

# Export orientation towards the regional and international markets: A case of seafood industry in Sri Lanka and the Japanese seafood market

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29 / 01 / 2007



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# Research questions ?

## Export oriented seafood industry of Sri Lanka

- What is the strategic situation of a country?
- What is the present market situation of the main products?
- Are the South Asian exporters geared towards diversification?
- What are factors that affect employee commitment?
- What is the level of compliance on food safety?
- What are the impacts of tsunami on seafood industry?

## Japanese seafood market

- ☀ Do Japanese consumers evaluate seafood based on quality or ethnocentricity?
- ☀ Who consume the sushi most?

# Justification of the study

- Economic importance to both Sri Lanka and Japan
- Vast potentials exist in Sri Lanka
- Identify the ways to create successful seafood export industry
- Less research focus in Sri Lanka
- Share the experience with international readership
- Consumer behavior of world's biggest fish market & ideas for exporters
- Suggestions for policy making

# Organization of the research studies on export oriented seafood industry of Sri Lanka



## Situation Analysis



Strategic situation of the country

## Analysis of firm and products



- Prawn exports to Japanese market
- Tuna processors and Export performance
  - Employee Commitment
  - Compliance on HACCP
- Impact of tsunami

## Regional Analysis



▪ Product diversification and Seafood exports of South Asia

Explore the path ways to be the pioneering seafood exporter in South Asia

# International business – operations and influences

## External influences

### Competitive environment

- Major advantage in price, marketing, innovation or other factors
- Number and relative capabilities of competitors
- Competitive differences by country

### Physical and Societal Factors

- Political policies and legal practices
- Values, attitudes and beliefs
- Economic forces
- Geographical influences

## Operations

### Objectives

- Sales expansion
- Resource acquisition
- Diversification
- Competitive risk minimization

## STRATEGY

### 1 Means

#### 1 Modes

- Importing and exporting
- Tourism and transportation
- Licensing and franchising
- Turnkey operations
- Management contracts
- Direct and portfolio investment

#### 2 Functions

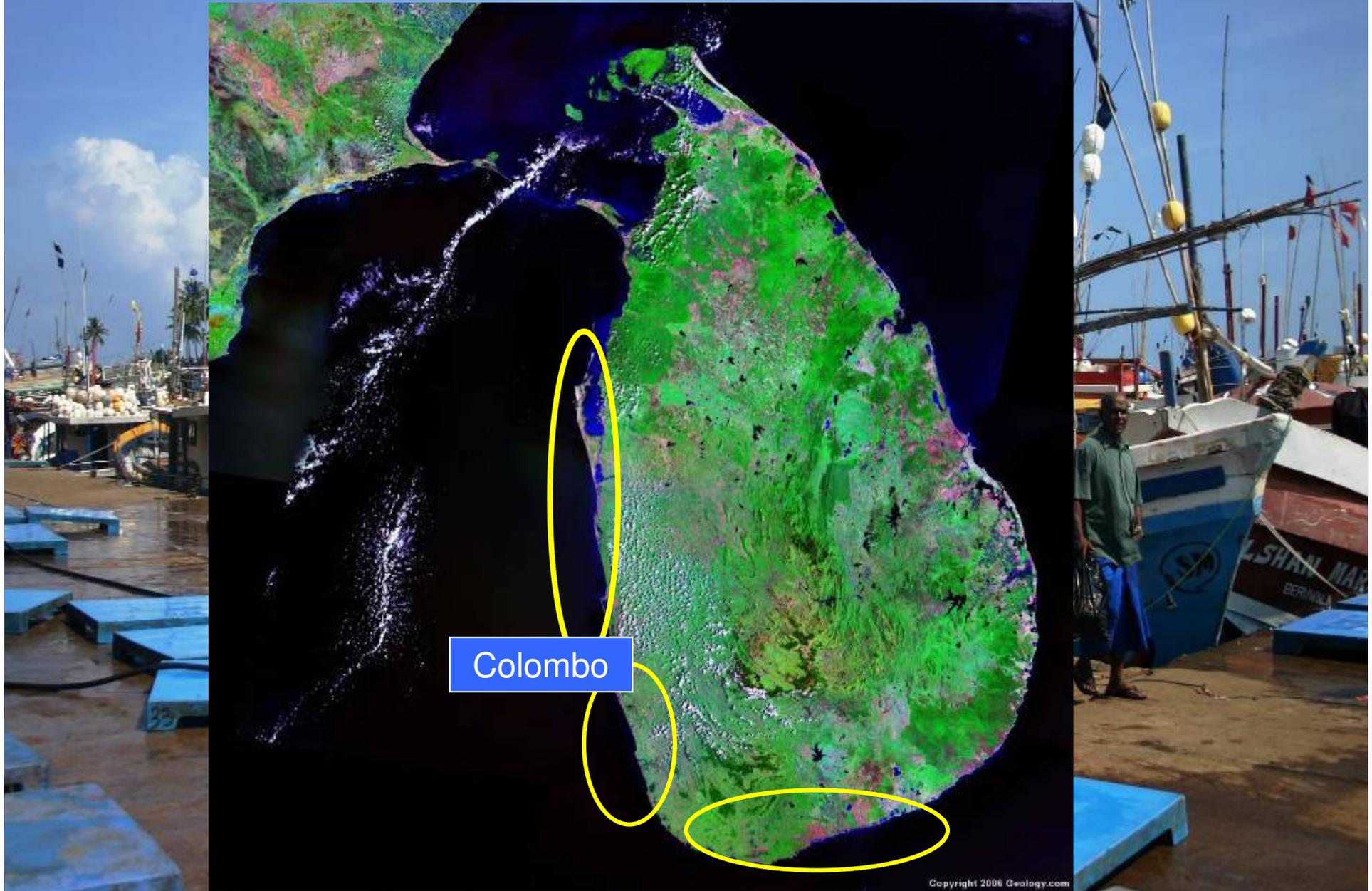
- Marketing
- Production
- Accounting
- Finance
- Human resources

#### 3 Overlaying tactical alternatives

- Choice of countries
- Organization and control mechanisms
- Degree of integration among countries' operations

Daniels and Radebaugh, 1998

# 1. A case study of export oriented seafood industry in Sri Lanka



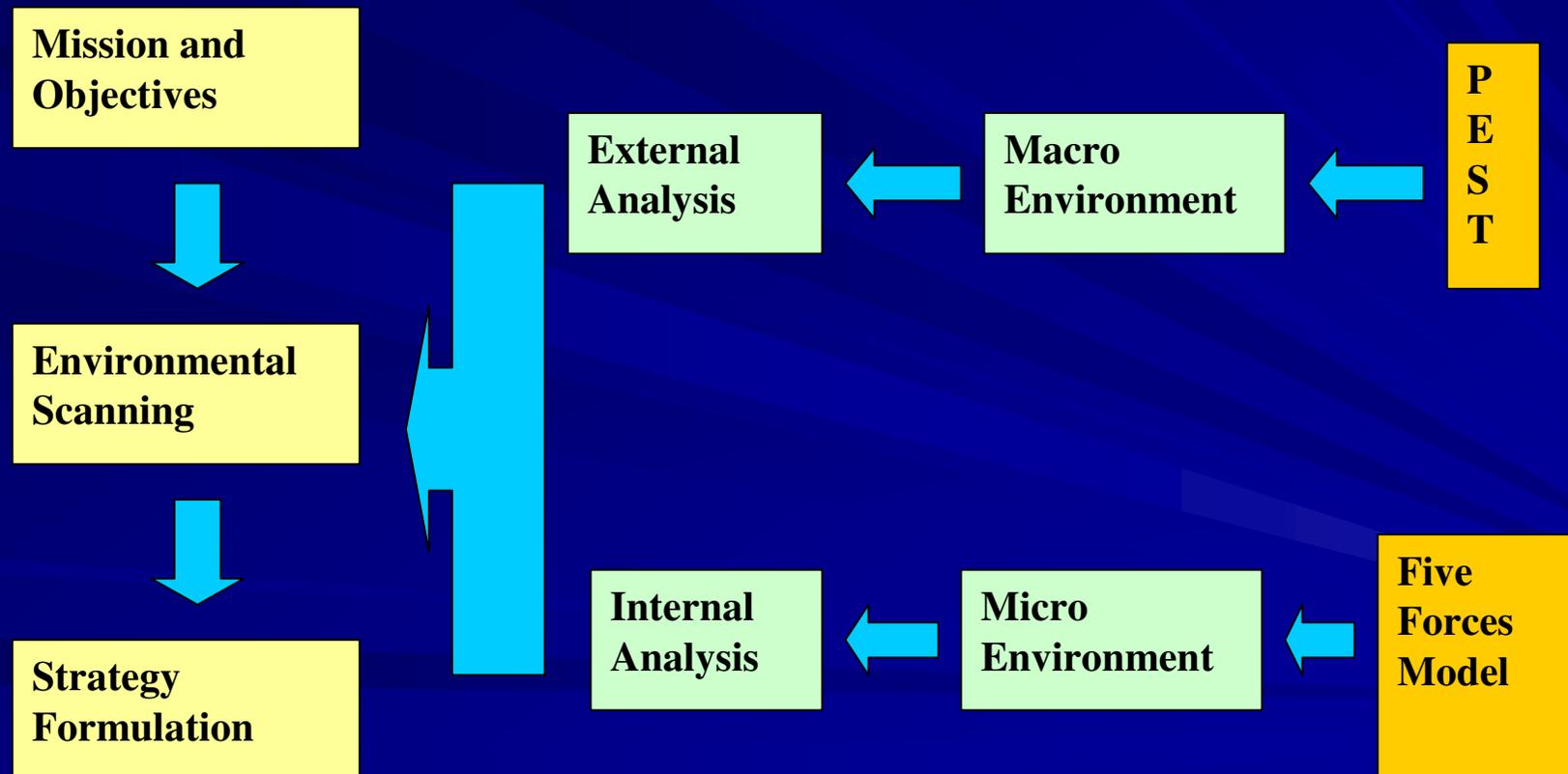
## **i. Evolution of the strategies for betterment of future: A case study of export oriented seafood industry in Sri Lanka**

### **Objectives of the study**

- To trace the strategic situation of export oriented seafood industry in Sri Lanka, focusing on how the international market dynamics have influenced the emergence and development of the sector**
- To identify the strengths, weaknesses, opportunities and threats of the seafood industry**

# Research methodology

- primary data gathered from in-depth interviews, focus group interviews of key informants from various sub sectors of fish production marketing chain
- Formulate strategies for the future



## Results and Discussion

### SWOT analysis:

**1. Strengths** – Strategic geographical situation, significant biophysical resource base, good image, experienced fishers with flexible fishing fleet , relatively large home market, high yields of semi-intensive and extensive production systems

**2. Weaknesses** – High dependency on prawn and tuna, poor efficiency in catch sectors, limited availability of quality infrastructure, unstable catches, irregular supply, large gap between research and industry, limited working capital, poor market knowledge and sales promotion

**3. Opportunities** – Exploiting non-traditional species for niche markets, value addition and diversification towards convenience meals, tap the ethnic market, get advantage of SAFTA, re-export, re-processing of Maldivian tuna

**4. Threats** – Falling resource base due to IUU fishing, voice of environmental groups on expansion, neighboring competitors, low interest on HACCP, SAFTAs' threat to local producers

# Five Forces' Model

**1. Threat of substitutes** – Economical alternatives of established meat markets

**2. Buyer's power** – Adverse economic conditions in main markets, dynamic consumer demand and environmental barriers

**3. Competitor rivalry** – Many players, slow market growth, high fixed costs, low value addition and differentiation, high exit costs and industry shake out

**4. Supplier power** – Supplier monopoly, market image, intensity of promotion and steady supply

**5. Barriers to entry** – High entry costs, legislative barriers, proprietary knowledge and asset specificity

## PEST Model

### Political

- Political instability; civil war
- Tax policy; income tax-15% for 5 years; 10% tax dividends; unlimited rupee exchange; 15% VAT
- Employment law
- Environmental law;
- Tariff and trade restrictions;

### Economic

- Annual GDP growth; Low interest rates-
- Exchange rate and devaluation of currency
- Moderate inflation

### Social

- Favorable labor law; Population growth-1.5%; High literacy rate (89%); educated, trained, hard working & motivated labor force
- Emphasis on safety and loyalty
- Labor productivity & real value added man hour is 4.9%

### Technological

- Research & development; value addition is increasing by 11%
- Automation
- Technology incentives; tax free on imports of agric. equipments, computers, construction machinery & low tax on materials for development
- Rate of technological change is 5.9% (2004)

ii. Sri Lankan prawn in Japanese Market:  
Vehicle for a secure future for  
Sri Lankan export oriented fisheries industry?



