Economics Cliff Notes

Hagens Berman Retreat
September 12, 2014
Phoenix, AZ

THE Brattle GROUP

A Look Ahead

I. A Primer on Markets
II. A Primer on Statistics and Regression
III. A Panel Discussion

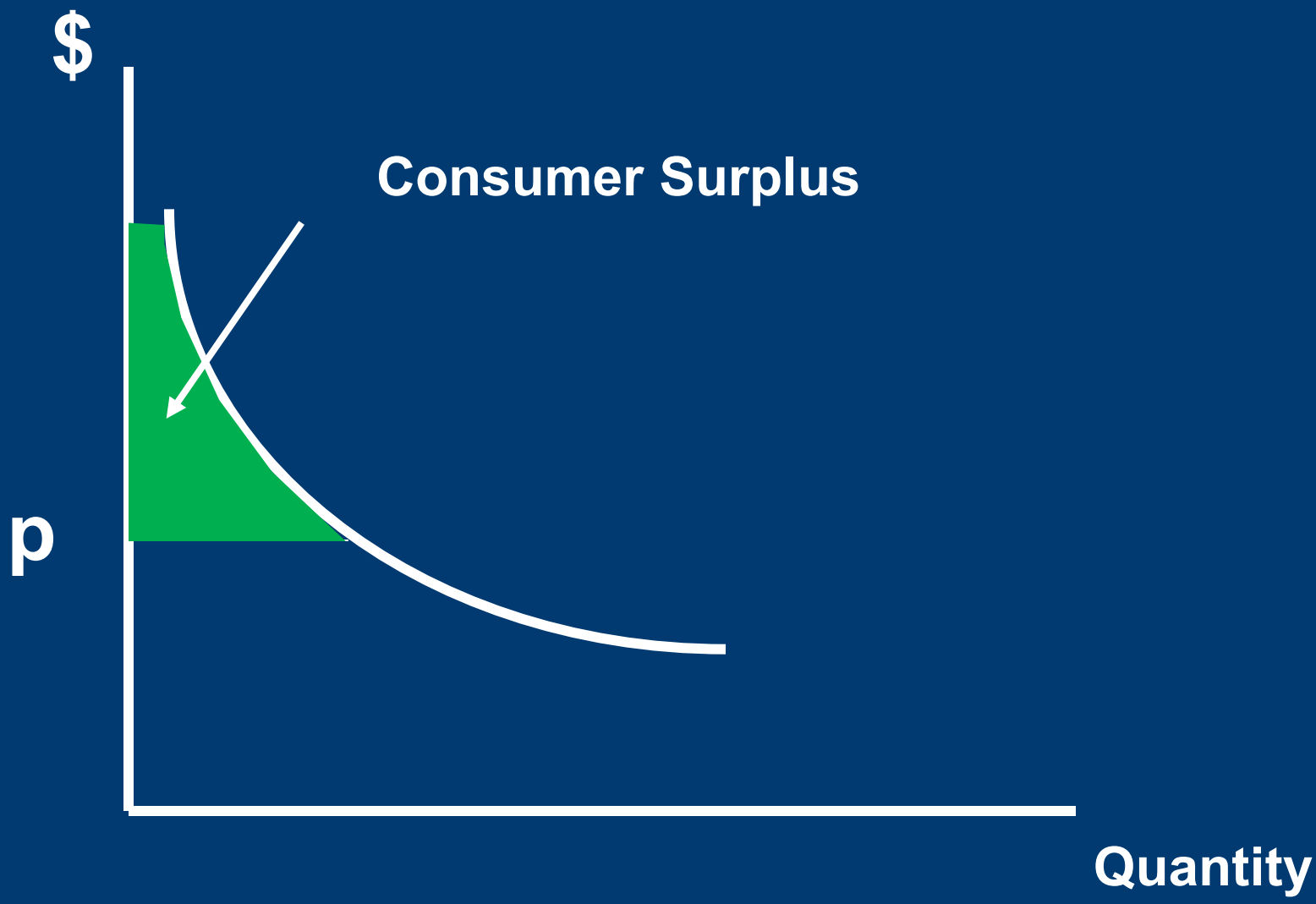
Introduction to Markets

Class Certification requires demonstration of common impacts.

