



Drug Policy Research Center

***Substance Use and Recessions:  
Insights from Economic Analyses of  
Alcohol and Drug Use***

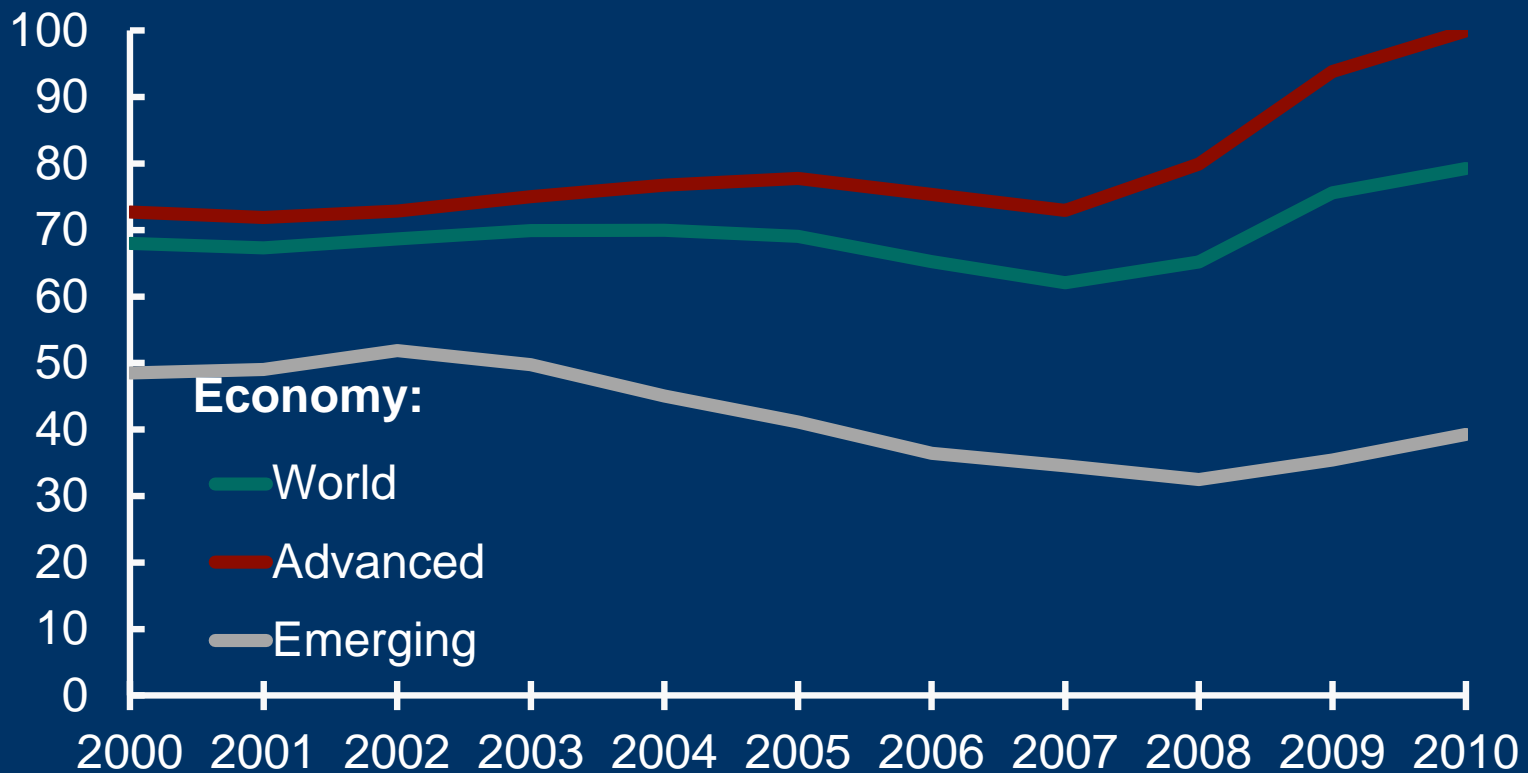
**Rosalie Liccardo Pacula, Ph.D.**

**Co-Director RAND Drug Policy Research Center**

**Senior Economist, RAND**

# Recent global recession and financial crisis decimated national budgets

Gross public debt as % of GDP



Source: IMF

# *Vulnerable populations affected by reduced services*

- **Elderly**
- **Poor**
- **Youth**
- **People suffering from chronic physical and mental health conditions**
  - **Addiction is *\*finally\** understood as a chronic disease amongst the scientific and medical communities**
  - **Making inroads with policy makers**

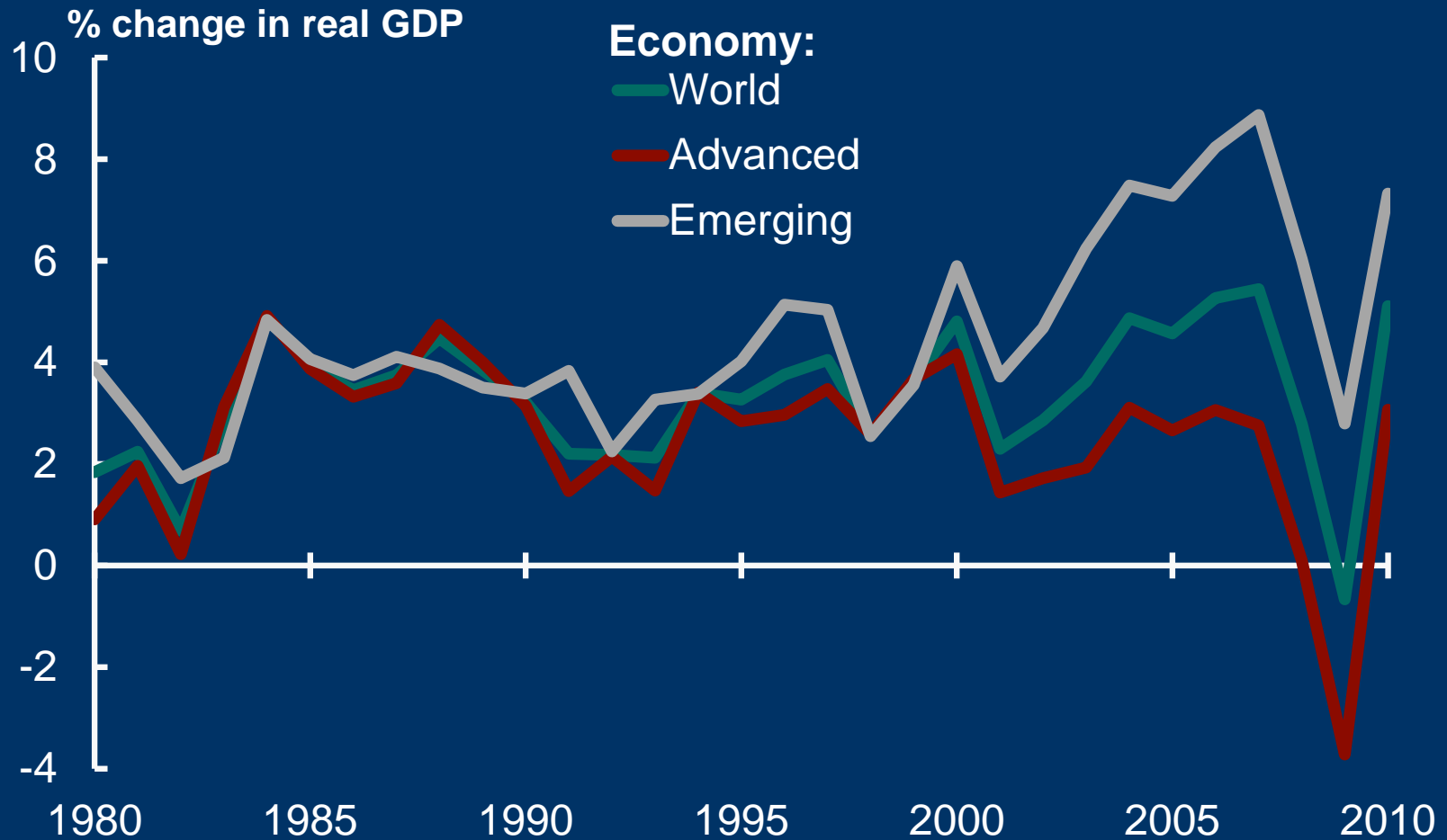
# ***What We Know about Economic Recessions and Substance Use***

