

# The impact of open-ended questions: A Multivariate Study of Respondent Engagement

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**“It’s the length, stupid!”**

Kees de Jong

Research World, June 2010

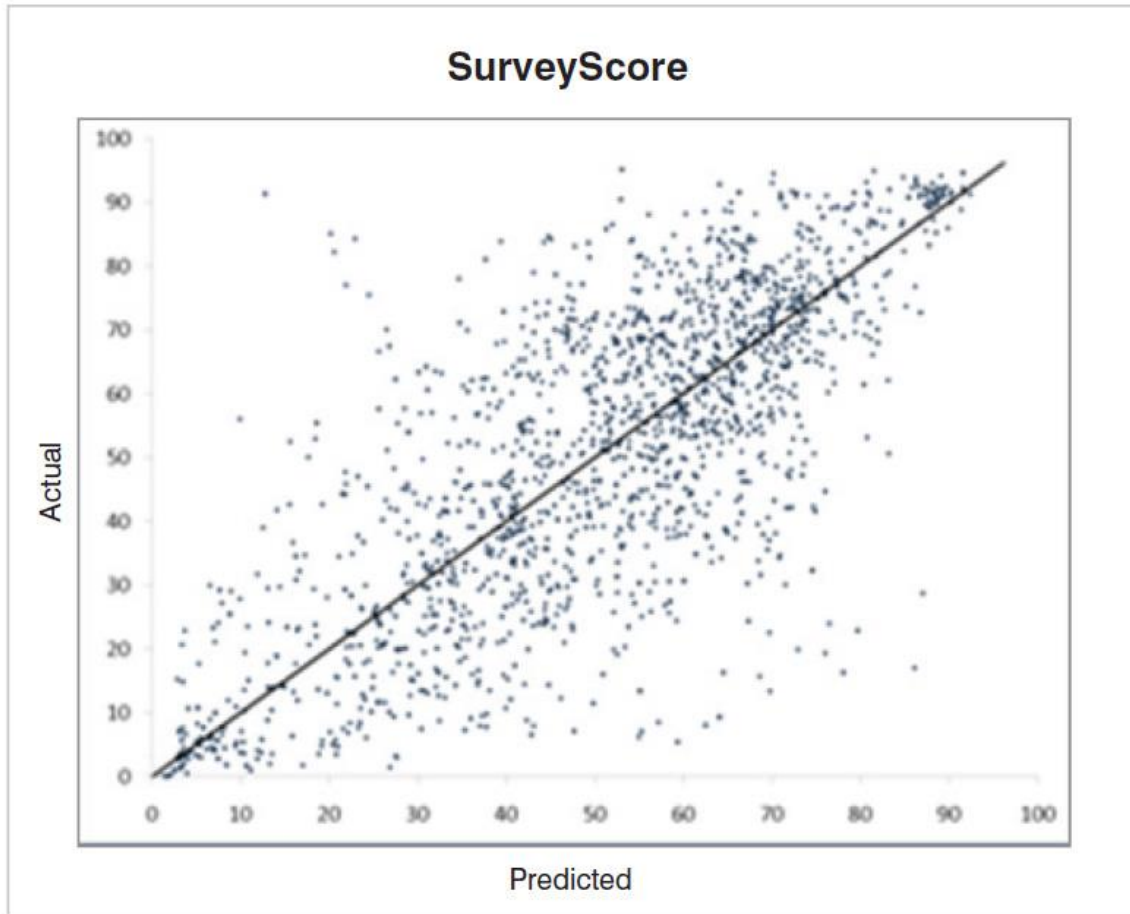
# Can anything be that simple?

If it is then creating a predictive model of engagement should be an easy task.

# “There is no silver bullet.”: Market Tools “Survey Score”

- A study of over a thousand studies.
- All from one panel source.
- “...survey design directly influences respondent.... engagement, in a consistent way.”
- “ ...survey length proved to be generally predictive of most respondent engagement measures, there was wide variation in the design variables that were most influential in driving various measures of engagement.”

# Does it work?



# Methods

- 1010 surveys consisting of >100 respondents.
- Excluding mall, B2B and physician studies.
- Multiple (20) panels, topics, and screening methods.
- A large number of questionnaire design variables.
- Four (total and partial straight lining, speeding, break offs) engagement variables.
- A large number of product/service categories.

