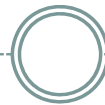


Some Topics in Econometrics that
will (likely) Be Important in Marketing:
Getting the Right Answers from Our Data



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Econometrics for Marketing:

In No Particular Order...



- 1) Estimating extremely high-dimensional models quickly / scalably

Big Data + Many Parameters = SLOW

- 2) “Fusing” data from many separate sources /
Dealing with vast “missingness”

Real data: aren't collected by one provider;
have lots of missing or mismatched info,
e.g., things people don't tell you; things you
can't observe; things that get corrupted; etc.

Econometrics for Marketing (cont'd)



3) “Parsimonious nonparametrics”

Who says... elasticities are constant?

that discrete choices are logit-like?

that errors are MVN?

that search costs are linear? [etc.]

4) Modeling and sampling from networked / dyadic data, particularly over time

Social networks, dating, CRM, [1000s of others]

Econometrics for Marketing (cont'd)



5) Joint approaches to optimization and estimation

“Nice” forms for estimation can be hard to optimize, or give ridiculous optimal policies (e.g., “charge this segment a bazillion dollars!”)

6) Marrying machine learning (etc.) with traditional statistical approaches

VAST literature in computer science focused on speed, scalability, & “pretty good” (robust, classical) answers, e.g., Amazon’s recommender system

Econometrics for Marketing (done!)



7) Optimal marketing policies:

conditional on entire posterior (MCMC draws);
rapid heterogeneity assessment;
freeing them from assumptions (e.g., linearity)

Advice to managers should NOT spit back our assumptions!
Or throw away our uncertainty.

8) Choice modeling: different kinds of attributes (e.g., styling; hedonics); temporal trade-offs; “goals”; [many others]

We’re good at concrete attributes (e.g., engine size) offered right now; less so at styling, prestige, the future...

Summary: Why These?



Some of these are largely statistical

Some are largely OR / OM

Some are partly substantive (e.g., nature of conjoint attributes)

Key: they come up A LOT in marketing papers, and...

they can **affect the answers** we get from our data sets