

# **The Dairy Check-Off and What's at Stake**

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# Objectives

Present overview of generic dairy advertising in U.S.

Examine how economists evaluate generic dairy advertising

Present results of recent economic analysis of national program



# Brand Advertising



Individual firm's effort

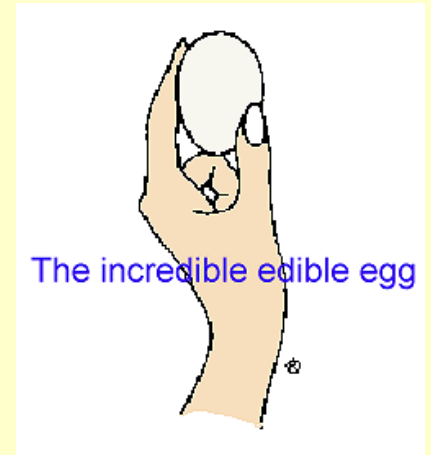
Heterogeneous product

Focus on specific attributes

Primary purpose: gain market share



# Generic advertising



Cooperative effort

Nearly homogenous product

Disseminate information about underlying attributes of the product

Purpose: strengthen demand for commodity

# Brief background on generic dairy advertising

Before 1983, generic dairy advertising voluntary

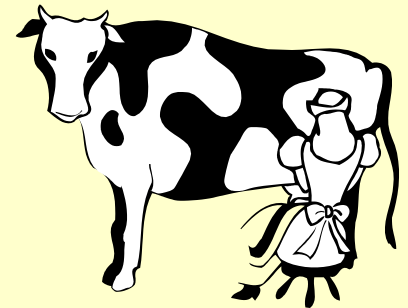
In 1983, Congress passed a law requiring:

15 cents/cwt tax on milk marketings in U.S.

min. of 5 cents funds National Dairy Board

max. of 10 cents funds state organization

raised \$254 million in 2002



# Measuring the effectiveness of generic advertising programs

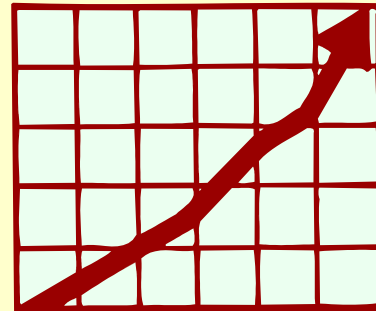
Effectiveness measures:

