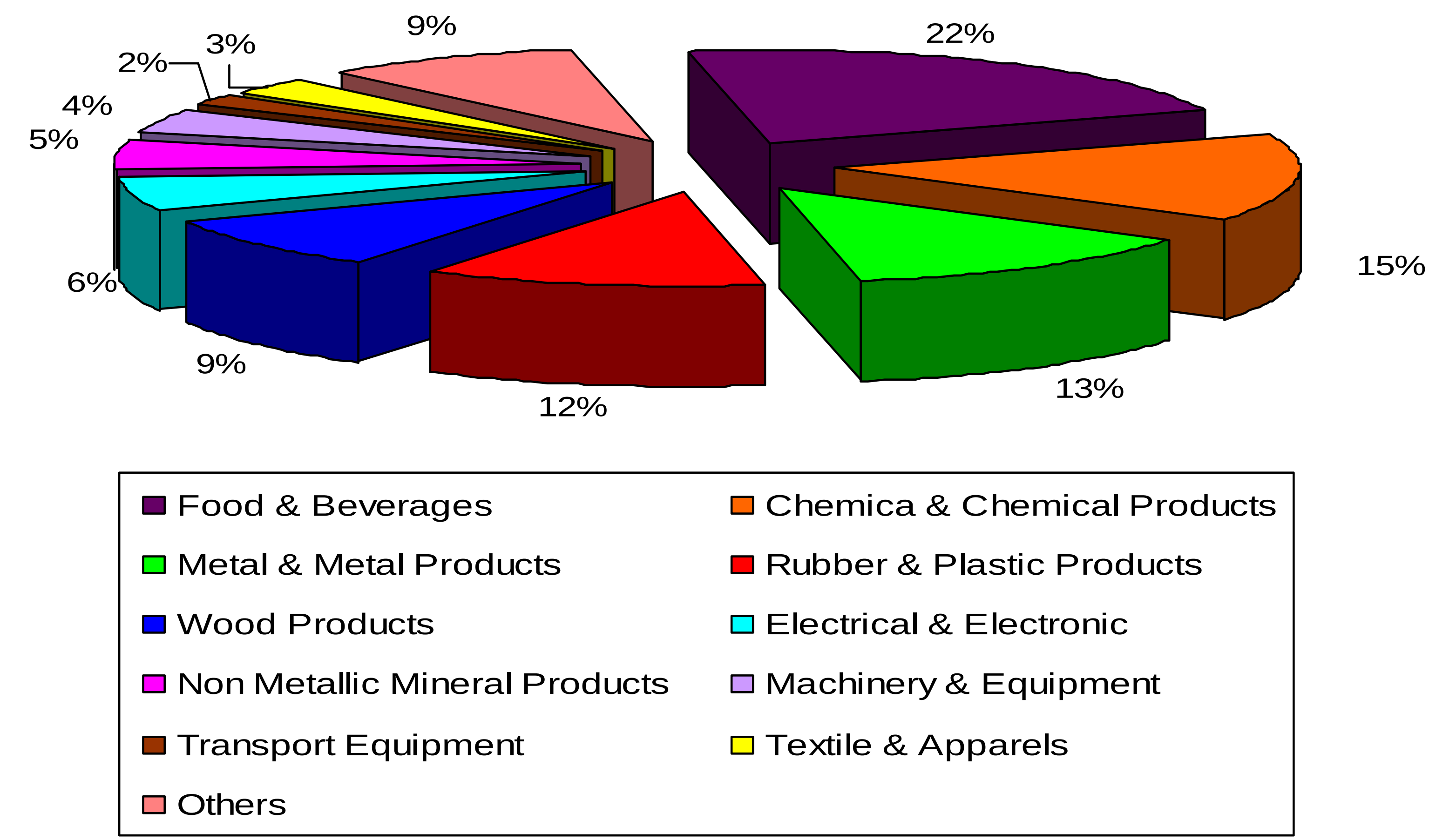
Share of Output Value by SMEs in The Manufacturing Sector



Share of Value Added by SMEs in The Manufacturing Sector



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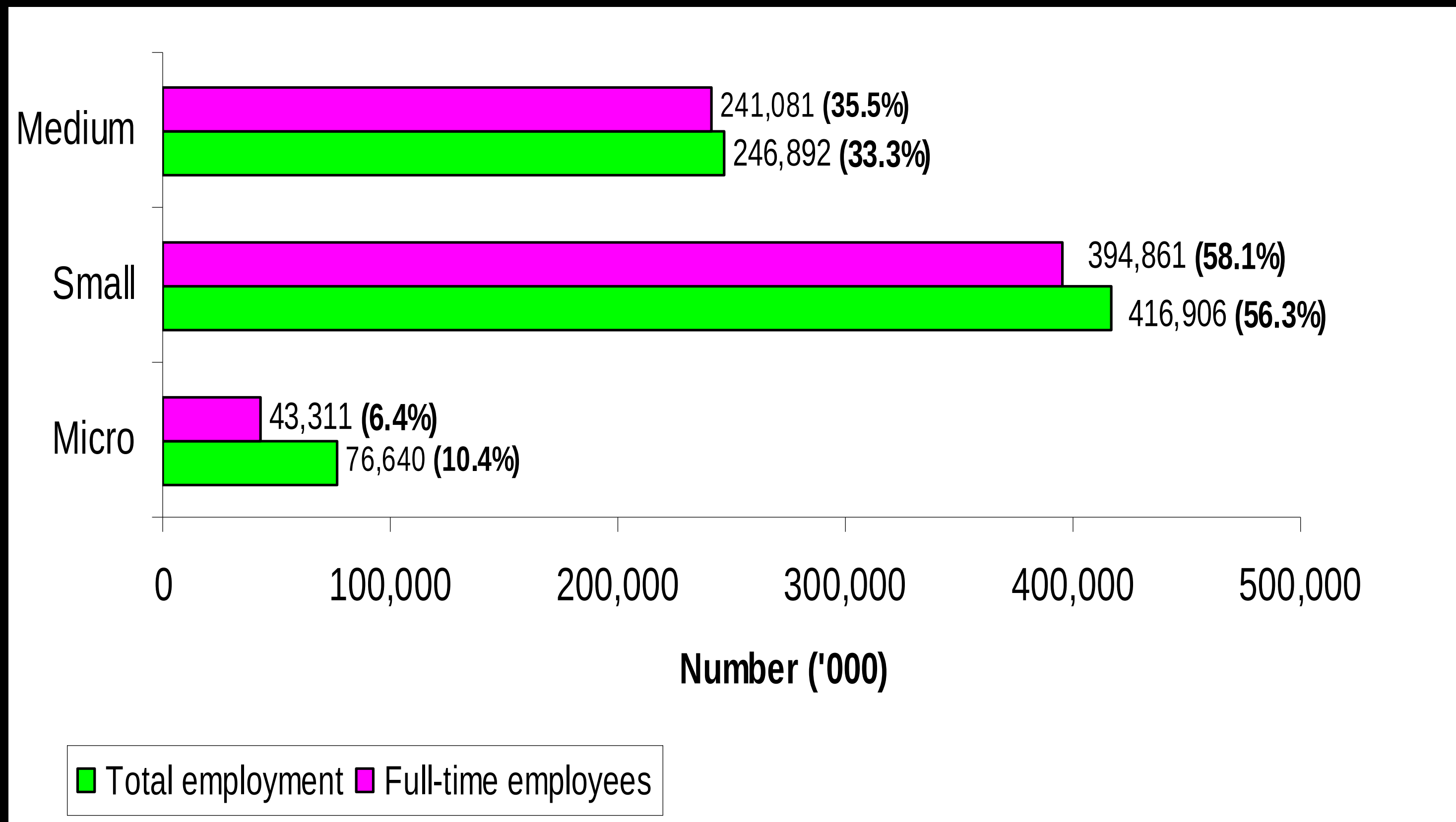
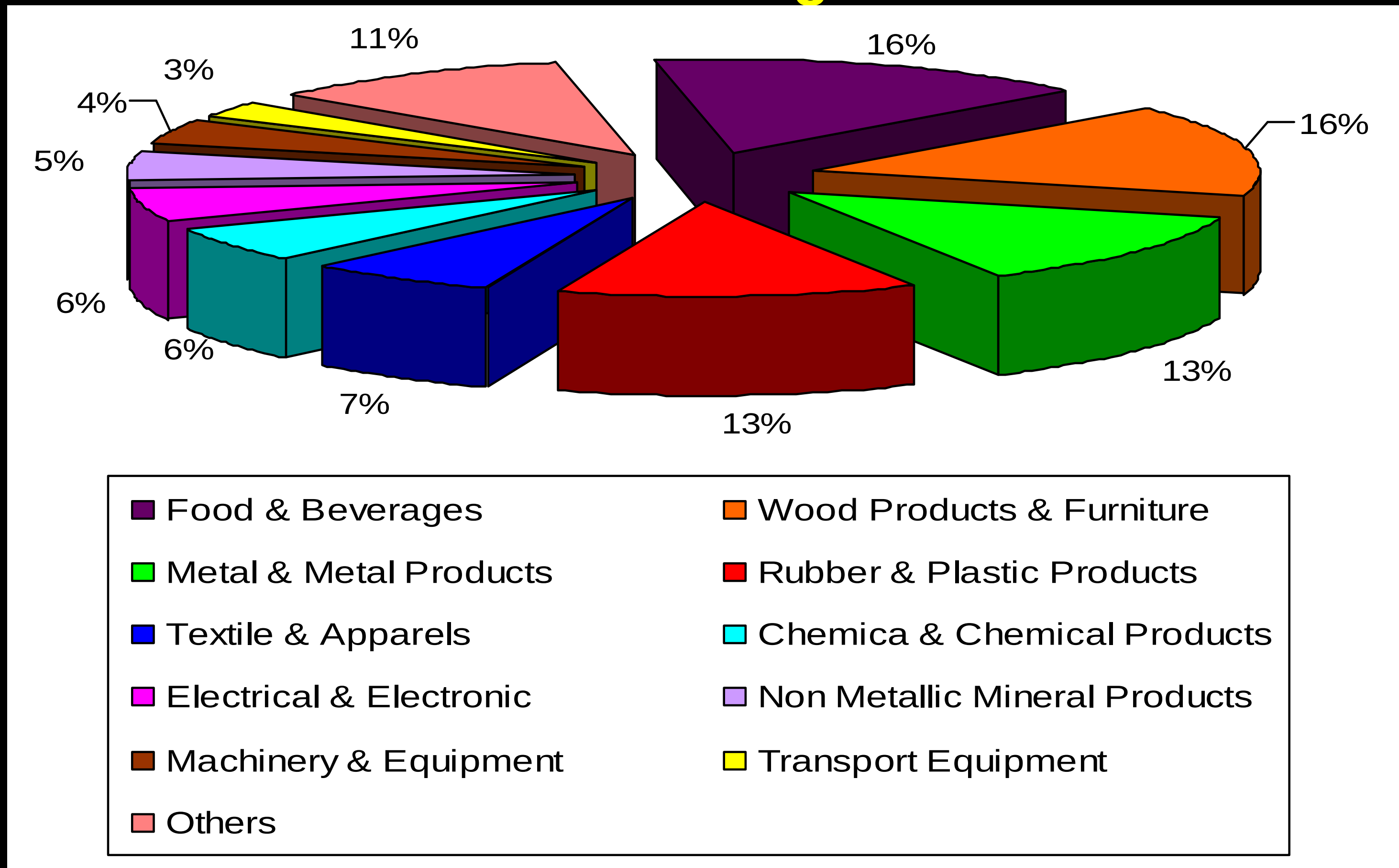
SMEs in Manufacturing Sector by Legal Status and Size

Legal Status	SMEs	%	Micro	%	Small	%	Medium	%
Total	37,866	100	20,952	55.3	14,955	39.5	1,959	5.2
Individual proprietorship	18,312	100	15,739	85.9	2,555	14	18	0.1
Partnership	4,180	100	2,396	57.3	1,770	42.4	14	0.3
Private limited company	15,124	100	2,757	18.2	10,521	69.6	1,846	12.2
Others	250	100	60	24	109	43.6	81	32.4

Employment in SMEs in Manufacturing Sector by Size



Employment Share in SMEs by Segments in The Manufacturing Sector



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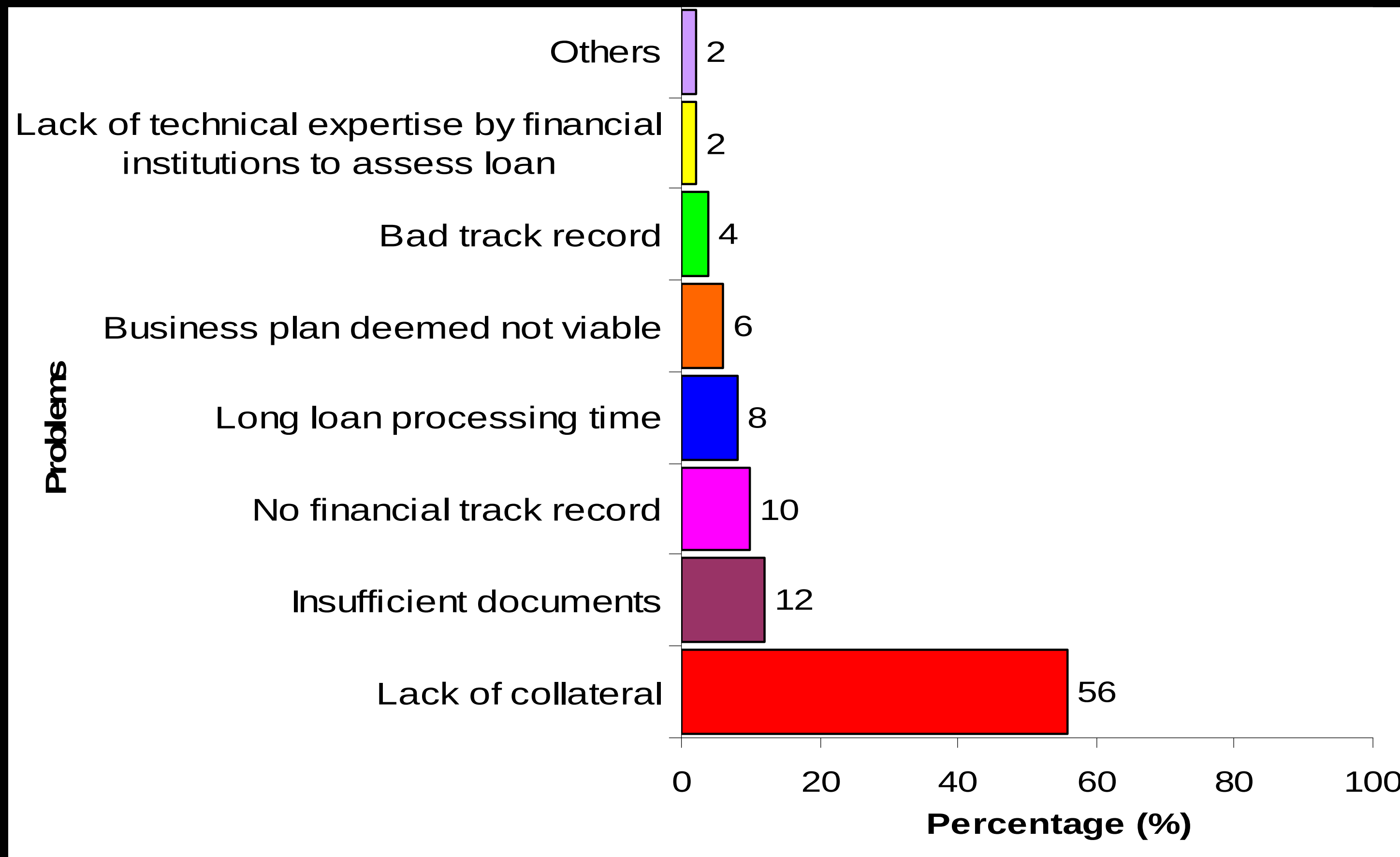
Sources of financing accessed by SMEs in the manufacturing sector

Financial Sources	SMEs	Micro	Small	Medium
Commercial banks/ finance companies	13.4	10.3	23.3	40.9
Own contribution/internally generated funds	34	31.4	44.4	38.6
Development financial institutions	2.7	2.9	2.1	2.3
Co-operatives	0.2	0.2	0.2	0.3
Government loans or grants	0.1	0.1	0.2	0.3
Bank Negara Malaysia SME Special Funds	0.3	0.3	0.3	0.7
Borrowings from friends & family	23.6	24.6	20.7	9.9
Others	25.7	30.1	8.7	6.8

Problems Faced by SMEs in Accessing Financing



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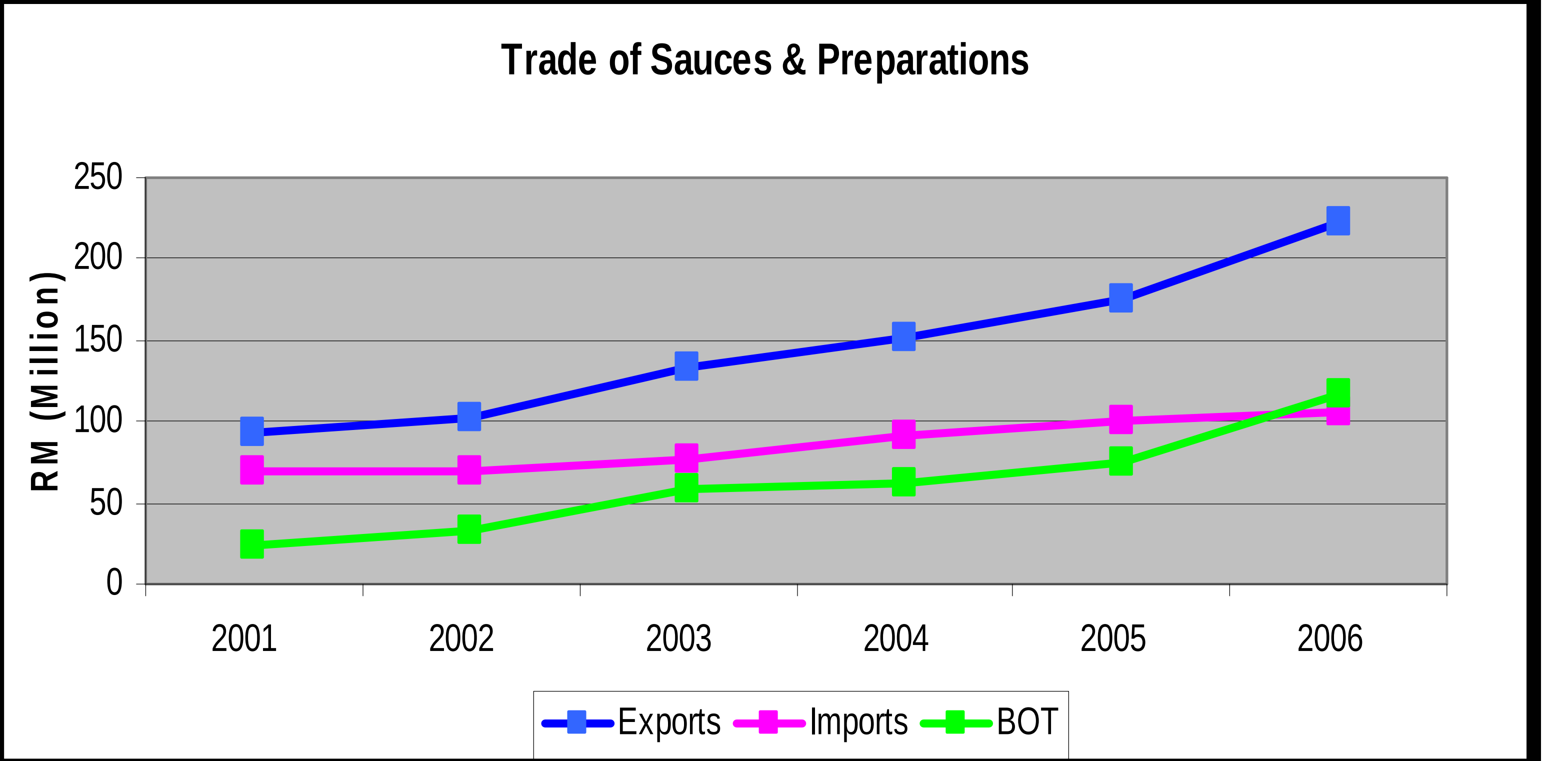
Distribution of SMEs by Key Indicators and Segments

	Share 2005 (%)			Share 1996 (%)	
Indicator Sub- sectors	**Total Output**	**Value Added**	**Employment**	**Value Added**	**Employment**
Food & Beverages	**33**	**22**	**17**	**16**	**13**
Chemicals & Chemical Products	14	15	6	10	3
Metal & Metal Products	13	13	13	10	10
Rubber & Plastics Products	10	12	13	14	14
Wood & Wood Products Including Furniture	8	9	16	13	20
Electrical & Electronics	5	5	6	7	7
Non-metallic Mineral Products	4	6	5	5	4
Machinery & Equipment	3	4	4	4	4
Transport Equipment	2	2	3	3	3
Textiles & Apparels	2	3	7	5	9
Others	7	9	11	11	13

Sauces, dressings and condiments segment

- Sauces And Preparations Nes And Mixed Condiments And Mixed Seasonings (HS 210390) 2001 - 2006



Retail sales of sauces, dressings and condiments

- Increased from RM917 million (2000) to RM1,050 million (2006) - increment of 14.6% with an AAGR of 2.8% for the 5 year period
- There are many players competing in the market due to low cost of production and high demand
- Consumers do not exhibit strong brand preference - they purchase any brands that are available on the shelves.

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Sales of Sauces, Dressings and Condiments by Subsector: Value 2001-2006 (RM million

Subsector	2001	2006	*AGR 2001-06	Changes (%) 2001/06
Tomato pastes and purées	5.3	6.6	4.7	25.9
Stock cubes	9.4	10.7	2.6	13.8
Gravy granules	6.3	7.1	2.6	13.8
Bouillon/stock cubes	15.7	17.8	2.6	13.8
Herbs and spices	391.5	442.8	2.5	13.1
Monosodium glutamate (MSG)	5.5	6	1.9	9.9
Chili sauces	68	79.1	3.1	16.3
Oyster sauces	38.6	45.3	3.2	17.2
Other table sauces	19.1	22.3	3.2	17

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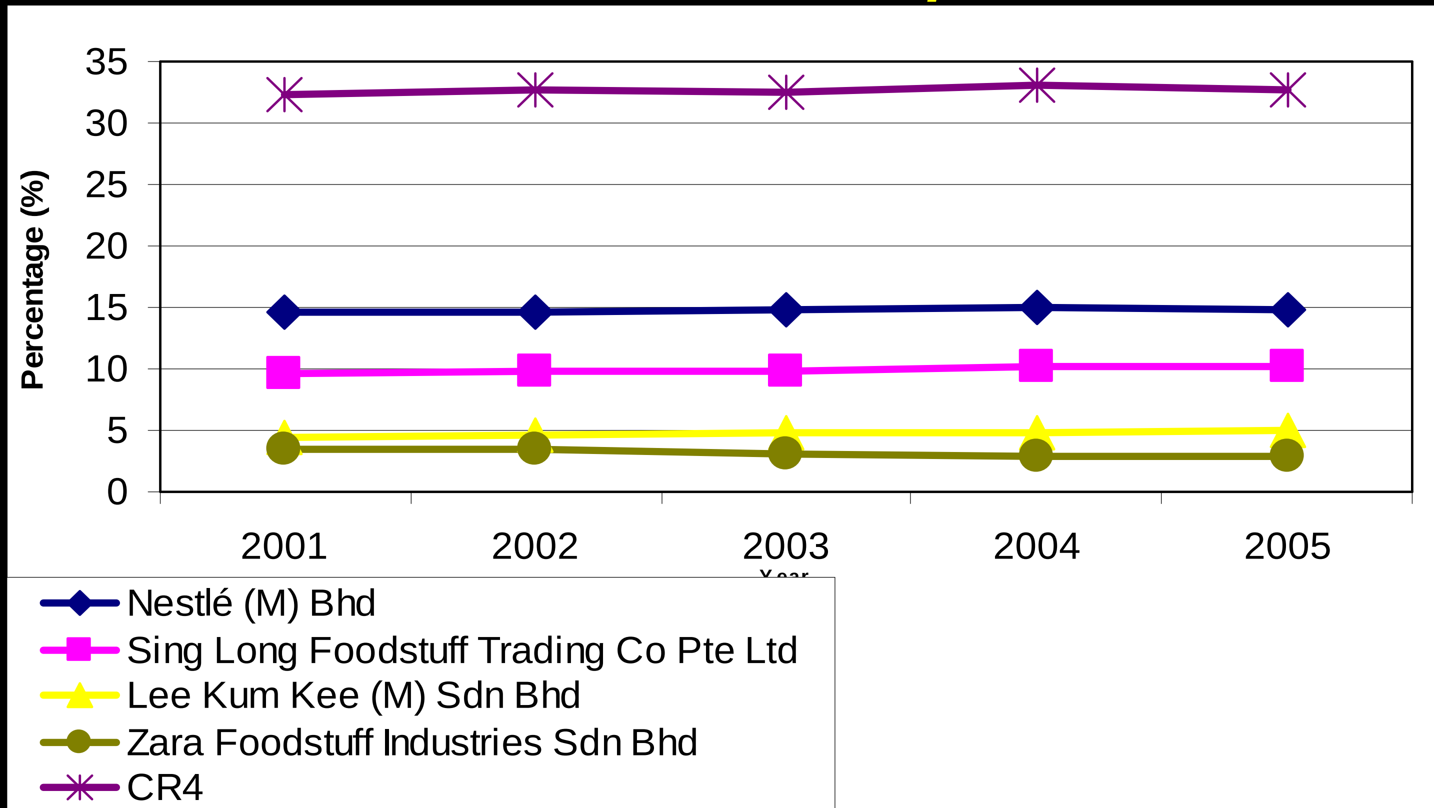
Sales of Sauces, Dressings and Condiments by Subsector: Value 2001-2006 (RM million

Subsector	2001	2006	*AGR 2001-06	Changes (%) 2001/06
Table sauces	125.7	146.7	3.1	16.7
Soy based sauces	109.8	124.2	2.5	13.1
Pasta sauces	13.7	17.6	5.2	28.9
Wet/cooking sauces	103.2	121.3	3.3	17.6
Ketchup	45.2	52.1	2.9	15.3
Regular mayonnaise	3.7	4.3	3.3	17.5
Mayonnaise	3.7	4.3	3.3	17.5
Regular salad dressings	5.9	7.2	4.2	22.7
Salad dressings	5.9	7.2	4.2	22.7
Pickled products	29.7	32.2	1.6	8.4
Othr sauces, dressings & cond.	61.9	71.4	2.9	15.3
Total	**916.6**	**1,050.40**	**2.8**	**14.6**

Market Structure Analysis of Sauces, Dressings & Condiments Segment

- *Concentration ratio – 4 Largest* ***Companies*** *Market Shares*



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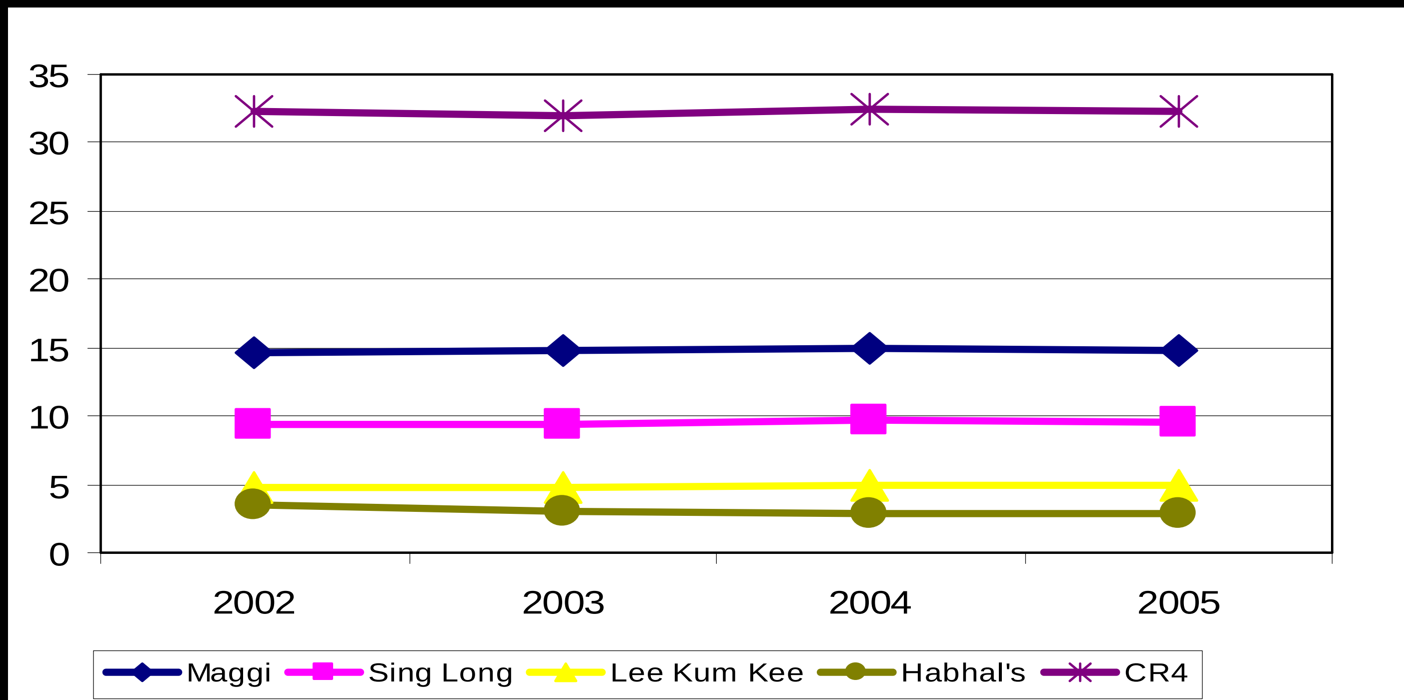
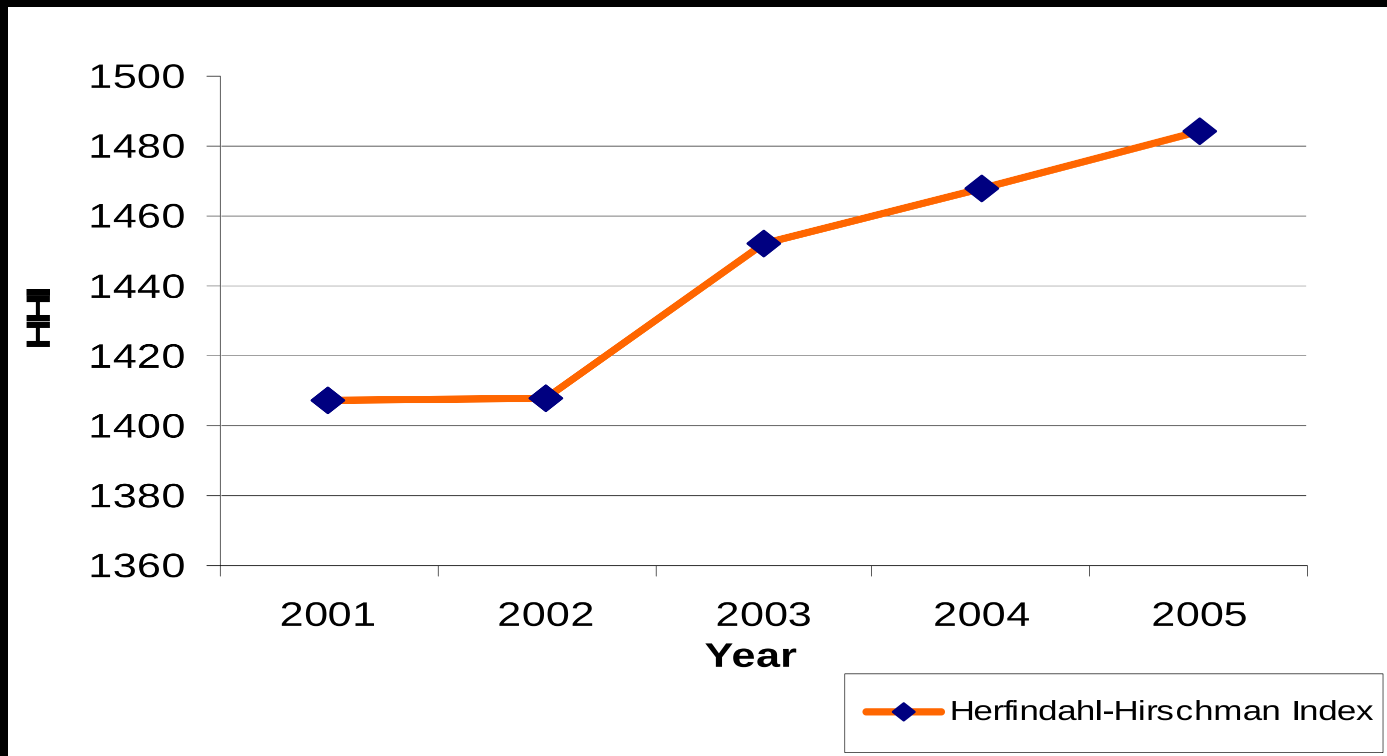
Market Structure Analysis of Sauces, Dressings & Condiments Segment – *Cont'*

- ***Concentration ratio - 4 Largest Brands' Market Shares***



Market Structure Analysis of Sauces, Dressings & Condiments Segment – *Cont'*

- ***Herfindahl-Hirschman Index (HHI)***



Market Structure Analysis of Sauces, Dressings & Condiments Segment – *Cont'*

- *Technology*
  - Available in Malaysia
  - Large enterprises carry out their own research and development in generating technologies for their own utilization & production
  - Technologies generated by public research agencies institutions such as Malaysian Agricultural Research and Development Institute (MARDI) or universities are for the benefit of SMEs

Market Conduct Analysis of Sauces, Dressings & Condiments Segment – *Cont'*

- *Promotions*
  - Nestlé (M) Bhd - leads with its Maggi brand by running constant promotions to increase sales and aggressively expand its product portfolio
- *Advertising*
  - Unilever (M) Holdings Sdn Bhd with Knorr brand
  - Nestlé (M) Bhd
- *New product development*
  - *Nestlé*
  - *Campbell Soup Southeast Asia Sdn Bhd*

Market Performance Analysis of Sauces, Dressings & Condiments Segment

- ***Performance of Sauces Producers: Return on Sales***

Company	Yearly Sales (RM)	PBTI (RM)	Return on Sales (%)
A	4,195,920	423,940	10 (73)
B	583,000	188,000	32 (83)
C	481,760	78,600	16 (72)
D	623,660	192,710	31 (71)
E	8,588,000	1,791,100	21 (73)

Note: 1 Figure in bracket represent share of capital to sales
2 A comprehensive study in 1995 revealed that the average technical efficiency (TE) of sauce SMI in Malaysia was 0.28

Market Performance Analysis of Sauces, Dressings & Condiments Segment – *Cont'*

- ***Performance of Sauces Producers: Return on Asset***

Company	Fixed Asset (RM)	PBTI (RM)	Return on Asset (%)
A	793,000	423,940	53
B	500,500	188,000	38
C	326,130	78,600	29
D	192,710	192,710	59
E	3,669,500	1,791,100	49

Sweet and Savoury Snacks Segment

- Grouped into three broad categories:
  - baked snacks – cookies, crackers, pies, tortillas
  - salted snacks – potato chips, corn chips, popcorn, nuts
  - specialty snacks – extruded snacks, dried fruit, pizza, ice cream novelties, yogurt
- Malaysia has a relatively young population:
  - Over 30% - under 15 years old
  - Over 40% - in the 15-39 years age group
  - The younger generation has a significant impact upon sweet and savoury snacks sales (esp. children and teenagers)

Sweet and Savoury Snacks Segment

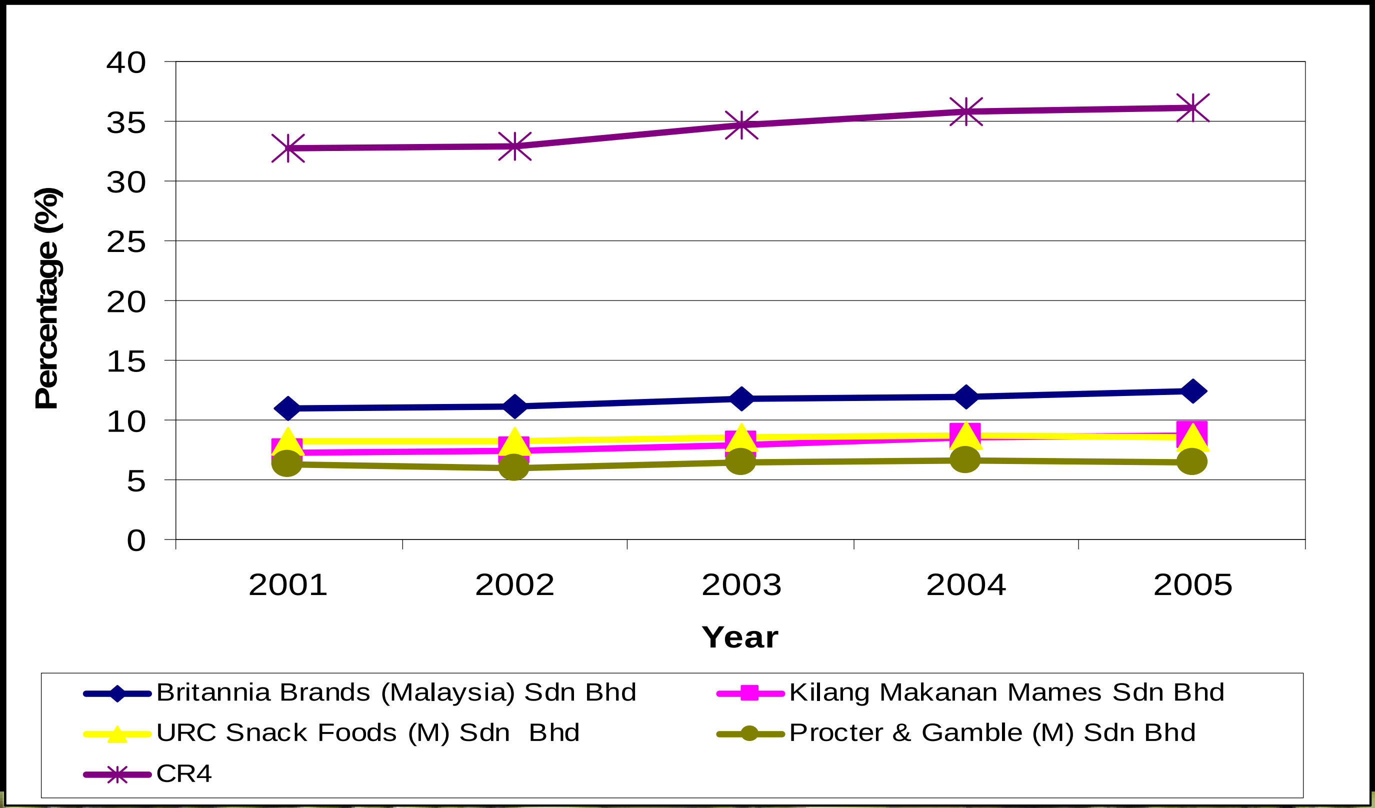
- Experienced growth of 5 % in volume and 4 % in value terms reaching RM518 million in 2006
- Chips/crisps registered strongest sales growth from 2001- 2006

Sales of Sweet and Savoury Snacks by Subsector: 2001-2006 (RM million)

Subsector	2001	2006	*AGR 2001-06	Changes (%) 2001/06
Fruit snacks	30.7	38.4	4.6	25.2
Chips/crisps	67.4	92.4	6.5	37.2
Extruded snacks	112.4	151.3	6.1	34.6
Tortilla/corn chips	25.5	34.9	6.5	36.8
Popcorn	10.9	13	3.5	18.7
Nuts	69.6	83.6	3.7	20
Other sweet & savoury snacks	97.1	103.9	1.4	7
Total	413.6	517.5	4.6	25.1

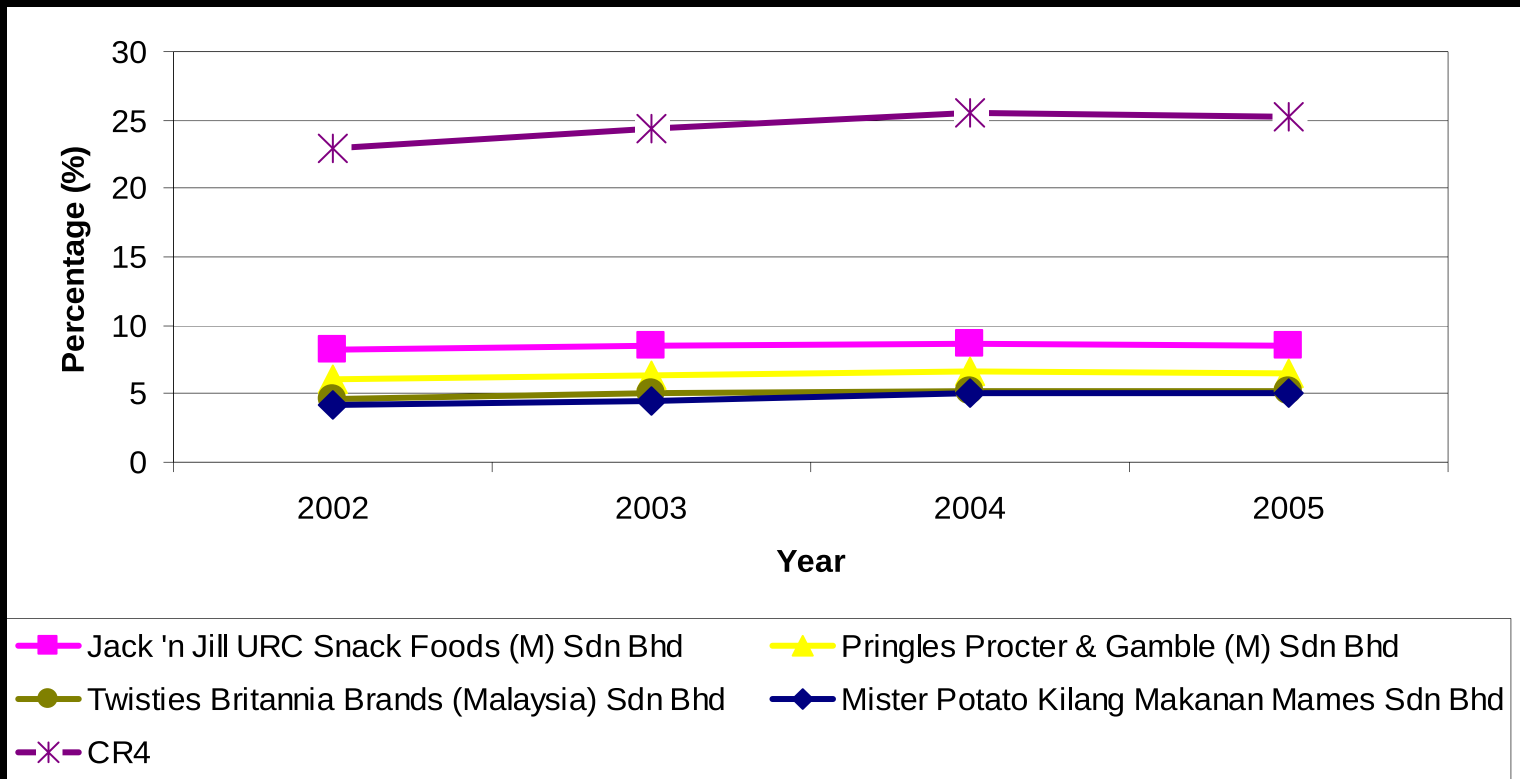
Market Structure Analysis of Sweet and Savoury Snacks Segment

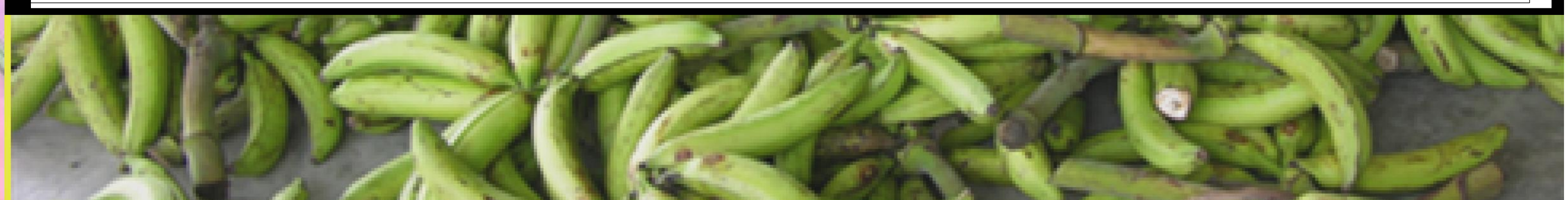
- *Concentration ratio – **4 Largest Companies' Market Shares***



Market Structure Analysis of Sweet and Savoury Snacks Segment – *Cont'*

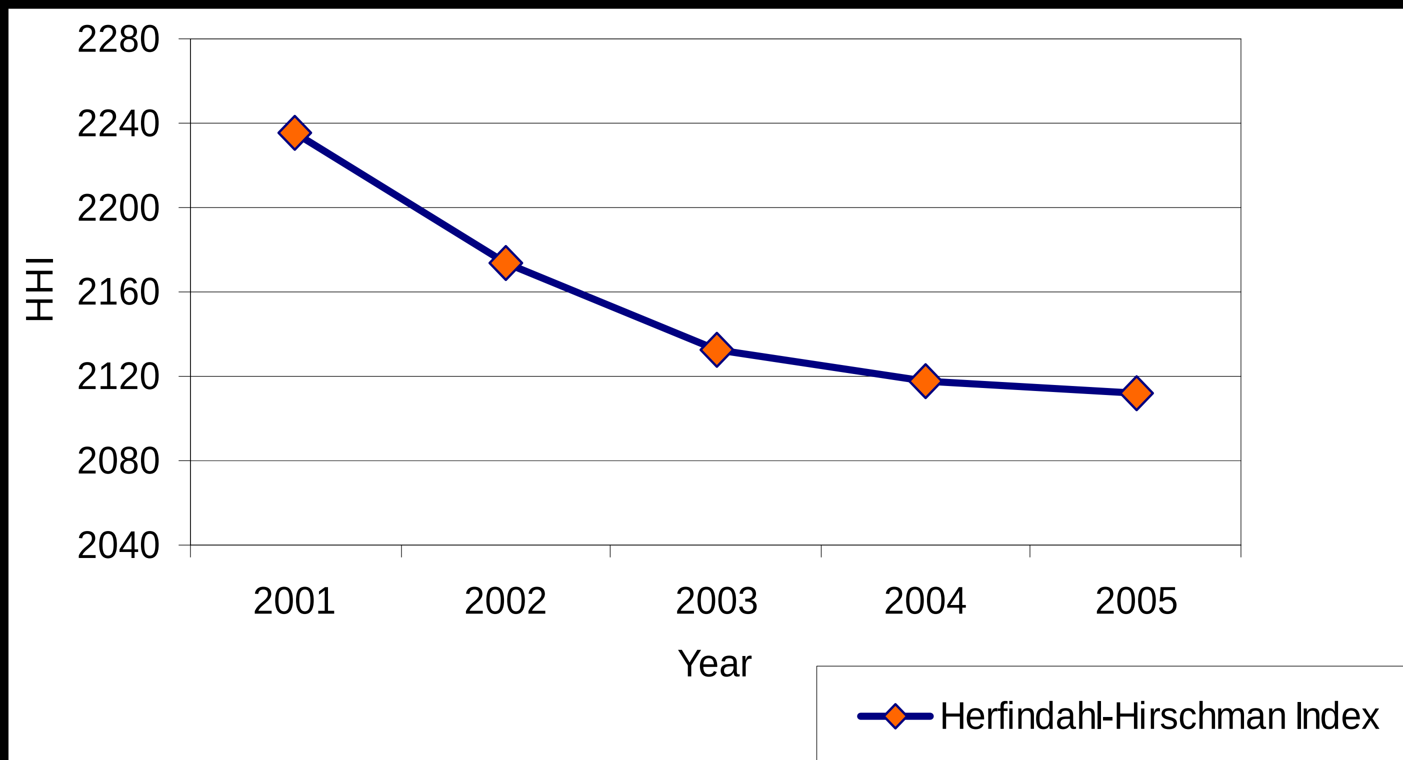
- *Concentration ratio –* ***4 Largest Brands' Market Shares***





Market Structure Analysis of Sweet and Savoury Snacks Segment – *Cont'*

- **Herfindahl-Hirschman Index (HHI)**



Market Structure Analysis of Sweet and Savoury Snacks Segment – *Cont'*

- *Technology*
  - Available in Malaysia
  - Large enterprises carry out their own research and development in generating technologies for their own utilization & production
  - Technologies generated by public research agencies institutions such as Malaysian Agricultural Research and Development Institute (MARDI) or universities are for the benefit of SMEs

Market Conduct Analysis of Sweet and Savoury Snacks Segment

- *Promotions and advertising*
  - S Britannia Brand

- *New product development*
  - S Launch of numerous new products and brands

Market Performance Analysis of Sweet & Savoury Snacks Segment

• ***Performance of Traditional Cracker/Chip Producers: Return on Sales***

Company	Yearly Sales (RM)	PBTI (RM)	Return on Sales (%)
A	2,700,000	450,000	15
B	2,500,000	NA	NA
C	1,250,000	250,000	20
D	200,000	35,000	18

Market Performance Analysis of Sweet & Savoury Snacks Segment – *Cont'*

- ***Performance of Traditional Cracker/Chip Producers: Return on Assets***

Company	Fixed Asset (RM)	PBTI (RM)	Return on Asset (%)
A	NA	450,000	NA
B	1,000,000	NA	NA
C	NA	250,000	NA
D	NA	35,000	NA

Conclusion

- The competition in the FPI is not regulated
- Thus, competition within this sector is unhealthy
- Large companies such as Nestle thrive under Malaysia's economic condition - enormous funds generated, they are able to venture into innovative technological advancements and develop new products
- SMEs are deprived of the chance to increase their sales growth in order to sustain in the industry

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Recommendations

- Malaysia requires a national competition policy
- The presence of a competition policy in the food and beverages segment will assist in accelerating the development and growth of SMEs
- Creating transparent policies and regulations - prerequisite for the survival and development of SMEs

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Market Liberalization and Its Relationship with Market Structure, Conduct and Performance of Selected Food Processing Industries in the Philippines

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Department of Agriculture

Organization of the presentation

This presentation is divided into four (4) parts:

1. Objectives and Scope
2. Overview of the Philippine economy with focus on food processing
3. General description of Philippine food processing
4. Selected processed food industry analysis
5. Conclusions/Recommendations

1. Objectives

a. <u>General:</u>

- looks into the effects of trade liberalization on selected processed food industries

b. <u>Specific</u>

In terms of the selected processed food industries:

- assess their market structure and conduct
- determine their market performance
- recommend policies and strategies in order to increase their market efficiency

Scope

- Small and medium enterprises (SMEs) of six (6) processed food industries

- Pre- and Post-liberalization period until 2005

- Strictly processed food as defined (Philippine Department of Health, 2005)

Food that has been subjected to some degree of processing like drying, milling, concentrating, canning, or addition of some ingredients which partially or completely change the physico-chemical and/or sensory characteristics of the food's raw material

2. Overview of the Philippine Economy with Focus on Food Processing

Output Growth

Table 1. Compounded annual growth rates in real GDP, Philippines, 1971-2005

Period	Annual GDP growth, %
1971 -1975	5.9
1976 - 1980	5.4
1981 - 1985	-2.4
1986 - 1990	5.1
1991 - 1995	2.9
1996 - 2000	3.1
2001 - 2005	5.0

Source: GDP at constant 1985 prices. National Statistical Coordination Board.

Structural Change

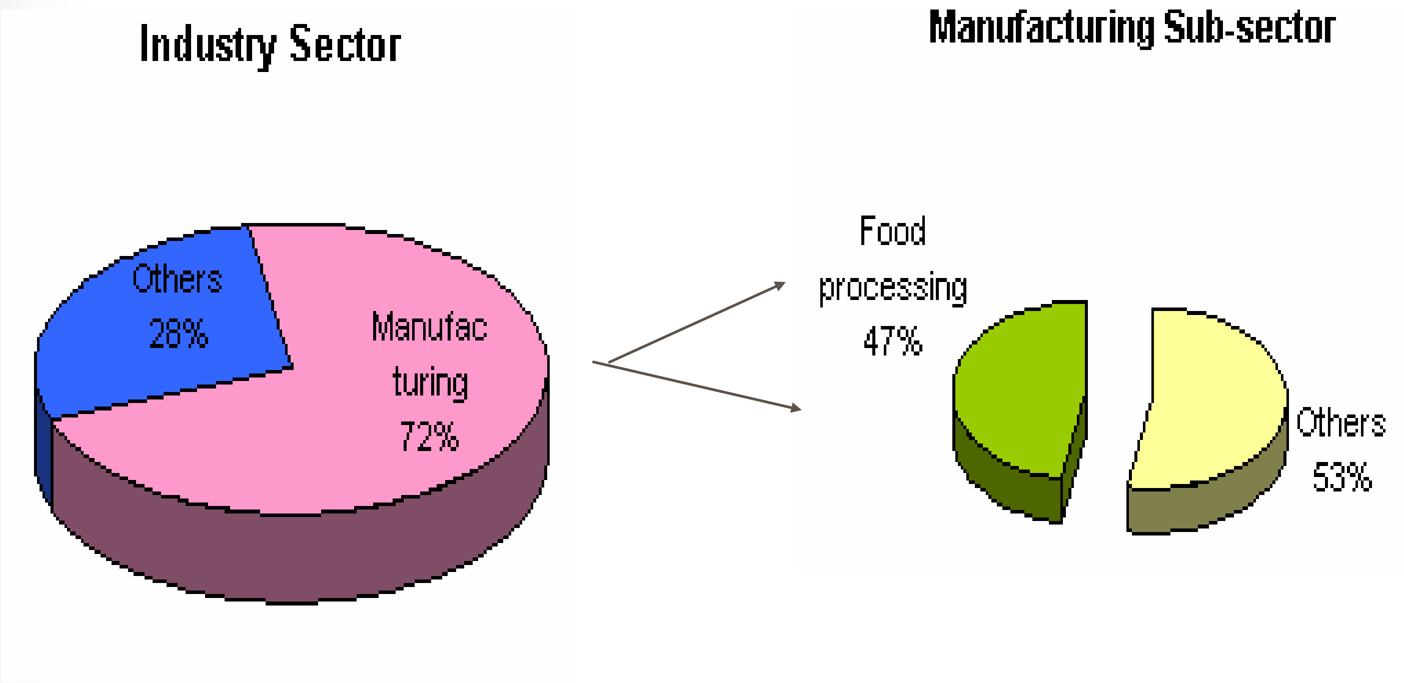
Table 2. GDP share by sector, Philippines 1971-2005

Period	Percent share to GDP			
	Total	Agriculture*	Industry	Services
1971 –1975	100	30.40	34.20	35.40
1976 – 1980	100	27.40	37.40	35.20
1981 – 1985	100	24.00	38.20	37.80
1986 – 1990	100	23.40	34.70	41.90
1991 – 1995	100	22.50	32.70	44.80
1996 – 2000	100	20.20	35.40	44.40
2001 – 2005	100	20.20	33.90	46.60

* Including fishery and forestry.

Source: Based on GDP at constant 1985 prices, National Statistical Coordination Board.