## Objectives

- ② To identify the past and future trends of the Sri Lankan shrimp exports in the Japanese market
- ② To identify the consumption trends and affecting factors for the consumption of shrimp in Japanese market

## Materials and methods

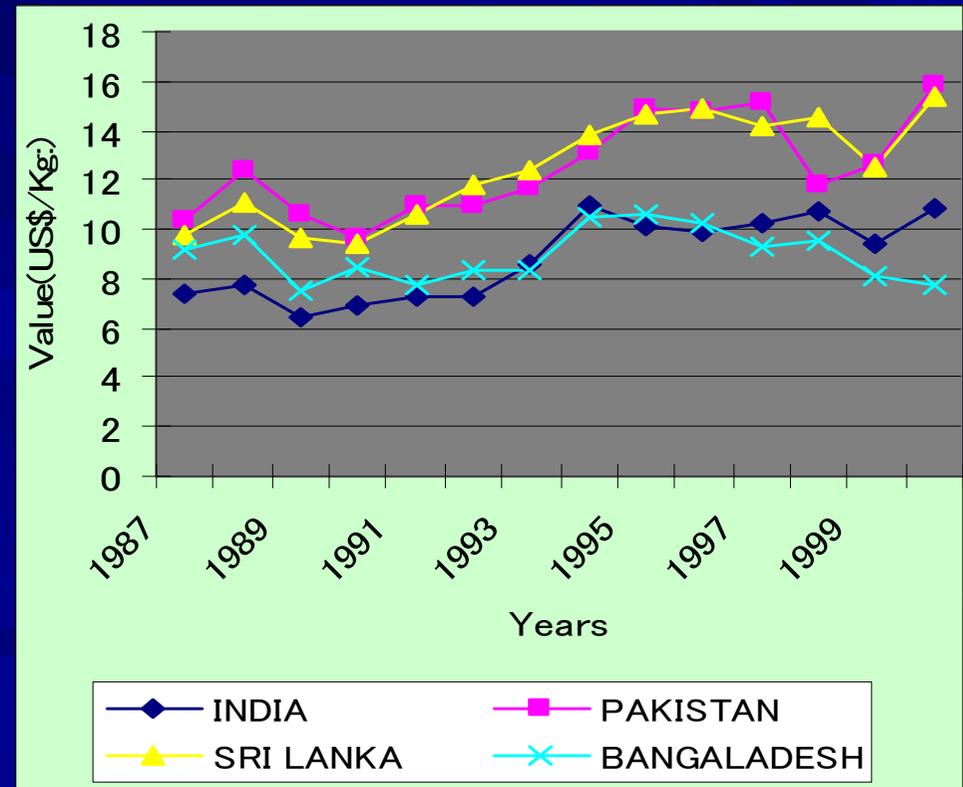
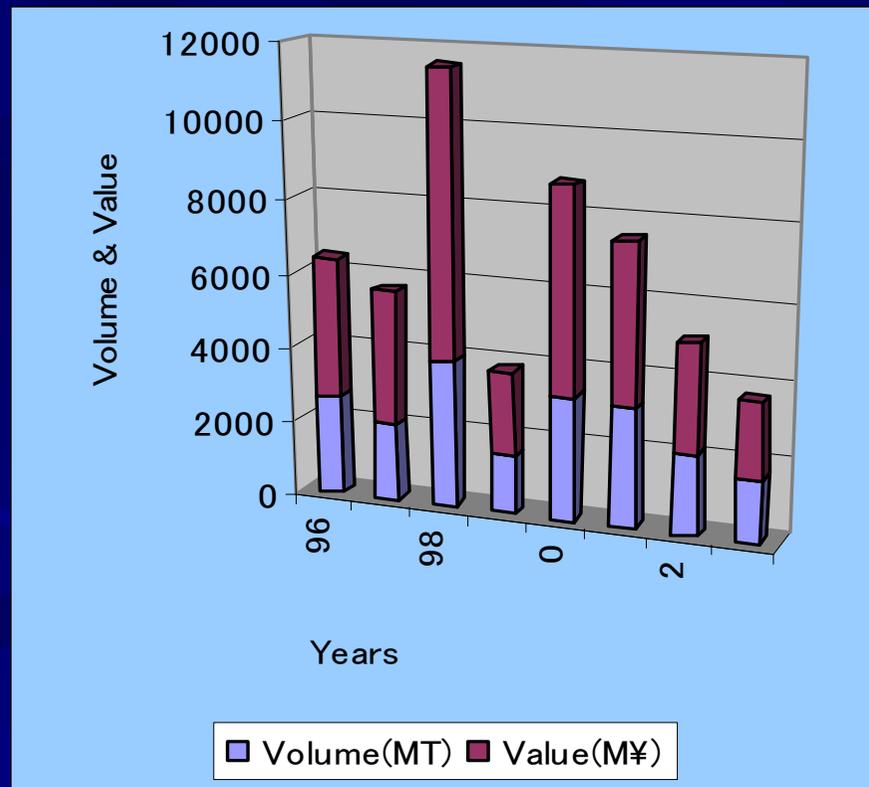
- ② Data sources: Export data 1990-2003
- ② Analysis: Time series forecasting (Moving averages with Linear Trend)

$$F(t+h) = F(t) + F'(t) [(m-1)/2+h]$$

- ② where  $F(t+h)$  = Forecast time,  $F(t)$ ,  $F'(t)$  = exponential smoothing,  $m$  = length of moving average,  $t$  = actual data,  $h$  = future periods

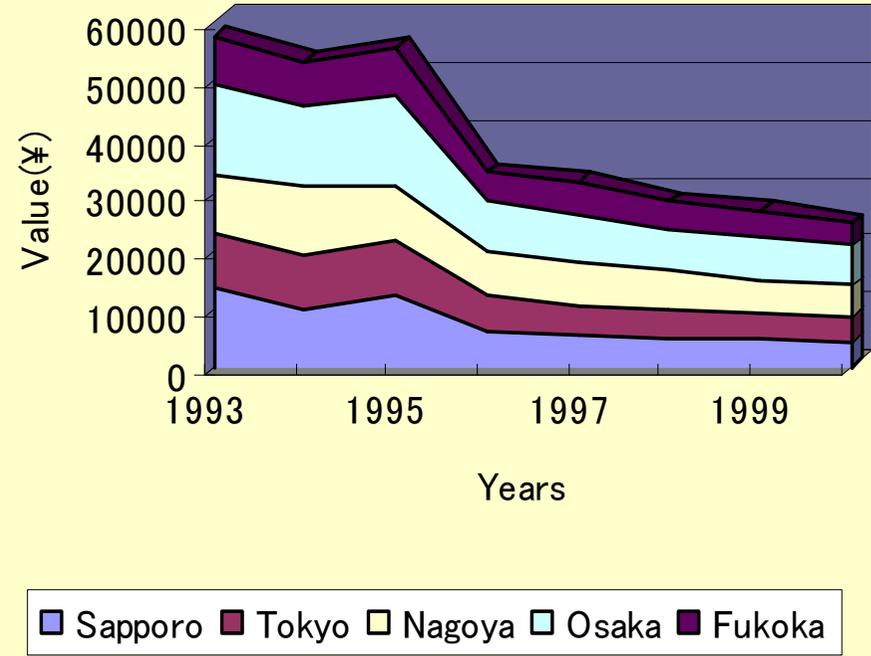
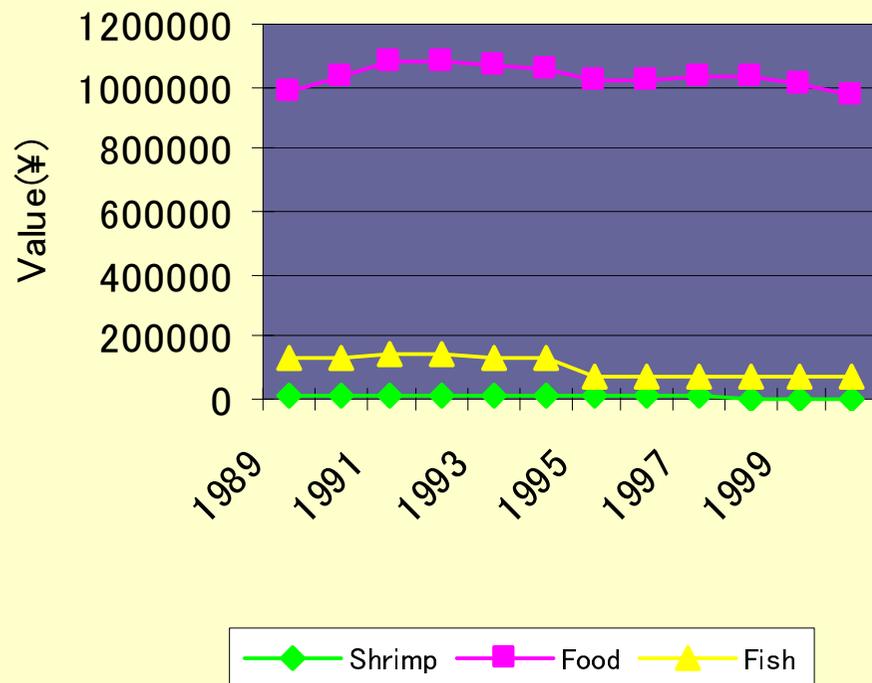
**Expenditure on consumption of Shrimp** =  $b_0 + b_1 * (\text{Total expenditure on food}) + b_2 * (\text{Total expenditure on fish}) + b_3 * (\text{no. of persons/household}) + b_4 * (\text{Expenditure on pork}) + b_5 * (\text{Expenditure on beef}) + b_6 * (\text{Expenditure on chicken}) + b_7 * (\text{Expenditure on ham and sausages}) + b_8 * (\text{Expenditure on egg and milk}) + b_9 * (\text{Expenditure on eat-out})$