If people were charged too much, we need to study how prices are determined to prove impact.

Simply put, prices are determined by the interplay of sellers and buyers (supply and demand).

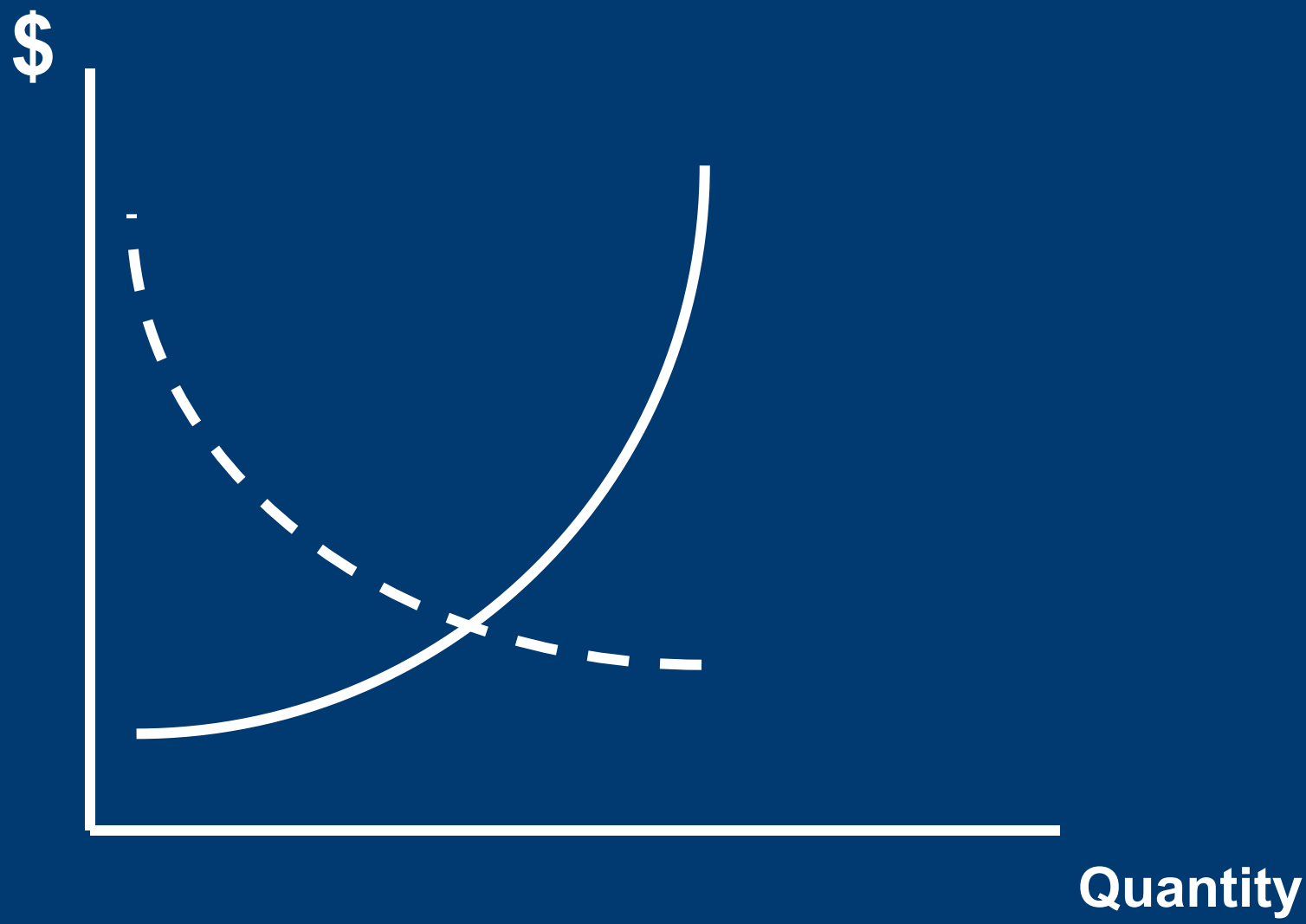
Demand



Demand

- Demand shifts when factors that affect demand change.
  - Prices of complementary products (skis and ski boots)
  - Prices of competing products (skis and snowboards)
  - Perceived quality of the good
    - Lanham Act: “All Natural”, “Organic”, “Made in the USA”
- Sometimes we differentiate between demand for one firm’s product versus market demand.