Figure 1. The industry sector, manufacturing sub- sector and food processing industry



Correlation of Growths in Food Processing and National Economy

Table 3. Food processing*: Compounded annual growth and shares to national GDP and GDP in manufacturing, Philippines, 1986-2005

Period	Annual growth of GDP food processing, %	Share (%) of food processing	
		National GDP	Manufacturing
1986 - 1990	11.80	12.28	47.49
1991 – 1995	8.92	10.58	44.76
1996 - 2000	10.75	9.95	47.17
2001 - 2005	12.93	10.61	49.33

***Food and beverages.**

Source: Based on data from the National Statistical Coordination Board.

3. General Description of Philippine Food Processing

3.1 Small and Medium-Scale Enterprises

- development of SMEs is part of the government's rural industrialization and development program

- Republic Act 6977 or Magna Carta of Small Enterprise in 1991, outlined the general policies for the development of SMEs

3. General Description of Philippine Food Processing

3.1 Small and Medium-Scale Enterprises

Table 4. Classification of establishments in the Philippines, 1991

Size of establishment	Number of employees	Assets/Capitalization	
		PhP*	US$**
Micro	1-5	<150,000	2,765
Cottage	6-9	150,000 - 1.5M	2,765 - 27,650
Small	10-99	1.5M - 15M	27,650 - 276,500
Medium	100-199	15M - 60M	276,500 - 1.106M
Large	200 or more	Above 60M	Above 1.106M

* Philippine peso. **US dollar equivalent.

Source: Sonido, 2001.

3. General Description of Philippine Food Processing

3.1 Small and Medium-Scale Enterprises

Table 5. Re-classification of establishments in the Philippines, 1997 and 2003

Size	No. of employees	Assets			
		1997		2003	
		PhP	US$	PhP	US$
Micro	1-9	<1.5M	<27,650	< 3M	< 55,300
Small	10-99	1.5M - 15M	27,650 - 76,500	3M -15M	55,300 - 276,500
Medium	100-199	15M - 60M	276,500 - 1.106M	15M -100M	276,500 - 1.84M
Large	≥ 200	>60M	>1.106M	>100M	≥ 1.84M

*** Philippine peso. **US dollar equivalent.**

Sources: Mindanao Economic Development Council (MEDCo), Department of Trade and Industry, 2007.

3. General Description of Philippine Food Processing

3.1 Small and Medium-Scale Enterprises

SMEs – establishments or firms with less than 200 employees and total assets of up to PhP100M or an equivalent of US$1.84M

Rural-based food processing

- **there are about 200 thousand which are dispersed all over the country**
- **many are home-based, cottage, micro- and small scale**
- **only 1-2 percent are registered with the government**

3.1 Small and Medium-Scale Enterprises

Table 6. Share of SMEs in food processing to SMEs in manufacturing, Philippines, 1993, 1999-2005

Year	No. of SME Establishments		Share of SME Food Processing to SME Manufacturing, %
	Total Manufacturing	Food Processing	
1993	89,180	40,465	45.4
1999	129,609	54,680	42.2
2000	124,229	52,073	41.7
2001	122,601	52,148	41.9
2002	121,995	52,046	42.7
2003	122,083	52,079	42.7
2004	117,007	55,053	47.1
2005	116,374	55,185	47.4

Source: List of Establishments, various years, National Statistics Office.

3. General Description of Philippine Food Processing

3.1 Small and Medium-Scale Enterprises

Table 7. Size distribution of food processing establishments, Philippines, 1999-2005

Year	Total	Micro	Small	Medium	Large
1999	54,680	50,332	3,927	178	243
2000	52,073	48,045	3,652	162	214
2001	52,148	48,325	3,434	164	225
2002	52,046	48,347	3,341	176	182
2003	52,079	48,367	3,349	176	187
2004	55,053	51,038	3,654	167	194
2005	55,185	51,335	3,504	163	183

Source: Lists of Establishments, various years. National Statistics Office

3.1 Small and Medium-Scale Enterprises

Table 8. Employment in food processing establishments, Philippines, 1999-2005

Year	Number of Employees					
	Manufacturing	Food Processing				
		Total	Micro	Small	Medium	Large
1999	1,674,472	433,956	162,956	83,629	24,823	162,548
2000	1,589,214	400,437	157,169	78,689	23,218	141,361
2001	1,634,103	398,985	158,443	69,927	23,322	147,293
2002	1,467,188	374,023	158,570	68,852	24,849	121,752
2003	1,640,042	376,248	158,622	69,006	24,795	123,825
2004	1,535,950	382,368	165,384	76,885	22,873	117,226
2005	1,463,346	378,759	164,195	71,103	24,145	119,316

Source: Lists of Establishments, various years. National Statistics Office

3.1 Small and Medium-Scale Enterprises

Table 9. Number of SMEs in food processing, Philippines, 1999-2005

Food processing industry	1999	2000	2001	2002	2003	2004	2005
Slaughtering and meat packing	410	324	299	299	298	245	233
Production, processing and preserving of meat & meat products	441	410	391	385	404	363	345
Processing and preserving of fish products & other sea foods	1,352	1,184	1,118	1,112	1,112	1,019	1,011
Processing/ preserving of fruits & vegetables	202	221	193	396	396	309	305
Manufacture of vegetable/animal oils & fats	136	117	104	104	104	118	122
Manufacture of dairy products	710	665	620	616	616	553	526

Source: List of Establishments, various years. National Statistics Office

3. General Description of Philippine Food Processing

3.2 Processed Foods

Table 7. Philippine classification of processed food based on HS and PSSC

Meat and meat preparations
Dairy products and bird's eggs (processed)
Margarine, shortening and vegetable fats and oils
Cereal and flour preparations
Processed fruits
Processed vegetables
Sugar and sugar preparations
Confectionary and other sugar based products
Coffee
Cocoa, tea and mate
Beverages
Nuts and coconut products
Sauces, condiments, spices & mixes & manufactures
Miscellaneous edible preparations
Animal feeding stuff
Processed fish and marine products

Source: National Statistics Office

Table 8. Value of production index of food manufacturing in the Philippines, 1995-2005

Year	Value of production index
	1985 = 100
1995	234.8
1996	273.3
1997	319.0
1998	337.1
1999	398.2
2000	368.1
	1994 = 100
2001	129.3
2002	136.5
2003	145.5
2004	159.1
2005	161.7

Source: Monthly Bulletin of Statistics, various years, National Statistics Office.

3.2 Processed Foods

Table 9. Total exports and share of processed foods in the Philippines, 1986-2005

Year	Total Exports FOB US$M Average	Processed food exports	
		FOB, US$M Average	Share to total exports, %
1986-1990	6,728.6	510.5	7.59
1991-1995	12,193.7	677.7	5.56
1996-2000	29,676.3	700.4	2.36
2001-2005	36,905.0	674.3	1.83

Source: Foreign Trade Statistics of the Philippines, National Statistics Office.

3. General Description of Philippine Food Processing

3.3 Trade Reforms

1970s: Import substitution policy has limited growth of manufacturing sector, as a result, its employment share stagnated at about 10-12%

1980s: Tariff reductions, simplified tariff structures, tariffication of QRs, range of tariff narrowed from 0-10% to 0-50%, tariff adjustments were phased out on 14 manufacturing industries including food processing, import liberalization with more items on manufacture goods

3.3 Trade Reforms

1990s: **Unilateral tariff reductions continued; lowering of tariffs on capital goods and raw materials to improve competitiveness.**

EO 260 in 1995 called for tariff range from 3-10% by 2000 and uniform 5% tariff by 2004.

Tariff reforms complemented by liberalization and deregulation policies in investment, foreign exchange and services.

Pacing of tariff reductions in consonance with uniform tariff under the WTO in 2004

3.3 Trade Reforms

2000s: Tariff reforms focused on free enterprise, market reliance under the Medium Term Development Plan, 2001-2014.

Simplified bureaucratic procedures and promoting market-friendly regulations to reduce costs of business undertaking, protection of consumer interests and sectors vulnerable to global market integration.

Tariff reform program designed to reduce tariffs to 0-5% range

3.3 Trade Reforms

Table 10. Average nominal tariff by sector, Philippines, 1981-2005

Sector	1981	1985	1990	1995	2000	2005
Total economy	**34.60**	**27.60**	**27.48**	**15.87**	**7.95**	**7.81**
Agriculture	43.23	34.61	34.77	27.99	14.40	11.85
Mining	16.46	15.34	13.97	6.31	3.27	2.47
Manufacturing	33.74	27.09	27.49	13.96	6.91	7.29

3. General Description of Philippine Food Processing

3.3 Trade Reforms

Tariff rates (%) on selected commodity imports, Philippines, 2002-2004			
Commodity	**Rate of Duty (%)**		
	2002	**2003**	**2004**
Processed mango	**10**	**7**	**5**
Processed tuna	**10**	**7**	**5**
Processed seaweeds	**3**	**3**	**3**
Carageenan	**5**	**5**	**5**
Noodles	**10**	**7**	**5**
Soy sauce	**10**	**7**	**5**
Desiccated Coconut	**10**	**7**	**5**

Source: Tariff and Customs Code of the Philippines, Vol 1., 2002.

3.3 Trade Reforms

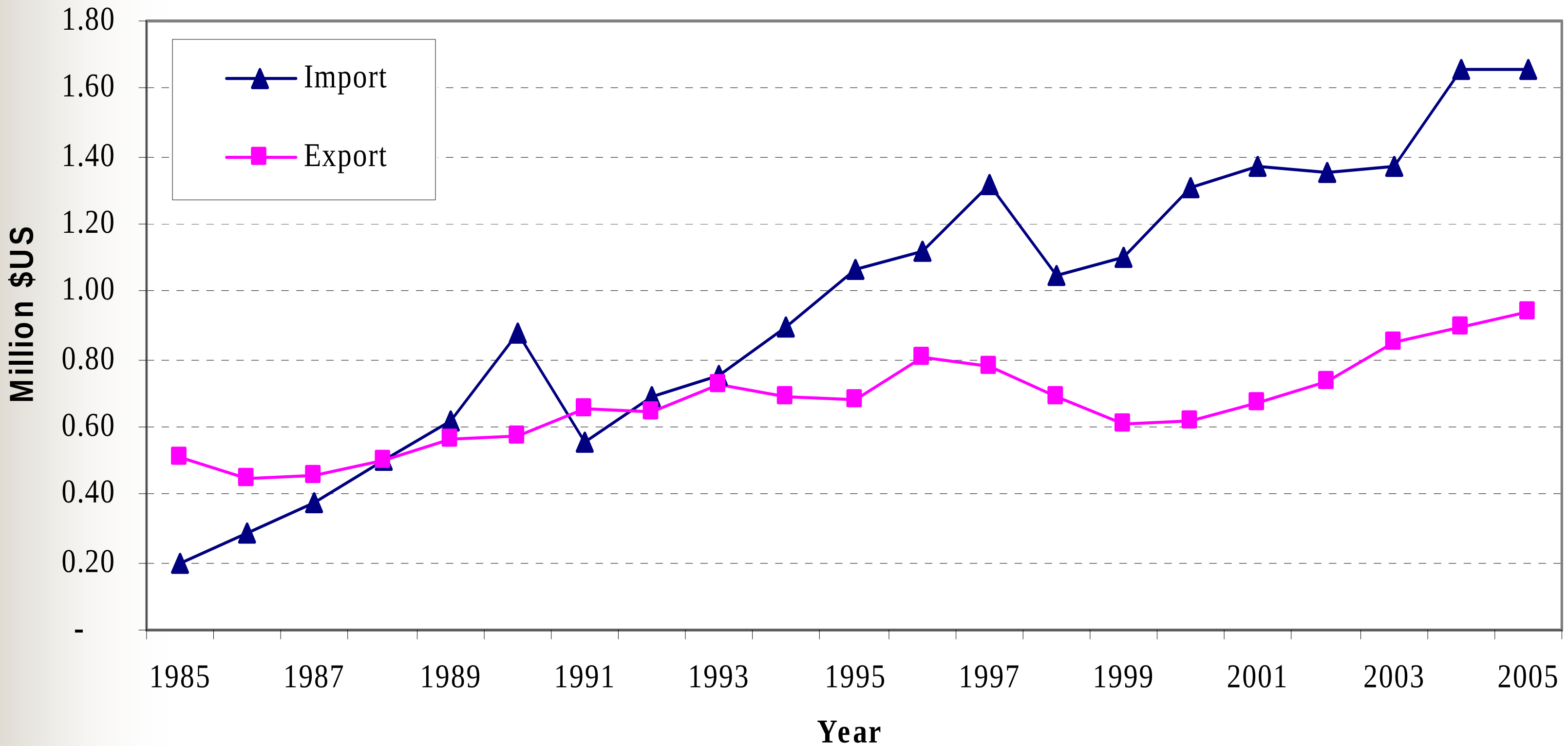
Table 11. Weighted average effective protection rates, 1998-2004 (in percent)

Sector	1998	1999	2000	2001	2002	2003	2004
All Industries	**8.59**	**7.80**	**7.06**	**7.09**	**6.14**	**5.89**	**6.33**
Exportable	2.35	1.75	1.59	1.71	1.16	1.1	1.38
Importable	14.76	13.42	12.28	12.16	10.89	10.48	15.09
Manufacturing	**7.01**	**6.36**	**5.86**	**5.79**	**5.04**	**4.82**	**5.13**
Exportable	-0.38	-0.92	-0.48	-0.45	-0.52	-0.52	-0.53
Importable	14.17	12.93	11.75	11.51	10.20	9.83	10.30
Food processing	**19.61**	**18.32**	**17.47**	**17.42**	**15.57**	**14.49**	**15.36**
Exportable	0.89	0.91	0.67	0.63	0.29	0.29	0.35
Importable	18.72	17.40	16.80	16.79	15.28	14.20	15.01
Beverages	**9.27**	**7.54**	**3.88**	**3.89**	**1.88**	**1.75**	**3.20**
Exportable	-0.38	-0.34	-0.29	-0.29	-0.25	-0.26	-0.26
Importable	9.65	7.88	4.18	4.18	2.13	2.01	3.46

Source: Aldaba, 2005

3. General Description of Philippine Food Processing
3.4 Effect of Trade Policies and Reforms

Figure 2. Value of exports and imports of processed foods, Philippines, 1985-2005



3.4 Effect of Trade Policies and Reforms

Table 12. Export ratio and import penetration ratio in processed food industry, Philippines, 1986-2005

Period	Export Ratio	Import Penetration Ratio
1986-1990	0.1115	0.1005
1991-1995	0.0884	0.1214
1996-2000	0.0879	0.1394
2001-2005	0.0869	0.1477

3.4 Effect of Trade Policies and Reforms

Table 17. Net trade of processed foods by selected category, Philippines, 1985-2005

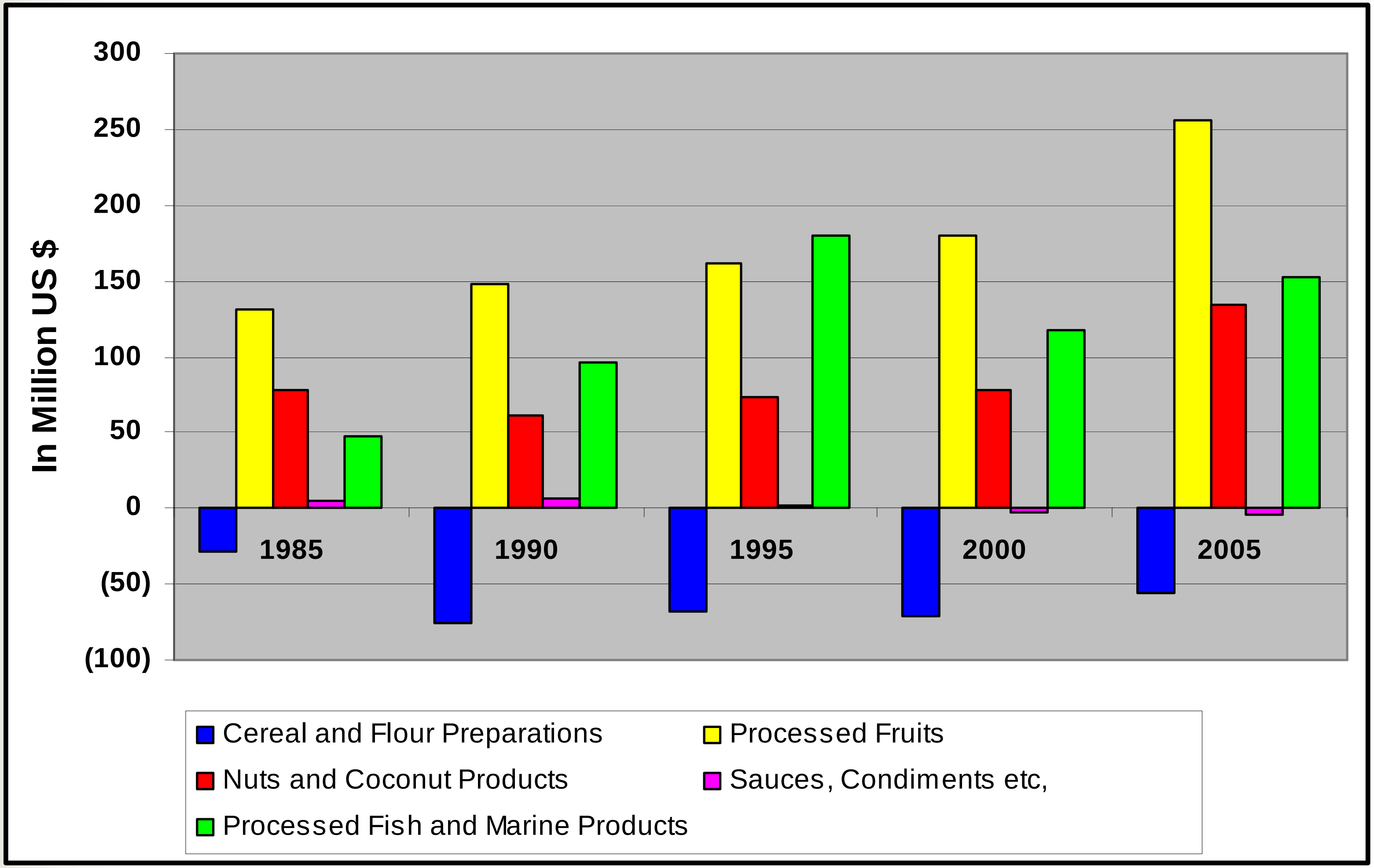


Table 18. Shares to total processed food exports, Philippines, 1986-2005

Food Category	1986-1990	1991-1995	1996-2000	2001-2005
Total exports (F.O.B. million US$)	510.5	677.7	700.4	674.3
Percent share, %	100.0	100.0	100.0	100.0
Processed fruits	27.8	27.2	27.3	28.8
Processed fish and marine products	16.2	24.9	24.2	20.7
Sugar and sugar preparations	19.4	15.5	13.3	7.4
Nuts and coconut products	13.4	12.0	12.9	13.6
Animal feeding stuff	13.2	9.5	6.9	4.6
Cereal and flour preparations	1.4	2.5	4.2	5.4
Dairy products and processed bird's eggs	0.5	0.2	0.6	7.0
Other food categories	8.1	8.2	10.6	12.5

3.4 Effect of Trade Policies and Reforms

Table 19. Shares to total processed food imports, Philippines, 1986-2005

Food Category	1986-1990	1991-1995	1996-2000	2001-2005
Total exports (C.I.F. million US$)	532.3	791.4	1,177.0	1,482.6
Percent share, %	100.0	100.0	100.0	100.0
Dairy products and processed bird's eggs	43.6	38.9	33.4	32.7
Animal feeding stuff	30.1	29.9	24.4	27.9
Cereal and flour preparations	11.5	10.4	9.6	7.1
Processed vegetables	3.4	5.3	6.8	4.7
Misc. edible food preparations	1.3	2.4	6.2	7.3
Sugar and sugar preparations	2.1	5.7	7.4	3.5
Beverages	3.9	0.1	2.1	6.3
Confectionary and other sugar based products	0.8	2.4	2.3	2.1
Cocoa, tea and mate	0.9	0.6	1.5	2.8
Other food categories	2.4	4.3	6.3	5.6

3. General Description of Philippine Food Processing

3.5 Laws and Policies Governing Enterprises

Table 15. Existing anti-trust laws and regulations in the Philippines

Competition Law	Description (Concerned Agency)
Art. XII, Sec. 19, 1987 Philippine Constitution	Prohibits anti-competitive, trade and other unfair competition practices.
Art. 186 and 187 RA 3815: Revised Penal Code	Defines and penalizes anti-competitive, criminal behavior e.g monopolies and restraint of trade.
Art. 28, RA 386 (1949) Civil Code of the Philippines	Allows collection of damages from unfair competition, abuse of dominant position by a monopolist.
RA 165: Act to Prohibit Monopolies and Combinations in Restraint of Trade	Allows treble damages for civil liability arising from anti-competitive behavior.
RA 165: Intellectual Property Code of the Philippines	Protects patents, trademarks, and copyrights, provides penalties for infringement.

3. General Description of Philippine Food Processing

3.5 Law's and policies Governing Enterprises

Table 15. Existing anti-trust laws and regulations in the Philippines (cont'n)

Competition Law	Description (Concerned Agency)
BP 68 (1980): Corporation Code of the Philippines	Rules on mergers, consolidations, and acquisitions. Does not address competition issues(Sec. and Exch. Commission or SEC)
BP 178 (1982): Revised Securities Act	Prohibits and penalizes manipulation of security prices and insider trading. (SEC)
RA 7581 (1932): Price Act	Price stabilization of basic commodities thru price controls and ceiling mechanisms; (Bureau of Trade Regulation and Consumer Protection or BTRC)
RA 7394 (1932): Phil. Consumer Act	Consumer product quality and safety standards and includes deceptive and unfair sales practices (BTRC, Bur, of Food & Drugs)
RA 337 (1948): General Banking Act	To regulate banks and banking institutions (Central Bank of the Philippines)

Source: Abad, A. (2002) in Aldaba (2005).

3. General Description of Philippine Food Processing

3.6 Foreign Direct Investment (FDI)

Table 16. Foreign direct investment (FDI) in Philippine in food manufacturing

Economic sector	1980-89	1990-99	2000-23
Total cumulative flows (US$ million)	**2,027**	**8,340**	**5,164**
Manufacturing	**44.70**	**50.08**	**30.65**
Chemical & chemical products	13.36	5.72	3.55
Food	**9.29**	**7.10**	**14.52**
Basic metal products	5.71	2.27	1.85
Textiles	2.17	10.77	1.23
Transport equipment	3.50	3.88	1.16
Petroleum & coal	2.14	10.77	1.23
Others	0.33	18.00	8.02
Other Sectors	**55.3**	**49.92**	**69.35**

Source: Bangko Sentral ng Pilipinas in Aldaba (2005).

4. Food Processing Industry Level Analysis

Table 17. Selected processed food category and food industry, Philippines

Category	Processed Food Industry
Processed fruits	Mango
Processed fish & marine products	Tuna
Nuts and Nut Products	Desiccated coconut
Cereal and flour preparations	Noodles
Sauces, condiments, spices & mixes and manufactures	Soy sauce
Processed vegetables	Processed Seaweed/Carageenan

4. Food Processing Industry Level Analysis

4.1 Processed Mango

Table 18. Major world producers of mango, 1985 -2005

Country	1985		1990		1995		2000		2005	
	Product-ion '000 mt	Rank	Product-ion '000 mt	Rank	Product-ion '000 mt	Rank	Product-ion '000 mt	Rank	Product-ion '000 mt	Rank
India	9,337	1	8,645	1	11,000	1	10,500	1	10,800	1
Mexico	1,109	2	1,074	2	1,342	3	1,559	4	1,503	4
Thailand	790	3	900	4	1,200	4	1,633	3	1,800	3
Pakistan	692	4	766	5	884	6	938	5	1,674	5
Brazil	527	5	545	6	638	7	538	9	850	8
Indonesia	416	6	509	7	889	5	876	6	1,478	6
Nigeria	400	7	504	8	631	8	730	8	730	9
China	382	8	912	3	2,008	2	3,211	2	3,673	2
Haiti	363	9	300	10	220	11	250	11	260	13
Egypt	119	18	144	17	232	10	299	10	380	10
Philippines	**355**	**10**	**338**	**9**	**594**	**9**	**848**	**7**	**950**	**7**

Source: FOASTAT

Table 19. Major world exporters of mango, 1985-2005

Country	1985		1990		1995		2000		2005	
	Exports '000 US$	Rank	Exports '000 US$	Rank	Exports '000 US$	Rank	Exports '000 US$	Rank	Exports '000 US$	Rank
India	15,581	1	17,482	2	12,353	5	16,523	6	93,100	2
Mexico	9,270	2	27,374	1	104,793	1	111,126	1	108,794	1
Philippines	**8,489**	**3**	**15,324**	**3**	**43,234**	**2**	**39,812**	**2**	**36,895**	**6**
Venezuela	6,681	4	5,788	5	1,262	20	**	**	**	**
UAE*	2,800	5	**	**	1,537	17	**	**	**	**
Mali	2,650	6	**	**	**	**	**	**	**	**
Pakistan	2,585	7	4,037	7	3,208	12	15,558	7	23,779	7
Haiti	2,300	8	4,800	6	5,550	9	9,800	10	6,690	15
Brazil	2,084	9	2,872	8	22,136	4	35,764	4	64,304	3
Israel	1,329	10	2,397	10	4,813	10	7,919	12	5,129	17
Netherlands	8,201	11	8,201	4	26,263	3	36,293	3	59,110	4
Peru	1,070	13	2,210	11	6,930	7	23,305	5	43,131	5

* United Arab Emirates ** Not in the top 20 producers. Source: FOASTAT

Industry Profile

- Commercial production started in late 1970s mostly small scale operations
- Largely characterized by SMEs, large corporations include processed mango in their product line
- Processed mangoes are usually the excess from domestic consumption and export and those which do not meet standards
- Medium to large domestic processors require first grade fresh mango, mature, free of bumps, cracks
- Processed mango: dried (sliced, diced, chopped), puree, concentrated juice, jam, candies, nectar, pickles, catsup

Industry Profile, cont'd . . .

- It is not easy to determine the number of mango processors due to the ease of market entry and exit especially with micro and small enterprises.
  - 2000: 17 mango processors based on BOI listings (Digal, 2005)
  - 2004: 83 mango processors (CIDA, 2004)

- Majority (56%) of mango processor workforce are women (CIDA, 2004)
- Processors export 20-80% of their products (CIDA, 2004)

Concerns of the Industry

1. Seasonality of supply
   - difficulty in assembling volume and product standards needed by processors due to predominance of small growers
   - high prices of off-season fresh mango
2. High prices of inputs
   - price of fresh mango export affects price for domestic processing
   - high tariff of sugar, in-quota (50%) and out- quota (65%) makes imported sugar price (US$8-9/bag) about the same price with domestic retail sugar (US$16-17/bag)

Concerns of the Industry, cont'd. . .

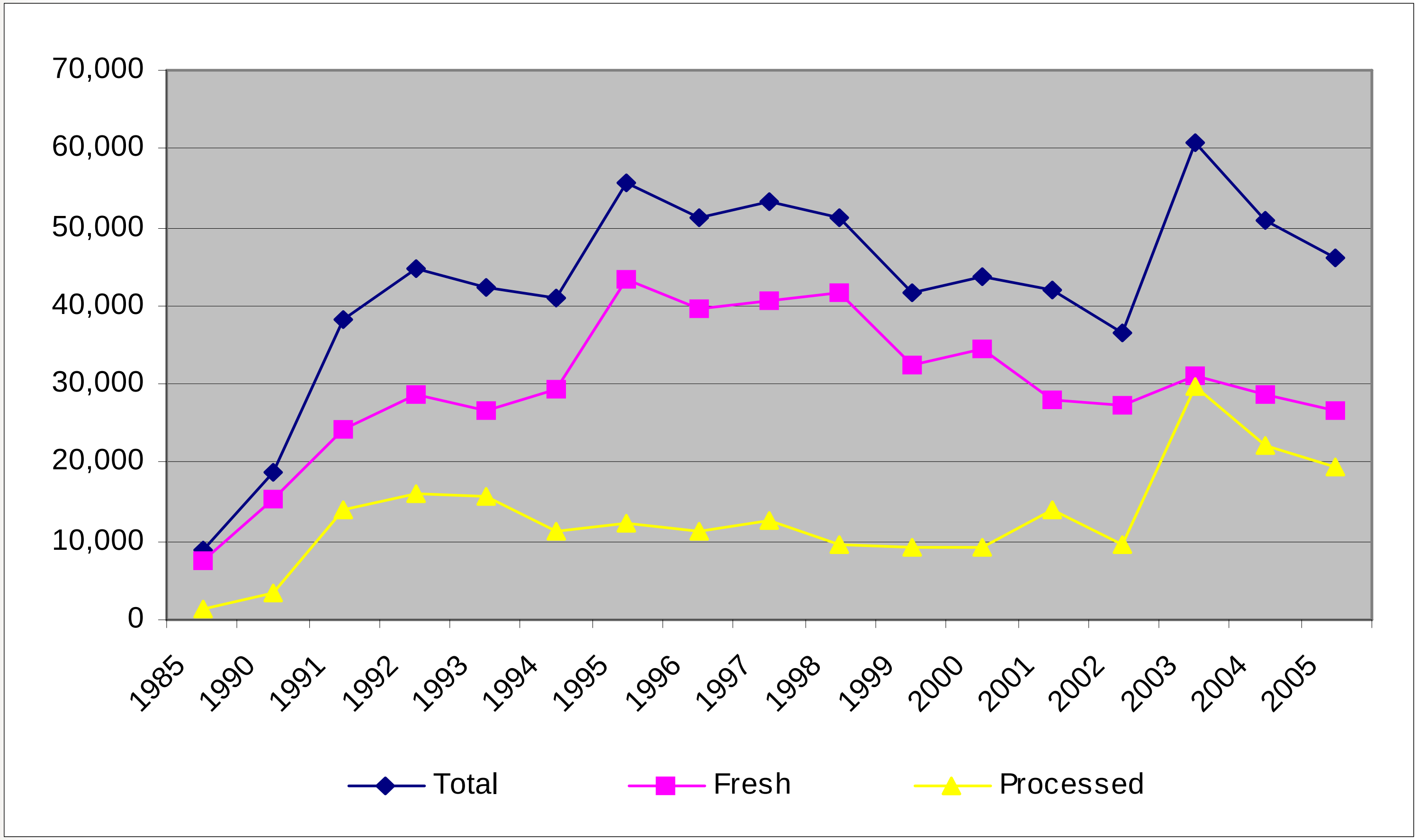
3. Packaging materials are expensive
   - 15% tariff on imported tin sheets for cans, PHILFODEX recommends duty free imports of packaging and raw material not available locally and reduction to 3% tariff for locally available materials (Digal, 2005)
4. Slow adoption of Gap/HACCP. Many SMEs are unable to meet standards due to lack of technical capability and funds.
5. Competition posed by other processed mango producing countries such as Thailand, India, Malaysia and Indonesia

Trade Liberalization and Exports of Processed Mango

1. **The Philippines adheres to the Codex Alimentarius Commission on Standards**
   - **the minimum standard quality for processed mango set by the country's Bureau of Product Standards and CODEX are being harmonized**
   - **most processors follow buyers' standards**

     e.g. no sugar and artificial preservatives and food coloring for the US; minimum residue level of <500 ppm for sulfite for the EU countries, Japan and US market may not accept products with sulfite-based preservatives
2. **Japan has reduced its tariff for dried mango from 6% to 3%**

Figure 5. Value of total mango exports, fresh and processed mangoes, Philippines, 1985, 1990-2005



4. Food Processing Industry Level Analysis

4.1 Processed Mango

Figure 7. Percent share of processed mango to total value of mango exports, Philippines, 1985, 1990-2005

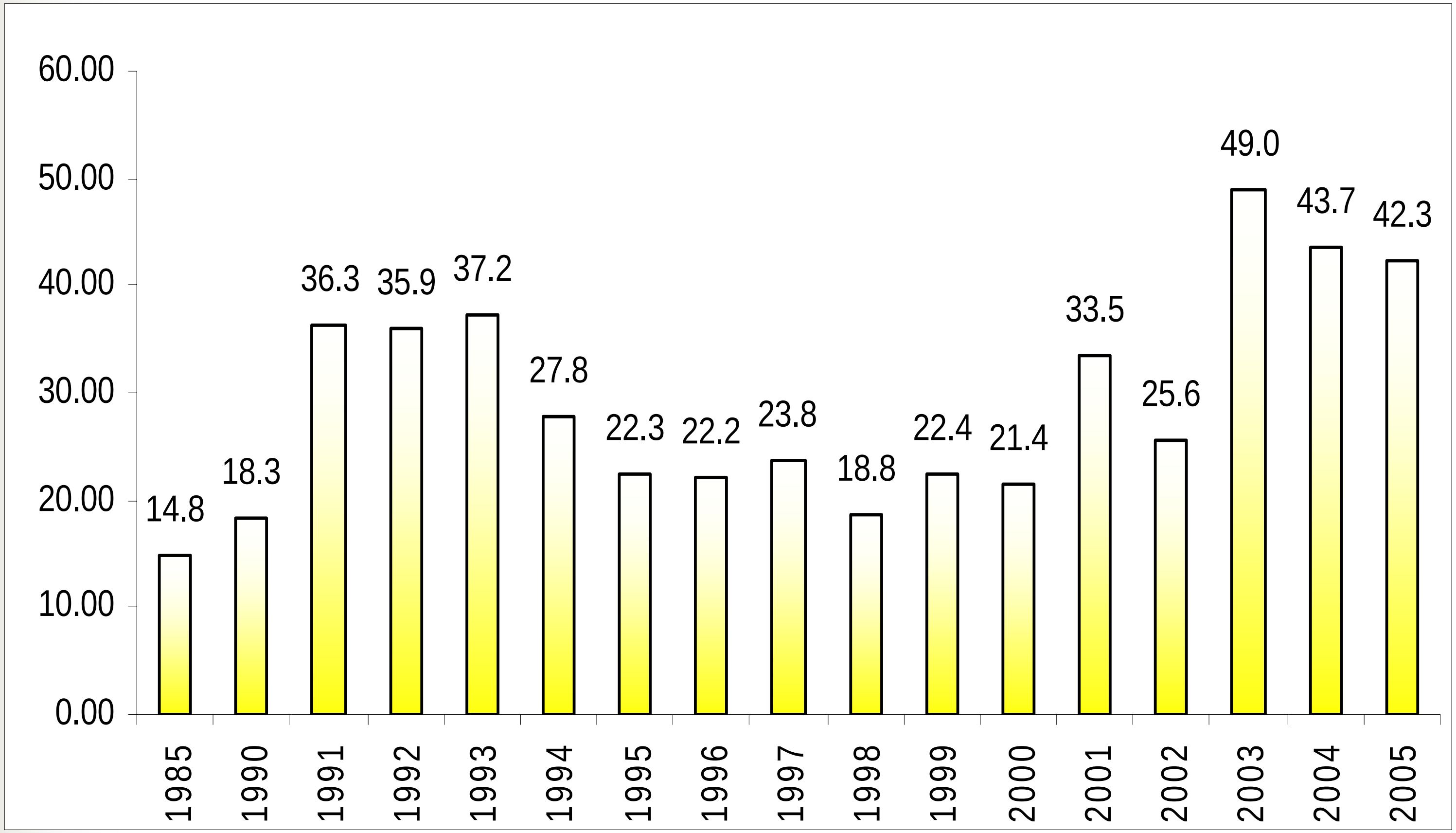
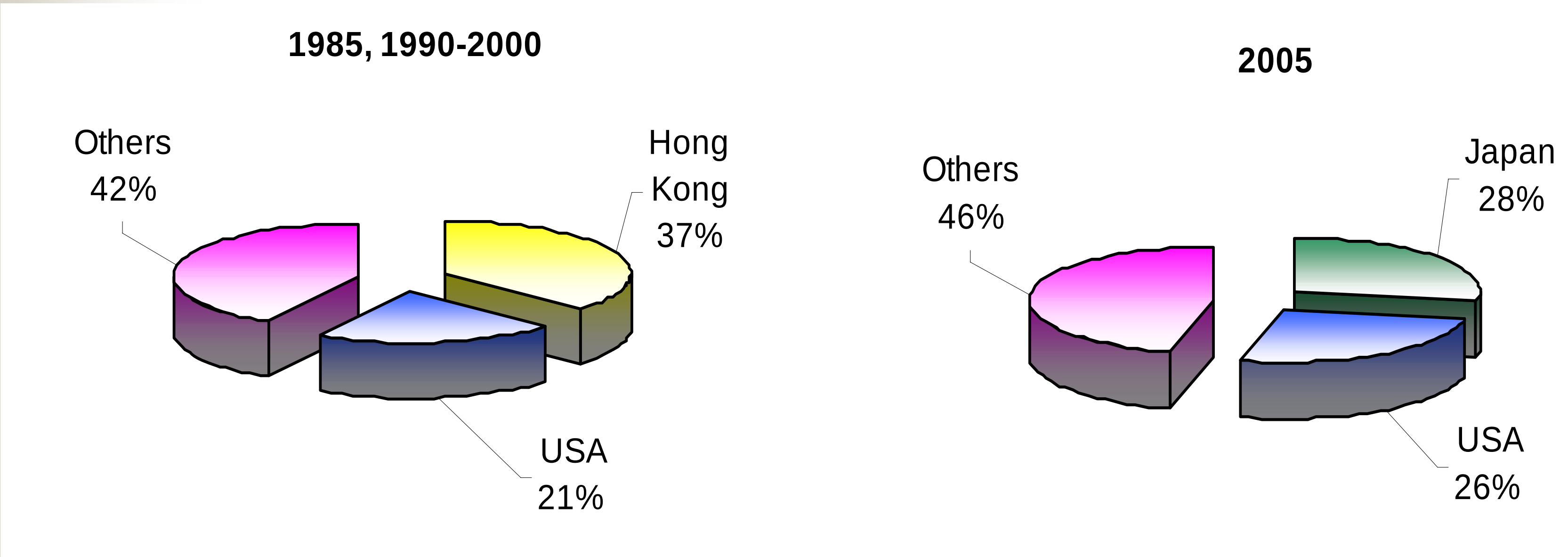


Table 26. Product distribution of processed mango exports, Philippines, 1985, 1990-2005

Year	Mangoes Dried	Mango Puree	Mango Juice Other than Concen-trates	Mango Uncooked/ Cooked by Steaming/ Boiling in Water, Frozen	Others	Total Value
	In percent, %					US$'000
1985	78.30	-	-	-	21.20	1,295
1990	-	98.69	-	-	1.31	3,440
1995	35.78	40.70	12.80	4.99	5.73	12,433
2000	58.42	13.25	20.29	7.93	0.11	9,374
2001	56.74	13.55	23.79	4.67	1.25	14,113
2002	41.12	19.52	29.21	8.86	1.29	9,401
2003	46.11	40.01	8.52	3.78	1.58	29,742
2004	36.41	41.34	13.64	6.65	1.96	22,306
2005	32.95	36.70	17.60	11.84	1.09	19,538

Source: Philippine Foreign Trade Statistics, various years.

Figure 8. Major markets of Philippine processed mango products



Market Performance Analysis

Profile of Sample Firms

Table 27. Size classification of sample SMEs in processed mango, Philippines, 2004

Size	No. Reporting	Total Assets
Total	10	
Micro	2	PhP1.39M - PhP1.67M (US$27,80 – US$33,400)
Small	5	PhP3.80M – PhP15.31 M (US$76,000 – US$313,000)
Medium	3	PhP21.91M – PhP49.71M (US$438,000 – US$994,200)

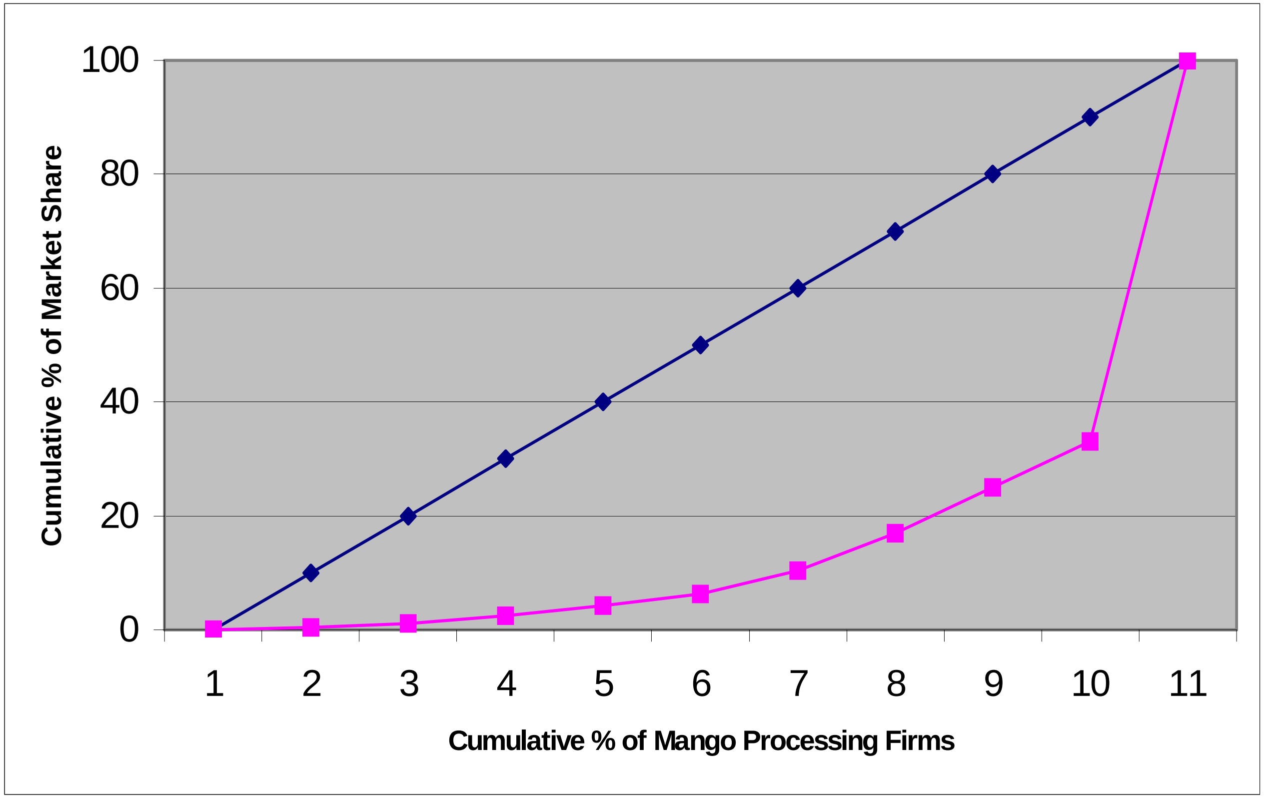
Market Performance Analysis

A. Market Structure

Table 28. Market concentration measures in sample SMEs in processed mango, Philippines, 2001-2004

Item	2001	2002	2003	2004
Sample size, n	9	9	9	10
Concentration ratio, C4	93.2	95.5	94.1	89.6
C3	85.8	86.4	88.4	83.0
Herfindahl Hirschman Index	4425	4389	5266	4680
Gini Coefficient	0.693	0.703	0.729	0.700

Figure 9. Lorenz curve for sample SMEs in processed mango, Philippines, 2004



4. Food Processing Industry Level Analysis

4.1 Processed Mango

B. Market Conduct

Table 29. Advertising-sales ratios of sample SMEs in processed mango, Philippines, 1999-2004

Size	No. Reporting	Advertising-sales ratio, percent					
		1999	2000	2001	2002	2003	2004
Micro	2	**	**	**	**	*	*
		*	*	*	**	*	0.0088
Small	5	*	*	*	*	**	0.0355
		*	*	*	*	**	*
		0.0063	**	*	*	0.0015	0.0024
		*	*	*	*	0.0140	0.0480
		*	*	*	*	0.0039	0.0021
Medium	3	**	**	0.0104	0.0062	0.0009	0.0038
		0.0063	0.0051	0.00003	0.00004	*	0.0003
		0.0008	0.0017	0.0007	0.0008	0.0010	0.0003

* No advertising expense reported.

** No record for the year.

4. Food Processing Industry Level Analysis

4.1 Processed Mango

C. Market Performance

Table 30. Market performance of sample SMEs in processed mango, Philippines, 1999-2004

Size	No. Reporting	1999	2000	2001	2002	2003	2004
		Rates of Return on Assets after Tax (ROA)					
Micro	2	**	**	**	**	(0.44)	(0.11)
		0.04	0.04	0.01	*	0.02	0.1
Small	5	0.15)	(.022)	(0.33)	*	**	(0.12)
		0.01	0.002	0.01	*	0.02	0.02
		0.11	**	(0.06)	*	0.07	0.03
		(0.36)	(0.18)	0.01	(0.26)	0.03	0.03
		0.002	(0.08)	0.01	(0.03)	0.02	0.02
Medium	3	**	**	0.04	0.02	0.02	0.01
		0.03	0.09	0.01	0.005	0.004	0.003
		(0.08)	0.15	0.05	0.04	0.05	0.07

* Incomplete records for the year.

** No record for the year.

Table 30. Market performance of sample SMEs in processed mango, Philippines, 1999-2004

Size	No. Reporting	1999	2000	2001	2002	2003	2004
Rates of Return on Stockholders Equity after Tax (ROE)							
Micro	2	**	**	**	**	1.13	0.25
		(0.02)	0.02	(0.01)	*	(0.02)	(0.02)
Small	5	0.49	0.37	0.30	0.05	**	(0.05)
		(0.01)	(0.003)	(0.02)	*	(0.04)	(0.01)
		(0.08)	**	0.03	nil	(0.02)	(0.02)
		0.56	0.21	(0.01)	(0.26)	(0.04)	(0.07)
		(0.27)	1.99	(1.04)	0.86	(0.73)	(1.94)
Medium	3	**	**	0.32	0.16	0.21	0.09
		0.22	0.09	0.04	0.03	0.01	0.01
		1.95	1.26	0.28	0.24	0.25	0.07
		(0.03)	0.02	0.01	0.01	0.01	0.02

* Incomplete records for the year.
** No record for the year.

Table 30. Market performance of sample SMEs in processed mango, Philippines, 1999-2004

Size	No. Reporting	1999	2000	2001	2002	2003	2004
Return on Sales after Tax (ROS)							
Micro	2	**	**	**	**	(0.98)	(0.07)
		0.04	0.05	0.02	0.02	0.02	0.002
Small	5	(0.71)	(0.61)	(2.66)	(2.78)	**	(0.60)
		0.01	0.002	0.01	(0.06)	0.02	0.02
		0.13	**	(0.06)	0.001	0.04	0.02
		(2.89)	(0.48)	0.01	(0.56)	0.04	0.03
		0.001	(0.06)	0.01	(0.02)	0.01	0.01
Medium	3	**	**	0.02	0.01	0.01	0.01
		0.01	0.01	0.004	0.003	0.003	0.002
		(0.03)	0.02	0.01	0.01	0.01	0.02

* Incomplete records for the year.
** No record for the year.

4.2 Processed Tuna

Industry Profile

In the Philippines, processed tuna includes canned, dried/smoked and salted.

Table 31. Annual canned tuna exports of Asia-Pacific countries, 2004-2005
In metric tons

Country	2004	2005
Thailand	311,071	373,981
Philippines	108,448	100,019
Indonesia	48,347	42,462

Source: Alliance Tuna International, Inc., 2006.

Industry Profile, cont'd...

- Contributory factors to the development of the Phil. canned tuna industry
  - *1970 import quota on canned fish
  - * Increased tuna catch from purse seiners which led to the establishment of canneries
  - *Fluctuating prices of frozen tuna due to erratic demand from US and Japan
  - * Large catches from American fleets reduced demand for frozen tuna
  - *Better prices of canned tuna attracted more investors

Industry Profile, cont'd. . .

- By 1980, there were about 25 canneries operating but this decreased over time due to declining catch, stiff competition from other processed tuna countries exporting countries, e.g. Thailand and the difficulty in accessing new markets.

- At present there are seven (7) tuna canneries mostly located in Gen. Santos City, the country's tuna capital

Industry Profile, cont'd. . .

Cannery employment

- **around 150,000 people employed directly and indirectly in the entire tuna canning industry located in Mindanao (Department of Foreign Affairs, 2005)**

Concerns of the industry

- **revolve around high prices of raw materials, better market access, and competition**

4. Food Processing Industry Level Analysis
4.2 Processed Tuna

Table 32. Selected data on Philippine canned tuna processors

Location/Company	Size of Establishment	Total assets 2004, PhPM (US$M)	Rated capacity, 2006, MTD	Rank
General Santos City				
General Tuna Corp.*	L	1,760 (35.20)	300	1
Philippine Best Canning Corp.	L	639 (12.77)	150	2
Ocean Canning Corp.	L	561 (11.22)	70	6,7
Miramar Fish Company, Inc.	L	314 (6.28)	100	4
Celebes Canning Corp.	L	405 (8.09)	80	5
Alliance Tuna International, Inc.	L	383 (7.65)	120	3
Seatrade Canning Corp.	**M**	**87 (1.75)**	**60**	**8**
Asia-Pacific Tuna Canning Corp.	**M**	**54 (1.09)**	**NA**	
Zamboanga City				
Permex Producer/Exporter Corp.	L	420 (8.39)	70	6,7

* Includes Century Canning Corp. which sells canned tuna solely in the Philippines.

Trade Liberalization and Exports

Market Access

a. Tariff barriers

- EU's 24% tariff that confronted the Philippines Thailand and Indonesia while African Caribbean Pacific (ACP) countries have zero tariff
- due to successful lobbying, the EU opened a 5-year annual quota of 25,000 MT at 12% tariff which was allocated to Philippines (9,000MT; Thailand, 13,000MT; Indonesia, 2,750MT; Other third countries, 250MT)
- The quota is expiring soon and there is now a move to negotiate for a single digit tariff to all volume; also for unlimited quotas at 12% tariff

Market Access, cont'd . . .

a. **Tariff barriers**

- -Another significant progress is the lowering of US tariff on Philippine tuna shipments. Philippine exports under quota has a 6% tariff while out-quota has 12.5%
- - The Philippines now enjoy a tariff parity for its canned tuna exports to the US with Andean member countries

b. **Non-tariff barriers**

- - More stringent SPS standards
  - * Zero-tolerance policy of examination and accreditation by the US and EU is costly to local canneries

Market Access, cont'd . . .

a. Non-tariff barriers

- EU and Japan ban on Philippine tuna because of substances like dioxin and furan in products from other countries. The ban triggered in lower canned tuna prices which resulted in lower export earnings.
- The EU rejected shipments of canned tuna because of detection of new contaminants such as BADGE and BFDG.
- Increasing the threshold level of lead in fish from 0.40 ppm to 0.20 ppm

Competition, Branding

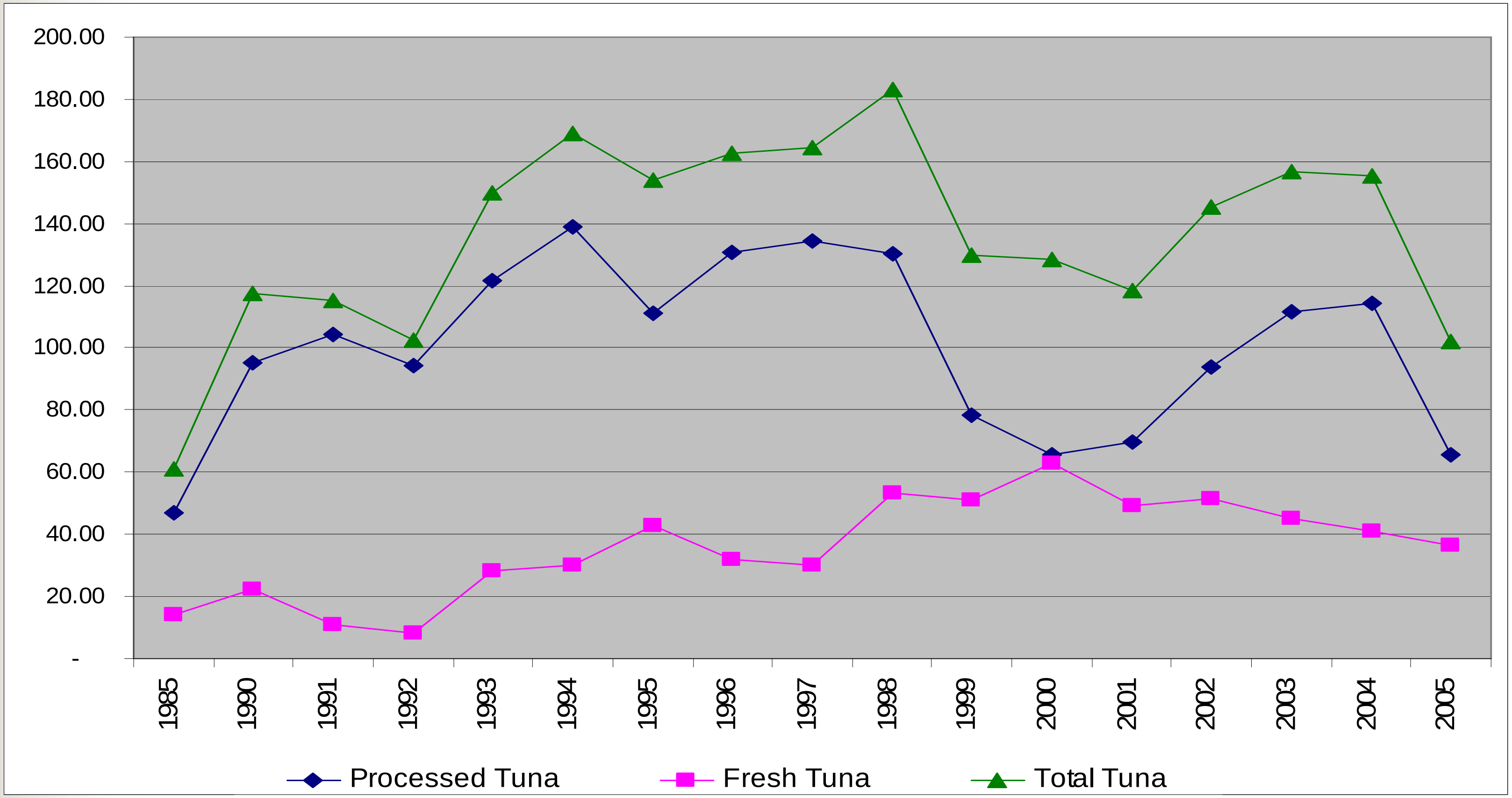
- The Philippines face stiff competition with Thailand's canned tuna with established brand name "Canned of the Sea" distributed in US market in retail sized cans

- Philippine canneries are cautious of Thailand's move to seek bilateral free trade with US

- Competition from pouched tuna exported duty-free to the US by the Andean countries. The Philippines export large sized institutional cans which competes with the cheaper large-sized pouched tuna

Export Performance

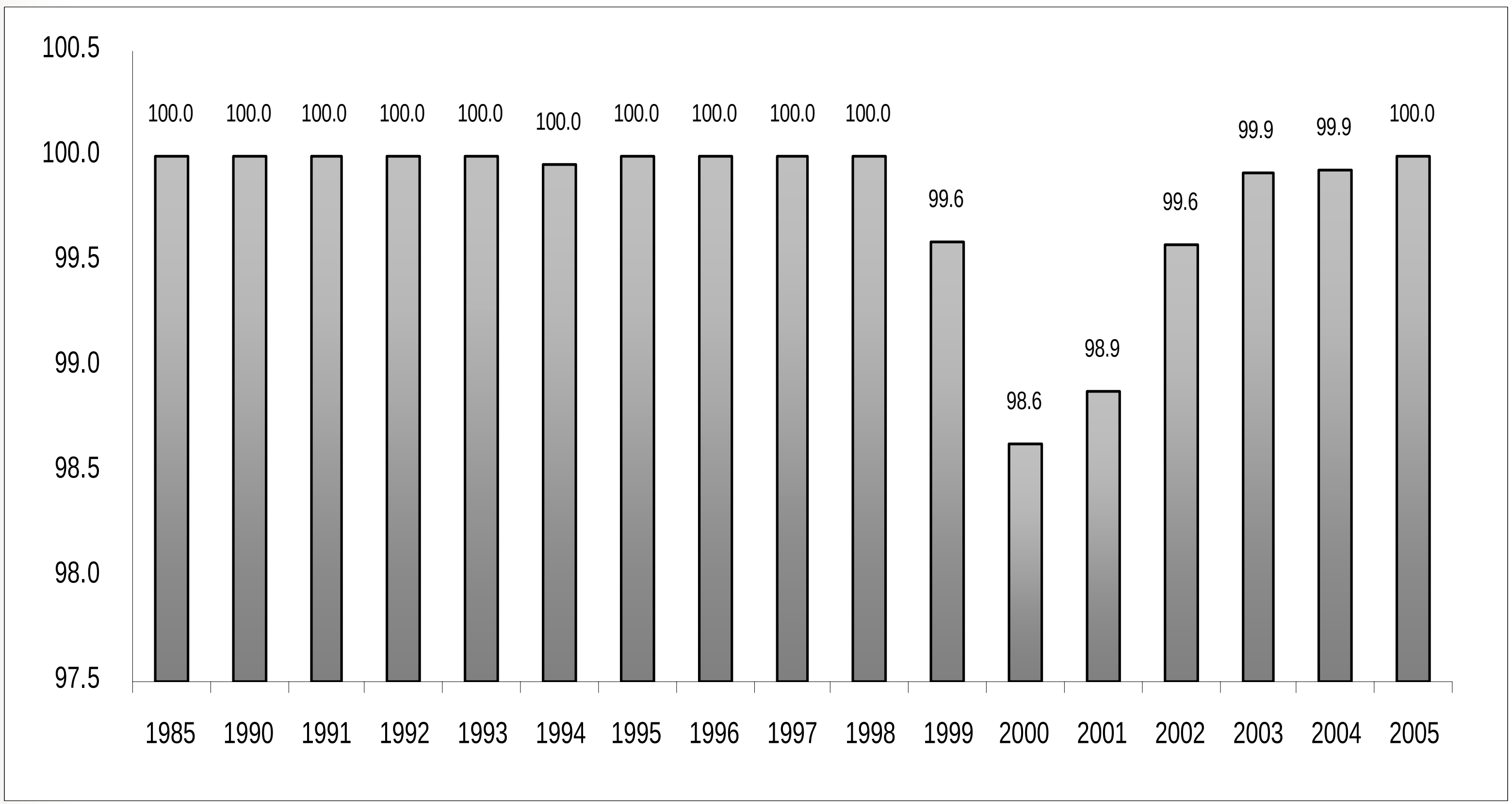
Figure 10. Value of total tuna exports, processed and fresh, Philippines 1985, 1990-2005



4. Food Processing Industry Level Analysis

4.2 Processed Tuna

Figure 11. Percent share of canned tuna to total value of processed tuna exports, Philippines, 1985, 1990-2005



Export Markets

Table 33. US imports of canned tuna, 1998-2005

Year	Total	Thailand	Philippines	Ecuador	Indonesia	Others
	In '000 metric tons					
1998	109.0	51.8	38.9	0.7	12.6	5.0
1999	151.7	86.3	38.6	1.9	17.4	7.5
2000	142.0	79.9	35.3	2.4	13.4	11.0
2001	132.5	64.0	28.2	14.6	15.2	10.5
2002	152.9	68.5	34.2	23.6	14.2	12.4
2003	167.5	79.9	38.4	23.4	16.9	8.9
2004	168.8	71.8	43.3	24.7	17.0	12.0
2005	169.0	77.4	43.8	15.5	18.0	14.3

Source: Globefish, 2006.