## Findings



# Findings

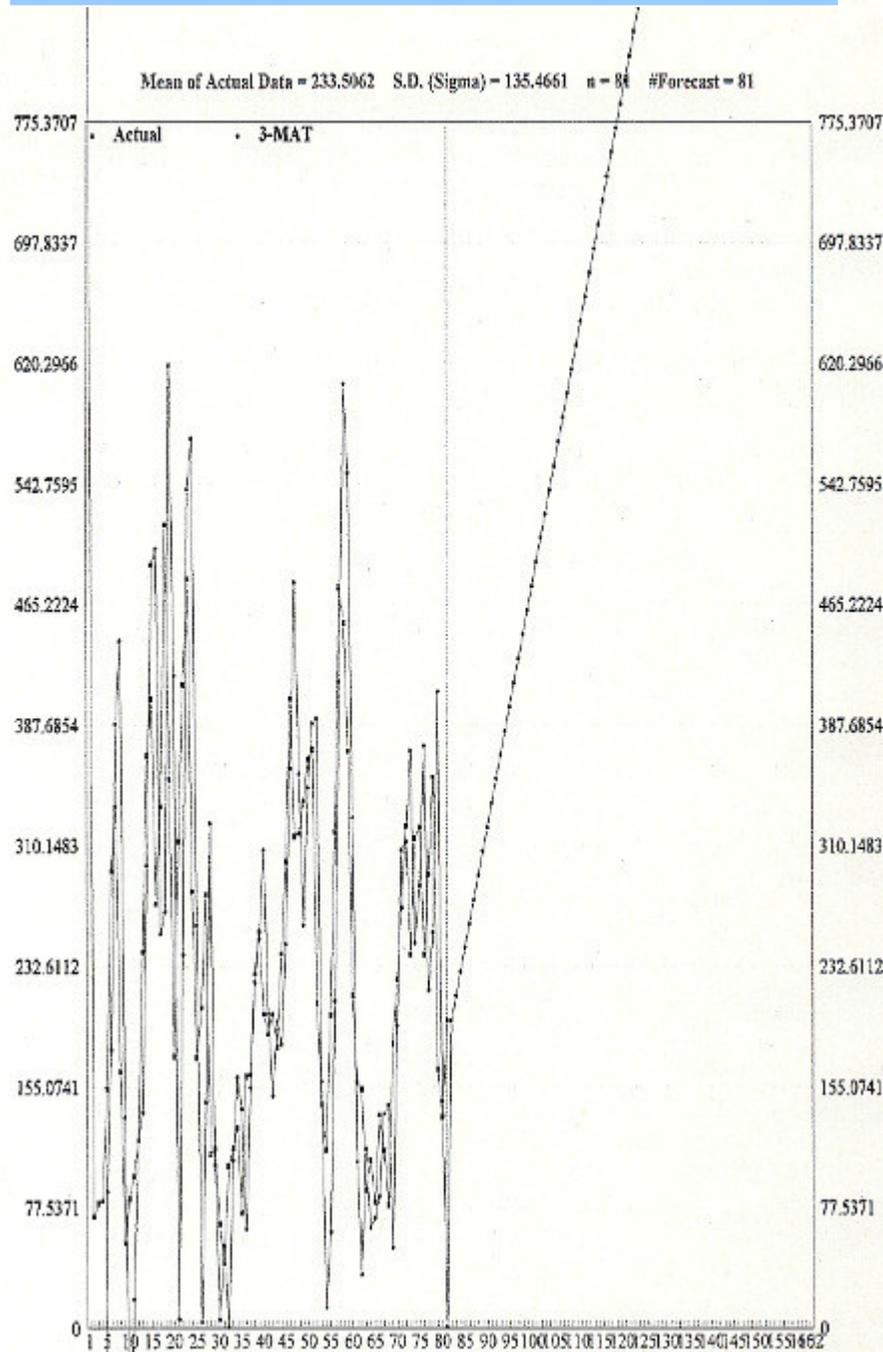
- ✿ Japan – main market for Sri Lankan prawn and shrimp
- ✿ **Heavy export competition from neighboring nations**
- ✿ Analysis showed positive trend in quantity demanded and receiving high prices for Sri Lankan shrimp exports in future
- ✿ **Low cost of production (US\$ 4.56/ Kg) comparing with other Asian competitors except China and has medium overhead cost for production (38.6%)**
- ✿ Increased diversification and value addition efforts of processors
- ✿ **Preference on prawns: Food service use – large to medium; families often buy small sized frozen and food processors – small size**
- ✿ Consumption rises during major national holidays
- ✿ **Consumers preference is due to freshness, uniformity in size, appearance, price**
- ✿ **Entry barriers and competition from established suppliers**



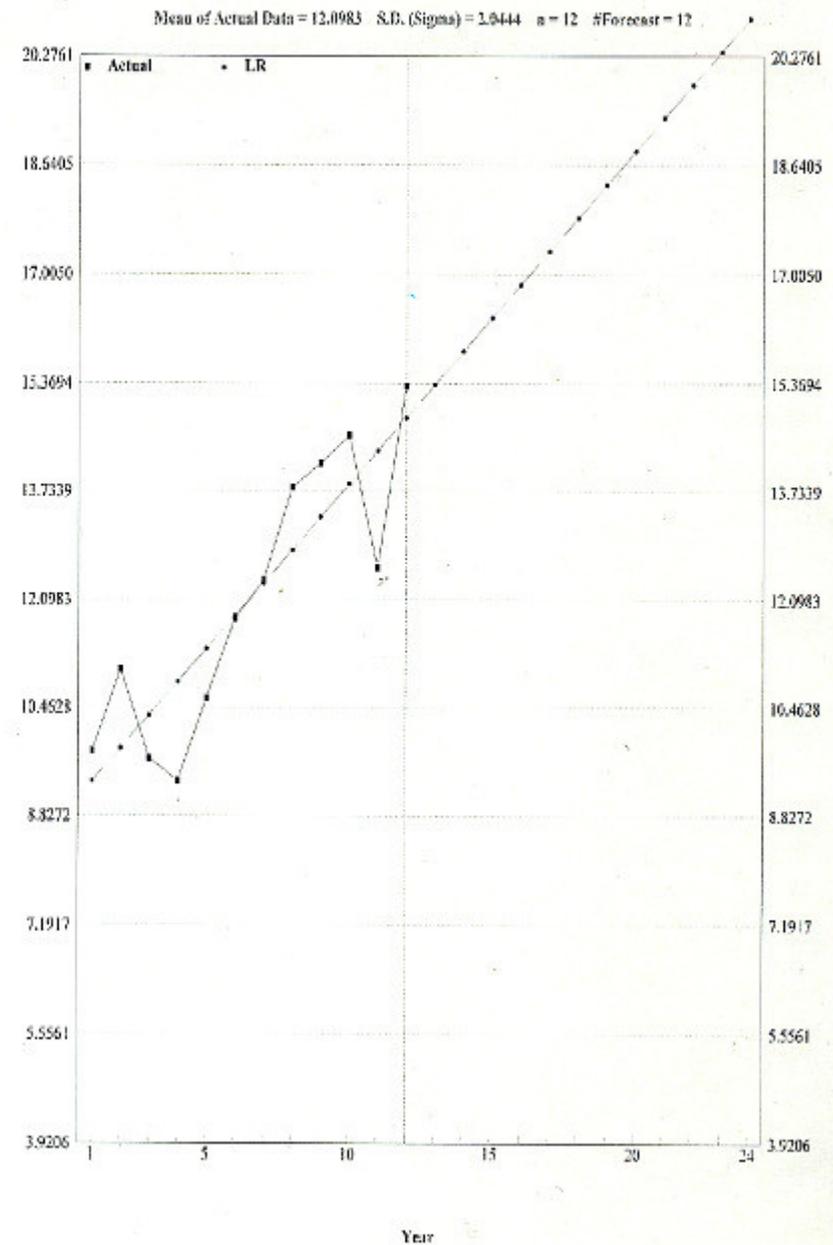
## Expenditure on shrimp consumption by whole market and by cities

- Fluctuation of consumption
- Japanese shrimp consumption also differs region to region in the country and it shows the direct influence of local culture on their food habits
- Expenditure on fish, chicken and eat outs had positive impact on shrimp consumption
- Expenditure on beef and no. of household persons had negative impact on shrimp consumption

## Forecast on shrimp exports to Japan



## Forecast on offering prices



### iii. Export performance of small and medium scale Tuna processing industry in Sri Lanka: Can they survive?



# Objectives

- To investigate the present status of tuna processing industry in Sri Lanka
- To analyzes the impact of technological innovation, effort in international business, manager's perception on obstacles to export and utilization of public instruments on export performance of tuna exporters

## Concepts

- Technological innovation (Product, Process and Innovation in management)
- International business management
- Manager's perceptions about obstacles to export
- Utilization of public instruments

## Empirical approach

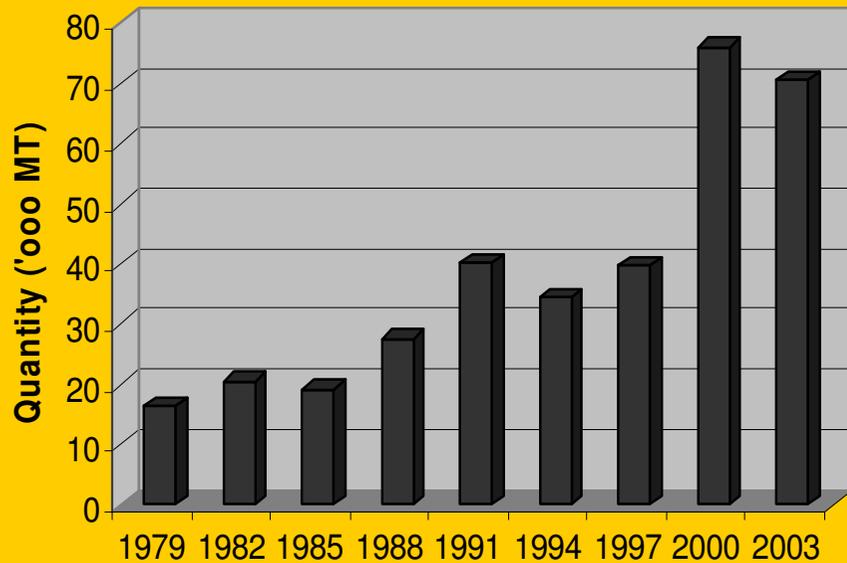
- survey - spring 2004
- **Study locations: Southern, Western provinces**
- **Primary data: 10 permanent tuna exporters and 10 sporadic tuna exporters**
- **Characteristics of the companies were considered: 1999-2003**
- **Companies that export through out this period - permanent exporters while companies not export regularly - sporadic exporters**
- **Data collection tools: Structured questionnaire, in-depth interviews with key informants**

$$\text{The model: } \text{Int}_i = \alpha + \beta \text{ exp}_i + \varepsilon_i$$

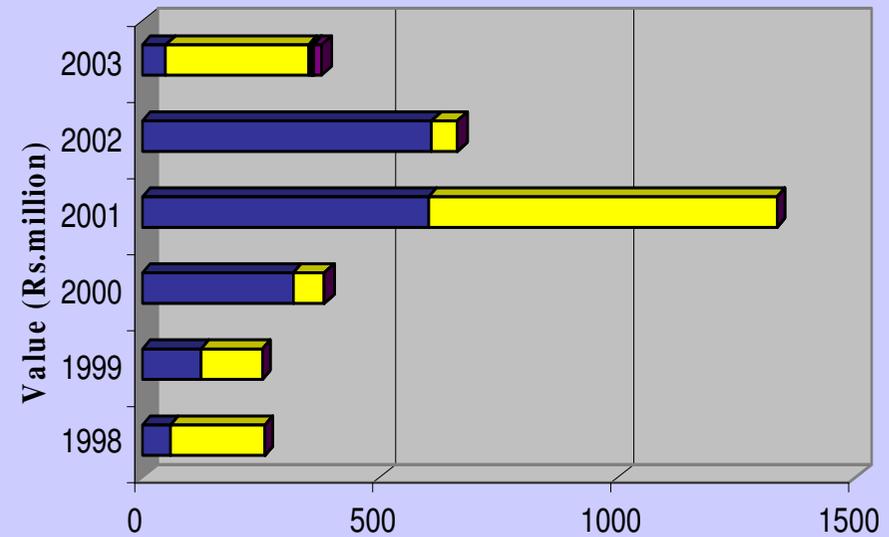
- **Where Int measures the intensity of Technological innovation, International business management, Manager's perceptions on obstacles to export and Utilization of public instruments**

■ **Measure the export intensity**

- The scale of intensity was measured as follows;
- 0 – null intensity; 1 – low intensity; 2 – slightly low intensity; 3 – slightly high intensity and 4 – high intensity
- Exp is a categorical variable that defines the exporting status of the company
  - 1- if the firm is a permanent exporter,
  - 0 – sporadic exporter
- Econometric estimation:
$$\Pr (Y_i = 1) = \Phi (\beta' X_i) + \varepsilon_i$$
- t test – to compare the means of two samples: permanent and sporadic exporters



■ Quantity



■ Tuna frozen ■ Tuna not frozen □ Fillets □ Fillets frozen ■ Smoked

- **Permanent exporters - more active in product and process innovation, strategic alliances with foreign firms, training of workers in export operations, export promotion in abroad and obtaining loans for financing working capital**
- **Sporadic exporters - more active in strategic alliances with domestic firms and hiring of staff qualified for international business**
- **Both facing greater difficulties in international operation**
- **Utilization of public instrument was not playing significant role**
- **Permanent exporters engaged in export promotion and technological capability enhancing in quality management than the sporadic exporters**

