Affordable Sustainability?

Can Marketing Messages Improve Market Access for Regional Producers and Better Serve Rural Consumers?

Hyunjung Lee and Kristin Kiesel

Department of Agricultural and Resource Economics
University of California, Davis

Research Results and Implications for Solano County

Introduction

Background and Motivation

- Strong *consumer demand* for local foods (He et al., 2021; Martinez et al., 2010; Spalding and Kiesel, 2026. Lee and Kiesel, 2026).
- No uniform definition of local production in the U.S.
- Multitude of labels and claims communicating credence qualities (i.e. otherwise unobservable quality attributes)
- Actual purchases depend on financial, time, and cognitive constraints

$\rightarrow$ Vote-Buy gap (Stated preferences $\neq$ Revealed preferences)

Research Question

- How do combinations of local production claims and organic labels (e.g., USDA Organic seal) affect quality perceptions, willingness to pay (WTP), and actual purchase decisions?
  - Do multiple sustainability statements reinforce each other or crowd each other out?
  - How do effects differ across income groups?

Sustainability Messaging

Labels and claims provide consumers with information about product attributes, but...

Labels

- are uniformly defined and regulated
- are certified by a governmental agency or third party
- are relatively more *accurate*

- **USDA Organic**
- Certified Transitional
- Certified Pesticide Residue Free
- Certified Naturally Grown
- Certified Regenerative

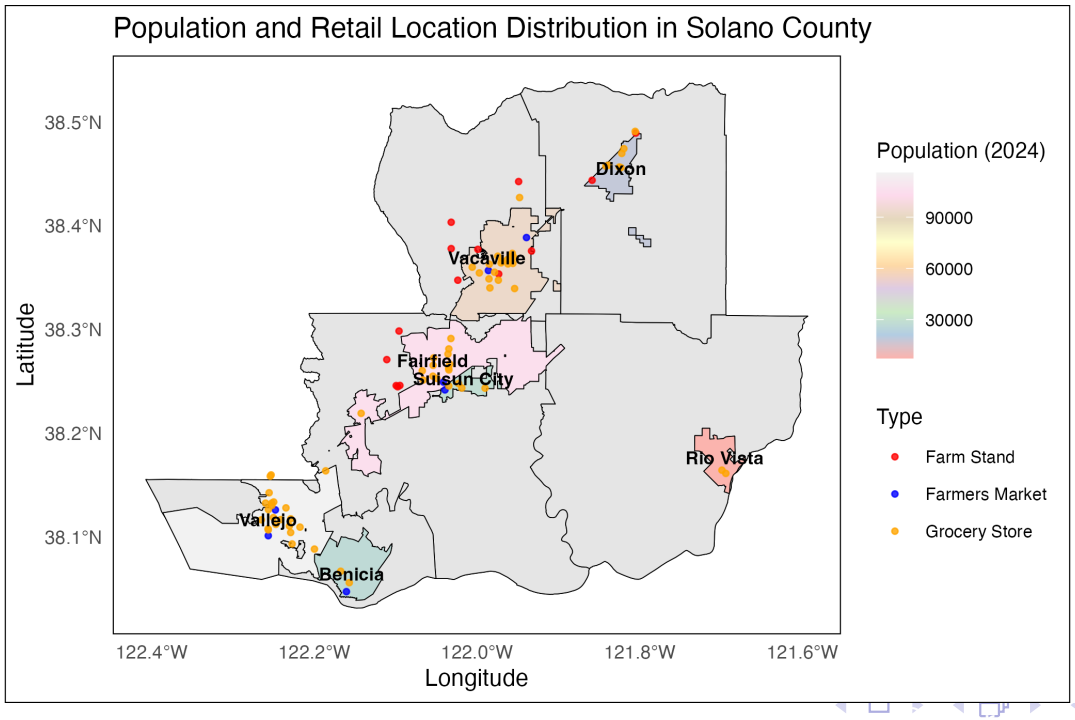
Claims

- are not uniformly defined
- are voluntarily added (by manufacturers and retailers)
- are relatively less *accurate*, but more intuitively understood

- Zero Pesticides
- All Natural
- Local

Situation Analysis

- Strong agricultural sector: $460.4 million in *agricultural commodity production*
- Significant income heterogeneity: ∼50% high-income; ∼10% below poverty
- Diversity in retail channels: National chains, discount stores, farm stands and farmers' markets; no independent/locally owned grocery stores?