Table 34. Germany's imports of canned tuna, 2001-2005

Year	Total	Philip-pines	Ecuador	Thai-land	PNG	Indo-nesia	Sey-chelles	France	Others
	In '000 metric tons								
2001	68.5	20.5	2.2	5.1	2.0	1.3	6.9	9.2	21.3
2002	85.7	28.5	4.1	9.3	1.3	2.1	8.2	16.8	11.5
2003	91.7	29.4	4.8	9.6	6.9	2.7	10.6	13.7	12.2
2004	81.2	19.1	13.7	5.6	9.2	3.5	5.4	7.3	15.9
2005	83.8	20.3	14.6	11.5	21.3	7.0	6.6	5.7	8.5

Source: Globefish, 2007.

Market Performance Analysis

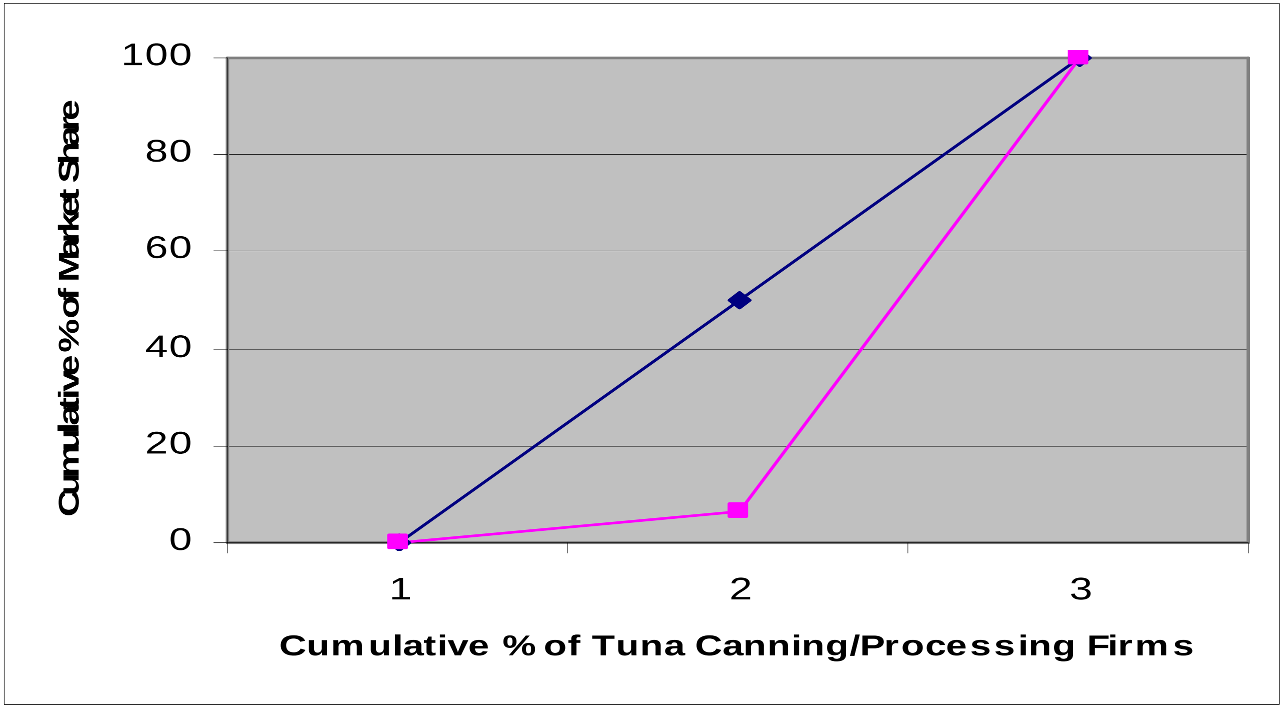
A. Market Structure

Table 38. Market concentration measures in sample SMEs in canned tuna, Philippines, 2000-2005

Item	2004
Sample size	2
Concentration Ratio, C1	93.41
HH Index	8,768
Gini Ratio	0.434

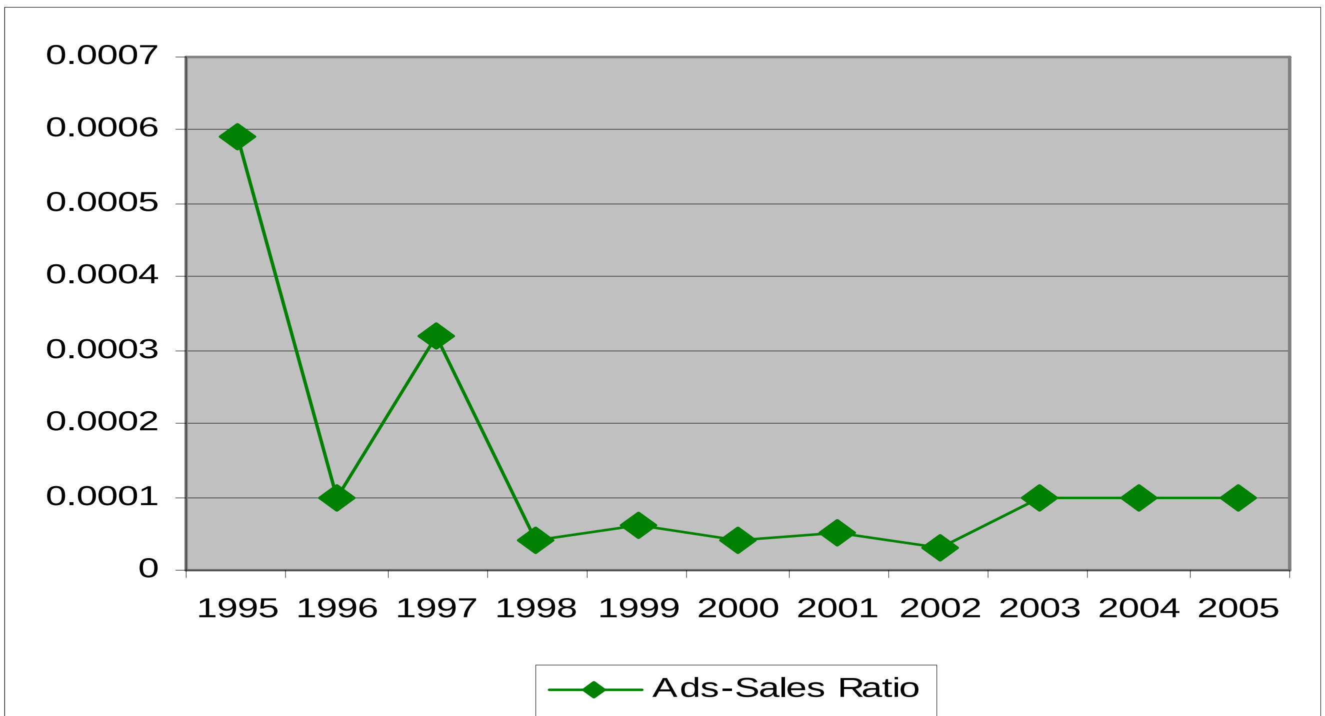
A. Market Structure

Figure 13. Lorenz curve for sample SMEs in processed tuna, Philippines, 2004



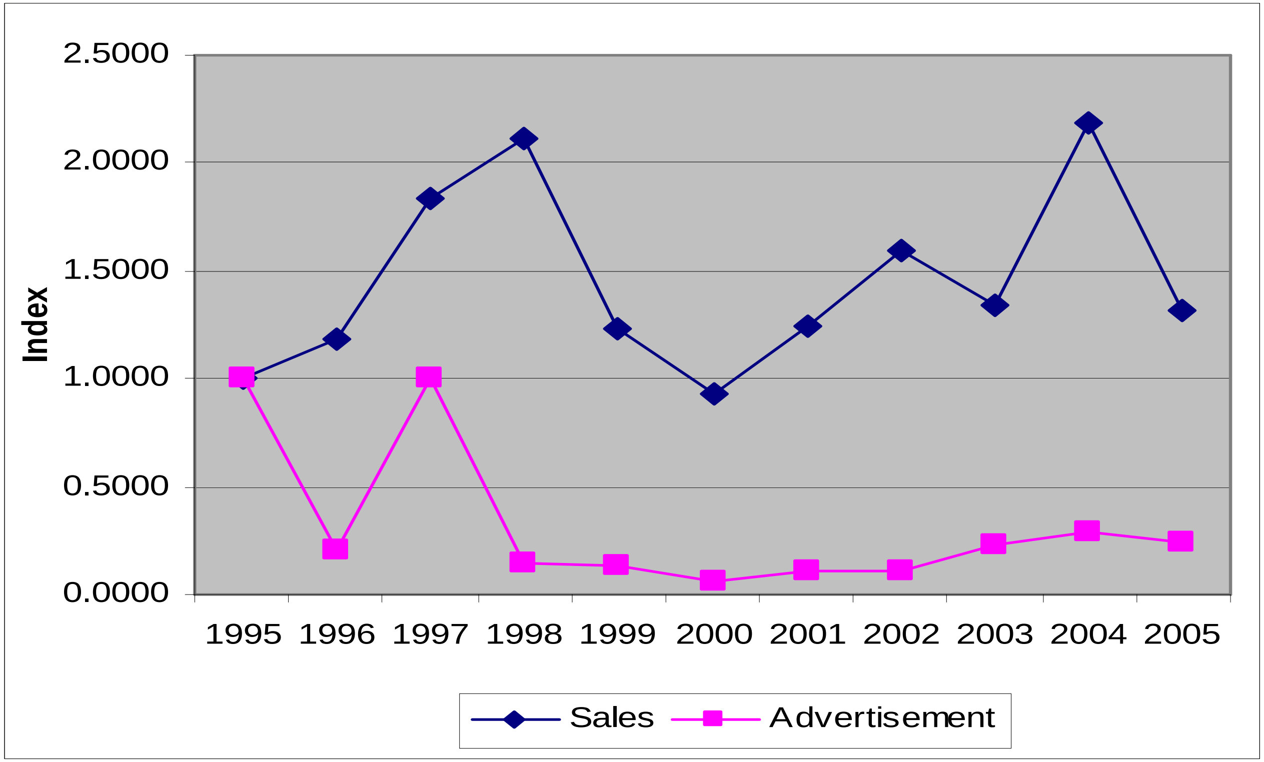
B. Market Conduct

Figure 14. Advertising-sales ratio, Seatrade, Philippines, 1996-2005



B. Market Conduct

Figure 15. Sales and advertising indeces, Seatrade, Philippines, 1995-2005

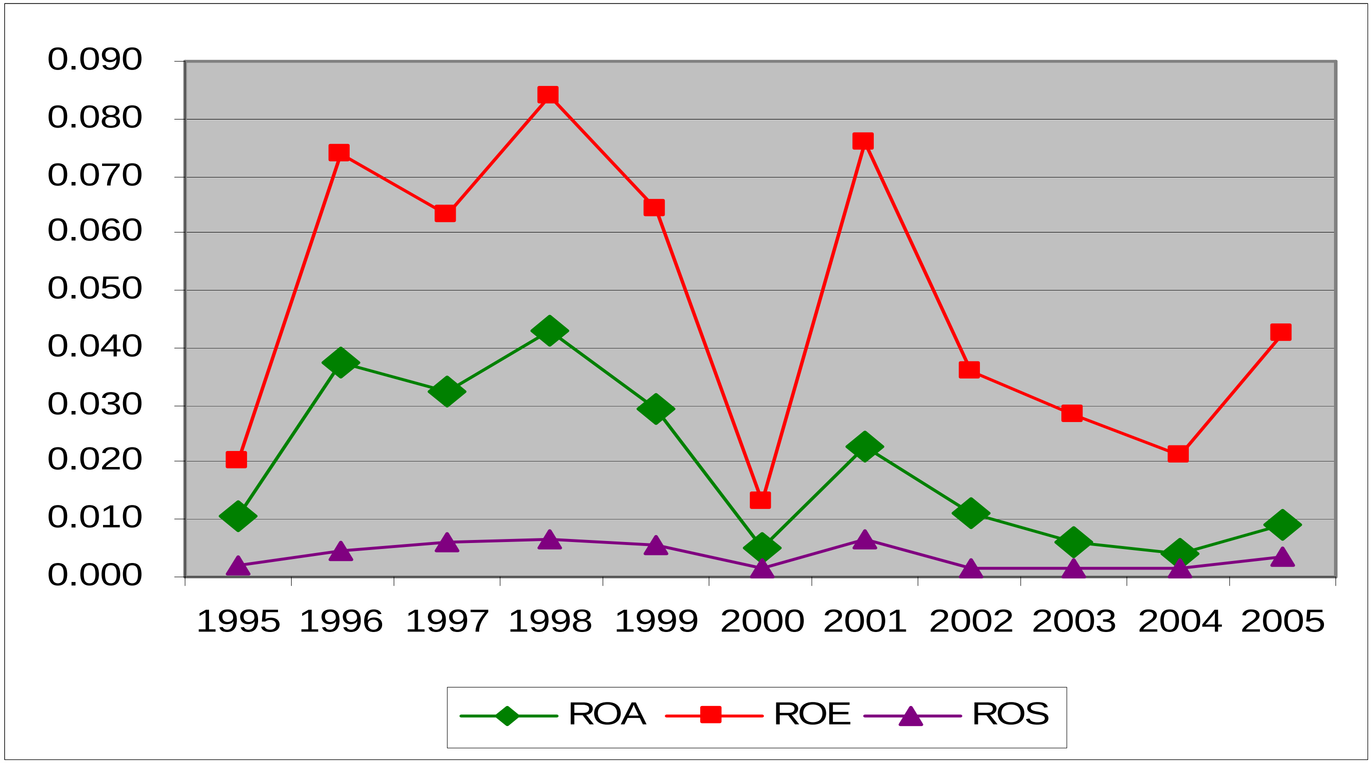


4. Food Processing Industry Level Analysis

4.2 Processed Tuna

C. Market Performance

Figure 16. Returns on asset (ROA), equity (ROE) and sales after tax (ROS) Seatrade, Philippines, 1995-2005



4.3 Processed Seaweeds/Carageenan

Industry Profile

1. **Products of seaweed of the eucheuma variety:**
   raw dried seaweed , alkai treated chips, carageenan

2. **Raw dried seaweed is processed into carageenan, a yellowish or tan to white, coarse to fine powder.**

3. **Carageenan is used as food, non-food or industrial additive used as enhancer, emulsifier, gelling agent, thickener, binder and stabilizing agent**

Table 36. Types of carageenan and their applications

Type of carageenan	Applications
Eucheuma Cottonii - Kappa	Dairy products
	Meat and Poultry products
	Water gels
	Processed human food/fat foods
	Pharmaceutical
	Personal care
Eucheuma Spinosa - Iota	Tootpaste
	Other dairy products
	Pharmaceuticals

Source: Seaweed Industry Association of the Philippines (SIAP).

4. Food Processing Industry Level Analysis

4.3 Processed Seaweeds/Carageenan

Table 36. Countries producinge Eucheuma seaweed and by type of carageenan extracted

Country/type of carageenan extracted	Percent share
Philippines	**72.0**
Cottonii	97.7
Spinosum	2.3
Indonesia	**22.0**
Cottonii	92.3
Spinosum	7.7
Malaysia	**2.7**
Cottonii	100.0
Zanzibar	**3.3**
Cottonii	23.0
Spinosum	77.0

Source: Seaweeds Industry Association of the Philippines (SIAP).

Industry Profile, cont'd . . .

4. Seaweed processing started in 1966 with an initial production of 800 MT. By 1980, the country was already producing the following:

   a. Semi-refined food grade carageenan or Philippine Natural Grade (PNG)
      Ranked top producer

   b. Highly-refined carageenan known as conventionally purified (CP)
      Ranked 4th producer

   c. Semi-refined carageenan as pet food
      Ranked 2nd producer

4. Food Processing Industry Level Analysis

4.3 Processed Seaweeds/Carageenan

Industry Profile, cont'd . . .

5. **There are 27 seaweed processors/exporters benefitting directly 100,000 families**

6. **Cebu in southern Philippines as the world's center for seaweed processing into carageenan**

7. **The industry is organized into a Seaweeds Industry Association of the Philippines**

4. Food Processing Industry Level Analysis

4.3 Processed Seaweeds/Carageenan

Concerns of the Industry

1. Competition from other Asian countries: China, Indonesia

2. Competition from other products such as carbon methyl cellulose (CMC) and santhan if price of carageenan becomes excessive

3. China’s access to raw Philippine seaweed under the Early Harvest Program (EHP) because of the latter’s huge seaweed requriement whichm may cause domestic shortage. Full implementation of the ASEAn-CHIAN Free Trade Area in 2030

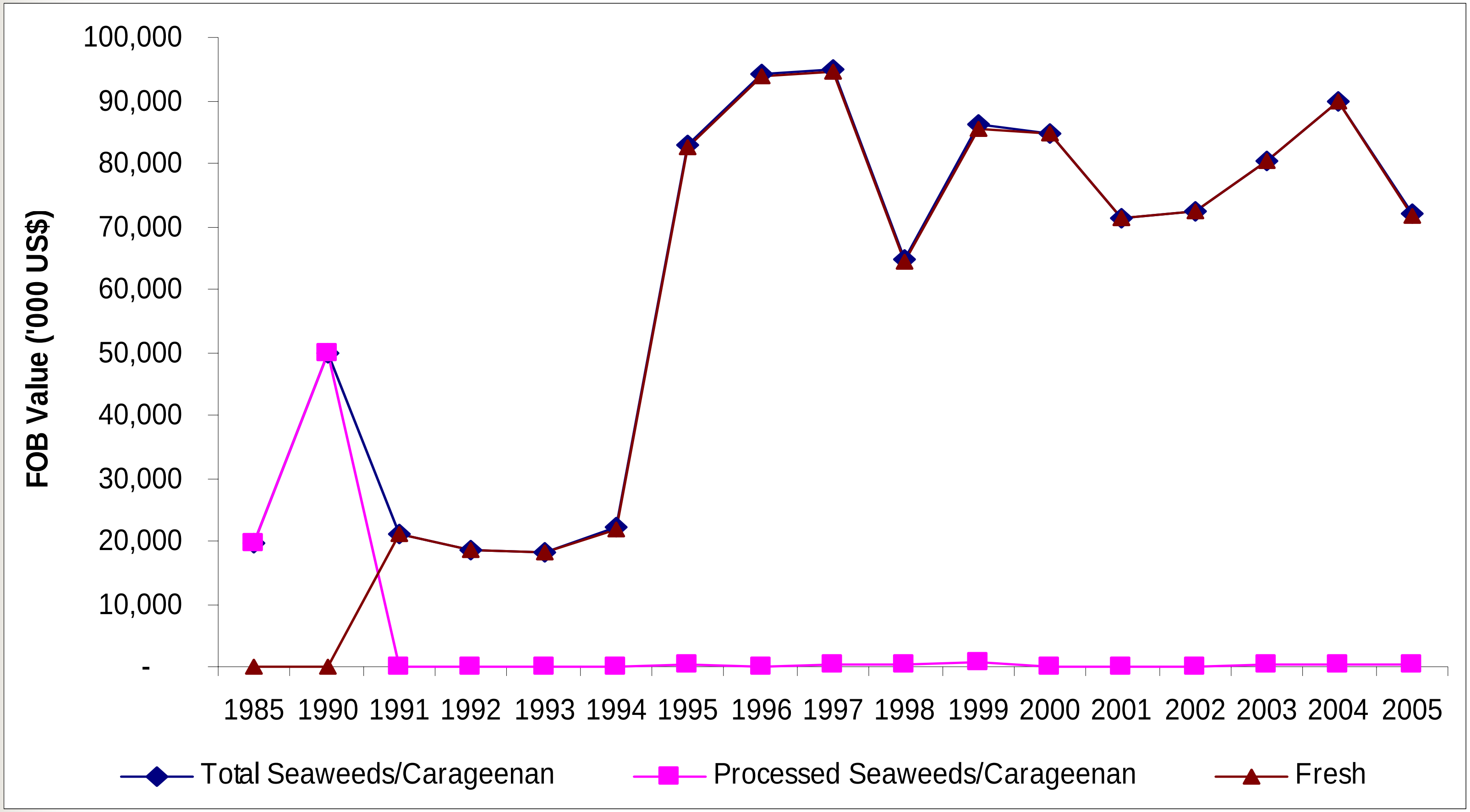
Concerns of the Industry, cont'd . . .

4. **Compliance with non-tariff barriers**
   Implementation of HACCP system per the Directive 91/492/EEC in order to receive approval to export fishery products to EU
   *** Insufficient public sector infrastructure investment in food safety and health regulation**

5. **Fishery subsidy is a core mandate fo WTO. "Friends of the Fish" which include the Philippines espoused for the prohibition of fishery subsidies that promote overcapacity and overfishing which deplete resources and distorts international markets**

Export Performance

Figure 18. Value of seaweeds/carageenan exports, Philippines, 1985, 1990-2005



4. Food Processing Industry Level Analysis
4.3 Processed Seaweeds/Carageenan

Figure 19. Percent share of processed seaweed/carageenan to total value of seaweed exports, Philippines, 1985, 1990-2005

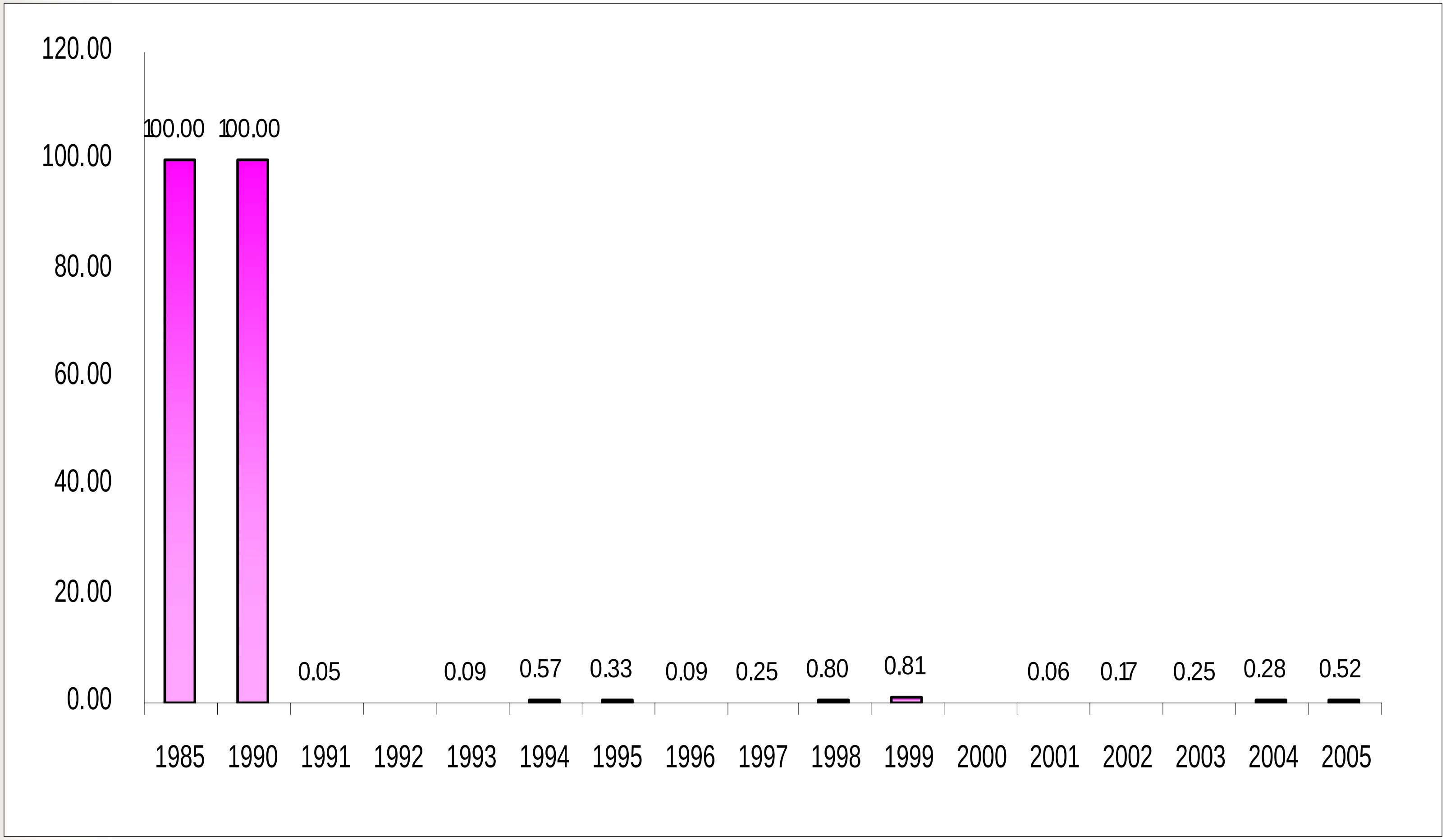


Figure 20. Major markets of processed seaweed and carageenan, Philippines, 1985 & 1990

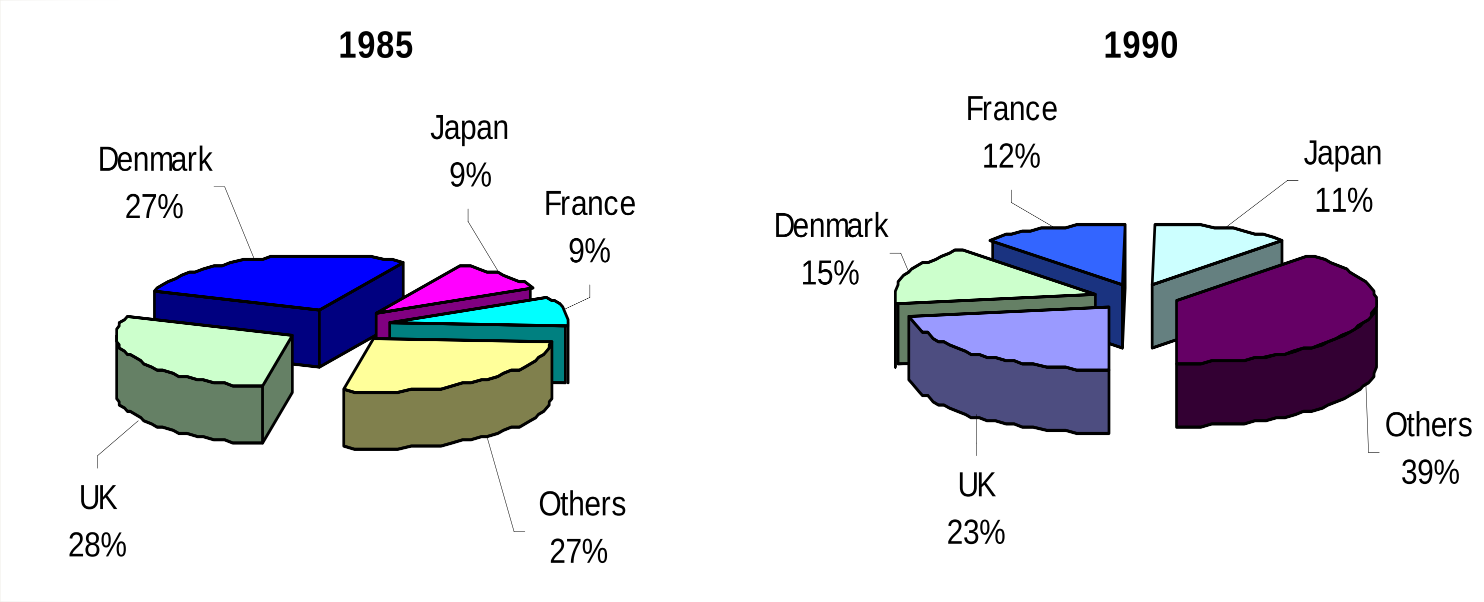
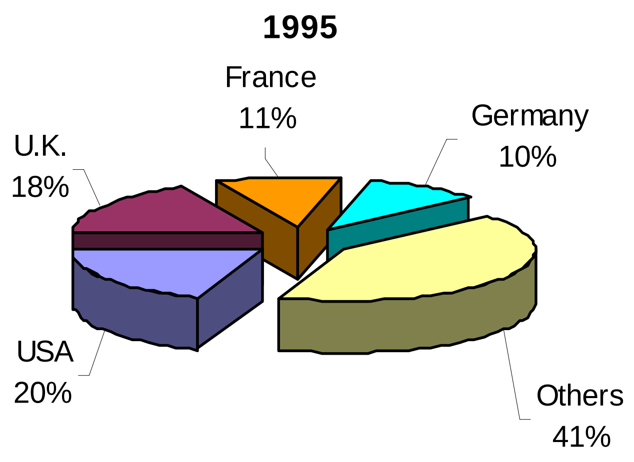
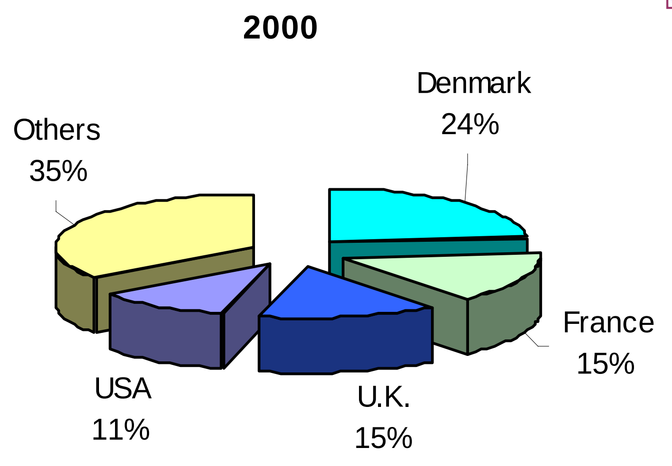


Figure 20. Major markets of processed seaweed and carageenan, Philippines, 1995, 2000 & 2005





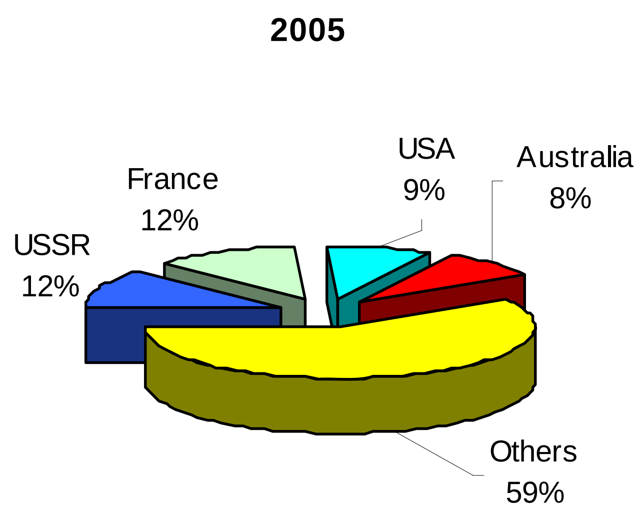
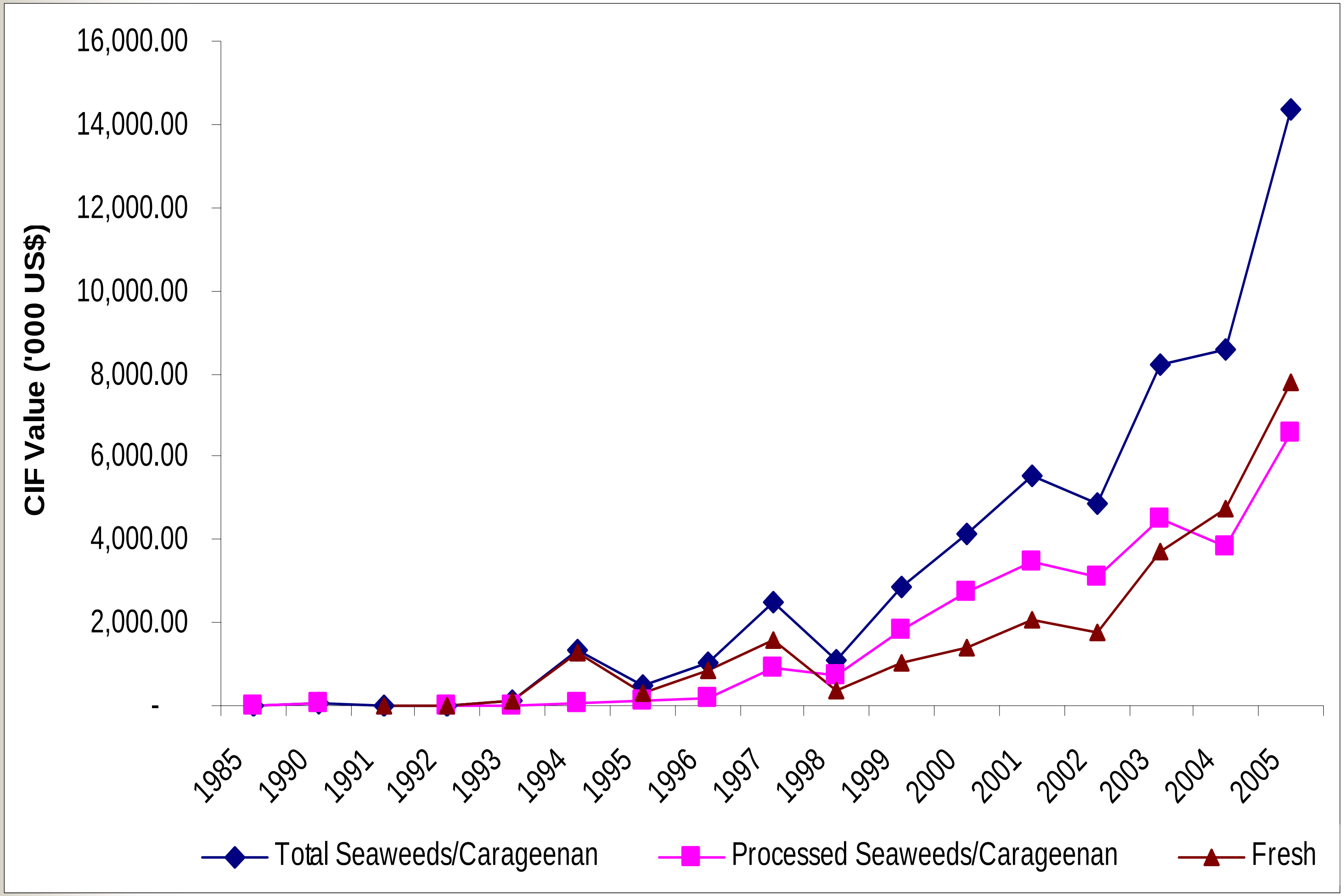


Figure 21. Imports of seaweeds, Philippines,1985, 1990-2005



Market Performance Analysis

Table 37. Size classification of sample SMEs in processed seaweeds/carageenan, Philippines, 2005

Size	No. Reporting	Total Assets
Total	4	
Small	2	PhP10,27M – PhP19.62M US$0.21M – US$0.39M
Medium	2	PhP69.10M – PhP96.42M US$1.38M – US$1.93M

Market Performance Analysis

A. Market Structure

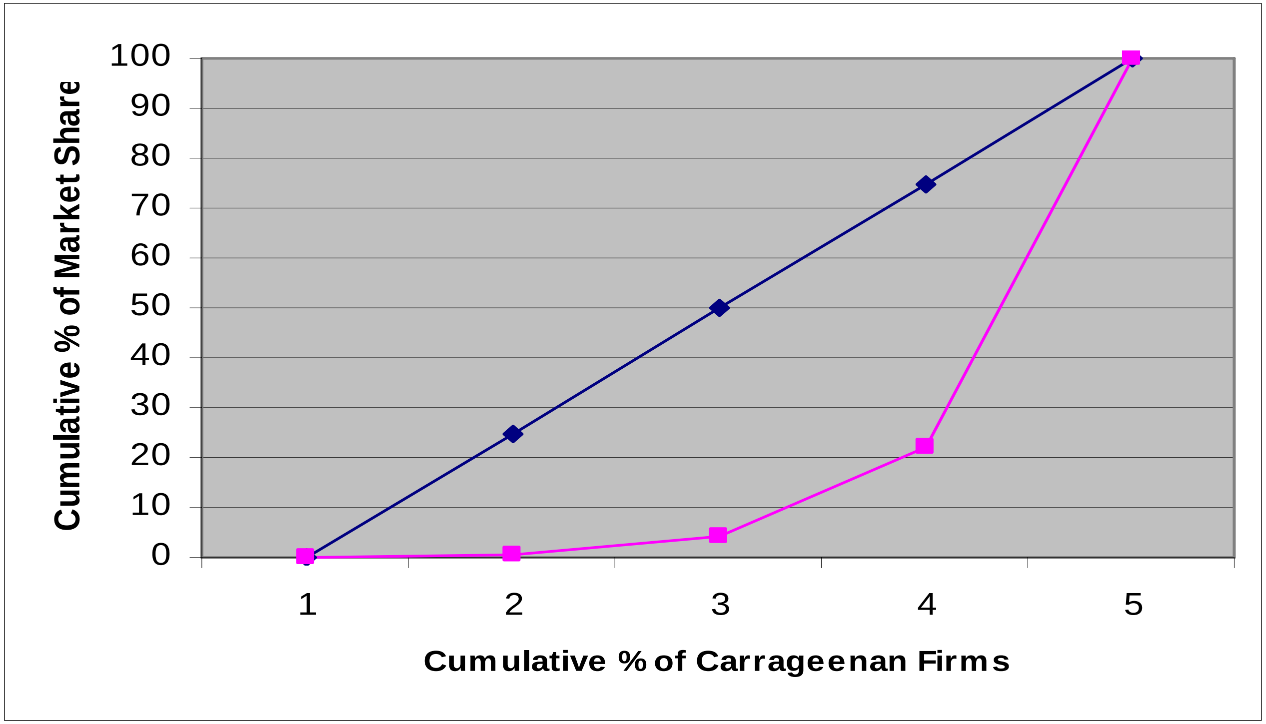
Table 38. Market concentration measures in sample SMEs in processed seaweed/carageenan, Philippines, 2000-2005

Item	2000	2001	2002	2003	2004	2005
Sample size, n	2	3	2	2	2	4
ConcentrationRatio, C1	56.74	71.95	66.40	68.14	69.14	77.99
C2		99.95				95.88
HH Index	5,091	5,961	5,538	5,658	5,333	6,416
Gini coefficient	0.067	0.479	0.164	0.181	0.191	0.617

Market Performance Analysis

A. Market Structure

Figure 22. Lorenz curve of sample SMEs in processed seaweed/carageenan, Philippines, 2005



Market Performance Analysis

B. Market Conduct

- only one out of 4 corporations reported advertising expenditure and in 2005 only
- its advertising –sales ratio for the period was 0.0068

Market Performance Analysis

C. Market Performance

Table 39. Market performance of sample SMEs in processed seaweed/carageenan, Philippines, 2000-2005

Size	No. reporting	2000	2001	2002	2003	2004	2005
		Rates of Return on Assets after Tax (ROA)					
Small	2	*	(0.1067)	*	*	*	(0.0622)
		*	*	*	*	*	(0.0723)
Medium	2	(0.0235)	(0.0567)	0.0014	0.006	(0.0013)	(0.0559)
		(0.0115)	0.0788	0.0051	0.0937	0.0838	(0.0372)

* No records for the year.

4. Food Processing Industry Level Analysis
4.3 Processed Seaweeds/Carageenan

Market Performance Analysis

C. Market Performance

Size	No. reporting	2000	2001	2002	2003	2004	2005
Rates of Return on Stockholders Equity after Tax (ROE)							
Small	2	*	(0.7090)	*	*	*	(0.7192)
		*	*	*	*	*	(0.6025)
Medium	2	2.9327	(0.6391)	0.0778	(0.0112)	(0.0748)	(0.1007)
		0.9465	(0.5727)	(0.0438)	0.3719	0.2453	(0.0016)
Return on Sales after Tax (ROS)							
Small	2	*	(1.7090)	*	*	*	(0.7192)
		*	*	*	*	*	(0.6025)
Medium	2	(0.0286)	0.6391	0.0778	(0.0112)	0.0748	(0.1007)
		(0.0158)	(0.5727)	(0.0438)	0.3719	0.2453	(0.0016)

4. Food Processing Industry Level Analysis

4.4 Soy Sauce

Table 40. World top exporters of soy sauce, 1985, 1990, 1995, 2000, 2004

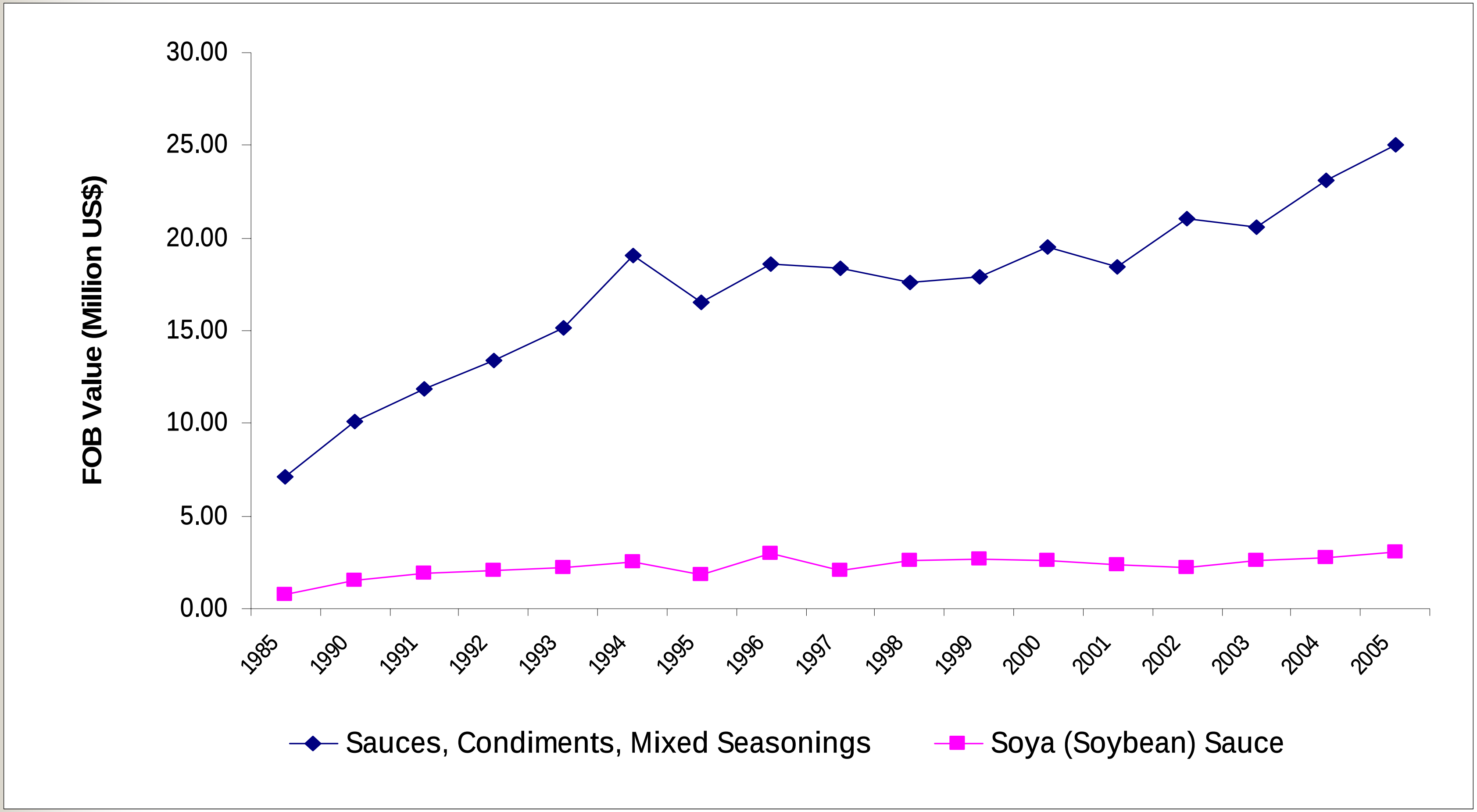
ountry	1985		1990		1995		2000		2004	
	Export mt	Rank	Export mt	Rank	Export mt	Rank	Export mt	Rank	Export mt	Rank
apan	9,372	1	10,009	1	9,854	1	12,004	2	15,373	2
ep. of orea	2213	2	1,156	9	2,067	7	3,759	7	7,155	7
hina			26,817	2	37,621	2	57,227	1	64,453	1
SA	691	3	2,222	4	5,702	4	11,223	3	12,500	3
hilippines	935	**4**	1,985	**6**	2,164	**8**	4,530	**10**	3,563	**13**
alaysia	614	5	1,309	11	556	15	2,245	14	3,417	10
etherlands			2,005	3	2,301	5	5,676	4	6,870	4
hailand			1,975	5	4,677	6	8,566	6	8,764	6
ermany			866	7	304	16	353	16	1,029	12
K			595	8	644	10	1,307	11	2,485	8
enmark			300	10	189	13	335	15	479	14

* Preliminary.
Source: FOASTAT

Non-tariff Barriers to Trade

- Discriminatory move by Australia to restrict its imports of sauces containing benzoic acid when in fact it continued to import the same from New Zealand. The Philipppines brought the issue to the WTO in late 1988. In 2001, Australia implemented a revised food code which allowed entry of Philippine sauces with benzoic acid. The revised code, however, has increased the tolerance level, of benzoates in sauces to 1,000 milligrams per kg.

