Profit Margins Along the Fresh Potato Supply Chain

UWEX & WPVGA Grower Education Conference

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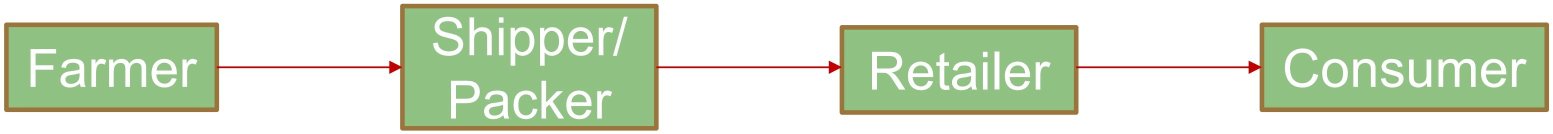
Goal Today

- We are at the very beginning of a longer-term research project on the pricing along the fresh potato supply chain focusing on identifying Wisconsin's comparative advantages

- Today we will summarize some preliminary findings from research in progress and provide some initial thoughts on their implications

Fresh Potato Supply Chain



Fresh Potato Supply Chain

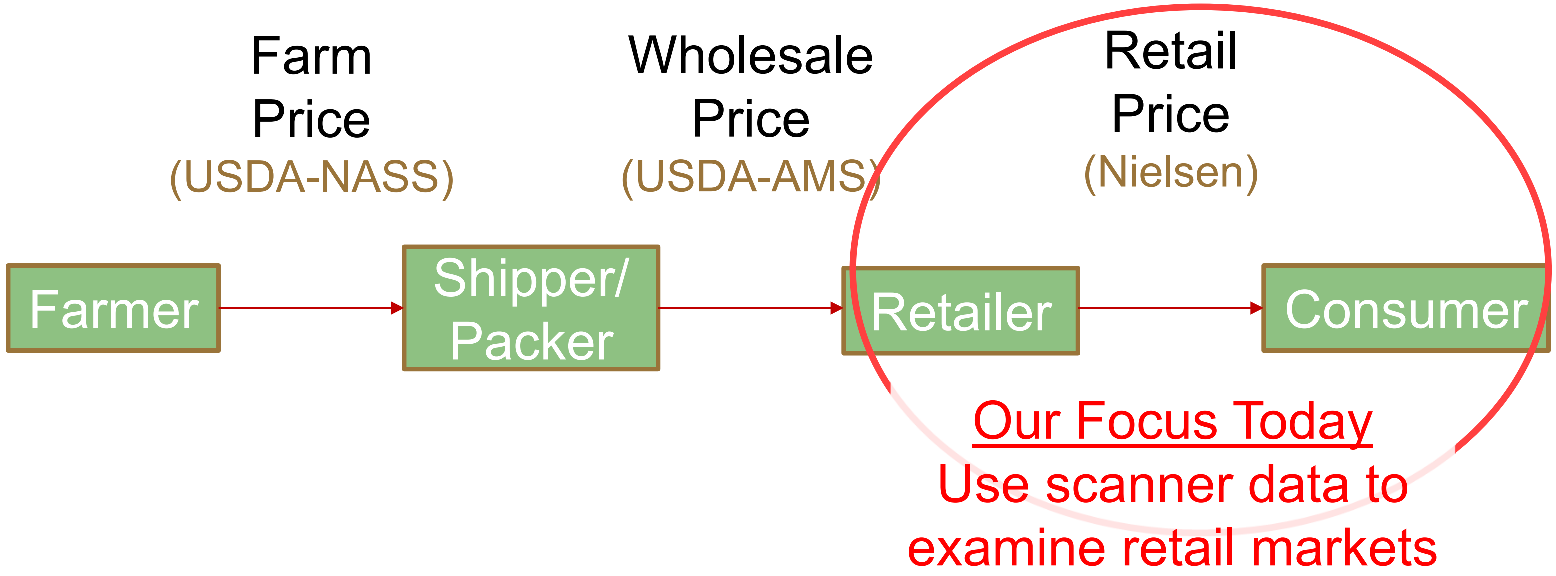
Farm Price (USDA-NASS)

Wholesale Price (USDA-AMS)

Retail Price (Nielsen)

Farmer → Shipper/ Packer → Retailer → Consumer

Fresh Potato Supply Chain



Fresh Potato Supply Chain

Farm Price (USDA-NASS)	Wholesale Price (USDA-AMS)	Retail Price (Nielsen)