# Summary of Scores

Particulars of scores	Permanent exporters Max.- Min.	Sporadic exporters Max.- Min.	Mean	Standard Deviation
<b>1. Technological Innovation</b>				
Product innovation (0-16)	16-8	7-1	7.7	5.37
Process innovation (0-16)	15-10	8-2	8.6	5.18
Innovation in management (0-16)	13-09	4-1	6.9	4.67
<b>2. Effort in international business (0-48)</b>	<b>36-23</b>	<b>14-09</b>	<b>21.45</b>	<b>11.07</b>
<b>3. Manger's perception on obstacles to export</b>				
Internal to the firm (0-36)	18-13	26-23	20.2	5.13
Internal to the country (0-36)	29-20	35-24	26.4	3.53
External to the country (0-52)	49-30	48-36	45.5	5.79
<b>4. Utilization of public instruments (0-12)</b>	<b>11-05</b>	<b>03-01</b>	<b>5.75</b>	<b>3.89</b>

## Model summary

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	St. error of the estimate
1	0.988 <sup>a</sup>	0.977	0.960	0.10319

a. Predictors: (constant), product innovation, process innovation, Innovation in management, effort in international business, manager perceptions on Obstacles to export and utilization of public instruments  
 96% of the export performance of the permanent and sporadic exporters was explained by the considered variables

### ANOVA<sup>b</sup>

Model	Sum of squares	df	Mean square	F	significance
Regression	4.883	8	0.610	57.323	0.000 <sup>a</sup>
Residual	0.117	11	0.011		
Total	5.000	19			

## Summary of coefficients

<b>Model</b>	<b>Standardized coefficients Beta</b>	<b>t</b>	<b>Significance</b>
<b>(constant)</b>	<b>0.527</b>	<b>1.122</b>	<b>0.286</b>
<b>Product innovation</b>	<b>0.085</b>	<b>0.477</b>	<b>0.643</b>
<b>Process innovation</b>	<b>0.032</b>	<b>0.130</b>	<b>0.899</b>
<b>Innovation in management</b>	<b>0.539*</b>	<b>2.166</b>	<b>0.053</b>
<b>Effort in international business</b>	<b>- 0.069</b>	<b>- 0.276</b>	<b>0.787</b>
<b>Obstacles internal to firm</b>	<b>- 0.081</b>	<b>- 0.533</b>	<b>0.605</b>
<b>Obstacles internal to country</b>	<b>- 0.011</b>	<b>- 0.129</b>	<b>0.900</b>
<b>Obstacles external to country</b>	<b>- 0.127</b>	<b>- 1.958</b>	<b>0.076</b>
<b>Public instruments</b>	<b>0.457</b>	<b>2.257</b>	<b>0.456</b>

## iv. Product diversification, will it assure future market for South Asian seafood industry? A case study of the South Asia



# Objectives

- ④ To estimate the degree of product diversification in south Asian seafood industry and comprises with regional, country wise and plant wise estimation of **Herfindhal Diversity Index (HDI)**
- ④ To Identify the past, present and future trends of South Asian seafood market

## Concepts: **Product diversity**

- ④ Product diversity refers to the degree of relatedness among various product segments (Jacquemin and Berry, 1979)
- ④ Measures: **industry relatedness**
- ④ Locale of study : India, Pakistan, Bangladesh, Maldives and Sri Lanka
- ④ Data: Customs records (2000 – 2003)

## Method and findings

- Herfindhal Diversity Index
- Data: seafood export figures in 4 year (2000-2003) period

$$H = \sum_{i=1}^n P_i^2$$

- Where  $P_i$  is the proportion of the  $i^{\text{th}}$  product relative to the total exports

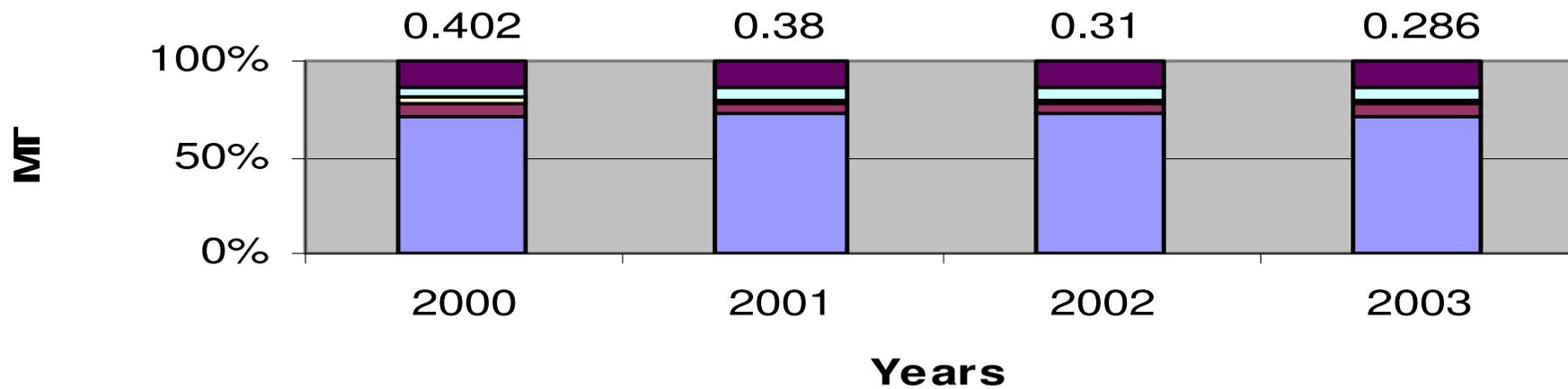
- $$H = \sum_{i=1}^n \frac{P_i^2 + P^2 B + P^2 P + P^2 S + P^2 M}{5}$$

Herfindhal diversity index (HDI) for the region; where  $P_I$  is HDI of India,  $P_B$  is HDI of Bangladesh,  $P_P$  is HDI of Pakistan,  $P_S$  is HDI of Sri Lanka and  $P_M$  is HDI of Maldives

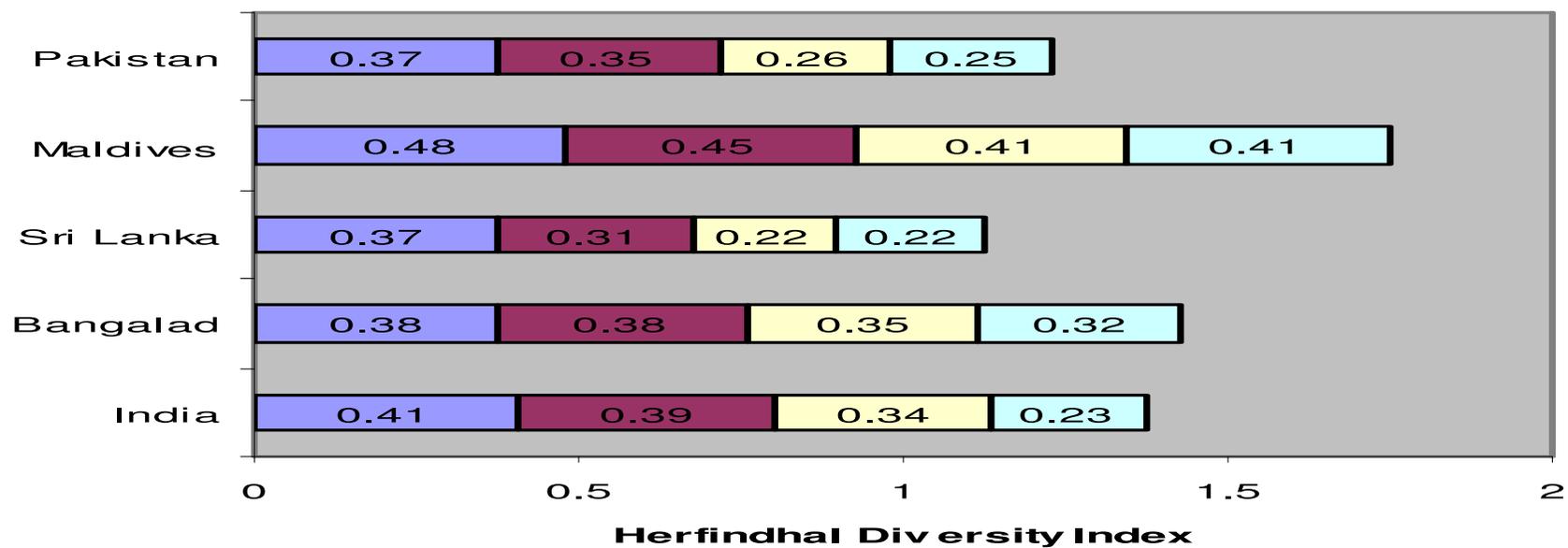
- The index: 0 = complete diversification and 1 = complete specialization

■ Measure the level of diversification

## Country wise seafood exports (MT) and Diversity

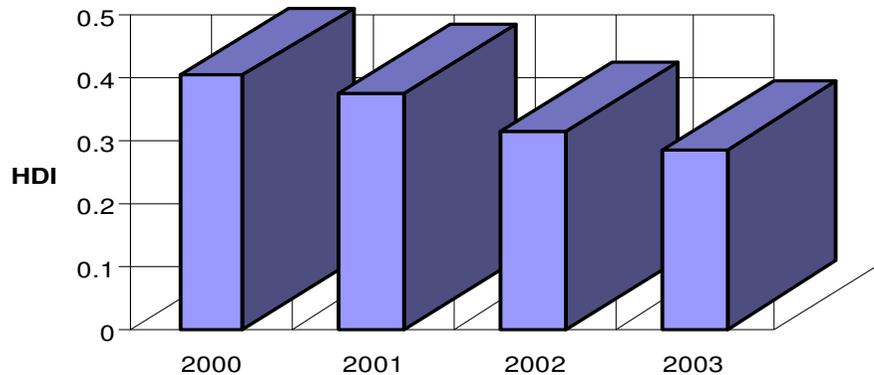


■ India 
 ■ Bangalad 
 ■ Sri Lanka 
 ■ Maldives 
 ■ Pakistan



■ 2000 
 ■ 2001 
 ■ 2002 
 ■ 2003

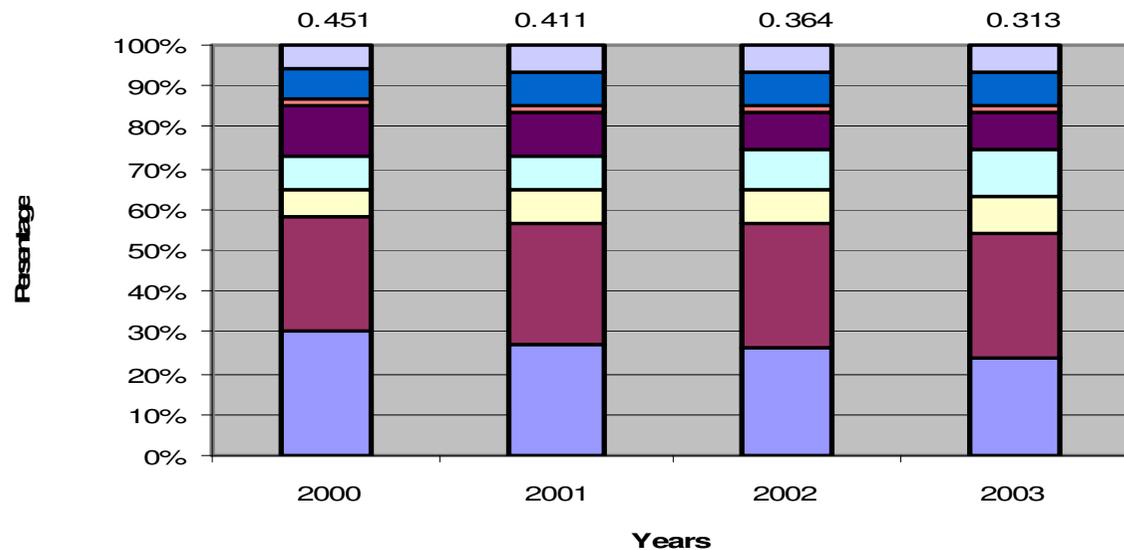
### Region wise Herfindhal Diversity Index for South Asia, 2000-2003



**Regional diversity index improved**  
**From 0.402 in 2000 to 0.286 in 2003;**  
**Most significant in India;**  
**Worst case is Maldives;**  
**All exporting nations move towards**  
**positively to the diversification**  
**Degree of product diversity among**  
**individual plants was changed**  
**slightly**

- Small and medium size plants were less diverse
  - In contrast large plants were more diverse
- Plants processing for EU and USA were less diverse than the Asian markets including Japan

