



# ECONOMIC OVERVIEW OF THE ATLANTIC HERRING FISHERY

Economic Analysis & Statistics / Policy Sector

Department of Fisheries and Oceans

January 2008



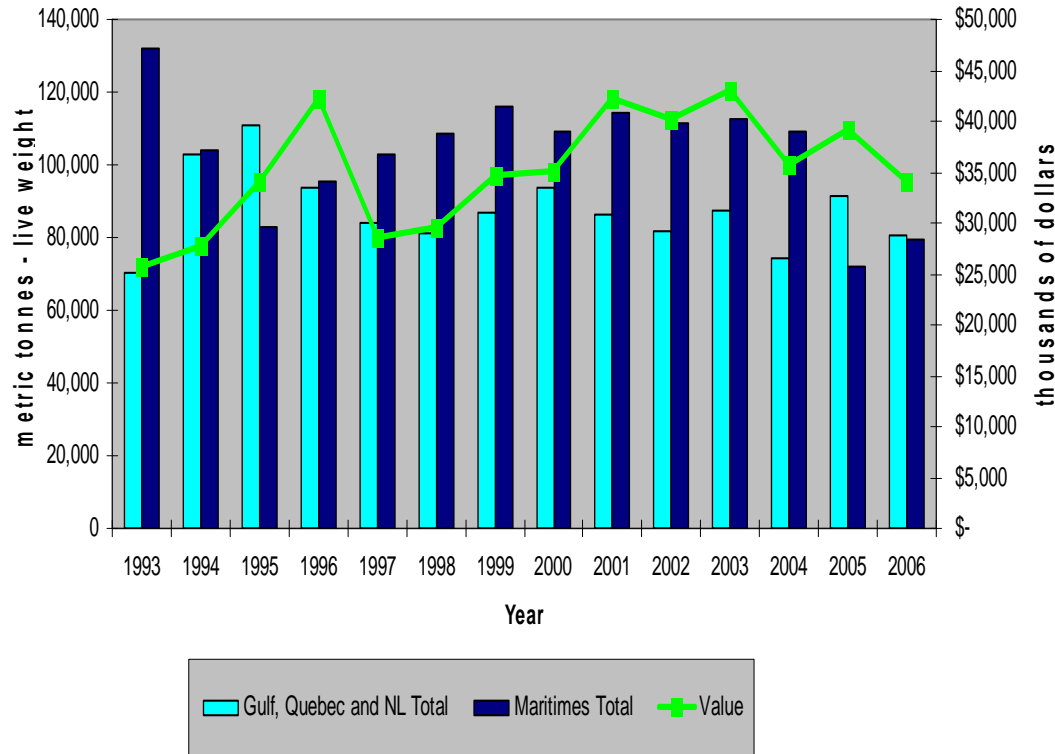
# Overview of Atlantic Herring

- Landings of 160,000 tonnes landed in 2006, reported *ex vesse*/value of \$34 million
  - Average *ex vesse*/price of \$0.21 per kg
- Over 140 processing plants are licensed by the provinces to process herring
  - Insufficient data to determine how many are actually processing herring
- Export value of \$80M from QC, NB, NS, PE, NL
  - Quantity exported was 36,000 tonnes (processed weight)
  - Average exported product price is \$2.19



# Atlantic Herring Landings

Atlantic Herring Landings



Total Atlantic Herring Landings

	Weight (tonnes)	Total Value (thousands)	Price Per Kilogram
<b>93</b>	201,919	\$ 25,759	\$ 0.13
<b>94</b>	207,138	\$ 27,727	\$ 0.13
<b>95</b>	193,702	\$ 34,064	\$ 0.18
<b>96</b>	188,842	\$ 42,331	\$ 0.22
<b>97</b>	186,550	\$ 28,620	\$ 0.15
<b>98</b>	189,984	\$ 29,505	\$ 0.16
<b>99</b>	202,899	\$ 34,792	\$ 0.17
<b>00</b>	203,366	\$ 35,177	\$ 0.17
<b>01</b>	200,545	\$ 42,274	\$ 0.21
<b>02</b>	193,310	\$ 40,174	\$ 0.21
<b>03</b>	200,334	\$ 43,017	\$ 0.21
<b>04</b>	183,445	\$ 35,811	\$ 0.20
<b>05</b>	163,263	\$ 39,282	\$ 0.24
<b>06</b>	159,729	\$ 34,099	\$ 0.21



