Leveraging Consumer Ignorance and Information Search Costs to Maximize Profits in US Wine 'Flash Sales': A Follow-up

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What is a 'flash' sale?

- Retail platform
  - Internet/social media/email
  - Impulsive purchase decisions are easy
  - Fixed or free shipping with minimum purchase
- Marketing tactics to increase profit
  - Large perceived discounts
  - Induced sense of urgency
  - Appearance of scarcity

Some US Flash Sellers

- ~~Cellar Thief~~
- Cinderella Wine (1 wine, 2/day)
- Invino (multiple wines, multiple days)
- Lot 18 (multiple wines, multiple days)
- Wine Spies (1x/day)
- Wines 'til Sold Out (1 wine, ~4/day)
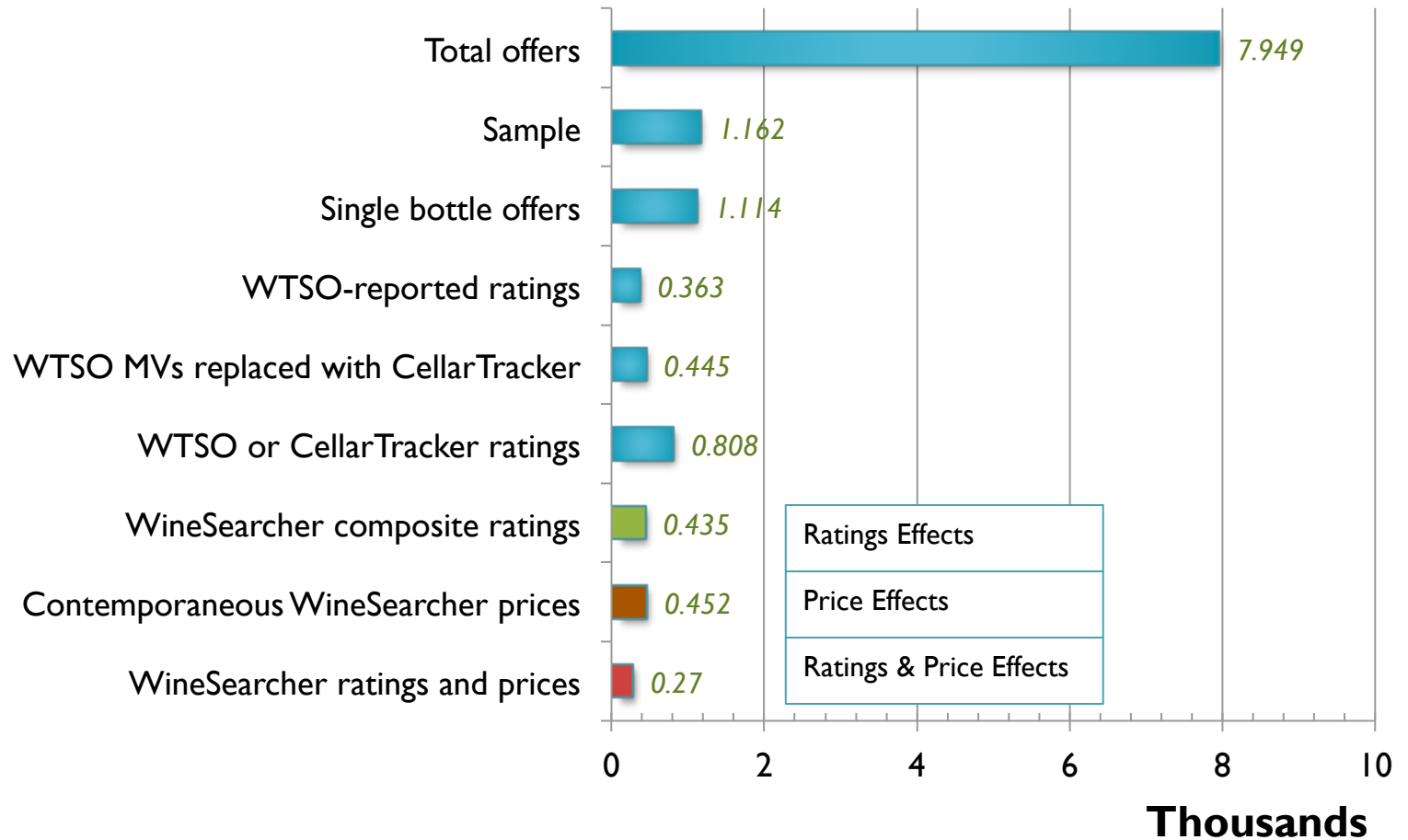- WineShopper (multiple wines, multiple days)
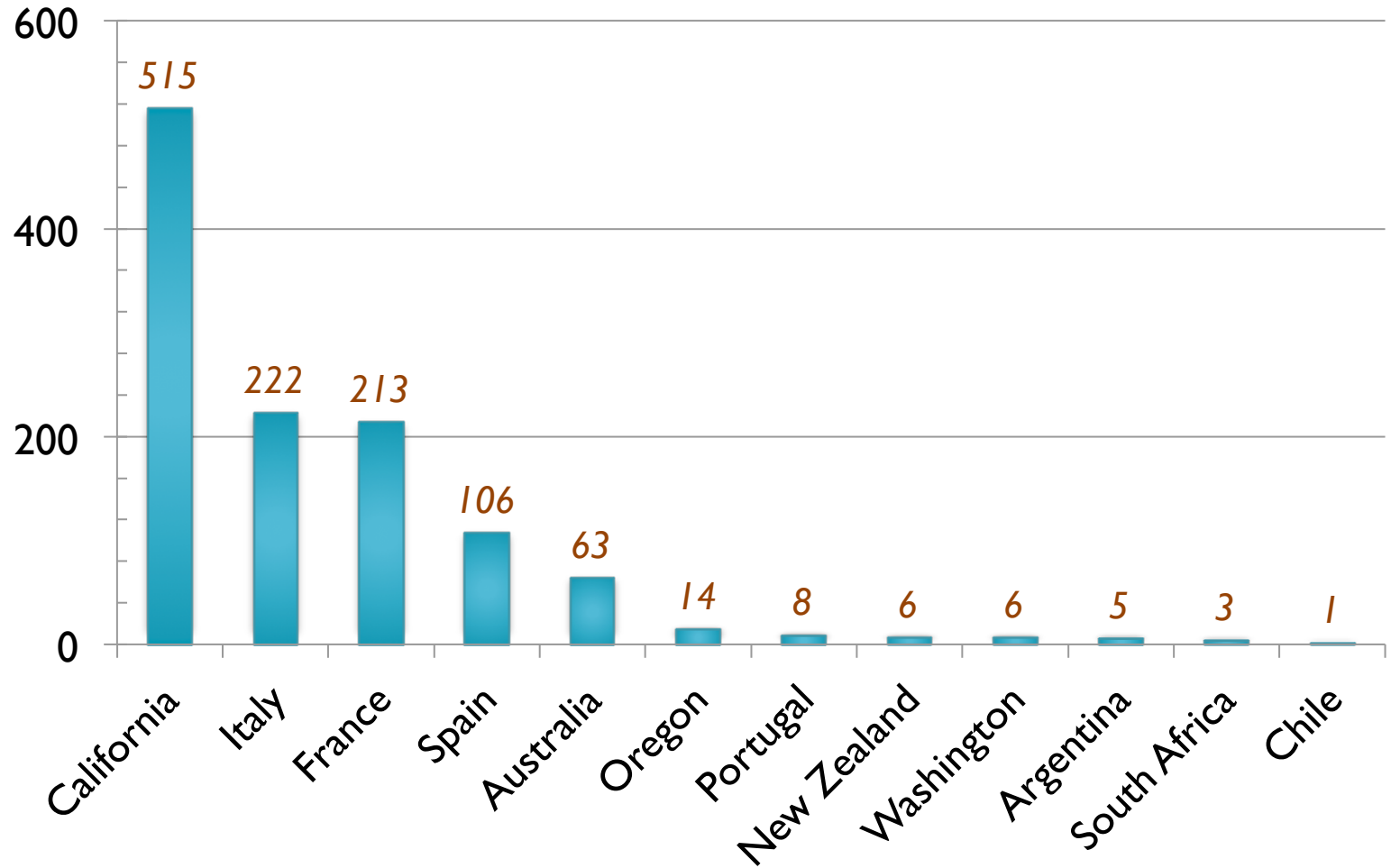- Wine.Woot