Figure 23. Exports values of sauces, condiments & mixed seasoning and soya sauce, Philippines, 1985, 1990-2005



4. Food Processing Industry Level Analysis

4.4 Soy Sauce

Figure 24. Share of soy sauce exports to total value of sauces, condiments & mixed seasonings, Philippines, 1985, 1990-2005

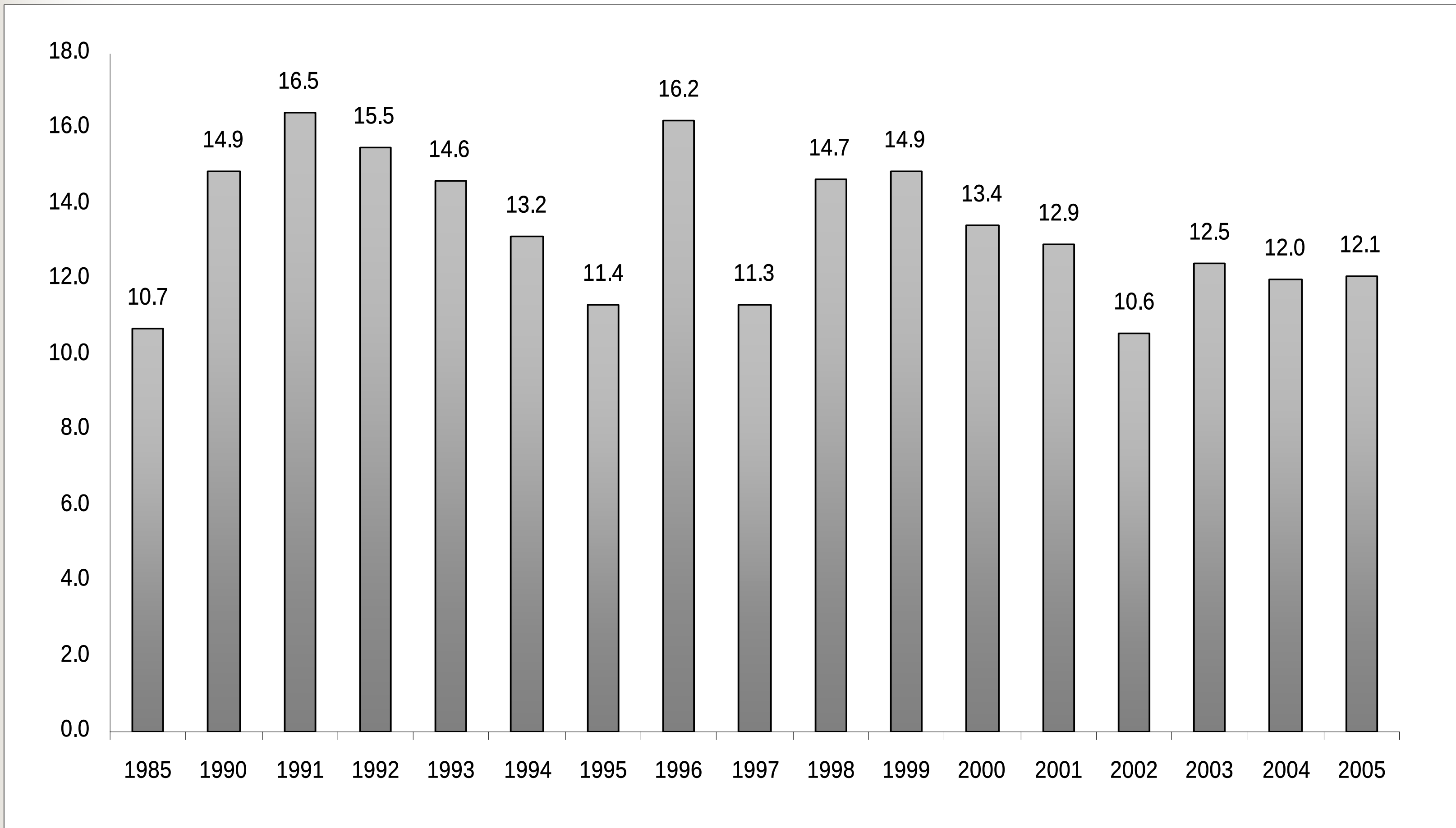
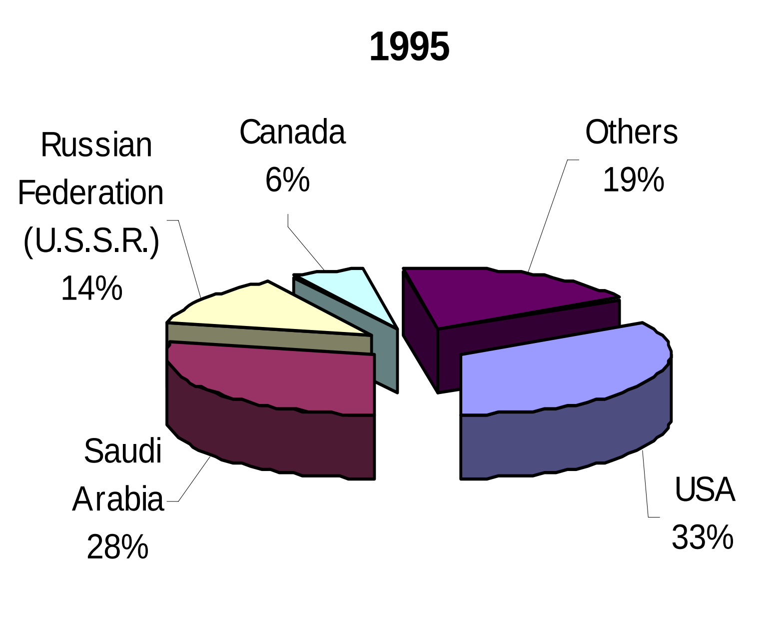


Figure 25. Major markets of Philippine soy sauce, 1995, 2000



4. Food Processing Industry Level Analysis
4.4 Soy Sauce

Figure 26. Value of imports and exports of soy sauce, Philippines, 1985, 1990-2005

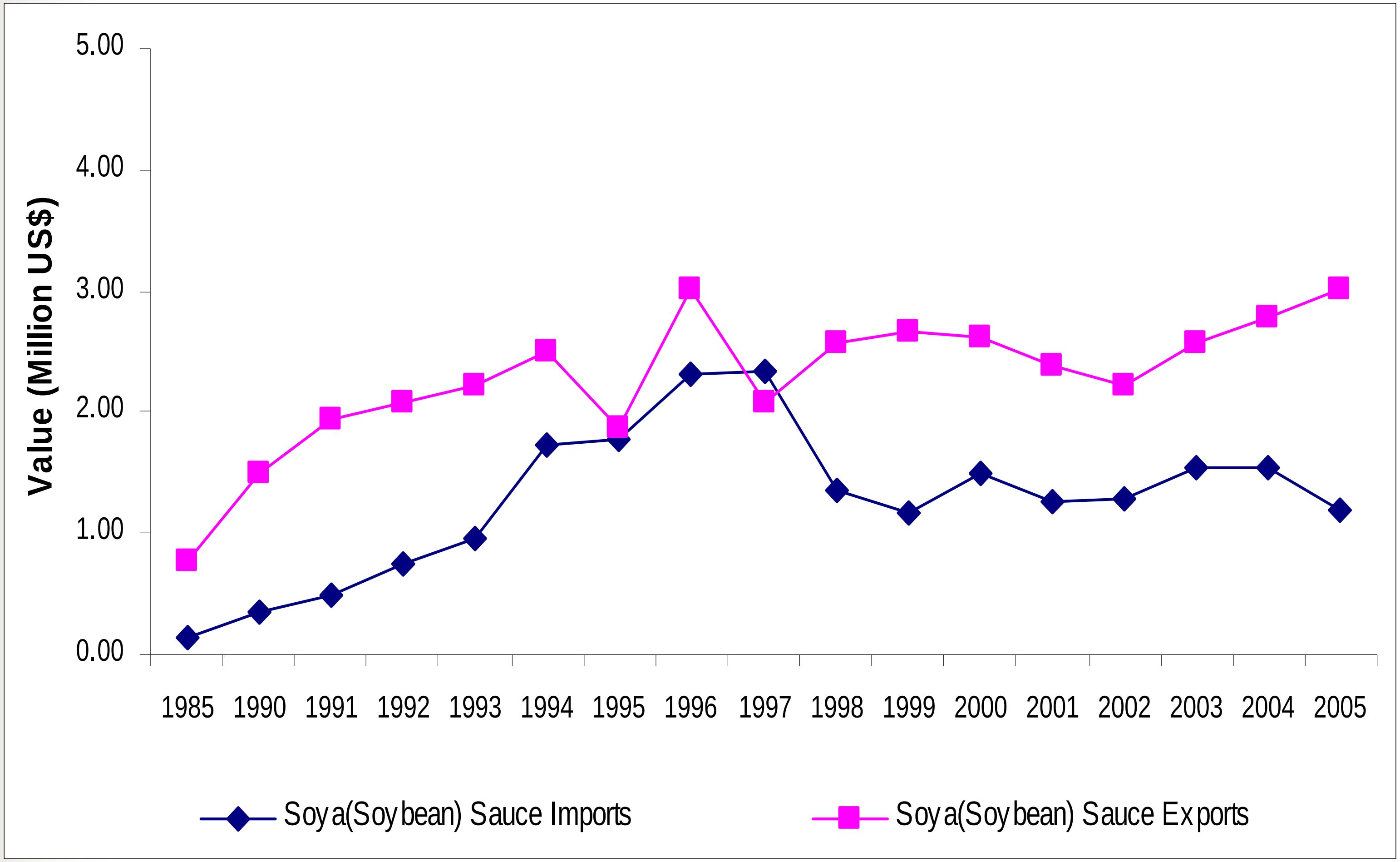


Table 41. Size classification of sample SMEs in soy sauce manufacturing, Philippines, 2005

Size	No. Reporting	Total Assets
Total	4	
Small	1	PhP9.1M (US$0.18M)
Medium	3	PhP22.3M-PhP61.2M (US$0.45M-US$1.22M)

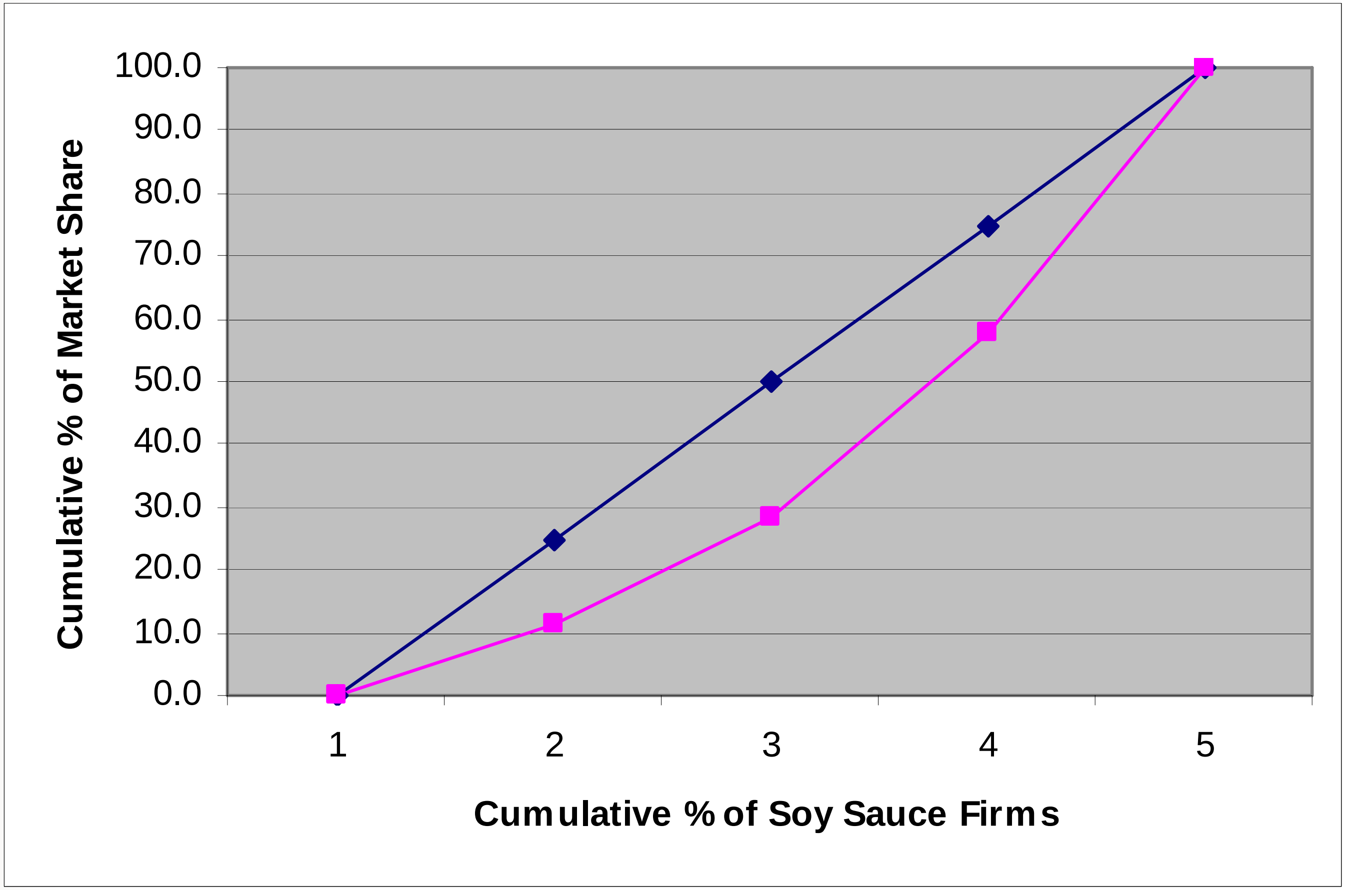
Market Performance Analysis

A. Market Structure

Table 42. Market concentration measures in sample SMEs in soy sauce manufacturing, Philippines, 2000-2005

Item	2000	2001	2002	2003	2004	2005
Sample size, n	4	4	4	4	3	3
Concentration Ratio, C1	49.60	49.44	42.34	42.37	49.55	58.01
C2	70.75	73.33	71.88	71.51	89.87	89.30
HH Index	3,352	3,331	3,124	3,067	4,184	4,459
Gini coefficient	0.293	0.342	0.279	0.263	0.263	0.315

Figure 27. Lorenz curve for 4 SMEs in soy sauce manufacturing, Philippines ,2003



4. Food Processing Industry Level Analysis
4.4 Soy Sauce

B. Market Conduct

- a medium-sized company out of 4 companies reported an intensified advertising expenditure from PhP14 thousand (US$276) in 2000 to PhP39 thousand (US$780) in 2001
- its advertising–sales ratio increased from 0.0005 to 0.0019 and 0.0015 in 2001 and 2003
- company’s sales suggest that as advertising increased, next year’s sales increased and continuous advertising resulted in higher sales in 2003
- as advertising decreased, sales correspondingly decreased
- heaviest advertiser is also a medium-sized company

C. Market Performance

Table 43. Market performance of sample SMEs in soy sauce manufacturing, Philippines, 2000-2005

Size	No. Reporting	2000	2001	002	2003	2004	2005
		Rates of Return on Assets after Tax (ROA)					
Small	1	0.0076	0.0208	0.0075	0.0186	*	0.0823
Medium	3	0.0040	(0.1459)	(0.0713)	0.0182	0.0098	0.0110
		0.0349	0.0331	0.0452	0.0423	0.0442	0.0342
		(0.3356)	(0.2286)	(0.2856)	(0.0102)	(0.5094)	*
Rates of Return on Stockholders Equity after Tax (ROE)							
Small	1	0.3804	0.5196	0.1638	0.2724	*	0.2655
Medium	3	0.0356	(6.9132)	0.8020	(0.2183)	(0.1304)	(0.1496)
		0.0991	0.0860	0.1262	0.1171	0.1234	0.0115
		0.2395	0.1607	0.1042	0.1345	0.1028	*

* No record for the year.

C. Market Performance

Table 43. Market performance of sample SMEs in soy sauce manufacturing, Philippines, 2000-2005

Size	No. Reporting	2000	2001	002	2003	2004	2005
Return on Sales after Tax (ROS)							
Small	1	0.0036	0.0096	0.0032	0.0082	*	0.0091
Medium	3	0.0038	(0.1759)	(0.0797)	0.0128	0.0087	0.0087
		0.0167	0.0167	0.0123	0.0127	0.0091	0.0115
		(0.3255)	(0.2413)	(0.1494)	(0.0186)	(0.2284)	*

* No record for the year.

4.5 Noodles

Table 44. Tariff rates (%) on wheat, flour and flour-based product imports, Philippines, selected years

Year	Durum Wheat	Other Wheat	Wheat Used as Feed	Flour	Pasta Products*	Bread Products
1995	10	10	30	30	30	30
2000	3	3	10	7	15	15
2001	3	3	10	7	15	15
2002	3	3	7	7	10	10
2003	3	3	7	5	7	7
2004	3	3	5	5	5	5

* Pasta, whether or not cooked or stuffed or otherwise prepared, such as spaghetti, macaroni, noodles, lasagne, gnocchi, cannelloni; couscous, whether or not prepared.

Source: Senen, 2003; Tariff and Customs Code of the Philippines, 2004.

4. Food Processing Industry Level Analysis
4.5 Noodles

Figure 28. Value of noodle exports by type, Philippines, 1985, 2000-2005

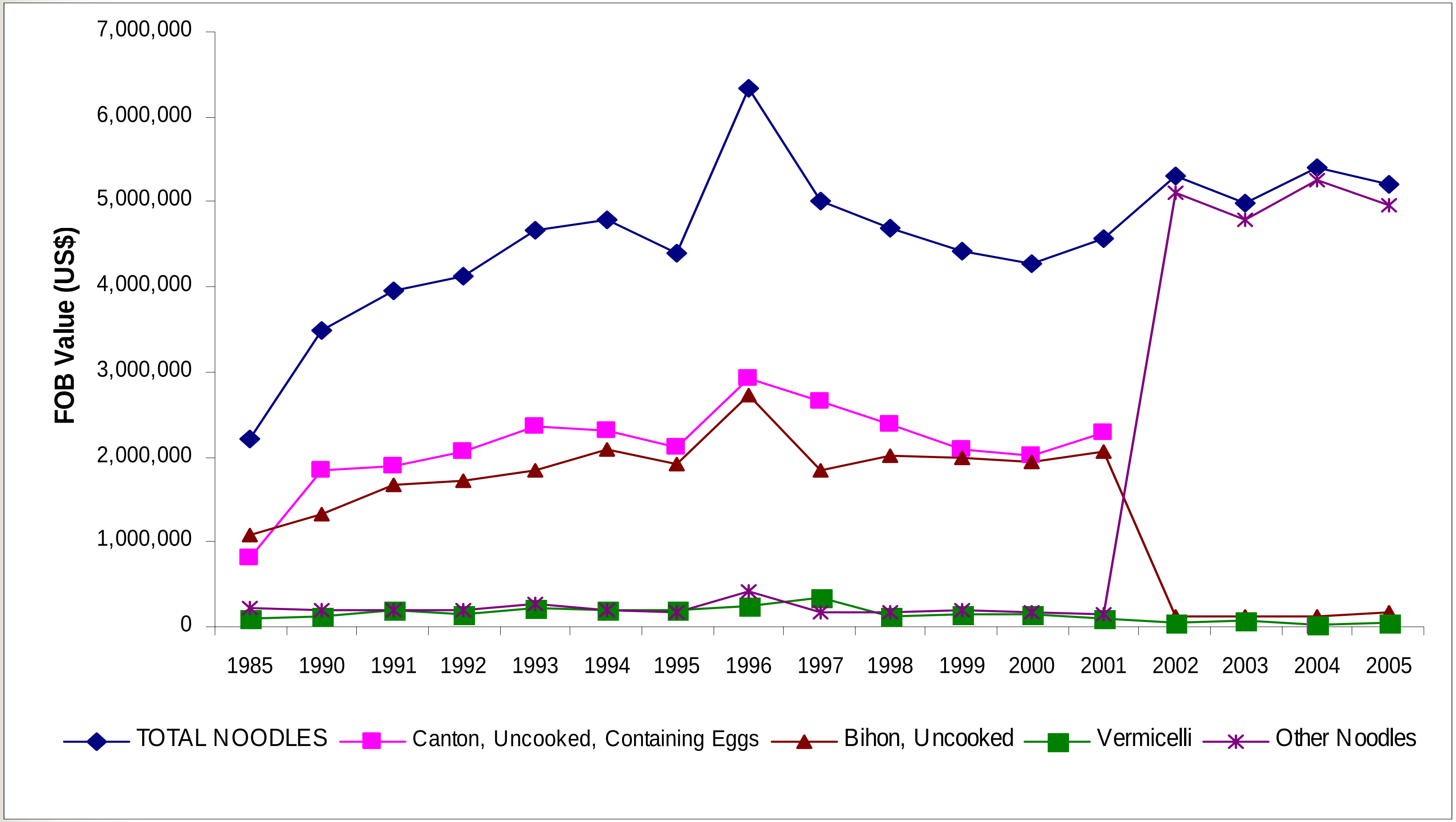


Figure 29. Major export markets of Philippine noodles, 1985 & 1990

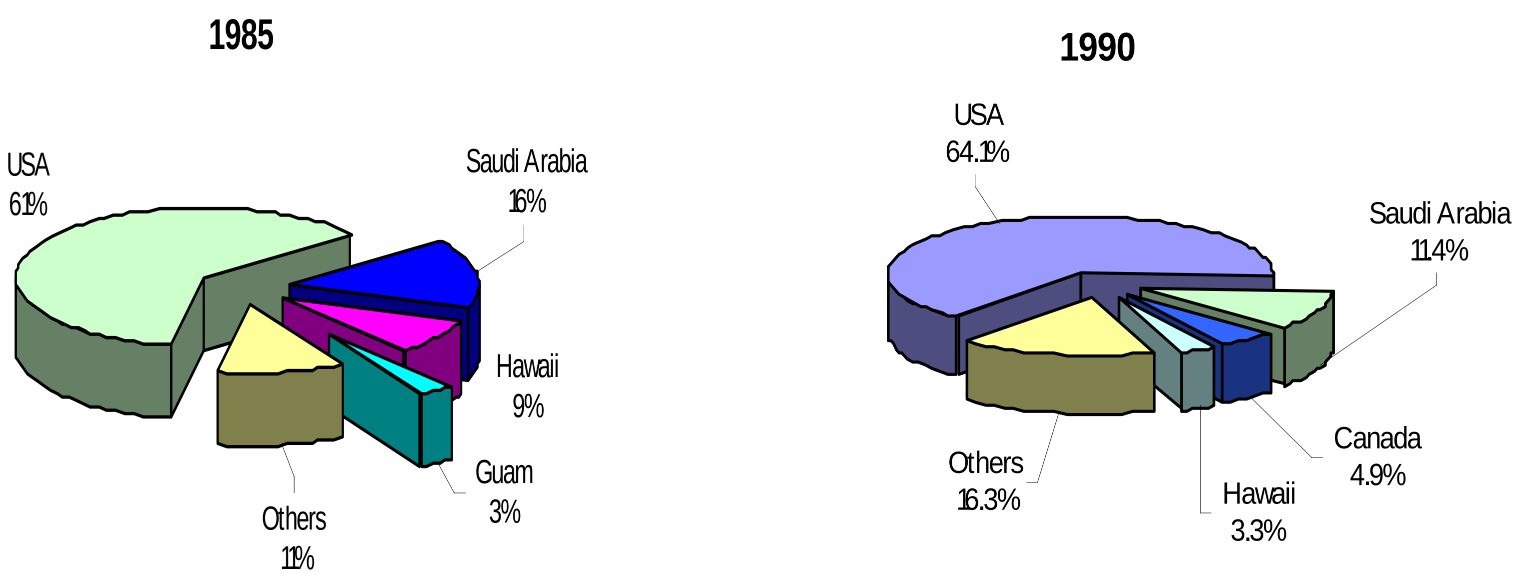


Figure 29. Major export markets of Philippine noodles, 1995 & 2000

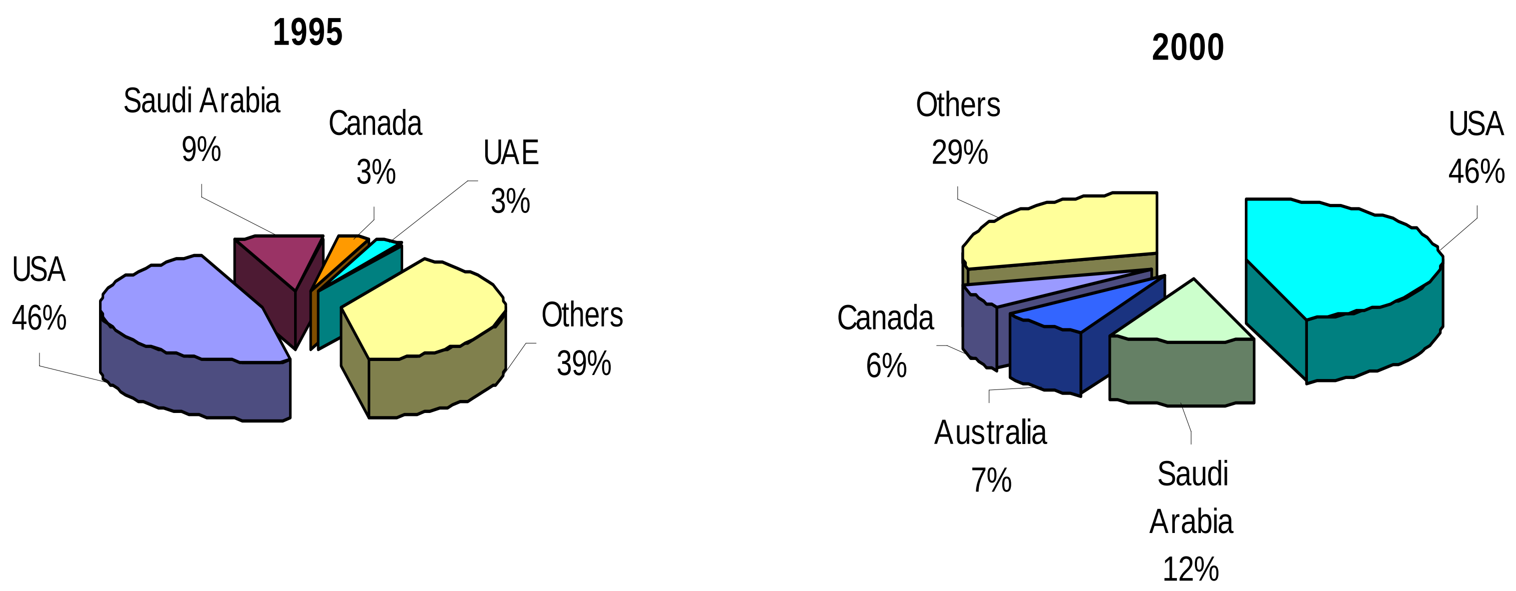


Figure 29. Major export markets of Philippine noodles, 2005

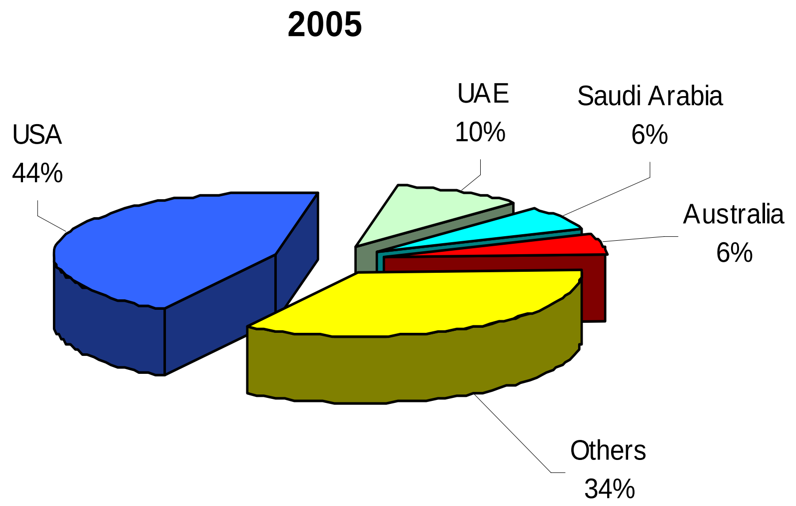


Figure 30. Value of noodle imports by type, Philippines, 1985, 2000-2005

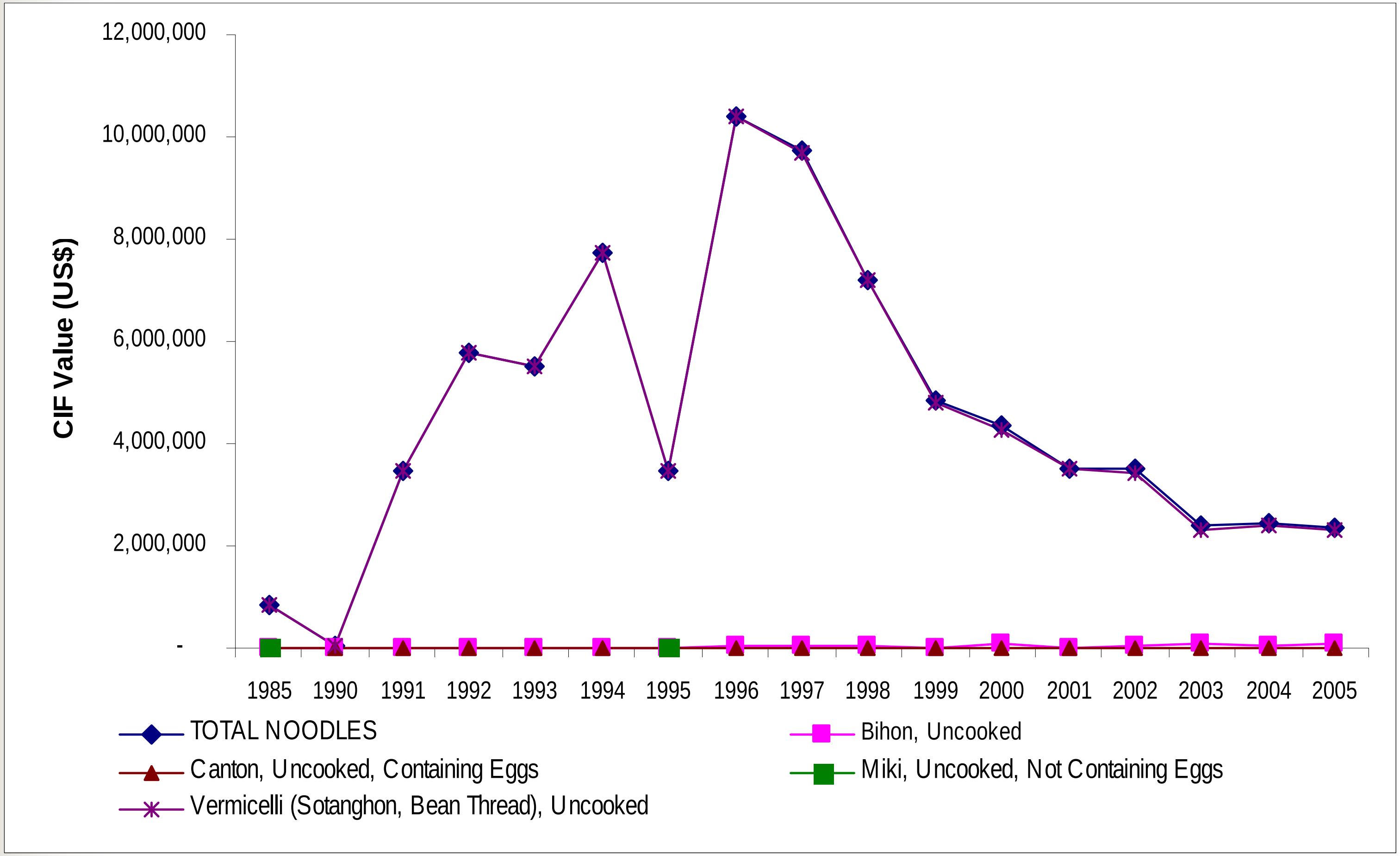


Table 45. Size classification of sample SMEs in noodle manufacturing, Philippines, 2000-2005

Size	No. Reporting	Total Assets
Total	6	
Small	2	PhP8.52M - PhP12.07M US$0.17M - US$0.24M
Medium	4	PhP27.34M - PhP68.99M US$0.55M - US$1.38M

Market Performance Analysis

A. Market Structure

Table 46. Market concentration measures in sample SMEs in noodle manufacturing, Philippines, 2000-2005

Item	2000	2001	2002	2003	2004	2005
Sample size, n	5	6	6	6	6	6
Concentration Ratio, C2	81.3	72.5	70.6	71.7	70.4	63.3
C3	98.1	89.5	90.0	91.3	87.5	83.4
HH Index	3,779	3,221	2,961	3,009	2,840	2,568
Gini coefficient	0.515	0.507	0.484	0.489	0.455	0.413

4. Food Processing Industry Level Analysis
4.5 Noodles

B. Market Conduct

- only three of the medium-sized companies spent for advertising, one of them continuously allocated funds for advertising from 2000-2004

- the company's advertising expenses ranged from Php133 thousand to Php833 thousand (US$2.66 thousand to US$17.66 thousand)

- advertising greatly improved the company's sales by two-thirds from Php72 thousand (US$1.44 thousand) in 2000 to Php124 thousand (US$2.48 thousand) in 2005

- the company did not spend on advertising in 2005 but its sales increased which resulted from the spillover of advertising expense from the past years

4. Food Processing Industry Level Analysis

4.5 Noodles

C. Market Performance

Table 47. Market performance of sample SMEs in noodle manufacturing, Philippines, 2000-2005

Size	No. Reporting	2000	2001	2002	2003	2004	2005
		Rates of Return on Assets after Tax (ROA)					
Small	2	0.174	0.150	0.137	0.106	0.122	0.052
		*	(0.041)	*	0.006	0.075	0.032
Medium	4	**	0.035	0.015	0.013	0.014	0.146
		0.017	0.018	0.028	0.021	0.014	0.122
		0.046	0.035	0.042	0.050	0.045	0.058
		0.052	0.048	0.062	0.144	0.164	0.098
		Rates of Return on Stockholders Equity after Tax (ROE)					
Small	2	0.195	0.173	0.175	0.0119	0.183	0.184
		*	(1.250)	*	(0.175)	0.093	0.032
Medium	4	**	0.323	0.157	0.211	0.089	0.146
		0.007	0.007	0.105	0.094	0.096	0.122
		0.060	0.009	0.073	0.111	0.095	0.058
		0.090	0.016	0.102	0.198	0.243	0.175

* Incomplete record for the year. ** No record for the year.

C. Market Performance

Table 47. Market performance of sample SMEs in noodle manufacturing, Philippines, 2000-2005 (cont'd)…

Size	No. Reporting	2000	2001	2002	2003	2004	2005
				Return on Sales after Tax (ROS)			
Small	2	0.174	0.029	0.030	0.026	0.050	0.056
		(0.112)	(0.020)	0.004	0.001	0.002	0.004
Medium	4	**	0.016	0.007	0.010	0.005	0.011
		0.007	0.007	0.008	0.008	0.009	0.010
		0.010	0.009	0.010	0.006	0.005	0.003
		0.016	0.0q6	0.022	0.041	0.041	0.033

* Incomplete record for the year. ** No record for the year.

4.6 Desiccated Coconut

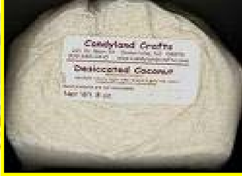
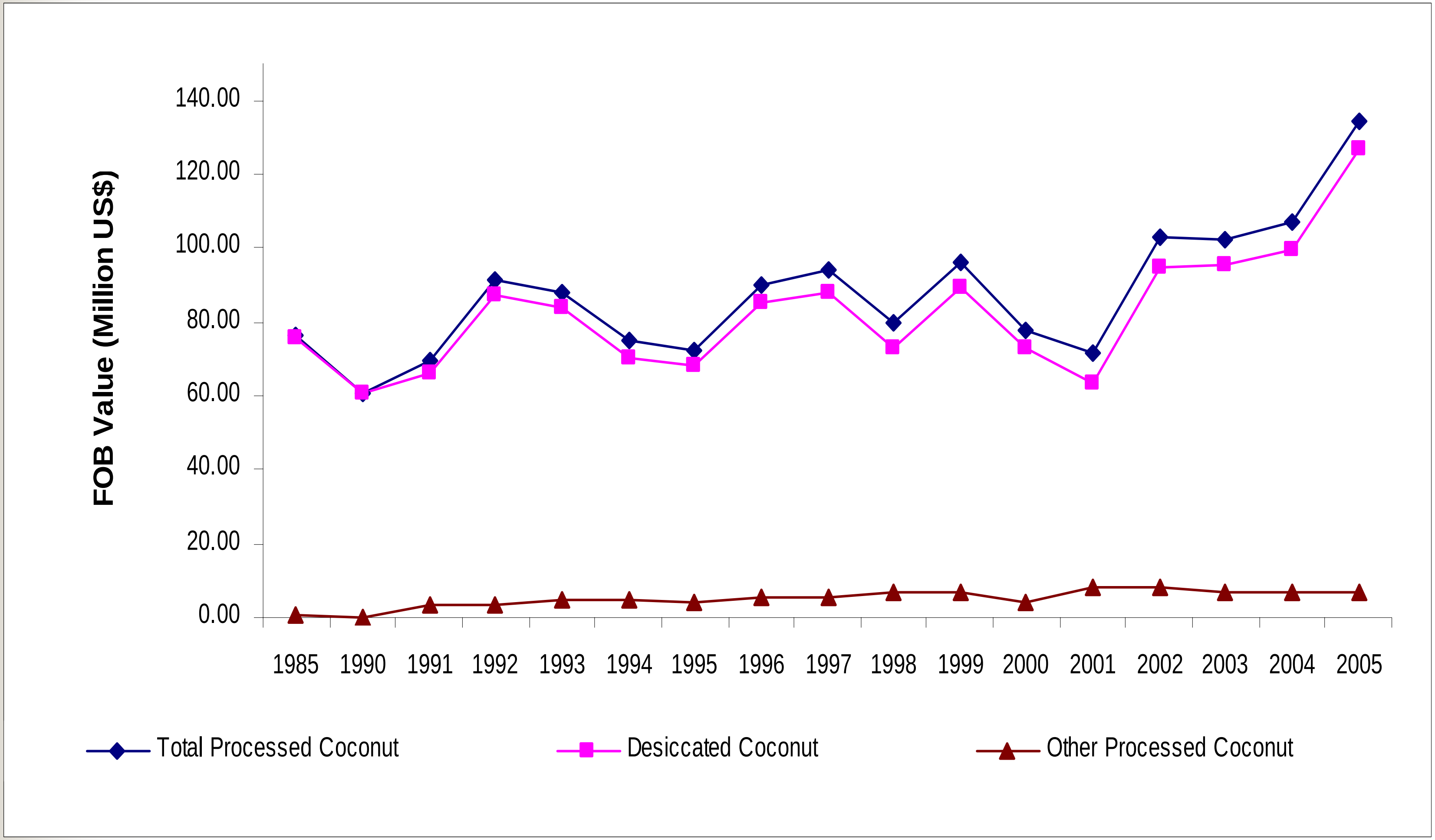


Table 48. Major world desiccated coconut exporters, 1985, 1990, 1995,2000, 2005

Country	1985		1990		1995		2000		2004	
	US$ 000	Rank	US$ 000	Rank	US$ 000	Rank	US$ 000	Rank	US$ 000	Rank
Philippines	**75666**	**1**	**60677**	**1**	**68286**	**1**	**73249**	**1**	**99743**	**1**
Sri Lanka	49327	2	35679	2	45141	2	64411	2	46465	2
Malaysia	7013	3	12113	3	15868	4	9062	5	5788	7
Cote d'Ivoire	5832	4	5915	4	8700	5	7832	6	3508	9
Indonesia	4620	5	1566	8	17533	3	21952	3	21245	3
Germany	4620	6	3325	5	2148	7	1648	8	3939	8
Netherlands	2803	7	3274	6	5152	6	5871	7	8448	5
United Kingdom	2638	8	468	11	964	9	514	14	895	11
Thailand	2195	9	59	20	*	*	*	*	*	*
Mexico	410	10	*	*	*	*	*	*	516	16
Belgium	*	*	*	*	*	*	*	*	9908	4

* Not on the list of top 20 exporters.
Source: FAOSTAT

Figure 31. Processed food coconut product exports, Philippines, 1985, 1990-2005



4. Food Processing Industry Level Analysis

4.6 Desiccated Coconut

Figure 32. Share of desiccated coconut exports to total value of processed coconut exports, Philippines, 1985, 1990-2005

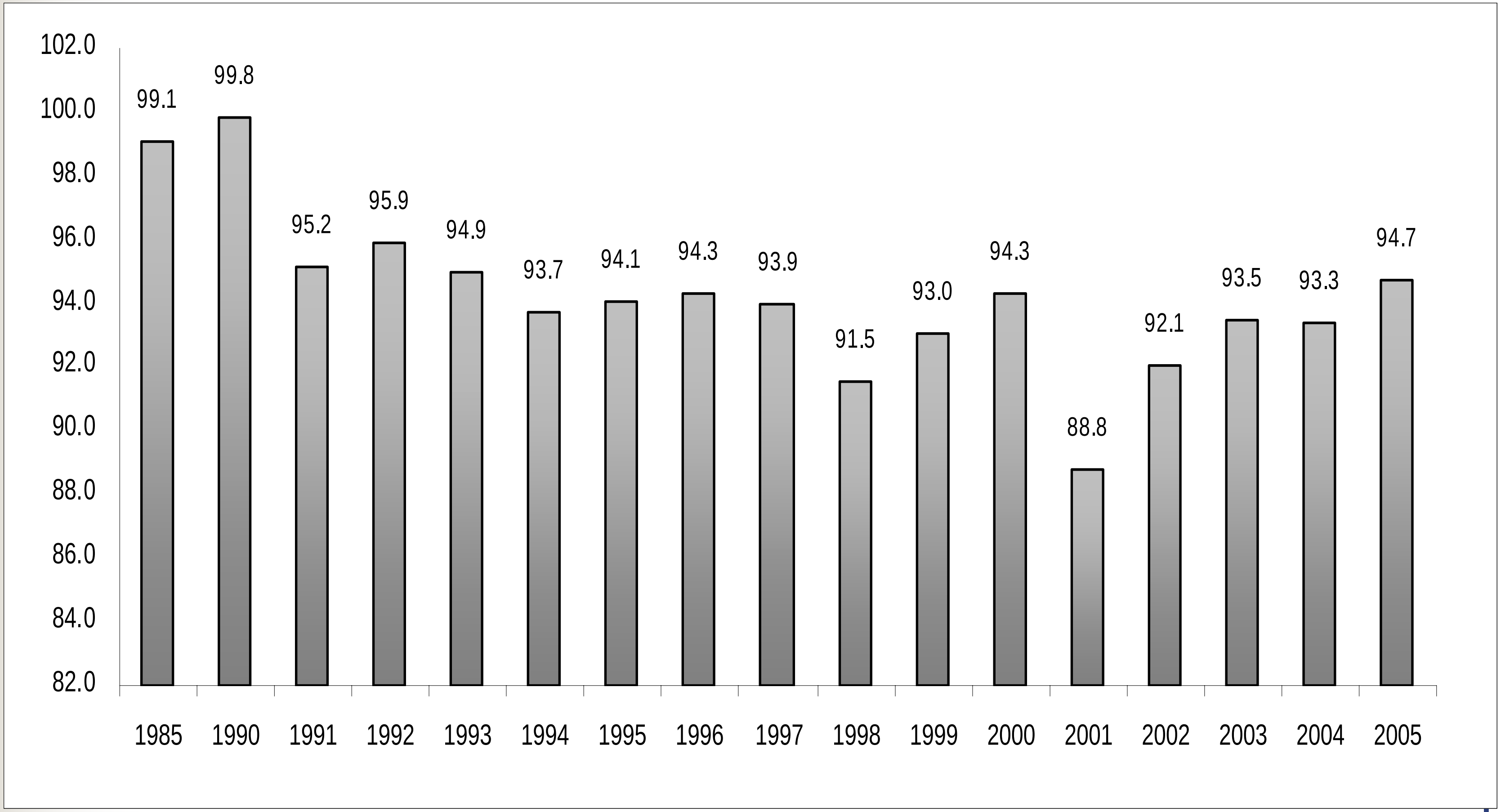
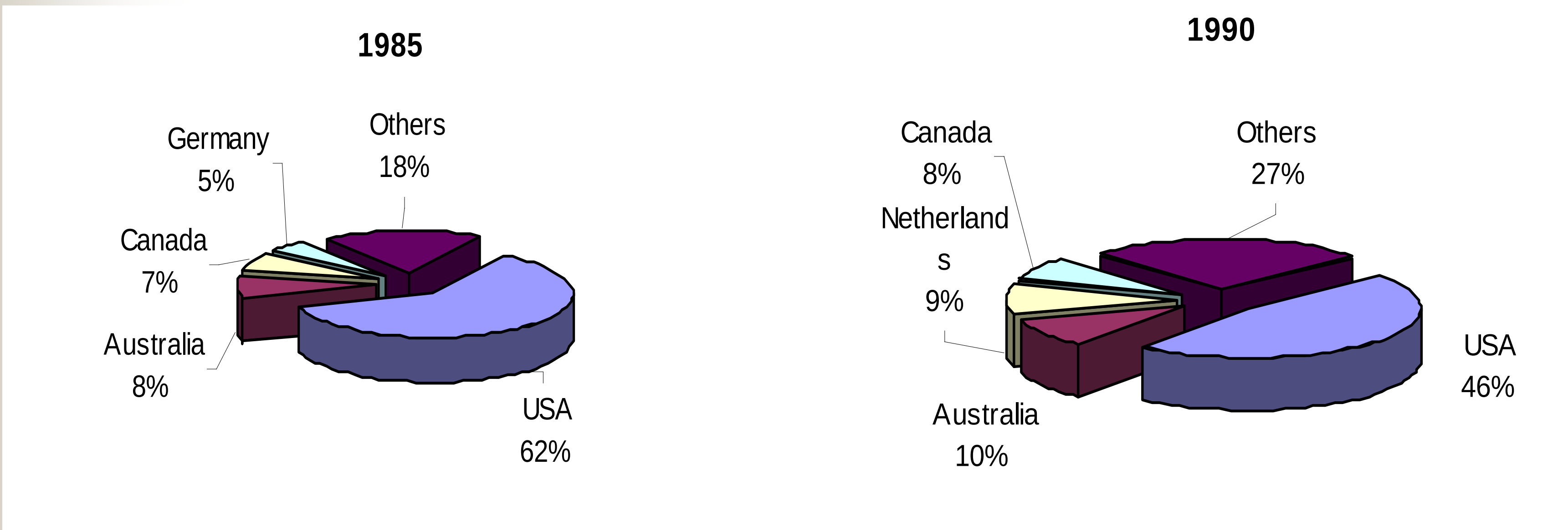


Figure 33. Top export markets of desiccated coconut, Philippines, 1985, 1990



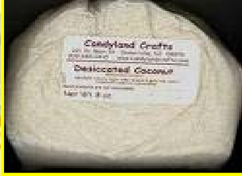
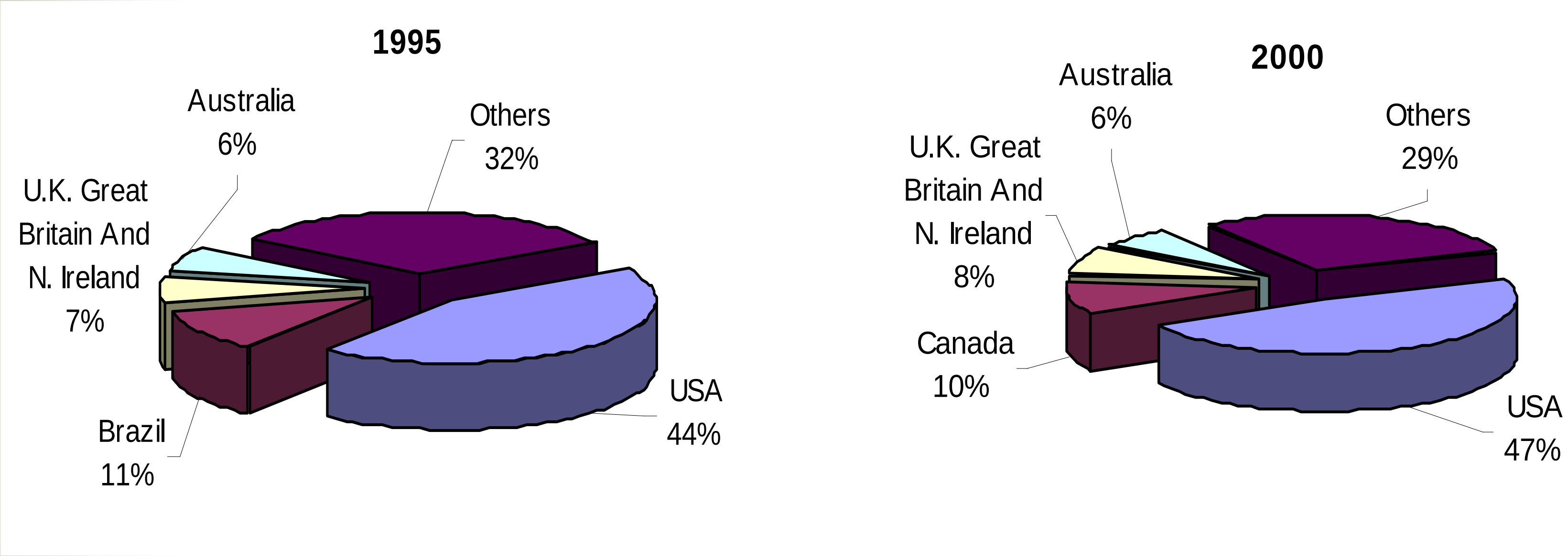


Figure 33. Top export markets of desiccated coconut, Philippines, 1995, 2000



4. Food Processing Industry Level Analysis

4.6 Desiccated Coconut

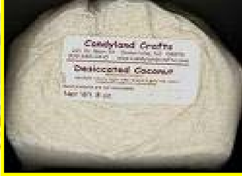
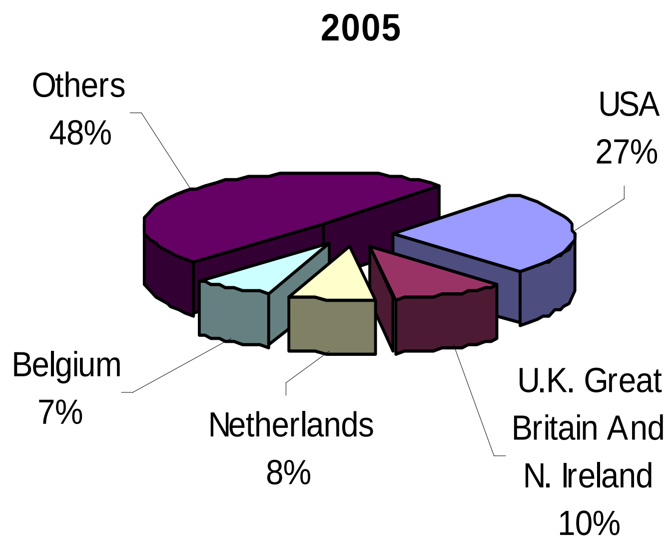


Figure 33. Top export markets of desiccated coconut, Philippines, 2005



5. Conclusions/Recommendations

The following stand out in this paper:

a. **Trade liberalization has increased both exports and imports of processed food products but in recent years imports exceeded exports.**
b. **The SMEs are constrained by both tariff and non-tariff barriers but more on the latter.**
c. **Sample SMEs are highly concentrated.**
d. **Their market performance are affected by their ability to have a larger market shares.**

5. Conclusions/Recommendations

In conclusion, the area that needs to be addressed by the government is the development of product standards for the upstream and downstream products.

In addition to this, public sector investment should focus on infrastructure that would support the established product standard in conformity with the external market.

Improve on the packaging of processed products and more product diversification.

The provision of supervised financing scheme to SMEs.

Good day!!!

Market Liberalization and its Relationship with Market Structure, Conduct and Performance of Selected Food Processing Industry in Thailand

Symposium "Market Liberalization and its Relationship with Market Structure, Conduct and Performance of Selected Food Processing of APEC Member Economies"

Kuala Lumpur, Malaysia

Presented by

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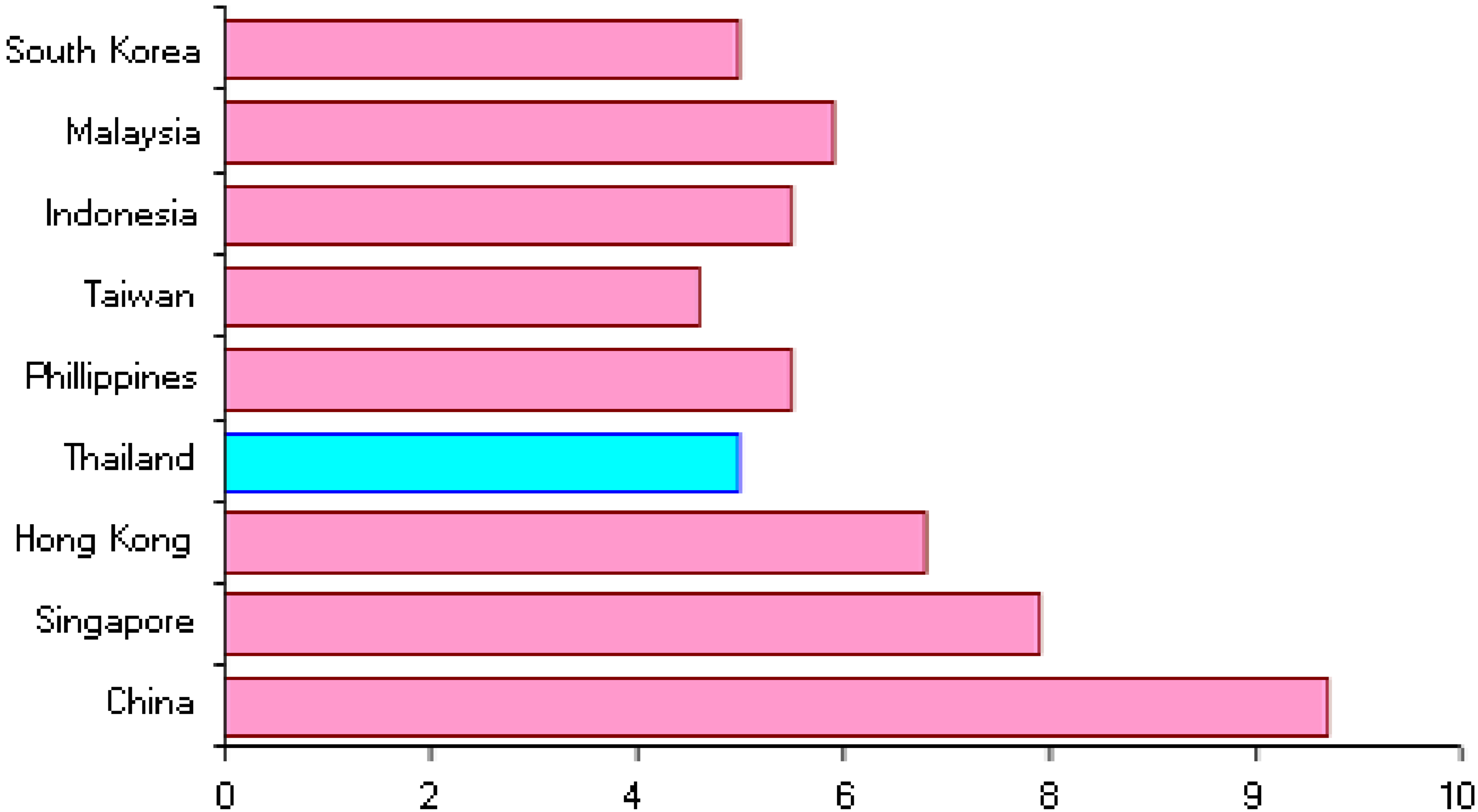
- ***Thailand in the region and among asean***
- ***Key economic indicators of Thailand in 2006***
- ***Thai economic structural change***
- ***Thai international trade***

Real GDP Growth of Regional Countries in 2006



Source: CEIC

Table Basic statistic of asean member countries , 2006

Country	Total land area	Total population	Pop. Densit	An. Pop. Gr.	GDP at current prices	GDPper capita at current prices	Merchandise trade [6/]		Total trade
							Exports	Imports	Total trade
	km^2	thousand	persons pe	percent	US$ million	US$	US$ million	US$ millio	US$ million
Brunei Darussala	5,765	383	66	3.49	11,572	30,214	7,619	1,489	9,108
Cambodia [1/]	181,035	14,163	78	2.45	7,256	512	3,514	2,923	6,437
Indonesia	1,890,754	222,051	117	1.30	364,259	1,640	100,799	61,066	161,864
Lao PDR	236,800	6,135	26	2.53	3,522	574	403	588	990
Malaysia	330,252	26,686	81	2.14	156,924	5,880	157,227	128,316	285,543
Myanmar [2/]	676,577	57,289	85	2.30	11,951	209	3,515	2,116	5,630
The Philippines	300,000	86,910	290	1.96	117,457	1,352	47,410	51,774	99,184
Singapore	704	4,484	6,369	3.27	132,273	29,500	271,608	238,482	510,090
Thailand	513,254	65,233	127	0.73	206,645	3,168	121,580	127,109	248,688
Viet Nam	329,315	84,222	256	1.33	60,965	724	37,034	40,237	77,271
ASEAN	4,464,456	567,557	127	1.54	1,072,825	1,890	750,708	654,098	1,404,806

Sources: ASEAN Statistical Yearbook 2006

Structure of the Economy in 2006		
Sector	**GDP by Sector (%)**	**Labour force by occupation (%)**
Agriculture	8.9	38.9
Manufacturing	39.3	15.1
Wholesale and Retail Trade	13.7	15.1
Other services*	38.1	28.8
* Other services include financial sector, education, hotels and restaurants, etc.		
Openness to Trade in 2006		**123% of GDP**

Major Export Items

- Computers and parts **(11.1%)**	- Integrated circuits and parts **(5.4%)**
- Electrical appliances **(7.57%)**	- Plastic products **(5.0%)**
- Vehicles and parts **(7.7%)**	- Base metal products **(4.5%)**

Major Import Items

- Crude oil **(15.6%)**	- Iron and Steel **(5.5%)**
- Industrial machinery and parts **(9.1%)**	- Integrated circuits **(4.23%)**
- Electrical machinery and parts **(7.1%)**	- Vehicles and parts **(3.3%)**