## 2006 Landings by Vessel Size

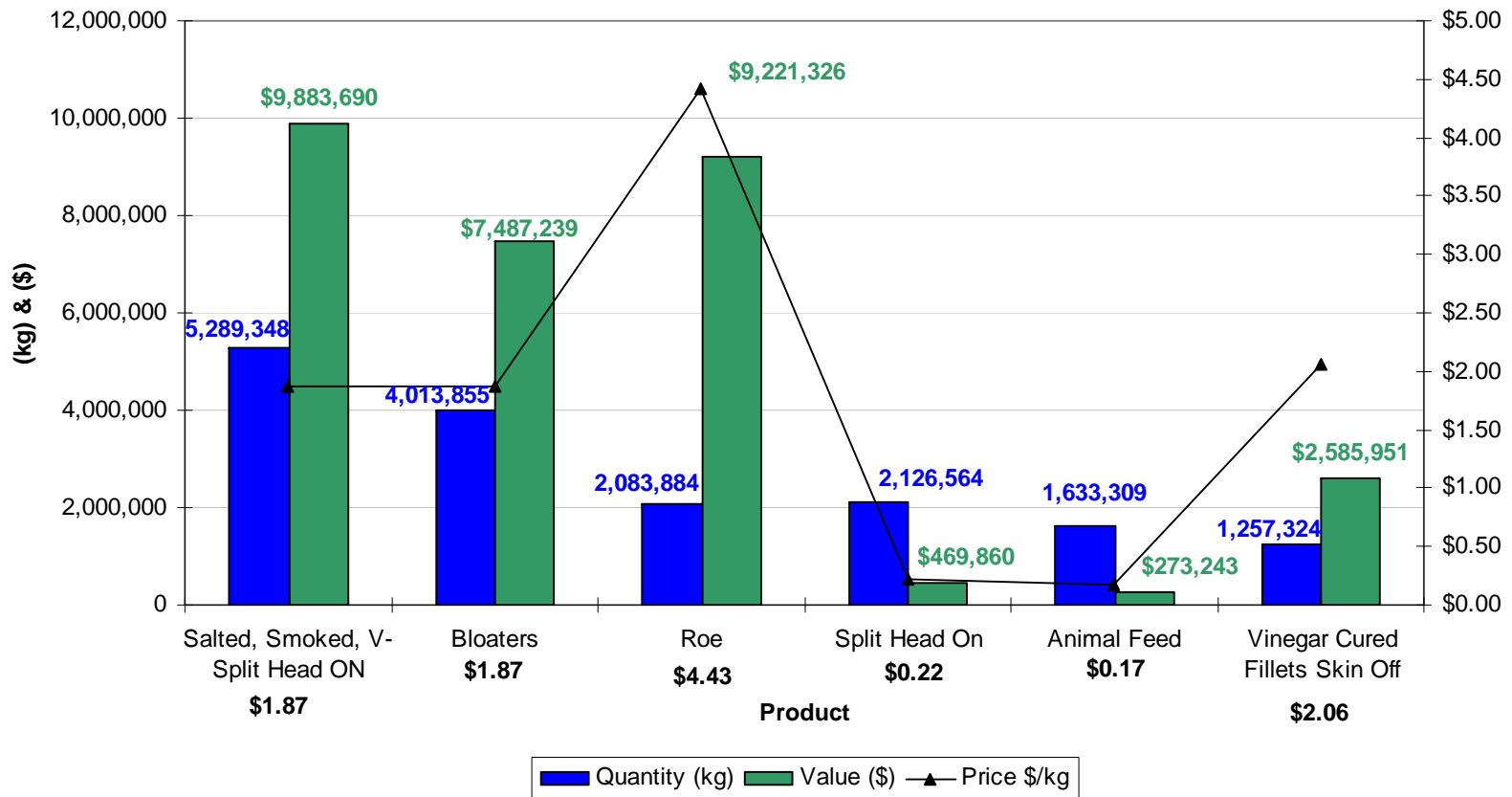
- Approximately 1500 licence holders caught Atlantic herring in 2006
- Herring is primarily a small boat fishery in DFO Gulf and Quebec regions
- On DFO Maritimes region side, almost  $\frac{3}{4}$  of fishery is prosecuted by vessels over 65 feet – the seine fleet

Vessel Length Class	Percent of Landings (Gulf)	Percent of Landings (Maritimes)	Percent of Landings (NL)	Percent of Landings (Quebec)	Overall percent of landings
Not Applicable	1.7%	1.2%	0.0%	0.2%	1.2%
1-34.9 FT	0.7%	1.2%	11.9%	30.0%	3.5%
35-44.9 FT	84.0%	7.3%	22.9%	67.3%	36.1%
45-64.9 FT	4.0%	15.8%	20.6%	2.5%	12.4%
65-99.9 FT	5.7%	42.1%	26.9%	0.0%	26.9%
100-124.9 FT	3.8%	25.6%	17.7%	0.00%	16.7%
125 FT or more	0.0%	6.8%	0.0%	0.00%	3.4%
Total	100%	100.0%	100%	100%	100.0%