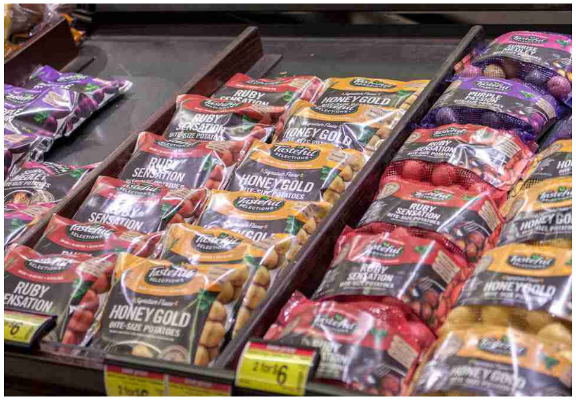
Farmer → Shipper/ Packer → Retailer → Consumer

Our Focus Today
Use scanner data to examine retail markets

- How do local brands compete with national and generic brands in WI?
- Longer-term: What are the sources of Wisconsin's competitive advantages?
  - Shipping costs, Cost of production, Healthy Grown, United Potato?
- How is the surplus from this advantage shared along the supply chain?

Demand Estimation using Scanner Data

- Lots of similar products in grocery stores for “fresh potatoes”
- Russet, yellow, red, white, fingerlings, little potatoes, organic, …
- Different package options: 3, 5, 8, 10-lb, plastic, mesh, ready to cook, …
- Multiple Brands, some with localities (Idaho russets), some without



Wisconsin Stores with Fresh Potato Scanner Data

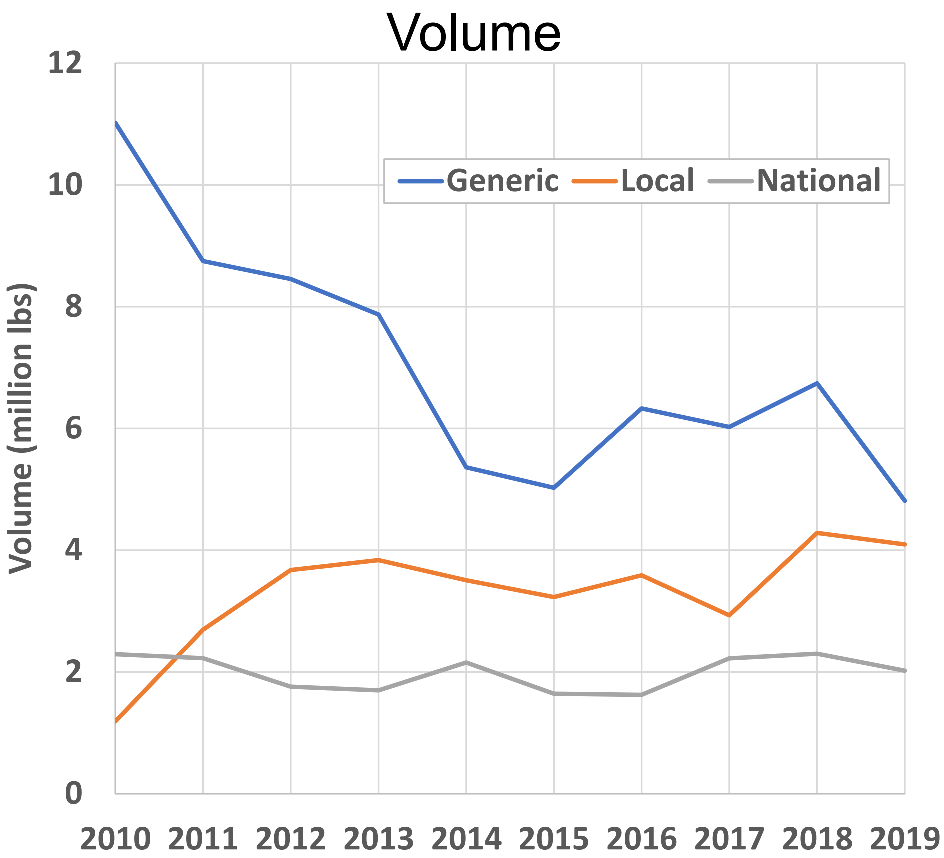
- A.C. Nielsen scanner data: Weekly sales by UPC code by store for 5 major chains for 2010 to 2019 in 3 major WI areas: Madison, Milwaukee, Fox Valley
- Retailer names masked (missing Kroger, Aldi, Trader Joe's, Costco, Walmart?)
- Dropped minor chains/stores so model would estimate, still 90+% of sales