# Definitions

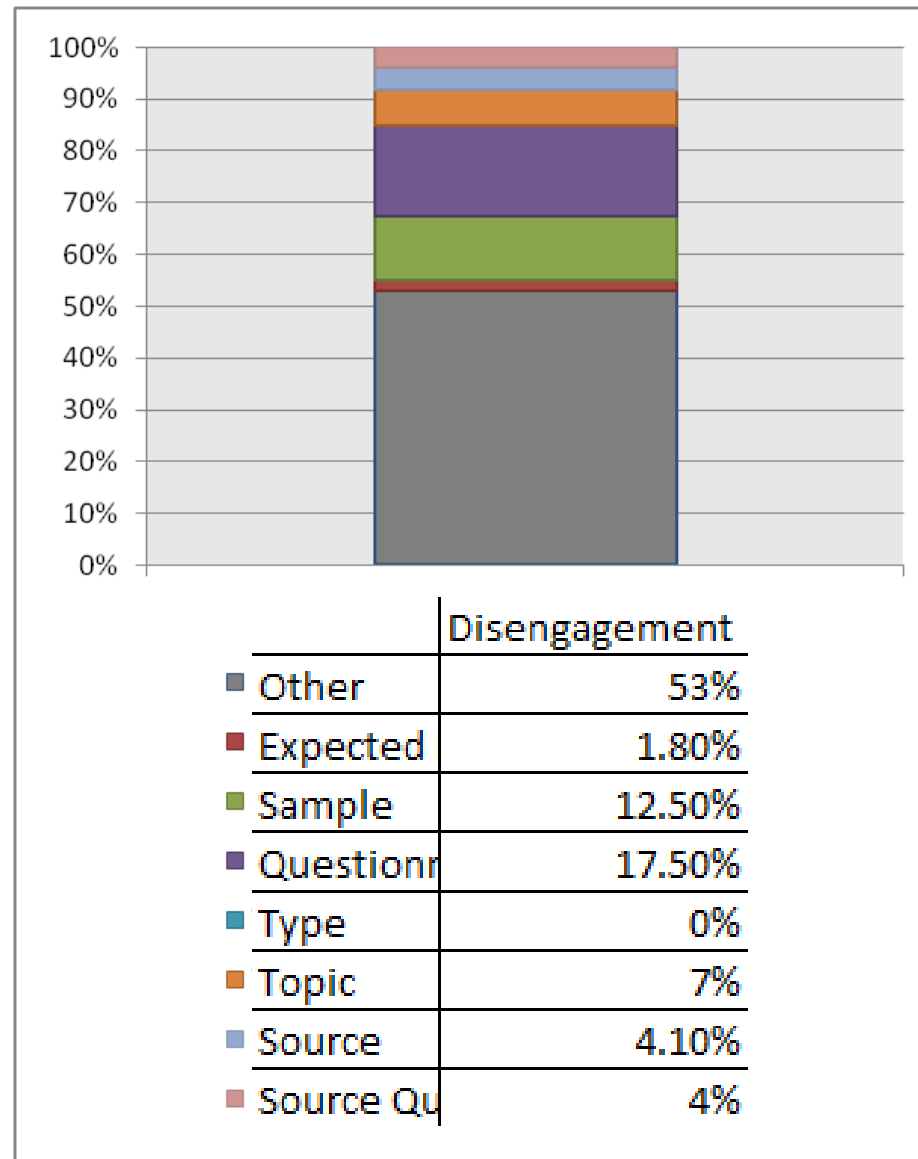
**Disengagement** – break-offs, straight-liners, and speeders within a given survey.