- Most people familiar with the psychological mechanisms on behavior
  - Recession → Stress → more use
  - Recession → Risk taking → more dangerous use
- Also people are aware of budget cuts impacting prevention and treatment
- So, general belief is that use of alcohol and illicit drugs as well as addiction rise during economic downturns
- **But, economics literature shows heavy alcohol use falls during recessions and only light use rises.**

# ***The Global Recession: Not Your Typical Business-Cycle Fluctuation***

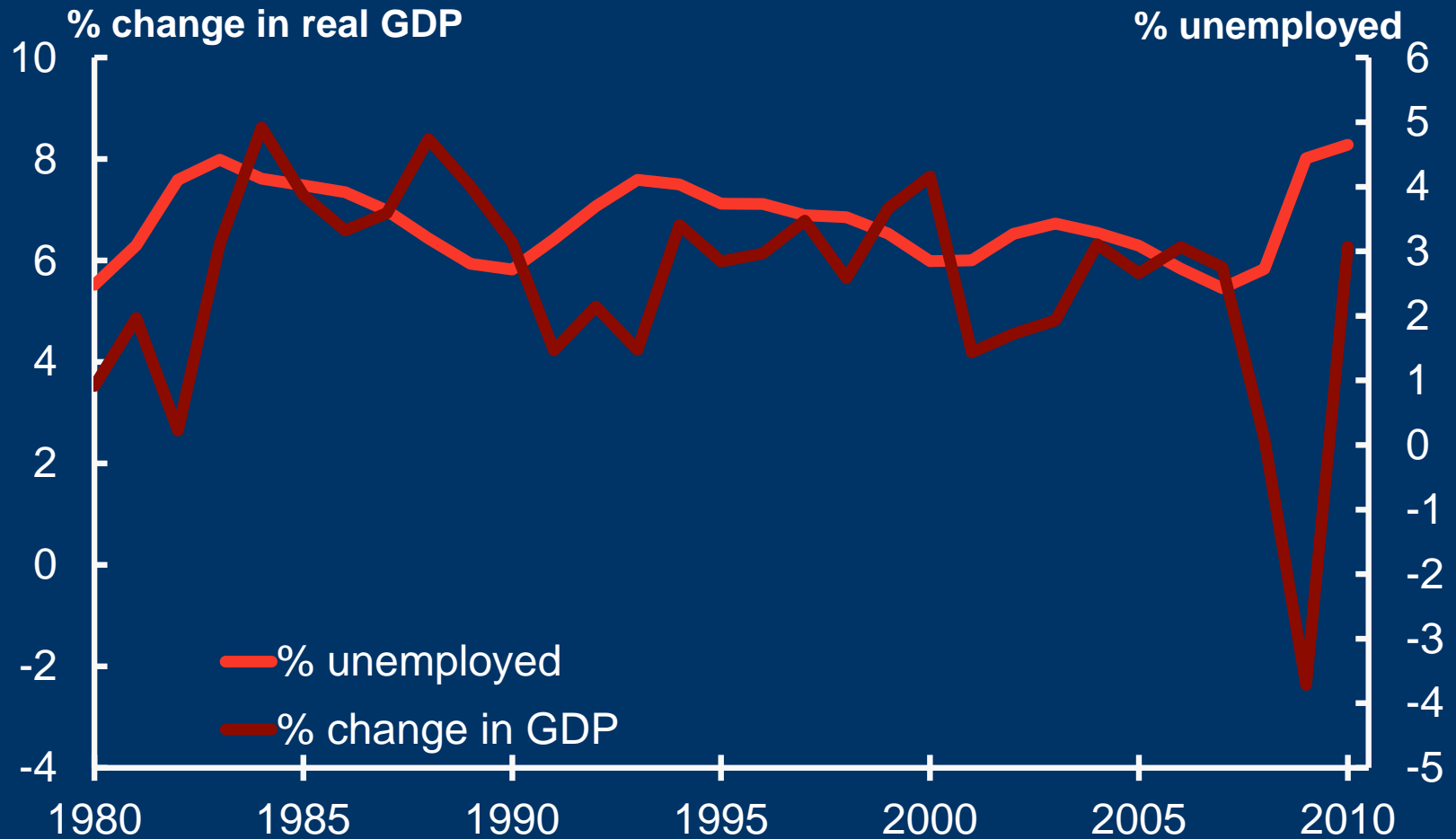
- **Wealth, not just disposable income, dropped dramatically at the beginning of the recession and continues to be affected**
  - **Housing bubble experienced in several key consuming countries**
  - **Drop in value of investments traded in financial markets through mortgage-backed securities**

# Global Recession Was Deeper for Advanced Economies



Source: IMF  
October 2011

# Unemployment in Advanced Economies Increased After Global Recession



Source: IMF  
October 2011

# *Outline*

- **Economic mechanisms that may affect alcohol and drug use and addiction**
- **Effects of business-cycle fluctuations on alcohol use**
- **Effects of business-cycle fluctuations on illicit-drug use**
- **Policy implications**