Increased market demand

Increased price

Benefits > costs

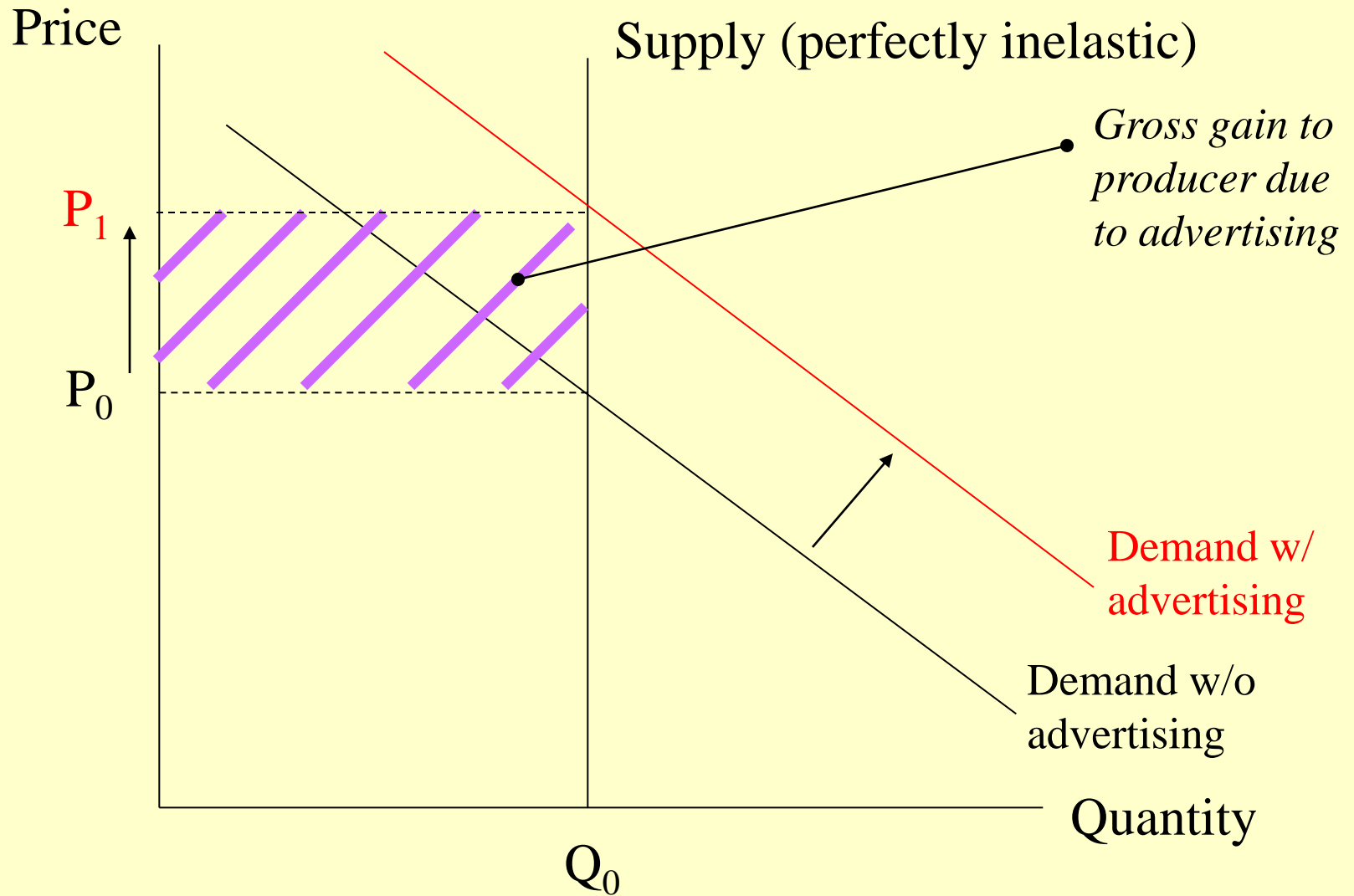
Reduced govt purchases



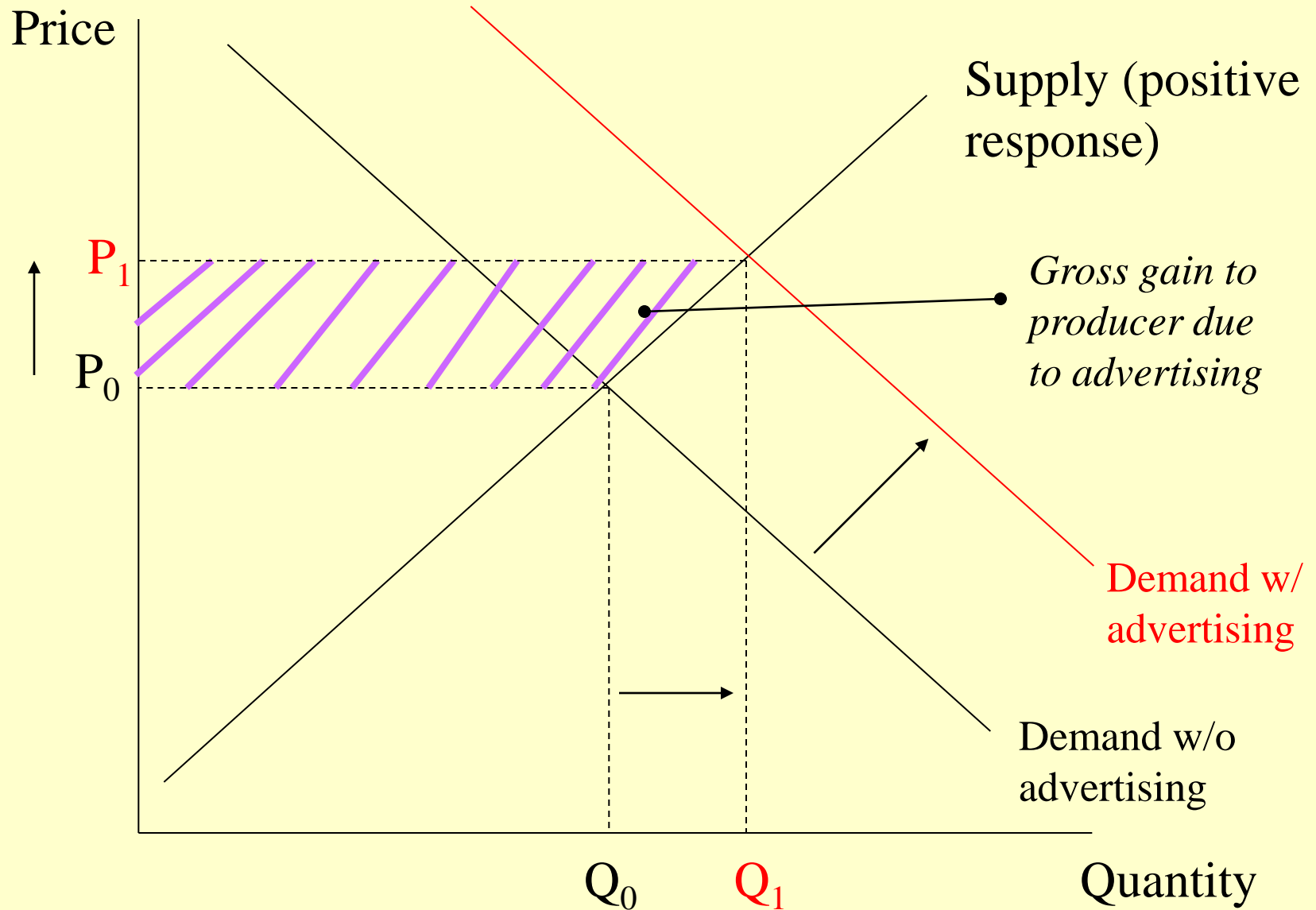
# Economic impacts of advertising

- Impacts