**Straight Lining** – similar answers across multiple items within grid questions (<1 Standard Deviation of variance).

**Sample and Demography** –sample characteristics, screening methods, and topic.

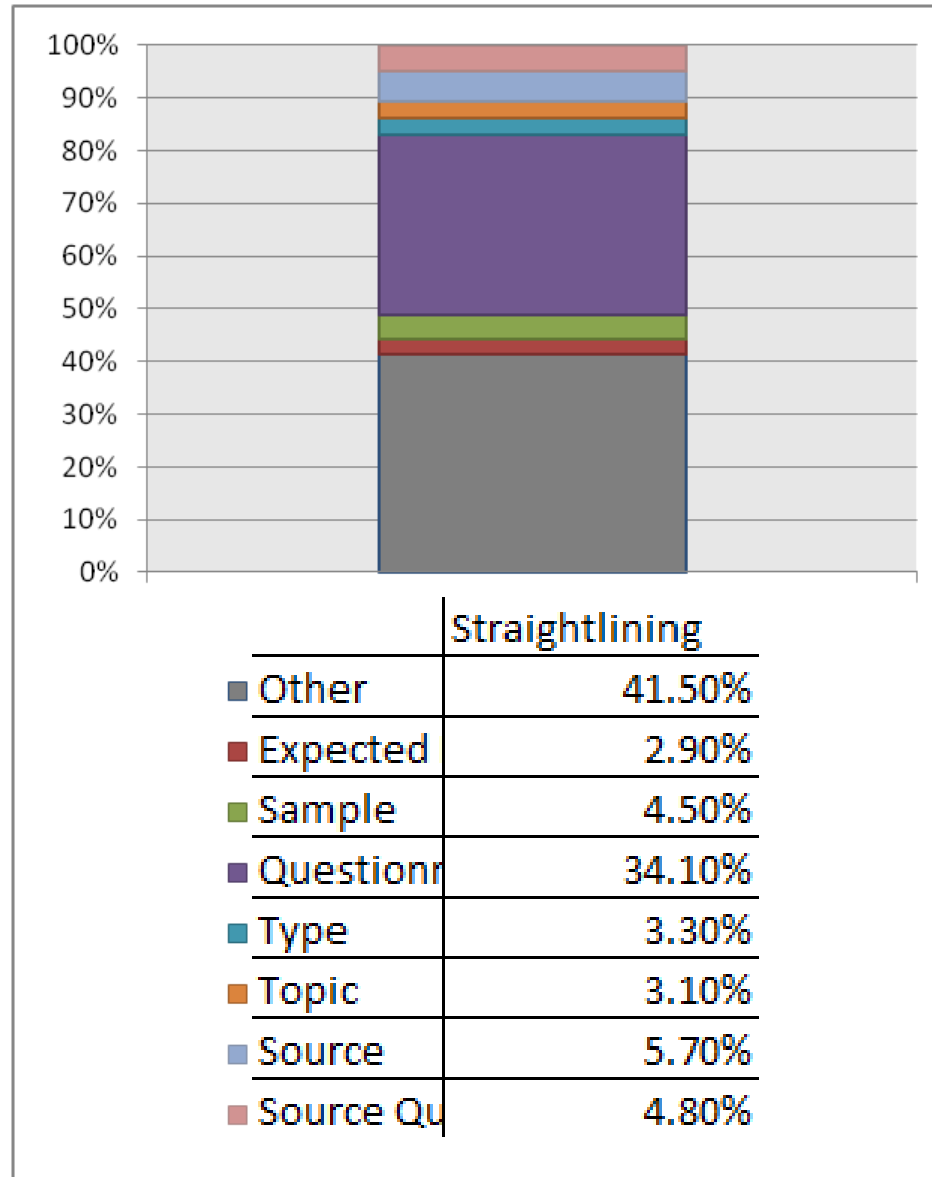
**Questionnaire structure**-- length and % proportions of different types of questions (factual vs. opinion, single punch, etc.).

