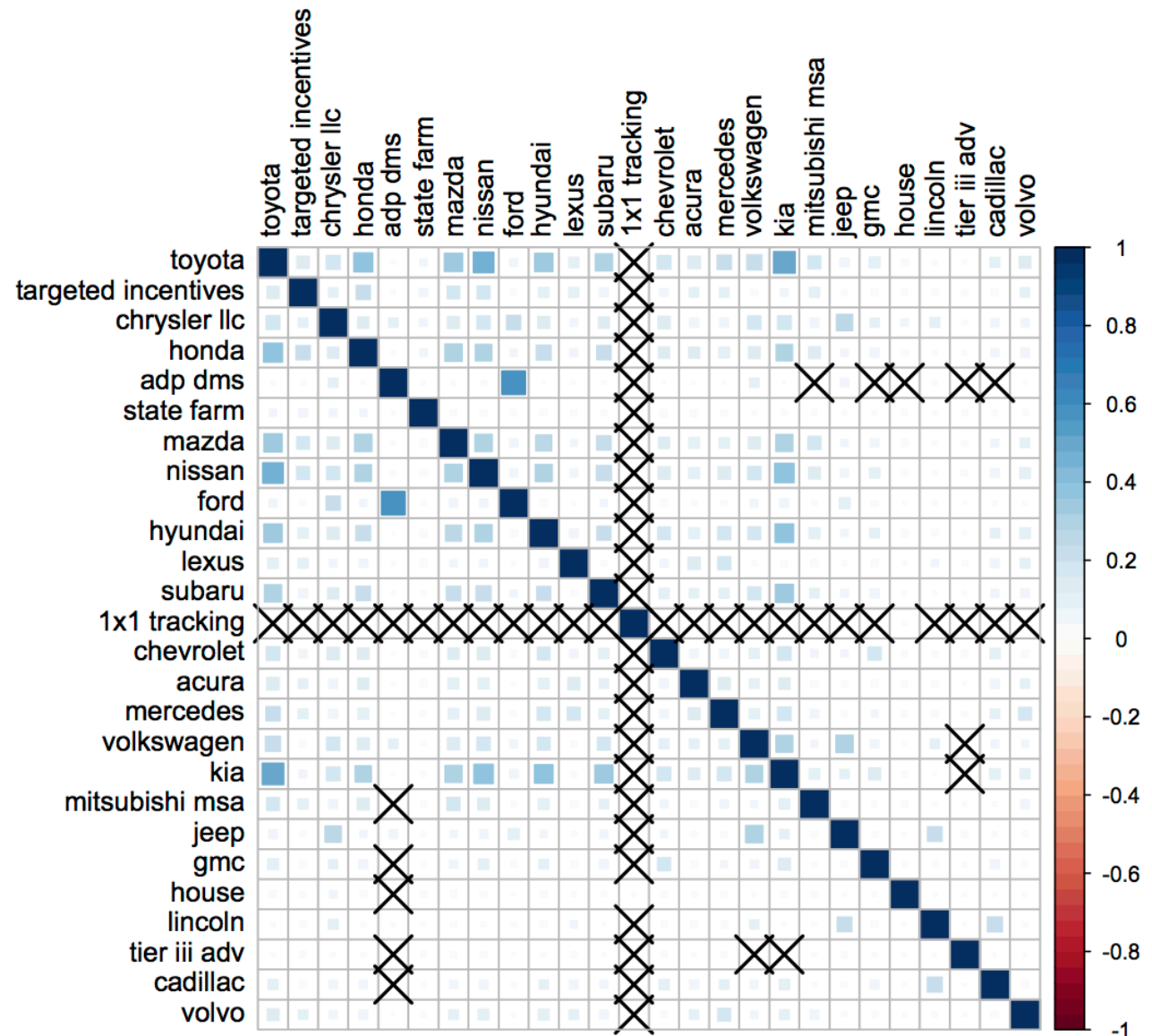


Connecting Consumer Expenditures with Edmund's Data

Joshua Fink & Siddharth Shivaprakash [Duke University](#)

