

# Scope and Limits of CVM to Measure the “Intangible” Benefits of Sports Events

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# Contingent Valuation Method

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- Contingent valuation is a survey-based economic technique for the valuation of non-market resources, such as environmental preservation or the impact of contamination.
- While these resources do give people utility, certain aspects of them do not have a market price as they are not directly sold--for example, people receive benefit from a beautiful view of a mountain, but it would be tough to value using price-based models.
  - Source: Wikipedia

# Contingent Valuation Method

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- Most \_\_\_\_\_ method for estimating environmental values.
  - a) widely used
  - b) controversial
  - c) legitimate
  - d) both a and b

# Contingent Valuation Method

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■ Most \_\_\_\_\_ method for estimating environmental values.

a) widely used

b) controversial

c) legitimate

**d) both a and b**

# The Problem

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- Intangible benefits of sports teams and arenas are significant but not as large as most public subsidies.
- Mega-events help identify their host cities to the rest of the world and may plausibly generate highly valuable civic pride benefits for local residents.

# Background

- Krutilla, Conservation Reconsidered, *AER*, 1967
- Market goods vs nonmarket goods
- Use values vs nonuse values
- Uniqueness
- Irreversibility/ Irreplaceability



*Nonmarket goods that are unique and irreplaceable are those most likely to generate significant intangible (i.e., nonuse) values.*

# Environmental Examples

	<b>Unique</b>	<b>Not Unique</b>
<b>Irreplaceable</b>	Grand Canyon, Bald Eagle	Striped shiner
<b>Replaceable</b>	Visibility at the Grand Canyon	Urban air quality

# Sports Examples

	<b>Unique</b>	<b>Not Unique</b>
<b>Irreplaceable</b>	Kentucky Derby, Manchester United FC	
<b>Replaceable</b>	Olympics, Cleveland Browns	St. Louis Cardinals (football)



# Measurement of Intangible Values

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- Revealed preference methods
- Stated preference methods
  - Contingent valuation
  - Contingent behavior
  - Choice experiments

# Advantages of CVM

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- Flexible
  - *ex-ante*
  - Beyond the range of historical experience
- Non-use values
- Uncertainty