# % of Disengagement Explained

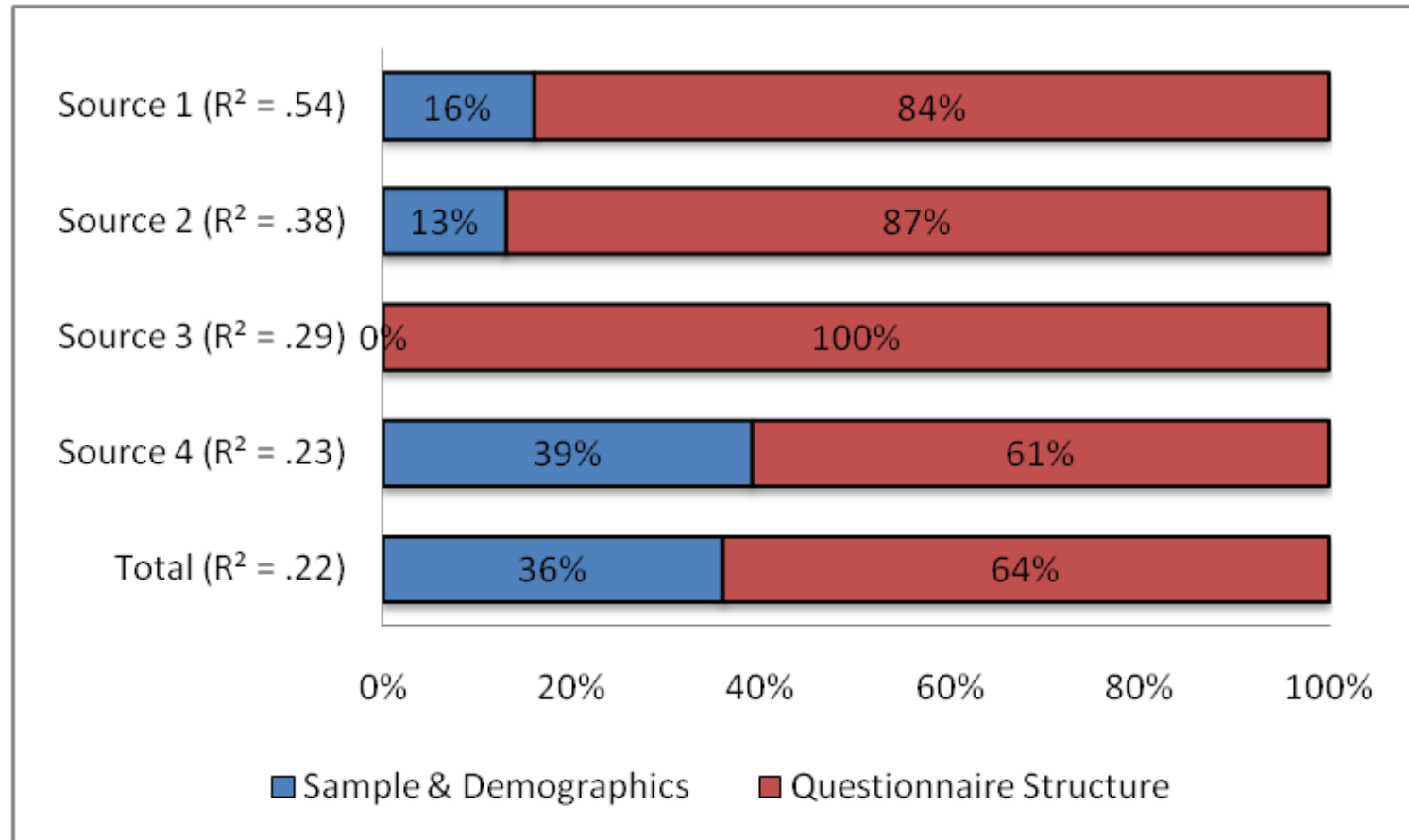




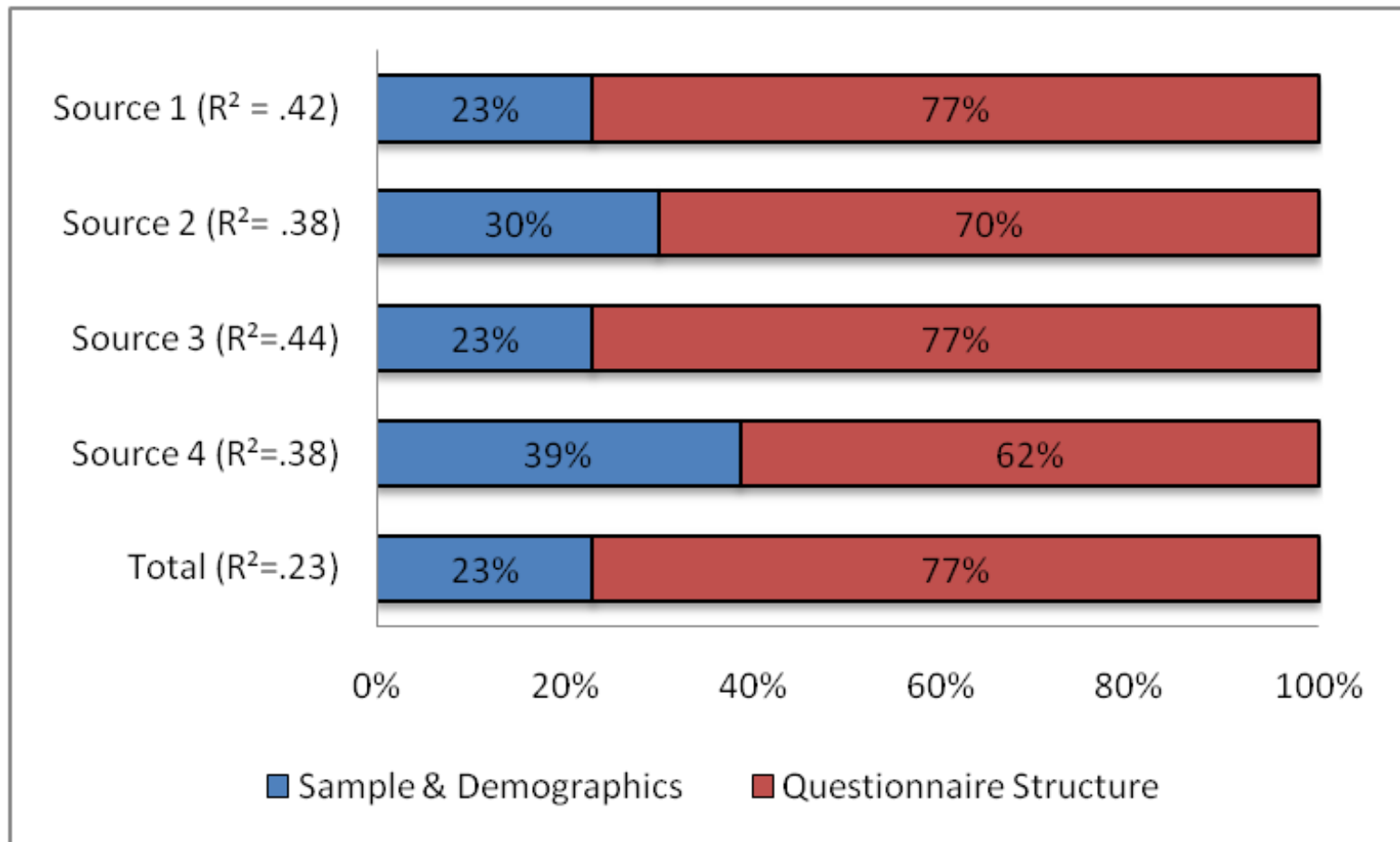
# % of Straight-lining Explained



# % of Disengagement Explained Within Sources



# % of Straight-lining Explained Within Sources



# Regression Model - Disengagement

		Source 1 (R <sup>2</sup> = .53)	Source 2 (R <sup>2</sup> = .38)	Source 3 (R <sup>2</sup> = .29)	Source 4 (R <sup>2</sup> = .23)	Total (R <sup>2</sup> = .12%)
Sample & Demography	Number	78	87	224	158	1014
	% Terminated	-	-	-		
	Cropduster	-	-	-	-	-
	Concept Test	-	-	-	-	-
	Screened	-	-	-		
	Gender	-	-	-	-	
	Age					
Questionnaire Structure	Income					
	Length					
	Question Length					
	Early Demographics	-	-	-	-	-
	Graphics					
	Factual Ratio					
	Ranking Ratio	-	-		-	
	Adding Ratio	-	-	-	-	
	Reference Ratio	-		-	-	-
	Hypothetical Ratio	-			-	-
	SP Ratio	-	-	-		
	MP Ratio	-		-	-	
	Numeric Ratio		-	-		
	MNL Ratio		-	-	-	-
	MNS Ratio	-	-			
	Open End Ratio		-			