Thailand: Real GDP growth rate, 1980-2006

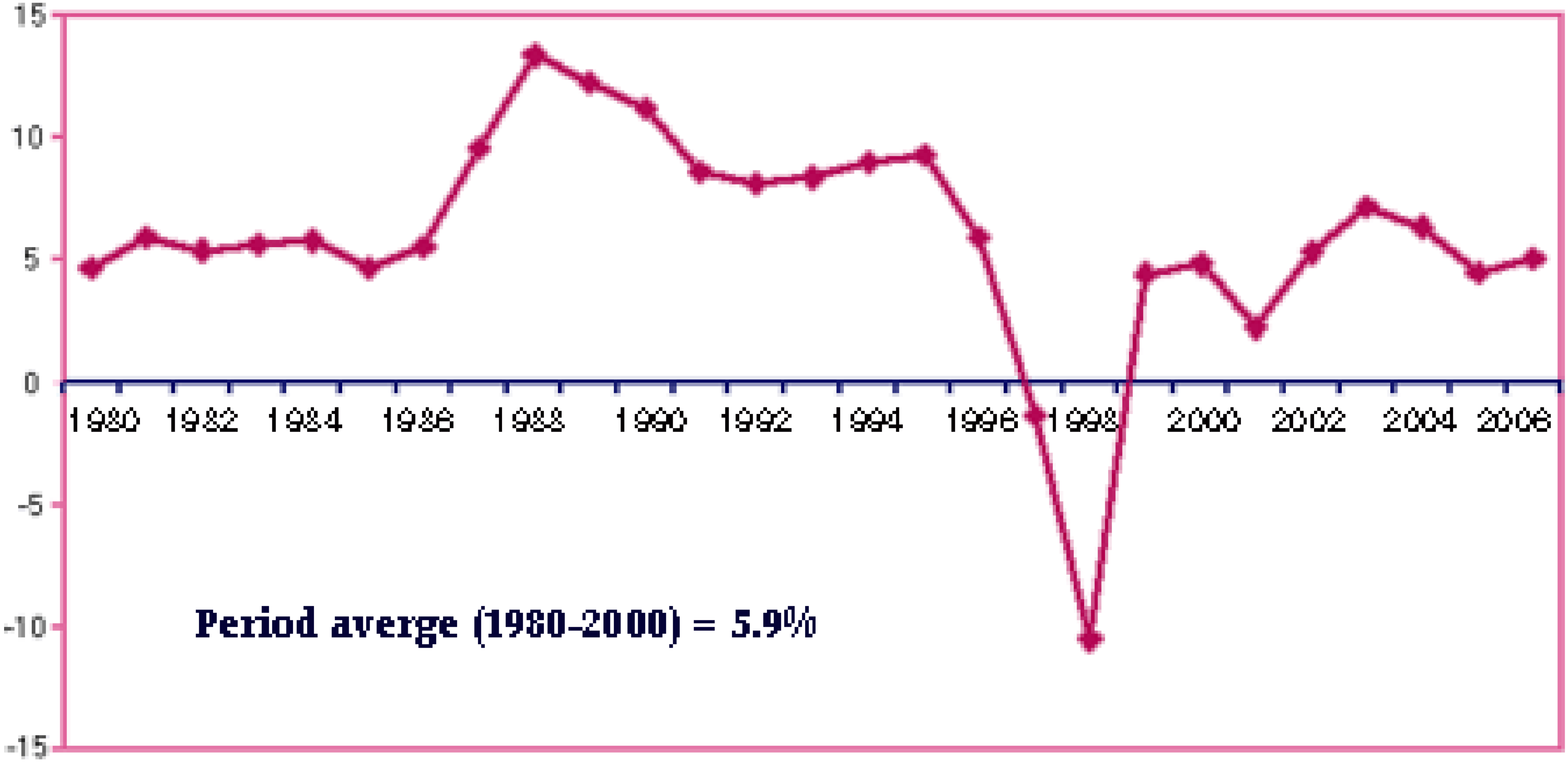


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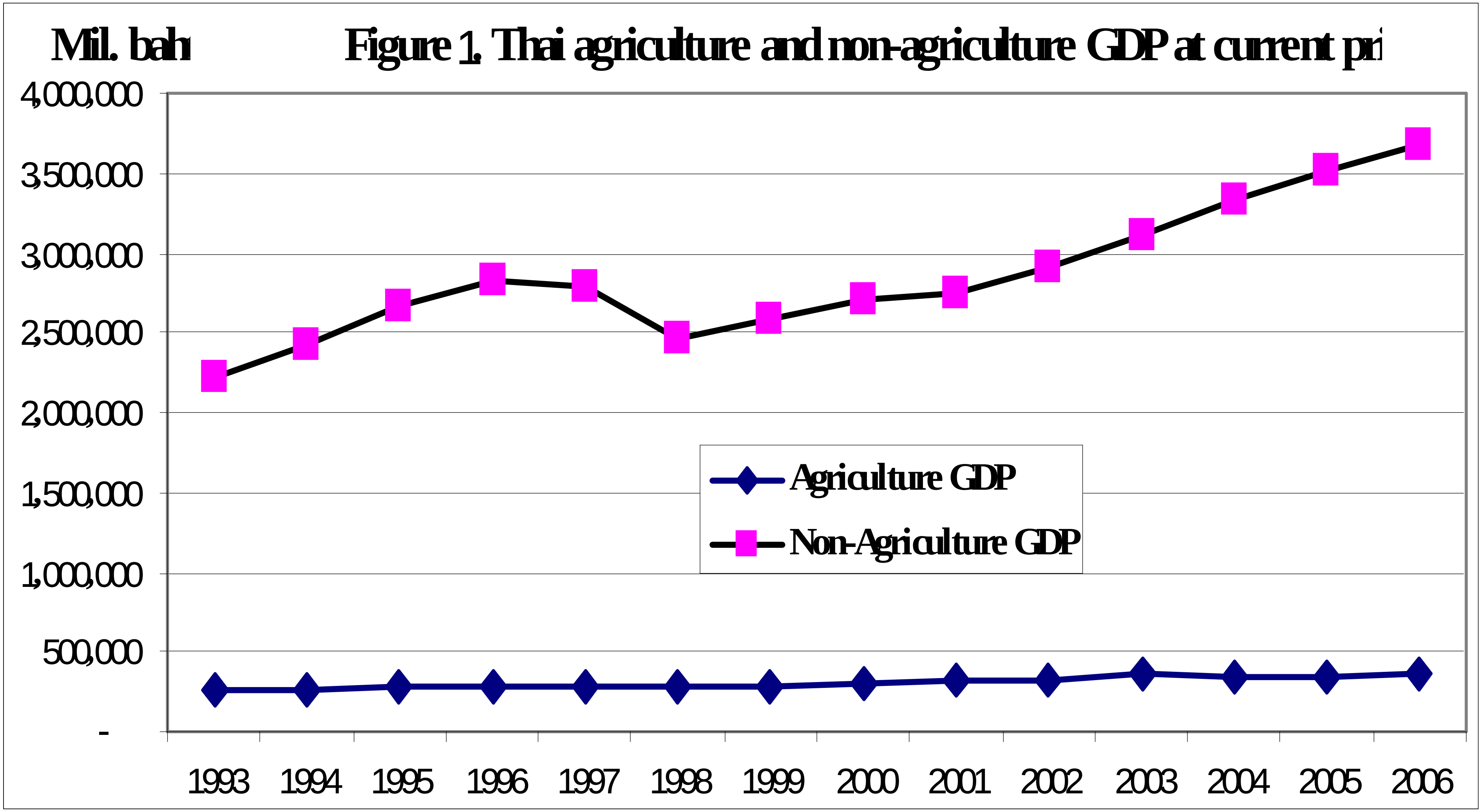
Table 1. Thai agriculture, non-agriculture and total gross domestic products at current price 1993-2006

	Agriculture GDP		Non-Agr. GDP		Total GDP	
	Mil. Baht	%	Mil. Baht	%	Mil. Baht	%
1993	254,105	10.29	2,215,353	90	2,469,458	100
1994	263,393	9.79	2,426,194	90	2,689,587	100
1995	276,924	9.42	2,663,993	91	2,940,917	100
1996	290,221	9.31	2,825,855	91	3,116,076	100
1997	287,944	9.37	2,785,263	91	3,073,207	100
1998	280,313	10.2	2,468,040	90	2,748,352	100
1999	288,469	10.04	2,583,611	90	2,872,080	100
2000	310,659	10.32	2,698,823	90	3,009,482	100
2001	318,883	10.38	2,753,387	90	3,072,270	100
2002	322,499	9.96	2,914,629	90	3,237,127	100
2003	363,368	10.48	3,104,398	90	3,467,766	100
2004	352,866	9.58	3,331,839	90	3,684,705	100
2005	342,065	8.88	3,508,769	91	3,850,834	100
2006P	358,712	8.87	3,685,598	91	4,044,310	100
Growth	2.5		3.7		3.6	

Remarks P=Preliminary data, and Growth=Compound growth rate 2003-06

Source: National account division, National Economics and Social Development Broad, as of 28 April 2007, www.nesdb.ac.th


Mil. baht
Figure 1. Thai agriculture and non-agriculture GDP at current pri
4,000,000
3,500,000
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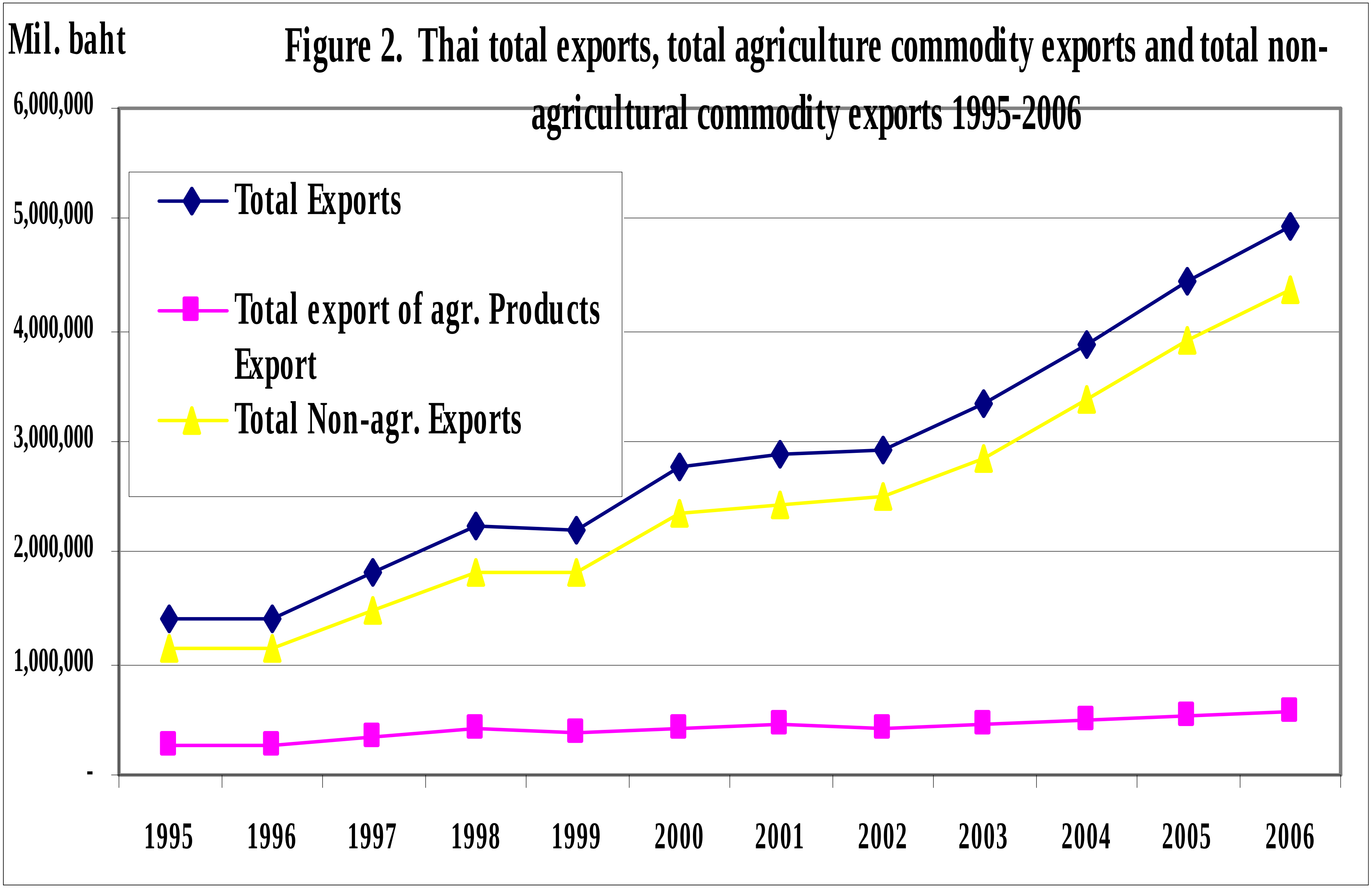
Agriculture GDP
Non-Agriculture GDP


Mil. baht
Figure 2. Thai total exports, total agriculture commodity exports and total non-agricultural commodity exports 1995-2006
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Total Exports
Total export of agr. Products Export
Total Non-agr. Exports
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1997
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2002
2003
2004
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2006

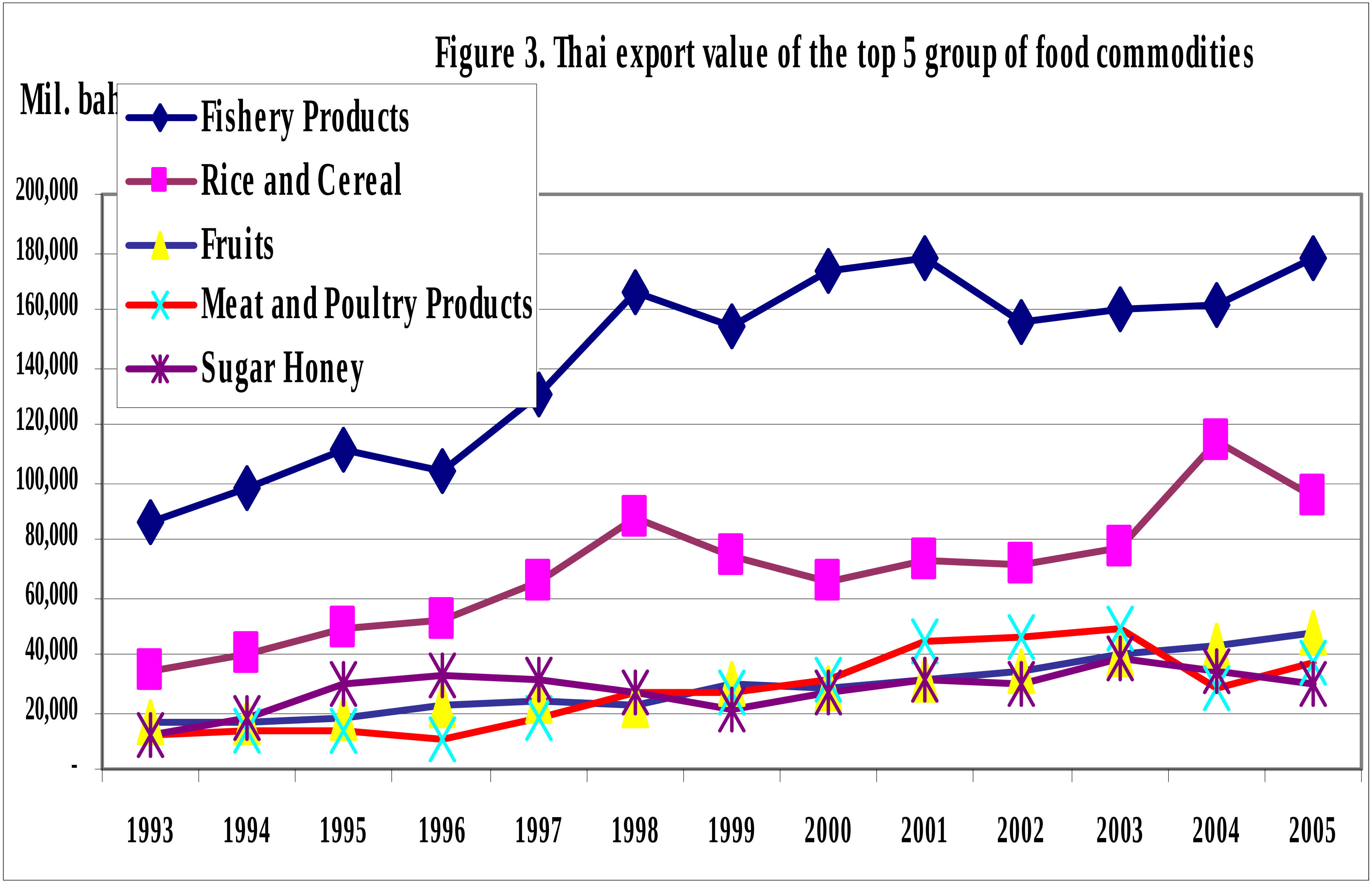

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Table 3 Thai total value of food (agricultural) exports and by major group of commodity (Unit Millions of baht)

	Fishery Products	Rice and Cereal	Fruits	Meat and Poultry Products	Sugar Honey	Unspecified Food	Animal Feed	Flour and Starch	Vegetable
1993	85,811.04	33,769.07	15,645.52	11,161.35	12,296.08	3,384.15	4,728.03	3,857.87	5,337.01
1994	98,234.30	39,847.25	16,253.87	12,684.74	17,289.66	4,721.81	4,800.45	6,055.75	7,106.84
1995	110,474.47	49,237.16	17,324.77	13,867.14	28,894.32	5,263.96	5,497.38	6,370.07	7,098.02
1996	103,792.38	51,345.07	21,734.33	10,021.98	32,287.40	6,547.24	6,226.18	4,986.69	7,591.74
1997	129,851.09	65,809.37	23,101.90	17,273.78	31,750.82	6,643.99	7,783.88	8,129.55	8,452.15
1998	165,446.87	87,688.18	21,696.52	27,167.36	27,050.63	7,148.88	9,441.20	7,223.23	9,873.10
1999	154,257.84	74,254.41	30,086.09	27,303.82	21,277.19	8,214.39	9,257.44	6,703.84	9,508.10
2000	173,273.52	65,899.21	28,585.11	31,593.80	26,197.29	8,985.85	11,089.52	8,401.79	9,916.48
2001	178,223.85	72,682.56	30,739.11	44,337.37	31,147.11	10,709.36	11,174.09	8,508.79	11,364.55
2002	155,665.68	71,060.55	34,584.78	46,495.16	29,939.35	12,254.06	12,972.88	8,903.31	11,780.03
2003	160,247.54	77,510.73	39,782.17	49,389.85	39,107.51	16,805.43	14,910.60	9,782.16	13,006.56
2004	161,791.43	113,850.10	42,489.54	28,488.52	33,594.49	20,319.17	16,687.44	11,412.01	15,409.39
2005	177,651.24	94,506.58	47,854.92	37,038.03	29,581.09	19,436.54	18,250.85	17,423.71	16,287.34
Growth	5.5	6.3	8.2	14	-1	11.5	11.4	13.3	7.9

Remarks: Growth = compound growth rate for a period of 1996-2005.

Source: National Food Institute, Bangkok Thailand, as of 6 December 2006

Table 3. (Continue) Thai total value of food (agricultural) exports and by major group of commodity (Unit Millions of baht)

	Cassava pe	Starch Prot	Seasoning	Fat and Oil	Milk Prot	Alcoholic Be	Te,Cof,Co Pro	All 16 coms	Other	All Total
1993	17,116.70	2,242.16	1,109.87	157.34	538.06	757.90	1,477.32	199,389.48	4,133.16	203,522.64
1994	12,090.20	2,758.71	1,337.34	523.96	896.24	1,375.35	2,449.29	228,425.77	4,770.25	233,196.02
1995	10,267.53	2,917.29	1,605.70	481.70	897.73	1,771.04	5,110.55	267,078.85	5,248.39	272,327.24
1996	12,361.41	3,357.75	1,726.48	340.07	1,008.97	2,471.13	3,064.30	268,863.15	5,850.40	274,713.55
1997	11,997.25	3,837.51	2,484.13	2,043.93	1,295.79	3,001.59	2,893.99	326,350.70	5,821.68	332,172.38
1998	11,460.56	4,634.23	3,209.87	1,938.66	1,604.23	1,932.67	4,490.84	392,007.03	6,795.07	398,802.09
1999	12,408.54	4,844.33	3,316.59	2,590.79	1,545.46	2,736.14	2,362.51	370,667.48	6,146.18	376,813.66
2000	7,701.31	5,501.06	3,744.28	2,902.97	2,042.89	2,910.51	2,549.63	391,295.21	7,874.30	399,169.50
2001	11,643.68	6,348.49	4,119.04	4,024.66	4,451.92	3,300.22	2,233.17	435,007.94	9,698.08	444,706.02
2002	8,212.37	6,588.95	4,604.02	4,220.49	6,470.40	2,621.02	1,723.66	418,096.71	9,695.93	427,792.65
2003	10,453.11	6,563.97	4,938.40	6,486.19	4,412.24	2,980.81	2,914.21	459,291.46	11,323.56	470,615.02
2004	15,034.33	7,145.36	6,127.76	8,892.66	5,541.46	4,052.14	3,345.04	494,180.84	12,832.12	507,012.96
2005	12,778.04	7,652.45	7,215.14	6,646.91	5,729.05	4,534.49	4,161.46	506,747.83	13,068.52	519,816.35
Growth	-3	13.1	20.6	(n.a.)	(n.a.)	19.5	10.9	9.7	12.2	9.8

Remarks: Growth = compound growth rate for a period of 1996-2005.

Source: National Food Institute, Bangkok Thailand, as of 6 December 2006

Overview of small and medium enterprises (SMEs)

- **Number of SMEs**
- **Roles of SMEs in employment**
- **SMEs' contributions in gross domestic product (GDP)**
- **Promoting and supporting polices on SMEs**

Table 4. Number of Manufacturing Small and Medium Enterprises in 2004 by Industry

Industries	Total	No.of LE	No.of SMEs	% of SMEs in particular industry	% of SMEs in all sector
1.Foof and beverages	135,376	149	135,227	99.9	28.0
2.Clothing	72,349	34	72,315	100.0	15.0
3.Textiles	57,606	102	57,504	99.8	11.9
4.Wood and wood products ex furniture	45,224	16	45,208	100.0	9.4
5.Tobacco products	31,579	47	31,532	99.9	6.5
6.Metal parts ex machinery and equipment	27,616	63	27,553	99.8	5.7
7.Ferniture manufacturing	23,883	46	23,837	99.8	4.9
8.Other non-metal products	10,459	48	10,411	99.5	2.2
9.Printed matter, printing and reproduction of media	9,082	33	9,049	99.6	1.9
10.Rubber and plastic products	7,298	110	7,188	98.5	1.5
Others	63011	606	62405	1365.9	13.0
Total	483483	1254	482229	99.7	100

Source: The 1997 Industrial Census and The 2002 Business Trade and Services Census by National Statistical Office

: List of registered establishment, Department of Business Development, Ministry of Commerce.

: List of insured employees, the Social Security Office

: List of registered manufacturers, Department of Industrial Works

Compiled by: the Office of Small and Medium Enterprises

Table 5. Average number of employment under SMEs in 2004 by industry

Industries	Average Emplmt. (Persons)	SMEs Average Emplmt.(Persons)	LE Average Emplmt.(Persons)	ME Average Emplmt.(Persons)	SE Average Emplmt.(Persons)
Manufacturing	9	7	784	200	5
Wholesale	9	7	260	70	6
Retail	3	2	292	68	2
Services	5	4	408	93	3
N/a	7	6	606	157	6
Averages	5	4	451	120	4

Source : The 1997 Industrial Census and The 2002 Business Trade and Services Census by Natio

: List of registered establishments, Department of Business Development, Ministry of Commerce.

: List of insured employees, the Social Security Office

: List of registered manufactures. Department of Industrial Works

Compiled by: the Office of Small and Medium enterprises Promotion

Table 6. Thailand's Gross Domestic Product 2000-2004 by Size of Enterprise

	2000	2001	2002	2003	2004
GDP at market prices (value:THB million)					
National	4,922,731	5,133,502	5,446,043	5,930,362	6,576,834
Agriculture	444,185	468,905	513,094	595,004	651,629
Non-agriculture	4,478,546	4,664,597	4,932,949	5,335,358	5,925,205
- Large Enterprises	1,980,084	2,070,339	2,208,262	2,436,805	2,722,095
- SMEs	1,945,800	2,019,480	2,112,599	2,256,353	2,486,892
Small Enterprises	1,043,349	1,084,056	1,135,987	1,206,535	1,331,954
Med. Enterprises	902,451	935,424	976,612	1,049,818	1,154,938
- Other Enterprises	552,661	574,778	612,088	642,199	716,218

Source: the Office of National Economic and Social Development Board

Compiled by: the office of Small and Medium Enterprises Promotion

Table 6. (Con.) Thailand's Gross Domestic Product 2000-2004 by Size of Enterprise					
	2000	2001	2002	2003	2004
GDP at market prices (percentage)					
National	100	100	100	100	100
Agriculture	9.1	9.2	9.5	10.1	9.9
Non-agriculture	90.9	90.8	90.5	89.9	90.1
- Large Enterprises	40.2	40.3	40.5	41.1	41.4
- SMEs	39.5	39.3	38.8	38.0	37.8
Small Enterprises	21.2	21.1	20.9	20.3	20.3
Med. Enterprises	18.3	18.2	17.9	17.7	17.5
- Other Enterprises	11.2	11.2	11.2	10.8	10.9

Source: the Office of National Economic and Social Development Board
Compiled by: the office of Small and Medium Enterprises Promotion

Table 6. (Con.) Thailand's Gross Domestic Product 2000-2004 by Size of Enterprise

	2000	2001	2002	2003	2004
Real GDP growth (percentage)					
National	4.8	2.2	5.3	6.9	6.1
Agriculture	7.2	3.2	1.0	8.7	-4.4
Non-agriculture	4.5	2.0	5.8	6.7	7.2
- Large Enterprises	4.6	2.1	6.9	8.3	8.1
- SMEs	4.3	1.8	4.7	5.5	7.1
Small Enterprises	4.1	1.7	4.7	5.0	7.2
Med. Enterprises	4.6	2.0	4.7	6.1	6.9
- Other Enterprises	4.6	2.8	4.9	3.1	3.1

Source: the Office of National Economic and Social Development Board

Compiled by: the office of Small and Medium Enterprises Promotion

Promoting and supporting polices on SMEs

- **Financial Policy**
- **Policy on Marketing**
- **Policy on Technology and Innovation**
- **Policy on Management and Human Resources**
- **Policy on Taxes, Privileges, and Regulations**

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Table 7. Loans and financial assistance received by SMEs, 2003-2004

Type of assistance	Jan.-Dec. 2003		Jan.-Dec. 2004	
	Number of SME (firm)	Total amount of money Mil. Baht	Number of SME (firm)	Total amount of money Mil. Baht
Credit	314,863	145,446.00	347,218	194,633.00
NPL	15	82.5	80	357
Loan Guarantee	3,875	4,647.00	2,794	6,018.00
Total	318,753	150,175.50	350,092	201,008.00
Average amount of money per SME		0.47		0.57

Source: Office of Small and Medium Enterprise Promotion, Ministry of Industry

Food Processing Industry

- **Food processors**
- **Food processor by food category and size**
- **Rice mill**

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Table 8. Thai total number of food factories, total labor employed, and total investment

	1998	1999	2000	2001
Number of factories				
1, Basic agro-Industry	48,985	48,936	45,752	44,736
2, Food	6,937	7,067	7,100	7,159
3. Beverage	365	375	383	395
Total food processors	56,287	56,378	53,235	52,290
% of total factories (21 industries)	44.19	43.93	42.44	42.14
Total 21 industries	127,364	128,350	125,449	124,079
Number of labor employment				
1, Basic agro-Industry	189,827	191,036	179,416	181,830
2, Food	339,759	352,298	355,130	359,586
3. Beverage	33,233	32,819	31,813	32,209
Total food processors	562,819	576,153	566,359	573,625
% of total factories (21 industries)	17.86	18.10	17.61	17.35
Total 21 industries	3,151,955	3,184,018	3,216,252	3,306,713
Total investment (Millions of baht)				
1, Basic agro-Industry	96,191	99,294	93,702	99,879
2, Food	179,854	193,367	201,633	220,462
3. Beverage	39,487	46,021	53,593	53,116
Total food processors	315,532	338,682	348,929	373,458
% of total factories (21 industries)	13.46	13.87	13.78	14.24
Total 21 industries	2,343,976	2,442,088	2,531,265	2,622,523

Source: Ministry of Industry

Table 8. (Cont.) Thai total number of food factories, total labor employed, and total investment

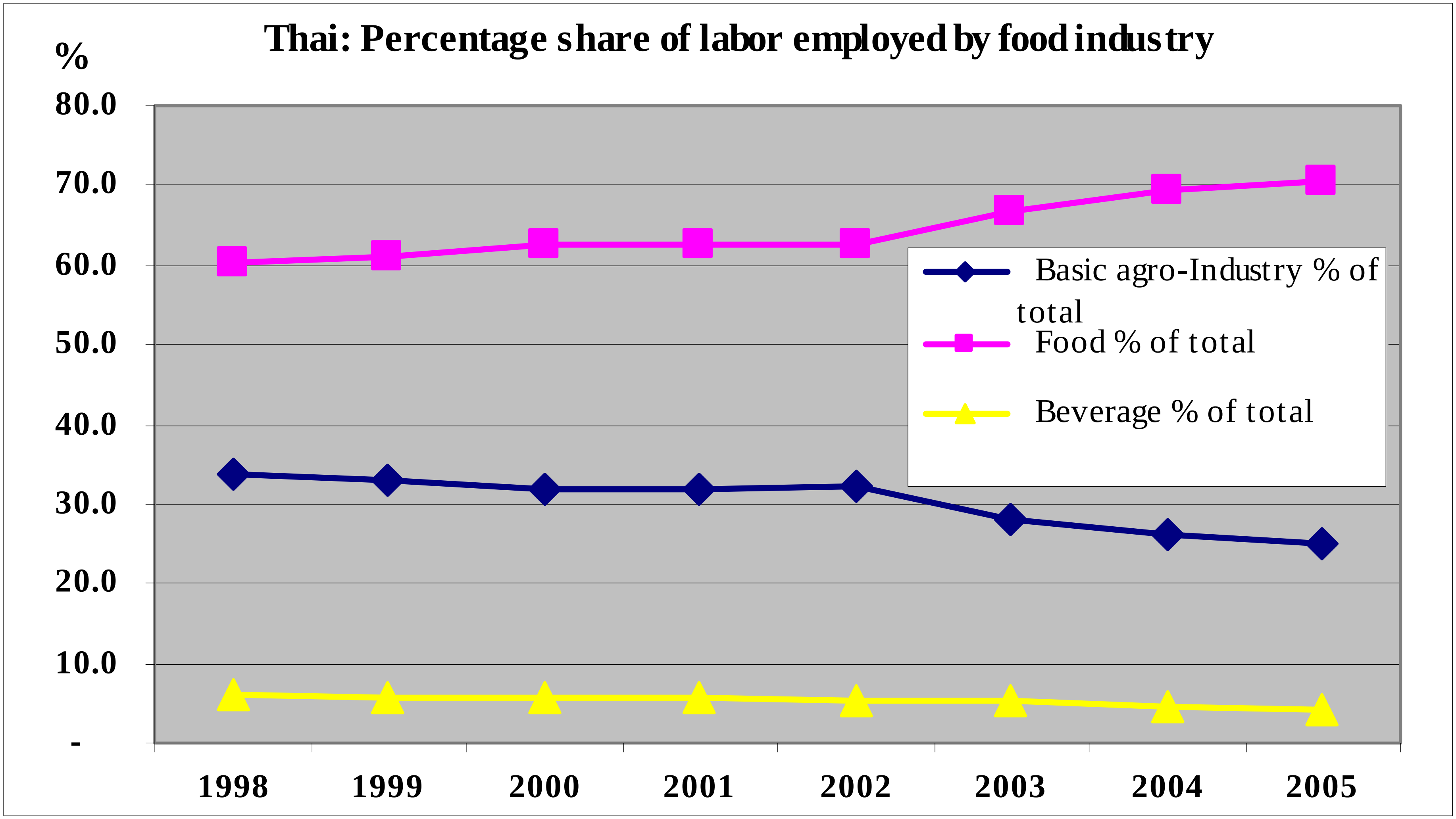
	2002	2003	2004	2005
Number of factories				
1, Basic agro-Industry	46,774	42,575	45,857	44,097
2, Food	7,287	6,814	6,620	6,899
3. Beverage	402	390	388	407
Total food processors	54,463	49,779	52,865	51,403
% of total factories (21 industries)	42.99	42.12	44.00	42.03
Total 21 industries	126,677	118,176	120,145	122,312
Number of labor employment				
1, Basic agro-Industry	185,567	154,868	147,269	148,786
2, Food	357,744	368,880	388,104	418,472
3. Beverage	29,545	28,826	24,471	25,381
Total food processors	572,856	552,574	559,844	592,639
% of total factories (21 industries)	17.36	17.34	16.67	16.73
Total 21 industries	3,300,080	3,186,488	3,359,345	3,542,146
Total investment (Millions of baht)				
1, Basic agro-Industry	109,190	113,594	117,336	130,872
2, Food	238,646	221,776	306,255	321,972
3. Beverage	53,301	56,685	58,728	74,814
Total food processors	401,138	392,055	482,318	527,658
% of total factories (21 industries)	15.22	14.48	13.25	13.04
Total 21 industries	2,635,452	2,708,024	3,641,405	4,045,982

Source: Ministry of Industry

Table 9. Thai total labor employed by the registered food factories and by industry (accumulated number)

	Basic agro-Industry		Food		Beverage		Total food factories		Total labor employed 21 ind.	
	Labors	% of total	Labors	% of total	Labors	% of total	Labors	%	Total 21 ind.	% food/total
1998	189,827	33.7279	339,759	60.3674	33,233	5.9047	562,819	100	3,151,955	17.86
1999	191,036	33.1572	352,298	61.1466	32,819	5.6962	576,153	100	3,184,018	18.10
2000	179,416	31.6788	355,130	62.7040	31,813	5.6171	566,359	100	3,216,252	17.61
2001	181,830	31.6984	359,586	62.6866	32,209	5.6150	573,625	100	3,306,713	17.35
2002	185,567	32.3933	357,744	62.4492	29,545	5.1575	572,856	100	3,300,080	17.36
2003	154,868	28.0267	368,880	66.7567	28,826	5.2167	552,574	100	3,186,488	17.34
2004	147,269	26.3054	388,104	69.3236	24,471	4.3710	559,844	100	3,359,345	16.67
2005	148,786	25.1057	418,472	70.6116	25,381	4.2827	592,639	100	3,542,146	16.73

Source: Ministry of Industry, Bangkok, Thailand.



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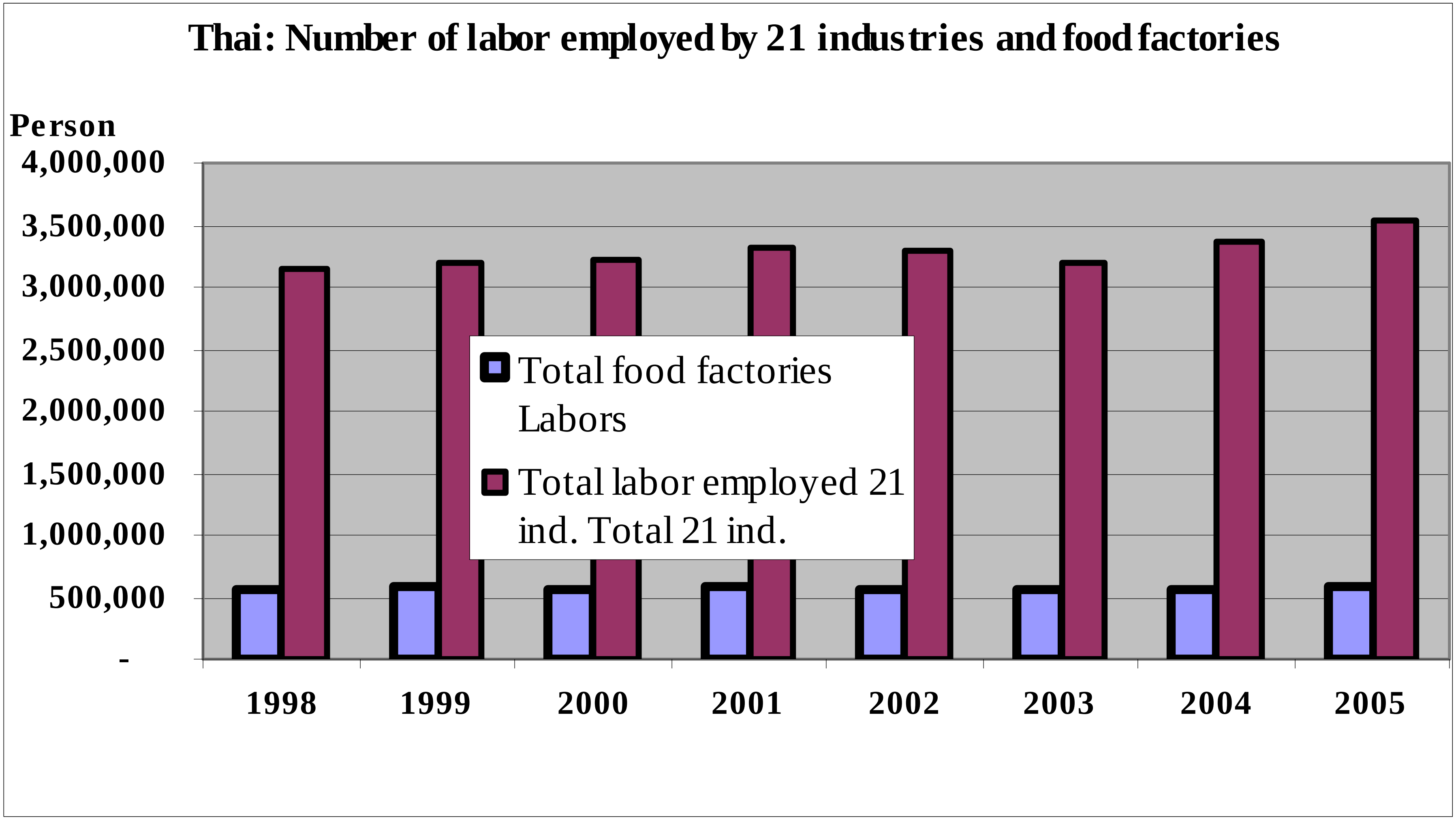

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Table 10. Thai number of food processors by food category and size

Commodity	Small	Medium	Large	Total
Meat & Poultry	529	40	21	590
Dairy Products	72	9	16	97
Fishery Products	377	80	23	480
Fat & Oils	179	39	11	229
Fruit & Vegetable	411	57	15	483
Cereal Product	1,792	61	24	2,877
Starch, Grind & Pound Grind	1,308	49	36	1,393
Syrup & Sugar	61	11	53	125
Tea, Coffee & Confectionary	471	25	13	509
Seasonings	384	17	10	602
Ice	1,294	15	1	1,310
Feedstuff	518	66	18	602
Alcoholic Beverages	20	11	30	61
Non-Alcoholic Beverages	232	17	23	272
Total	8,648	497	294	9,439

Source : Office of Industrial Economics : September 2001

Note : Size of factories are classified by capital investment (millions of baht), Small: <50, Medium: >=50, <200 and Large: >=200

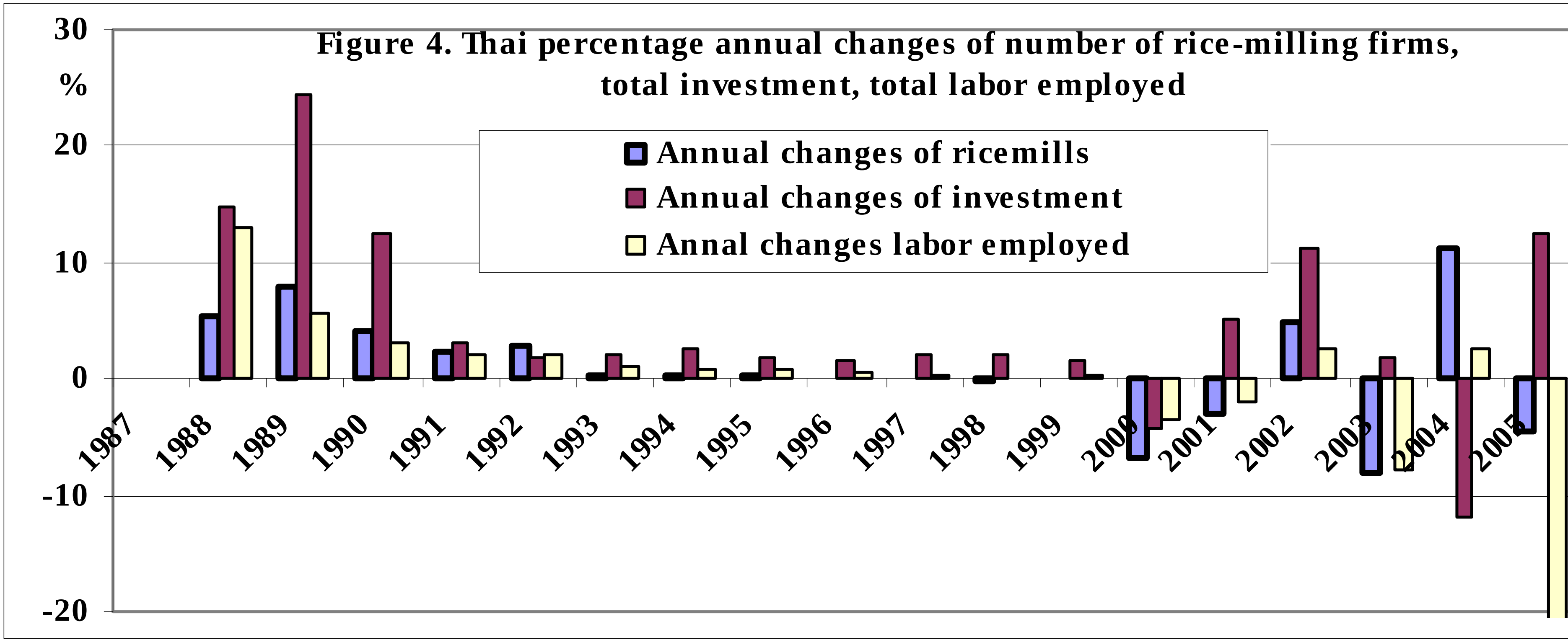
Figure 4. Thai percentage annual changes of number of rice-milling firms, total investment, total labor employed
Annual changes of ricemills
Annual changes of investment
Annal changes labor employed
30
%
20
10
0
-10
-20
1987
1988
1989
1990
1991
1992
1993
1994
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1996
1997
1998
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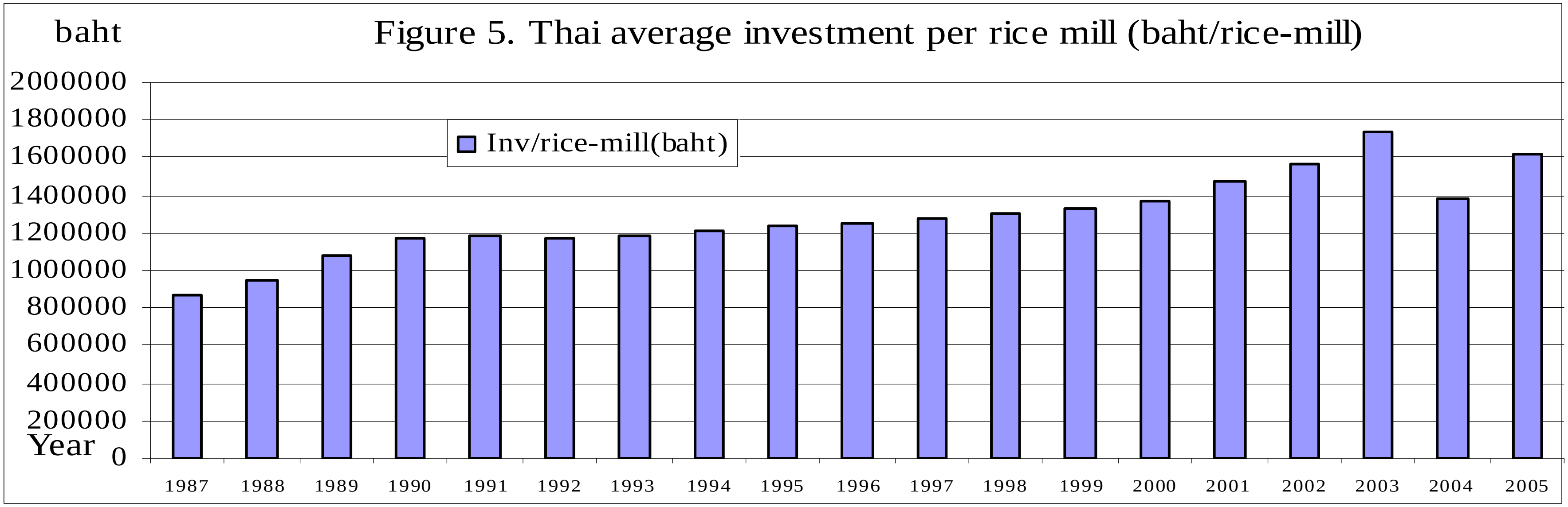
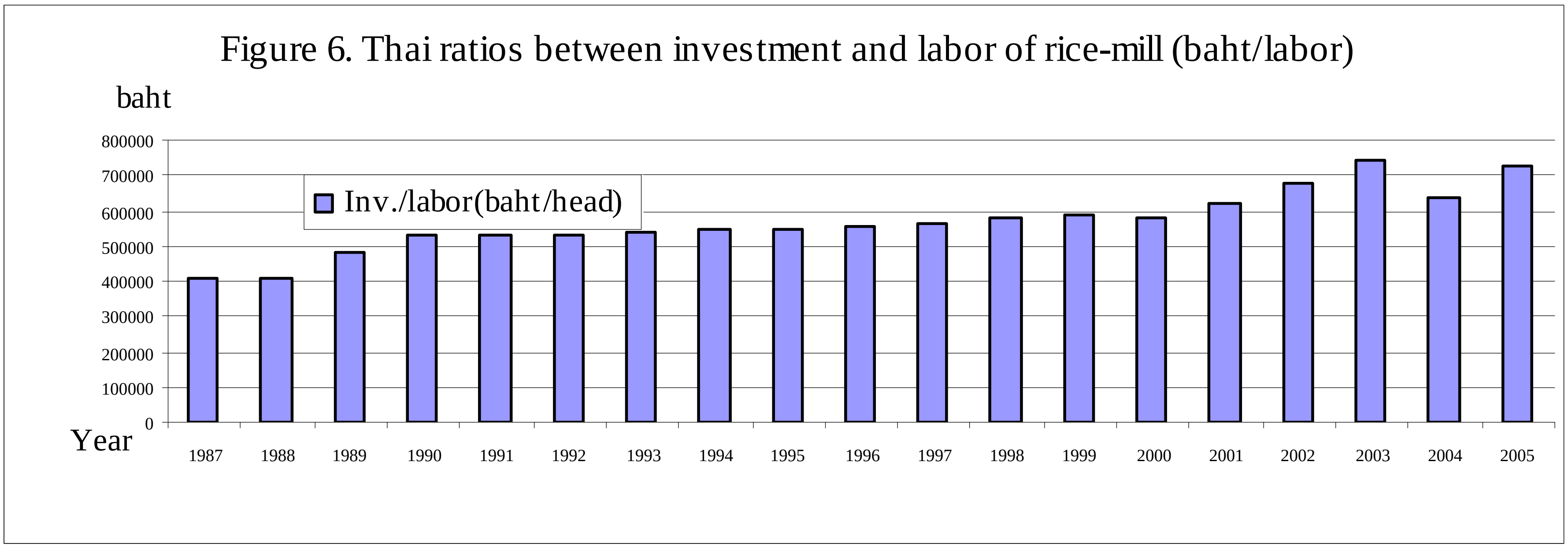
2000
2001
2002
2003
2004
2005





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Methodology

- **Ordinary Least Square (OLS) analysis**
- **Market structure, conducts and performance (SCP) analysis**

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$$Q_X = f\,(P_X, Ps, I, Pop, Pol.)\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

Where:

Q_X = Quantity export ;
P_X = Owned price;
Ps = Price of substitute commodity;
I = Income;
Pop = Population; and
Pol = Policies.

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$$Q_n = f\,(P_X, Ps, T, D_1, D_2, D_3)\ldots\ldots\ldots\ldots\ldots(2)$$

Where:

Q_n = Quantity export that trend was detached;
P_X = Own price;
Ps = Price of substitute commodity;
T = trend that reflect the continuing implementation of policies on trade liberalization; and
D_1 to D_3 = Dummy variables for testing specific police or intervention

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MSi = TPRi/TPRt…………………..…….(3)

Where:

MSi = Market share of firms size i which represents small, medium, and large;

TPRi = Total principal revenue of firms size i.; and

TPRt = Total principal revenue of all firms within the industry.

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A) Concentration ratios (CR)

Market dominance is presumed if:
1)CR1 is greater than 33.3 %
2)CR3 is greater than 50%
3)CR5 is greater than 66.7%

B) Herfindahl-Hirschman Index HHI

The degree of market concentration is divided as:
1) Unconcentrated: if HHI is less than 1,000
2) Moderately concentrated: if HHI is between 1,000 and 1,800
3) Highly concentrated: HHI is greater than 1,800

Selected sub-sector and commodities of analysis

1. Crop sub-sector
   1) **rice mills**
   2) **flour mills**
   3) **cassava starch**

2. Fruit and vegetable sub-sector:
   1) **canned fruit and vegetable processing**

3. Fishery sub-sector
   1) **sea food processing**
   2) **canned sea food processing**

4. Livestock sub-sector
   1) **Slaughterhouse**

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a) Canned pineapple export

$$\ln EDp = 18.2161 - 0.5614 \ln Pp + \mathbf{0.1907 \ln T} - 0.5058\ WTO + 0.1862\ FS$$
$$(17.471)^{****} \quad (-5.1611)^{***} \quad \mathbf{(2.6865)^{**}} \quad (-4.1105)^{***} \quad (2.3215)^{**}$$

$R^2 = 0.9045$ $\quad \bar{R}^2 = 0.8726$

D.W. = 2.0118 $\quad$ n = 17 (1990- 2006)

****Significant level at 100 % *** Significant level at 99 % ** Significant level at 90 %

Pp = Average f.o.b. price of canned pineapple in Bangkok

T = Time trend representing implemented policy, T =1 for 1990 and T =17 for 2006

Dummy variable WTO = 1 starting from 1995, and FS = 1 starting from 2004

Figure in the parentheses are t-statistic.

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b) Frozen shrimp export

$$\ln ED_s = \underset{(22.9817)^{****}}{12.19401} - \underset{(-0.4402)^{ns}}{6.37E\text{-}07\, P_s} - \underset{(-1.8519)^{**}}{\mathbf{0.051388\, T}} - \underset{(-0.3697)^{ns}}{0.094979\, WTO} + \underset{(0.2970)^{ns}}{0.067694\, FS}$$

$R^2 = 0.7469$ $\quad \bar{R}^2 = 0.6203$

D.W. = 2.0684 $\quad$ F-statistic*** = 5.9014

n = 17 (1990- 2006)

**** Significant level at 100 %***Significant level at 99 %**Significant level at 90 %

ns = not significant

Ps = Average f.o.b. price of frozen shrimp in Bangkok

T = Time trend representing implemented policy, T =1 for 1990 and T =17 for 2006

Dummy variable WTO = 1 starting from 1995, and FS = 1 starting from 2004

Figure in the parentheses are t-statistic.

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c) Frozen chicken export

$$\ln EDc = 11.8331 - 2.87E\text{-}06\,Pc + 0.1009T - 0.3516\,WTO - 3.6048\,FS$$
$$(30.2975)^{****} \quad (-0.4684)^{ns} \quad (2.1138)^{**} \quad (-0.8943)^{ns} \quad (-9.5838)^{****}$$

R^2 = 0.9252 $\bar{R}^2$ = 0.9003

D.W. = 2.0915 F-statistic* = 37.1195**

n = 17 (1990- 2006)

****** Significant level at 100 %, ***Significant level at 99 %**

**** Significant level at 90 %, ns = not significant**

Pc = Average f.o.b. price of frozen chicken in Bangkok,

T = Time trend representing implemented policies, Trend variable T =1 for 1990 and T =17 for 2006

Dummy variable WTO = 1 starting from 1995, and FS = 1 starting from 2004

Figure in the parentheses are t-statistic.