WTSO DATA

Caveats

- Price and ratings data are seriously incomplete, making inferences risky
- Known unknowns
  - WTSO <u>is not</u> representative of the flash sale market
  - Sample <u>might not be</u> representative of WTSO
  - Subsamples <u>are not</u> representative of the sample

Samples and Subsamples

Category	Value (Thousands)
Total offers	7.949
Sample	1.162
Single bottle offers	1.114
WTSO-reported ratings	0.363
WTSO MVs replaced with CellarTracker	0.445
WTSO or CellarTracker ratings	0.808
WineSearcher composite ratings	0.435
Contemporaneous WineSearcher prices	0.452
WineSearcher ratings and prices	0.27

Legend:
- Ratings Effects
- Price Effects
- Ratings & Price Effects

Offer Prices and Ratings by Wine Origin

Origin	Average Offer Price	Average WTSO-reported Rating	Wine Searcher Composite Rating
US	$27.26[1]	91.12	89.32
Foreign	$31.73[2]	91.58	89.42[4]
US	$26.76[1]	91.47	89.69
Europe	$32.92[3]	91.54	89.72[5]

[1] Values differ due to missing data.
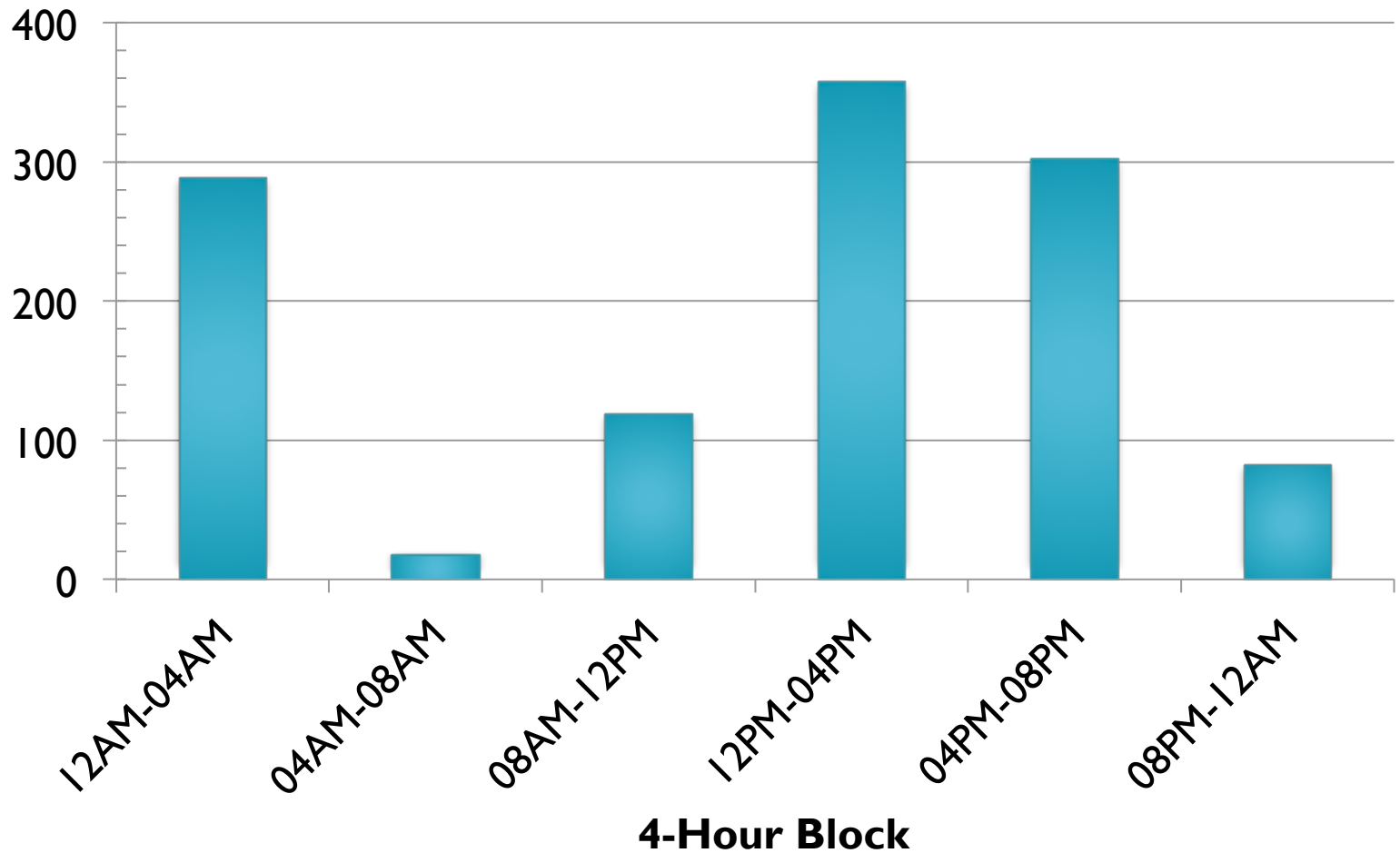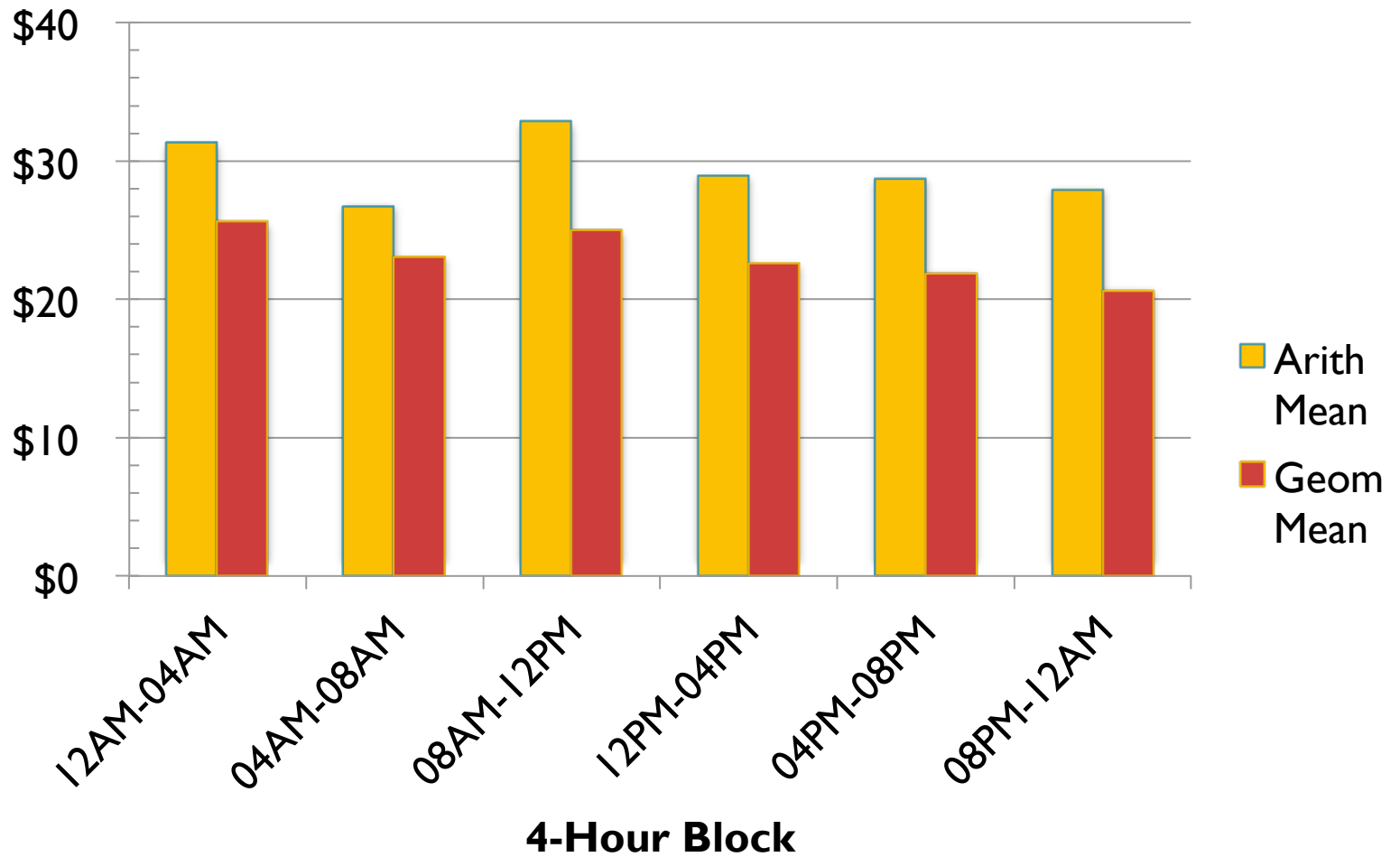[2] $p = .015$.
[3] $p = .001$.
[4] $p = .076$
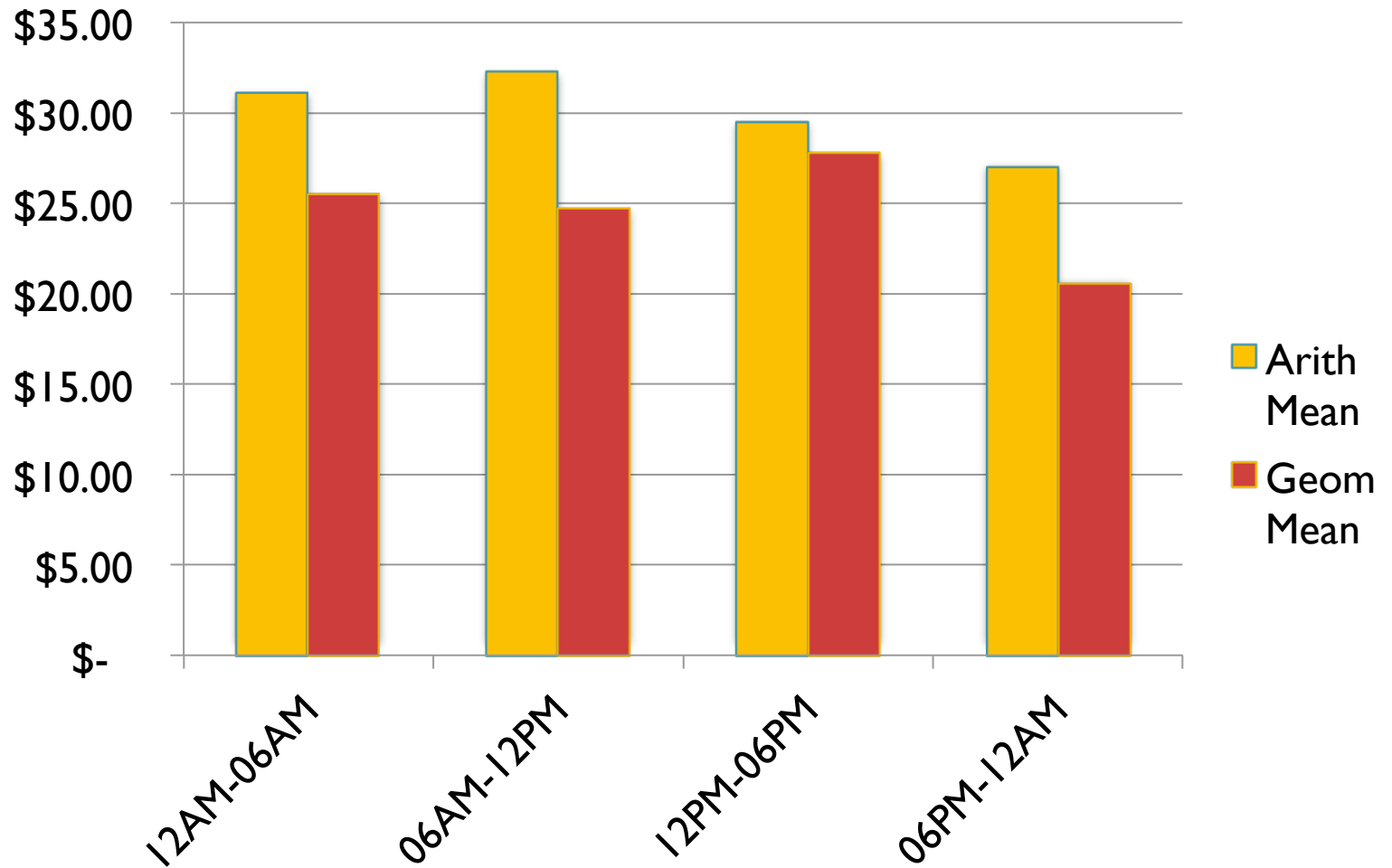[5] $p = .741$.