depend upon mkt supply response
  - No supply response
  - Positive supply response
  - Infinite supply response

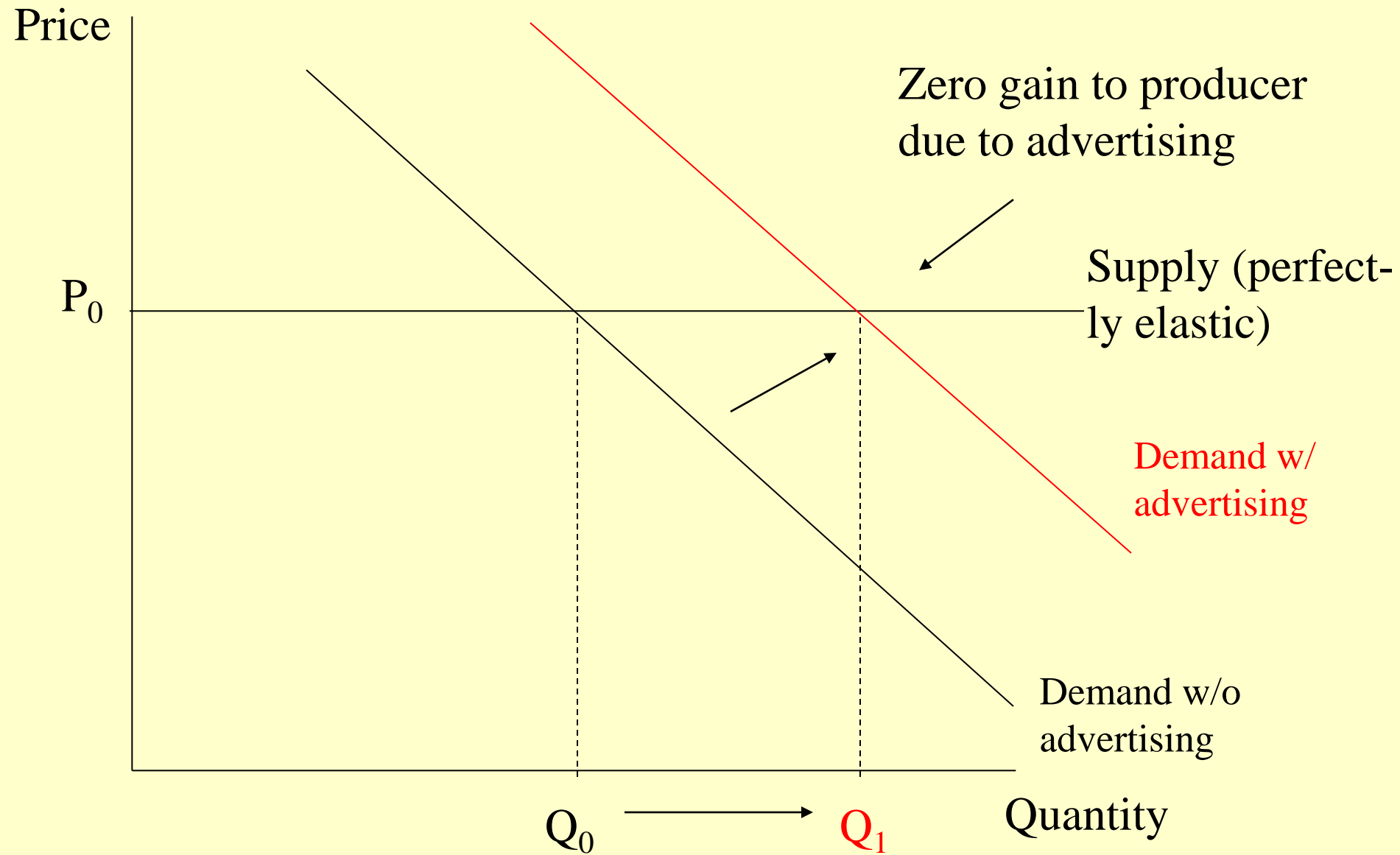
# Impact of advertising w/ no supply response



