What a product manager needs to know about

Conjoint, Maxdiff, & AHP

IN TEN MINUTES

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For: software product managers, marketers, & designers
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COVERS

- ~~complete degree in market research~~
- ☑ quick primer on three important market research and decision support techniques

SaaS product people can borrow market research techniques used in retail and consumer packaged goods to good effect. Discrete choice experiments lend themselves to retail goods and B2C software, where they can power robust insights. For situations where the number of respondents is very limited (e.g. some enterprise B2B), try AHP. One good application of any of these is simply to gauge whether executives or other stakeholders share common ground with respect to product priorities.

CONJOINT ANALYSIS

Conjoint surveys ask participants to choose from packages of attributes, repeatedly, in randomized combinations. You discover feature-level preferences by analyzing the way various packages perform.

For example, imagine that you have to decide to what degree the next version of your task list app needs more integrations, collaboration features, or a mobile app, with specific variants:

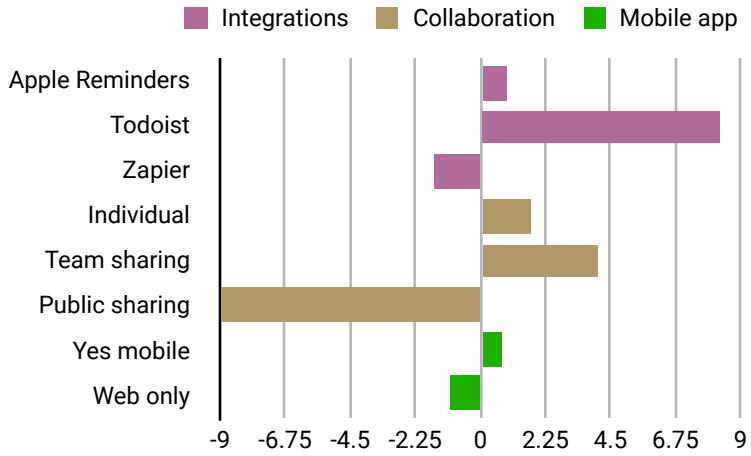
Attributes	**Integrations**	Apple Reminders	Todoist	Zapier webhooks
	Collaboration	Share with individuals	Team-based sharing	Public sharing
	Mobile app	Stay web only	Add mobile app	

Participants would choose their favorite among three randomized packages, a few times over:

	Product A	Product B	Product C
Page 1	✓ Todoist integration Team-based sharing Stay web only	Zapier integration Public sharing Stay web only	Apple Reminders integ. Individual sharing Add mobile app
Page 2	Apple Reminders integ. Team-based sharing Add mobile app	✓ Todoist integration Public sharing Add mobile app	Zapier integration Individual sharing Stay web only
Etc.	…	…	…

Iterating repeatedly over such combinations requires many participants—even more so if you need to capture multiple demographic/psychographic groups. Thus, this technique applies well to B2C apps with many users.

Just look at that lovely chart! This is one of *many* kinds of insight you get from conjoint. Adding price as an attribute even gauges marginal WTP (willingness to pay).



MAXDIFF

Maxdiff is a variation on conjoint where the respondent selects the best and the worst of the choices shown, instead of one favorite. Maxdiff is most commonly used with single attributes (though conjoint.ly supports a multivariate maxdiff flavor). Example: a hosted database service can survey the relative importance of price vs. storage limits vs. bandwidth limits. Single-attribute maxdiff works well for long lists of choices.

Least important	**Storage limit > 100GB**	Most important
✓ **Least important**	**Bandwidth limit > 1TB**	Most important
Least important	**Price < $100/month**	**Most important** ✓

AHP (THE PAIRWISE ATTRIBUTE DEATHMATCH)

The Analytical Hierarchical Process is particularly effective with a low participant count. Respondents rank each choice at each level pair by pair, on a scale of one (no preference) to 9. (The 9-point scale is mathematically important—something to do with eigenvectors. Or magic.)

Following the conjoint example, level 1 of the hierarchy would be integrations vs. collaboration vs. mobile. Each participant scores integrations against collaboration, integrations against mobile, and collaboration against mobile. It's possible to get circular logic, so inputs must be adjusted to a reasonable consistency ratio. Then, the process continues down the hierarchy. (Don't try this without dedicated software.) The result is a rigorous quantification of opinions, highlighting both the overall priority, and—just as importantly—where the outliers and inconsistencies are.

	Apple Reminders	Todoist	Zapier	Individual sharing	Team sharing	Public sharing	Add mobile	Stay web only
OVERALL	**17.6%**	**18.2%**	**9.8%**	**22.0%**	**17.7%**	**2.6%**	**6.0%**	**6.0%**
Gina	5.2%	52.5%	16.5%	9.2%	9.2%	1.0%	4.2%	2.1%
Nathan	3.7%	3.7%	0.6%	25.3%	43.6%	4.2%	6.3%	12.6%
Morena	48.4%	5.4%	16.1%	17.0%	5.1%	1.6%	3.2%	3.2%

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