NOT REALLY 'TIL SOLD OUT'

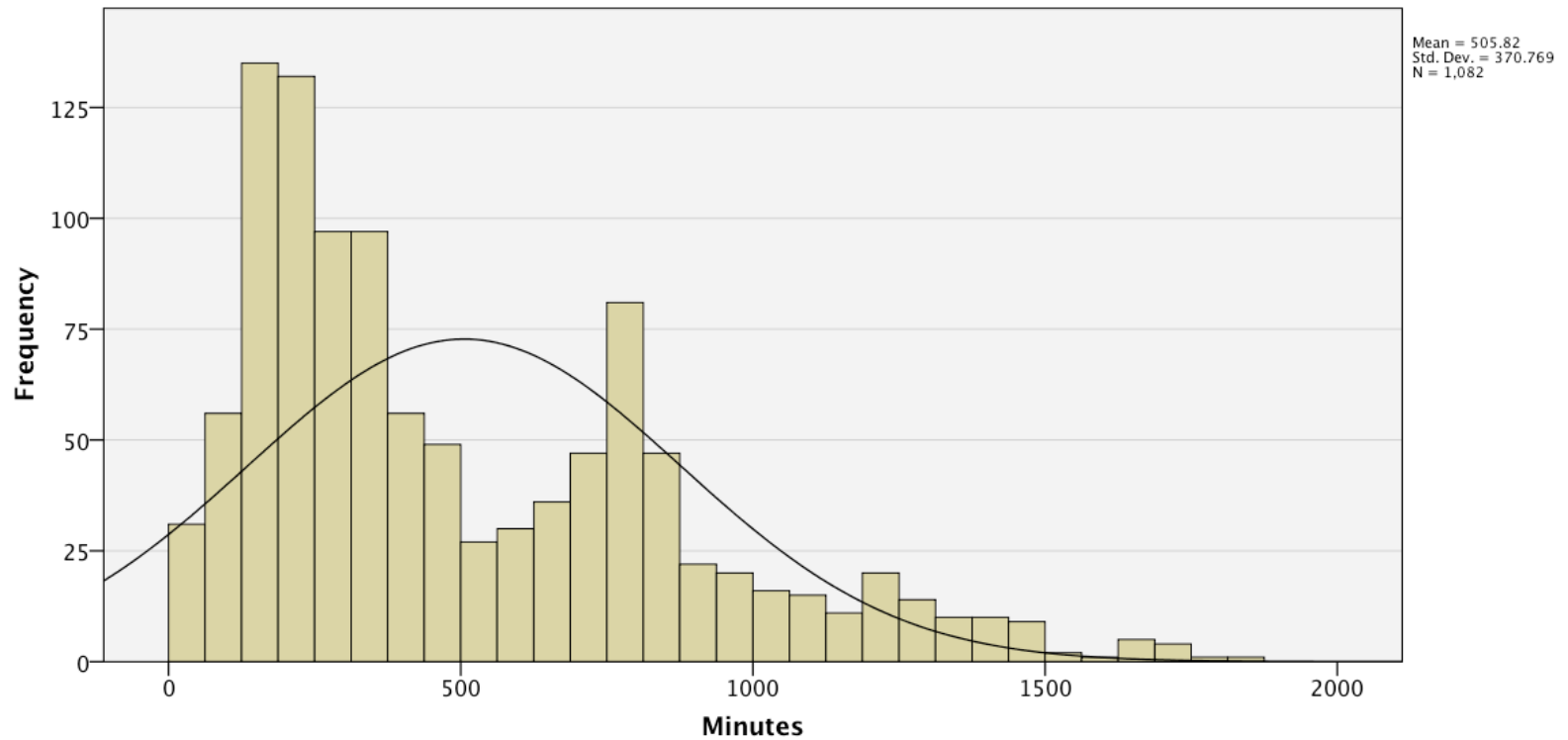# Number of Offers by Time of Day

Mean Prices by Time of Day

Mean Prices by Time of Day

Elapsed Time Between Offers

Offers of the Same Wine

| Number of Offers	Count	Percent
1	444	38.2
2	164	14.1
3	53	4.6
4	34	2.9
5	10	0.9
6	5	0.4
7	1	0.1
8	1	0.1
Total	1,162	100.0%

RATINGS HYPOTHESES

Does WTSO misrepresent ratings?

- Trusted ratings influence WTP
- Inflating ratings should permit higher offer prices
- 2011 analysis found
  - WTSO reported highest WS/WA/ST only
  - Using 90 and CA as bases, WTSO prices were
    - higher by $10.64 for FR per average rating point not disclosed (p<.001)
    - Others ranged from -$3.96 (CH) to $6.86 (AR), but not significant

WTSO ratings are still biased
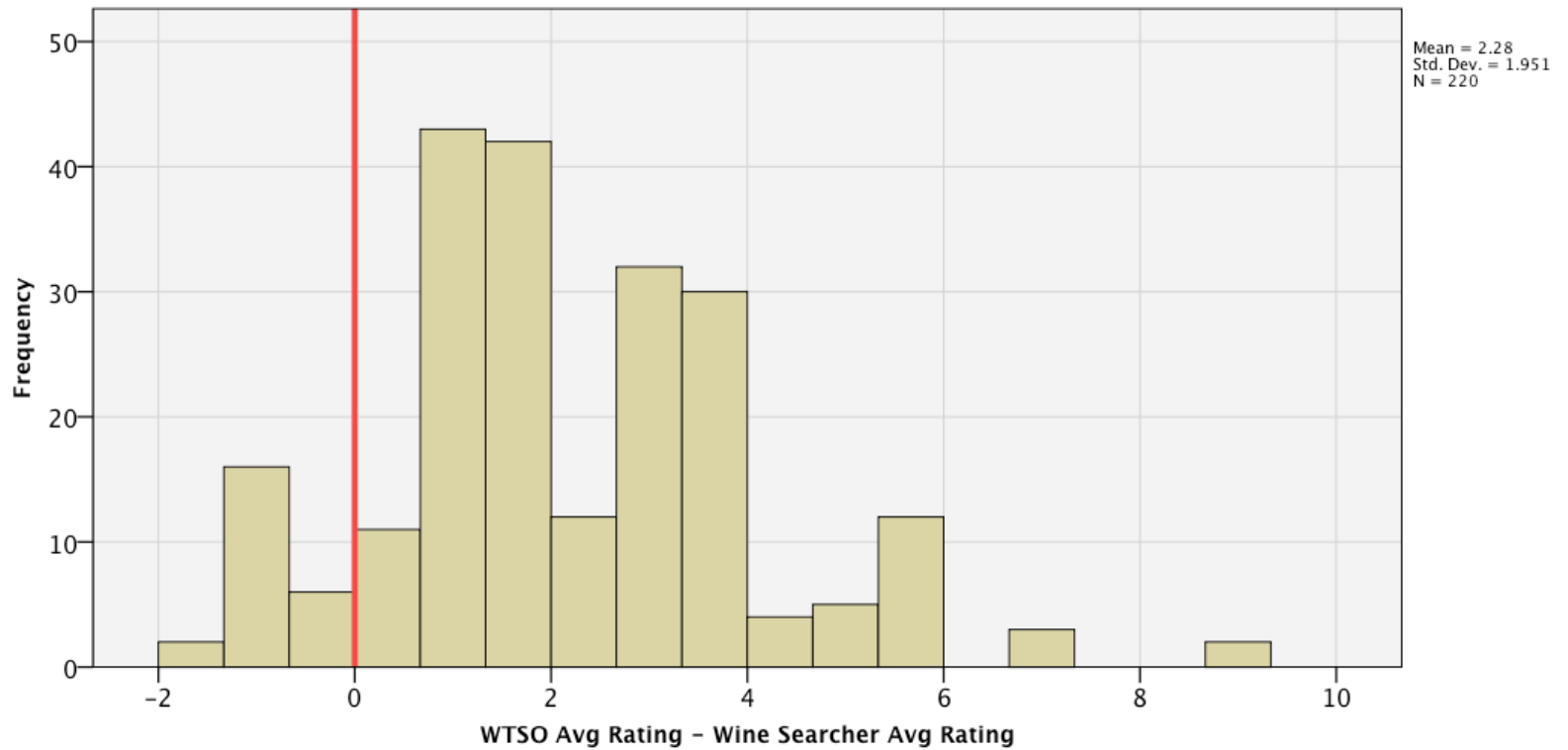
PRICING HYPOTHESES

Does WTSO exaggerate discounts?

