

# **Tobacco Product Regulation: FDA's Economic Impact Analysis**

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# FDA Economic Analysis

## ■ Benefits of Warning Labels

- Value of reduced smoking and life years gained
- Value of health improvements from chronic diseases caused by smoking
  - Proposed rule included emphysema costs only
  - Added other health conditions in revised rule
- Reductions in fire costs
- Reductions in medical care costs
- Other financial effects (e.g. social security payments, income tax receipts)
  - Not in proposed rule

# FDA Economic Analysis

## ■ Costs of Warning Labels

- One-time costs
  - Costs of changing cigarette packaging
  - Costs of removing non-compliant point-of-sale advertising
  - Market testing costs
- Ongoing costs
  - Industry's administrative/record keeping costs
  - FDA's administrative costs

# Underestimate of Label Impact

## ■ Impact Estimate

- Comparison of trends in smoking prevalence rates in Canada and US, 1991-2009
- Accounts for changes in prices over time
- Difference between projected and actual prevalence in Canada attributed to labels
- 0.088 percentage point reduction (0.4% reduction in prevalence rate)
  - About 213,000 fewer smokers in US in 2013, growing over time

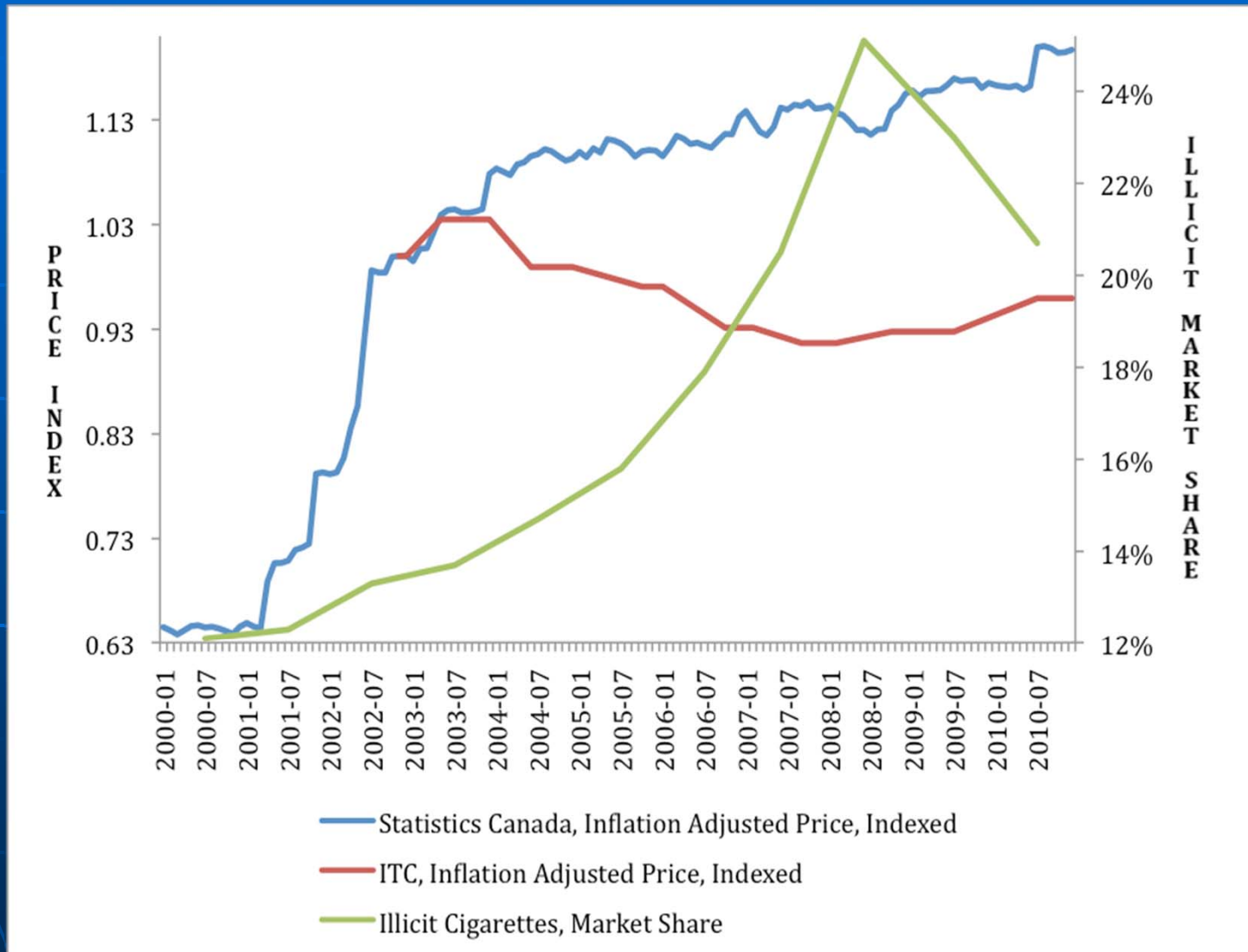
## ■ Underestimate of label impact due to inaccurate measure of price