Supply

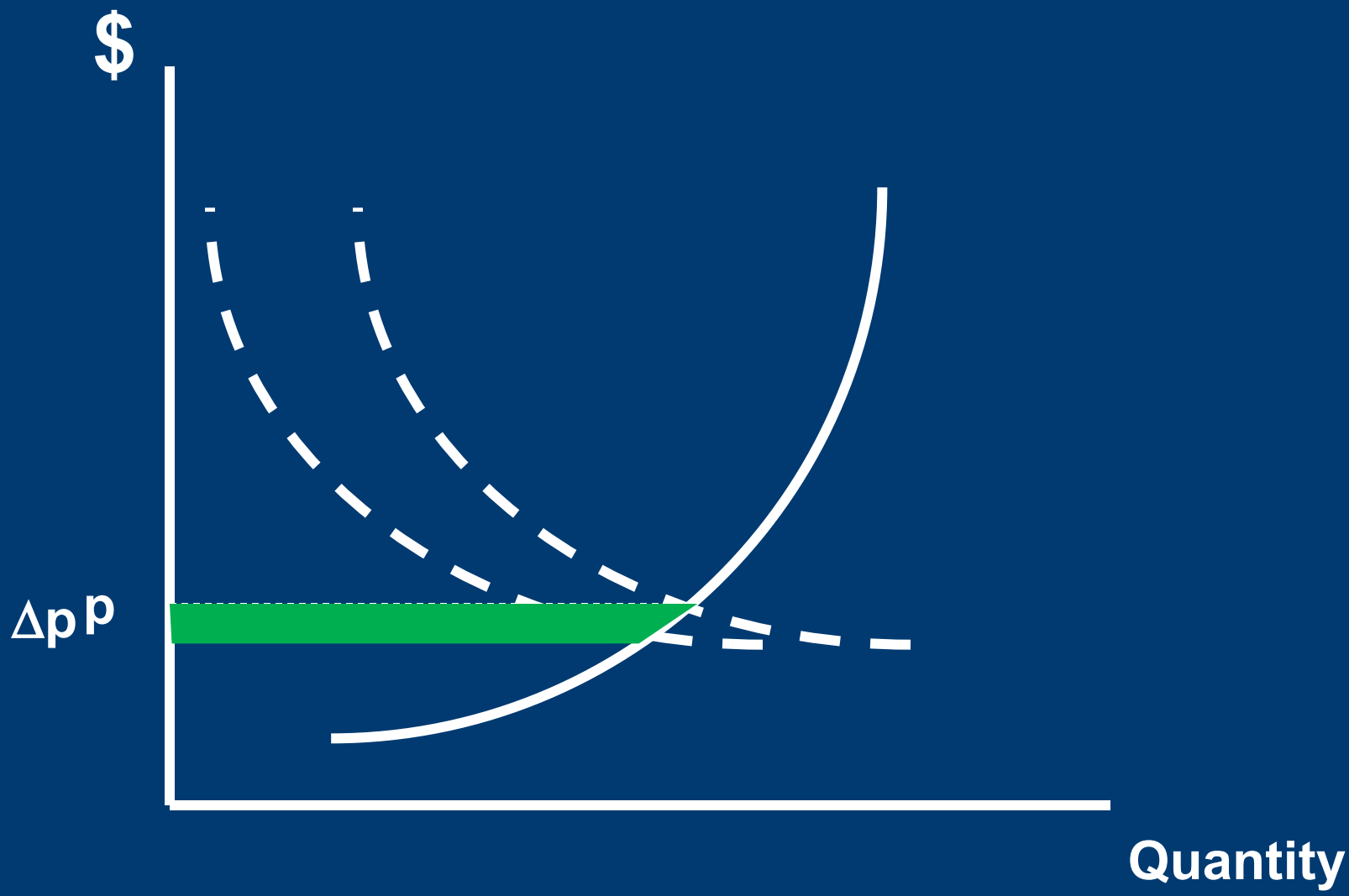


Supply

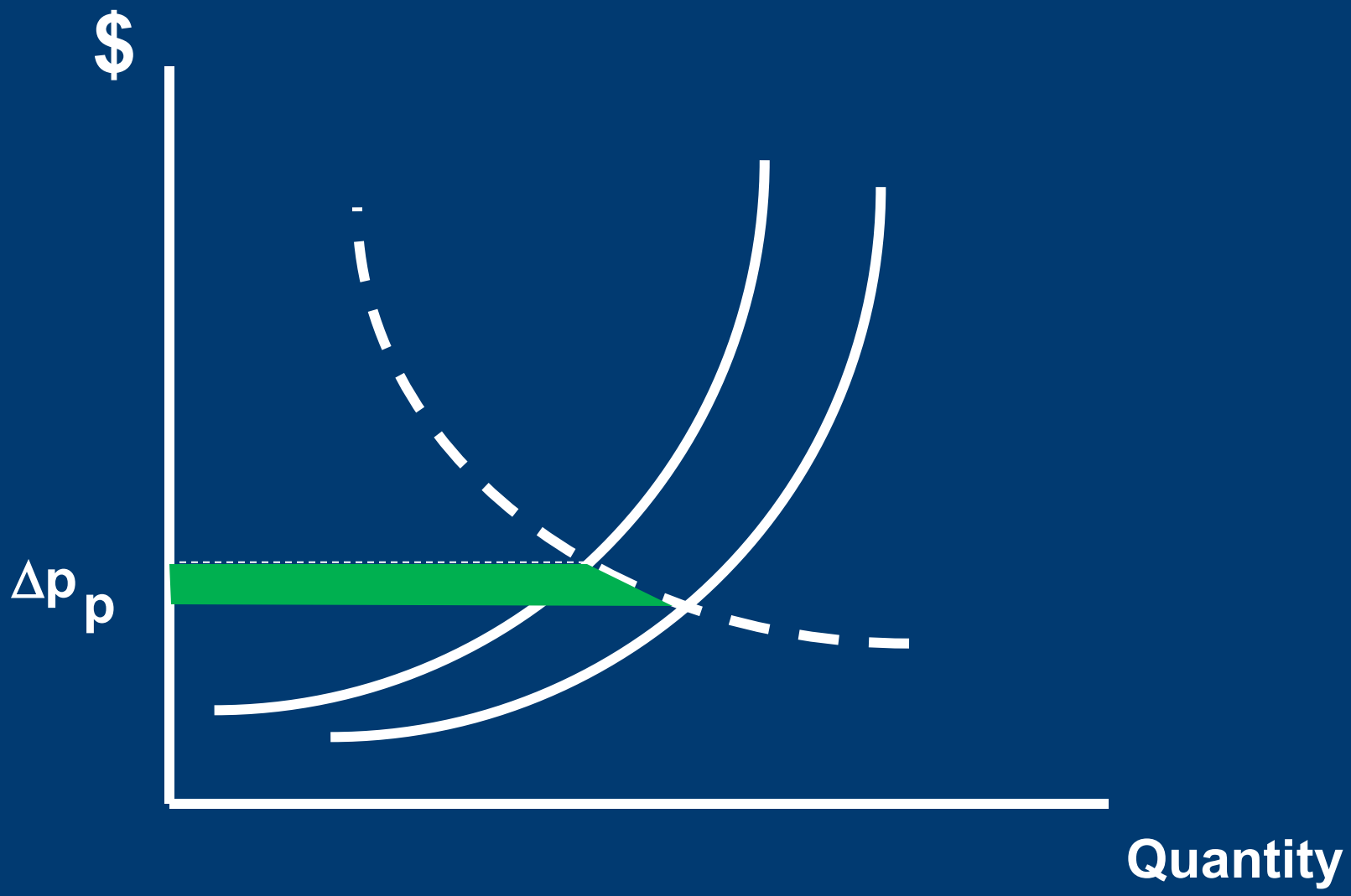
- Supply shifts when factors that affect costs change
  - Prices of inputs to production (materials, capital and wages)
  - Interest rates
  - Competition among firms

- Sometimes we differentiate between supply for one firm's product versus market supply.