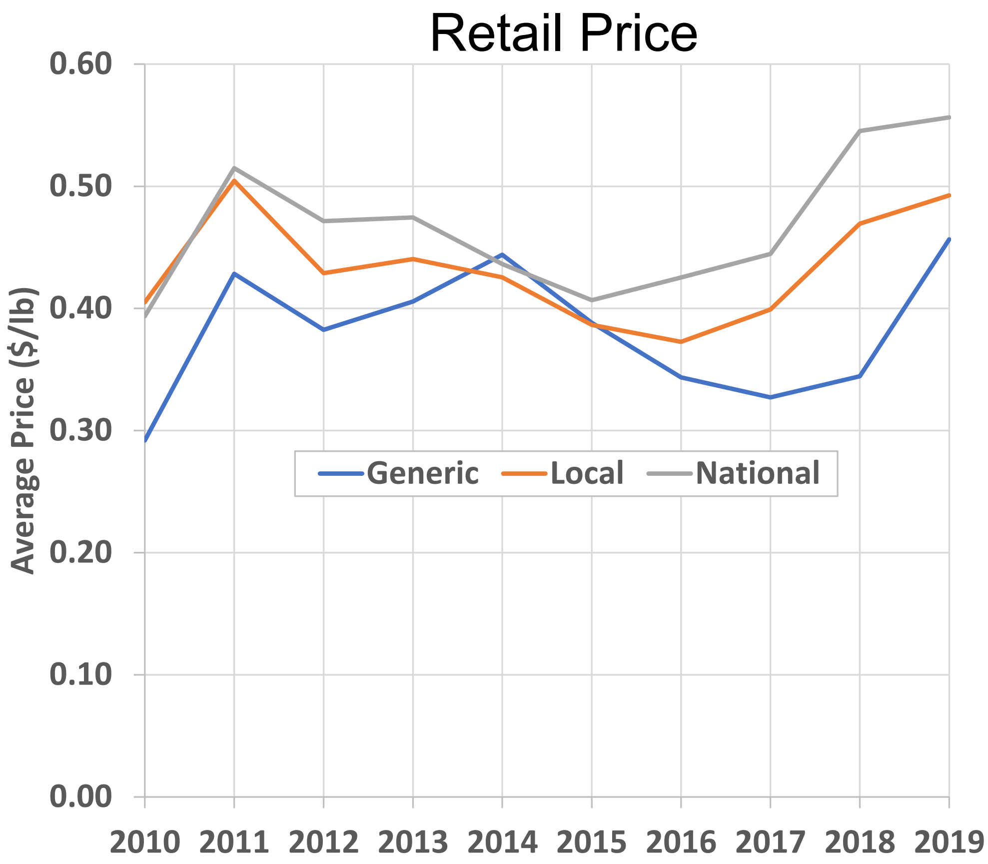
Number of Stores in Wisconsin by Chain and Year										
Chain	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
One	0	0	0	0	0	0	0	0	10	11
Two	90	94	96	96	98	99	99	98	98	97
Three	92	94	94	93	95	92	88	94	96	95
Four	26	26	27	25	25	25	25	16	6	4
Five	0	0	0	0	0	0	0	0	30	30
Total	**208**	**214**	**217**	**214**	**218**	**216**	**212**	**208**	**240**	**237**