- Exaggerating 'original price' (an admittedly endemic marketing practice) may increase WTP among naïve purchasers
- Does inflating 'original prices' permit higher offer prices?
- 2011 analysis found average WTSO 'original price' exceeded average reported 'release price' by $11.56
  - Caveat: Based on 61% of sample, and biased in favor of rated wines and CA wines
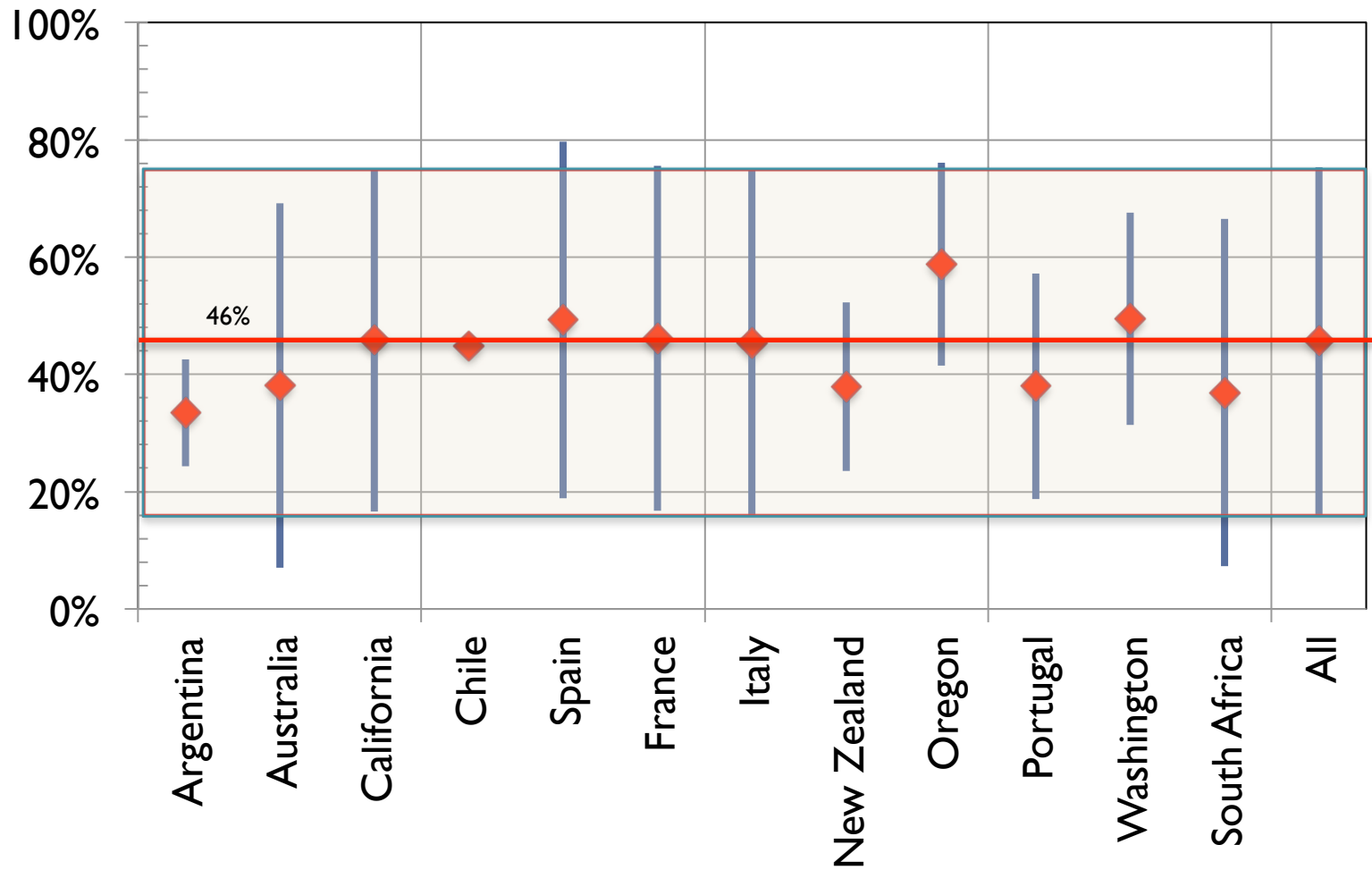
Mean prices by origin
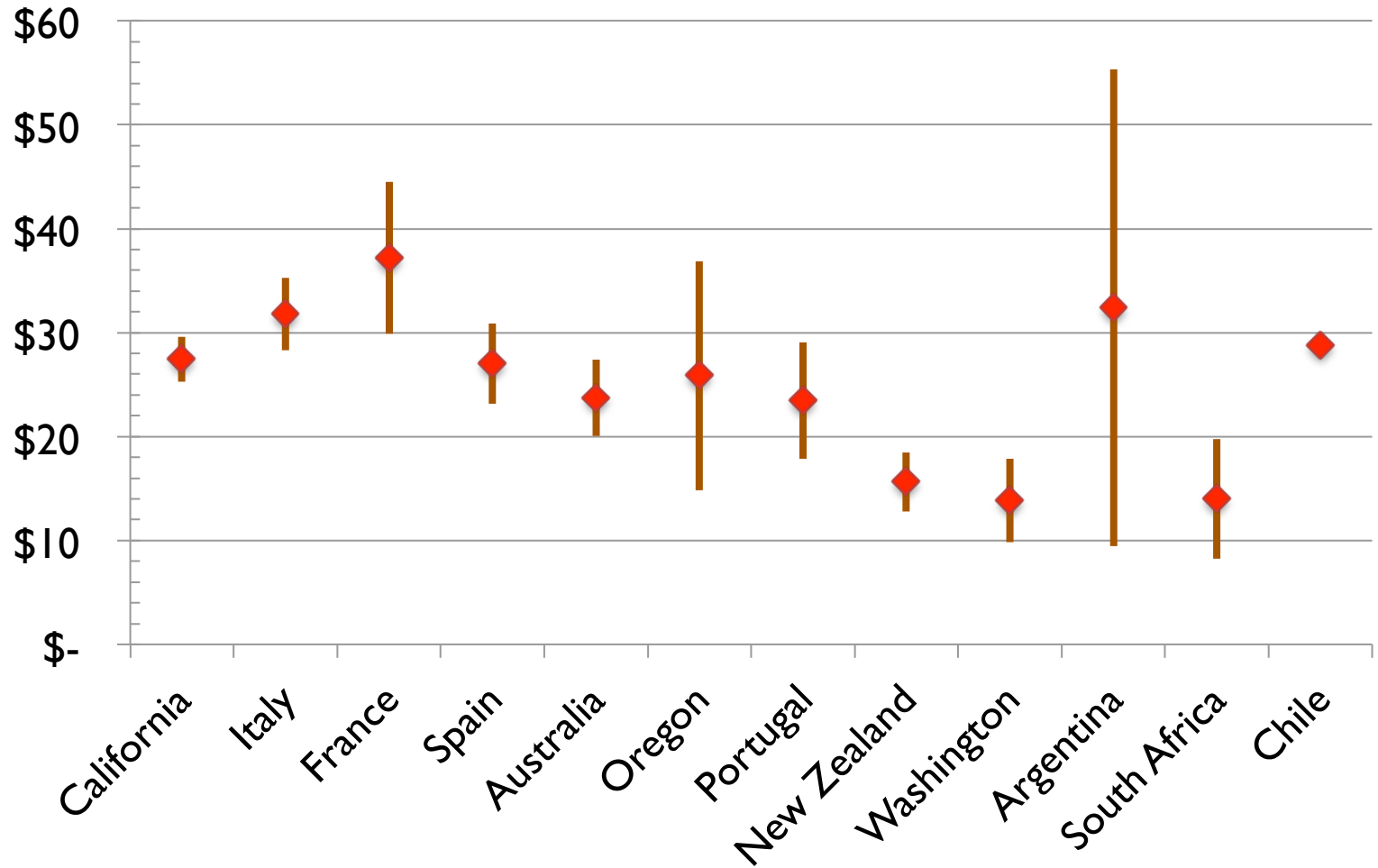
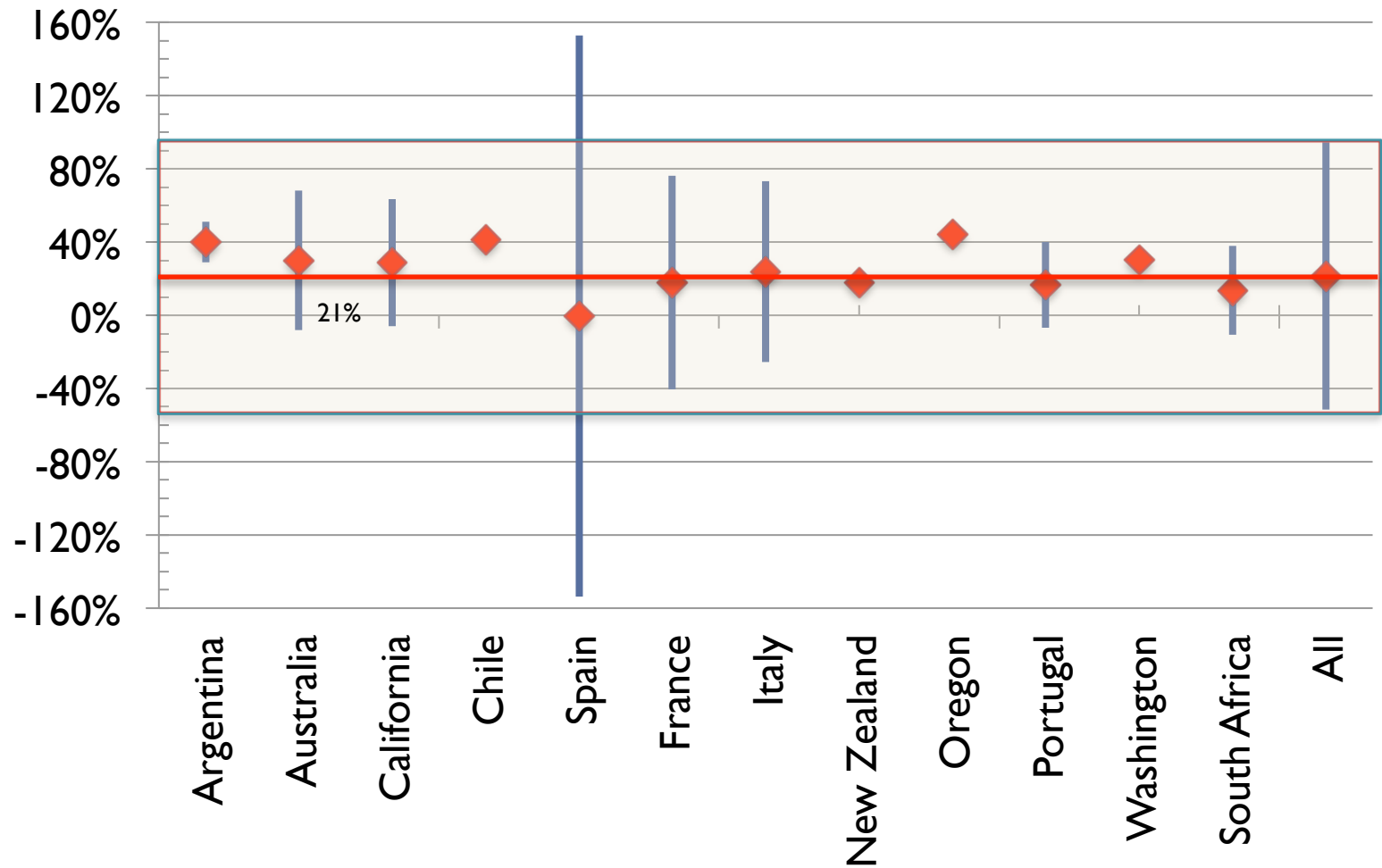means & 95th confidence intervals