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# *Two important economic drivers impacted by business cycle fluctuations*

- **Disposable Income**
- **Relative Prices**

# *How Recessions May Decrease Consumption of Alcohol and Illicit Drugs*

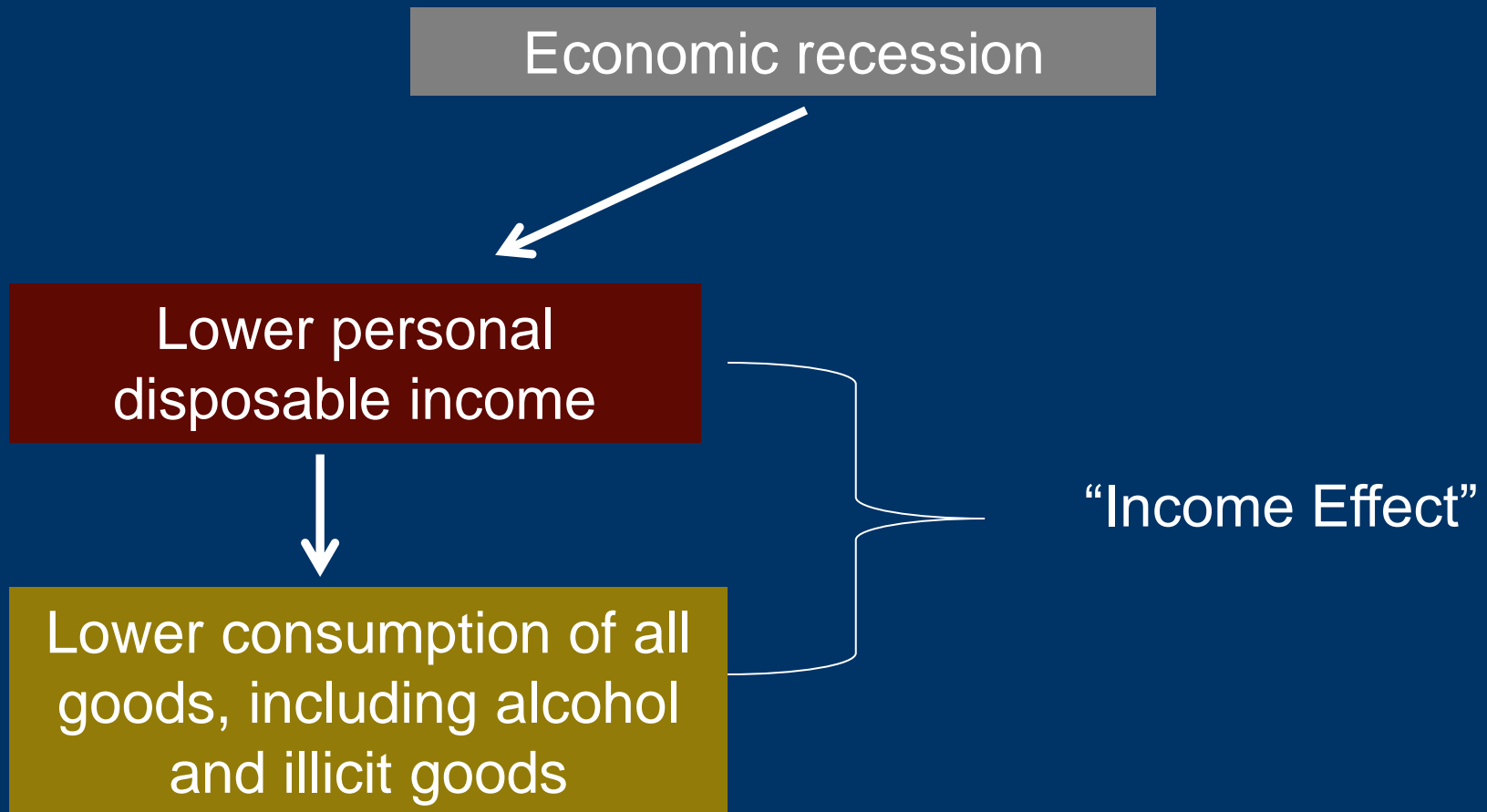
Economic recession

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graph TD; A[Economic recession] --> B[Lower personal disposable income]; B --> C[Lower consumption of all goods, including alcohol and illicit goods];
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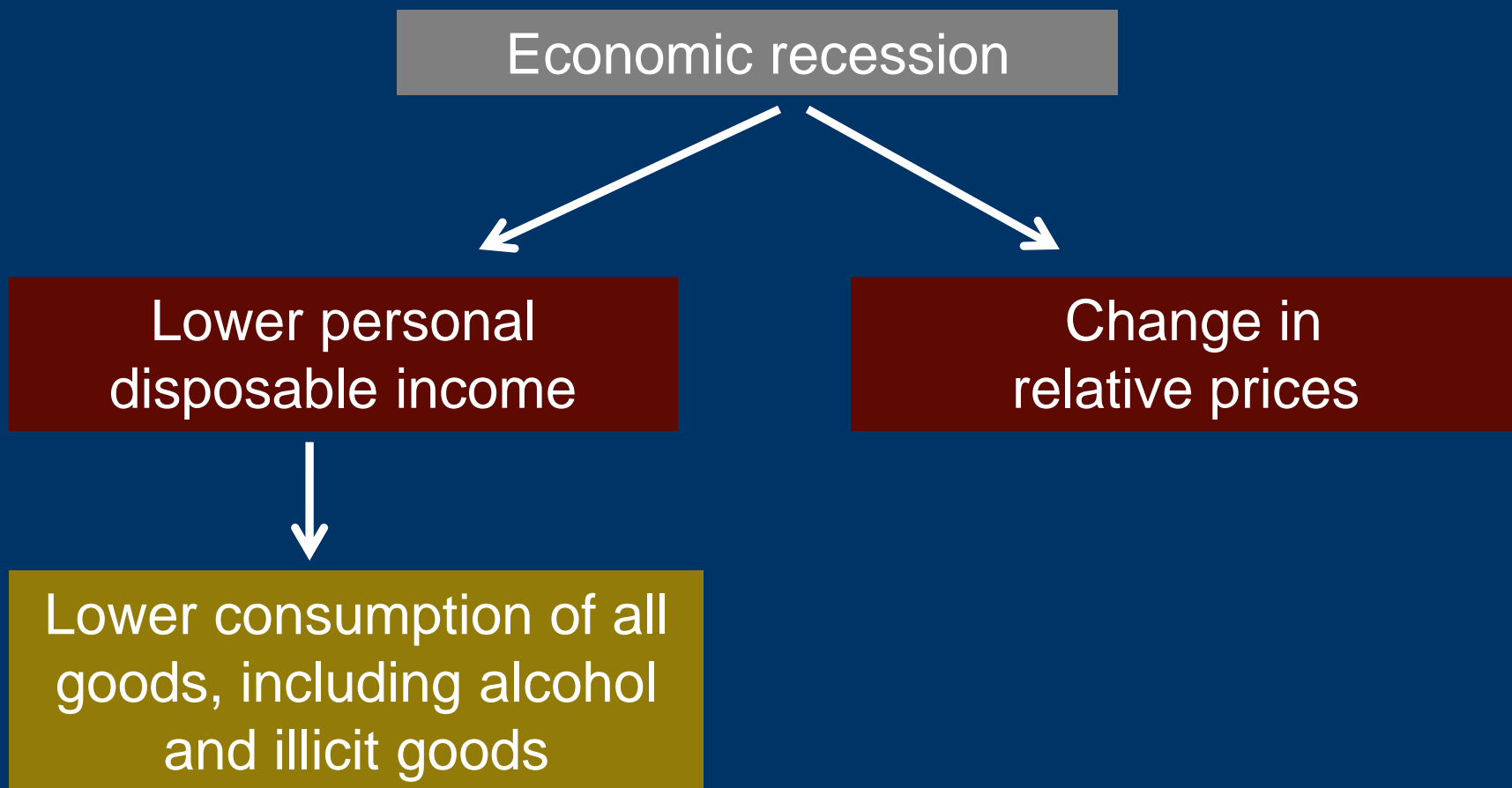
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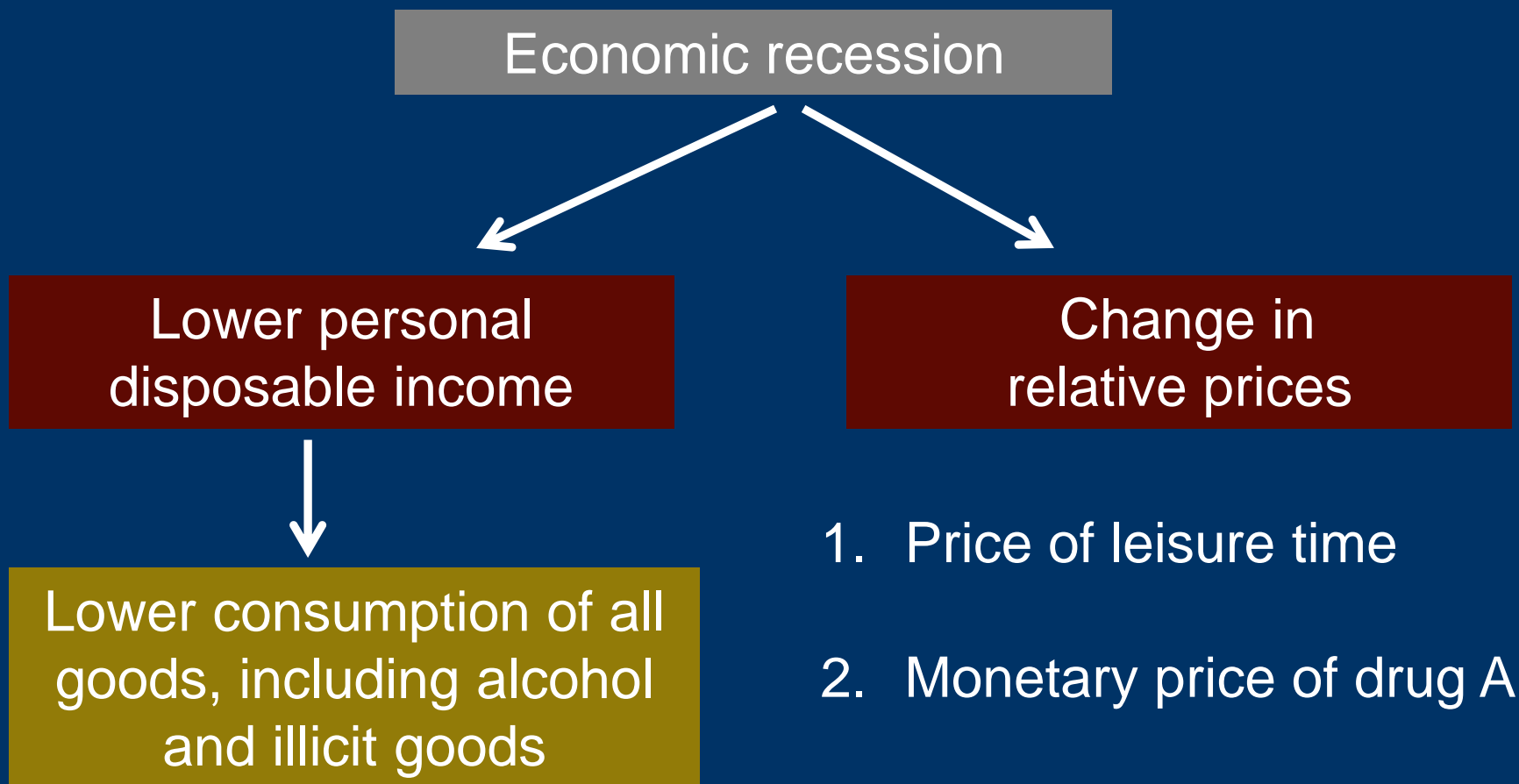
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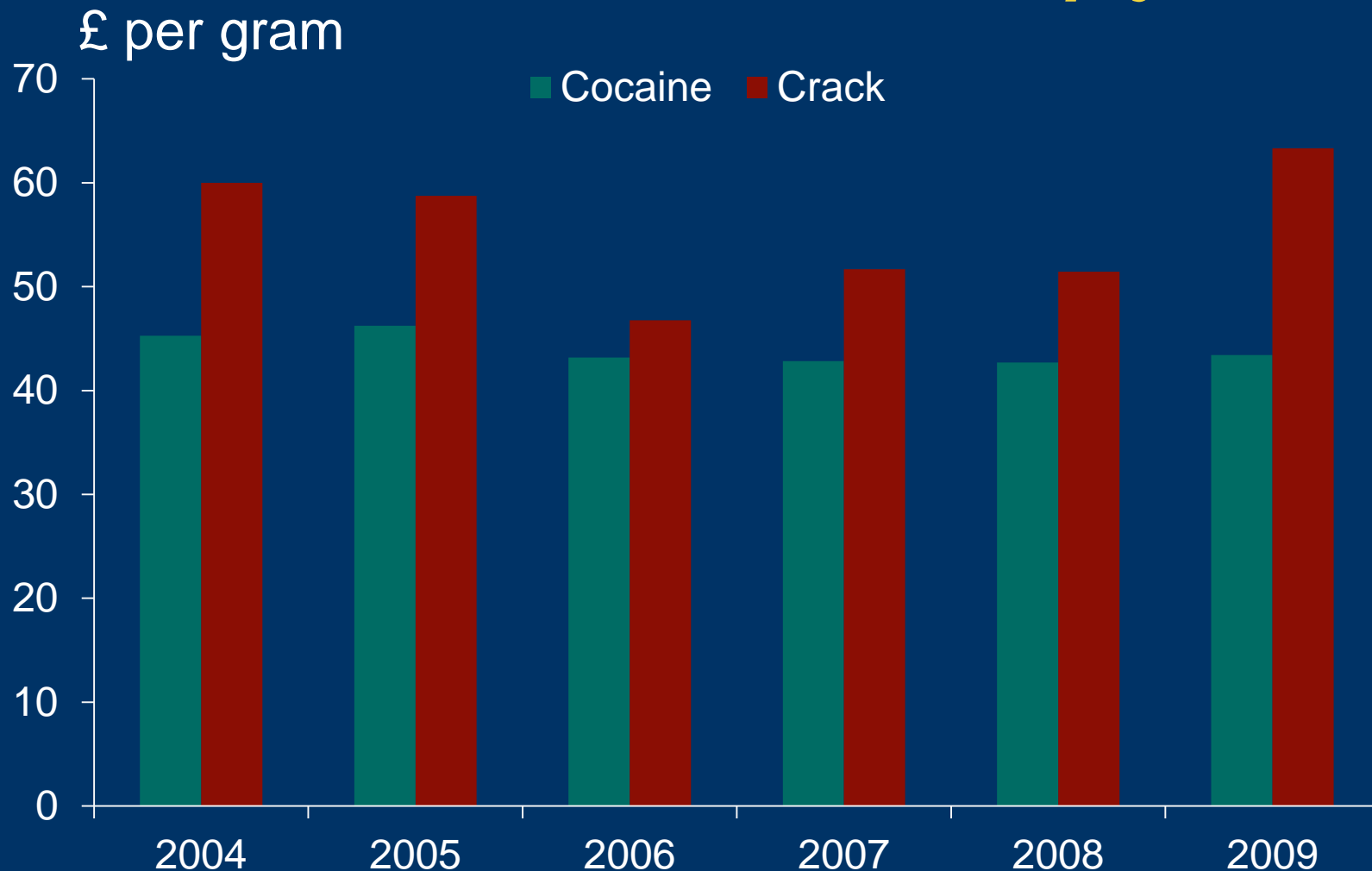
# *How Recession May Decrease Consumption of Alcohol and Illicit Drugs*