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Rice mills

Table 12. Thai number of establishment of rice mills, average principal revenue of firm and market share by size of firms

Year	Number of establishments (firms)				Average principal revenue of firm (baht)			Total	Market share of firm (%)			
	S	M	L	Total	Small	Medium	Large	Mil. Baht	Small	Medium	Large	Total
1990	218	290	218	726	7,332,104	14,980,428	77,453,227	22,827.53	7.00	19.03	73.97	100
2000	220	292	220	732	6,755,321	18,675,258	76,551,284	23,780.63	6.25	22.93	70.82	100
2001	227	302	227	756	8,068,417	18,954,882	85,401,497	26,942.04	6.80	21.25	71.95	100
2002	239	319	239	797	9,922,165	25,770,138	105,431,924	35,790.30	6.63	22.97	70.41	100
2003	253	335	152	740	11,972,186	33,384,483	134,341,174	34,632.62	8.75	32.29	58.96	100
2004	255	338	255	848	15,936,047	41,614,238	167,020,100	60,719.43	6.69	23.16	70.14	100

Remarks:

The size of firm small (S), medium (M), and Large (L) are classified according to the total assets of firm in baht in each year as follows

1990 [S(218) <= 1,942,000.00 < M(290) <= 5,975,500.00 < L(218)] , 2000 S(220) <= 2,002,900.00 < M(292) <= 5,985,400.00 < L(220)]

2001[S(227) <= 2,338,321.10 < M(302) <= 7,646,868.75 < L(227)] , 2002 [S(239) <= 2,869,199.20 < M(319) <= 10,419,911.86 < L(239)]

2003 [S(253) <= 3,500,000.00 < M(335) <= 14,516,851.86 < L(252)] , 2004 [S(255) <= 4,940,734.07 < M(338) <= 19,265,135.66 < L(255)]

Source : Department of Business Development, Ministry of Commerce

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Rice mills

Table 13. Thai average net profit of rice mills by size and total net profit of all rice mills

	Average net profit of rice mills (baht)			Total of all rice mills
	Small	Medium	Large	mills (Mil. Baht)
1999	48,022.02	132,250.00	316,047.20	118.00
2000	35,074.77	197,122.70	496,817.50	175.00
2001	53,070.14	219,691.90	822,994.80	265.00
2002	102,025.80	394,335.30	425,665.40	252.00
2003	148,463.70	467,724.60	561,025.20	336.00
2004	196,656.80	667,577.90	252,851.10	340.00

Remarks:
The size of firm small (S), medium (M), and Large (L) are classified according to the total assets of firm in baht in each year as follows
1990 [S(218) <= 1,942,000.00 < M(290) <= 5,975,500.00 < L(218)] , 2000 S(220) <= 2,002,900.00 < M(292) <= 5,985,400.00 < L(220)]
2001[S(227) <= 2,338,321.10 < M(302) <= 7,646,868.75 < L(227)] , 2002 [S(239) <= 2,869,199.20 < M(319) <= 10,419,911.86 < L(239)]
2003 [S(253) <= 3,500,000.00 < M(335) <= 14,516,851.86 < L(252)] , 2004 [S(255) <= 4,940,734.07 < M(338) <= 19,265,135.66 < L(255)]
Source : Department of Business Development, Ministry of Commerce

Rice mills

Table 14. Thai number of establishment of rice mills, concentration rations, and HHI							
Year	No. firms	CR1	CR3	CR4	CR5	CR8	HHI
1999	726	39.13	66.95	76.91	86.05	96.01	2,160.28
2000	732	39.69	72.42	82.67	87.45	95.41	2,270.94
2001	756	31.53	69.61	79.74	87.29	96.22	1,945.16
2002	797	31.49	71.84	80.60	86.13	95.60	2,103.39
2003	840	23.56	66.60	76.91	82.39	94.77	1,838.22
2004	848	53.08	71.62	79.54	84.08	95.45	3,128.12
Source: Department of Business Development, Ministry of Commerce							

Remarks:

A) Market dominance is presumed if: 1) CR1 is greater than 33.3 %; 2) CR3 is greater than 50%; and 3) CR5 is greater than 66.7%

B) Herfindahl-Hirschman Index HHI The degree of market concentration is divided as: 1) Unconcentrated: if HHI is less than 1,000; 2) Moderately concentrated: if HHI is between 1,000 and 1,800; and 3) Highly concentrated: HHI is greater than 1,800

Flour mills

Table 15. Thai number of establishment of flour mills, average principal revenue of firm and market share by size of firms

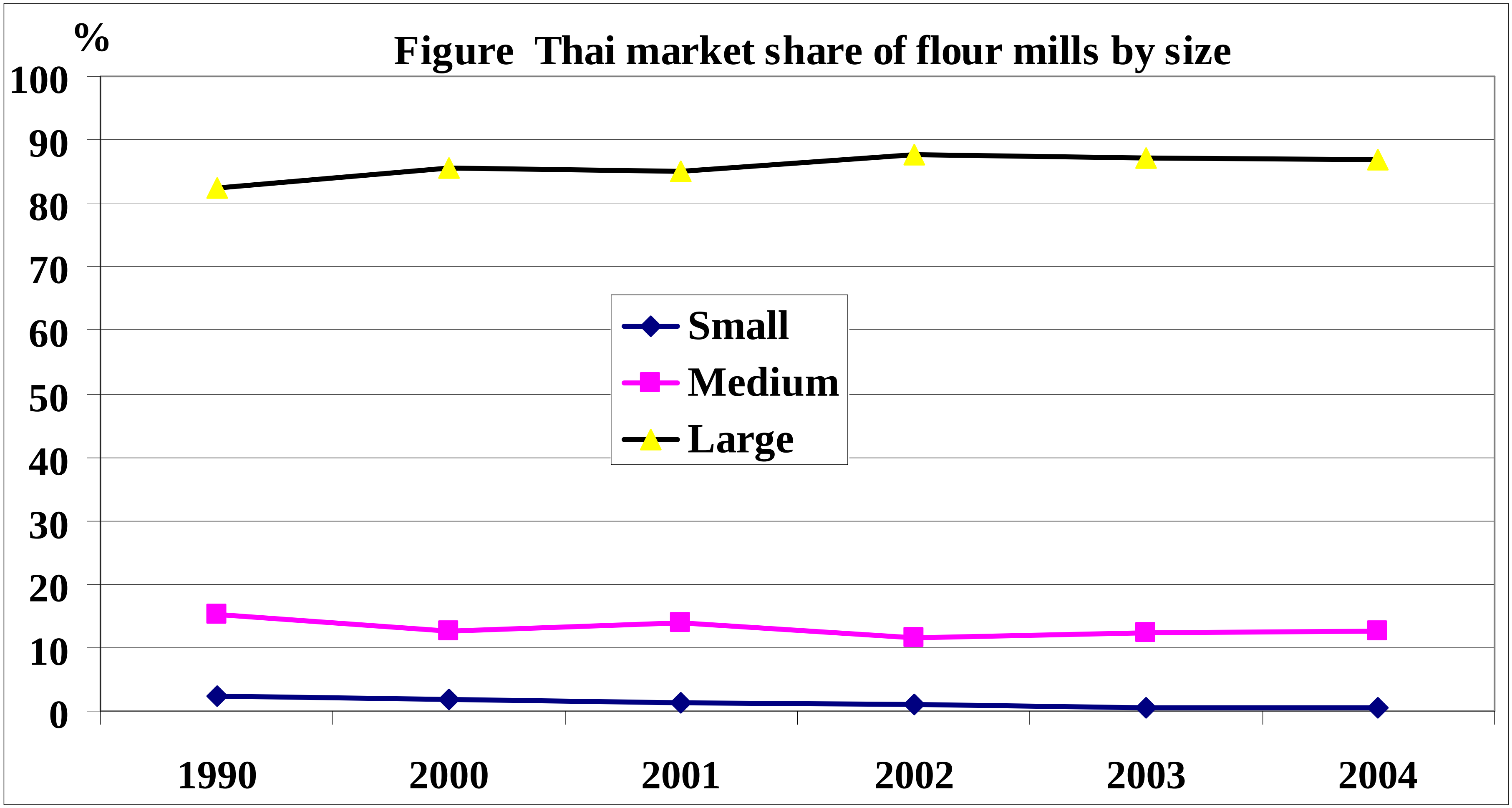
Year	ber of establishments (fi				Average principal revenue of firm (baht)			Total	Market share of firn		
	S	M	L	Total	Small	Medium	Large	Mil. Baht	Small	Medium	Large
1990	30	38	30	98	13,381,227	68,563,935	471,107,357	17,140	2.34	15.20	82.46
2000	29	38	29	96	11,813,793	63,198,813	556,017,310	18,869	1.82	12.73	85.46
2001	33	42	33	108	6,790,006	59,791,354	467,773,130	18,172	1.23	13.82	84.95
2002	35	47	35	117	5,457,283	49,992,731	513,299,608	20,506	0.93	11.46	87.61
2003	37	50	37	124	2,869,432	53,987,047	509,578,179	21,660	0.49	12.46	87.05
2004	36	46	36	118	3,697,910	68,063,765	604,990,314	25,044	0.53	12.50	86.97

Remarks:

The size of firm small (S), medium (M), and Large (L) are classified according to the total assets of firm in baht in each year as
1990 [S(30) <= 7,596,800.00 < M(38) <= 105,151,300.00 < L(30)], 2000 [S(29) <= 7,100,500.00 < M(38) <= 114,676,000.00 < L(29)]
2001 [S(33) <= 6,045,882.37 < M(42) <= 101,494,209.16 < L(33)] , 2002 [S(35) <= 6,221,859.82 < M(47) <= 98,748,075.37 < L(35)]
2003 [S(37) <= 5,673,876.63 < M(50) <= 102,438,333.49 < L(37)], 2004 [S(36) <= 5,857,654.78 < M(46) <= 123,602,046.26 < L(36)]

Source : Department of Business Development, Ministry of Commerce

Flour mills



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Flour mills

Table 16. Thai average net profit of flour mills by size and total net profit of all flour mills

	Average net profit of flour mills (baht)			Total of all flour mills
	Small	Medium	Large	mills (Mil. Baht)
1999	(41,250.00)	(114,361.11)	22,727,000.00	1,872.17
2000	203,379.31	(217,722.22)	62,407,586.21	5,330.73
2001	(73,114.87)	(54,421.79)	28,078,470.59	2,384.35
2002	(52,029.76)	(1,029,087.63)	27,257,350.88	2,376.18
2003	(106,934.16)	889,930.95	34,458,989.66	3,010.60
2004	(150,797.30)	433,550.46	33,868,947.29	2,950.81

Remarks:
The size of firm small (S), medium (M), and Large (L) are classified according to the total assets of firm in baht in each y
1990 [S(30) <= 7,596,800.00 < M(38) <= 105,151,300.00 < L(30)], 2000 [S(29) <= 7,100,500.00 < M(38) <= 114,676,000.00 < I
2001 [S(33) <= 6,045,882.37 < M(42) <= 101,494,209.16 < L(33)] , 2002 [S(35) <= 6,221,859.82 < M(47) <= 98,748,075.37 < I
2003 [S(37) <= 5,673,876.63 < M(50) <= 102,438,333.49 < L(37)], 2004 [S(36) <= 5,857,654.78 < M(46) <= 123,602,046.26 <
Source : Department of Business Development, Ministry of Commerce

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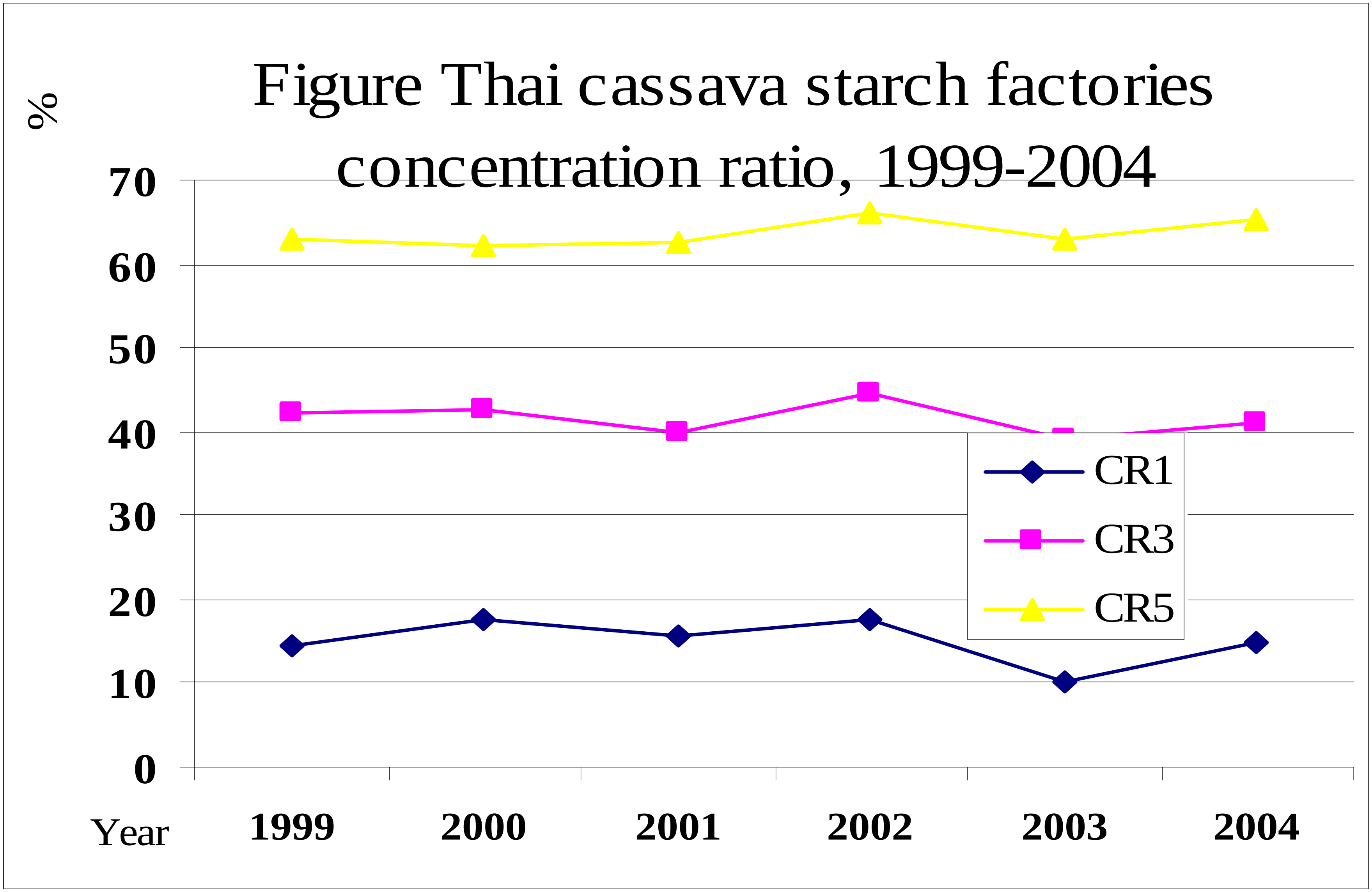
Flour mills

Table 17. Thai flour mills, concentration ratios, and HHI						
Year	CR1	CR3	CR4	CR5	CR8	HHI
1999	22.17	51.91	60.00	67.88	89.40	1,339.03
2000	24.09	50.83	59.31	67.30	89.05	1,350.74
2001	25.81	52.17	61.24	69.06	89.41	1,377.93
2002	23.90	58.43	65.63	72.39	90.56	1,425.25
2003	20.95	50.06	58.81	67.54	89.11	1,252.77
2004	30.80	60.42	67.68	74.42	90.91	1,619.74
Source: Department of Business Development, Ministry of Commerce						

Cassava starch



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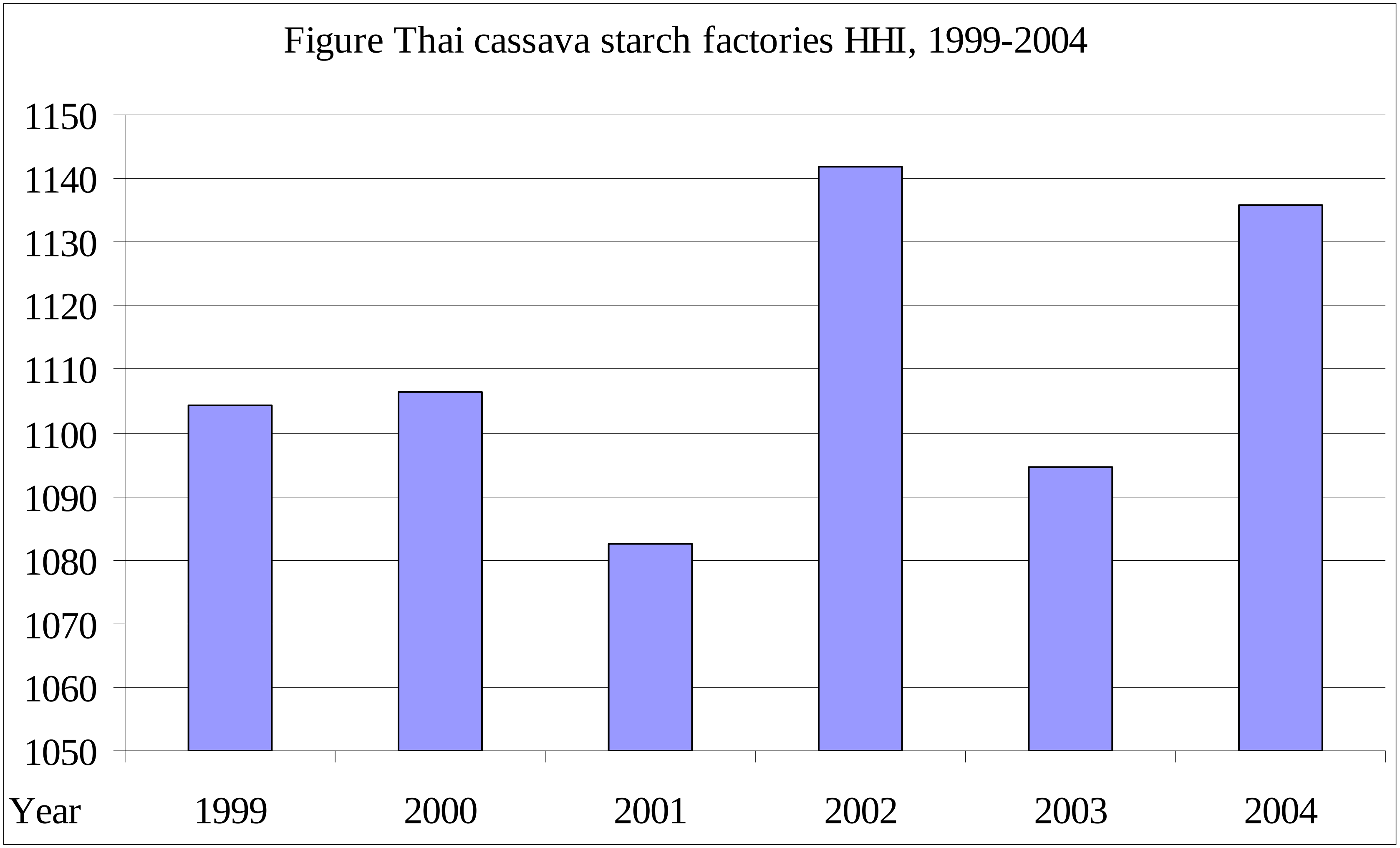
Cassava starch



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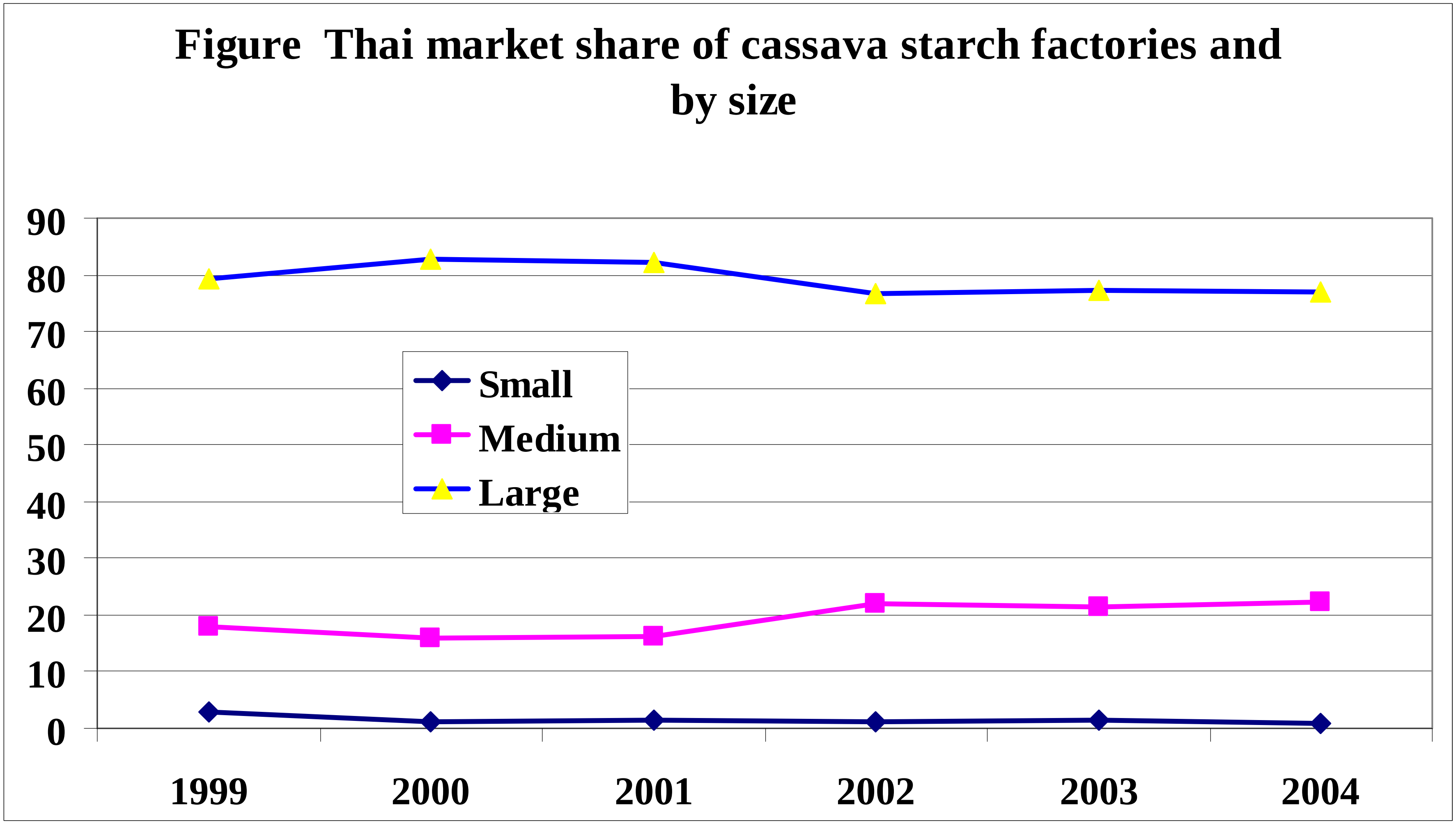
Cassava starch



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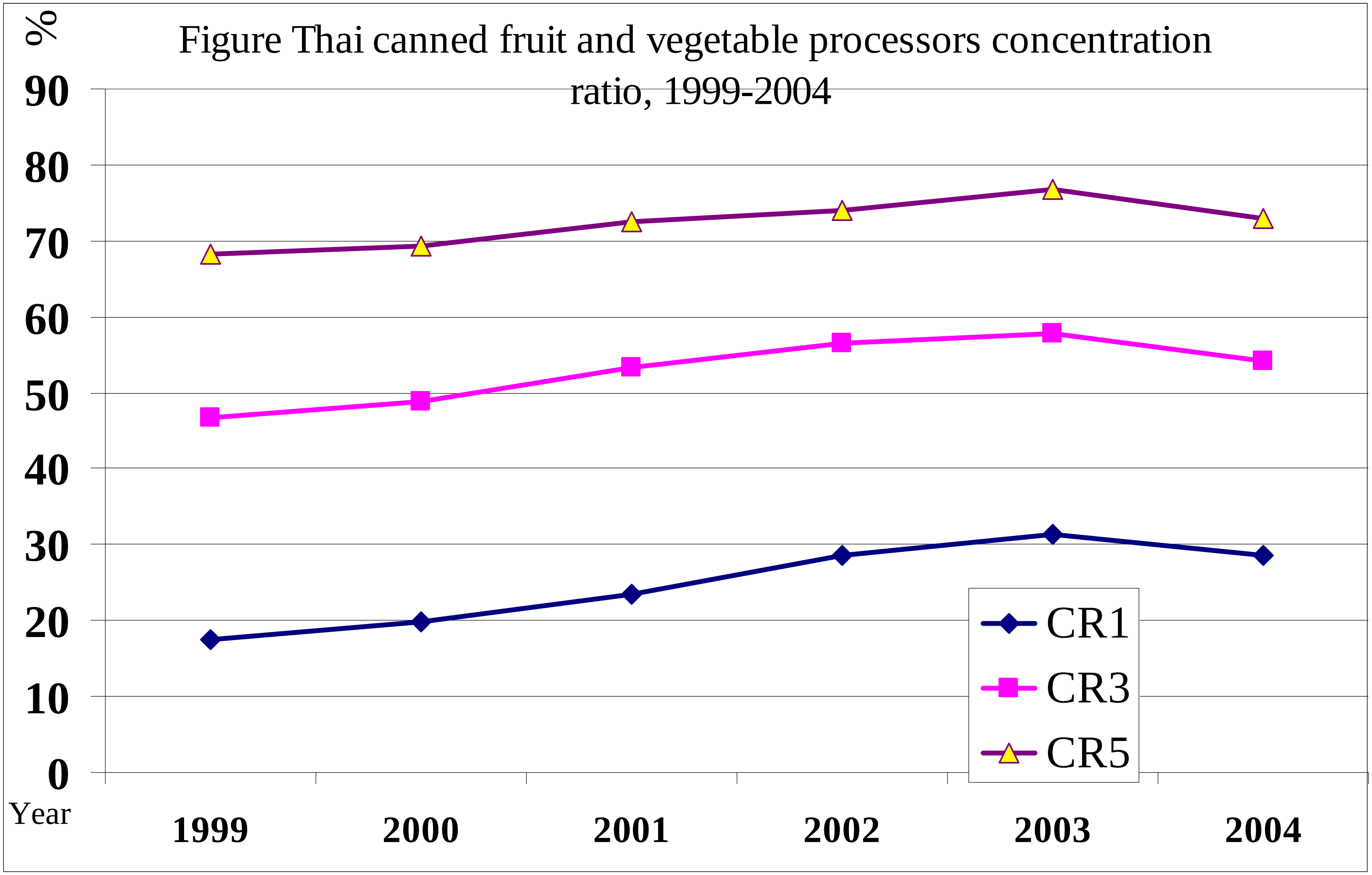
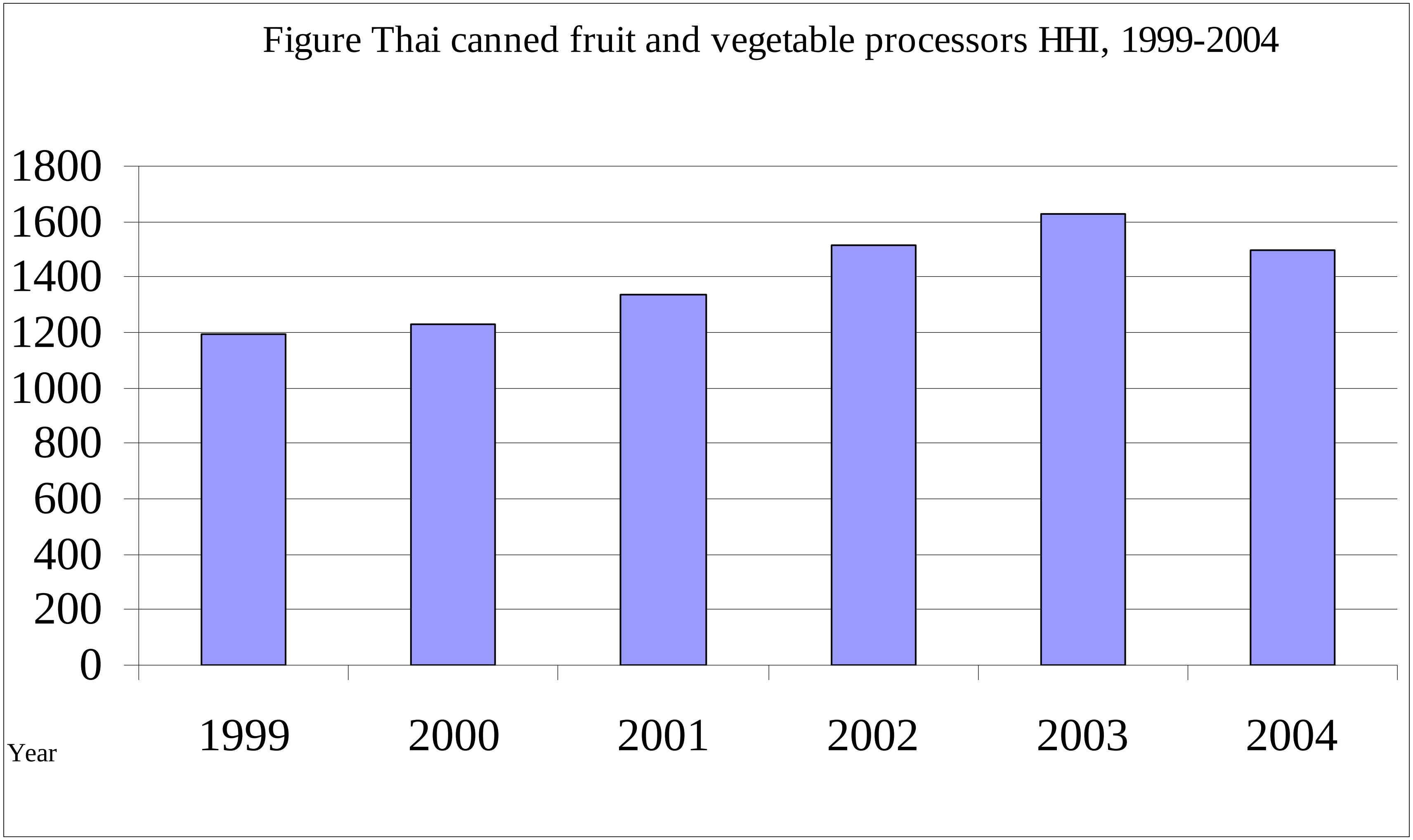
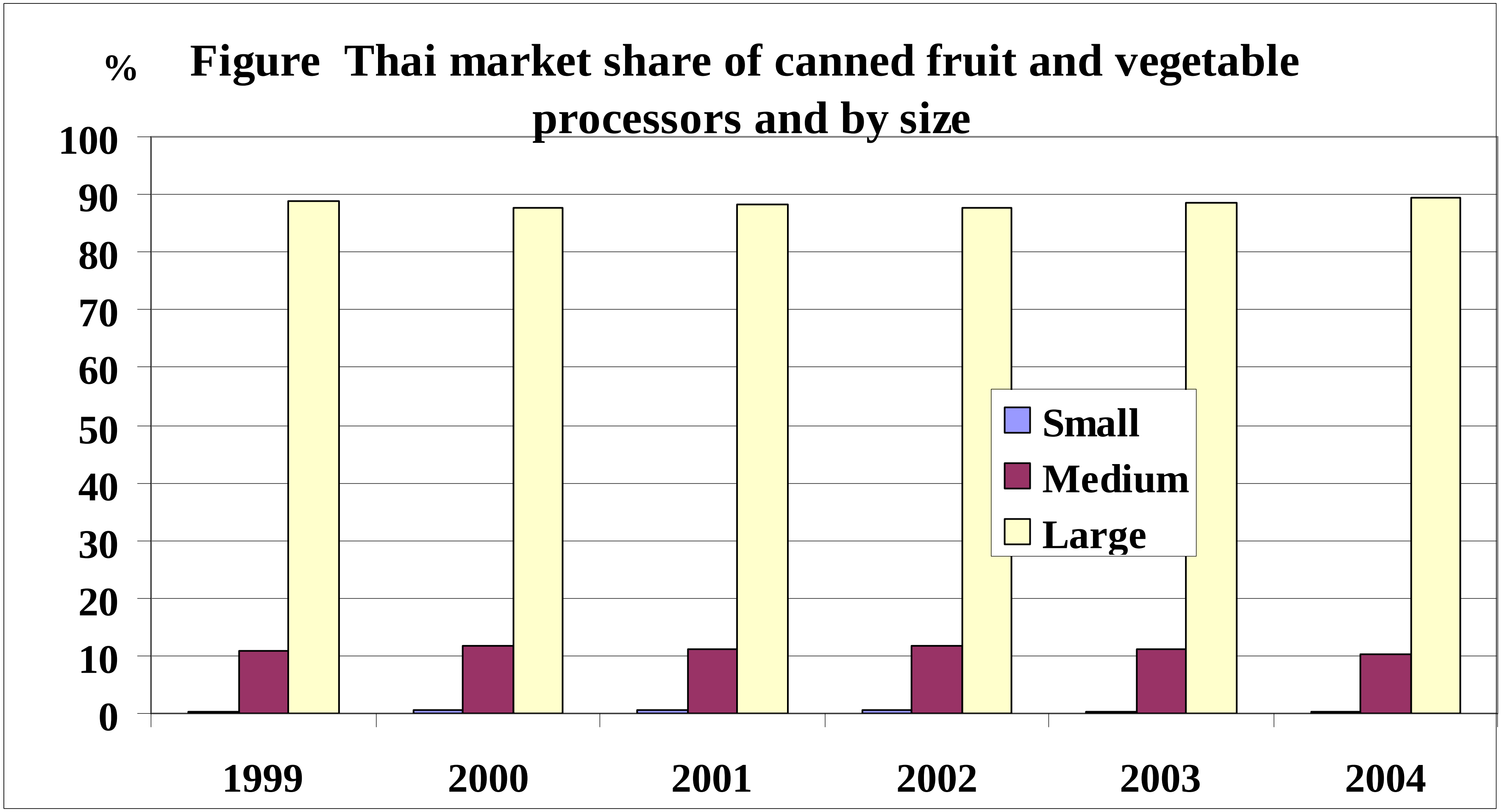
Canned fruit & vegetable



Canned fruit & vegetable



Canned fruit & vegetable



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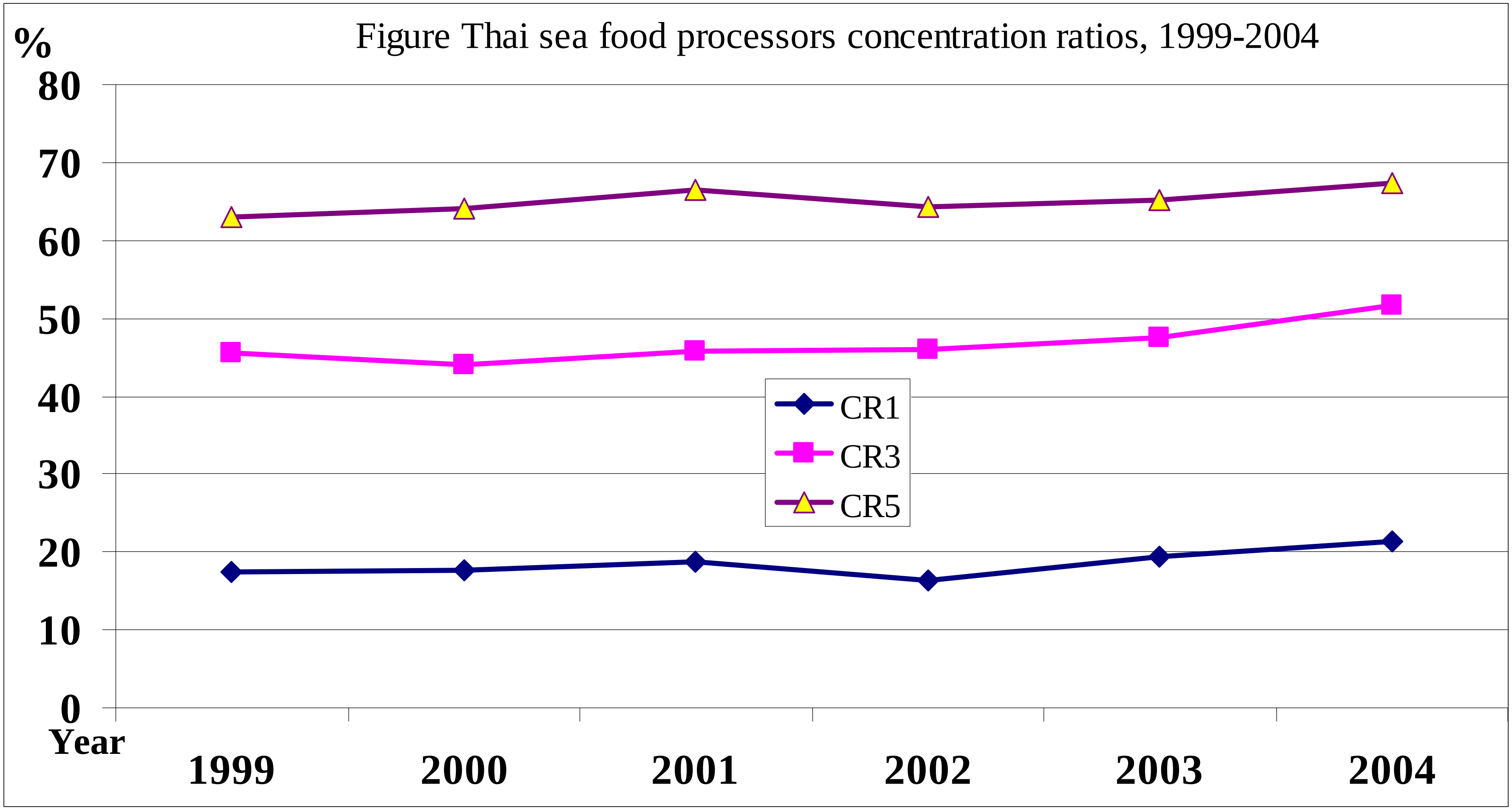
Sea food processing



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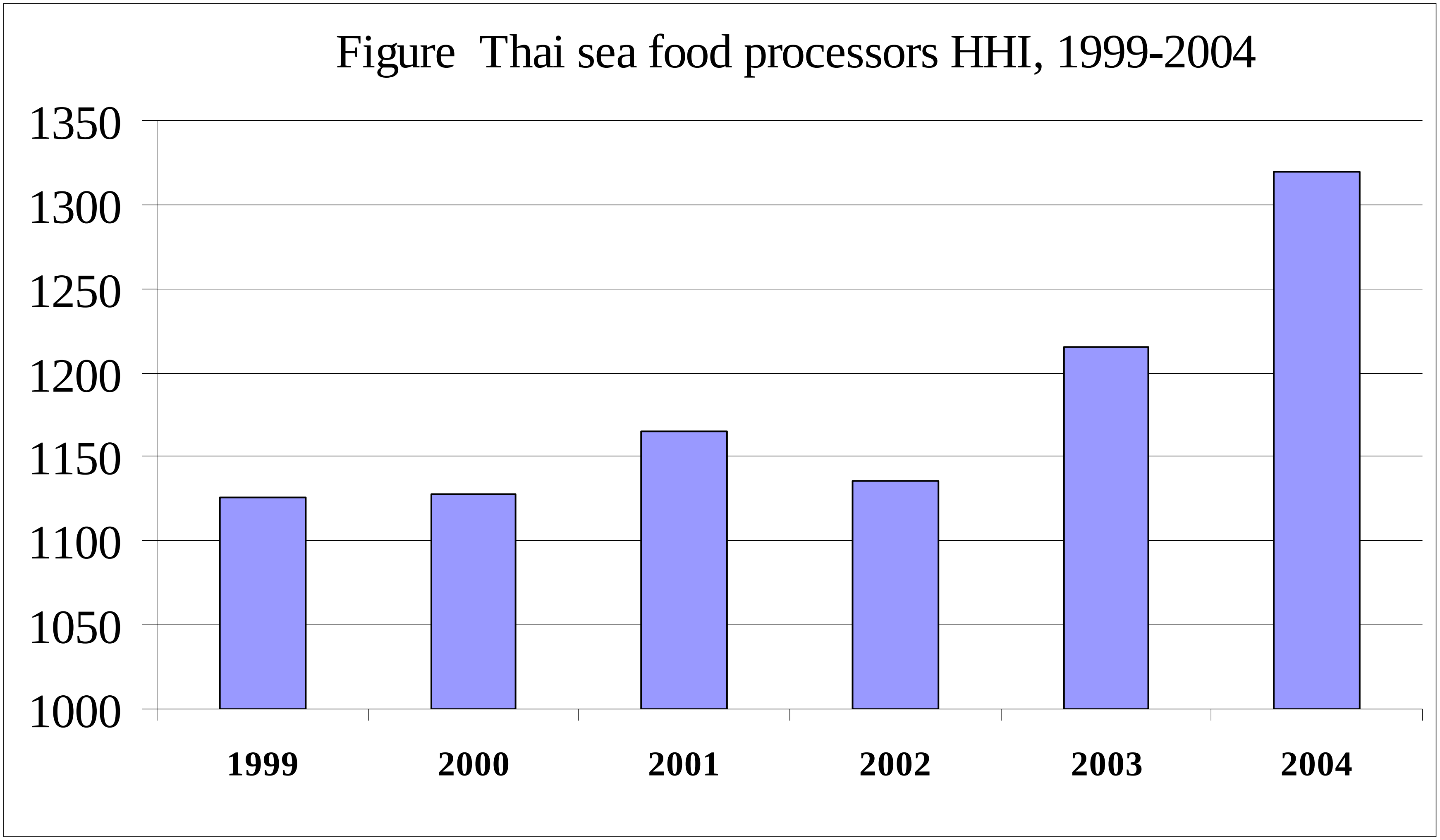
Sea food processing



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Sea food processing

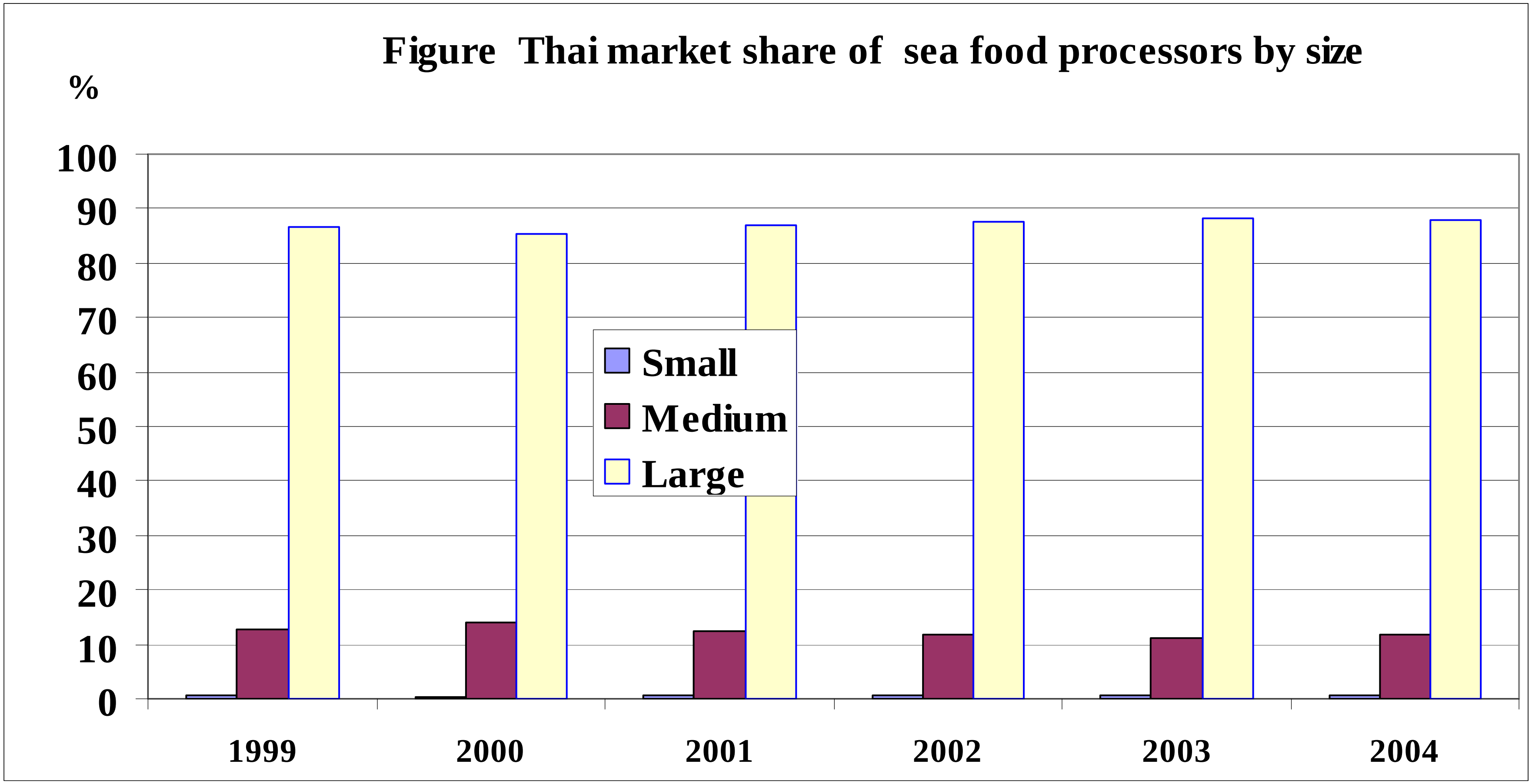

Table 27. Thai principal revenue of canned food processor by firm in 1999, 2002 and 2004 (Unit: baht)

Firm	1999	2002	2004
1	30,000.00	3,750.00	142.30
2	250,000.00	1,186,240.00	3,000.00
3	1,759,000.00	4,808,550.71	9,500.00
4	4,031,000.00	11,164,000.00	19,000.00
5	5,283,000.00	330,759,983.84	379,401.87
6	5,973,696.10	487,606,022.94	481,570.00
7	6,860,000.00	746,923,797.93	2,922,365.00
8	233,770,000.00	1,068,014,853.00	3,391,903.52
9	402,812,000.00	1,321,008,525.00	6,671,127.30
10	459,398,000.00	2,363,927,692.26	24,033,406.91
11	550,242,000.00	2,999,600,569.00	77,897,130.55
12	890,986,000.00	3,529,177,246.86	135,877,750.16
13	1,379,971,000.00		166,974,187.85
14	1,427,003,000.00		747,731,648.89
15	1,737,947,000.00		764,040,547.00
16	2,185,786,000.00		1,261,161,644.24
17			1,403,413,932.00
18			1,741,261,768.34
19			2,099,731,379.45
20			2,477,656,306.00
21			2,914,001,072.15
22			4,143,316,289.27
Total	9,292,103,695.10	12,864,181,231.54	17,970,975,072.80

source: Department of Business Develolpment, Ministry of Commerce Bangkok, Thailand

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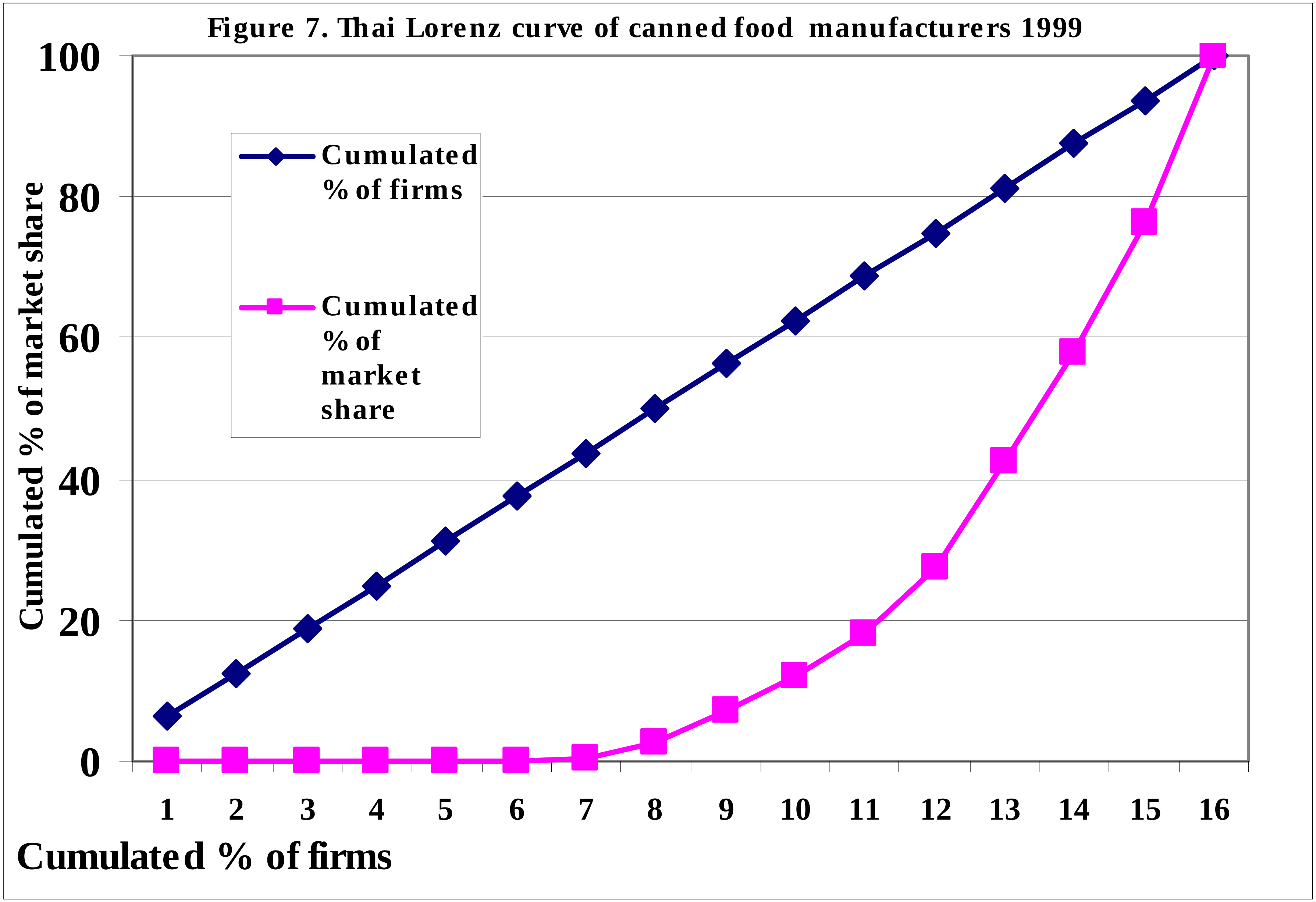

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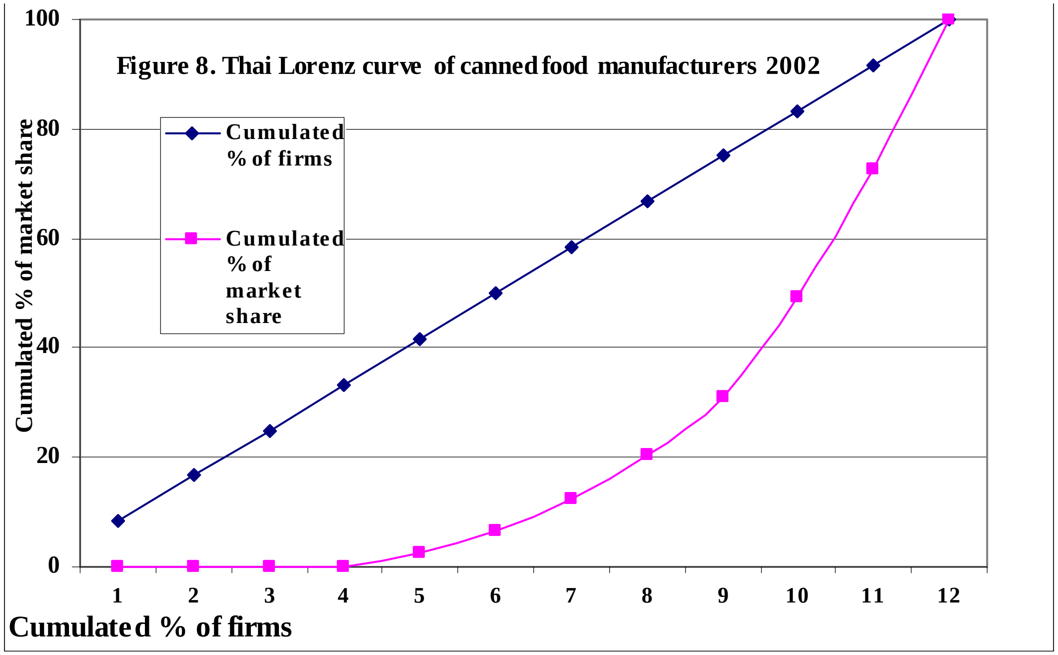

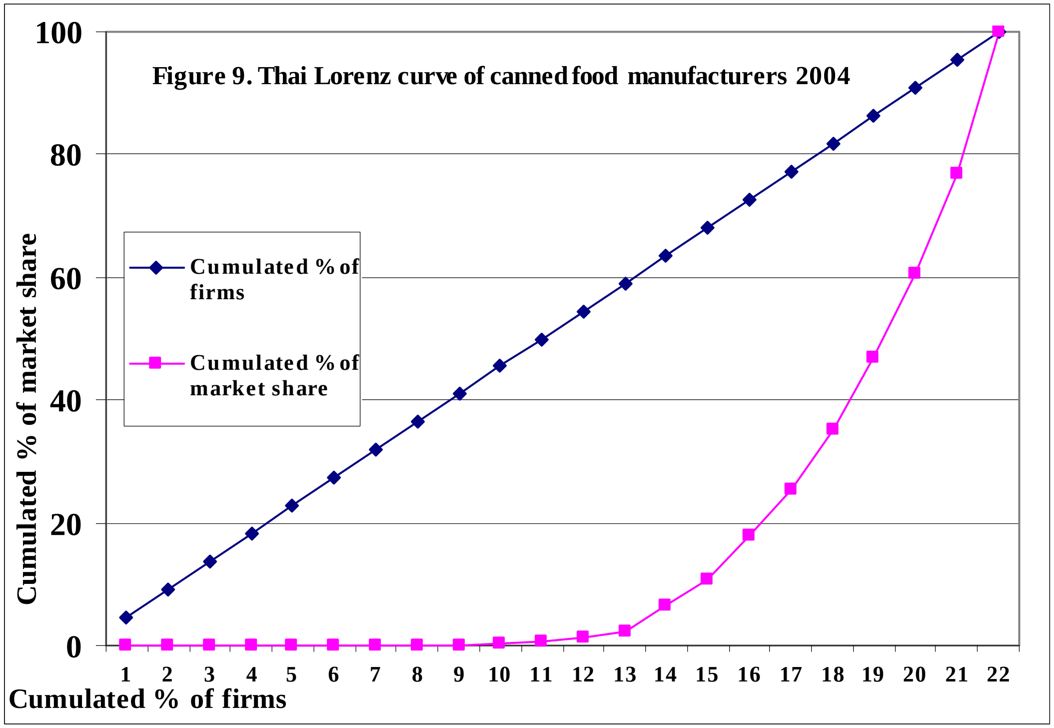

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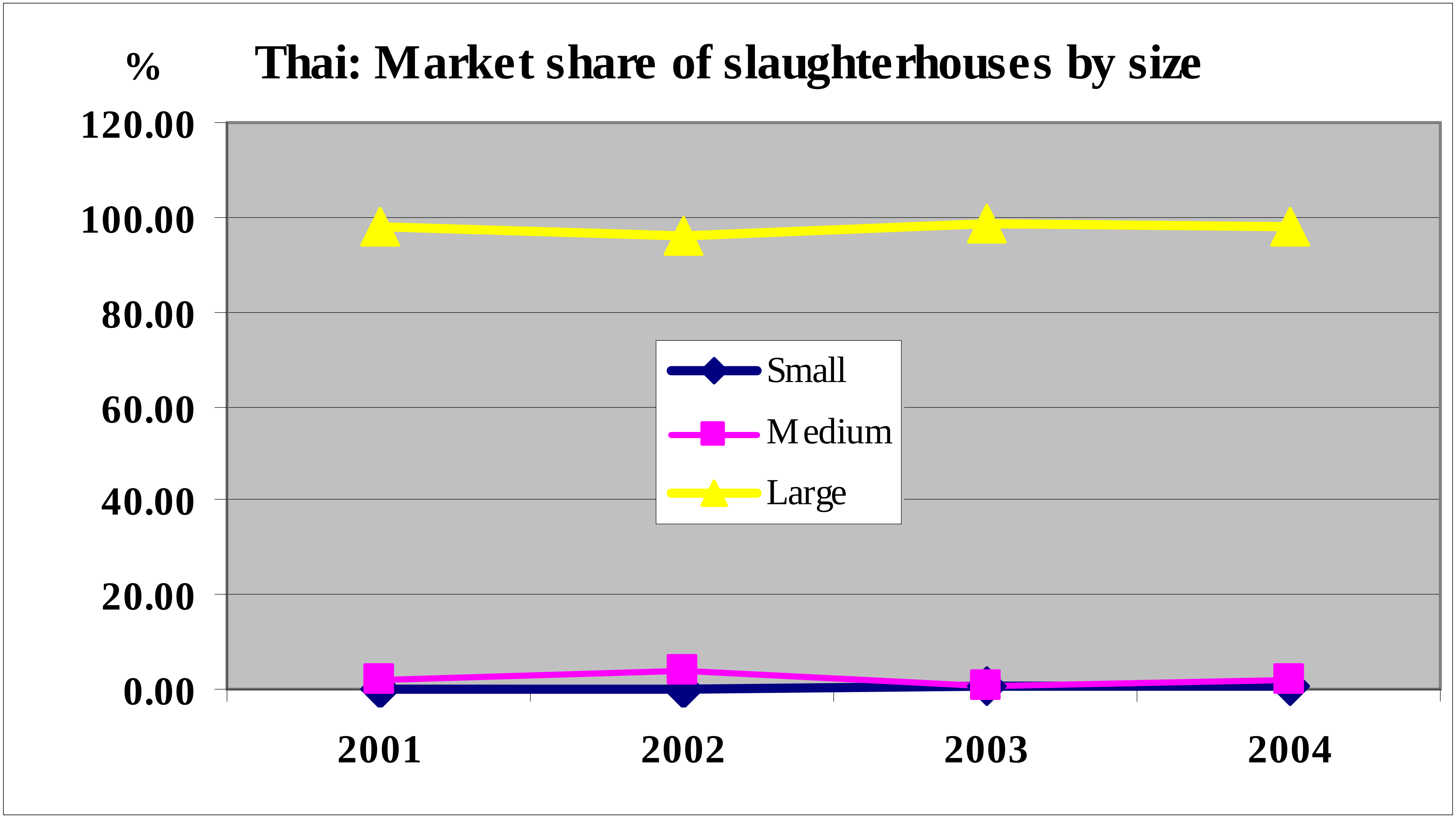
Slaughterhouse



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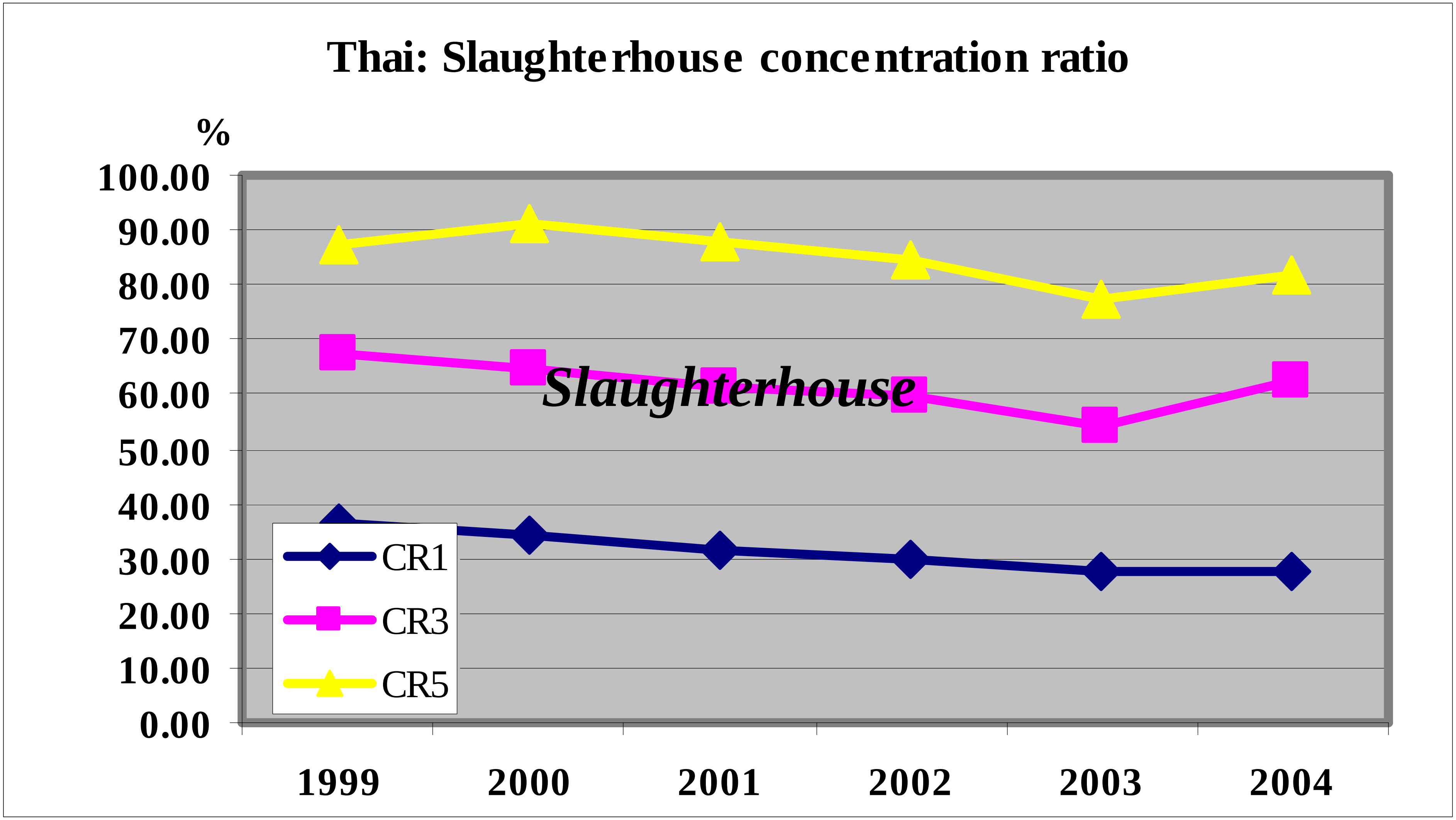
Slaughterhouse