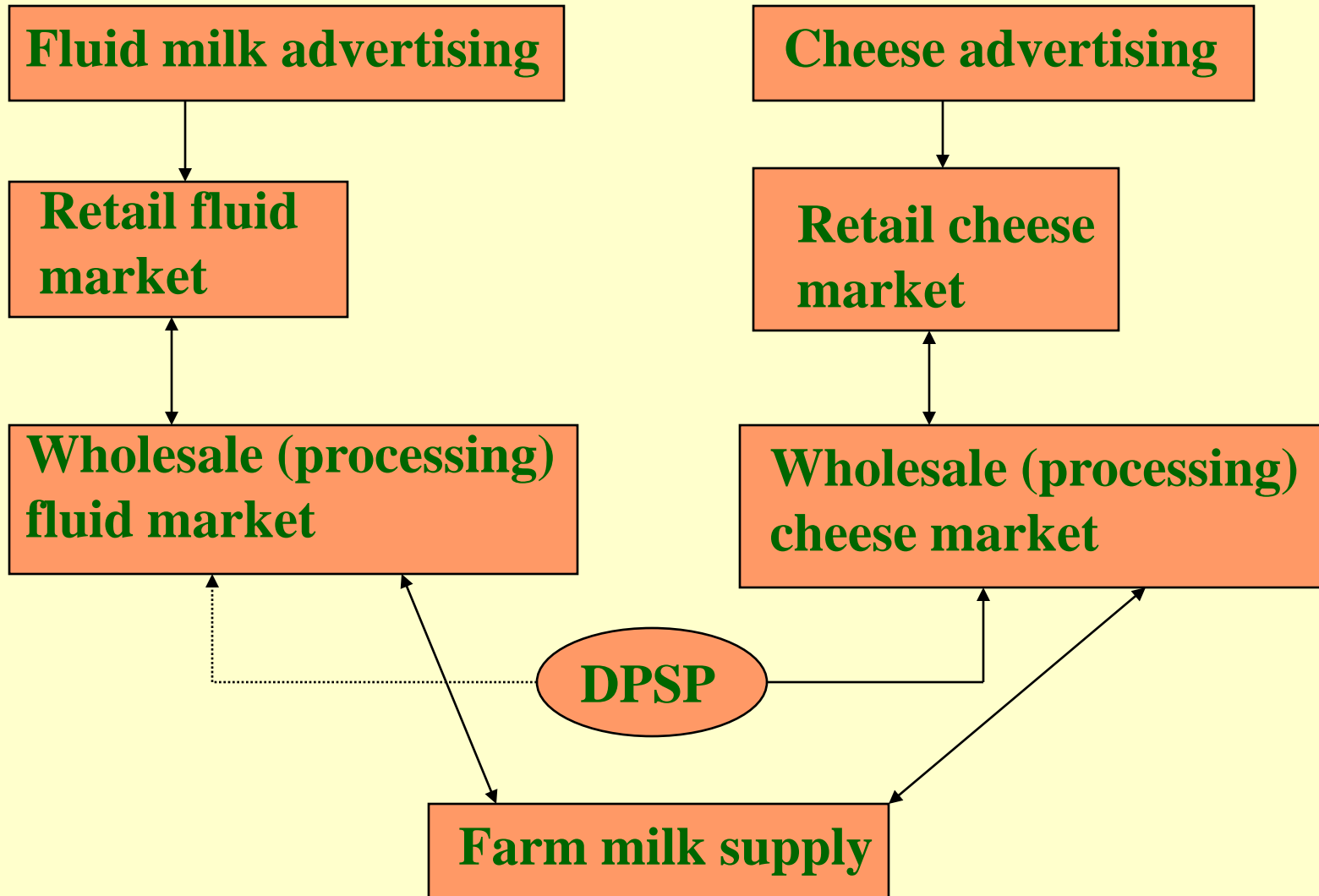
# Impact of advertising w/ positive supply response



# Impact of advertising w/ infinite supply response



# Overview of aggregate dairy industry model



# Econometric approach

Uses statistical techniques along with data (time series or cross-sectional)

Estimates shift in demand due to promotion (i.e., “promotion elasticity”)

Estimates net impact of other factors on demand (i.e., other “elasticities”)