# ***What Has Research Shown on Price of Alcohol and Drugs in Recession?***

- **In recessionary times, price of alcohol is flat or increases**
  - **No evidence manufacturers lower prices during recessions**
  - **Governments may increase “sin” taxes, which may get passed through to alcohol prices**
- **Price of illicit drugs theoretically could fall**
  - **There is no empirical evidence supporting a drop in illicit drug prices associated with recent global recession**

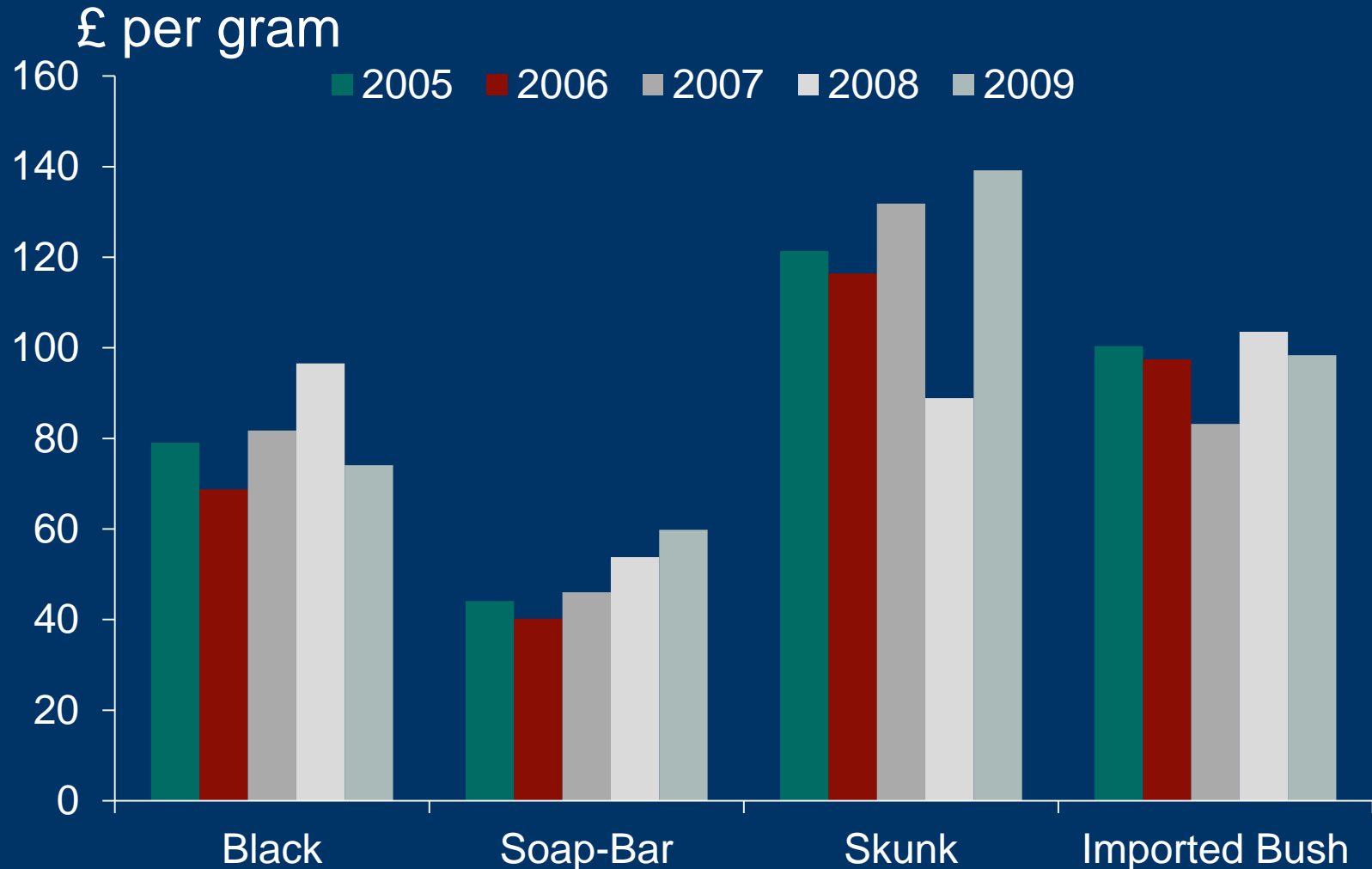
# ***UK Cocaine Price Has Been Steady Recently While Price for Crack Rose Sharply in 2009***