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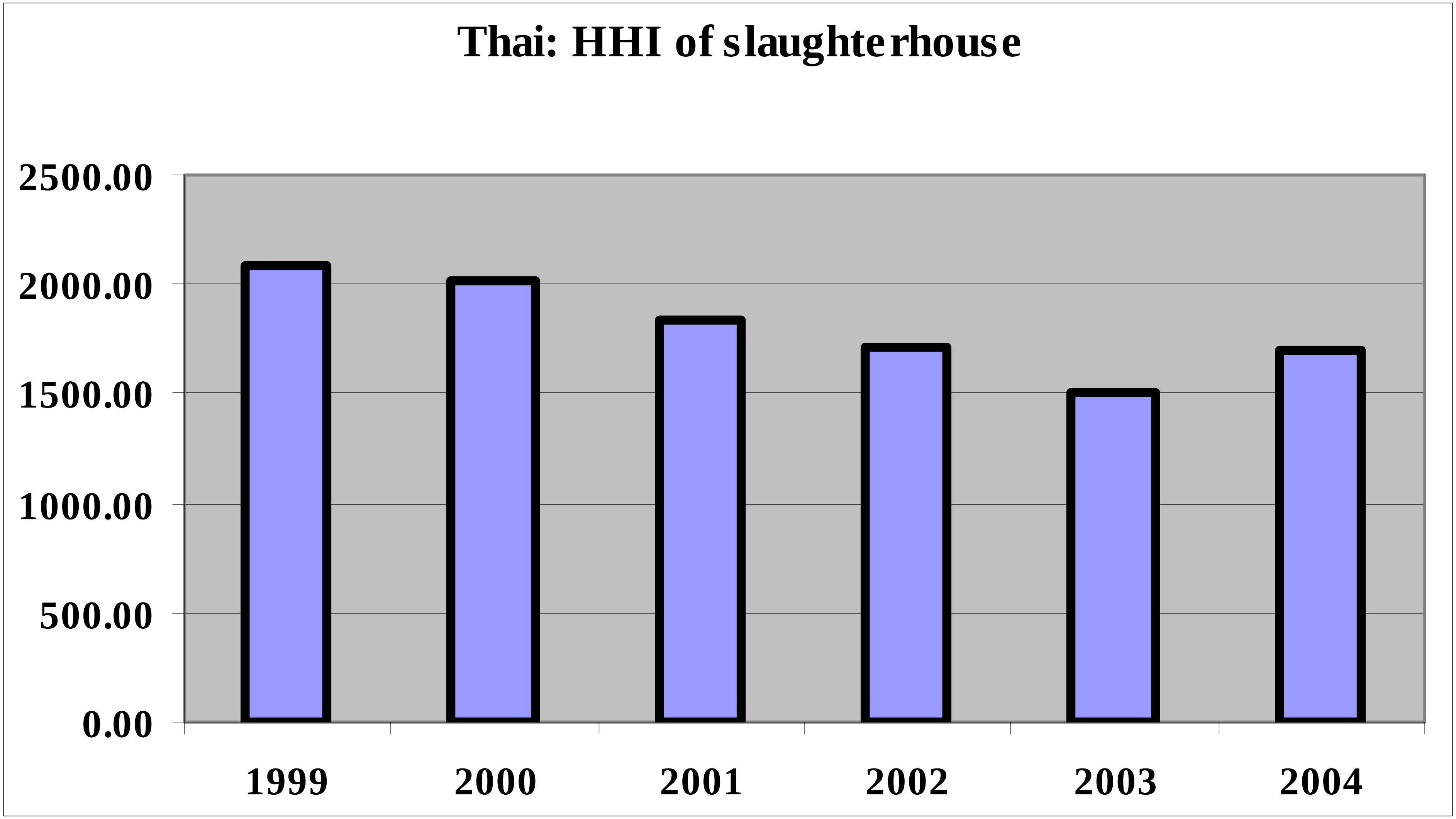

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Recommendation

1. **Information and statistic, and socio-economic research on food related industries or food processing should be enhanced, so that better policy formulation to crop with dynamic development of the industry that affect not only the adequate food supply availability but also a significant employments in the economy.**

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Recommendation

2. **Ways and means should be explored for providing updated and easy understanding marketing information and trade regulations or measures of major and potential importing countries as well as relevant trainings for principal agricultural food and commodity market participants, especially the small and medium firms;**

Recommendation

3. **To enhance the competitiveness of food processing and agricultural commodity SMEs, credit and funding should be available for financing additional investment required due to the implementation of hygienic and food safety measures imposed by importing countries**

4. **An appropriate transition period should be considered for food and agricultural commodity SMEs, in the implementation of regulations and measures that requires adaptation and special trainings.**

Dr. Boonjit Titapiwatanakun, Dept. Agrl. Resources & Economics Faculty of Economics, Kasetsart University, Bangkok Thailand

Thank you & good luck
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FOOD PROCESSING IN VIETNAM – CASE STUDY OF TEA, COFFEE, CASHEW NUT AND RICE

Pham Quang Dieu

Information Center for Agriculture and Rural Development

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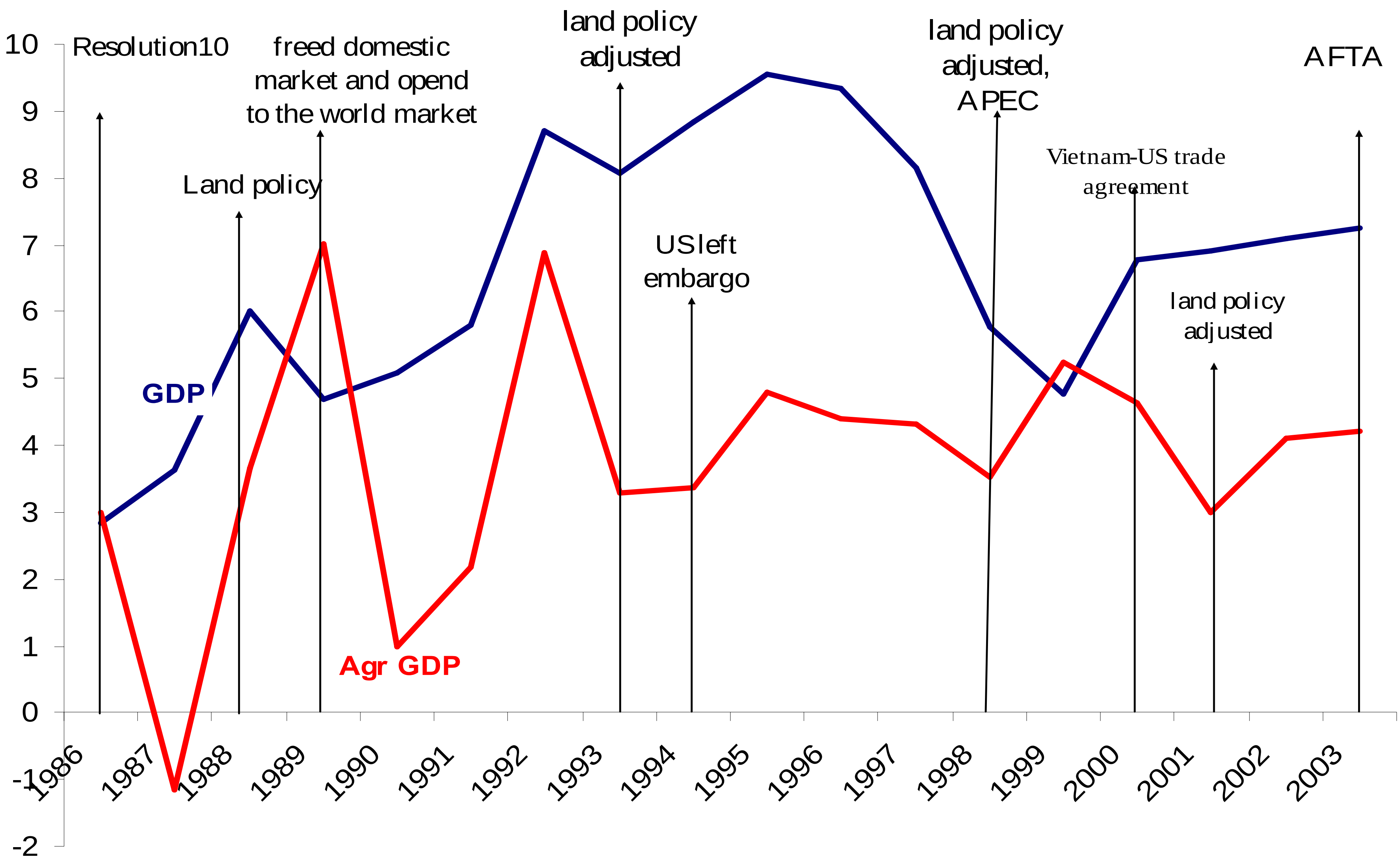
Contents

Sustainable agricultural growth-a key momentum for reform and industrialization



Overview of Agricultural sector in Vietnam

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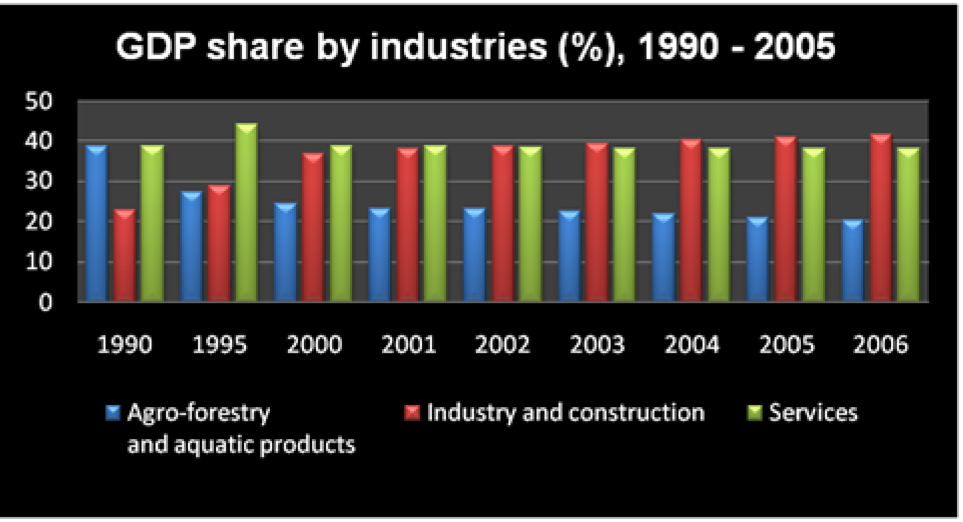
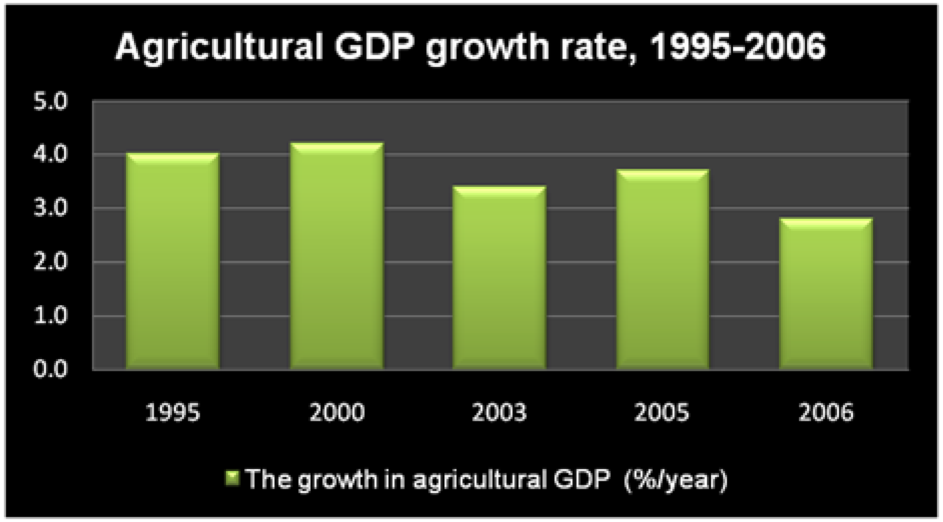
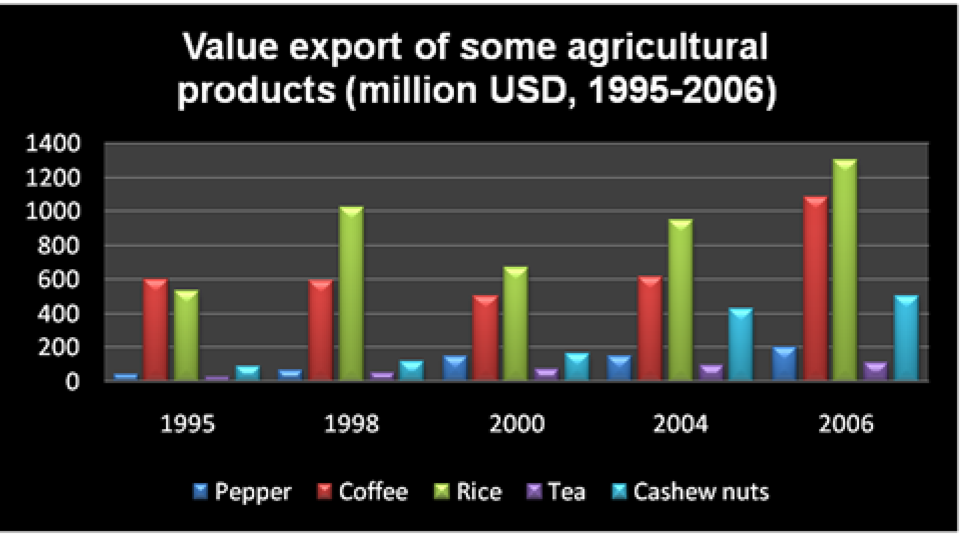
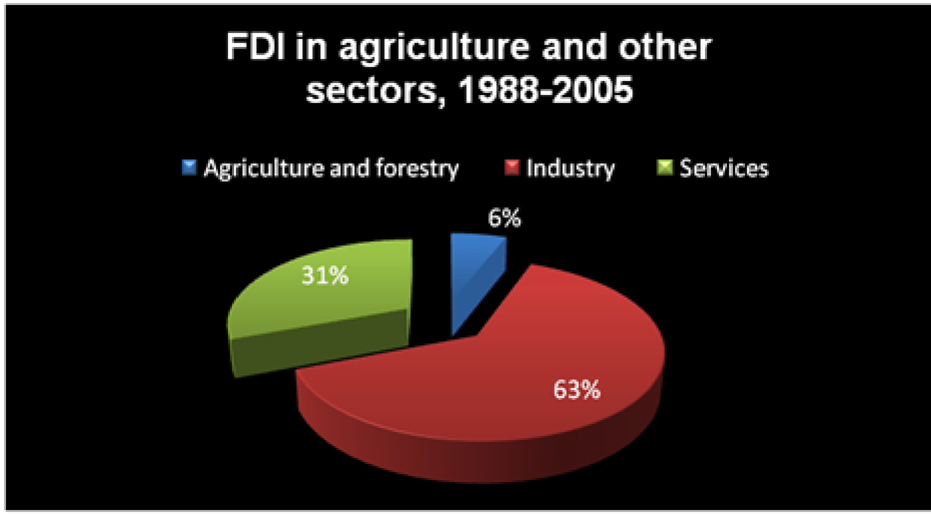
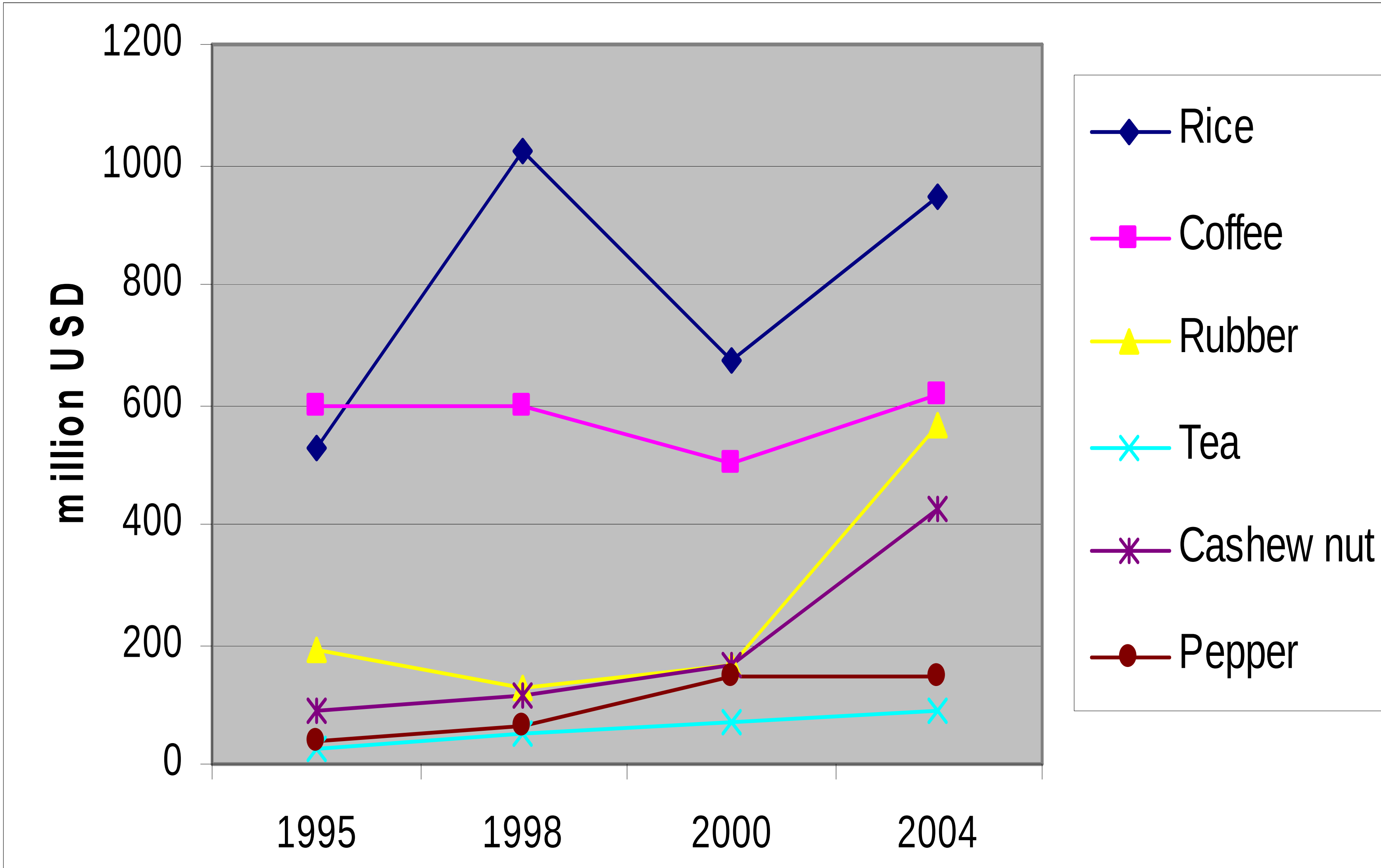




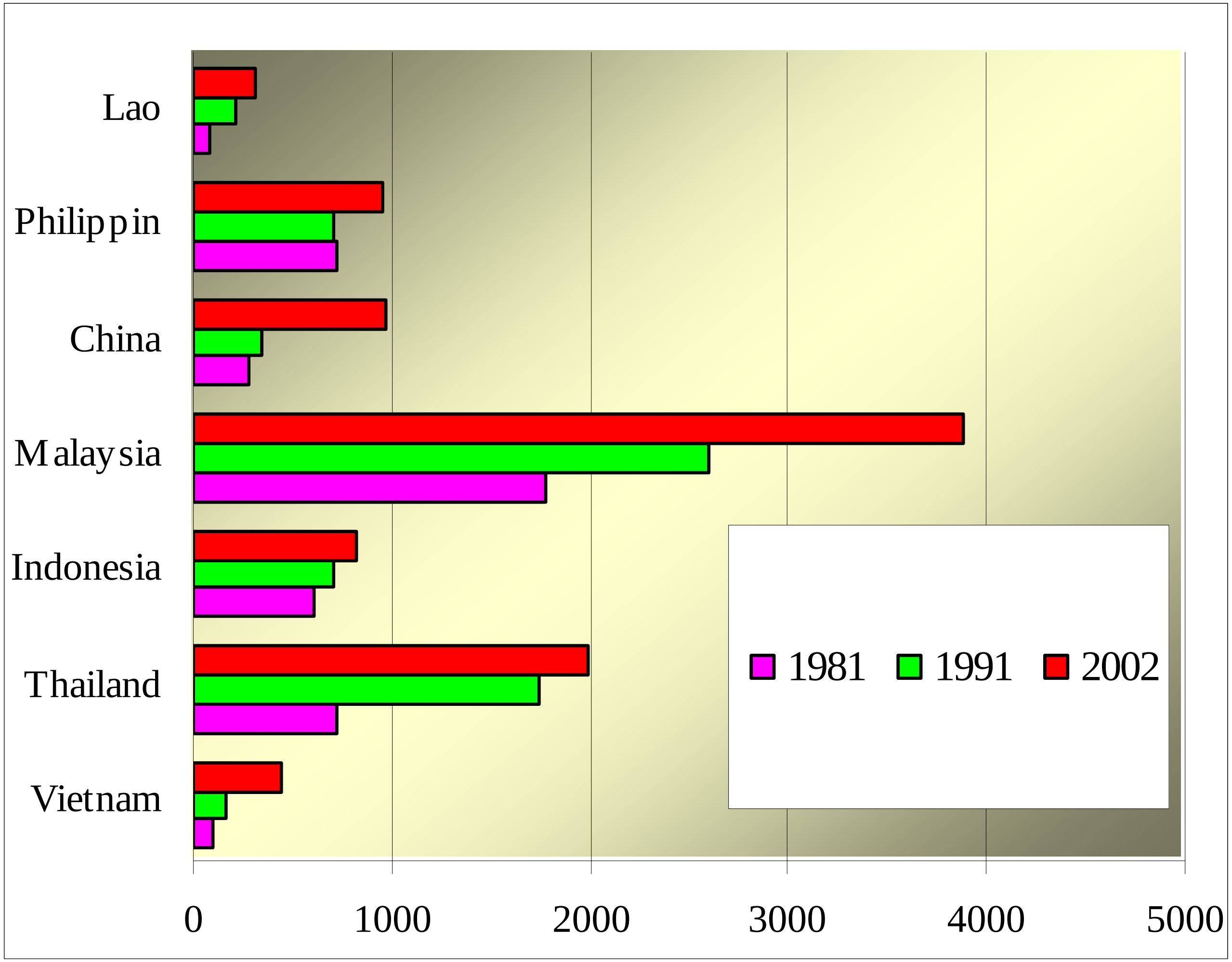




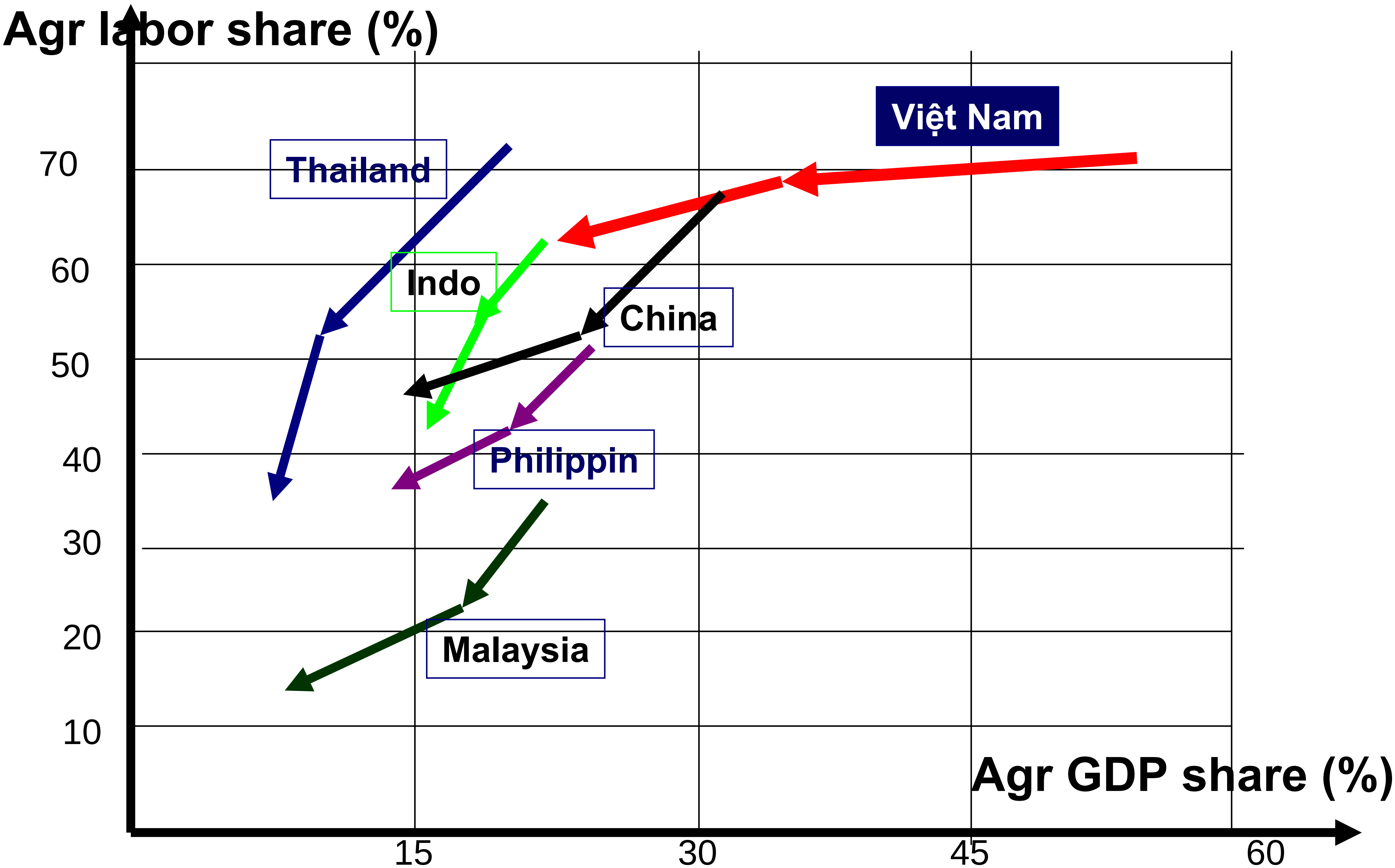
Agricultural export booming



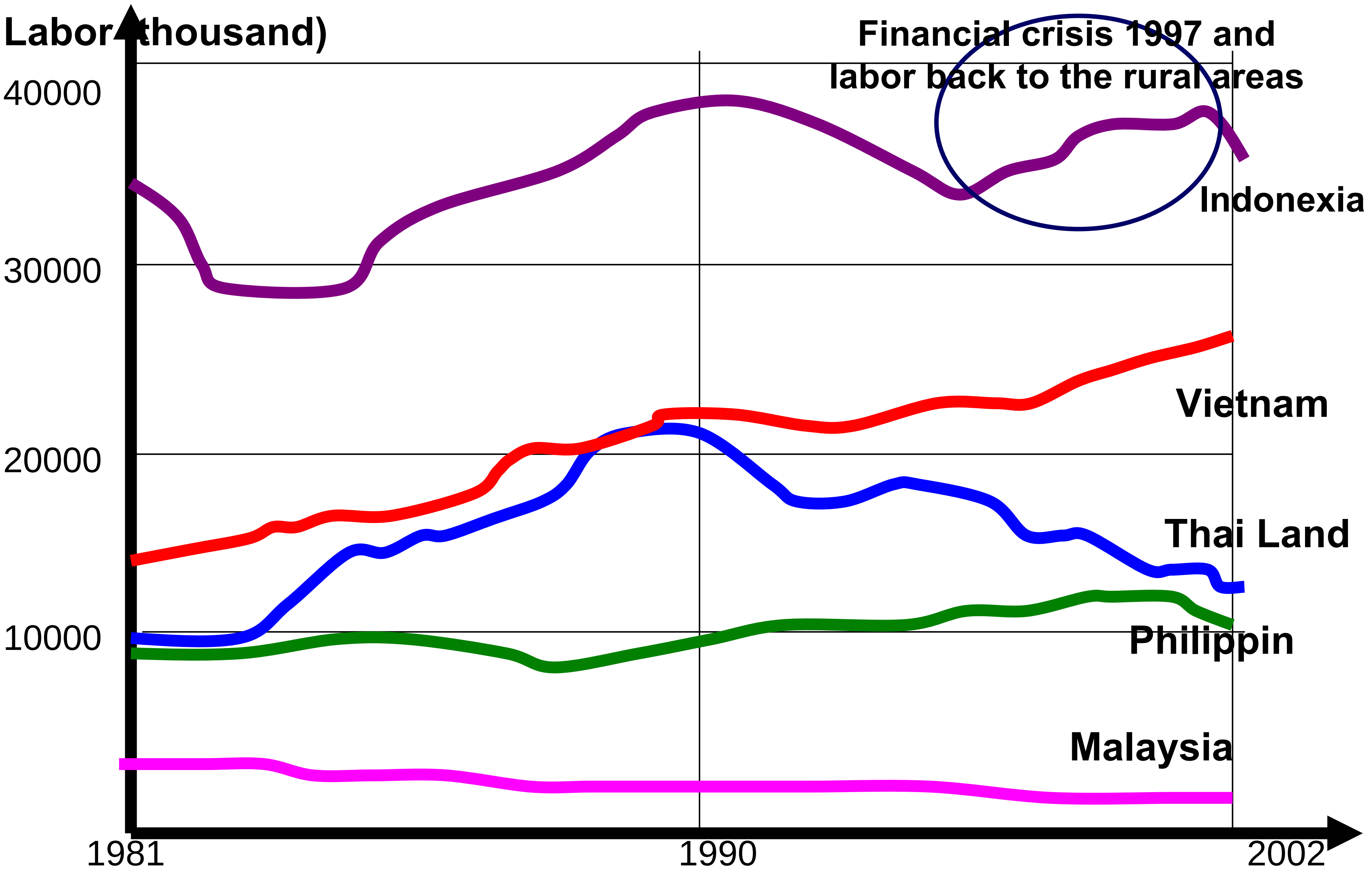
Vietnam and other countries in the region – early phase of development



Agricultural transformation and labor change (1981-1991-2002)



Agricultural labor force in the economy



Food processing in the economy

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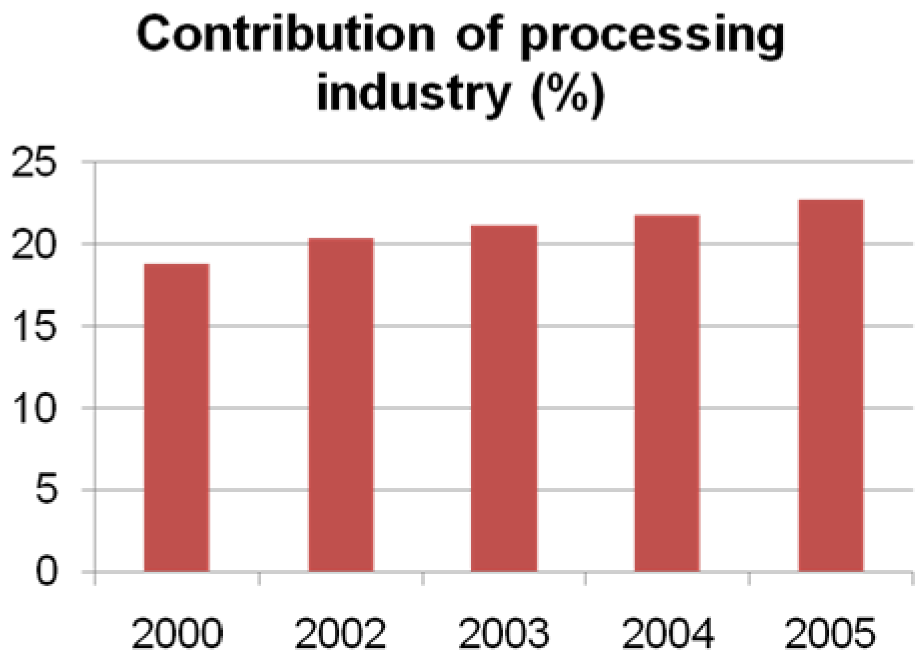
- In 1995-2000: 12%/year
- In 1998-1999: economic crises, 10.2% and 7.48% respectively.
- Since 2000: the processing industry recovered and its growth rate maintained at 10.4%
- In 2001-2005: growth rate reached 17% annually.



Demand drivers for the food processing industries

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- Rapid industrial and urban development: middle class, changes in life style, income increase.
- 1995 - 2005, population living in urban areas from 20% to 26%.
- Diversified in food consumption
- Supermarket chains have been in increasing trend

Population in urban and rural areas during 1995-2005

	1995	2000	2003	2004	2005
Pop in urban (%)	20.75	24.18	25.80	26.50	26.97
Pop in rural (%)	79.25	75.82	74.20	73.50	73.03

Number of supermarkets in Hanoi and Ho Chi Minh city, 1990-2005

	1990	1993	2000	2001	2005
Hanoi	0	3	25	32	55
Ho Chi Minh	0	0	24	38	71

The rising of middle class: Income per capita (USD/year) in 1998- 2002

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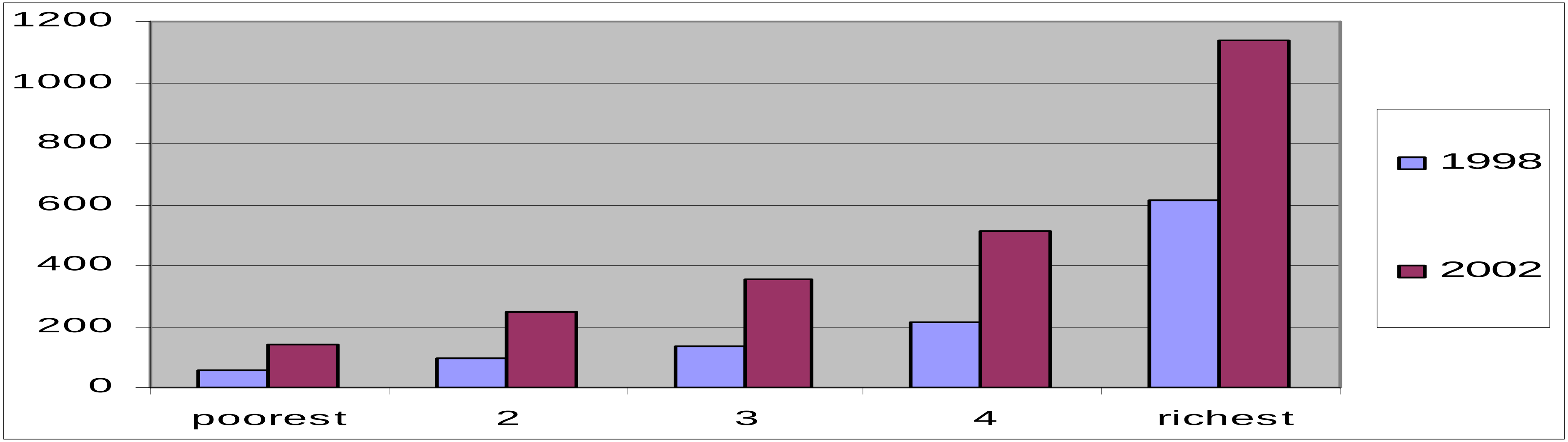
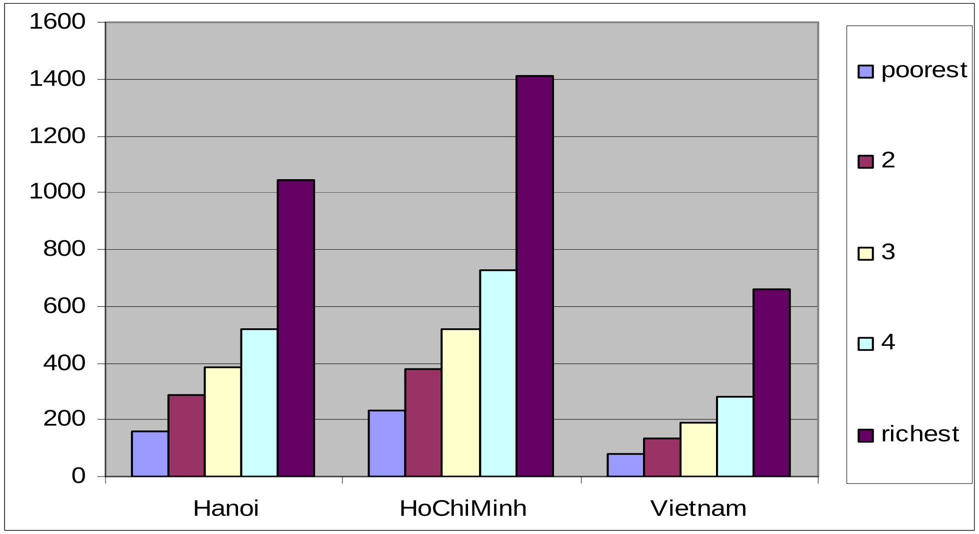
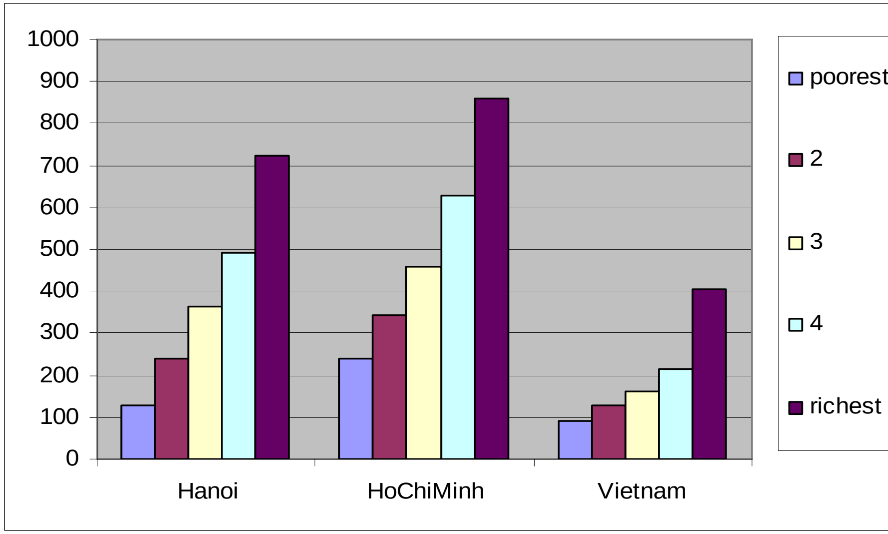


Income per capita (USD/year) in 2002



Expenditure per capita (USD/year) in 2002



Demand drivers for the food processing industries (cont)

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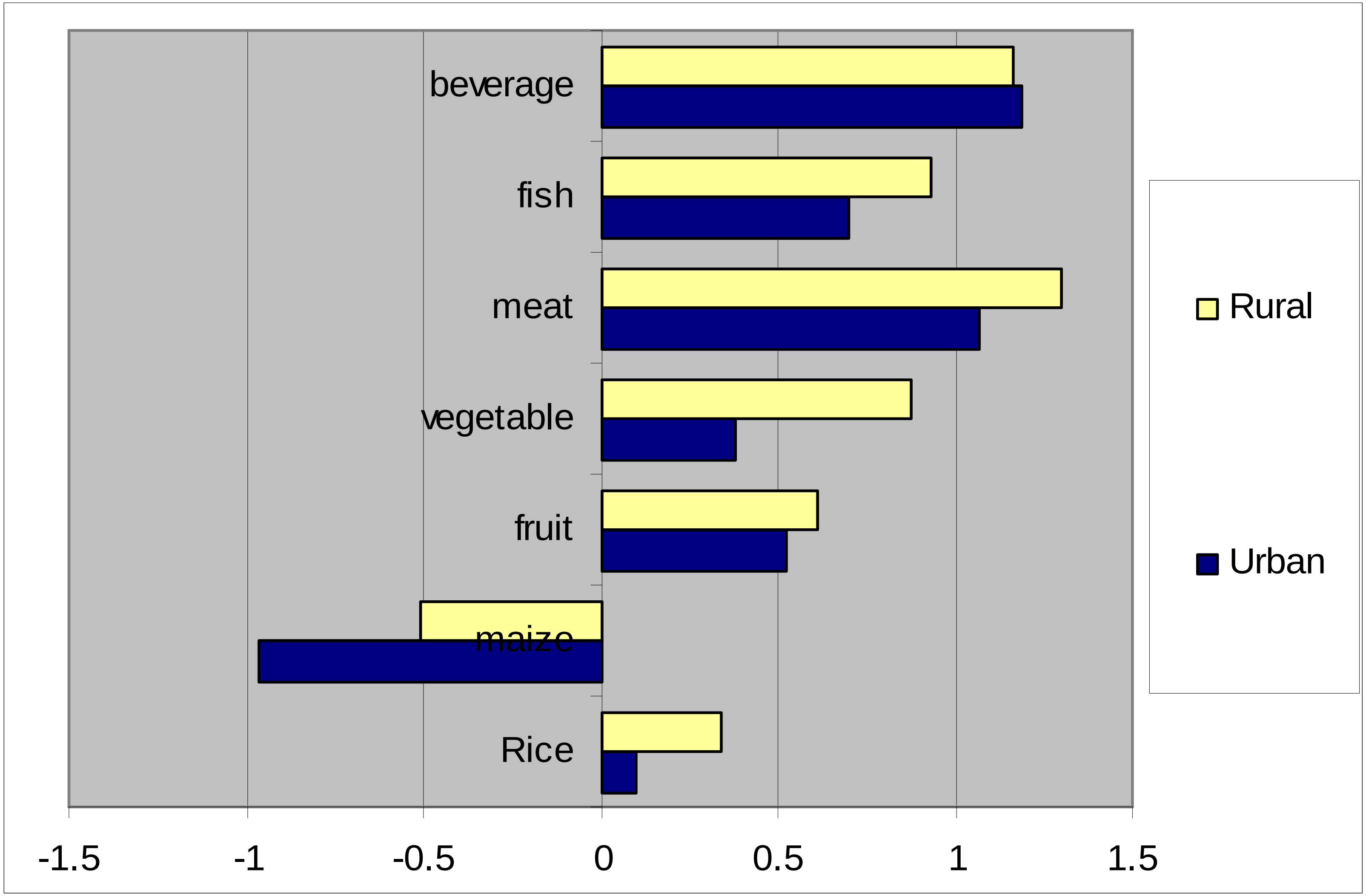
Income and Expenditure of five groups

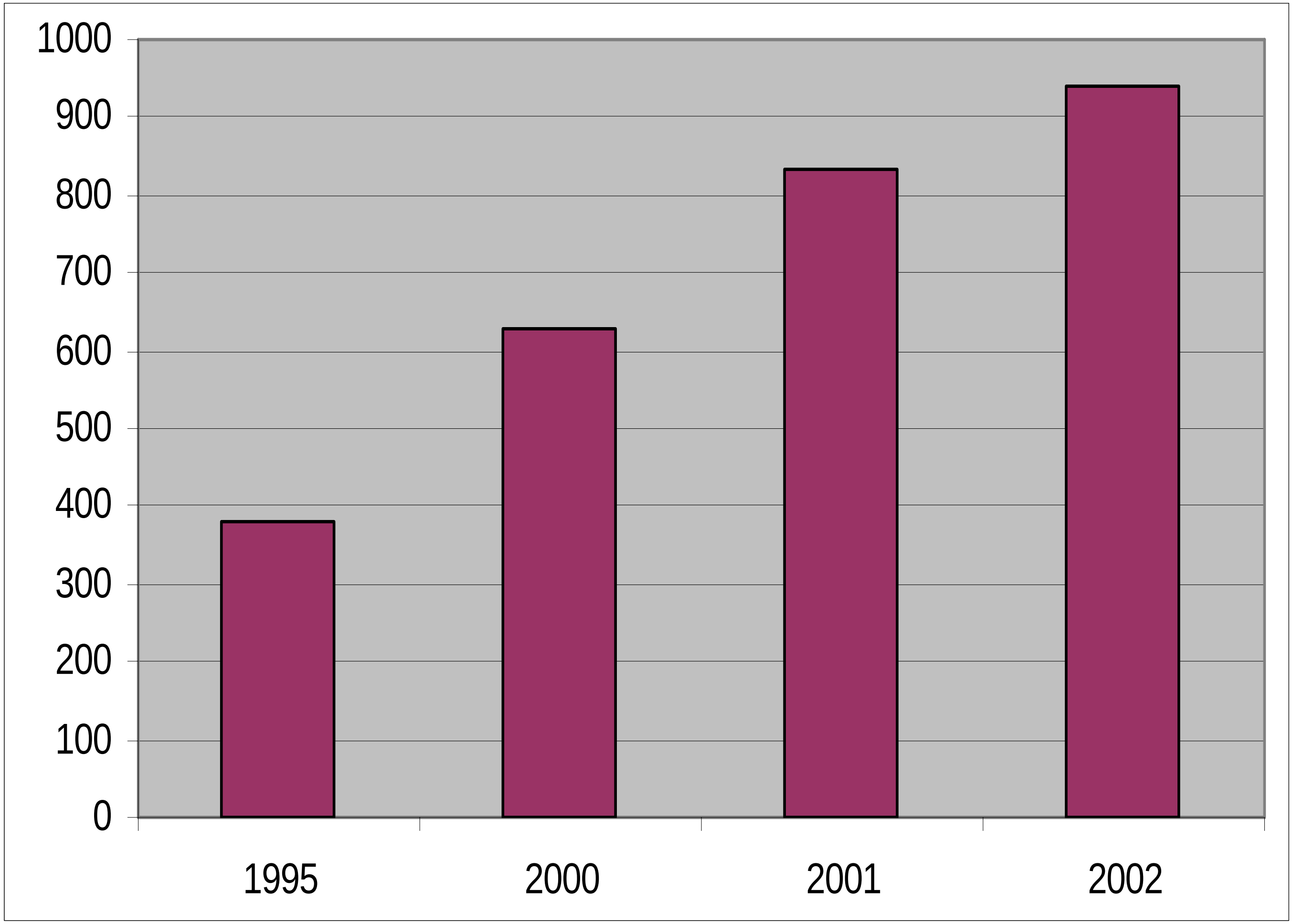
	Group 1	Group 2	Group 3	Group 4	Group 5
Income					
Income (1 person/1month) (USD)	7.08	11.73	16.52	20.23	57.42
Expenditures					
Expenditure on food (1 person/1month) (USD)	5.68	7.18	8.55	10.83	17.91
Expenditure on other goods and services (1 person/1month) (USD)	2.43	3.99	5.51	8.27	18.18
Percentage of expenditure over income					
Food	80%	61%	52%	54%	31%
Other goods and services	34%	34%	33%	41%	32%

Source: VLSS, 2002

Expenditure elasticity – the increasing pattern toward non-basic food expenditure



Food import (million USD)



Food processing industry is still in the small size

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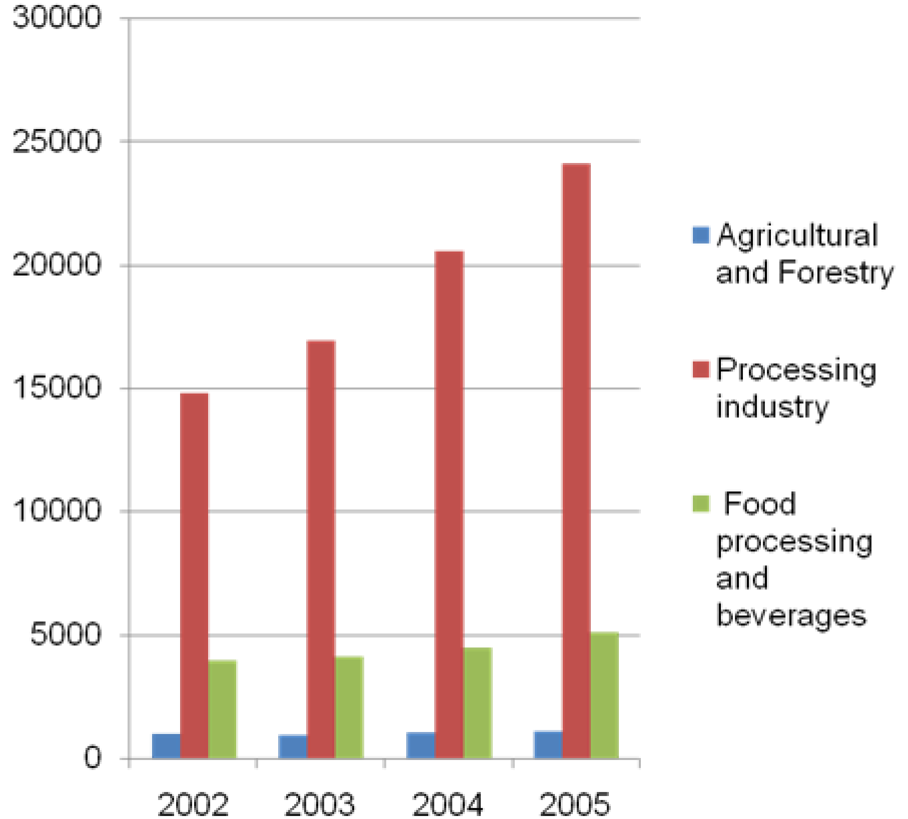
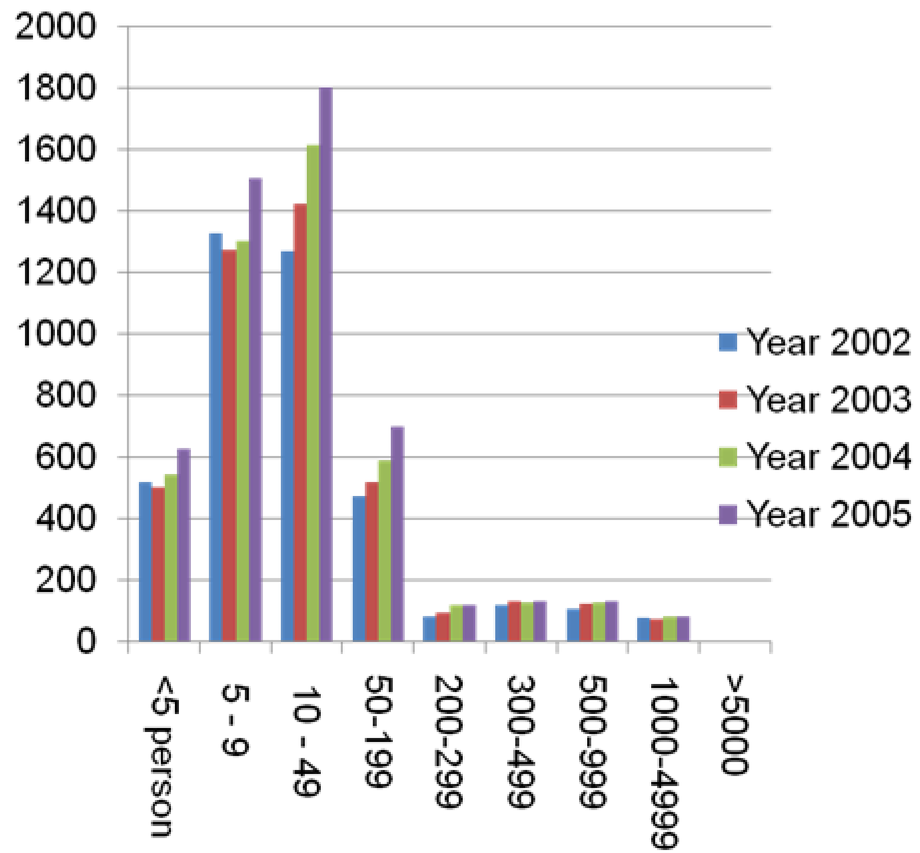
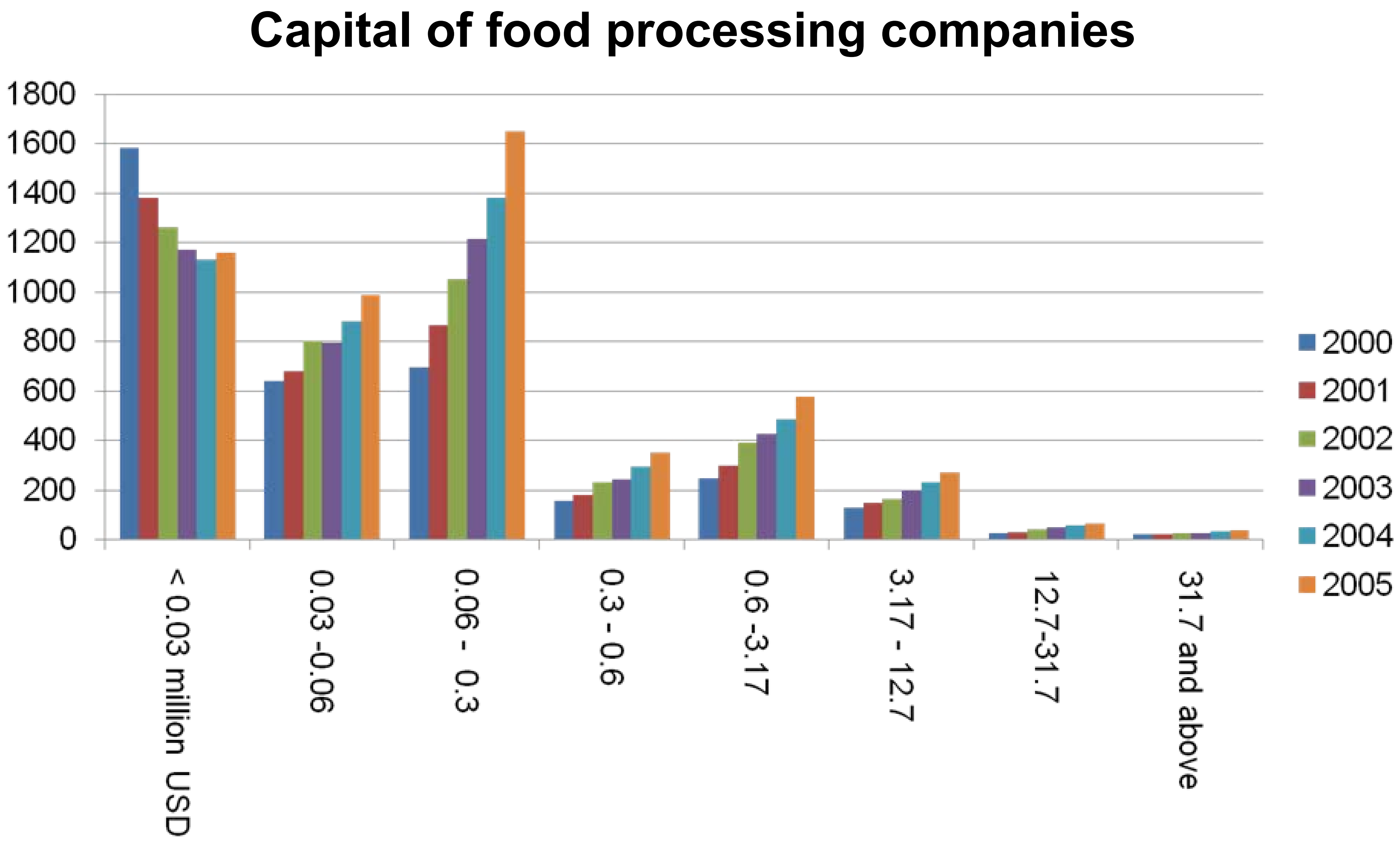
Number of food processing companies



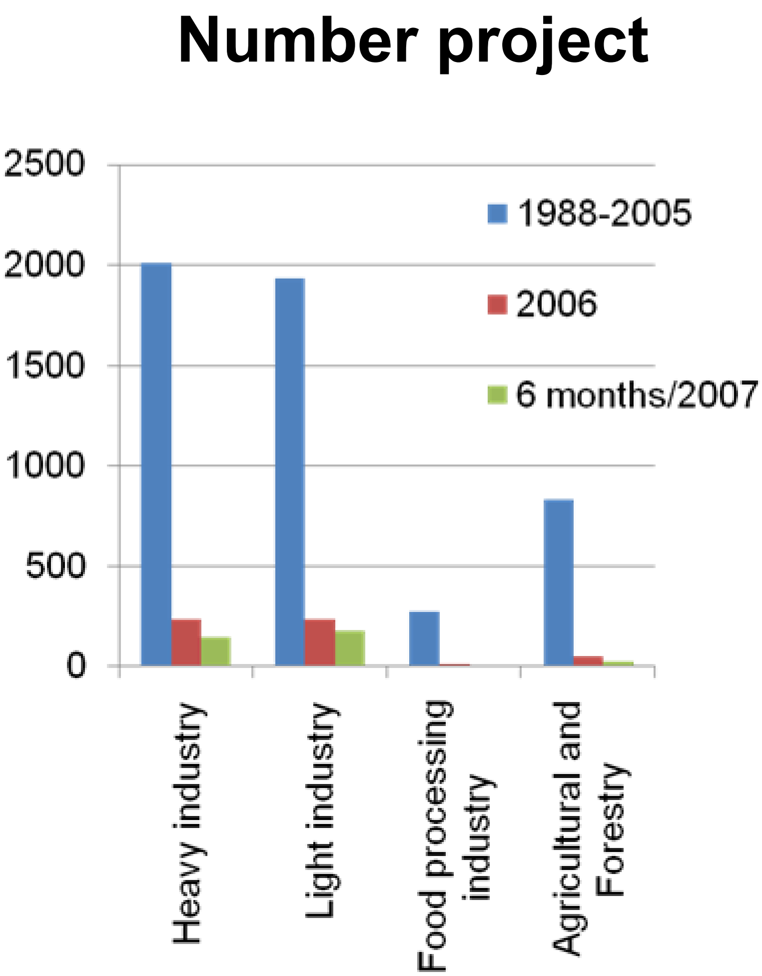
Labor use of food processing companies

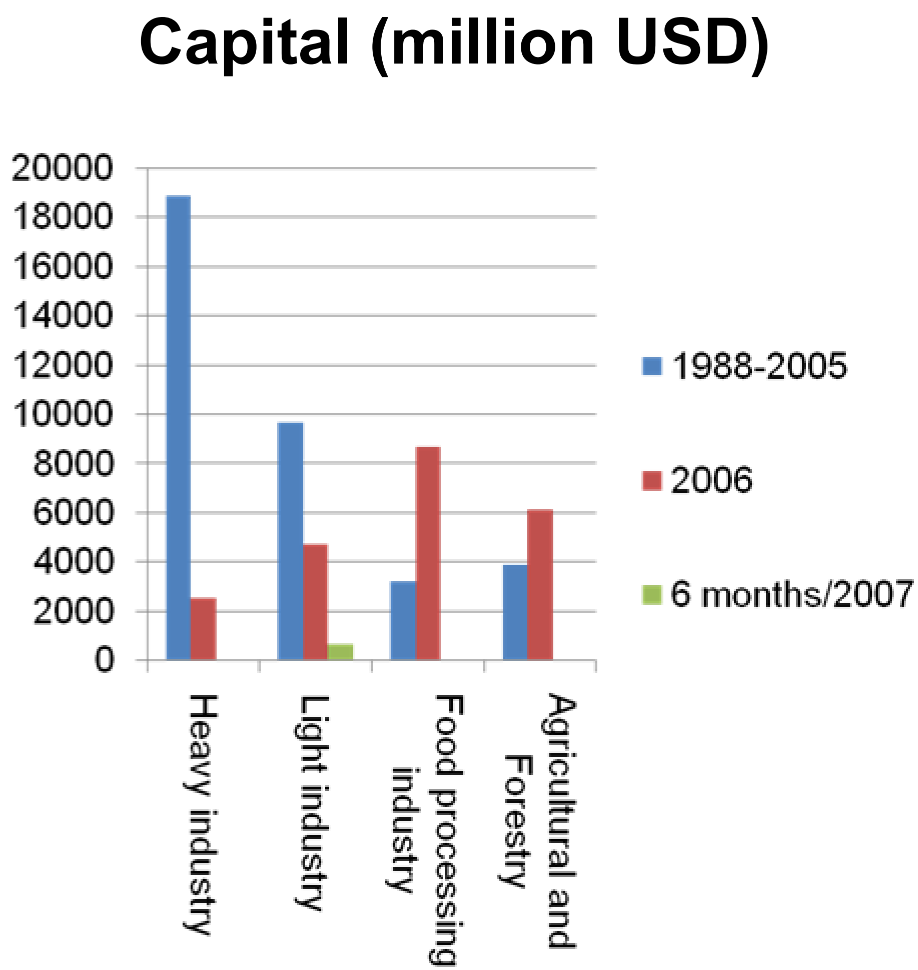


Food processing industry is still in the small size



FDI into food processing industry





Impact of trade liberalization on food processing

AFTA

- Reduced taxes on processed agriculture products to 20-25% in 2009, 5-10% in 2013 and 0% in 2015 from their current MFN level of 40-50%
- Boosted Vietnam's export to ASEAN and Vietnam's business enterprises have diversifying markets, promoting export to USA, Japan, EU…

Vietnam – American Trade Agreement (VATA)

- Reduced tariff barrier, export turnover of some Vietnam's commodities has increased strongly like milling rice, wood, vegetables…
- However, import tax applied to coffee, cashew nut, tea… at the same level as indicated in MFN, VATA can not help increase much exportation.