Potato Products with Scanner Data Sales

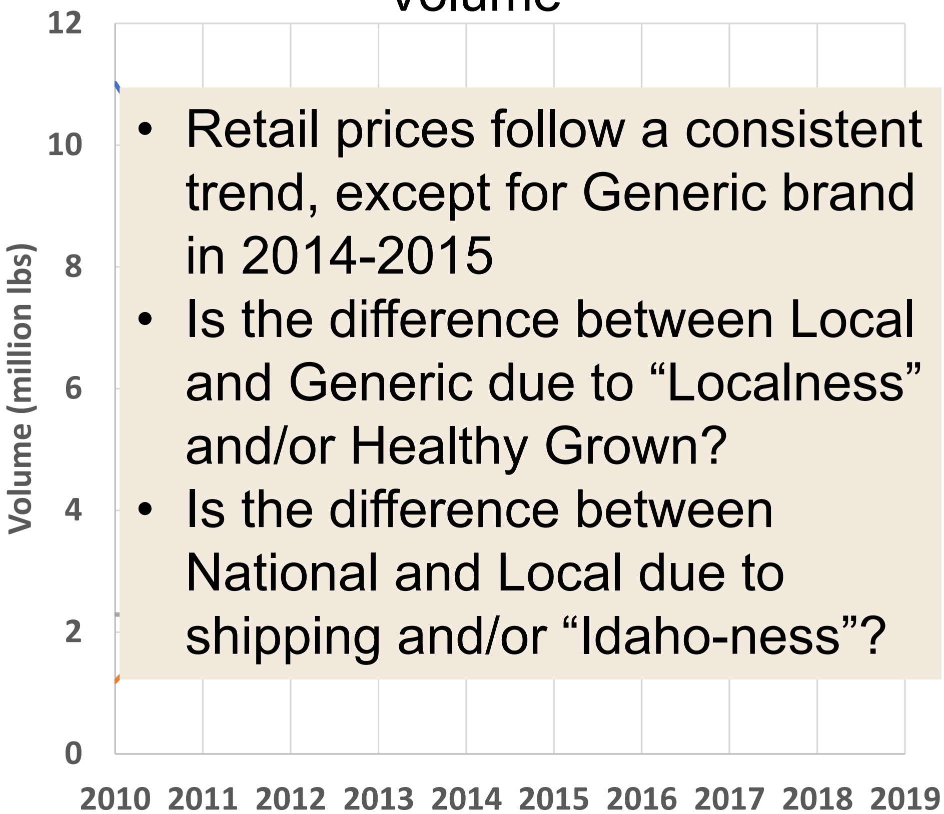
- Three major types of Fresh Russets
  1. Green Giant Fresh Idaho Russets (National)
  2. Alsum Russets (Local)
  3. Generic Russets (from WI?)
- Several minor brands in the data with small shares, so dropped
- Potato Types: Russet, Golden, Red, Baby
- Package Size: 0.75, 1.5, 3, 5, 8, 10 lbs
- BLP (Berry, Levinsohn, and Pakes 1995) is the standard way to analyze scanner data to estimate demand elasticities, product substitutions, markups and wholesale prices

Fresh Russet Sales Volumes and Prices in Wisconsin by Brand for 2010-2019

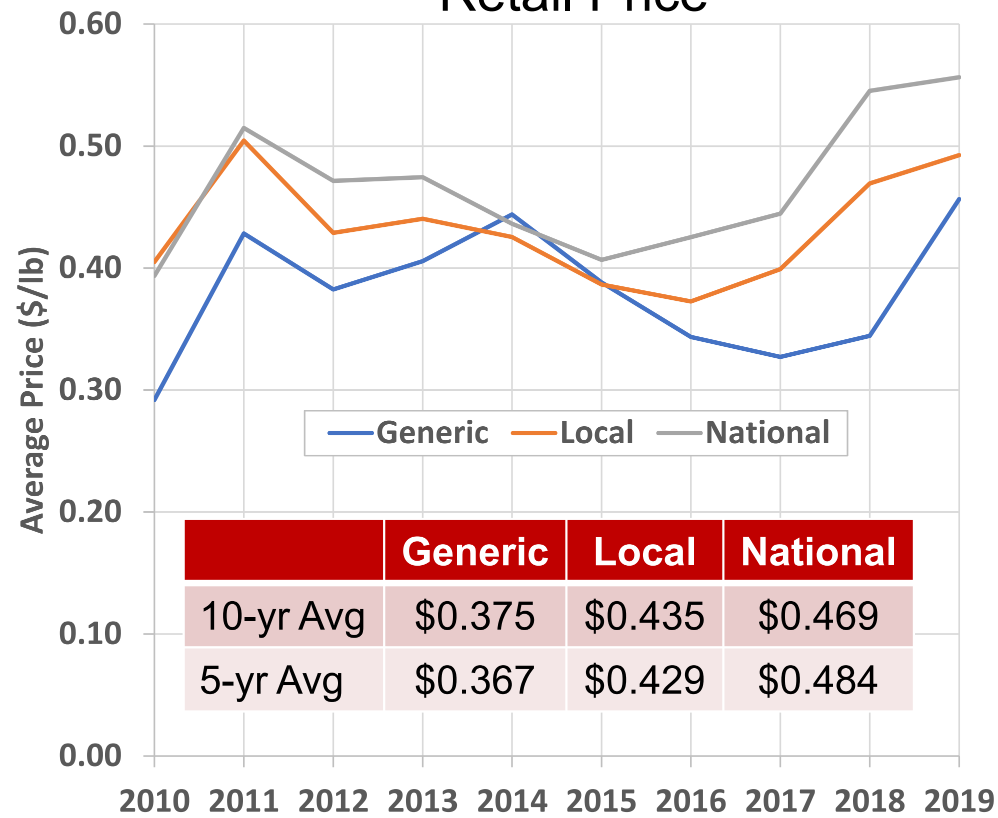




Fresh Russet Sales Volumes and Prices in Wisconsin by Brand for 2010-2019



- Retail prices follow a consistent trend, except for Generic brand in 2014-2015
- Is the difference between Local and Generic due to “Localness” and/or Healthy Grown?
- Is the difference between National and Local due to shipping and/or “Idaho-ness”?