# Gulf Region 2006 Herring Processing

### Processed Herring Comparison (2006)



Source: DFO Gulf Region

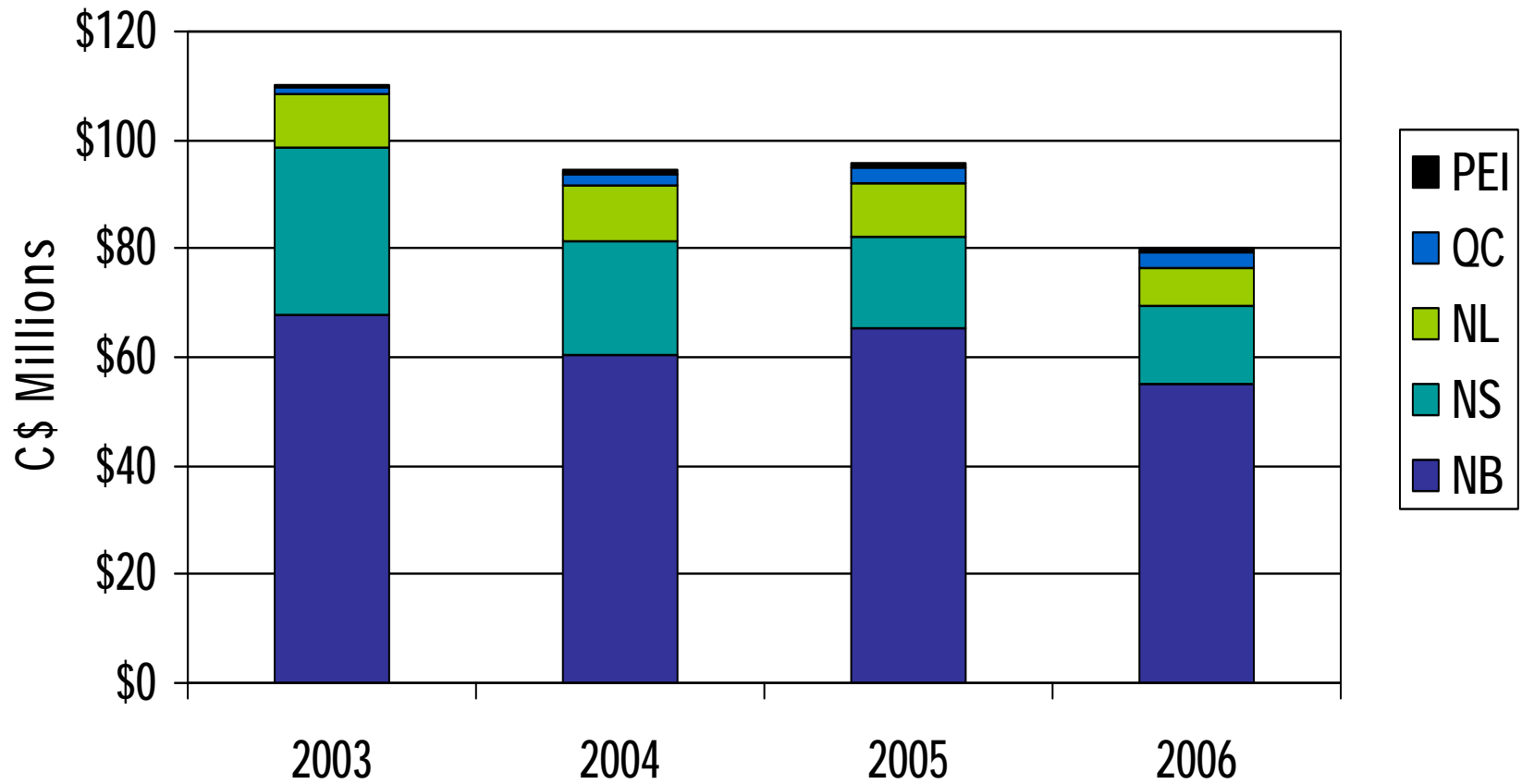


# Herring Exports

- Primary Export Products:
  - Smoked (destination: Caribbean)
  - Roe (destination: Japan)
  - Sardines (destination: U.S.)
  - Pickled/Cured (destination: U.S.)
  - Canned (destination: U.S.)
- Highest Export Price is obtained on smoked roe (\$12/kg)
  - Exported primarily to Japan and China
  - Mostly produced in B.C., although a small amount was exported from NS, NL and QC in 2006