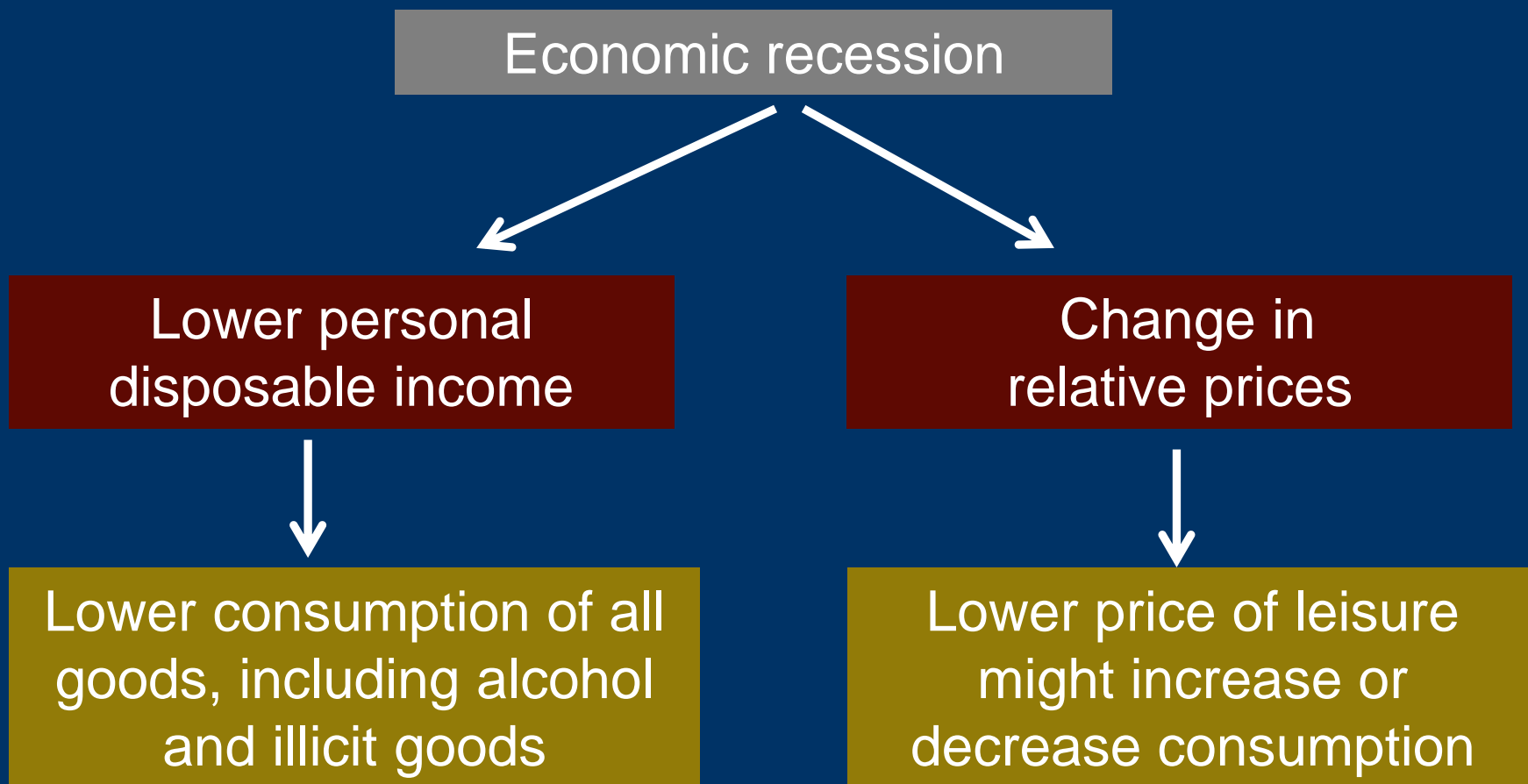
Source: Independent Drug Monitoring Unit