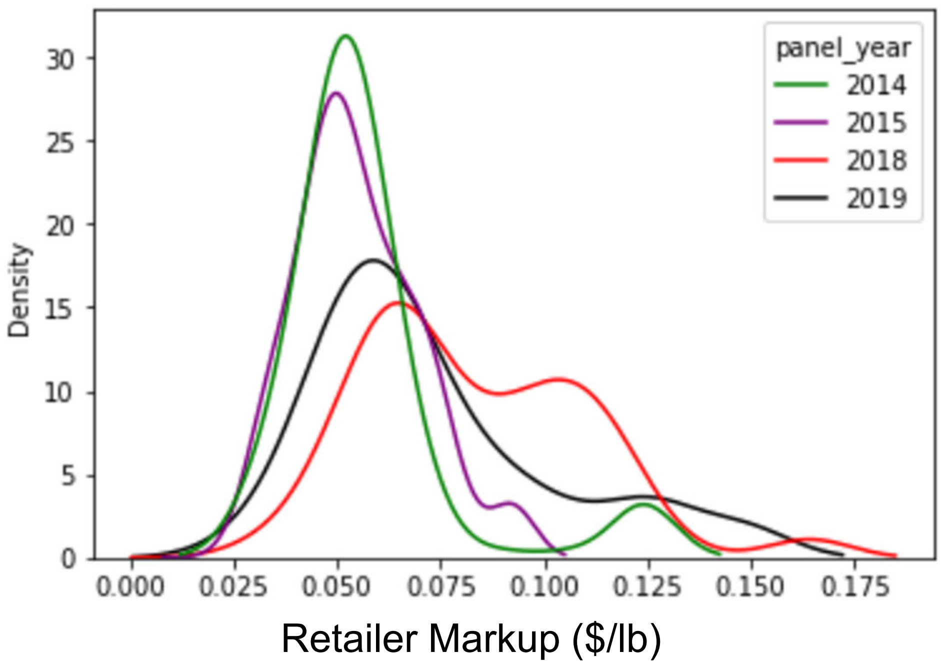


	Generic	Local	National
10-yr Avg	$0.375	$0.435	$0.469
5-yr Avg	$0.367	$0.429	$0.484

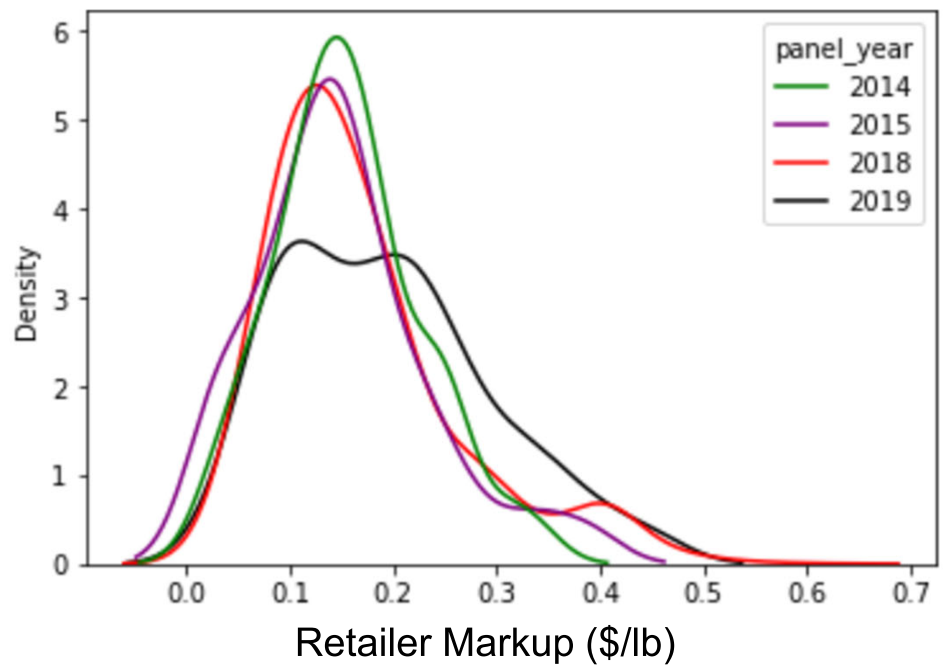
Results: Example Retailer Markup Densities by Year