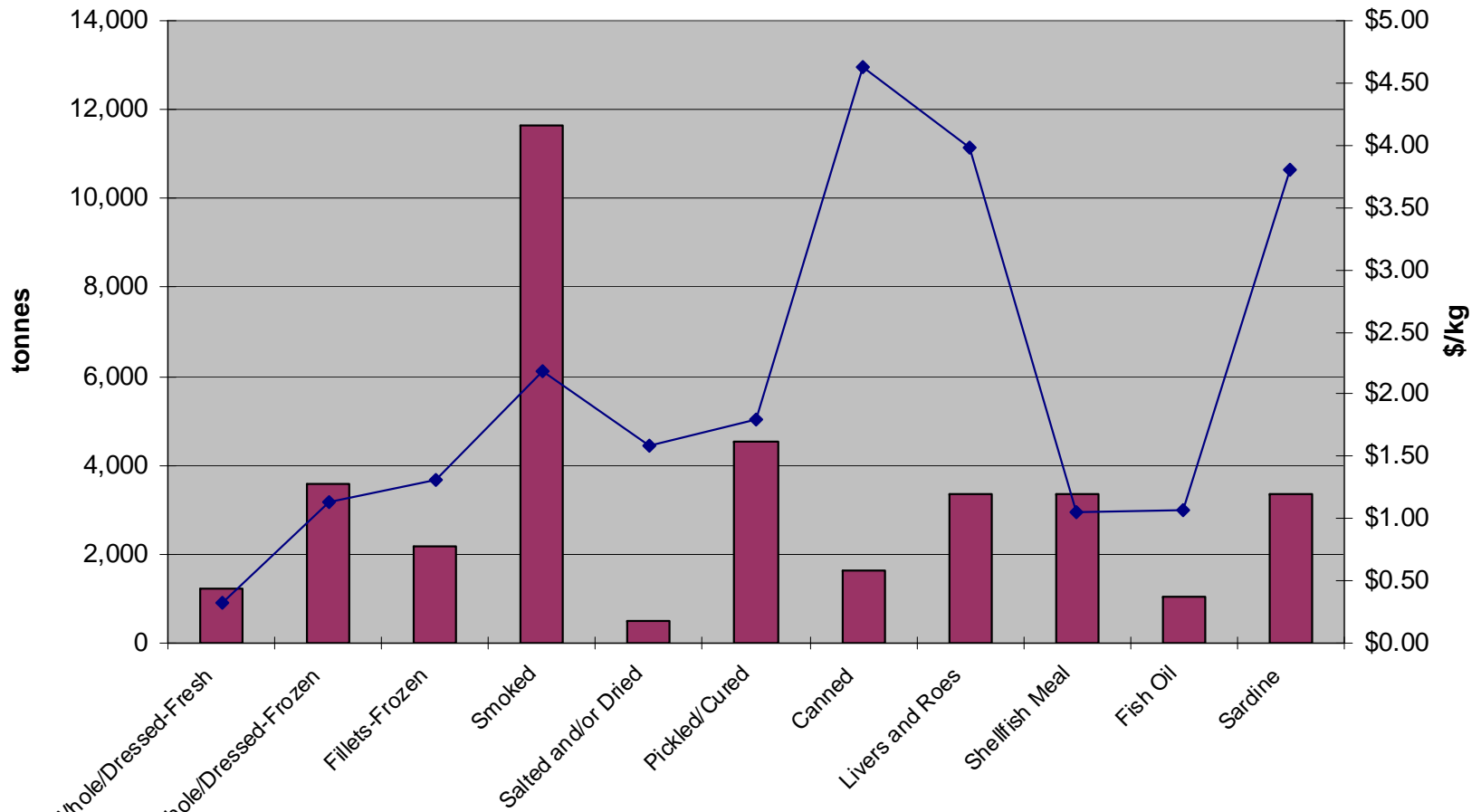


# Provincial Atlantic Herring Exports





# Atlantic Herring Export Products (2006)

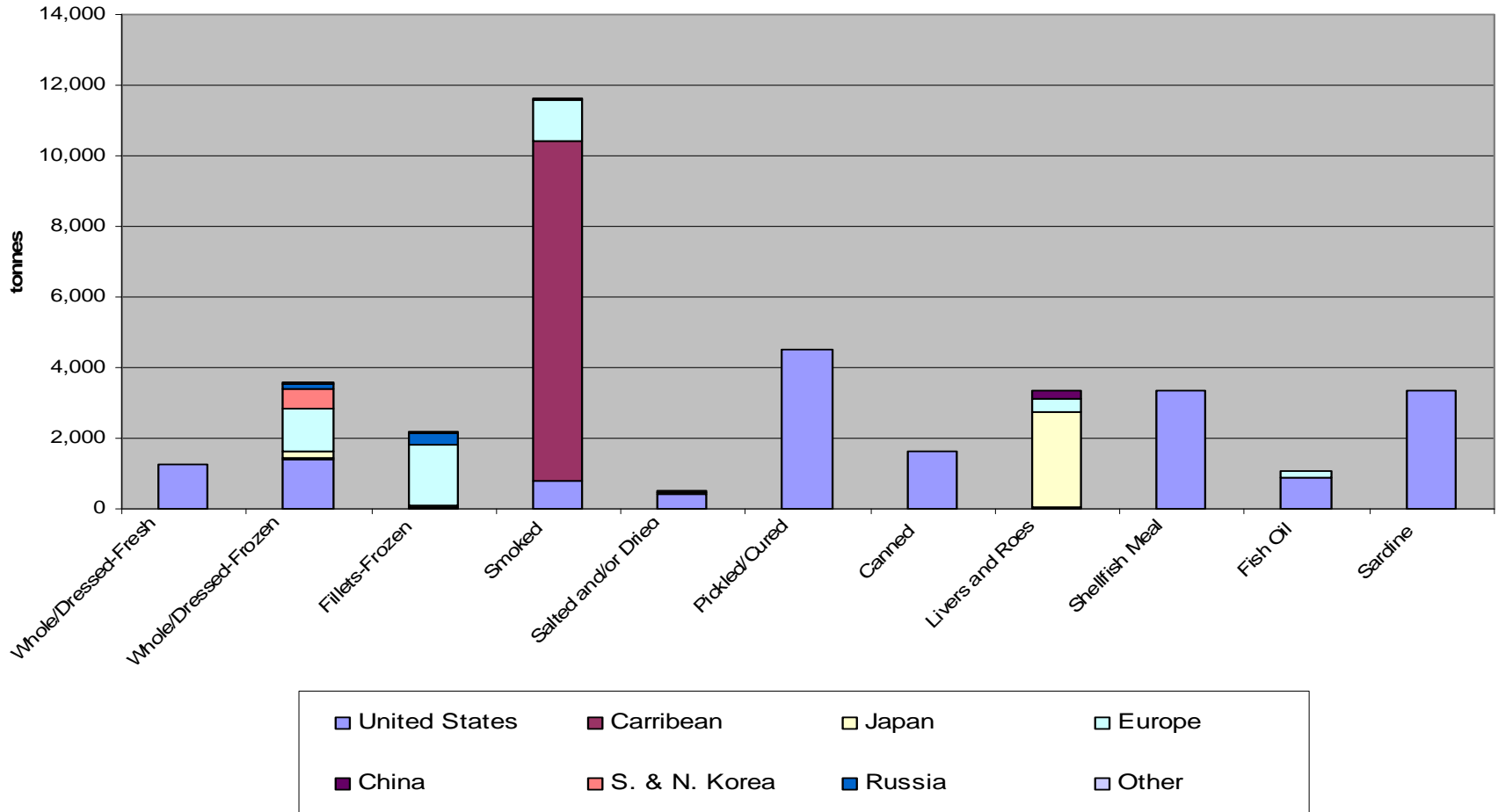


Export Volume

Canada Export Price

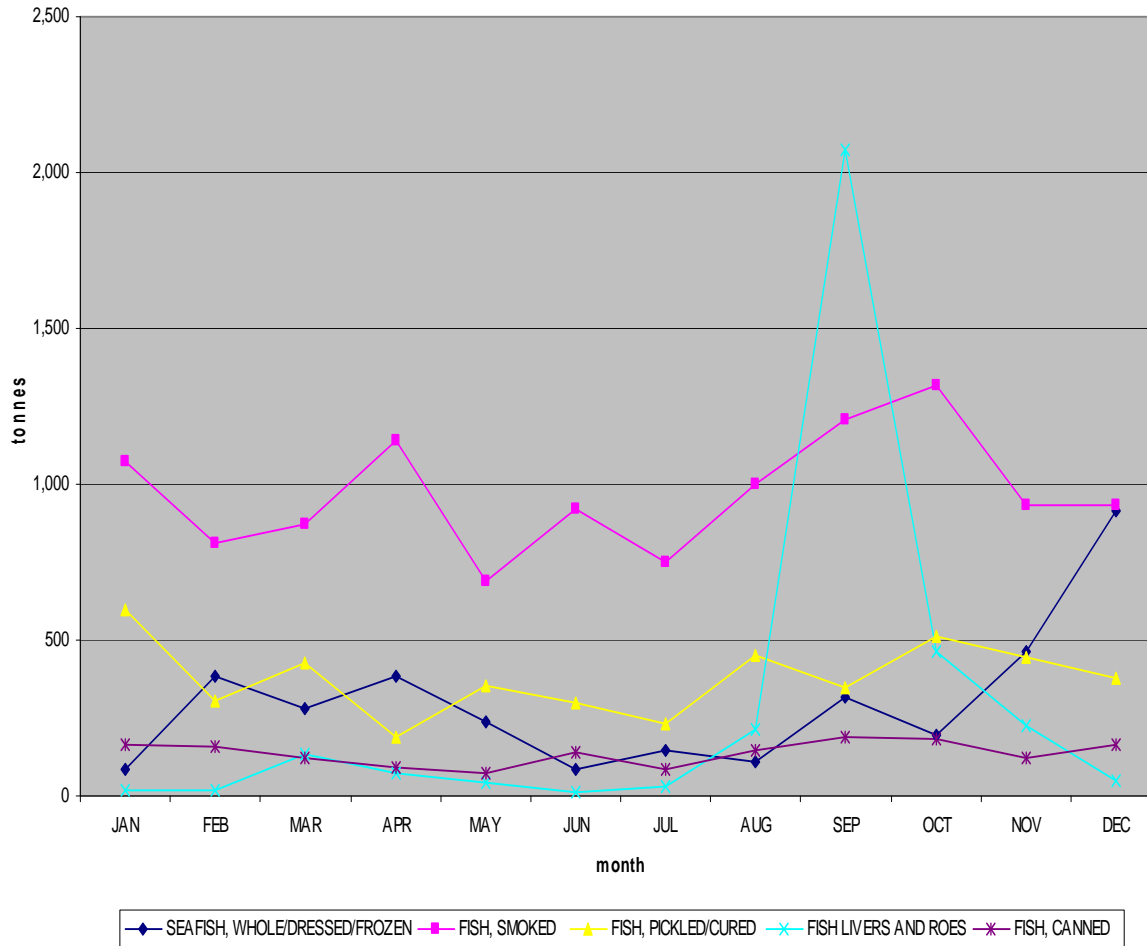


# Atlantic Herring Export Markets (2006)





# Monthly Exports of High Value and Volume Herring Products



**Note:**

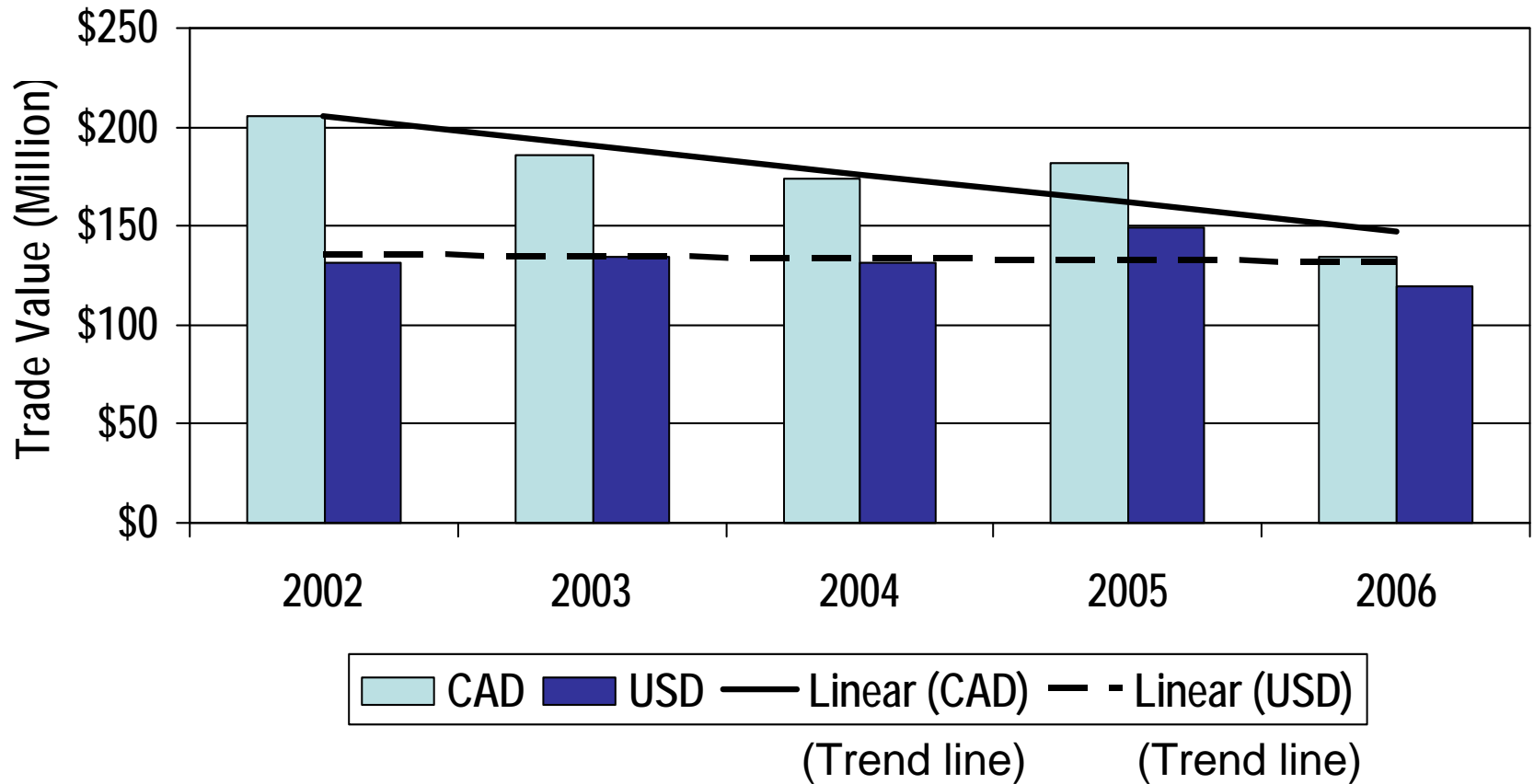
- Price per kilogram undergoes little change for, fish pickled/cured and fish smoked.
- Price per kilogram peaks in April for fish, canned, with a price drop in May.
- Price per kilogram is fairly constant for sea fish, whole/dressed frozen with the exception of a peak in price during September and October.
- The fish livers and roes price per kilogram undergoes significant price fluctuations over the year.