### Regional scale major seafood exports (%) and Diversity for South Asia, 2000-2003



■ Shrimp 
 ■ Fish 
 ■ Cuttlefish 
 ■ Crab 
 ■ Dryfish 
 ■ Beachde 
 ■ sharkfin 
 ■ Other

**v. The involvement of female labor in seafood processing in Sri Lanka: Impact of organizational fairness, organizational commitment and supervisor evaluation on employee commitment**



# Objectives

- ② To identify the socio economic background of the female laborers in processing industry
- ② To explore the impact of organizational fairness, organizational commitment and supervisor evaluation on the female employee commitment in seafood processing industry

## Concepts

- ② **Evaluation of supervisor** - The degree to which one supports or endorses a leader (Schappe, 1996; Alecander and Ruderman, 1987)
- ② **Organizational Commitment** - Measure of affective commitment an opposed to normative or continuance commitment
- ② **Organizational Fairness/ Justice –**
  - ② **i. Distributive Justice** (Moorman, 1991; Niehoff and Morrman 1983): discriminant validity in relation to job satisfaction
  - ② **ii.Procedural Justice** (Moorman 1991): Degree to which job decisions included mechanisms; employee voice and appeals process
  - ② **iii. Interactional Justice** (Leventhal, Karuzan and Fry (cf. Moorman, 1991) : Fairness of the interactions between manager and employee that enacted the formal procedures

# Materials and methods

- Study location and sample: 50 randomly selected female employees of the 10 seafood processing firms
- Primary data - Structured Questionnaire based on **Likert type**, seven-point response format, ranging from 1-Strongly disagree to 7-strongly agree

## ● Hypothesis Testing

H1 - Organizational Justice has positive impact on the organizational commitment

H2 - Supervisor evaluation has positive impact on the organizational commitment (the degree of fairness of supervisor perception will affect the commitment measures)

■ **Measure the level of impact**

# Findings

- **Socio Economic characters of the sample:**
- **Majority of the employed women: age range 25-29, un married and having completed their secondary education**
- **Female domination in lower grade jobs are high (Male: Female=2:10 in Prawn & 4: 10 in Tuna processing plants)**
- **Quality control and administrative grade's ratio is 2:1 and CEO positions are overwhelmingly held by males**

	Mean score	SD	Minimum score	Maximum score
Distributive justice	25.02	3.37	18.00	33.00
Procedural Justice	16.06	4.18	9.00	23.00
Interactional Justice	13.34	6.73	41.00	63.00
Commitment scale	50.02	6.73	41.00	63.00
Supervisor evaluation Scale	24.04	2.73	19.00	30.00

	Distributive justice	Procedural Justice	Interactional justice	Commitment scale	Supervisor evaluation scale
Distributive justice	-----				
Procedural Justice	-----	-----			
Interactional Justice	-----	<b>0.655**</b>	-----		
Commitment scale	<b>0.607**</b>	<b>0.407*</b>	-----	-----	
Supervisor evaluation scale	<b>0.608**</b>	<b>0.509**</b>	<b>0.626**</b>	<b>0.670**</b>	-----

**Bivariate Correlation between organizational fairness scales, supervisor evaluation scale and commitment scores {\*\* Correlation is significant at the 0.01 level (2-tailed)}**

	B	SEB	Beta
Organizational justice	<b>0.399</b>	<b>0.092</b>	<b>0.531*</b>

**vi. Compliance on HACCP and export penetration: An empirical analysis of the seafood processing firms in Sri Lanka**



# Objectives

- To find out the impact of HACCP, level of sanitation, labor, capital and traceability on export penetration of the seafood export business
- To draw implications about the impact of food safety regulations (HACCP) on corporate success of seafood processors

## Methodology

- Study location - 50 seafood processing firms in South, West and North-west coast of Sri Lanka (26 EU approved establishments)
- Data collection tools – Structured questionnaire, interviews, observations

## Measures:

- **Status of HACCP: scale (0-3) and calculated by adding binary variables**
  - 1 – if the company responded positively or 0 otherwise
  - 2 – Company has participated HACCP training
  - 3 – Company has implemented HACCP and documentation
- **Level of sanitation was define by using Dummy variables**
  - SANI 1 – Plant requires minor modification
  - SANI 2 – Plant requires major modification

- **Construct the export penetration index**

## Theoretical framework

- Prices are function of the quality attributes,  $p = f(q)$ . the firms supply for  $Y_i$  as function of quality attributes, inputs prices  $w$ , and fixed inputs  $k$ ,

$$Y_i = f(q, w_i, k)$$

- Dependent variable  $Y_i$  is the quantity of the product sold in international market  $i$ ,
- An export penetration index (EPI) defined by Featherstone and Uhm (1993) is as follows;

$$EPI = X/Y$$

Where,  $X$  is the total export and  $Y$  is the total production

- The empirical model to be estimated is as follows (modified from Zaibet,(2001);
  - $EPI = f(\text{HACCP, Sanitation, Labor, Capital, Traceability})$

## Results of the OLS model

Variable	Parameter	“t” statistic	Significance
Intercept	0.377	5.504	0.000
HACCP	0.288	1.268	0.212
Labor	0.054	0.293	0.771
Capital	0.213	0.990	0.328
SANI 1	0.201	1.605	0.116
SANI 2	-0.001	-0.012	0.990
Traceability	0.488	1.982	0.054

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Standard Error of Estimate
1	0.867 <sup>a</sup>	0.752 <sup>b</sup>	0.716	0.115

a – Predictors: (constant), Traceability, Labor, SANI 1, SANI 2, Capital, HACCP    b – Dependent Variable

## Correlations among variables (Pearson correlation)

	EPI	HACCP	Labor	Capital
EPI				
HACCP	0.824**			
Labor	0.368*	0.228		
Capital	0.609**	0.510**	0.856**	
SANI 1	-0.089	-0.043	-0.207	-0.320
SANI 2	-0.587	-0.707**	-0.130	-0.305
Traceability	0.785**	0.867**	0.221	0.547

\*\* Significance at 0.001 level (1- tailed) \* Significance at 0.005 level (1-tailed)

- HACCP, Capital and traceability have high positive impact
- Labor has little impact on export performance (EP)
- SANI 1 and 2 has negative impact on export performance
- All EU approved plants have their own HACCP plan for each product type
- Exporters to Asian market have low interest on HACCP plan



vii. Forefront of recovery: A sub sector analysis of the post tsunami seafood export industry in Sri Lanka

# Objectives

- ② To identify the impact of tsunami on seafood industry of Sri Lanka
- ② To formulate sub-sector analysis for the sustainable livelihood of the stakeholders of the seafood industry of south of Sri Lanka

## ② Concepts

- ② Sustainable Livelihood Approach (SLA) and Sub-sector Analysis (SA)
  - ② Aim of the SA is examine more closely at the changes that have taken place after the disaster
  - ② Livelihood assets pentagon is used as a visual tool to present information about people's access to assets and the interrelationships
  - ② capital assets: human, social, physical, natural and financial
- Evaluate the level of capital assets of fishers, traders and export-processors

# Methodology

- ② Study locations - 9 villages of three districts (Galle, Matara and Hambantota ) of southern coastal province in summer 2005
- ② stratified random sampling: 3 main strata (producers, traders, exporters)
- ② 30 respondents from each stratum and 10 respondents for each stratum from each district
- ② Main data collection tool - the structured questionnaire
- ② four point rating scale was used to evaluate the statements under the each sub-section of the questionnaire
- ② Rating scales for positive statements were 3 - high, 2 - medium, 1- low and 0 - not at all and vice versa for negative statements

## Findings

- ② Fish producers – 100% is male, 67% is married, 67% - G.C.E.O/L, 26% - G.C.E. A/L, 90% permanent employees
- ② Traders – 94% is male, 76% is married, 40% - G.C.E.O/L, 27% - G.C.E. A/L, 63% permanent employees
- ② Exporters – 97% is male, 67% married, 20% - G.C.E.O/L, 43% - G.C.E. A/L, 37% - graduate and diploma, 63% permanent employees

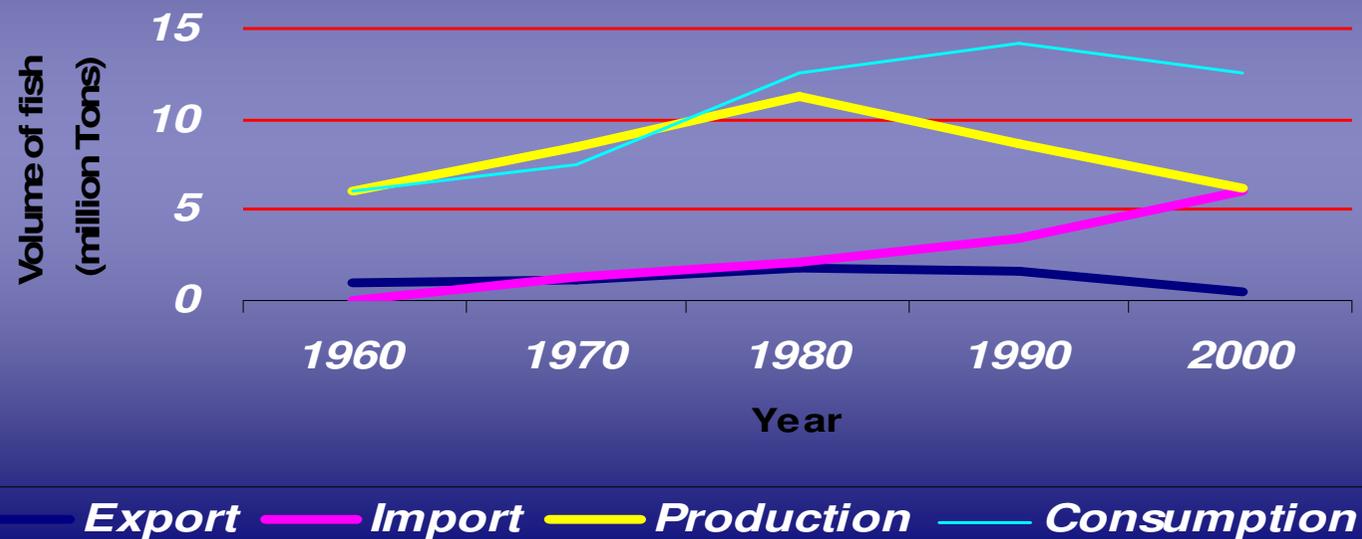
## An analysis of the sub-sector participants (mean scores)

<b>Variable (Possible Score)</b>	<b>Producers/ Fishers</b>	<b>Traders</b>	<b>Export- processors</b>
Human capital (0 - 18)	6.17	6.43	6.43
Social capital (0 -27)	16.83	17.81	17.84
Natural capital (0 -12)	11.47	5.87	5.87
Financial capital (0 -18)	3.97	5.63	5.63
Physical capital (0 - 24)	9.82	5.27	5.27
Shocks (0 - 3)	2.72	2.67	2.67
Trends (0 - 3)	2.14	2.63	2.62
Seasonality (0 - 3)	1.37	1.84	1.83
Policies (0 - 3)	2.87	2.47	2.47
Institutions (0 - 3)	2.03	2.37	2.37
Processes (0 - 3)	2.57	2.37	2.37
Livelihood strategies (0 - 3)	1.23	1.83	1.83

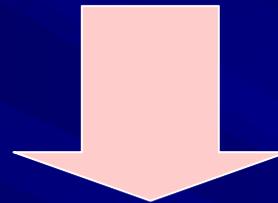
- ② **Social relationships were severely damaged**
- ② **Human capital: fishers, traders and export-processors equal**
- ② **Social capital: traders and export-processors high but fishers low**
- ② **Physical capital: fishers very high compared to traders and processors**
- ② **Financial capital: fishers very low compared to traders and export-processors**
- ② **Natural capital: Fishers high compared to traders and export-processors**
- ② **Establishment of 100m buffer zone made big burden to all sub-sector participants**
- ② **Tsunami and its' destruction were the biggest shock**
- ② **Unlimited and unmanaged distribution of fishing fleets and gear may cause extra pressure on fish stocks and can be negative shock in long term**
- ② **Policies and institutional changes made significant impact on fisher's livelihood**