# CVM of Sports (millions of 2006 \$)

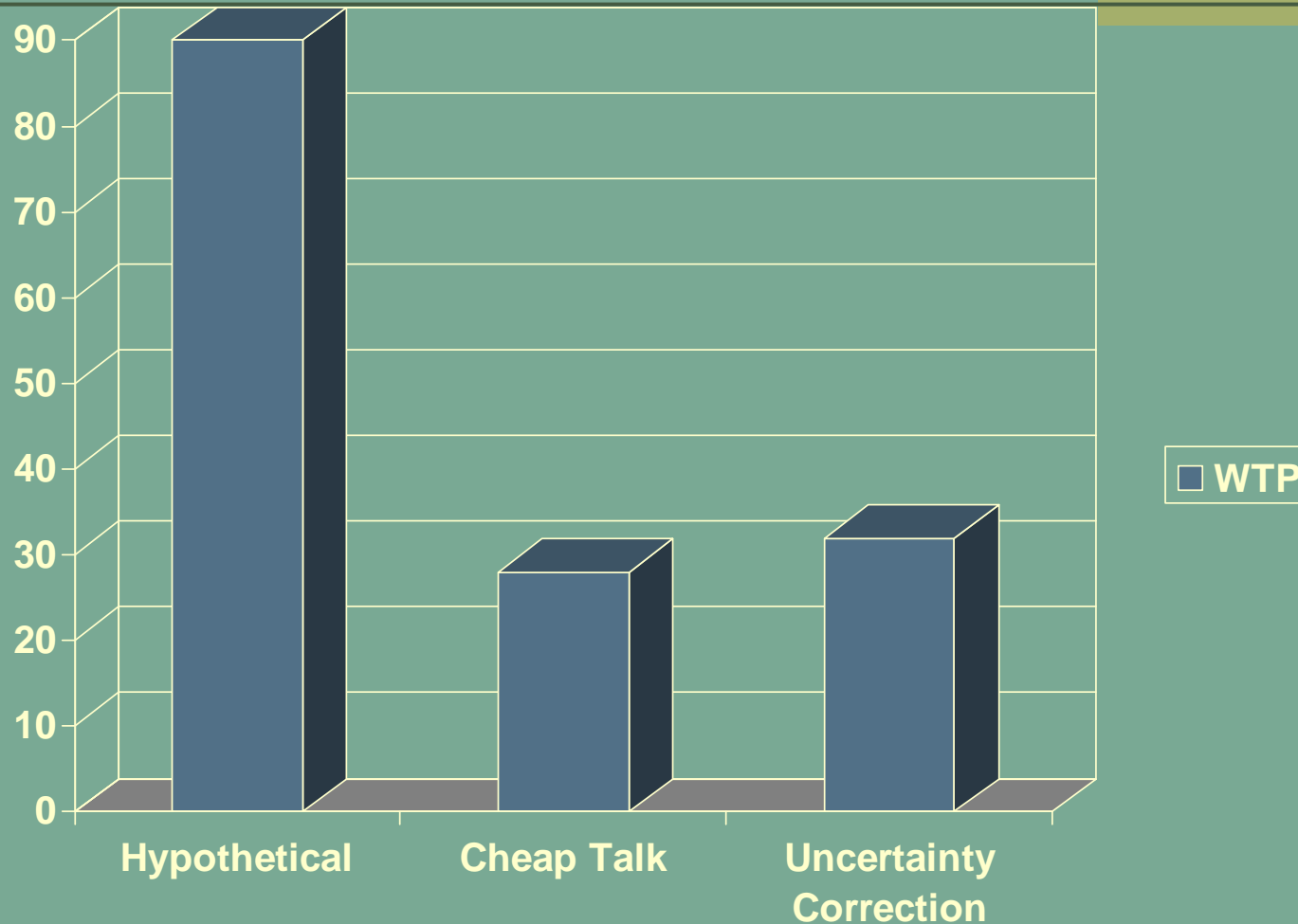
TEAM (Survey Year)	Discount rate	Total WTP	Nonuse Value
London Olympics (2004)	5%	NA	\$3,849
Portland MLB (2003)	6.25%	\$81	\$60
Pittsburgh Penguins (2000)	8%	\$77	\$56
Jacksonville Jaguars (2002)	7%	\$40	\$28
Jacksonville NBA (2002)	7%	\$29	\$21
UK Basketball (1997)	8%	\$9	\$3
Minor League Baseball (1997)	8%	\$8	\$0.9
Minnesota Vikings (2003)	NA	\$106	NA
Alberta Amateur Sports (2006)	6%	\$188	NA

# CVM Challenges

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- Hypothetical bias
- Validity and reliability
- Long-lived policy
- Multi-part policy
- Appropriate property rights
- Aggregation

# Hypothetical Bias



# Validity and Reliability

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## ■ Validity

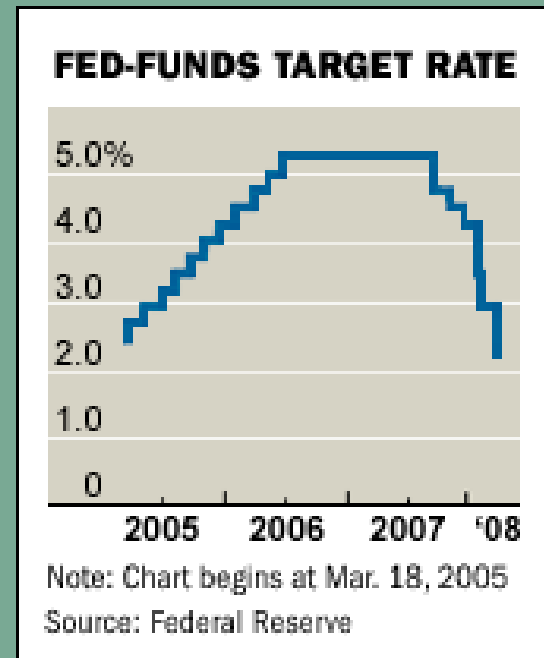
- Content (i.e., face)
- Criterion (SP = true WTP)
- Construct (i.e., theoretical)
- Convergent (RP = SP, etc.)