Accounts for supply response to higher price

# Return on investment (ROI) estimation

Based on econometric elasticity estimates

“Average” return based on simulation of two scenarios:

Baseline--market situation with promotion

Alternative--market situation without promotion

“Marginal” return based on two scenarios:

Baseline--market situation with promotion

Alternative--market situation with small change in promotion

Promotion benefits = increase in revenue due to promotion

Promotion costs = increase in cost due to promotion

ROI = promotion benefits divided by promotion costs

# Per capita milk and cheese demand depends on:

Retail own price

Retail price of substitutes

Per capita disposable income

Current and past generic (and brand) advertising expenditures

Seasonality variables

Expenditures on food consumed away-from-home

Percent of population under 6 years old (for fluid milk only)



# Econometric results (selected elasticities, 1975-99)

Variable		Fluid milk	Cheese
Own price		-0.170	-0.320
Income	0.180	0.305	
Food away from home		-0.180	0.495
Branded advertising		0.015	0.032
Percent of population < 6		0.610	NA
<b>Generic advertising</b>		<b>0.051</b>	<b>0.015</b>



Figure 3. Percentage of U.S. population six years old and younger, 1975-99.

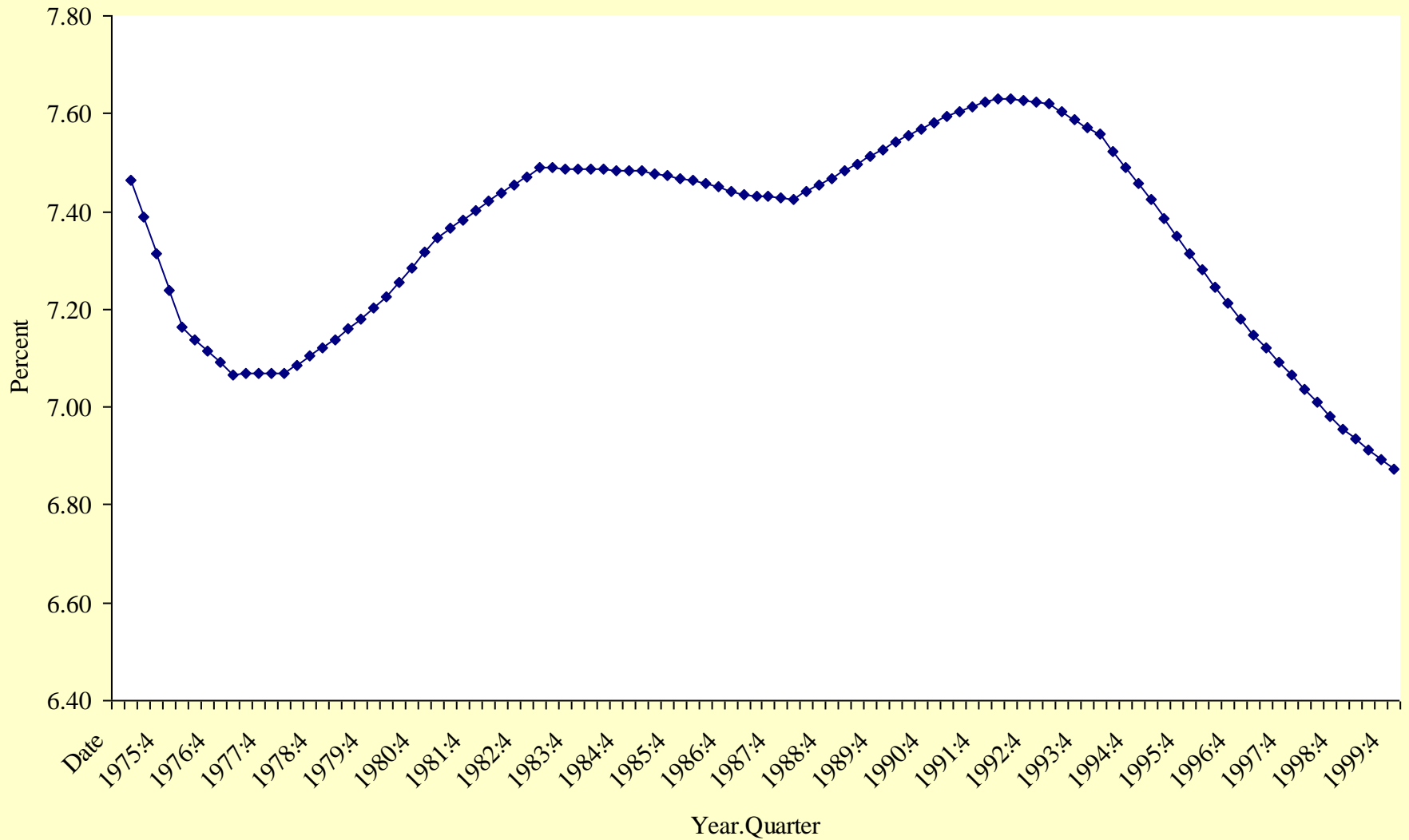
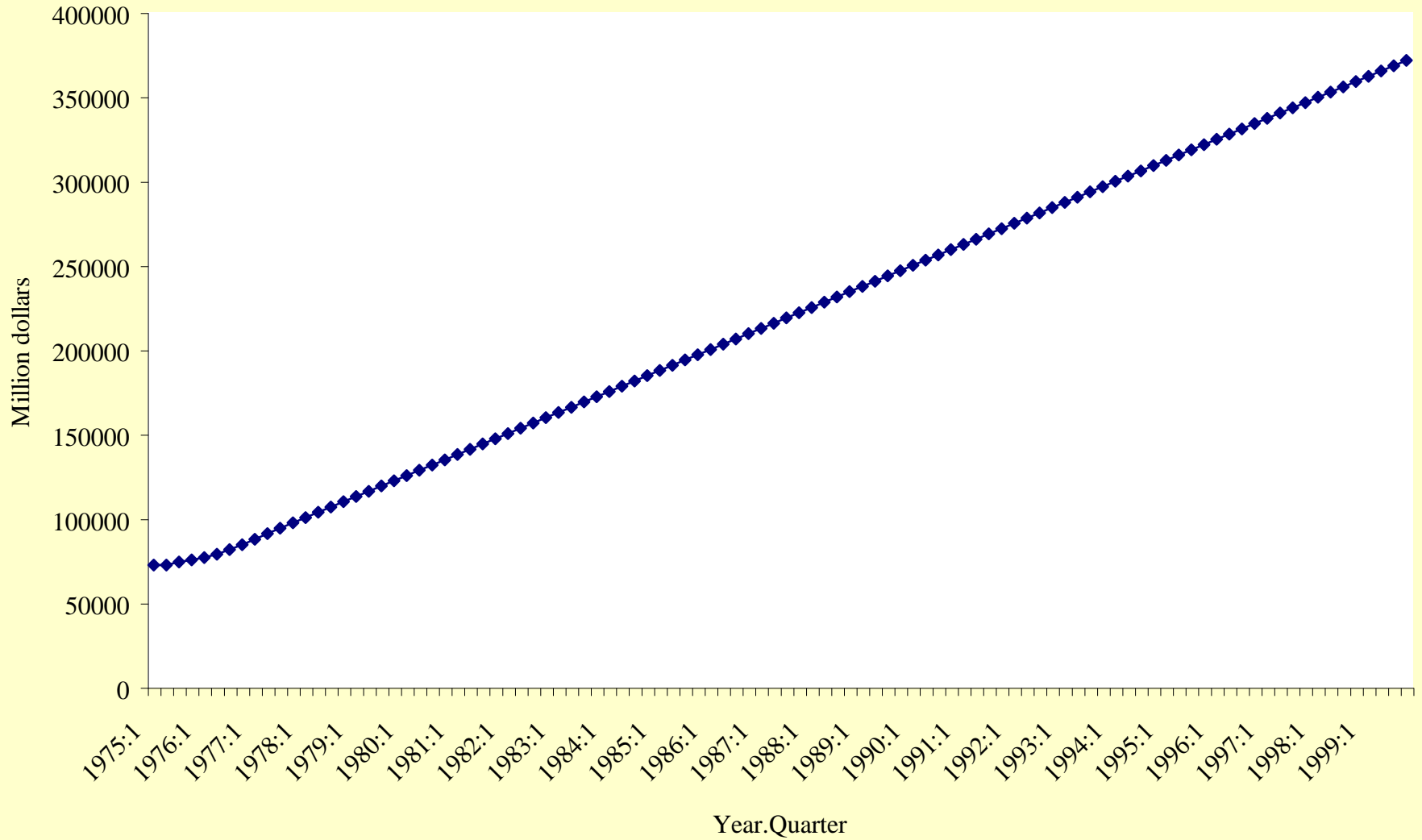
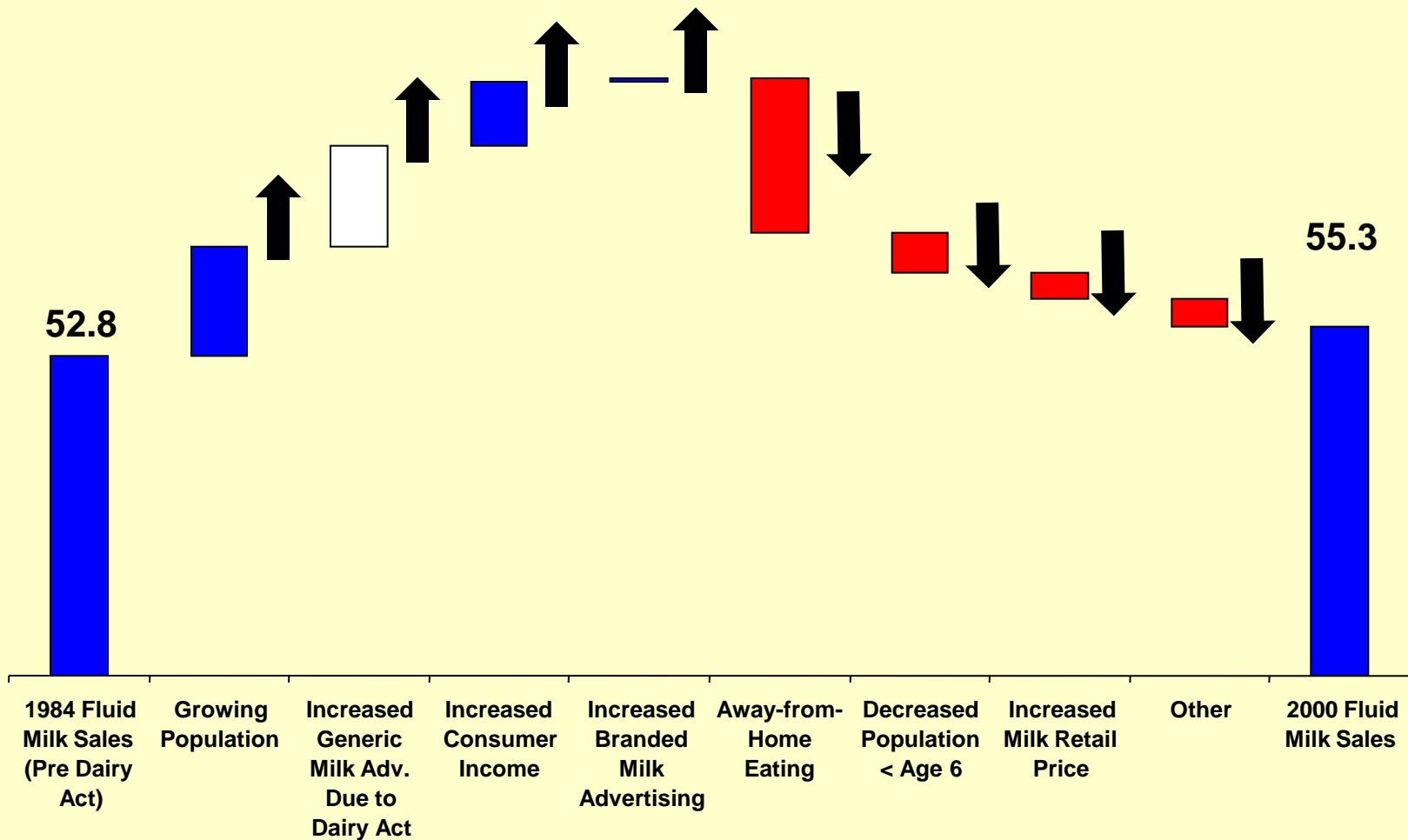