Damages from Misrepresentation



Damages from Cartel



Intermission

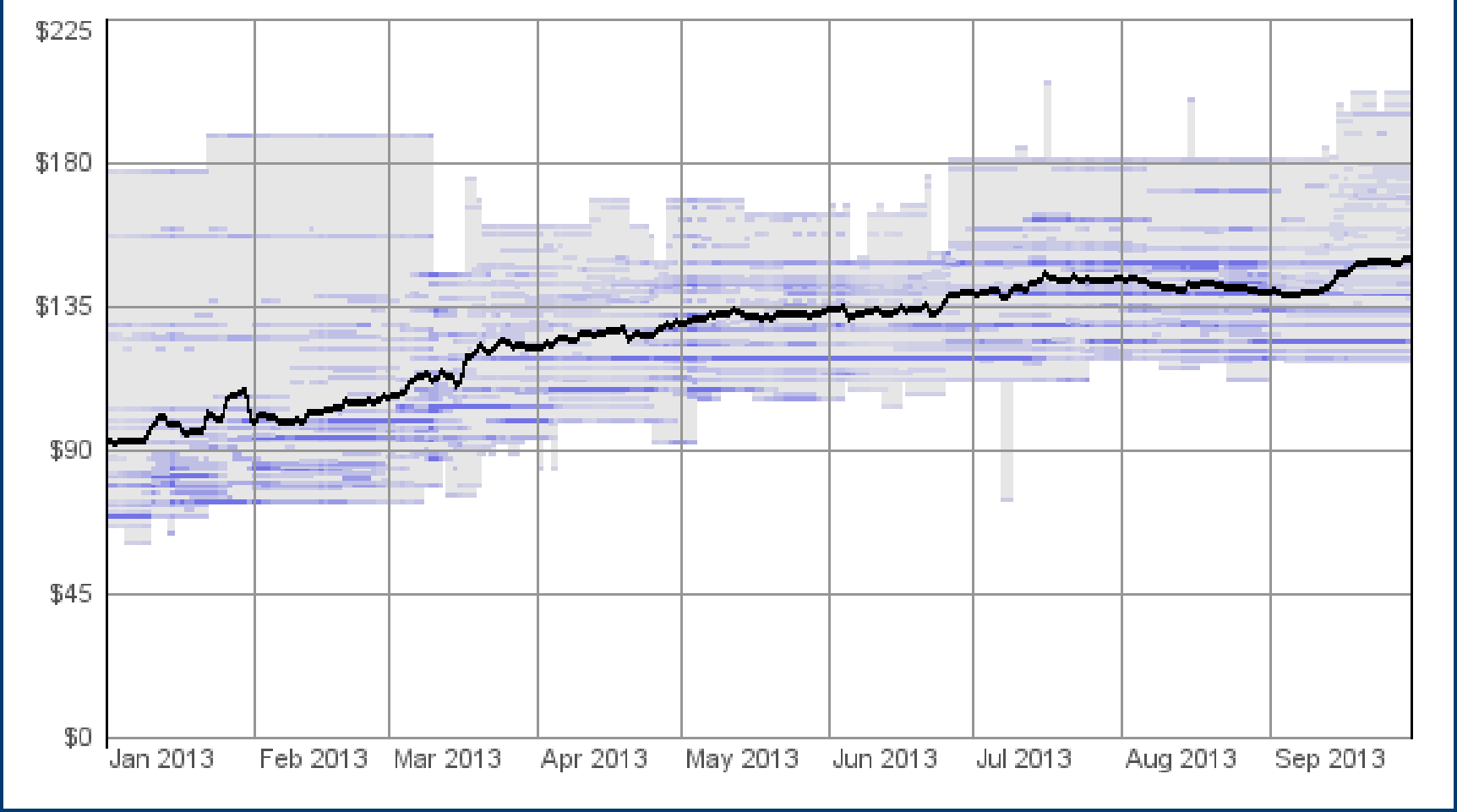
Introduction to Statistics

Class Certification requires demonstration of common impacts.

Transaction data often demonstrates price dispersion.

