

The Numerator Data

KELLOGG RESEARCH SUPPORT

Feb 24, 2025

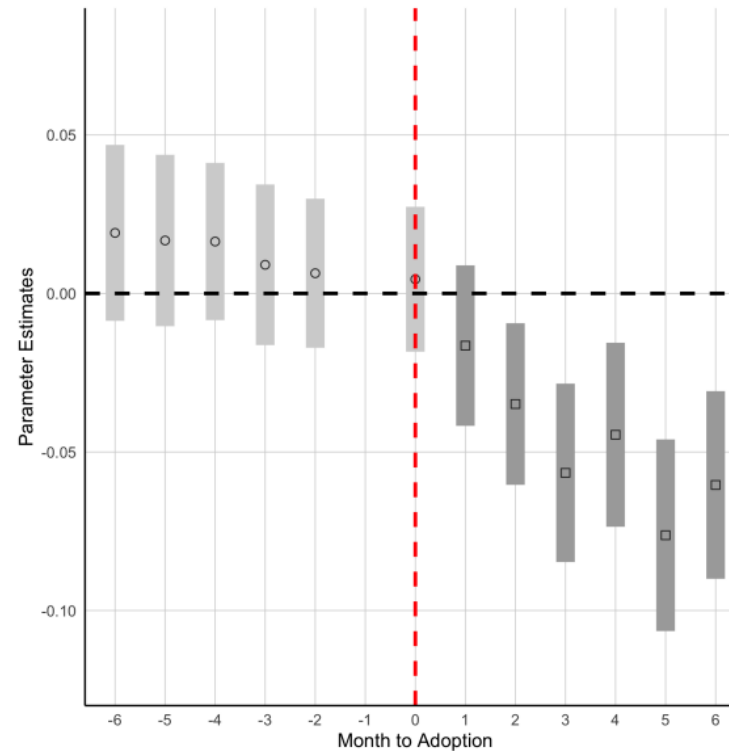
Northwestern | Kellogg

THE NUMERATOR DATA

- Vast database of offline and online purchases of a large panel of 4 million consumers, including a 'static panel' of 150k consumers
- Data start 01/01/2018, quarterly updates
- Not just classic retail: digital purchases, food delivery....
- Multiple data sources: Scanned receipts, emailed receipts, direct information from retailer through portal access
- "New Age Panel"
- Research Potential from linked consumer surveys

THE NUMERATOR DATA

Figure 6: Change in Grocery Spending Post GLP-1 Adoption



Notes: Changes in grocery spending using TWFE, based on 2,623 users and 4,072 corresponding matched non-adopters. The dependent variable is log of spending on groceries.

Source: Hristakeva et al. (2024), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5073929