## 2. A case study of the seafood consumption trends in Japanese market

Japanese fish consumption, production and trade trends, 1960-2000



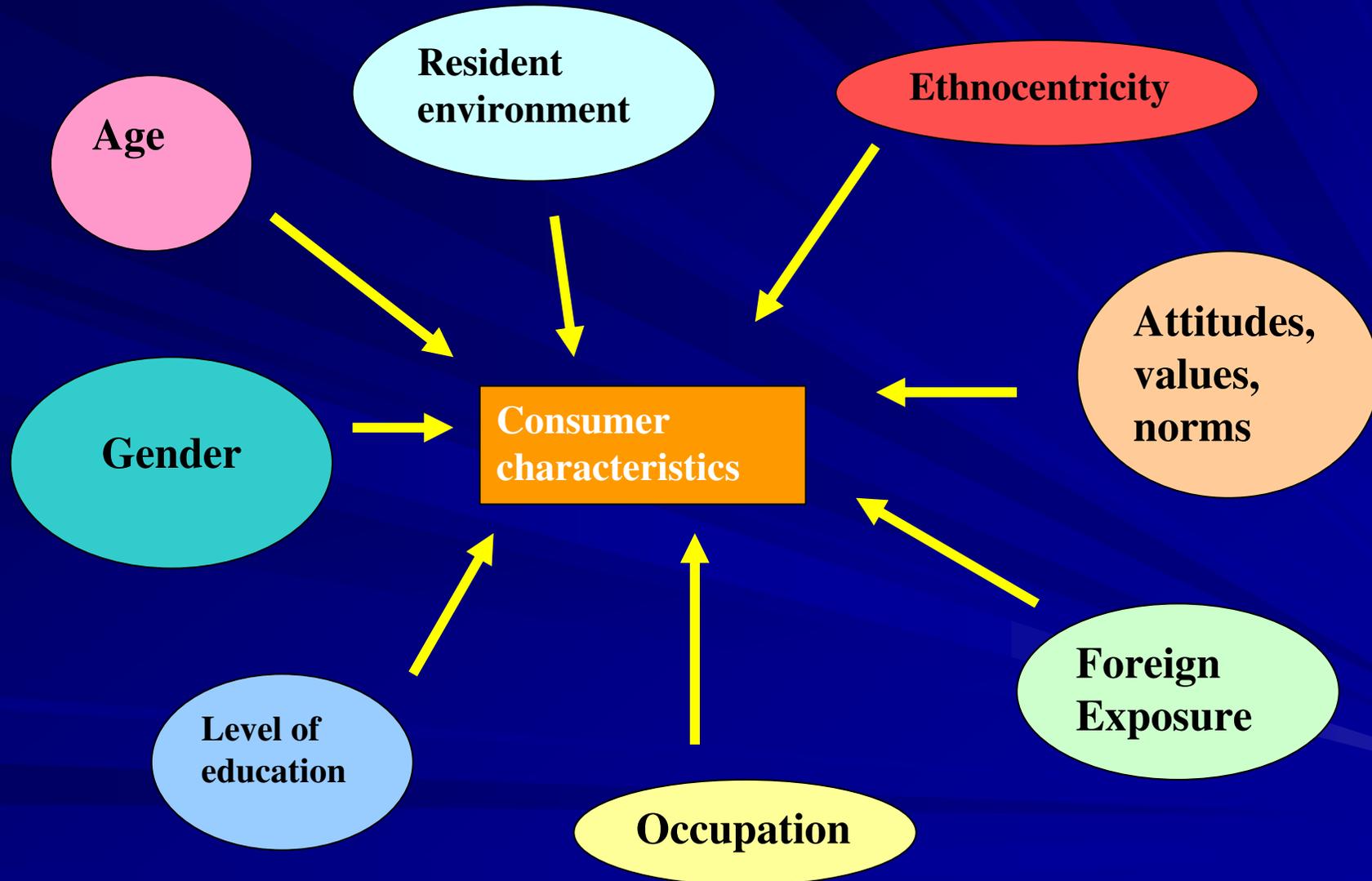
**Presentation chronology: Case study of the seafood  
consumption trends and consumer behavior in  
Japanese market**



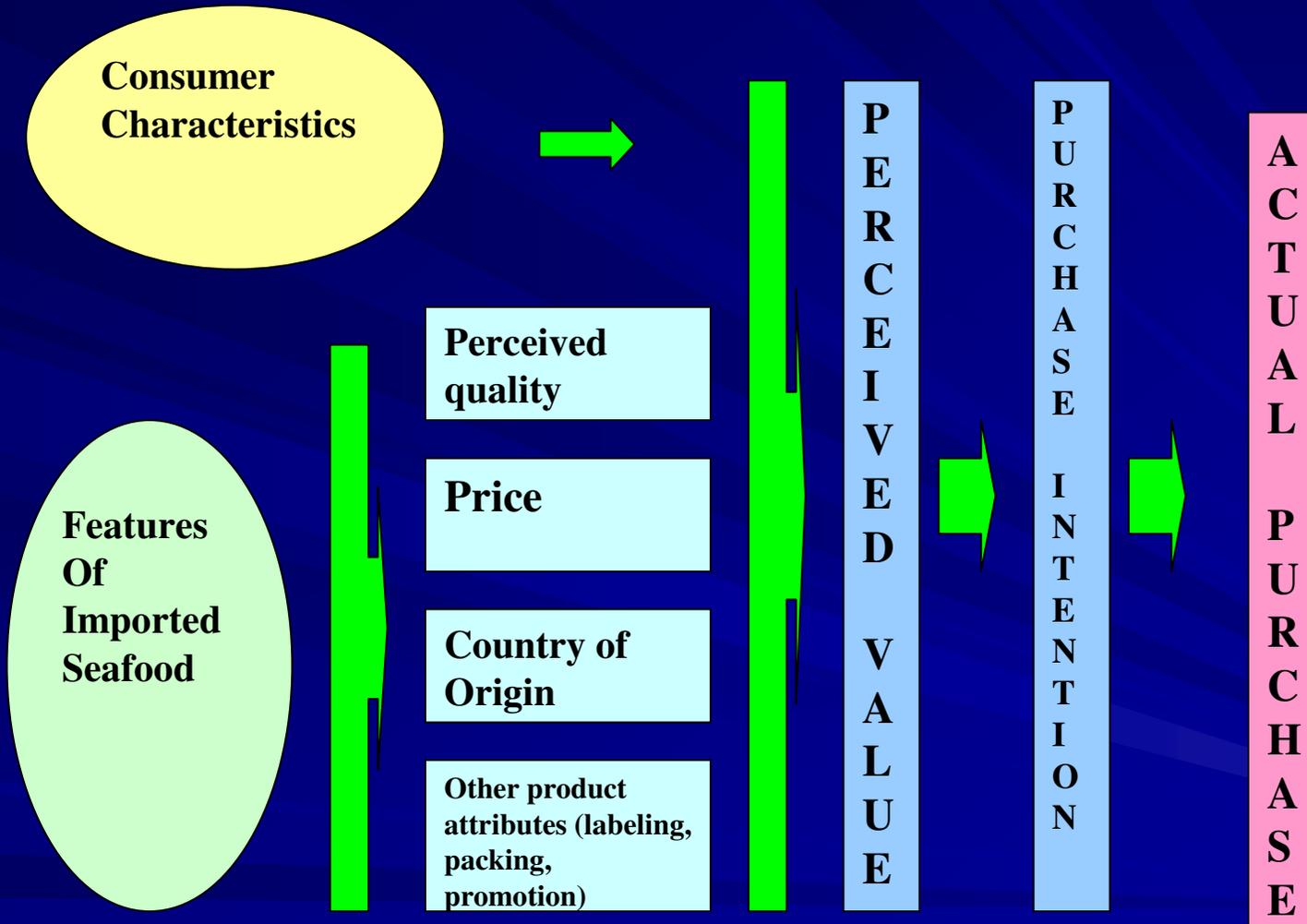
**Consumer behavior on  
Imported vs domestic  
seafood**

**Sushi consumption  
Trends in Japanese  
market**

# Characteristics of the Consumer



# Intention to purchase



08/01/2007

Proposed model



**i. Regional preferences in the Japanese seafood consumption: An empirical analysis of consumer purchasing behavior on domestic vs imported seafood**



# Objectives

- To compare the consumer evaluations of various attributes of seafood products of imported vs domestic origin
- To analyze the regional variations in evaluation of domestic vs imported seafood
- To explore the phenomenon of economic ethnocentrism and its effects on domestic purchasing behavior

## Concepts

- **Country of origin - Country image is the overall perception of consumers form of products from a particular country** (Nagashima (1970); Roth and Romeo (1992); Parameswaran and Pisharodi (1994))
- **Ethnocentrism - The beliefs held by consumers about the appropriateness, indeed morality of purchasing foreign made products** (A'dorno et al., (1950); Shimp and Sharma (1987))

## Hypothesis

**H1 - Positive relationship between consumer ethnocentrism and intention to buy domestically produced seafood**

**H2 - Negative relationship between consumer ethnocentrism and imported seafood product judgment**

- **Study locations – Hiroshima (126), Osaka(108) and Tokyo (122)**
- **Self-administered structured questionnaire & in-depth interviews**
- **Structure of the questionnaire: Part i = socio-economic information, preferences of seafood buying behavior**
- **Part ii: 10 item Country of Origin Scale (evaluations of various product attributes with respect to a seafood origin (Parameswaran and Pasioli (1994))**
- **10 items of spread over 3 dimensions (general country attributes, general product attributes and specific product attributes)**
- **Country of Origin Scale consisted of a 5 point Likert-scale where 1= not at all to 5 = most appropriate**

■ **Part iii – 10 item CETSCALE (Shimp and Sharma (1987)) and psychometrically validated a scale, which measures perceptions of the appropriateness of buying domestic vs imported seafood products**

■ **Based on the composite scores (possible scores 10-50); respondents were categorized -  $>10 - <29$  = low levels of consumer ethnocentrism,  $30$  = mid level and  $>31 - <50$  high level of consumer ethnocentrism**

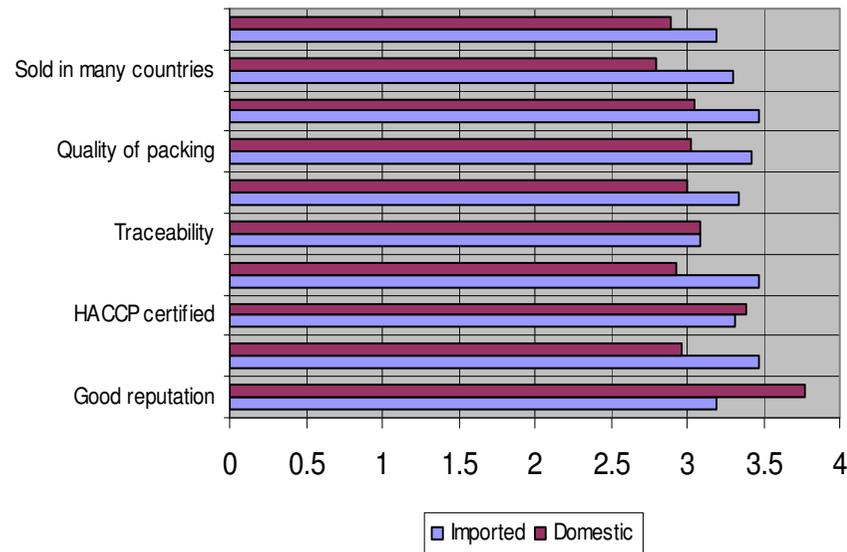
■ **Measure consumer evaluation of product attributes and ethnocentricity**