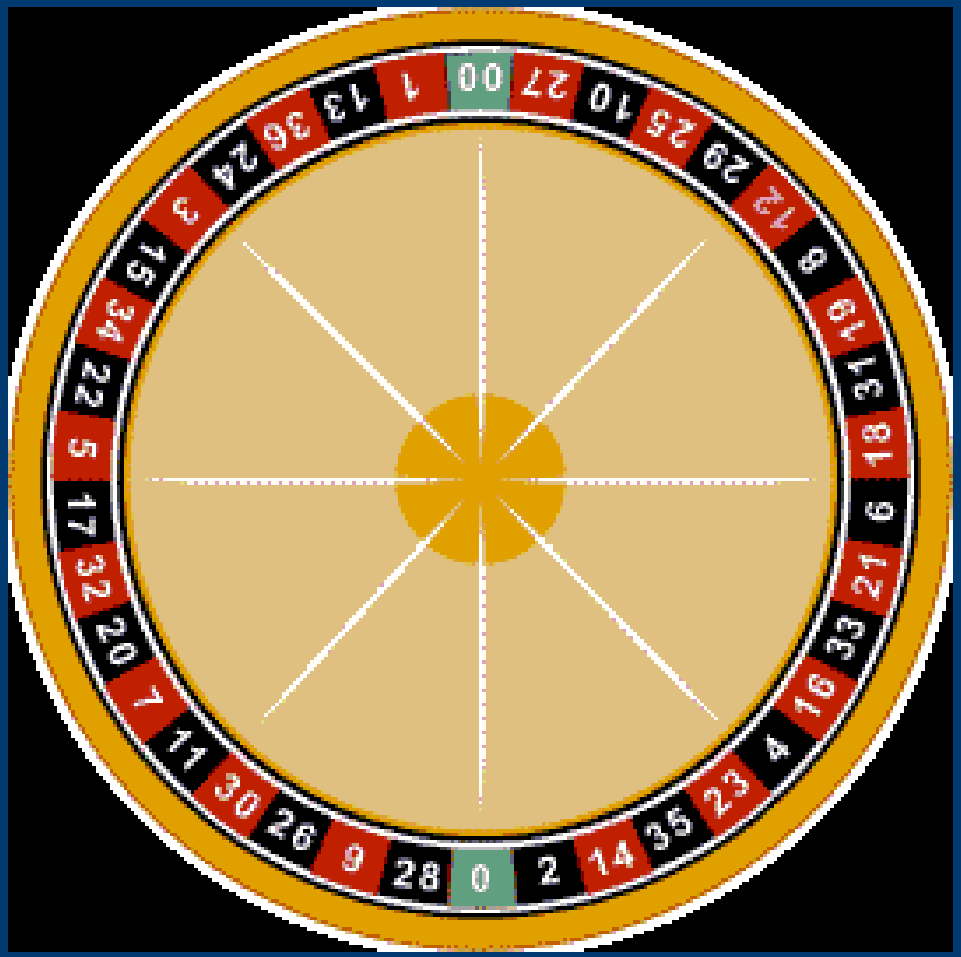
Statistical models (like regression models) can quantify the various sources of the price dispersion.

204 Pin 1600MHz SODIMM DDR3 (2 X 8192)



Source: http://pcpartpicker.com/trends/memory/#ram.204sodimm.ddr3_1600.2x8192

A Typical (U.S.) Roulette Wheel



Statistical Evidence

Is the Wheel fair?

If so, on average: red and black come up 18/38th of the time and green 2/38.

Suppose we observe an hour's worth of a defendant's play. (at a play per minute N=60) Defendant is caught with device that rigs wheel to hit green more often than random.

During the hour, we saw 9 greens. The chance of observing that on a fair wheel is 0.1%.

Possible Defendant's position

Defendant claims he only used device sporadically so not all plays were affected.

Need to test impact for each individual spin.

The chance of a single green is 2/38 (5.3%), so we can't rule out a fair wheel on an individual basis.