Data Collected: Lab-in-the-Field Label Experiment

- Two experimental sessions in 2025 (June & October)
- Three components
  - Pre-survey (Shopping habits)
  - Choice experiment (Information treatments)
  - Post-survey (Belief updating; *Demographics*)
- Incentive-compatible purchase decision
  - Participants are compensated ($30)
  - Option to purchase strawberries ($5/basket)

(Group S) Grown in Solano County + Sustainable Solano

(Group O) Grown in Solano County + USDA ORGANIC

(Group SO) Grown in Solano County + Sustainable Solano + USDA ORGANIC

Select Participant Characteristics

Sample size

- 108 participants: 68 in June, 40 in October
- 55% non-White, 26% Hispanic/Latinx

Household size

- Avg. size: 2.7
- 33% with children under 18 (Avg. number of children: 2.4)

Income

- 30% low-income households (below $35,000)
- 43% receive food assistance (SNAP, WIC, food banks and pantries)

Additional characteristics

- 55% long-term Solano residents (more than 10 years)
- 27% work/worked in agricultural production

Pre-Experiment Survey Responses

Where Do You Shop?

Main shopping channels

- Grocery chains: 75%
- Supercenters: 64%

Price-oriented options

- Discount stores: 40%

Local foods channels

- Farmers' markets: 32%
- Farm stands or CSA: 20%

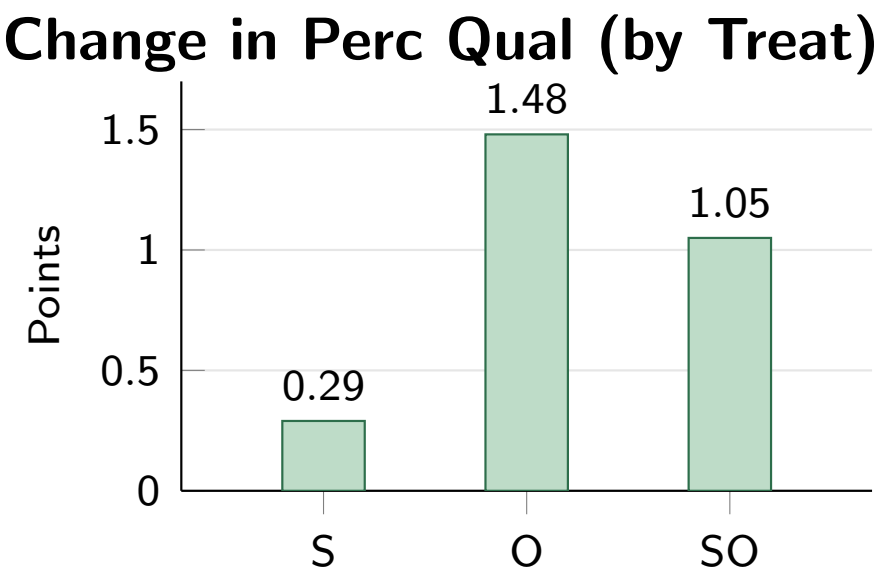
Credence Qualities Intentionally Purchased?

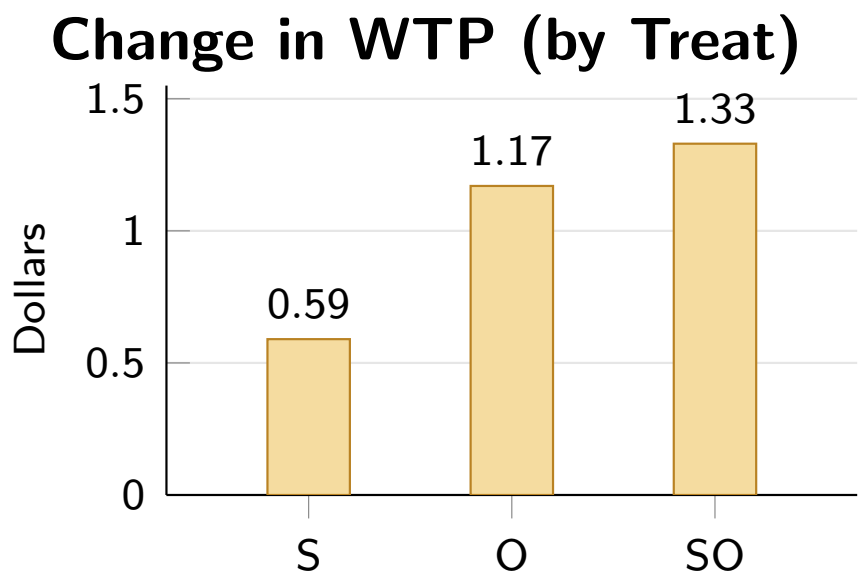
- USDA Organic: 56%
- Local: 41%
- Natural/Naturally Grown: 41%
- Non-GMO: 33%