## Frequently utilized product attributes and % of appearance

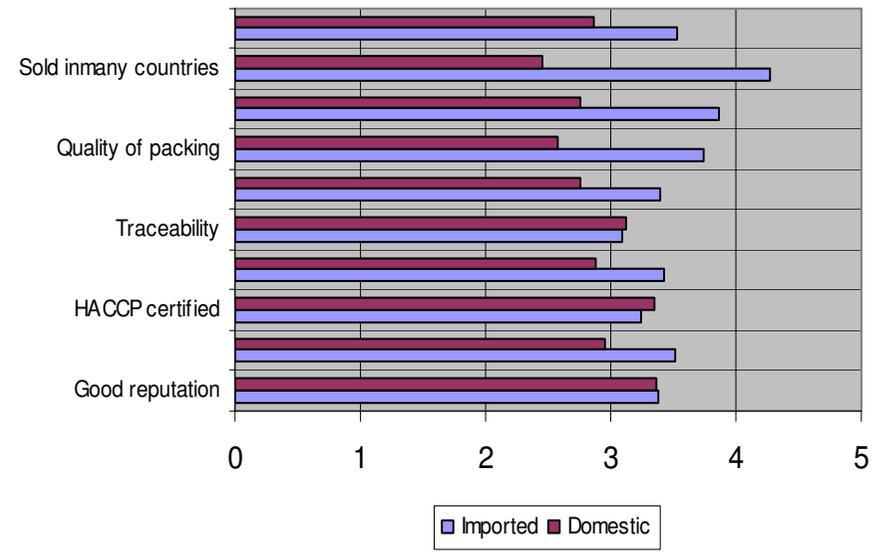
<b>Fresh (Whole fish)</b>	<b>Fresh (sliced)</b>	<b>Frozen</b>	<b>Canned</b>	<b>Dried fish</b>	<b>Smoked</b>
<b>Date of Expiry (100)</b>	<b>Date of Expiry (100)</b>	<b>Price (82)</b>	<b>Price (86)</b>	<b>Quality (92)</b>	<b>Date of Expiry (93)</b>
<b>Price (87)</b>	<b>Price (78)</b>	<b>Date of Expiry (76)</b>	<b>Origin (79)</b>	<b>Price (86)</b>	<b>Price (81)</b>
<b>Quality (color of eyes &amp; gills) (74)</b>	<b>Quality (color of flesh) (69)</b>	<b>Origin (74)</b>	<b>Date of Expiry (76)</b>	<b>Origin (57)</b>	<b>Quality (75)</b>
<b>Traceability (57)</b>	<b>Traceability (61)</b>	<b>Traceability (63)</b>	<b>Traceability (68)</b>	<b>Date of Expiry (52)</b>	<b>Traceability (68)</b>
<b>Origin (42)</b>	<b>Origin (54)</b>	<b>Packaging (61)</b>	<b>Contents (63)</b>	<b>Packaging (32)</b>	<b>Origin (58)</b>

# Comparative analysis of COO effects

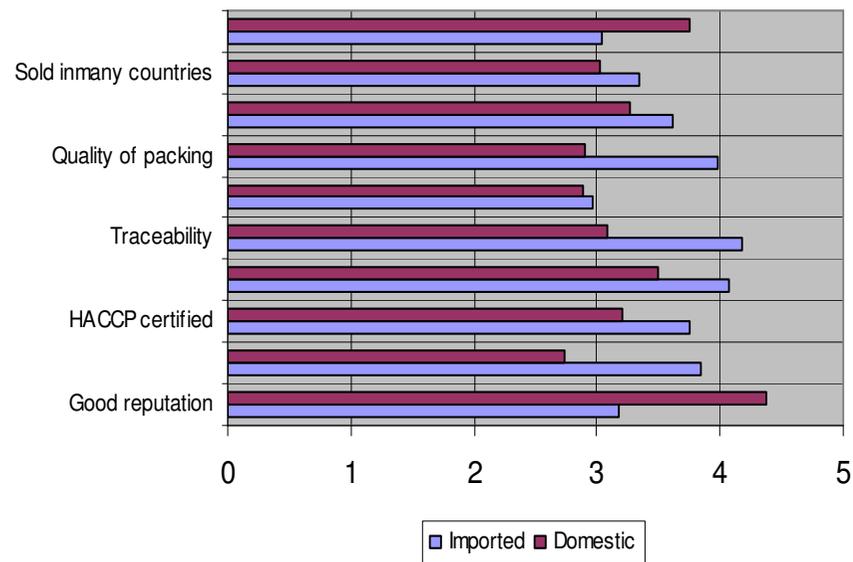
## Hiroshima



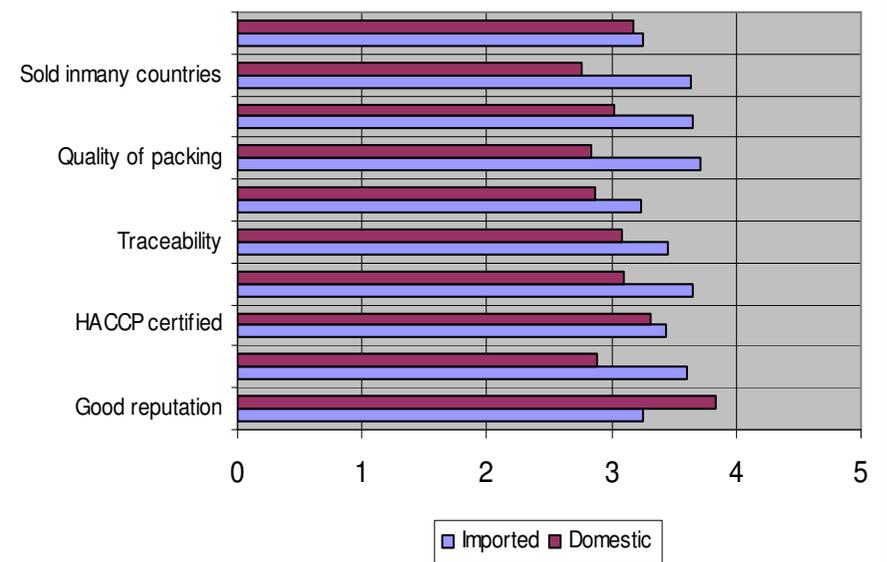
## Osaka



## Tokyo



## Cumulative sample



## Ethnocentrism and Domestic purchasing behavior

Location	Total ethnocentric Score on the CETSCALE (mean)	Minimum	Maximum	Standard Deviation
Hiroshima	<b>25.85</b>	18	37	5.2
Tokyo	<b>27.70</b>	17	48	6.19
Osaka	<b>27.05</b>	19	38	5.39
Cumulative	26.87	17	48	5.59



ii. An analysis of demographic and behavioral patterns related to sushi consumption: A case study of the Hiroshima Prefecture

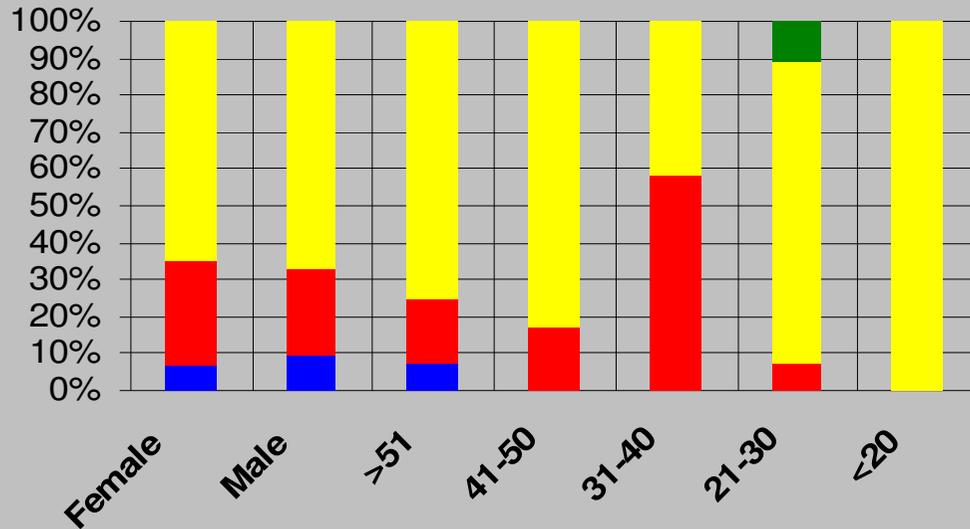
# Objectives

- ❏ To analyze Japanese consumers' sushi consumption habits
- ❏ To find out the impact of demographic characteristics on sushi purchase decisions and attitudes towards sushi
- ❏ To explore the strategic behavior of the sushi businesses in Japan

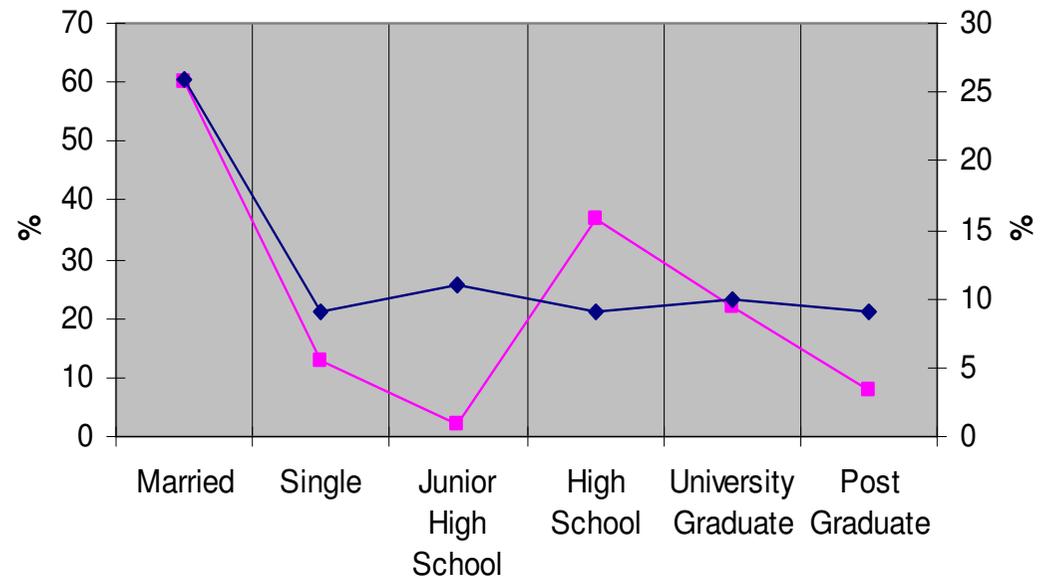
## Method

- ❏ Location – Hiroshima prefecture
- ❏ Sample – 108 randomly selected consumers
- ❏ Data collection tool – structured questionnaire
- ❏ Sample profile – 57% female; 43% male; 85% married, age: 41-50 – 26% and >51 – 45%; education level - 47% high school and 39% graduates; employment – 43% fulltime and 39% part time

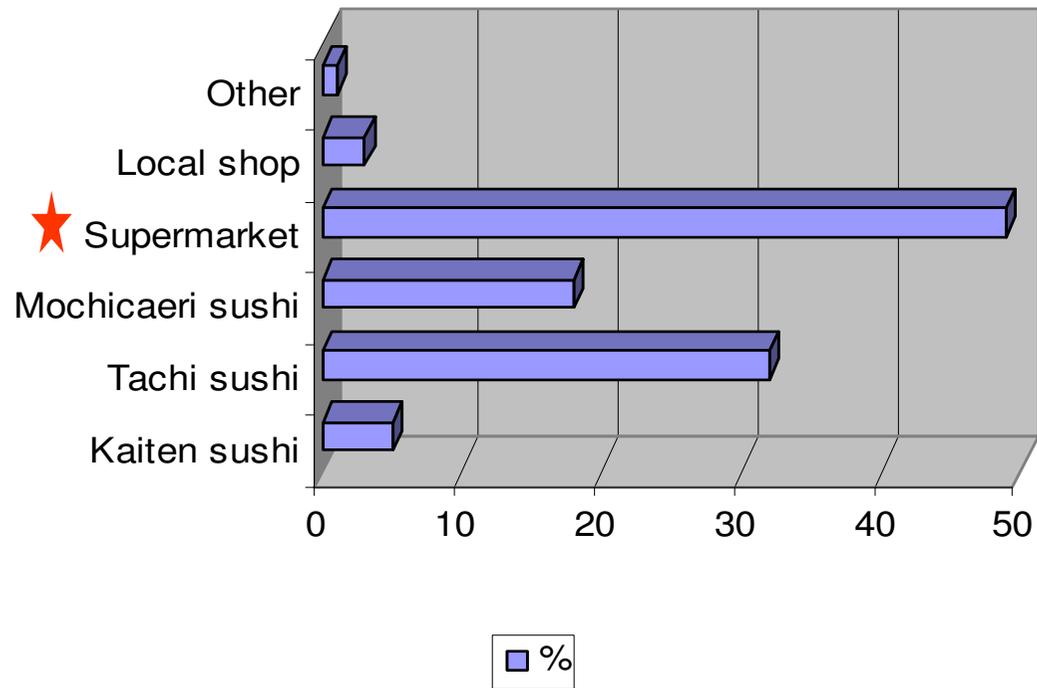
- **Three main types of sushi restaurants were identified**
- **1. Traditional Japanese style sushi bar / Sushi Tei**
- **2. Rotational sushi bar / Kaiten sushi**
- **3. Take away style sushi shop / Mottecaeri sushi**
- **But, most popular for sushi is Super-markets**
- **Home delivery system also available**