Advertised discounts by origin
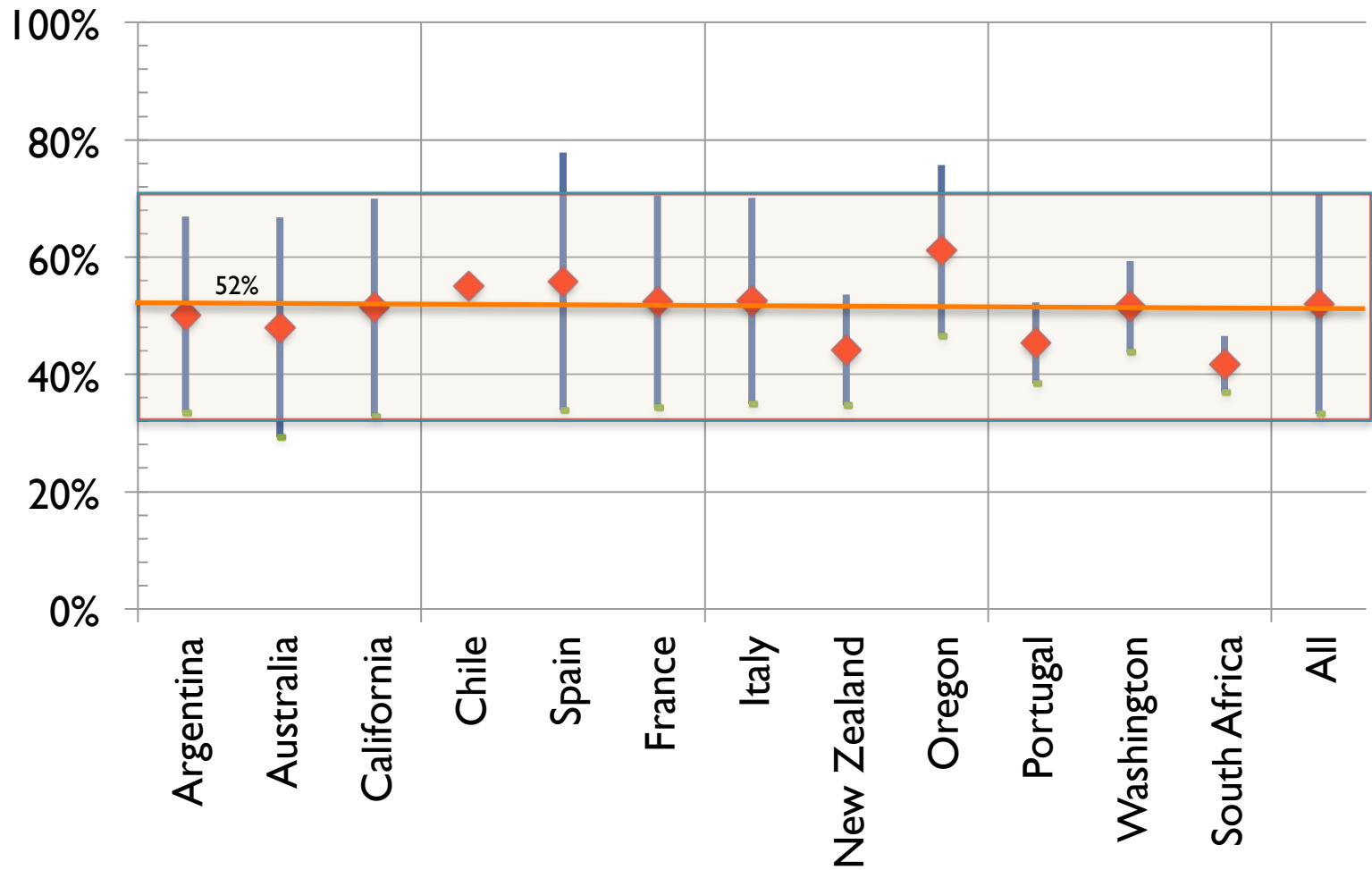
means & 95th confidence intervals

