

# Market Power in the Food Chain

By

Vinus Zachariasse and Frank Bunte

OECD Conference

6-7 February 2003

The Hague

## Research questions

- do Dutch food processing and retail companies abuse their market power
- position of chain links in Dutch agribusiness and retail
- definition of market power
- price transmission in meat and potatoes
- risk sharing in potato chain

## Shares in consumer expenditure in Dutch agribusiness (%)

	<u>Agriculture</u>		<u>Processing</u>		<u>Distribution</u>	
	1990	1997	1990	1997	1990	1997
Dairy	54	46	17	23	28	32
Meat	40	36	16	23	44	42
Arable produce	13	13	50	55	37	31
Fruit and vegetable	35	40	8	8	57	52
Flowers and plants	53	59	0	0	47	41
Total	25	22	33	35	43	43

Source: De Bont et al (2000).

## Net income as a share of consumer expenditure in Dutch agribusiness (%)

	<u>Agriculture</u>		<u>Processing</u>		<u>Distribution</u>	
	1990	1997	1990	1997	1990	1997
Dairy	30	19	5	7	13	10
Meat	10	14	8	9	4	3
Arable produce	3	2	16	23	18	17
Fruit and vegetable	8	5	1	1	4	5
Flowers and plants	16	15	0	0	2	2
Total	8	7	6	8	9	8

Source: De Bont et al (2000).

# Market power: imperfect price transmission

1. Price changes are not fully transmitted
2. Time lag between price adjustment in stages
3. Asymmetry in reaction to price shocks

# Results of price asymmetry studies

	Test method					
	all methods	first differences	summation first differences	error correction	threshold methods	other methods
Number of tests	197	93	47	31	10	18
Symmetry	102	30	36	17	2	17
Asymmetry	95	63	11	14	8	1
Asymmetry (%)	48	68	23	45	80	6

Source: Meyer and Von Cramon-Taubadel (2002).

## Final price effects of positive and negative price shocks at the producer level (guilders per kilo)

Product	Chain level	Shock	Price effect	Shock	Price effect
Pork	Farm	-0,27	-0,27	0,30	0,42
	Processing		-0,33		0,43
	Retail		-0,00		0,41
Beef	Farm	-0,19	-0,33	0,20	0,20
	Processing		-0,34		0,00
	Retail		0,02		0,08
Poultry	Farm	-0,05	-0,04	0,05	0,32
	Processing		0,01		0,52
	Retail		0,03		0,45
Table potatoes	Farm	-0,08	-0,09	0,10	0,10
	Retail		-0,07		0,01
Chips	Farm	-0,07	-0,08	0,10	0,10
	Processing		-0,01		0,00
	Retail		-0,00		0,00

Source: Bunte et al. (2003).

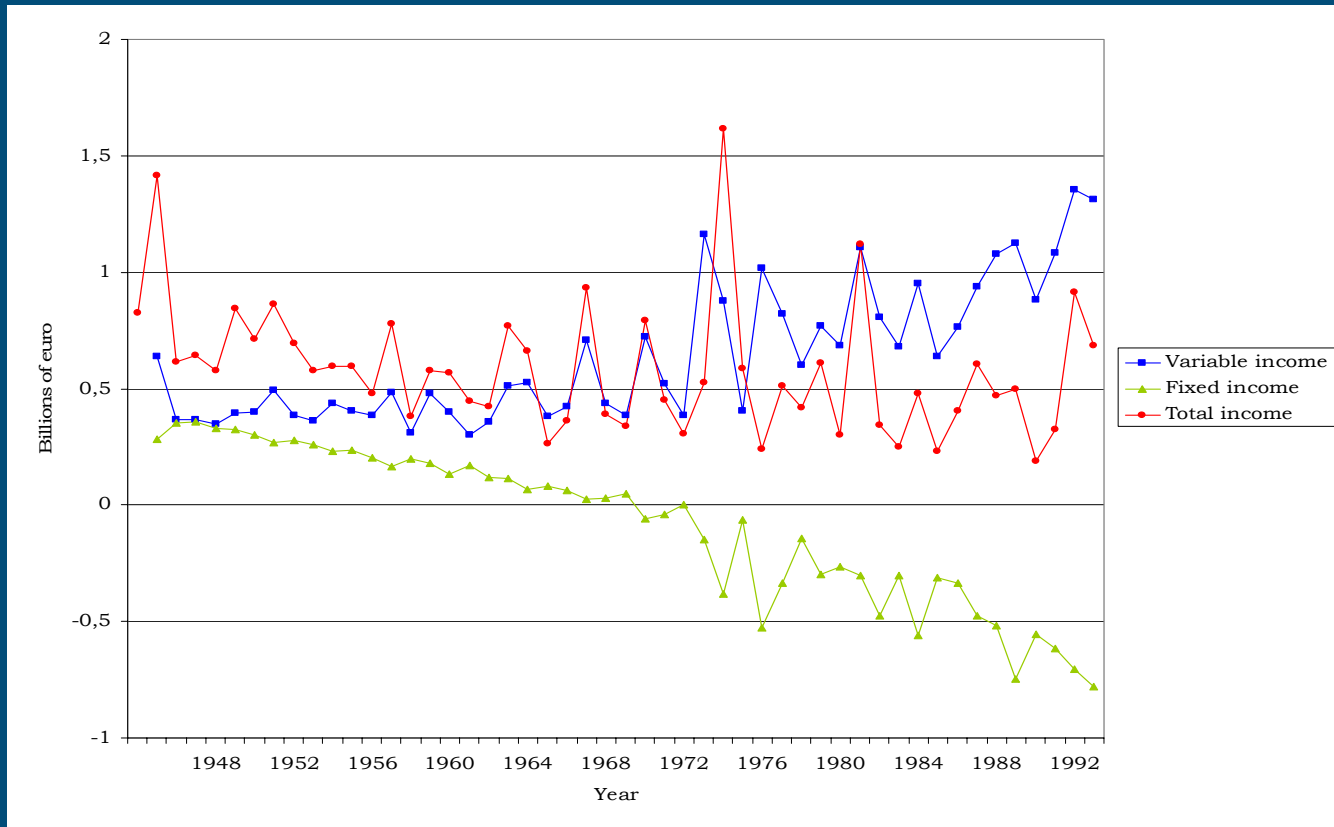
# Independence test

	Pork	Poultry	Chips
Retail	No	No	No
Wholesale / Processing	Yes	No	Yes
Farm	No	Yes	No

Source: Bunte et al (2003).



# Farmer income from potato production



# Policy recommendations

1. Limited evidence for exercising market power
2. Retailers tend to level off price shocks upstream
3. Evidence for a shift in income risk to farmers for table potatoes

## Concerns on price formation

1. Price levelling and negative price asymmetries enlarge the burden of negative price shocks for farmers
2. Shift in income risk to farmers increase farmers' vulnerability

## Improvement of the price formation

- More price competition at processing and retail level
- Governmental intervention may be criticised
- Opportunities for farmers and others:
  - hedging / future markets
  - participation in strong governed chains

## Price formation in a broader context

- Price information is critical subject of corporate social responsibility of different chain partners
- Focus not just on Profit and Planet, but on People-dimension as well