## Comparisons of Cigarette Prices in Canada Between Statistics Canada and the ITC Canada Survey Over Eight Waves of Survey Data Collection (October 2002 to June 2011)

Survey Dates	Statistics Canada	Percent Change	ITC	Percent Change
10/30/02-12/30/02	131.3		\$7.43	
5/15/03-9/28/03	137.4	4.7%	\$7.69	3.5%
6/3/04-12/27/04	143.9	4.7%	\$7.35	-4.4%
10/10/05-1/31/06	144.3	0.3%	\$7.21	-1.9%
10/11/06-2/17/07	147.8	2.5%	\$6.92	-4.0%
9/21/07-2/12/08	149.9	1.4%	\$6.81	-1.6%
10/25/08-7/28/09	151.6	1.2%	\$6.89	1.2%
7/13/10-6/24/11	157.1	3.6%	\$7.13	3.4%
Average Change		2.6%		-0.5%
Total Change		19.7%		-4.0%

Notes: The Statistics Canada price reflects an inflation-adjusted measure of the cigarette prices reported by Statistics Canada indexed to January 2000. The ITC price reflects a consumption-weighted average of the prices reported by smokers in the ITC Canada Survey, adjusted for inflation.

# Cigarette Prices and Illicit Cigarette Market Share, Canada, 2000-2010



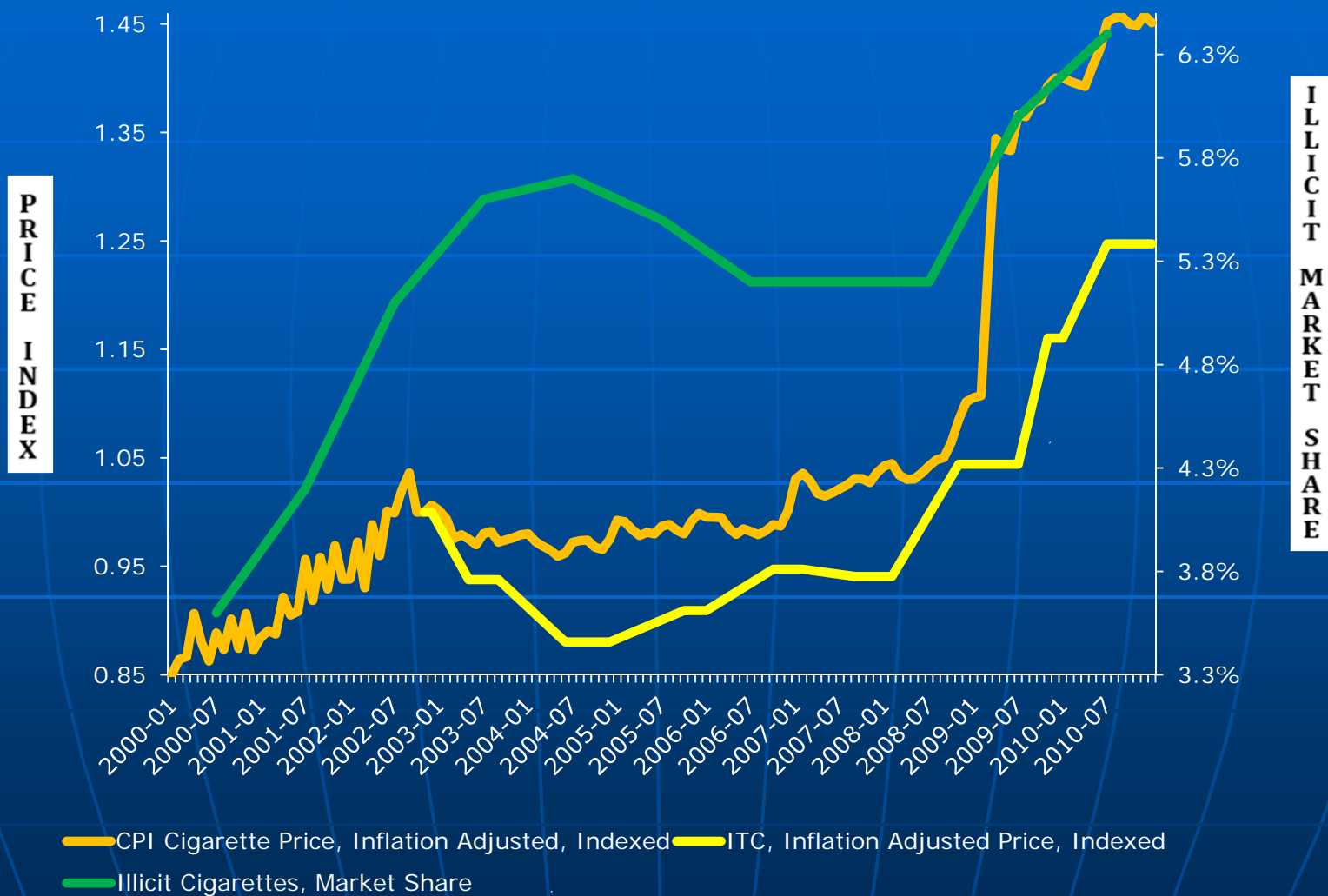
Source: Euromonitor, 2011, Statistics Canada, and ITC project. Note that the two price measures are indexed to 1.0 in November 2002