## ■ Reliability

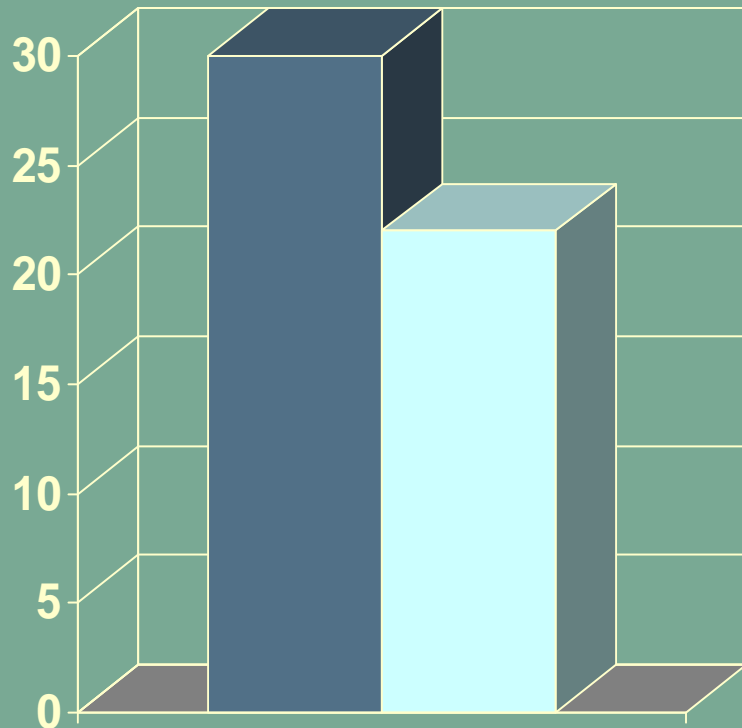
- Temporal (Test-Retest)
- Variance

# Long-lived policy

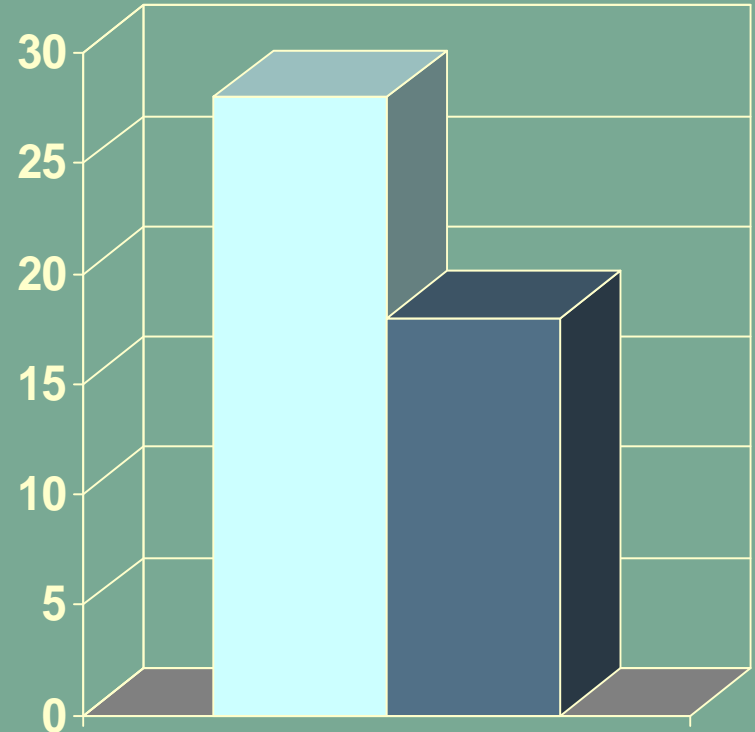
- What is the appropriate payment schedule?
  - One-time payment
  - Annual payment for  $t$  years
  - Annual payments into perpetuity
- Implicit discount rate
  - 18%
  - 57%