Product Type:	Weighted Average \$/kg
SEA FISH, WHOLE/DRESSED/FROZEN	\$ 1.14
FISH, SMOKED	\$ 2.18
FISH, PICKLED/CURED	\$ 1.79
FISH LIVERS AND ROES	\$ 3.98
FISH, CANNED	\$ 4.63





# Impact of the Rising Loonie on Herring Fishery

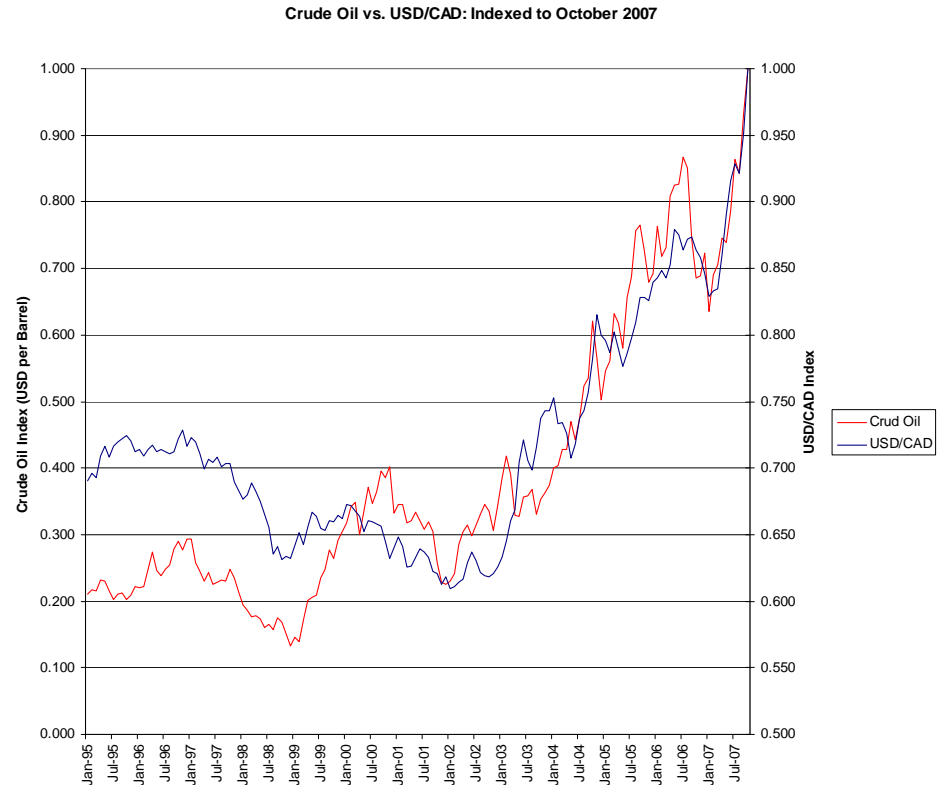


Note: includes Pacific herring



# Rising Oil Prices and Canadian Dollar

- High crude oil prices twice impact seafood sector
  1. Increases operating costs
  2. Canadian dollar tracks crude oil prices, but at lower rate
    - Fuel prices increase 4x faster than CAD purchasing power
    - Higher dollar results in lower export revenues





## 2004 Gulf Inshore Herring Fleet Average Vessel Economic Profile

Days at sea	83
Days fished	82
Average crew size	3
Number of fishing enterprises	2344

Quantity of inshore herring landings	71,910 kg
Value of inshore herring landings	\$17,333
Average price (\$/kg)	\$ 0.24
% of fishing revenues from inshore herring landings	29%

Total fishing revenues	\$60,422
Operating and Maintenance Expenses:	
Fuel	(\$5,858)
Other Expenses	<u>(\$36,205)</u>
Total Operating and Maintenance Expenses	(\$42,063)
Gross operating income	\$18,359
<i>less: Depreciation</i>	<u>(\$ 6,827)</u>
Net operating income	\$11,532
<i>less: Interest expense</i>	<u>(\$ 2,691)</u>
<b>Net income before taxes</b>	<b>\$ 8,841</b>

- Source: Costs and Earnings Survey 2005
- Operating and maintenance expenses relate to fishing operations/activities, i.e. all fisheries (main fishery and other fisheries) that the vessels were involved in during 2004.
- This table presents average reported values from the Costs and Earnings Survey, 2004, and not the administrative data from the regional DFO catch and effort database.

Note: Diesel prices in Canada have increased by 41% since the end of 2004



# Maritimes Seine Fleet Costs and Earnings

	<b>2001</b>
Food Herring	\$ 38,827
Herring Roe	\$ 34,836
OSS	\$ 34,715
Other	\$ 43,998
<b>Total fishing revenues</b>	<b>\$ 152,376</b>
<b>Total operating and maintenance expenses</b>	<b>\$ 116,138</b>
<i>includes: fuel, oil, grease</i>	\$ 6,037
<b>Gross operating income</b>	<b>\$ 36,238</b>
less: Insurance	\$ 6,000
less: License	\$ 5,000
less: Other fixed costs	\$ 1,000
less: Total debt expenses	\$ 18,225
<b>Net income before taxes</b>	<b>\$ 6,013</b>