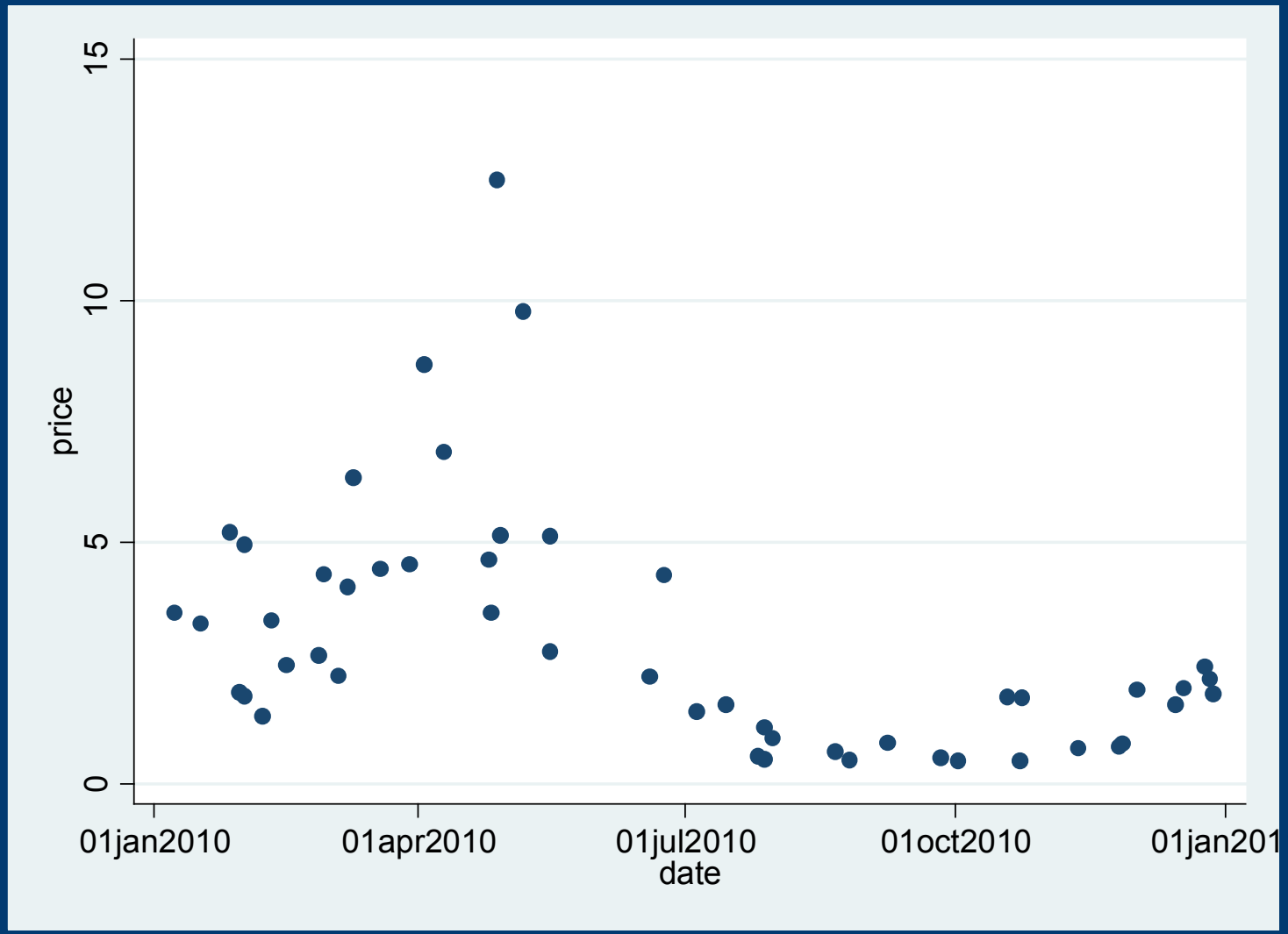
Statistical Precision

Most statistical models are some form of an average.