# UK Cannabis Prices Have Increased for Some Varieties



# *How Recession May Decrease Consumption of Alcohol and Illicit Drugs*



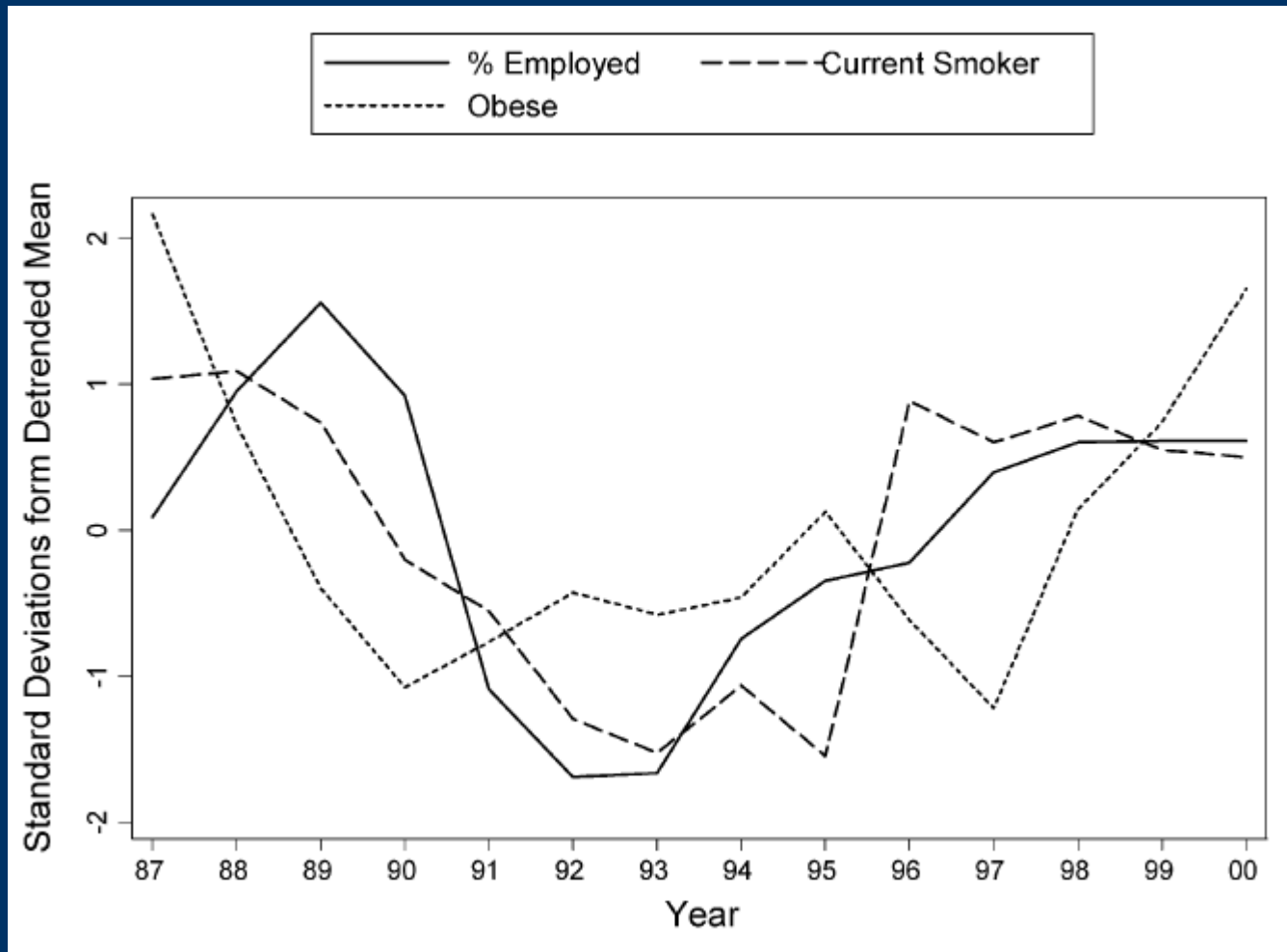
# Outline

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- Policy implications

# ***Relationship Between Economic Conditions and Alcohol Use Is Nuanced***

- **Initial research found U.S. states with higher rates of unemployment had lower rates of total alcohol consumption and alcohol-related deaths**
- **Subsequent research found difference between “heavy” and “light” drinking during recessions**
  - **Heavy drinking behavior is pro-cyclical, decreasing during recessions**
  - **Some evidence light drinking may be countercyclical**
- **When modeled carefully, same results have been found for Europe (Gerdtham & Ruhm, 2006)**

# U.S. Trends in Employment, Smoking, and Obesity Have Similar Cyclical Patterns



Source: Ruhm, 2005

October 2011

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# Unemployment Boosts Cannabis and Other Drug Use Among U.S. Youths

Estimated effects of unemployment rate on youth drug use	Coefficient estimate for persons age	
	15 to 19	20 to 24
Used cannabis in past year	0.067*	0.080***
Used cannabis in past month	0.059	0.131***
Heavy use of cannabis in past month	0.116***	0.209***
Times used cannabis in past month	0.096**	0.174***
Used other drugs in past year	0.165***	0.015
Heavy use of other drugs in past year	0.129*	0.017
Times used other drugs in past month	0.211*	0.218

\* indicates statistical significance at the 10% level

\*\* indicates statistical significance at the 5% level

\*\*\* indicates statistical significance at the 1% level

Source: Arkes, 2011

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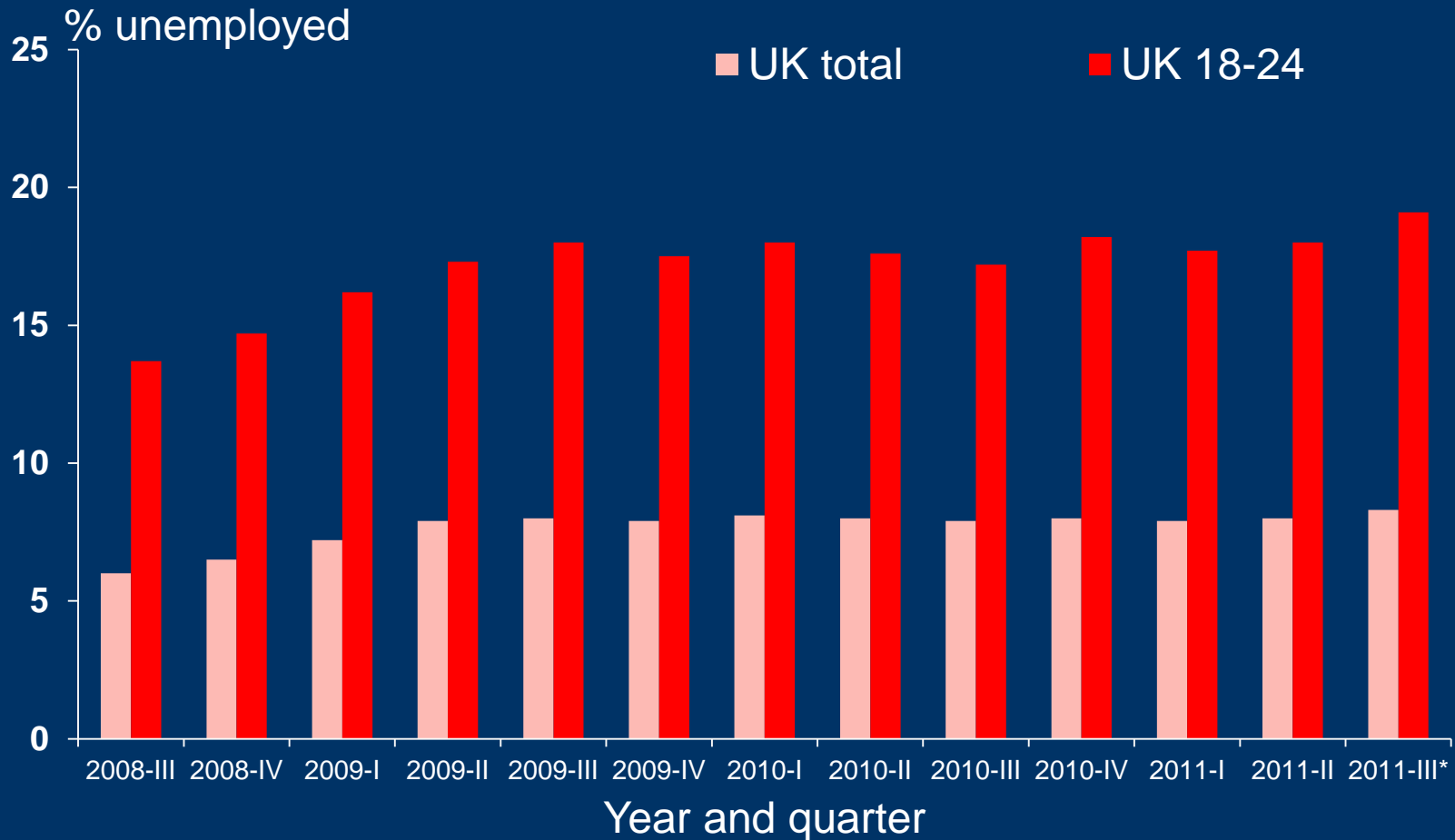
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# ***Youths Who Use Illicit Drugs Are More Likely to Sell Them in Economic Recession***