Note: diesel fuel price have increased by 78% since the end of 2001

Debt is estimated to be approximately \$400,000

Source: OECD study on the Transition to Responsible Fisheries



## Potential Areas for Further Study

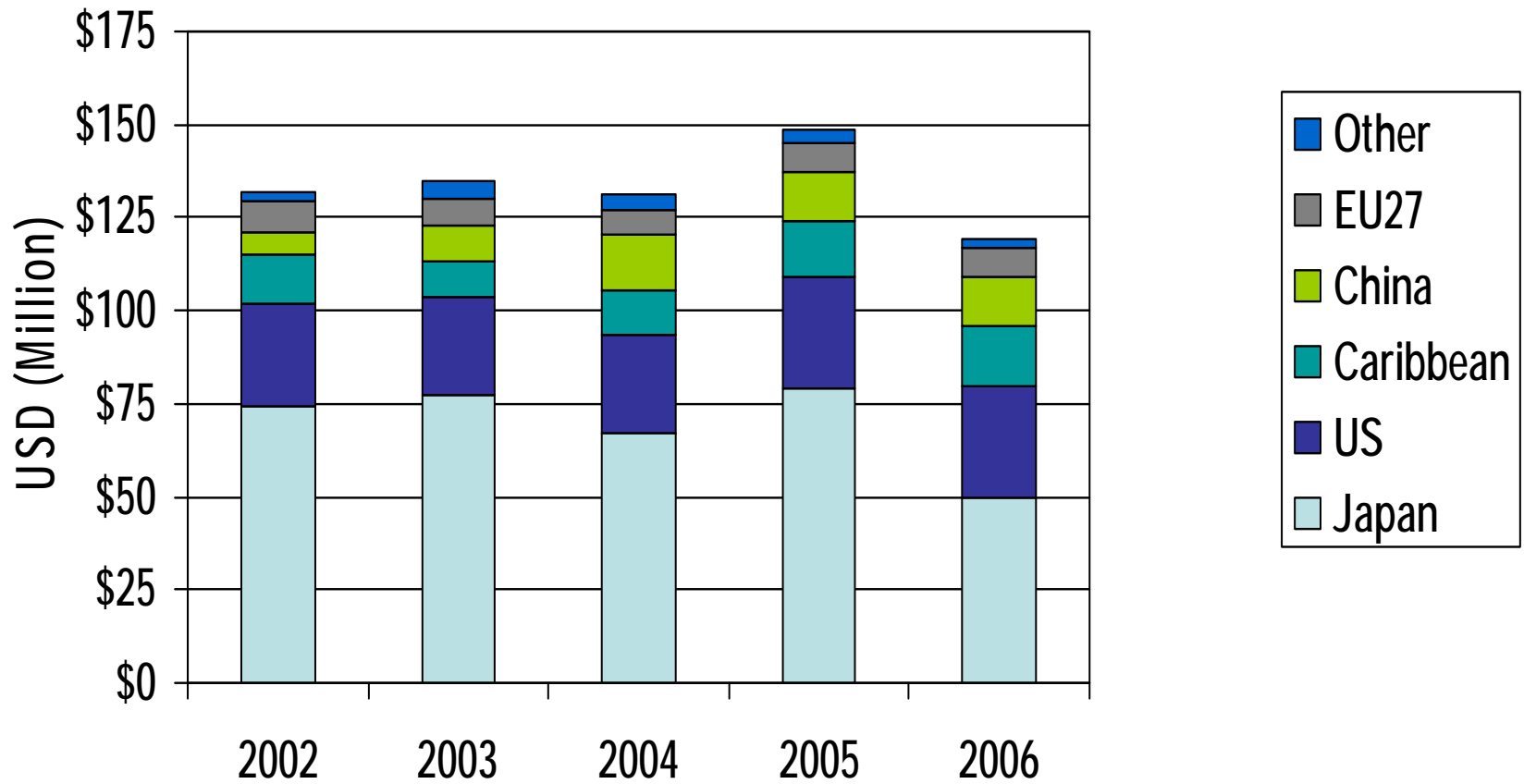
- Herring as bait
- Processing statistics
- Domestic consumption
- Update cost and earnings data for different herring fleets
- Bio-economic modeling