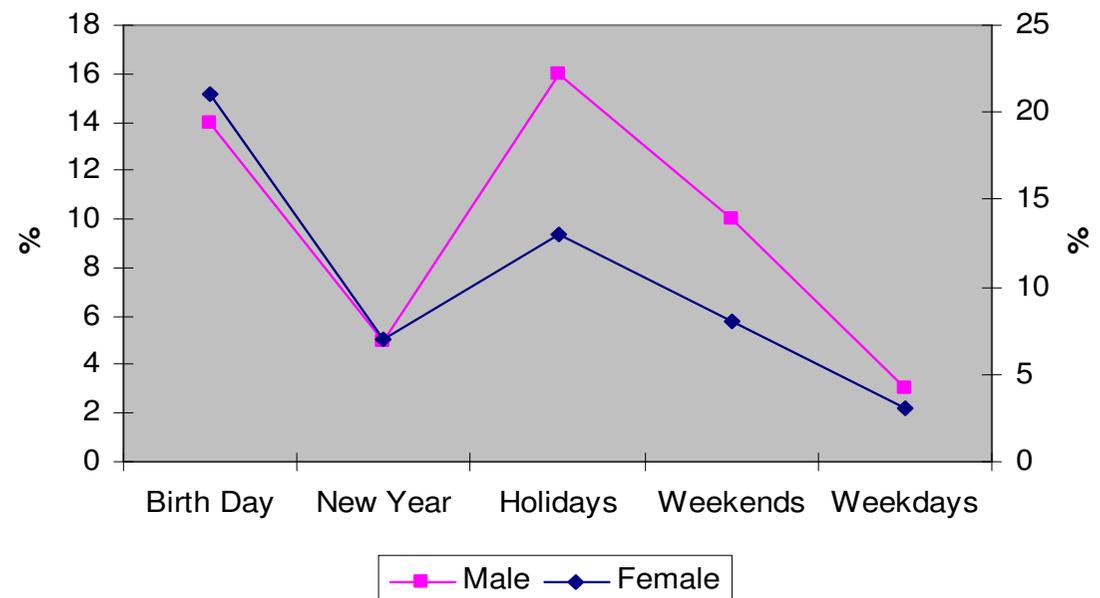
## Frequency of sushi consumption by gender, education and civil status

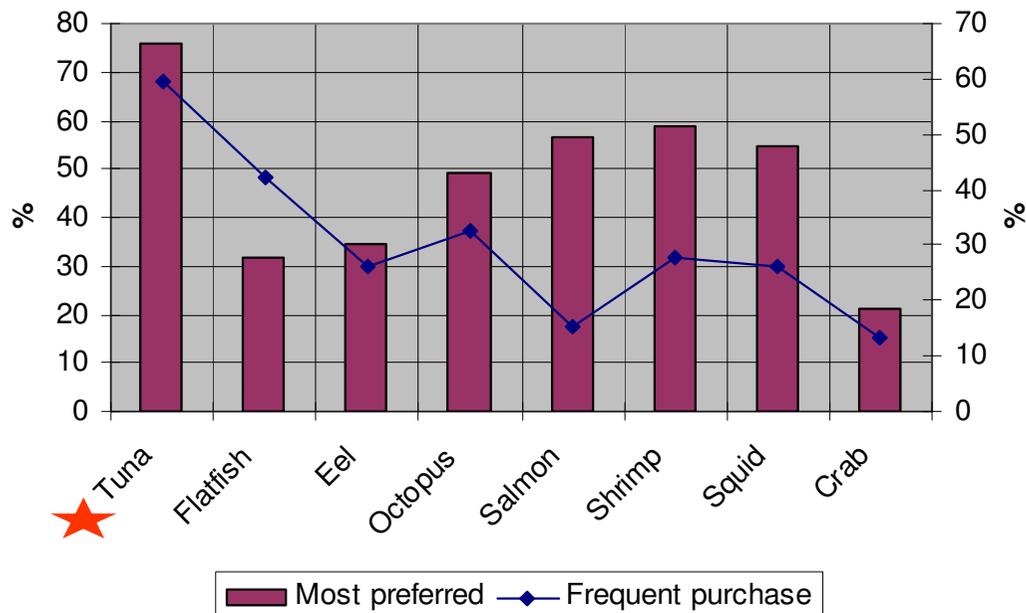


## Consumer preferences When purchasing sushi



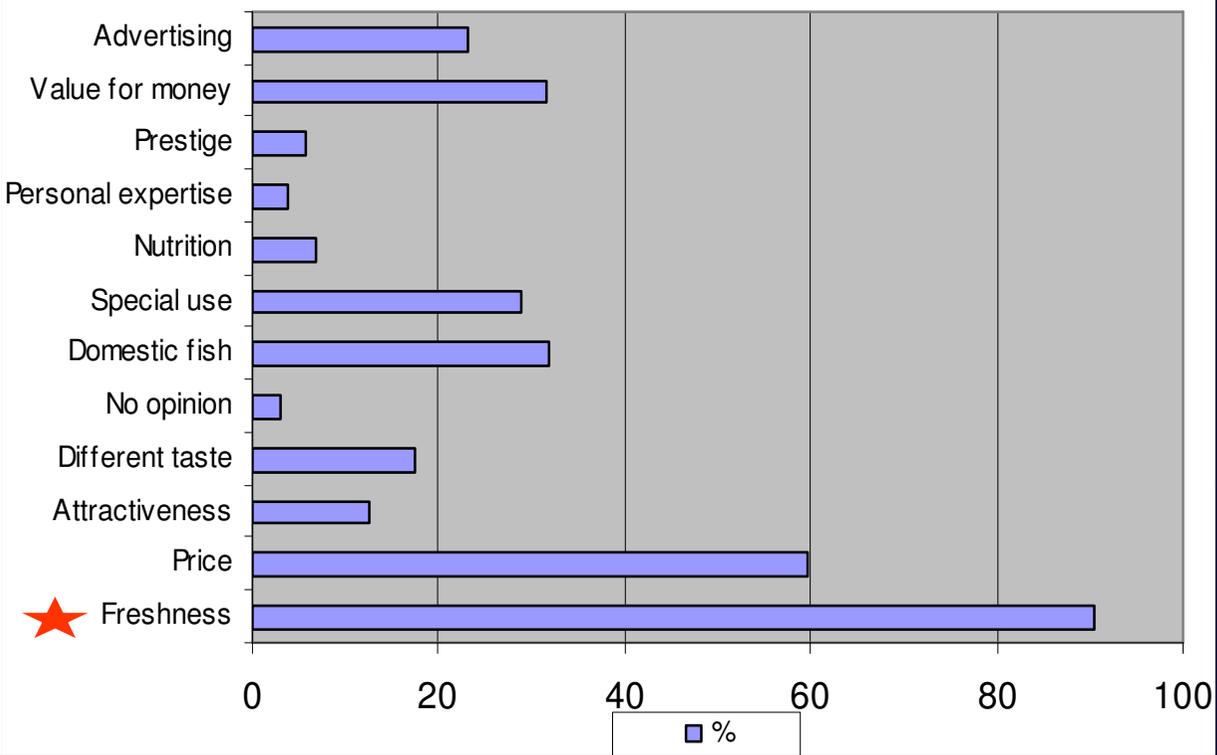
## Consumer preferences Of sushi for different Occasions by gender





**Most preferred and  
Frequently purchasing sushi**

**Factors affecting for  
the sushi purchase**



- ❏ **Technology and chain restaurants have changed the sushi business**
- ❏ **Traditional sushi bars need strategies for dynamic market**
- ❏ **Expansion of Rotational sushi bars; through chain operations, competitive pricing, applying original Japanese menu concepts to a fast food format**
- ❏ **youth (between 21-30 years) prefer modern sushi restaurants with special offerings**
- ❏ **Older age groups (>51 years) prefer traditional sushi restaurants**
- ❏ **sushi is less prominent than other meals of ordinary Japanese people**
- ❏ **The evolution of sushi restaurants is two pronged;**
  - i. **Fashionable club-like restaurants**
  - ii. **Brightly lit family restaurants**
- ❏ **Culinary cross-fertilization between east and west cuisine has created new combinations of sushi**

# Conclusions: Case study of Sri Lanka

- Seafood industry's disproportionate importance
- Structural problems hurdle in the way
- Sri Lankan shrimp producers have greater comparative advantage
- Critical problems for shrimp exports are international price fluctuations, capital scarcity, poor distribution network, natural calamities, low value addition, poor infrastructure, international regulations
- Future possibilities towards prepared and cooked meals
- **Process and product innovation have positive impact on export performance**
- **Public instruments have non significant impact on export performance**
- **Permanent and sporadic exporters suffer from the obstacles outside the country**

## Conclusions (ctd.,)

- ❖ **To overcome barriers - South Asian producers have to diversify both markets and product mix**
- ❖ **Joint venture between India, Sri Lanka and Maldives to mobilize common resources**
- ❖ **Supervisor evaluation has positive impact on organizational commitment**
- ❖ **Organizational fairness is influencing trust in management, intention to stay or leave, evaluations of supervisors, conflict/harmony and job satisfaction**
- ❖ **Commitment improves the motivation, creativity, and satisfaction of workers**
- ❖ **The level of HACCP compliance, no. of employees, capital, and traceability positively correlated to the export penetration index**
- ❖ **sanitation (SANI 1 and 2) negatively correlated to the EPI**

## Conclusions (ctd.,)

- **India, Pakistan and Sri Lanka have a strong position in implementing HACCP and others are progressing**
- **Sub-sector analysis: overall capital building capacity of traders and export processors were better than the fishers**
- **Policy changes and institutions have negative impact on fisher's social capital building**
- **Better livelihood strategies of export-processors help to rehabilitate faster compared with producers and traders**

## Conclusions: Case study of consumer behavior of Japanese market

- Cultural sensitivity and ethnocentrism haven't direct impact on consumer evaluations and evaluation based on product attributes
- Importers have to pay much attention on product attributes rather than cultural barriers and domestic producers have to improve the level of product attributes
- consumer ethnocentrism and intention to buy domestic seafood has positive relationship
- Sushi consumption patterns in Japan seem to closely reflect the evolution of the household's life cycle
- sushi is consumed once a month as an 'expensive treat' for special occasions
- Older age females prefer sushi meals most
- Ready to eat sushi packs of supermarkets are convenient, and economical and price conscious consumers prefer supermarkets most

## Suggestions: Case study of the seafood industry of Sri Lanka

- **Diversification of markets and products**
- **value addition and value creation efforts**
- **Market oriented product mix for Just-in –time purchase**
- **Strengthen the market infrastructure and supportive services (public instruments)**
- **Tap the regional market through SAFTA**
- **Fair treatment for employees and rewards should be based on employee commitment**
- **Rehabilitation should be based on “need analysis”**
- **Vertical cooperation and integration among the stakeholders in seafood production marketing chain**
- **Strengthen the local entrepreneurs in fisheries**

## **Suggestions: Case study of consumer behavior in the Japanese seafood market**

- Low ethnocentric Japanese market demanding quality, regular supplies, Valued, unique convenience seafood meals**
- Domestic seafood suppliers have to be competitive with international supplies**
- Sushi bars have to cater the demand of both young and Aging population**
- Campaigning to improve consumer know-how on food safety and labeling is essential**



*Thank you very much for being here to share  
my research experiences*