BLP Estimates Retailer Markup = Retail Price – Wholesale Price

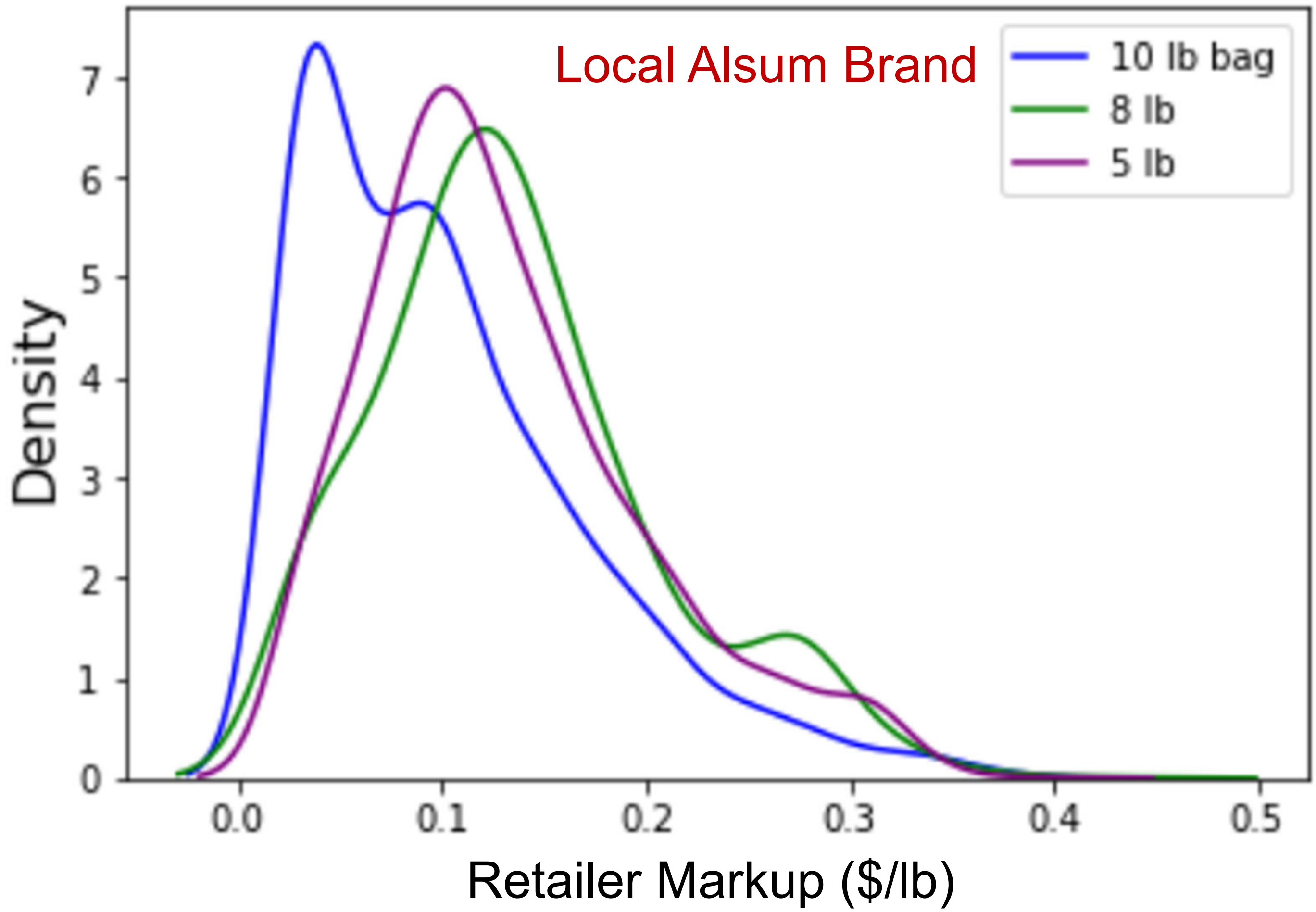
Generic Russets



Green Giant Fresh Idaho Russets



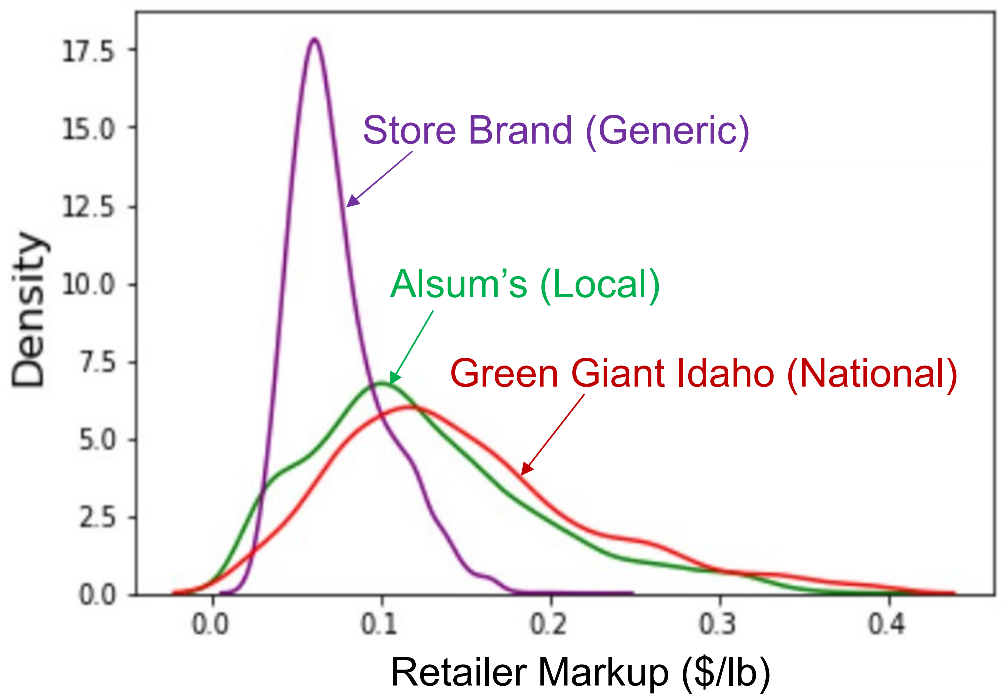
Results: Example Retailer Markup Densities by Package Size



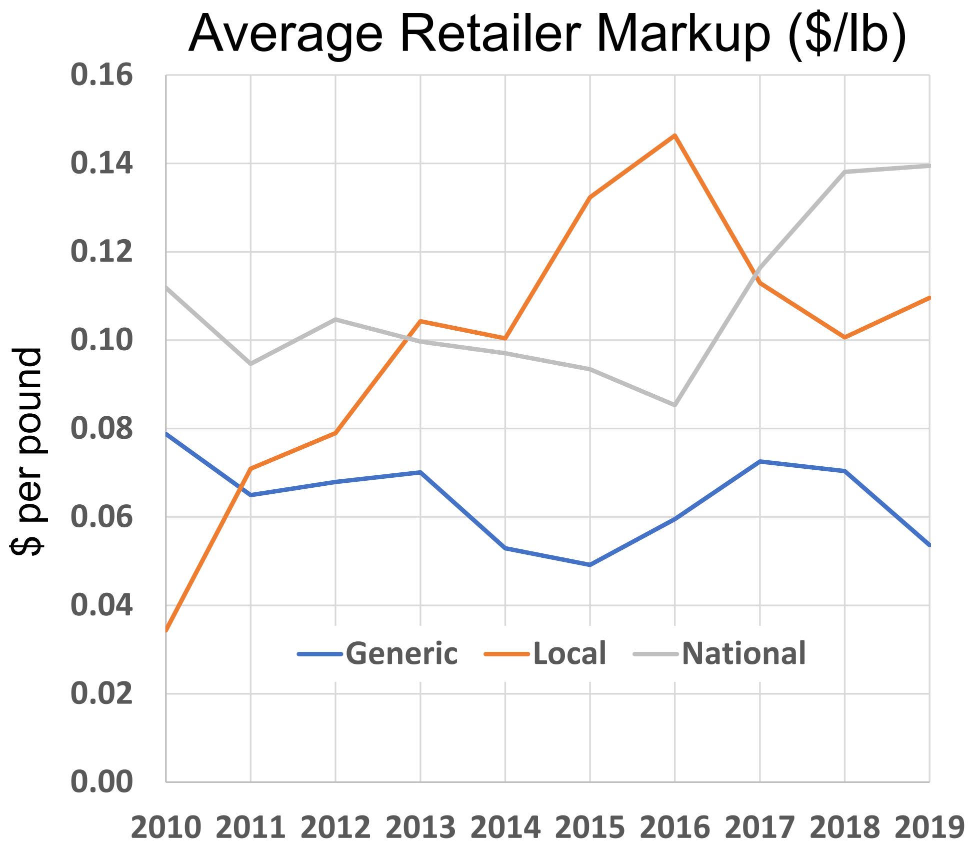
Results: Distribution of Retailer Markups for Fresh Russet in Wisconsin 2010-2019

- Generic brand has smaller and more consistent retailer markup
- Local and National brands have larger retailer markups that vary widely and have similar distributions
- Retailers treat Local and National brands similarly in terms of markups
  - Does “Local” & Health Grown make a premium brand like “Idaho”?