✓ Local claims and organic labels widely recognized

Experiment Data: Quality Rating and WTP Responses

- USDA Organic Seal generates the strongest quality response; Local and Organic Seal combined generates the largest WTP increase

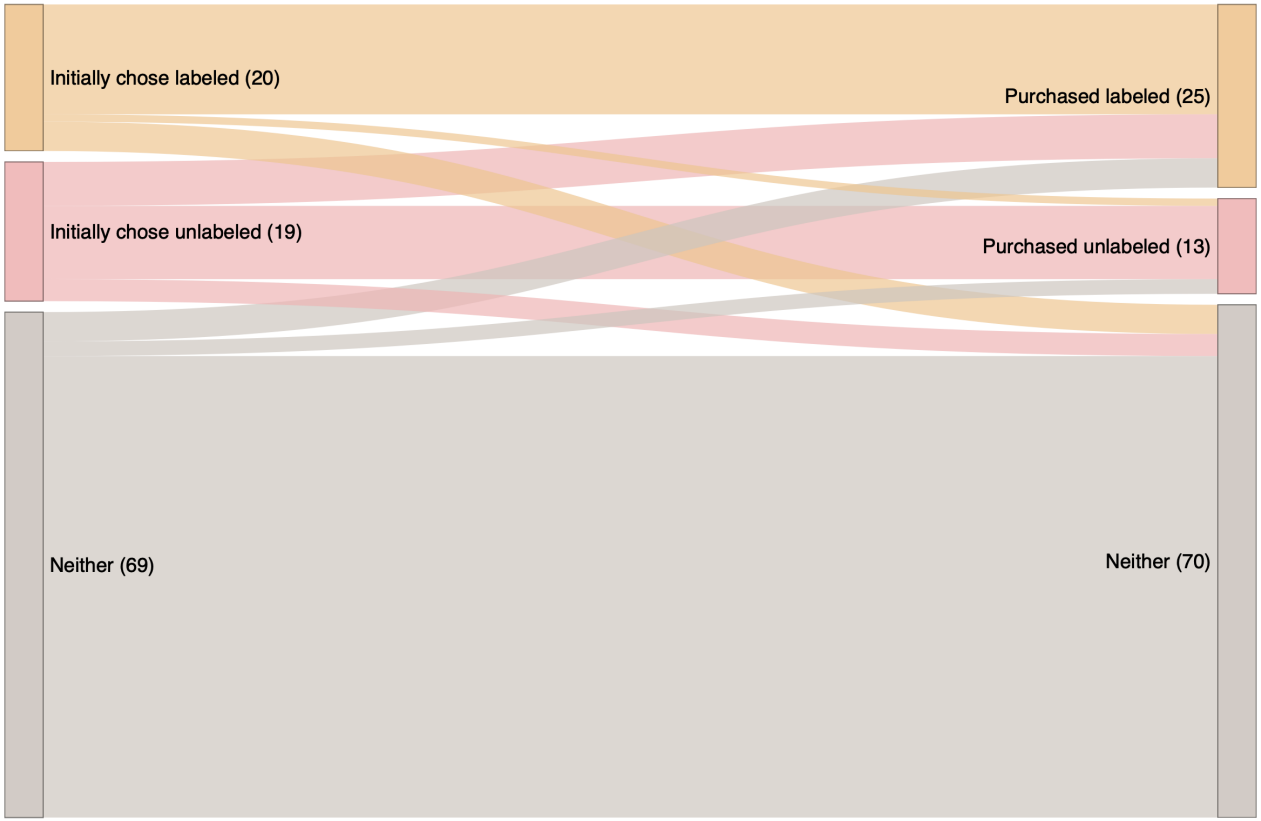




Experiment Data: Changes in Purchasing Choice

Reference Dependence

- Initial choice determines final purchase
  - Little change in "preferring neither"
- No/negative effect on overall purchases