## Comparisons of Cigarette Prices in Canada Between BLS and the ITC Canada Survey Over Eight Waves of Survey Data Collection (October 2002 to June 2011)

Survey Dates	United States			
	BLS-CPI	Percent Change	ITC	Percent Change
10/30/02-12/30/02	1.180		\$4.10	
5/15/03-9/28/03	1.148	-2.7%	\$3.85	-6.2%
6/3/04-12/27/04	1.141	-0.6%	\$3.61	-6.1%
10/10/05-1/31/06	1.166	2.2%	\$3.73	3.3%
10/11/06-2/17/07	1.186	1.7%	\$3.89	4.2%
9/21/07-2/12/08	1.218	2.7%	\$3.86	-0.7%
10/25/08-7/28/09	1.420	16.6%	\$4.29	11.0%
11/2/09-1/10/10	1.644	15.8%	\$4.76	11.1%
7/13/10-6/24/11	1.709	4.0%	\$5.12	7.5%
Average Change		5.0%		3.0%
Total Change		44.9%		24.7%

Notes: Bureau of Labor Statistics inflation adjusted price indexed to one in January 2000. The ITC price reflects a consumption-weighted average of the prices reported by smokers in the ITC Canada Survey, adjusted for inflation.

# Cigarette Prices and Illicit Cigarette Market Share, United States, 2000-2010



Source: Euromonitor, 2011, Bureau of Labor Statistics, and ITC project. Note that the two price measures are indexed to 1.0 in November 2002