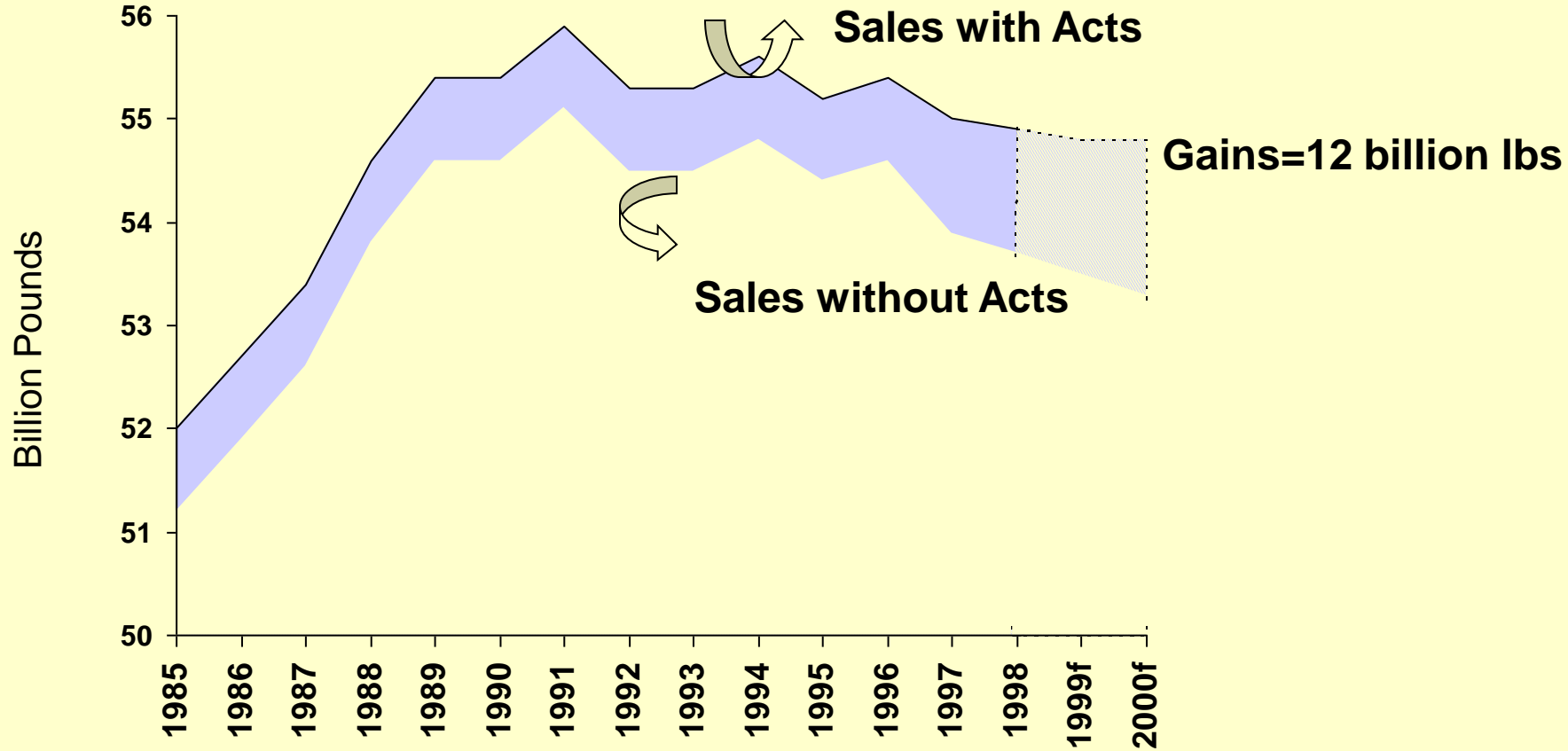
Figure 4. Expenditures on food consumed away-from-home in the U.S., 1975-99.