# Appendix: Charts including Pacific Herring

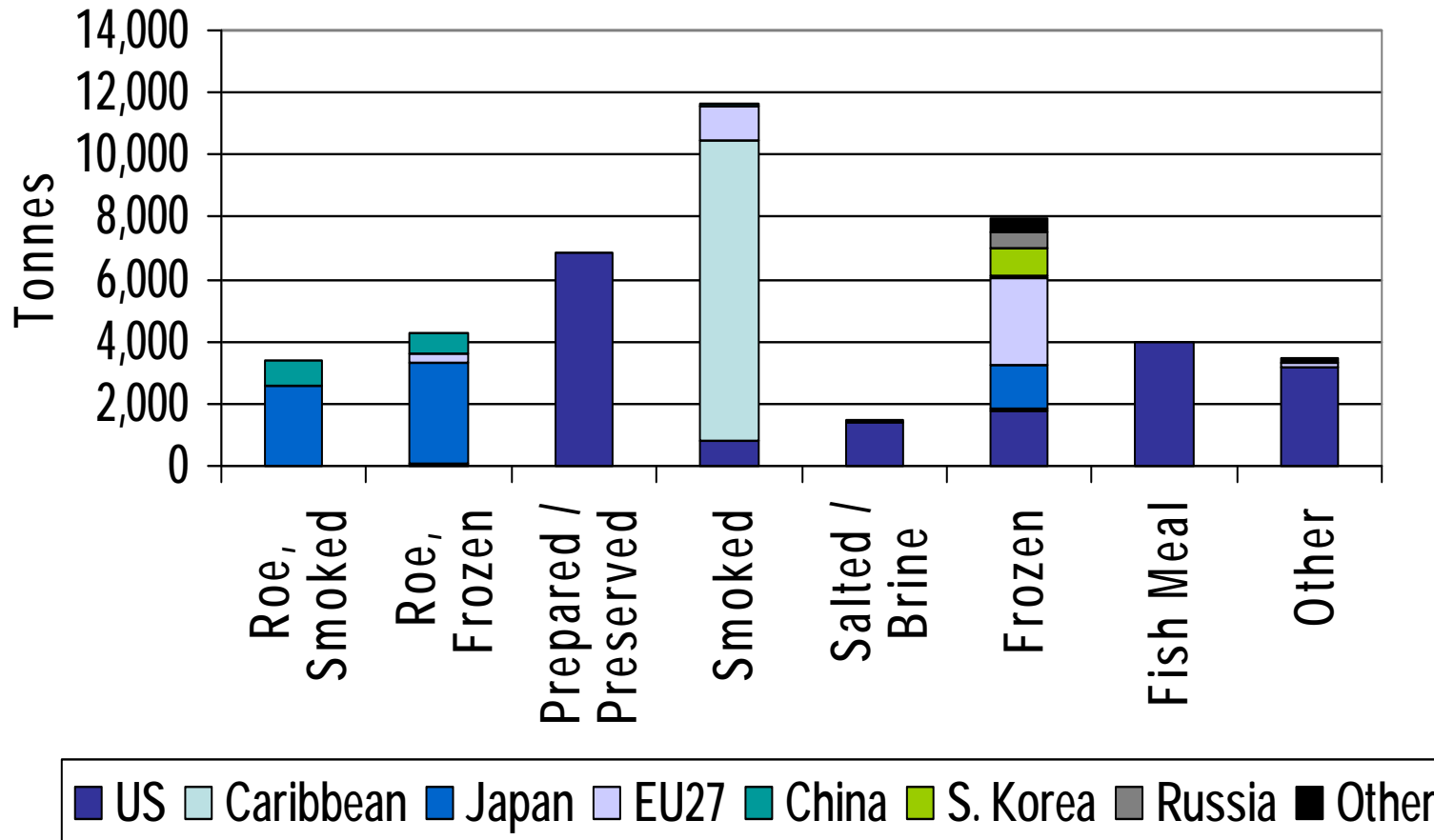


# Canadian Herring Export Markets



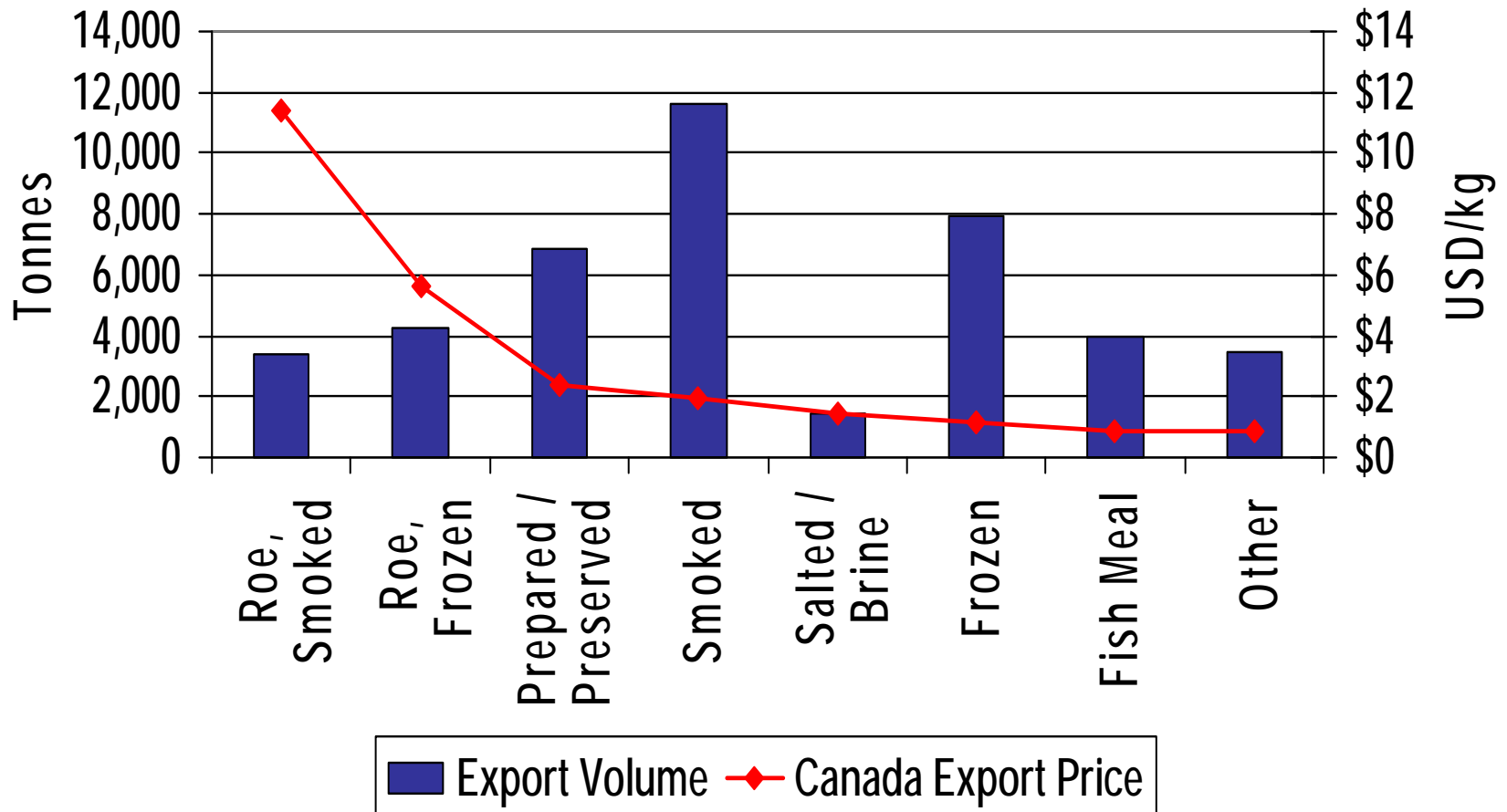


# Canadian Herring Export Markets (2006)





# Canadian Herring Export Products (2006)





# Provincial Herring Export Products (2006)