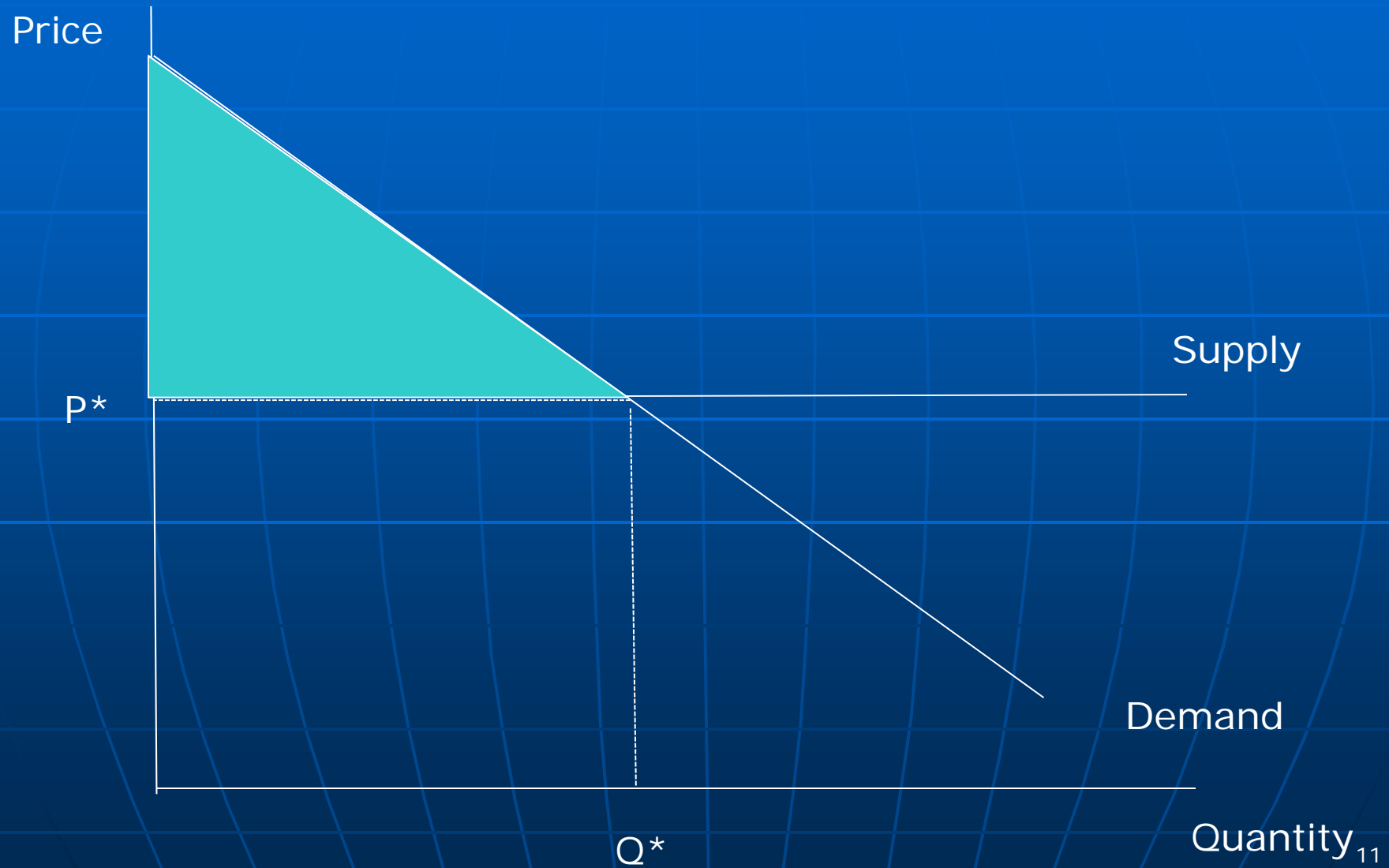
# Underestimate of Benefits

- **Benefits excluded from FDA estimates**
  - Reductions in consequences of non-smokers exposure to tobacco smoke
    - Particularly reductions in infant/child health consequences from exposure to maternal smoking during pregnancy
  - Under-valuation of short-term health benefits from cessation
    - e.g. immediate drop in heart attacks
  - Long-term benefits given 20 year window for assessment