Discount from 'Yesterday's Best' by origin

means & 95th confidence intervals

Discount from contemporaneous Wine Searcher price by origin

means & 95th confidence intervals

DOES WTSO PROFIT FROM THESE PRACTICES?

More caveats

- Analysis is limited to publicly available data, which excludes sales volumes

Regression model

- Dependent variable = WTSO Offer Price
- Independent variables (N)
  - Fixed effects
    - Country/state dummy & interactive variables (14)
    - 'Yesterday's Best' (or if MV) WineSearcher price (1)
    - Contemporaneous WineSearcher price trend
  - Test Variables
    - Producer's Wishful Surplus
    - Profit from disinformation about price
    - Profit from misinformation about quality

Variables explained

- Producer's Wishful Surplus
  - Release Price – 'Yesterday's Best' Price or Contemporaneous Wine Searcher Price
- Disinformation about price
  - = 'Original Price' – Release Price
- Misinformation about quality
  - = Avg WTSO-reported rating (WS/WA/ST) – Wine Searcher Composite Rating
  - Caveat: WS Composite Ratings include other 100-pt raters and 20-pt raters

Regression Results (1)

	2011 Analysis		2014 Analysis
Adjusted R^2	.977		
	B	Sig.	
PERCEIVED QUALITY EFFECTS			
Avg Points from 90	.869	.169	
PREVAILING MARKET PRICE			
'Yesterday's Best Web Price', Premium Wines Only	-.032	.404	

Regression Results (II)

	2010 Analysis		2014 Analysis	
Adjusted R^2	.977			
	B	Sig.	B	Sig.
PREVAILING MARKET PRICE				
ALL	—	—		
AR	-.127	.948		
AU	-.083	.377		
CA	.700	.000		
ES	-.262	.000		
FR	-.289	.000		
IT	-.101	.087		
PT	.069	.680		
WA	.505	.273		

Regression Results (III)

	2011 Analysis		2014 Analysis	
Adjusted R^2	.977			
	B	Sig.	B	Sig.
<u>PRODUCER'S WISHFUL SURPLUS</u>				
Release Price – 'Yesterday's Best Web Price'	.573	.000		
<u>PROFIT FROM DISINFORMATION ABOUT PRICE</u>				
'Original Price' - Release Price	.300	.000		

Regression Results (IV)

	2011 Analysis		2014 Analysis	
Adjusted R^2	.977			
	B	Sig.	B	Sig.
PROFIT FROM MISINFORMATION ABOUT QUALITY				
WTSO Rating – Composite Rating				
AR	6.860	.925		
AU	-.463	.805		
CA	.684	.554		
CH	-3.959	.615		
ES	.534	.735		
FR	10.641	.000		
IT	.740	.601		
ZA	-2.622	.635		