WTO integration

- Current tax level applied for food processed products is high around 40-50% and during 5 years from now it need to be reduced to the level of 20-30% → challenge for the food processing industry of Vietnam

Facing WTO

- Joining 2007
- Tariff reduction and removal of non-tariff
- Domestic processing industry facing difficulties
- Consumers get benefit and domestic producers under pressure

Commodities	Before WTO	After WTO	Implementation (year)
Processed cashew nut	40	35	2012
Processed meat	30	25	2011
Milk products	30	25	2011
Cakes	34,4	25,3	2009-2011
Beer	65	35	2011
Wine	65	45-50	2011-2012
Processed fruits and vegetables	40	35	2011
Instant coffee	50	40	2010

Sanitary and Phytosanitary (SPS) and food safety

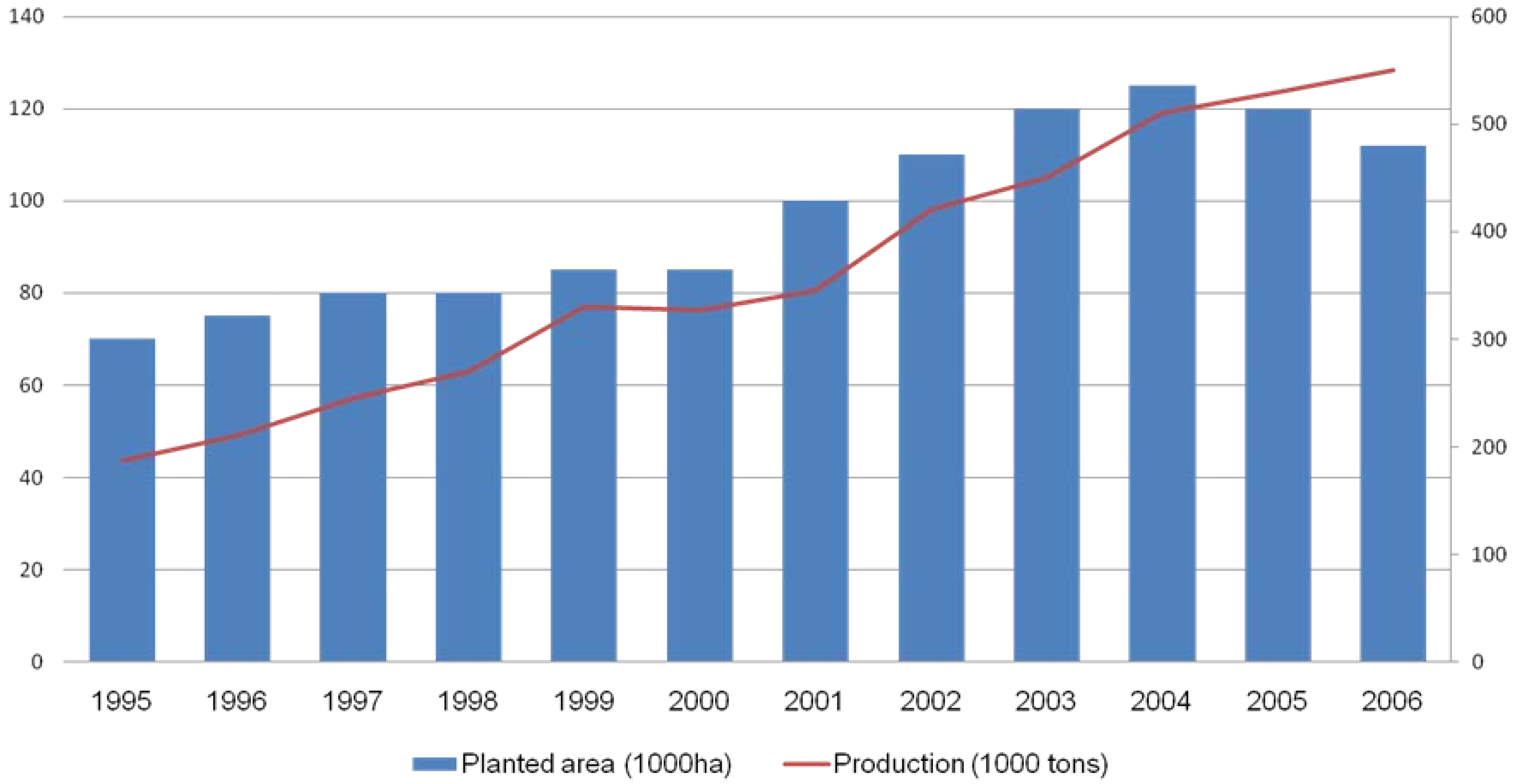
- Food safety is becoming a major issue for Vietnamese food in domestic market and export
- Vietnam lacks of regulations applied by the international standard
- The enforcement system is weak
  - Overlapping functions among agencies
  - No central agency responsible to the food safety issues

Standards for fresh meet of Vietnam and CODEX: MRL-maximum residual limit

Item	Codex	VN
ABAMECTIN *(mg/kg)*	0.01	-
AMITRAZ *(mg/kg)*	0.05	-
BIFENTHRIN *(mg/kg)*	0.5	-
CHLORPYRIFOS *(under–mg/kg)*	1	0,1
CHLORPYRIFOS-METHYL *(mg/kg)*	0.05	-
CLOFENTEZINE *(mg/kg)*	0.05	-
DICOFOL *(mg/kg)*	3	-
DIPHENYLAMINE *(mg/kg)*	0.01	-
FENARIMOL *(mg/kg)*	0.02	-
FENBUCONAZOLE *(mg/kg)*	0.05	-
FENPROPATHRIN *(mg/kg)*	0.5	-
FENPYROXIMATE *(under)*	0.02	-
FIPRONIL *(mg/kg)*	0.5	-
FLUMETHRIN *(mg/kg)*	0.2	-
FLUSILAZOLE *(mg/kg)*	0.01	-
GLYPHOSATE *(under)*	0.1	-

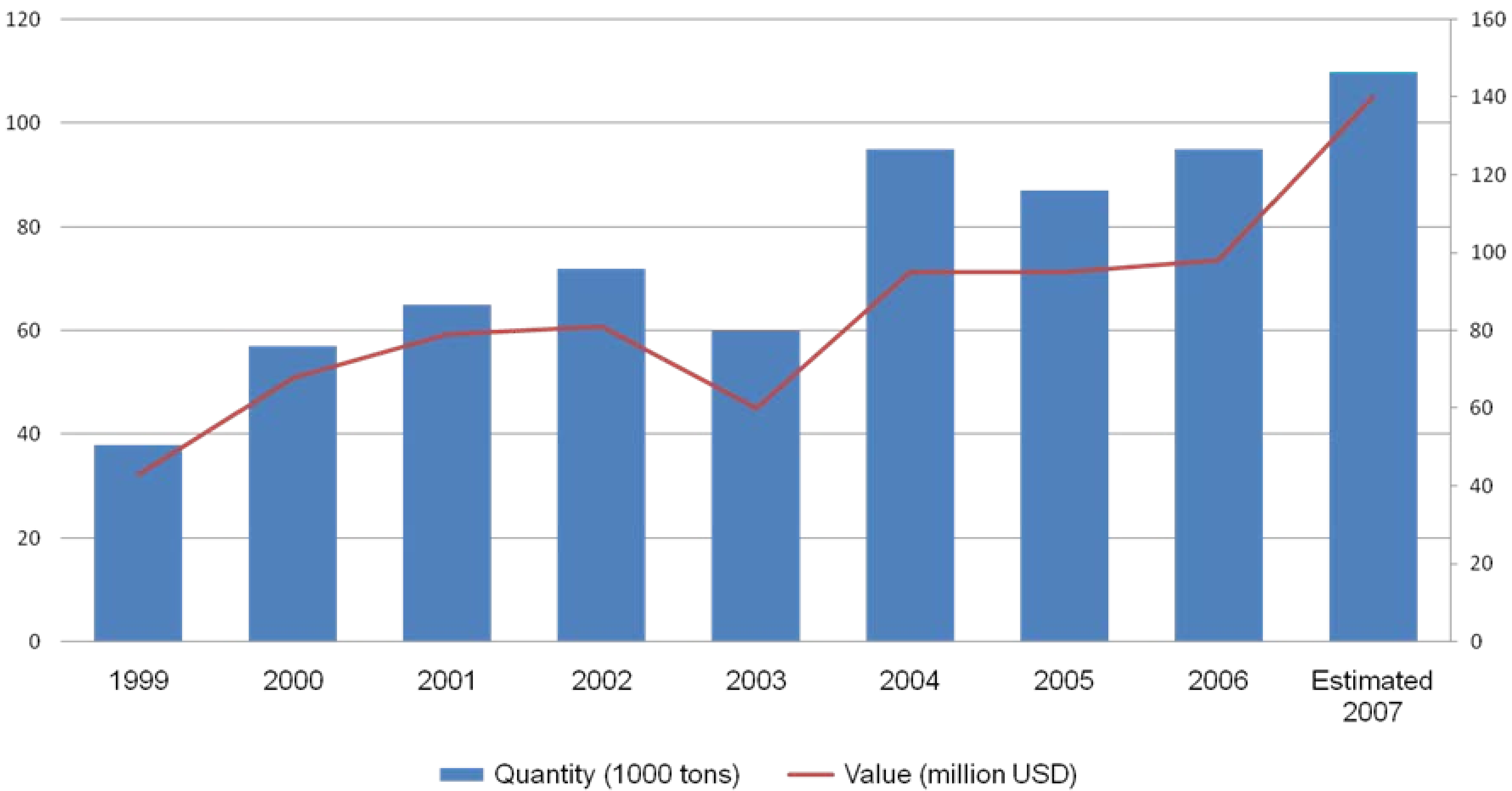
Item	Codex	VN
MYCLOBUTANIL *(mg/kg)*	0.01	-
PENCONAZOLE *(mg/kg)*	0.05	-
PIPERONYL BUTOXIDE *(mg/kg)*	5	-
PYRIPROXIFEN *(mg/kg)*	0.01	-
SPINOSAD *(under)*	3	-
TEBUCONAZOLE *(mg/kg)*	0.05	-
TERBUFOS *(under)*	0.05	-
THIABENDAZOLE *(mg/kg)*	0.1	-
TRIAZOPHOS *(mg/kg)*	0.01	-
VINCLOZOLIN *(mg/kg)*	0.05	-
Cabaryl *(mg/kg)*	-	0,0
DDT *(mg/kg)*	-	0,1
2, 4 D *(mg/kg)*	-	0,0
Lindan *(mg/kg)*	-	0,1
Triclorfon *(mg/kg)*	-	0,0
Diclovos *(mg/kg)*	-	0,0
Diazinon *(mg/kg)*	-	0,7
Fenclophos *(mg/kg)*	-	0,3
Cuomaphos *(mg/kg)*	-	0,2

Tea area, yield and production, 1995-2006



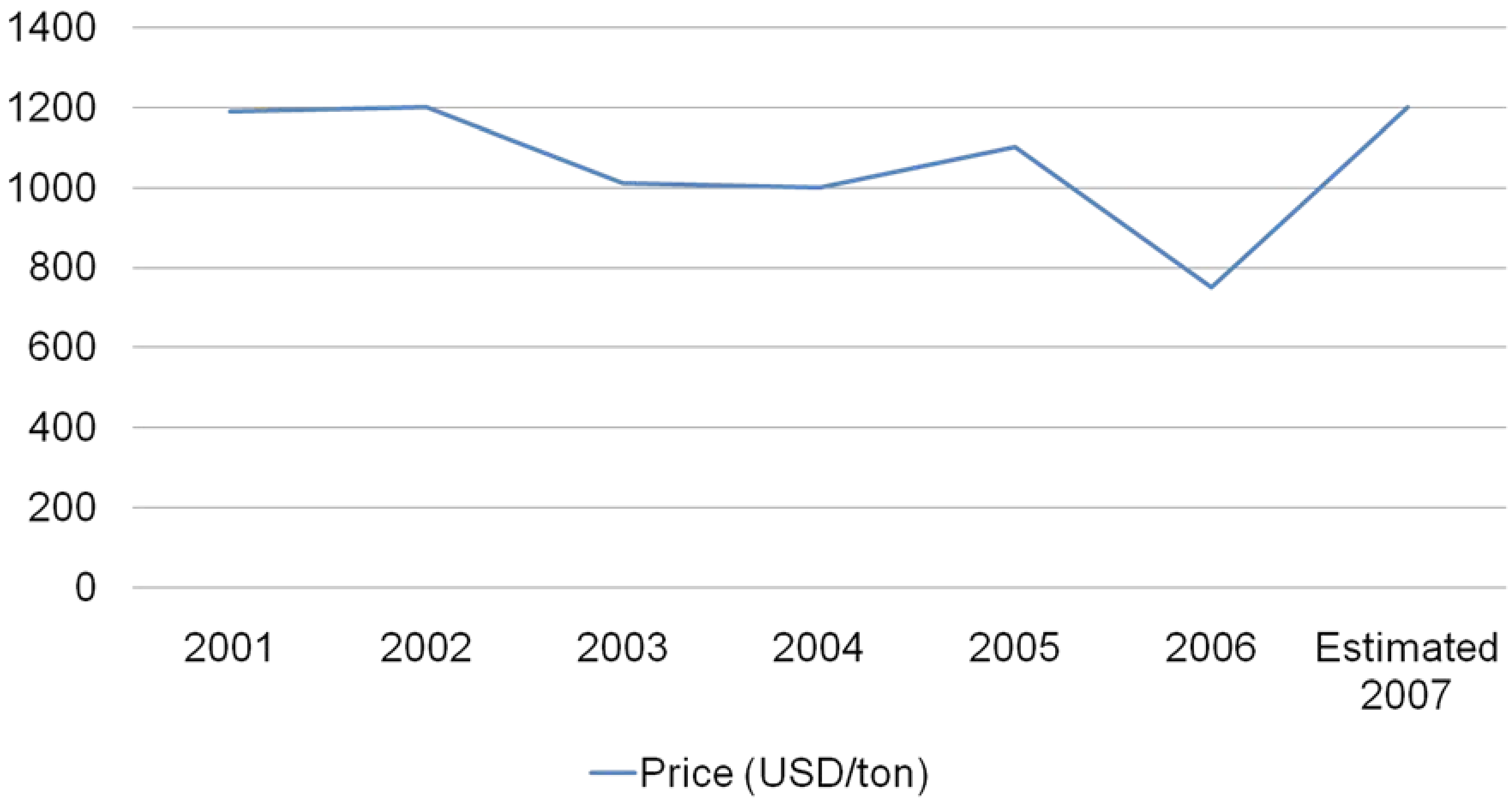
Source: CIEM, 2006

The quantity and value of tea export, 2001-2007



Source: CIEM, 2006

Price of tea export, 1995-2007



Market performance in tea processing

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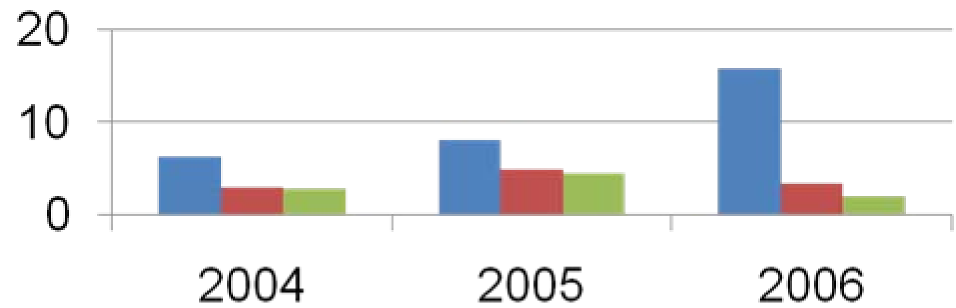
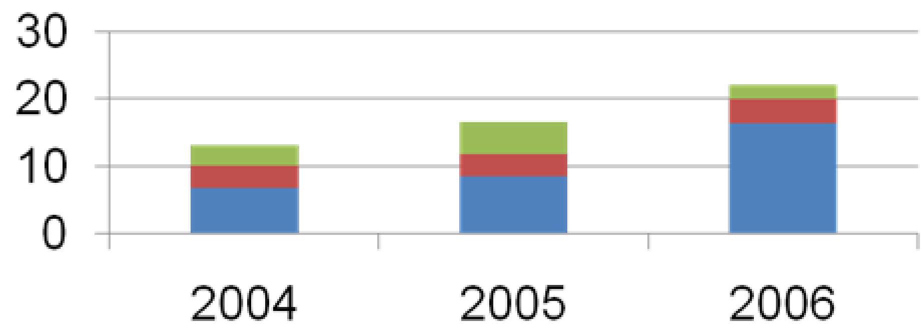
Number	2004	2005	2006
1	**Vinatea***	**Vinatea***	**Vinatea***
2	Nghe An Tea*	Phu Da	Nghe An
3	Red Tea*	Red Tea*	Ladotea*

- Highly competion in processing industry
- SOEs still control the tea export market: VINATEA
- In 2005, two FDI enterprises entered the market. Phu Da and Phu Ben
- Domestic market in the development

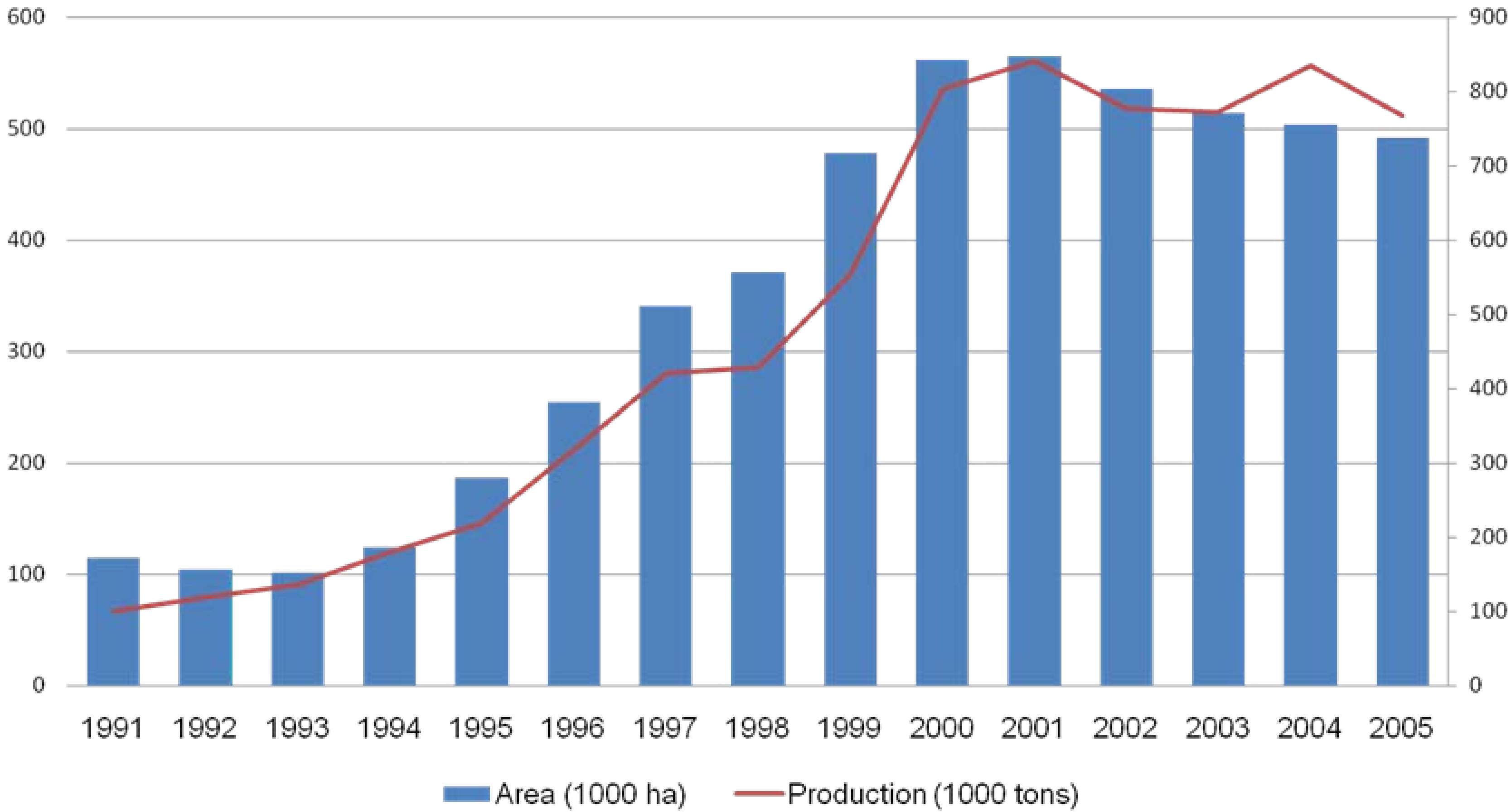
Export of 3 leading companies (million USD)



Export share of 3 leading companies (%)

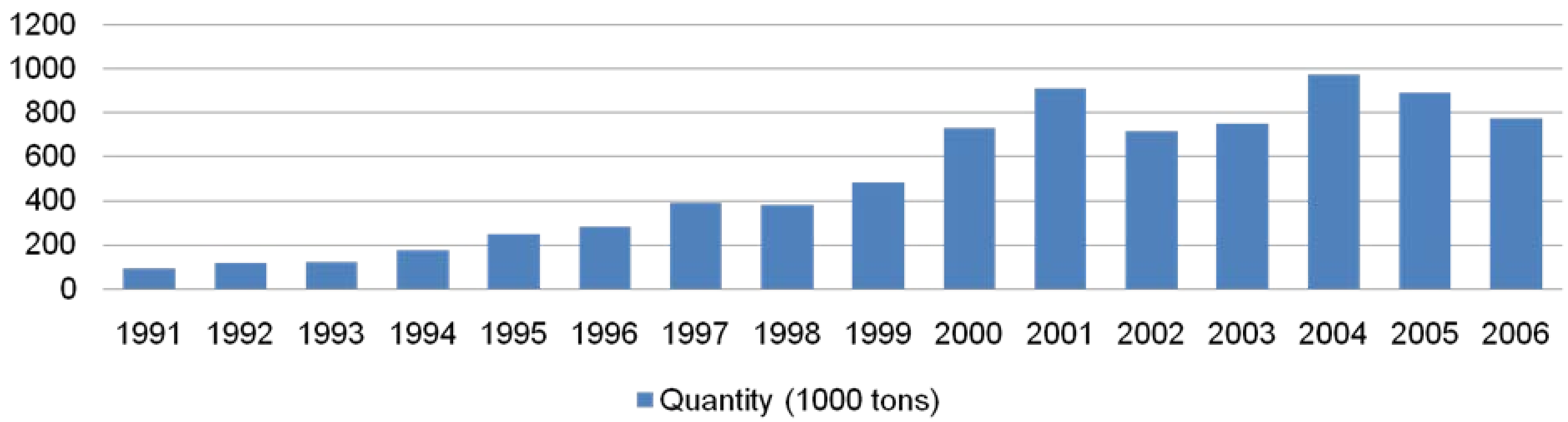


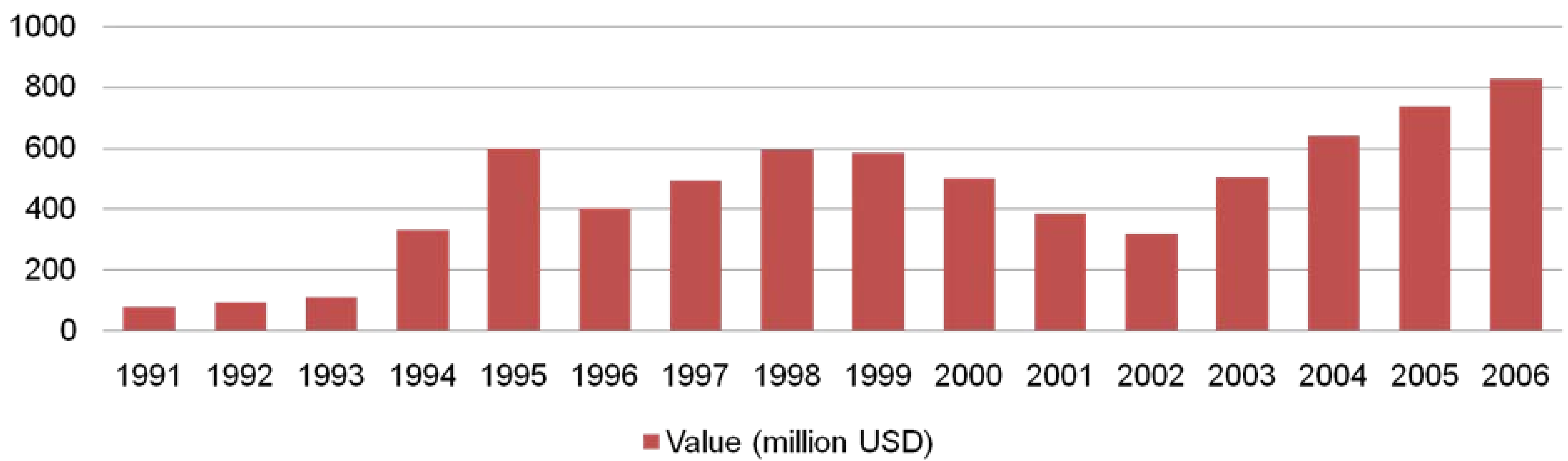
Coffee area and production, 1995-2006



Source: Tran Quynh Chi (2007), Vietnam's Coffee Profile

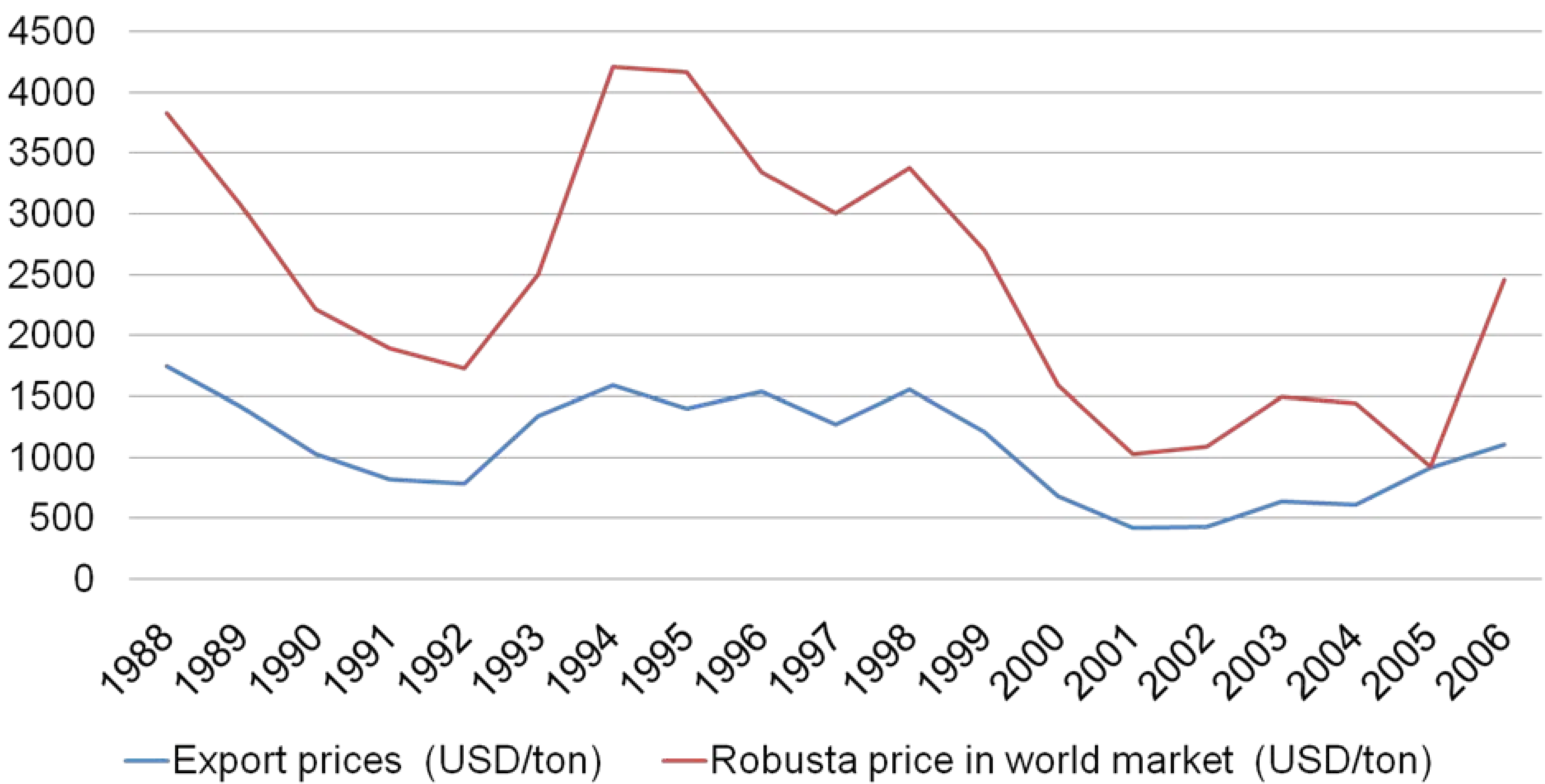
The quantity, value of coffee export, 1991-2006





Coffee Price

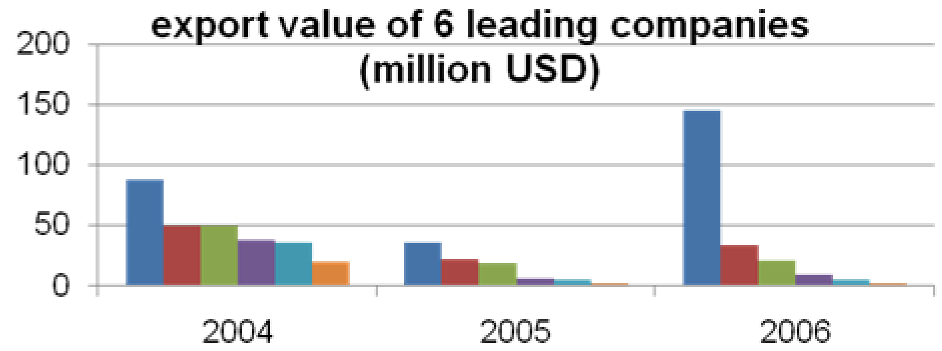
Coffee export price, 1988-2007 (USD/ton)

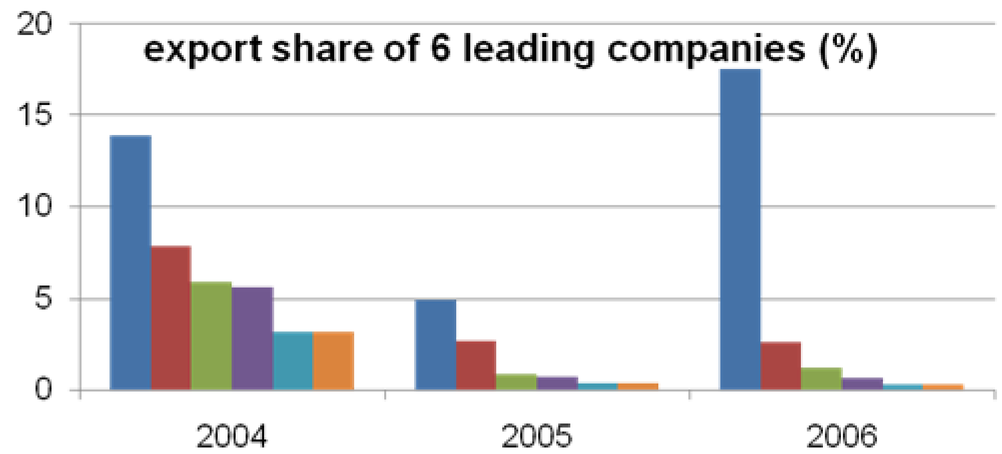


Market performance in coffee processing

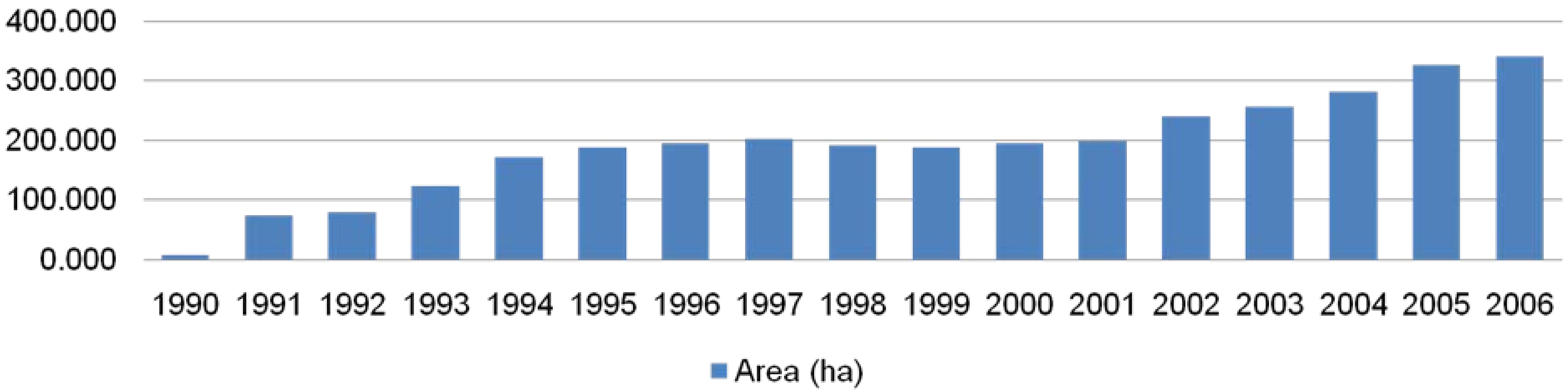
	2004	2005	2006
1	INTIMEX*	INEXIM-Dak Lak*	Vinacafe Buon Ma Thuot*
2	Simexco *Dak Lak	Generale-xim	ACOM
3	Vinacafe Buon Ma Thuot	Dakman	Dakman
4	Nothern Foodstuff	IASAOCO	IASAOCO
5	INEXIM*Dak Lak	Thang Loi Company	Phuoc An
6	Mascopex	**Trung Nguyen**	Vinacafe Bien Hoa*

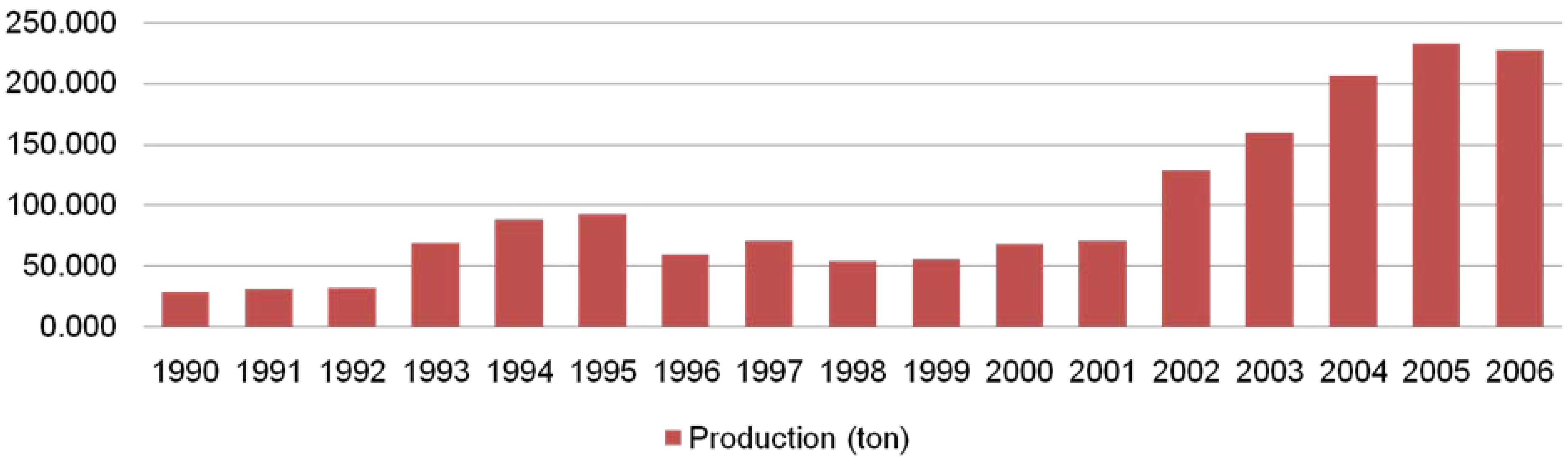
- Market fluctuation
- Changes in leading export companies
- The emergence of private sector
- Domestic versus international market





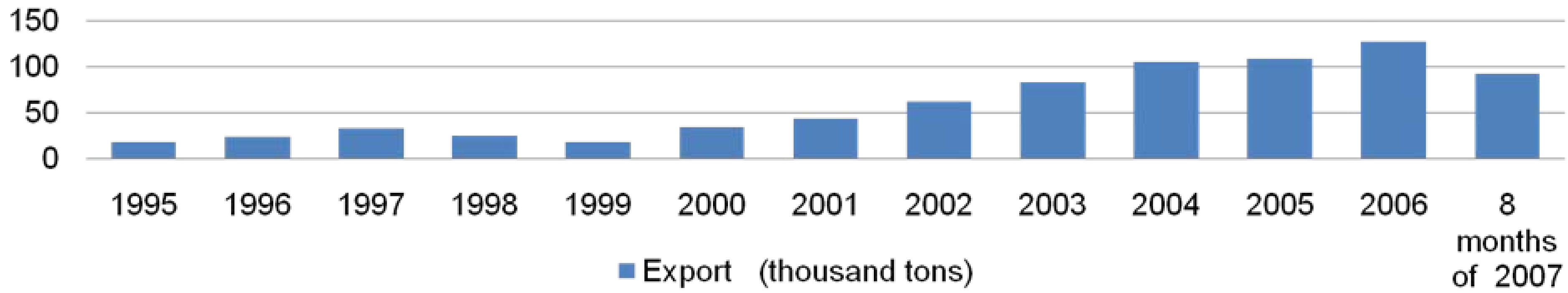
Cashew area and production, 1990-2006

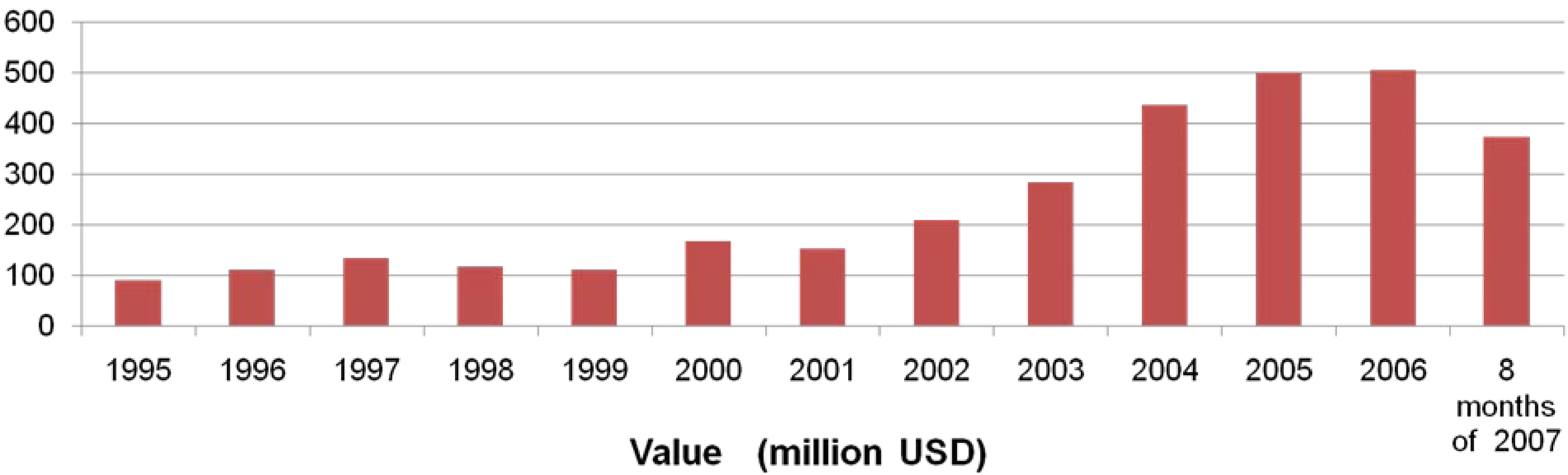




Cashew nut processing

The quantity and value of cashew nut export, 1995-2007





Market performance of cashewnut

- The cashew nut processing industry has been steadily growing during the last two decades
- Market driven development and labor intensive industry
- Raw material supply shortage
- Labor shortage caused by the development of other industries
- 100 cashew nut processing factories with a total capacity of 500,000 tons
- Quality issues and entry into developed markets

Quantity and Value of rice export

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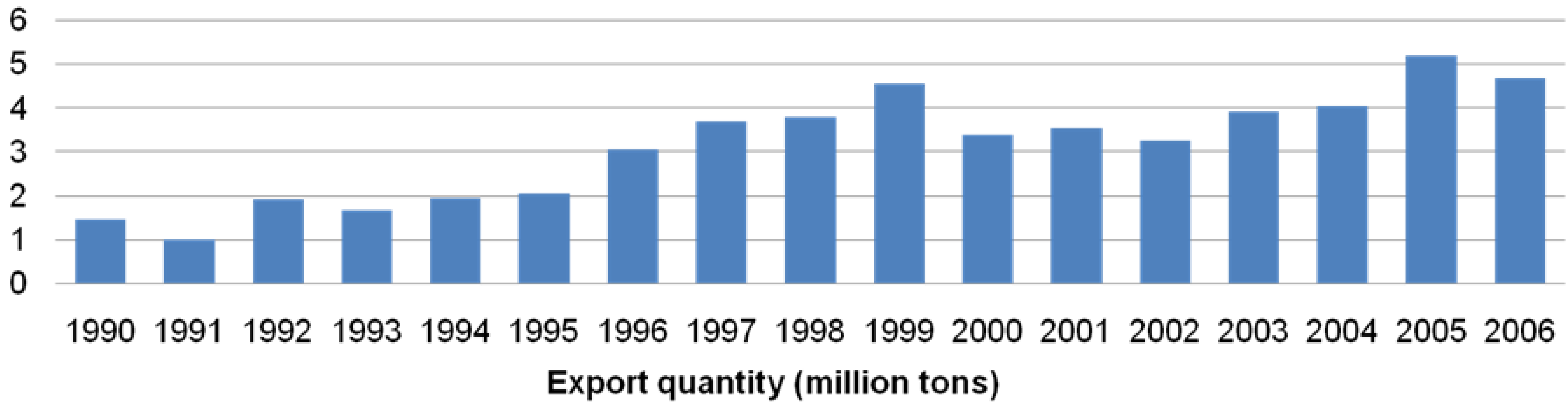
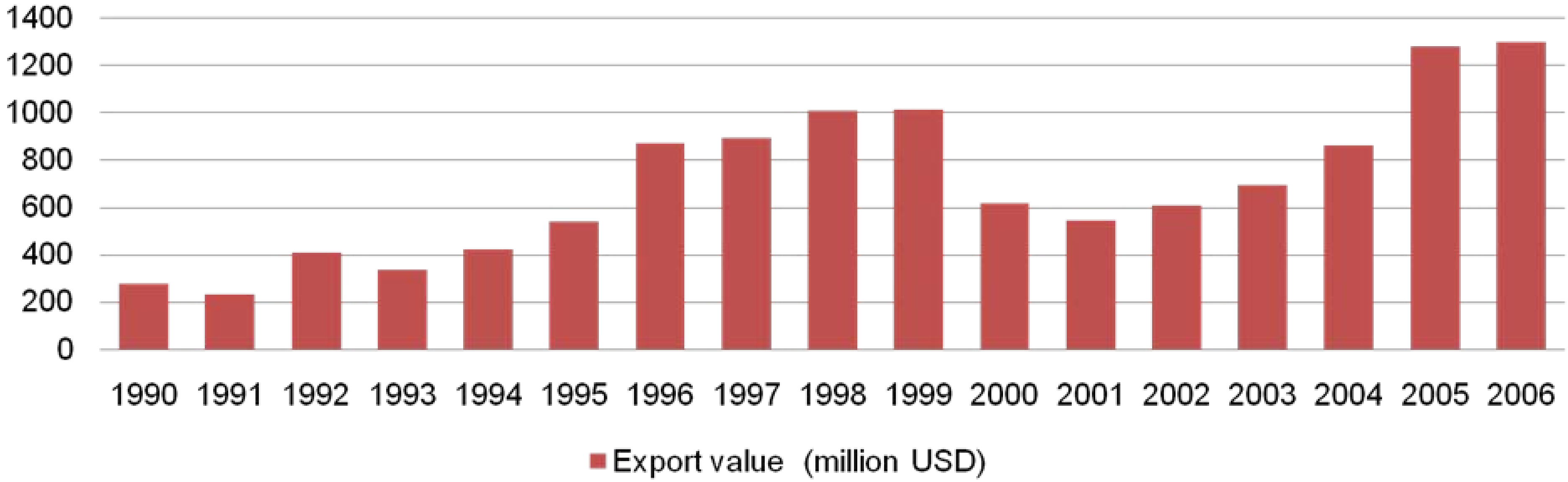
The quantity and value of rice export, 2001-2007





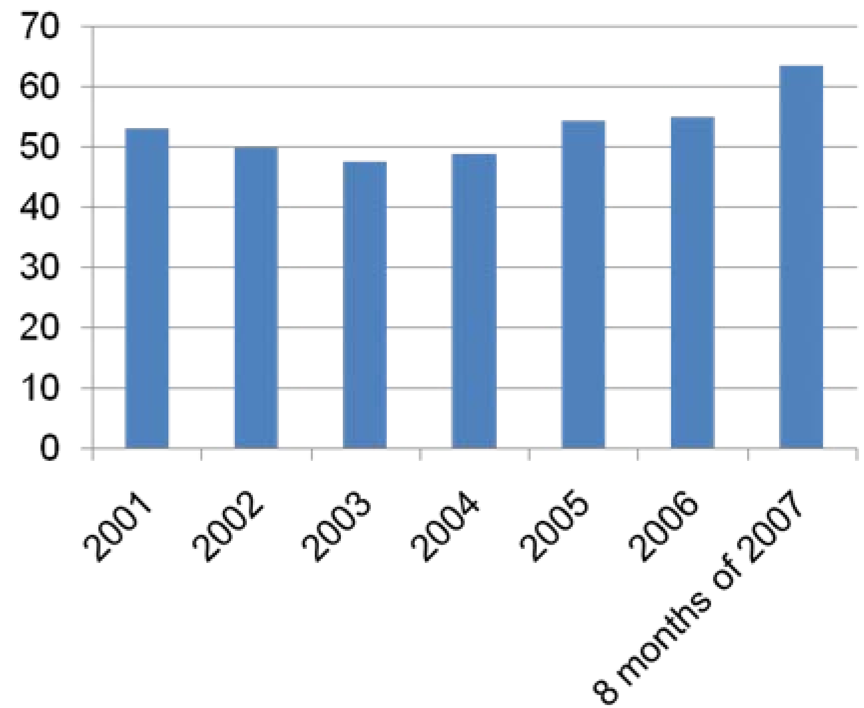
Market performance of rice processing

Rice export companies

Year	No. of companies
1997	17
1998	19
1999	41
2000	47

No	2004	2005	2006
1	Vinafood 2*	Vinafood 2*	Vinafood 2*
2	Vinafood 1*	(GENTRACO) *	An Giang Tourimex
3	(DARGIMEX)*	(ANGIMEX)*	Vinafood 1*
4	Vinh Long Food*	(DARGIMEX)*	(DARGIMEX)*
5	Thot Not General Commerce	Kien Giang Trading (KIGITRACO	Long An Food *
6	Long An Food*	An Giang Tourimex	(KIGITRACO
7	(KIGITRACO)	(TSC)	(BIDIFOOD)
8	(TSC)	(MEKONIMEX)	(MKC)

Share of VINAFOOD 2 in rice export (%)



Conclusion and implications

- Vietnam has comparative advantages in some agricultural products…. not maximize toward high value added and processed product.
- The development of food processing is very important for agricultural development and poverty reduction
- Market structure still affected by the historical background: SOEs
- The success of the food processing sector hinges on nature of the value chain and the policy.
- Main implications
  - Research and extension: higher yields, more efficient use of inputs: tea; rice
  - Stronger business associations: tea, coffee and cashewnut
  - Quality improvement and trade promotion: cashewnut
  - Companies need to capture the big opportunities from the middle class in domestic market: Coffee; tea
  - Material area development: cashewnut

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THANK YOU FOR YOUR ATTENTION!

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