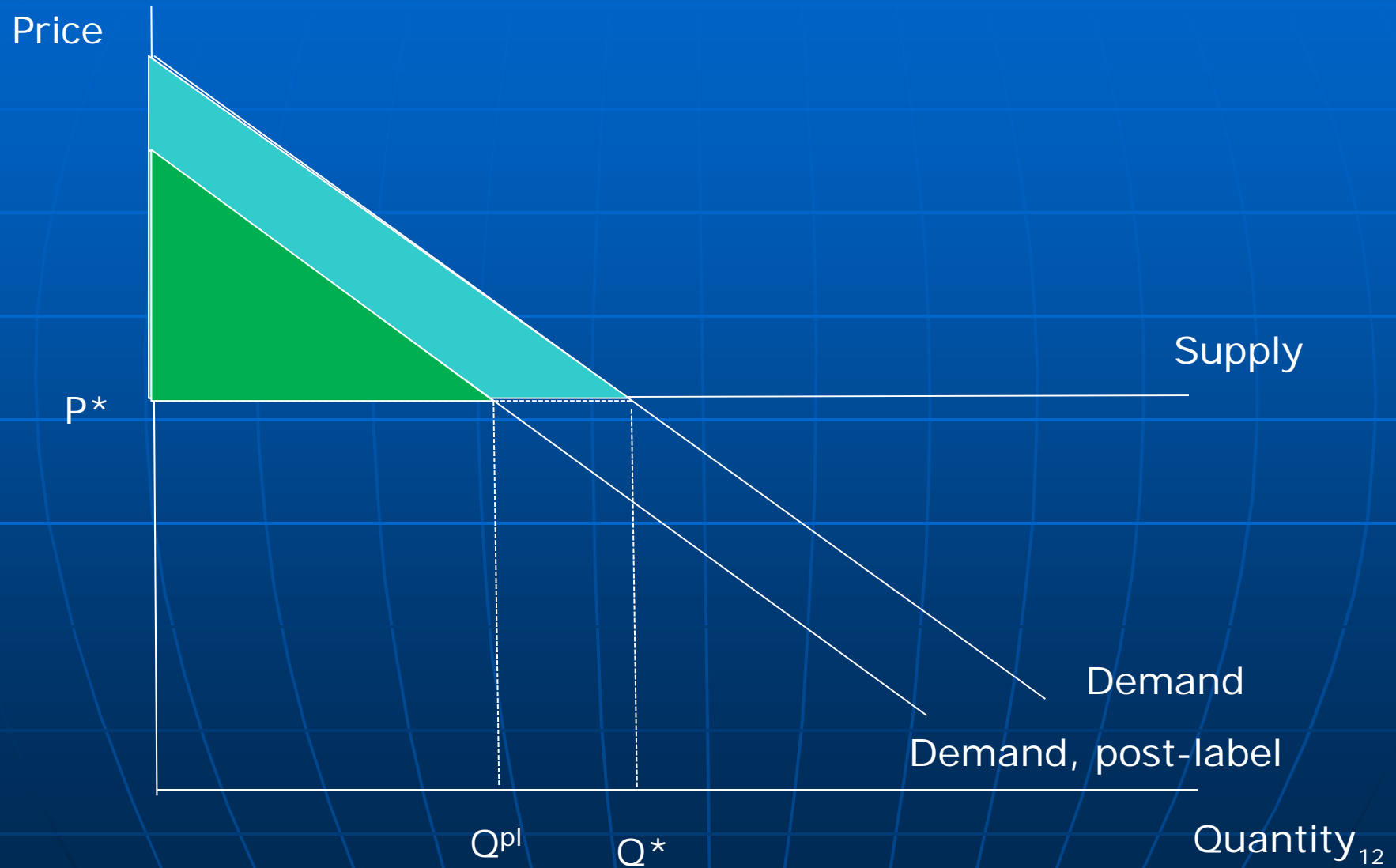
# Underestimate of Benefits

- **Reduction in benefits to account for lost consumer surplus**
  - Initially assumed that 50% of value of extended/improved life was offset by loss of “consumer surplus” (satisfaction smokers get from smoking)
  - Final rule considered alternative scenarios but used similar approach
  - Implies considerable reduction in benefits or, in cost-effectiveness analysis, considerable increase in costs

# Consumer Surplus



# Consumer Surplus



# Underestimate of Benefits

## ■ **Lost consumer surplus**

- Assumes fully informed, fully rational behavior
- Significant market failures in cigarette markets
  - Imperfect information about health consequences of tobacco use
  - Poor understanding of addiction
  - Almost all initiation occurs during adolescence
  - Time-inconsistency of preferences

# Underestimate of Benefits

## ■ Lost consumer surplus

- Together result in most smokers regretting ever having started smoking
  - US-ITC survey: 91.2% agree or strongly agree that “if you had to do it over again you would not have started smoking”
  - 7 in 10 smokers report wanting to quit smoking completely
  - Over half of smokers try to quit for at least one day
    - Only 2.5% succeed in any given year

# Underestimate of Benefits

## ■ Lost consumer surplus

- Levels of regret and quit behavior suggest that most of lost consumer surplus could be viewed as a benefit, not a cost
  - For smokers who quit, no longer spending to maintain an addiction that they'd prefer to break
  - For those prevented from initiation, benefits of avoiding an unwanted addiction not counted
- FDA analysis also ignores gains in consumer surplus as money once spent on cigarettes is spent on other goods and services
  - Would offset nearly all of any lost surplus in the traditional analysis

# Inconsistency of Approach

## ■ Lost consumer surplus

- Not included in economic analysis of other FDA proposed rules
  - e.g. 2011 regulatory impact analysis of Menu Labeling rules
- Inappropriate for public health, public safety regulations
  - Same approach implies one should consider the “lost consumer surplus” to illicit drug users when assessing drug control laws or to drunken drivers when considering drinking and driving laws



# Summary

- **FDA Approach to Economic Impact Analysis Flawed**
  - Under-appreciation of benefits
  - Reduction of benefits (or increase in costs) to account for lost consumer surplus
  - Likely to reappear in assessments of future rules
  - Misused in industry challenges to FDA regulation and other tobacco control policies