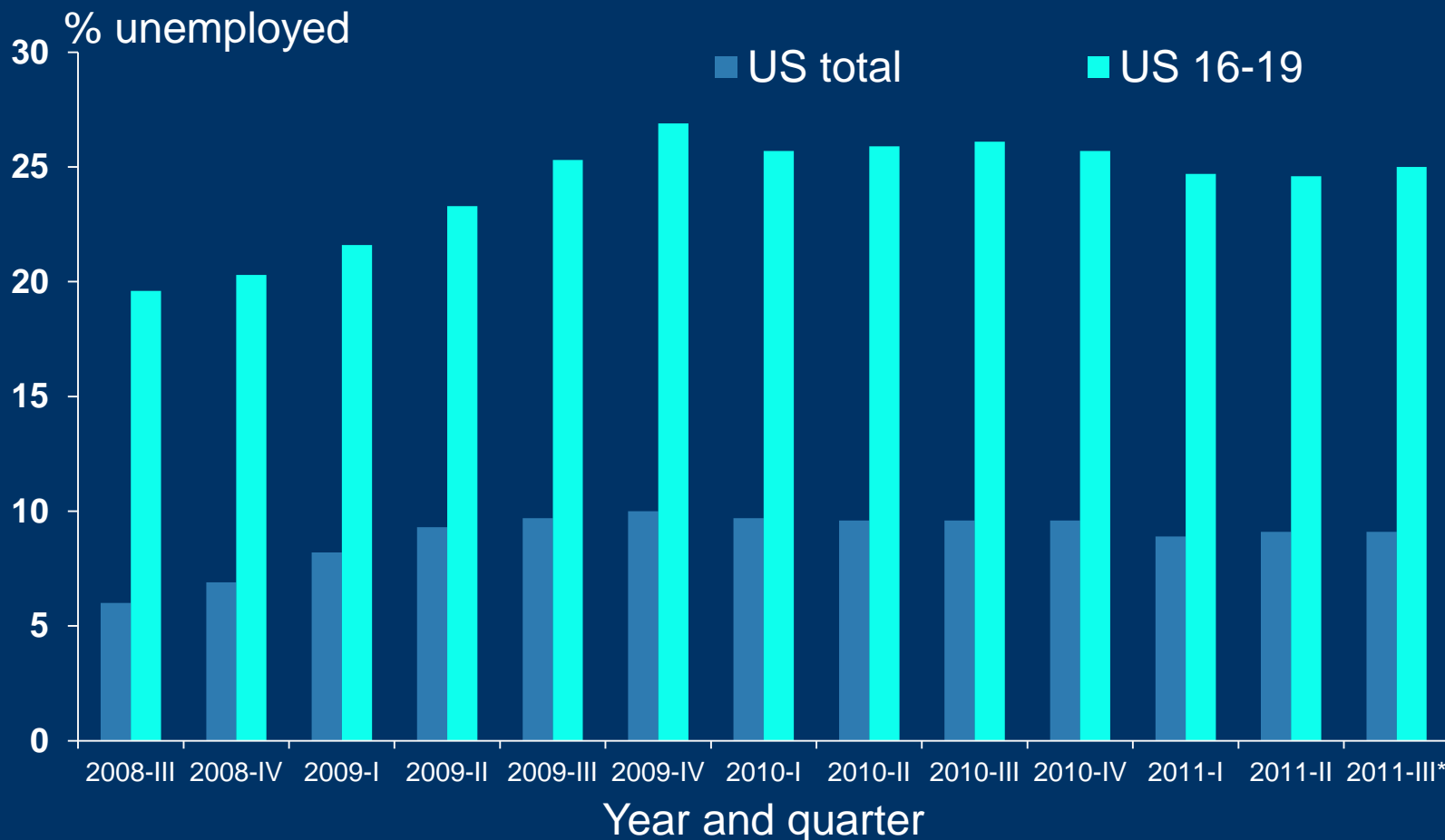
- **Teenagers face higher risk of unemployment when economy contracts**

# Youth Unemployment in the UK Is Greater than Total Unemployment



Sources: UK Office for National Statistics, US Bureau of Labor Statistics.  
2011-III data for UK for June-August 2011.

# Youth Unemployment in the United States Is Also Far Greater than Total Unemployment



Sources: UK Office for National Statistics, US Bureau of Labor Statistics.  
2011-III data for UK for June-August 2011.

# ***Youths Who Use Illicit Drugs Are More Likely to Sell Them in Economic Recession***

- Teenagers face higher risk of unemployment when economy contracts
- Hypotheses for why they seek/obtain jobs in black market:
  - Social networks facilitate it
  - Youth have lower rates of risk-aversion
  - Black market actively recruits youth sellers
  - Enforcement reduced
- Implications:
  - Teens able to partially or fully offset income lost from legitimate market employment
  - Teens learn where to buy drugs at lower prices

# Similar Age Differences Observed in Australian Household Survey Data

	Predicted Effect of	
	1-percent increase in unemployment	\$1,000 increase in per capita income
On cannabis use by		
Total population	-1.9 % decrease	-0.8% decrease
14-24 year-olds	2.4% increase	0.2% increase
25-34 year-olds	1.4% increase	0.2% increase

*Source: Chalmers and Ritter, 2011*

# ***Why Does Relationship Between Economy and Illicit Drugs Use Differ by Age?***

- **Youth may be more willing than adults to engage in black-market alternatives during economic slowdowns**
  - **Participating in black markets can result in no real loss in general income**
  - **Clear evidence supporting this interpretation in the United States, but additional research needed on other developed countries**
- **Psychological mechanisms associated with recessions may dominate economic mechanisms for this segment of the population**

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# ***Research Offers Several Insights for Policy***

- Evidence pointing to decrease in heavy use of alcohol and illicit drugs among older adults may mean short-term cuts in treatment budgets not as important as cuts in prevention right now
- Rise in illicit drug use among youth & young adults means need for future treatment will rise, however
  - Budget cuts for treatment must only be temporary
- Youths are particularly vulnerable in recessions
  - Vulnerable to initiating drug use
  - Vulnerable to engaging in black market activities

# ***Main Conclusion***

- **Both psychological and economic factors influence consumption during economic downturns**
- **There is heterogeneity in which factor dominates a given population's behavior**
- **For the population on average, income effects seem to dominate psychological factors for heavy drinking**
- **Several social factors might change the relative importance of income effects:**
  - **System of social insurance in a country**
  - **Intensity and duration of recession**
  - **Ability of a country to borrow during recessions to maintain enforcement & programs**

***Thank you!!***