Distribution of Markups 2010-2019

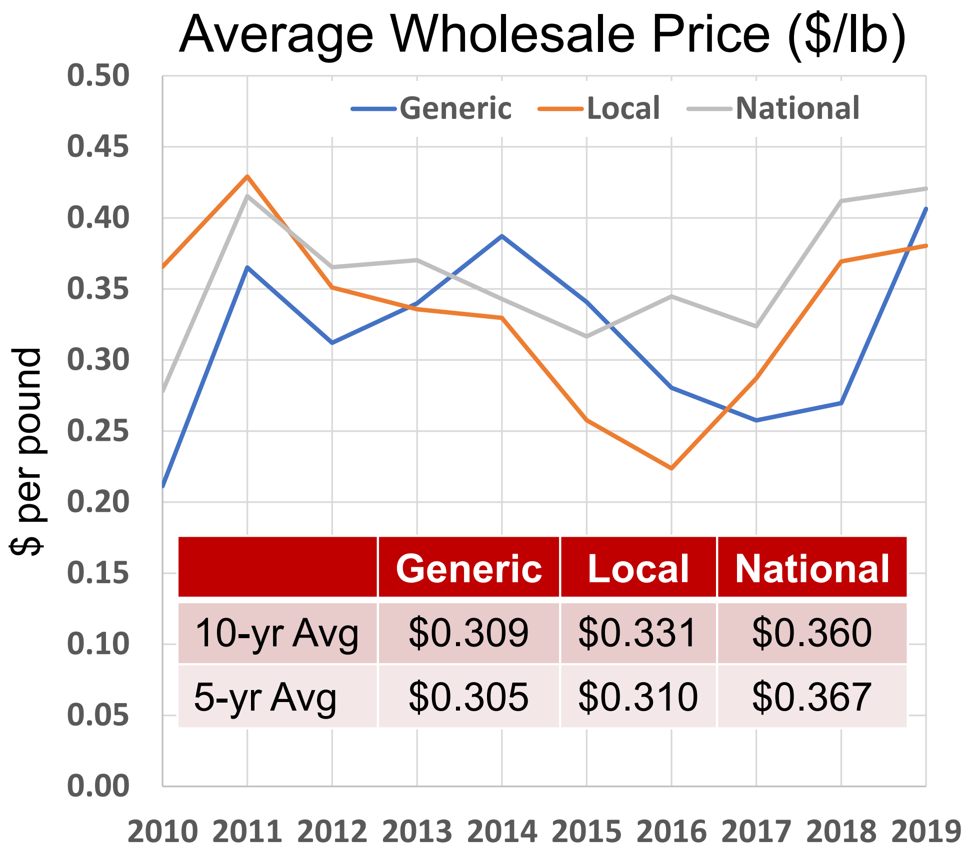


Estimated Retailer Markup by Brand & Year



- Generic brand average markup ranged between 5 and 7 cents with no real trend
- National brand average markup ranged 9 to 11 cents, then jumped to 14 cents in 2018-2019
- Local brand rose from <4 cents to >14 cents from 2010-2016, then ranged 10-11 cents 2017-2019
- Local brand most dynamic
- Why Local-National switch in 2017?

Estimated Wholesale Price by Brand & Year



	Generic	Local	National
10-yr Avg	$0.309	$0.331	$0.360
5-yr Avg	$0.305	$0.310	$0.367

- Retail price – Markup = Wholesale
- How accurate are these estimates?
- All follow same general trend, but Generic brand more erratic
  - What happened in 2014-2015?
- Is difference between Local & Generic due to “Localness” and/or HG?
  - Has this difference eroded?
- Is difference between National & Local due to shipping and/or “Idaho-ness”?

Summary

- Preliminary research results leaving us with more question than answers
- WI retailers treat Local and National brands similarly in terms of markups
  - Does adding “Local” & Health Grown make a premium brand like “Idaho”?
- Is the difference in retail and wholesale prices between Local and Generic due to “Localness” and/or Healthy Grown?
- Is the difference in retail and wholesale prices between National and Local due to shipping costs and/or “Idaho-ness”?
- We plan to answer these by analyzing other regions (New York, Colorado), controlling for shipping costs, farm costs of production, and have more brands
- What are the sources of Wisconsin’s competitive advantage?
- How is the value of this advantage shared along the supply chain?

QUESTIONS?
COMMENTS?

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