# Multi-part Policy



■ WTP-A ■ WTP-B



■ WTP-B ■ WTP-A



# Appropriate Property Rights

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## ■ Theory

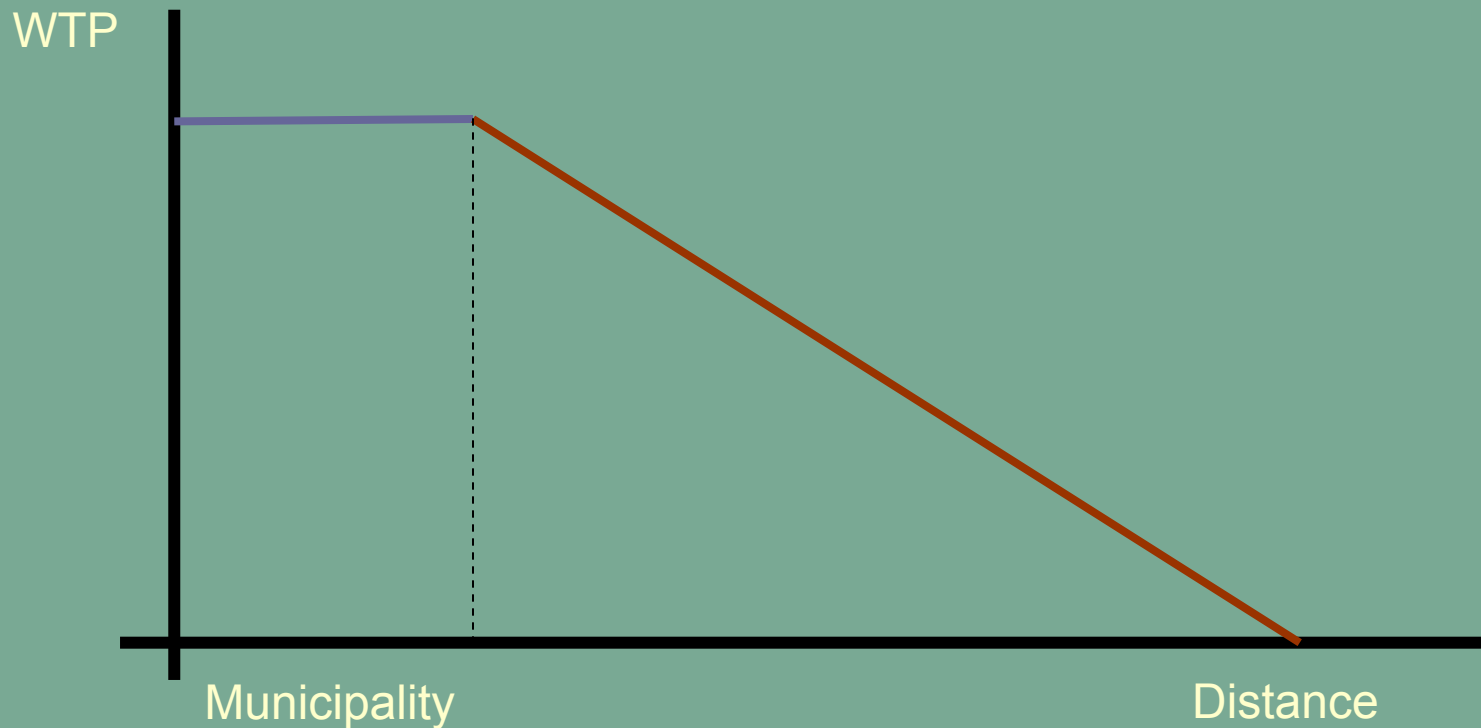
- $V(Q, Y) = V(Q^0, Y + WTA)$
- $V(Q, Y - WTP) = V(Q^0, Y)$
- $WTP \approx WTA$

## ■ Practice

- $WTA > WTP$
- Endowment effects
- Status quo effects
- Lack of good substitutes

# Aggregation

- Standing: Users vs nonusers
- Geographic extent of the market



# Suggestions for future CVM sports research

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- Data enrichment: combine RP and SP
  - Contingent behavior
  - Decomposition of use and nonuse values
- Choice experiments
  - Convergent validity of CE and CVM

# Conclusions

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- Mega-events may plausibly generate highly valuable civic pride benefits for local residents.
- The difficulty is in devising a plausible CVM scenario in which mega-events might relocate and for which respondents might plausibly pay.
- A number of CVM design issues have yet to be considered in the CVM of sports.