# Fluid Milk Sales Gains (Billion Pounds)



# Fluid Milk Sales Due to Dairy and Milk Acts

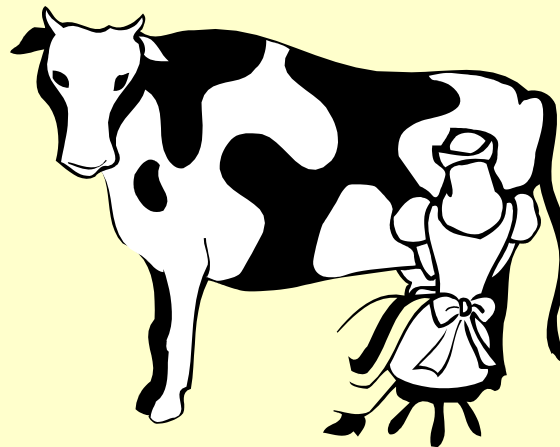


# Model simulations

Model simulated under two scenarios:

1. Baseline scenario - both Dairy and Fluid Milk Acts in effect
2. No-checkoff scenario - both Dairy and Fluid Milk Acts not in effect

Difference between scenarios gives impact of Dairy and Fluid Milk Acts



# Average annual values, 1996.1-99.4

Variable	Unit	with advertising	without advertising	Percent change
Fluid demand/supply	bil lbs	55.4	54.6	1.4
Cheese demand	bil lbs me	60.7	60.0	1.2
Total demand	bil lbs me	154.0	152.5	1.0
Basic formula price	\$/cwt	12.88	12.04	7.0
All milk price	\$/cwt	13.83	12.98	6.5
Milk supply	bil lbs	158.2	157.3	0.6

# Benefit-cost ratio (BCR) of Dairy Program

BCR for Dairy Program also calculated

Benefits = Increase in net dairy farm revenue due to milk and cheese advertising by dairy farmers

Cost = 15 cent assessment times milk marketings

Average BCR (1996-98) = 4.29

Every dollar invested in Dairy Program returned \$4.29 in net revenue