THE NUMERATOR DATA

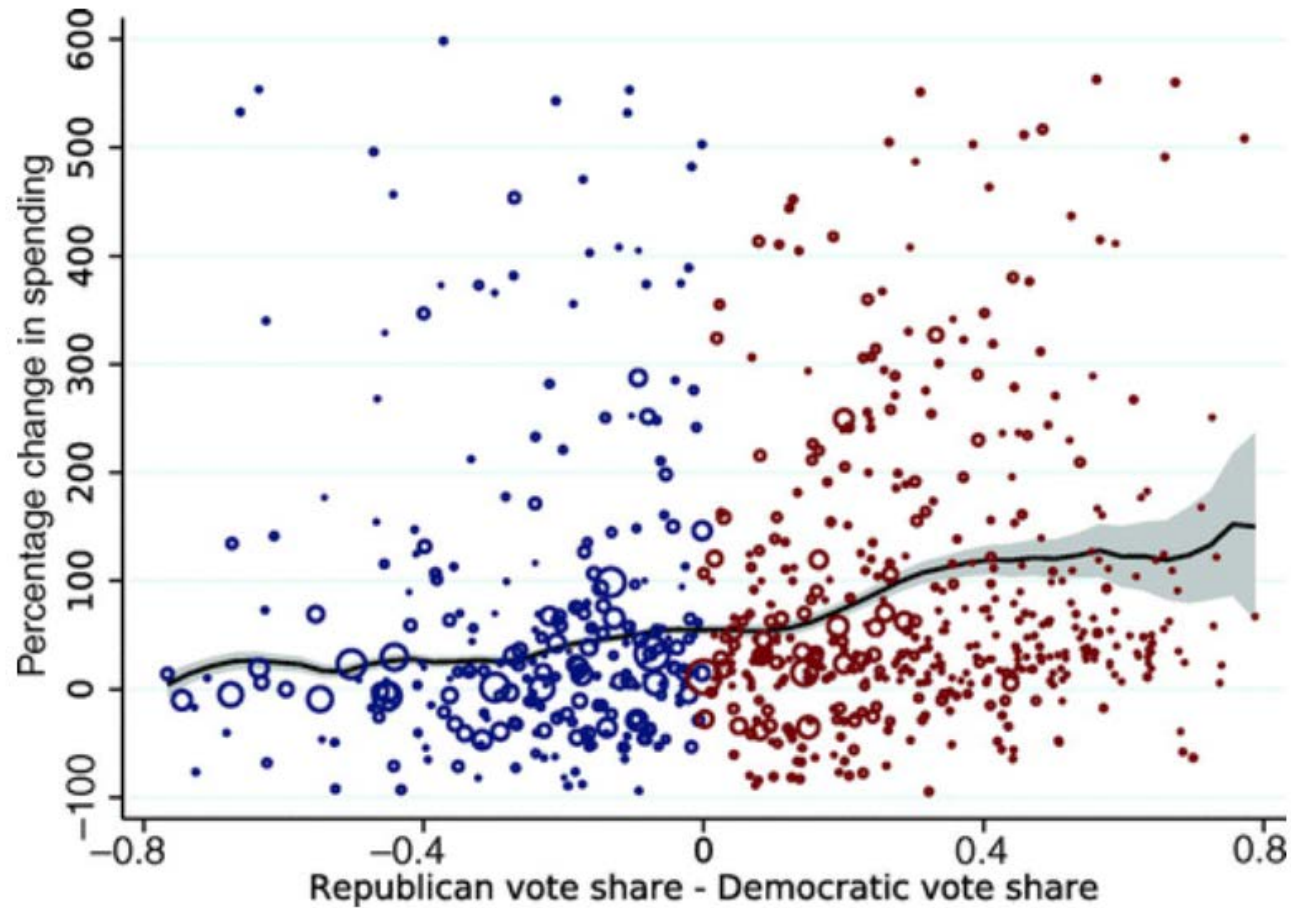


Figure 6. (Color online) Change in Goya Spending by County Vote Margin

Source: Liaukonyte et al. (2022), <https://pubsonline.informs.org/doi/full/10.1287/mksc.2022.1386>

WHERE ARE THE DATA FROM?



Receipt Hog

[How It Works](#)

[Rewards](#)

[Blog](#)

[Support](#)

[Log In](#)



Get **rewarded** every
time you shop.

Upload your receipts and pad your piggy bank
with extra cash.



WHERE ARE THE DATA FROM?

PAPER RECEIPTS



Description	\$	
Wet Toilet Paper	1.49	T
Wet Toilet Paper	1.49	T
Wet Toilet Paper	1.49	T
Wet Toilet Paper	1.49	T
Organic GF Cereal	4.99	FT
Blue Diamond Thins	2.48	FT
Clusters of Oats	1.59	FT
Honey Nut Cheerios	3.49	FT
GF Bake Mix	2.29	FT
Rotini	3.16	FT
4.0 @ 0.79		
Hamburger Buns	0.83	FT
Hamburger Buns	0.83	FT
Italian Bread	1.05	FT
Hot Dog Buns	2.49	FT
3.0 @ 0.83		
Popcorn Chicken	4.79	FT
Popcorn Chicken	4.79	FT
Skim Milk	1.88	FT
	5.85	FT

EMAIL INBOX

thank you for your purchase.
we're processing your order.



order #901608 placed on 11/28/2016

hi Linda,
We wanted to let you know that we're working on your order right now. If you have questions about your order, call 1-800-591-3869 or visit your [order details page](#).

Need to change your order? Check your [order details page](#) to see if your item(s) can still be canceled.

order details

arriving
12/2

Ships to the below mailing address:



Boys' Fox Mid Top Skate Sneakers Cat & Jack™ - Black 13
Size: 13
Color: BLACK Qty: 1 \$26.99



Boys' Straight Fit Jean Dark Wash 6 - Cat & Jack™
Size: 6
Color: Dark Wash Qty: 1 \$12.99



Room Essentials™ Microfiber Sheet Set
Size: Full
Color: Gray Qty: 2 \$33.58
\$16.79 ea.



Classic Jenga Game Qty: 1 \$8.79

DIRECT RETAILER PORTALS

amazon.com

Final Details for Order #113-
[Print this page for your records.](#)[Print this page for your records.](#)

Subscribe and Save Order Placed: December 22, 2017

Amazon.com order number: 113-

Order Total: \$0.95

This order contains Subscribe & Save items.