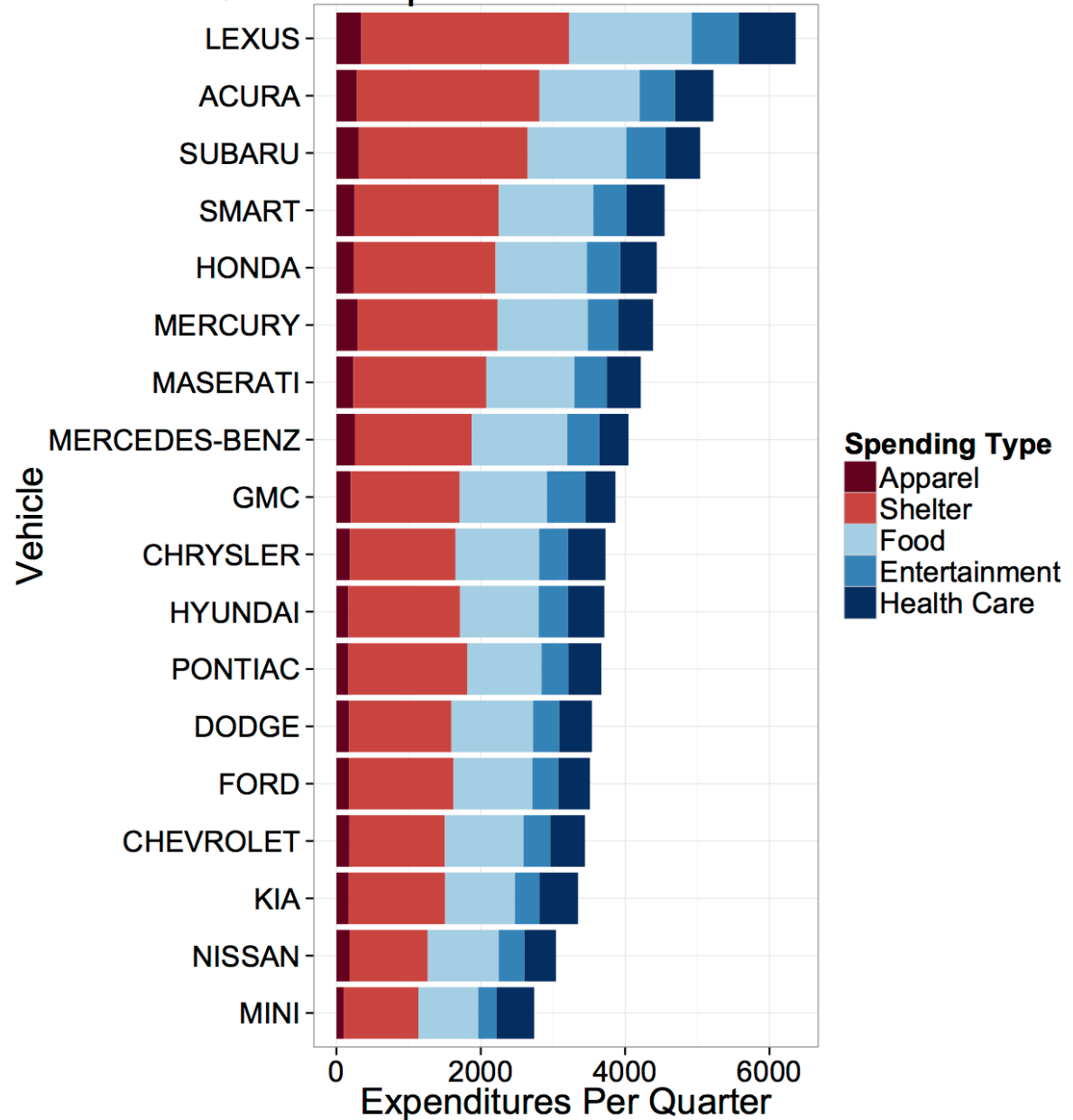
Advertising Clicks



Advertising
Clicks

The
Consumer
Expenditure
Survey
(CEX)

Per Quarter Expenditures and Make of Vehicle



A Model for Targeted Advertising

What type of interest in advertisements can we predict?

Mean advertisement clicks by vehicle search history and geographic region:

vehicle make		region	
CHEVROLET	2.378	Midwest	4.343
CHRYSLER	2.657	Northeast	3.658
DODGE	2.396	South	2.618
FORD	3.254	West	4.122
HYUNDAI	3.026		
KIA	3.001		
LEXUS	2.732		
MASERATI	1.377		
MERCEDES-BENZ	3.215		
MERCURY	.945		
MINI	7.314		

MCMC Gaussian Regression of Expenditures on Vehicle Categories

Food Expenditures w/ Random Effects for U.S. region, conditioning on overall expenditure

95% HPD Intervals	lower	upper
Luxury Vehicle	-107.820	-37.448
American Vehicle	-116.190	-52.207
Total Expend	.040	.043

Food Expenditures w/ Random Effects for U.S. region, conditioning on overall expenditure

95% HPD Intervals	lower	upper
Luxury Vehicle	8598.660	13556.544
Value Vehicle	2814.866	7552.374
American Vehicle	-3059.119	1307.565
Total Expend	3.931	4.165