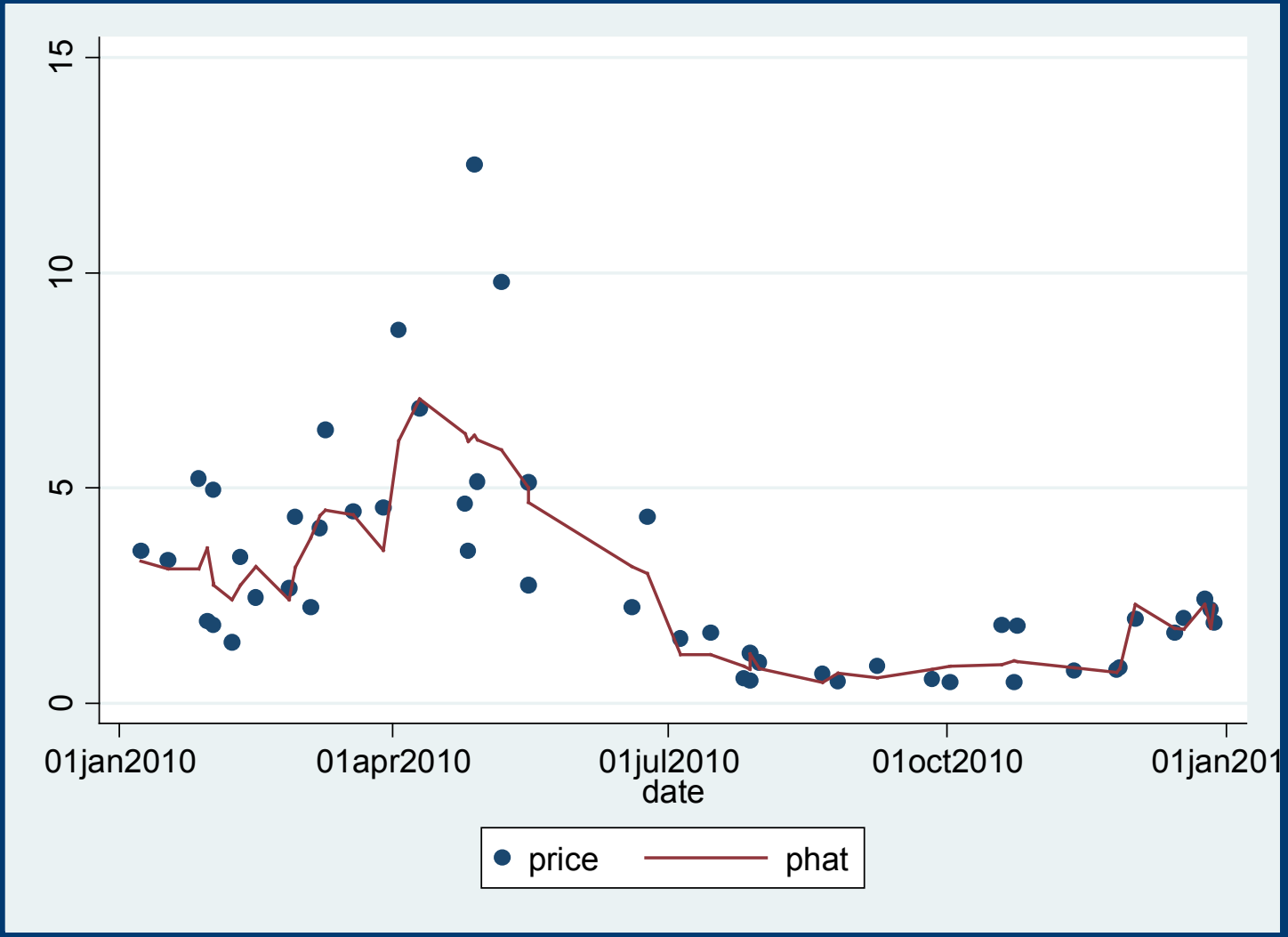
The more data the more precise the estimate

Often neglected is the “power” of a statistical analysis—i.e. what kind of impacts could a test find statistically significant.

A Regression Example



Example: Regression Fit



My Bio

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Dr. Armando Levy specializes in microeconomics, econometrics, and statistics. Dr. Levy has managed, supported expert work and provided testimony on calculating damages in many litigation cases with an emphasis on statistical and econometric issues as well as sample design. His casework experience spans class action damages, insurance, intellectual property and telecommunications. His academic work has examined issues in the demand for crop insurance, telecommunications and live theater. He has also analyzed bidding behavior in auctions, the diffusion of wireless 3G technologies, and optimal contracts in the poultry industry.

Prior to joining *The Brattle Group*, Dr. Levy was Assistant Professor of Economics at North Carolina State University in Raleigh, North Carolina. Dr. Levy has been a lecturer at the University of California at Berkeley in 2008 and 2009.

Dr. Levy has authored a chapter for a book on demand analysis in the telecommunications industry and numerous articles for peer-reviewed journals. Dr. Levy earned his Ph.D. in Economics and a M.A. in Statistics both from the University of California at Berkeley. Dr. Levy received his Ph.D. in Economics, his M.A. in Statistics and his A.B. in Applied Mathematics from the University of California at Berkeley.