Shipped on January 6, 2018

Items Ordered	Price
1 of: Nature Valley Chewy Granola Bar, Protein, Gluten Free, Salted Caramel Nut, 5 Bars, 1.42 oz	\$2.00
Sold by: Amazon.com Services, Inc.	
Condition: New	

Shipping Address:	Item(s) Subtotal: \$2.00
	Shipping & Handling: \$0.00
	Subscribe & Save: -\$0.30
	Your Coupon Savings: -\$0.75

	Total before tax: \$0.95
	Sales Tax: \$0.00

Shipping Speed:	Total for This Shipment: \$0.95
Standard Shipping	-----

Payment information

Payment Method:	Item(s) Subtotal: \$2.00
Debit Card Last digits:	Shipping & Handling: \$0.00
	Subscribe & Save: -\$0.30
Billing address	Your Coupon Savings: -\$0.75

	Total before tax: \$0.95
	Estimated tax to be collected: \$0.00

	Grand Total: \$0.95

To view the status of your order, return to [Order Summary](#).

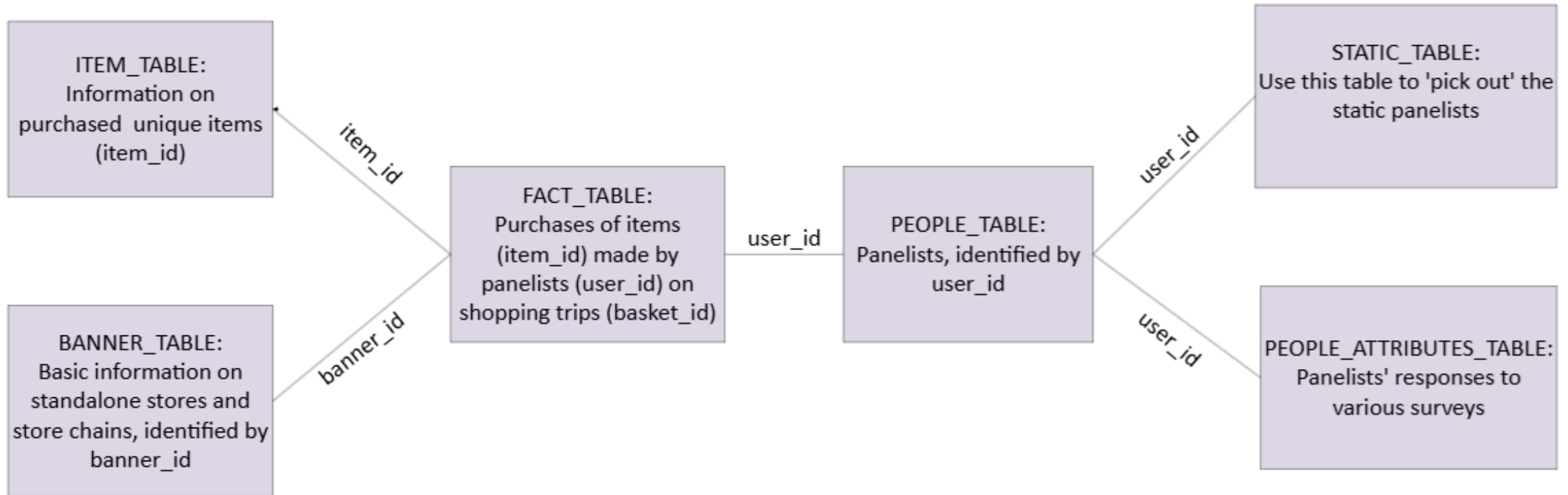
WHERE ARE THE DATA FROM?



THE NUMERATOR DATA

- Weights available to make static panel representative and scale up to national market
- Records where order was placed (in store or online), and how it was delivered/collected (in store, shipping, download)
- Contrast to Nielsen data:
 - Numerator is available to all Kellogg researchers
 - Larger panel (150k vs 60k)
 - Uses data from scanned receipts instead of having panelists scan barcode of each item at home - less churn
 - App contact point allows surveying of panelists
 - Frequent (quarterly) updates
 - Retailer names not encrypted
 - “Omnichannel coverage”: better capture of online purchases, food delivery, etc.

DATABASE STRUCTURE



HANDLING QUARTERLY UPDATES, REPRODUCIBILITY

- Superseding / Overlapping quarterly updates
- E g:
 - 4/18/2025 update: Q1 2025 data
 - 7/18/2025 update: Q1-Q2 2025 data
 - 10/17/2025 update: Q1-Q3 2025 data
 - 1/16/2026 update: CY 2025 data
- Manage by filtering on batch date variable
 - Best practices can vary by table!
- Use CTEs to keep code modular

WEIGHTING/SCALING

Total Commerce Static Demographics



Numerator Total Commerce Static Raw and Weighted as of November 2023

ACCESSING NUMERATOR

- Two main options:
 - Through Redivis:
 - “Workflows”/SQL console
 - Python (‘redivis’ package)
 - R (‘redivis’ package)
 - CLI interface to run SQL queries (kdcutils)
 - Through Athena/Kellogg Data Cloud:
 - SQL console
 - Python via pyodbc
 - R via odbc and DBI libraries
 - CLI interface to run SQL queries (kdcutils)