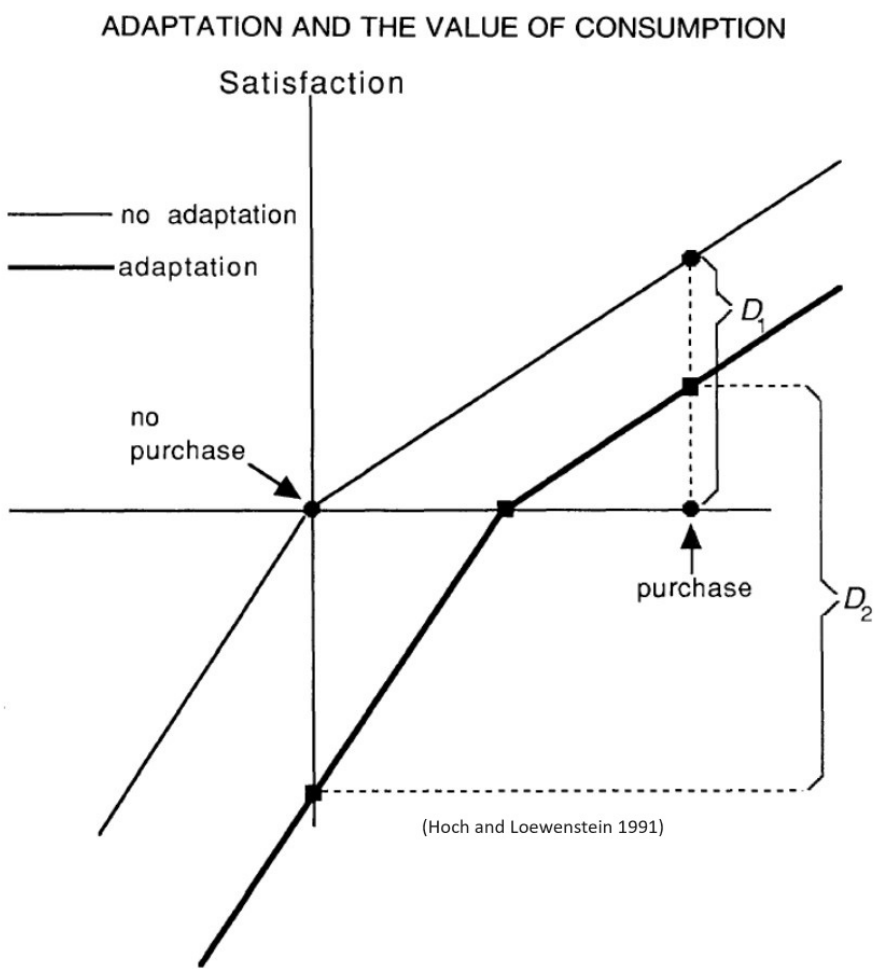


Subjective Information Processing

1. Evaluation relative to reference point (i.e. *initial perception*, default or status quo, habit)
2. Loss aversion

Induced change in reference point before purchase

- ✓ Physical and sensory proximity (sight, touch, smell, etc.)
- ✓ Temporal proximity (delayed payment)
- ✓ Social comparison (peers, celebrities, brand ambassadors)
- ✓ *(Accurate) information provision?*



Belief Updating

- Messages significantly change stated evaluations
- Largest increase in perceived quality for USDA Organic Seal
- Largest increase WTP for Local and organic seal (SO)
- Relatively larger increases for lower-income consumers
- *Actual purchase is relatively unresponsive to information provision*

	Δ Quality	Δ WTP	Δ Purchase
Label Treat	1.908***	1.274*	0.215
Label × Organic (O)	1.714*	0.608	0.280
Label × Organic + Local (SO)	0.505	1.207*	0.192
Label × Middle income	-1.901**	-1.233	-0.138
Label × High income	-1.538*	-1.381*	0.033
Controls	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes
Observations	114	114	114

Conclusions

- No immediate purchase response
  - Stated preferences (Intent) $\neq$ Revealed preferences (Purchase)
- Messages improved perceptions and valuations of local food
- Type of statements (and combinations) matter
  - USDA Organic seal sends strongest quality signal
  - Sutainable Solano Logo has limited impact on its own, but generates the largest WTP increase when combined with USDA organic seal
- Consumer responses vary by income
  - Lower-income consumers increase quality/WTP relatively more than higher-income consumers

Implication

Sustainability messages help regional producers communicate value, but messaging alone will not generate additional revenue.

Thank you

kiesel@ucdavis.edu