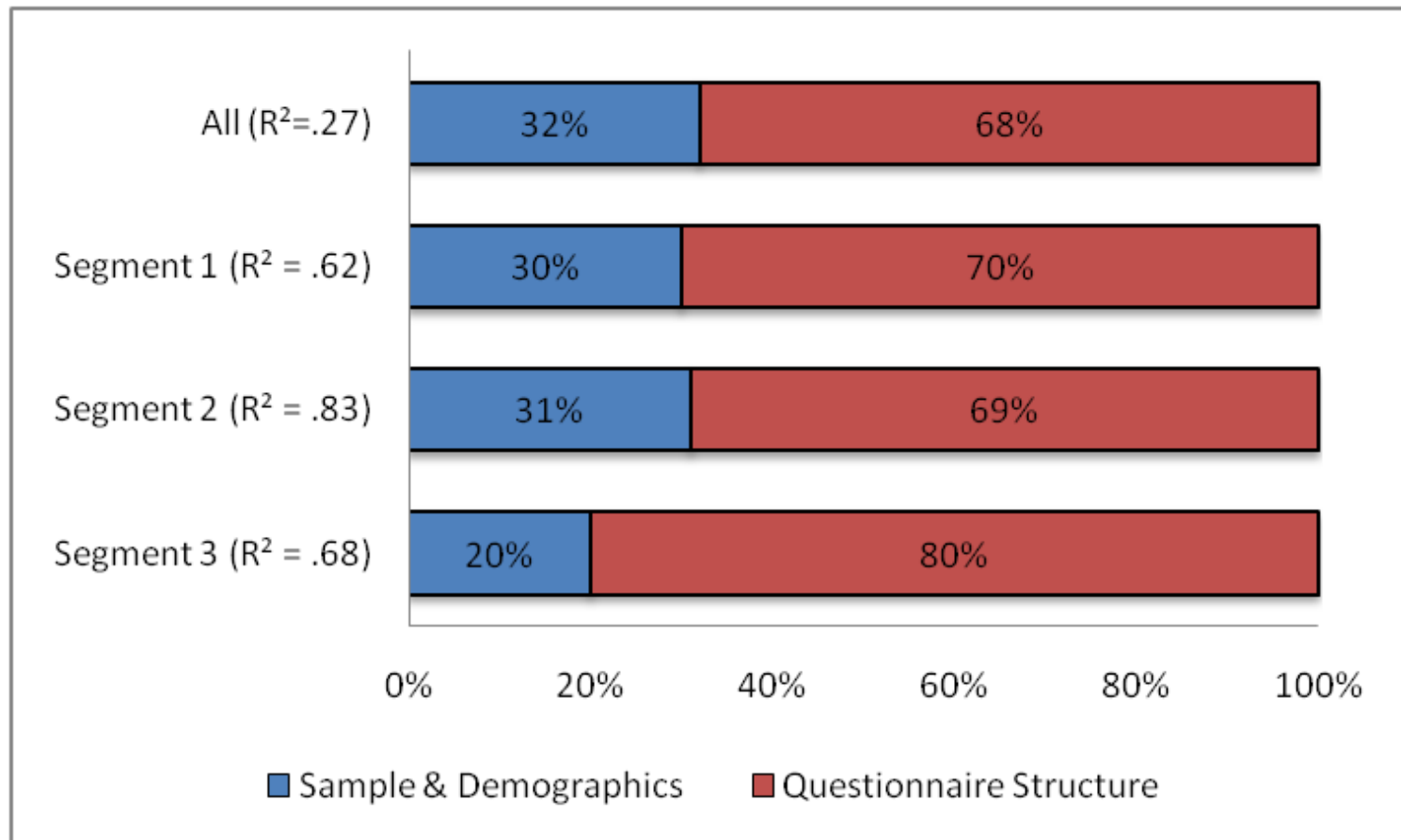
	>10%
	0-10%
	-10% - 0%
	< -10%

# Regression Model - Straight-lining

		Source 1 (R <sup>2</sup> = .54)	Source 2 (R <sup>2</sup> = .38)	Source 3 (R <sup>2</sup> = .29)	Source 4 (R <sup>2</sup> = .23)	Total (R <sup>2</sup> = .12)
Sample & Demography	Number	78	87	224	158	1014
	% Terminated	-	-	Green	Red	Orange
	Cropduster	-	Red	-	Orange	Orange
	Concept Test	Red	Red	Orange	-	Orange
	Screened	-	-	-	-	-
	Gender	-	-	-	Orange	Orange
	Age	-	-	-	Orange	-
Questionnaire Structure	Income	Red	-	Green	-	-
	Length	-	Red	Red	Green	-
	Question Length	-	-	-	-	-
	Early Demographics	-	Green	-	-	-
	Graphics	-	-	-	-	-
	Factual Ratio	Orange	-	Red	-	Orange
	Ranking Ratio	-	-	-	-	Green
	Adding Ratio	-	-	-	-	-
	Reference Ratio	-	Red	-	-	-
	Hypothetical Ratio	-	-	-	Orange	-
	SP Ratio	Red	-	Red	Red	Red
	MP Ratio	-	-	-	-	Orange
	Numeric Ratio	Blue	-	-	Blue	-
	MNL Ratio	Blue	Blue	Blue	-	Blue
	MNS Ratio	-	-	Orange	Blue	Orange
	Open End Ratio	Orange	-	Red	Orange	Red

Red	>10%
Orange	0-10%
Green	-10% - 0%
Blue	< -10%

# % of Incidence Explained – Clustered Regression

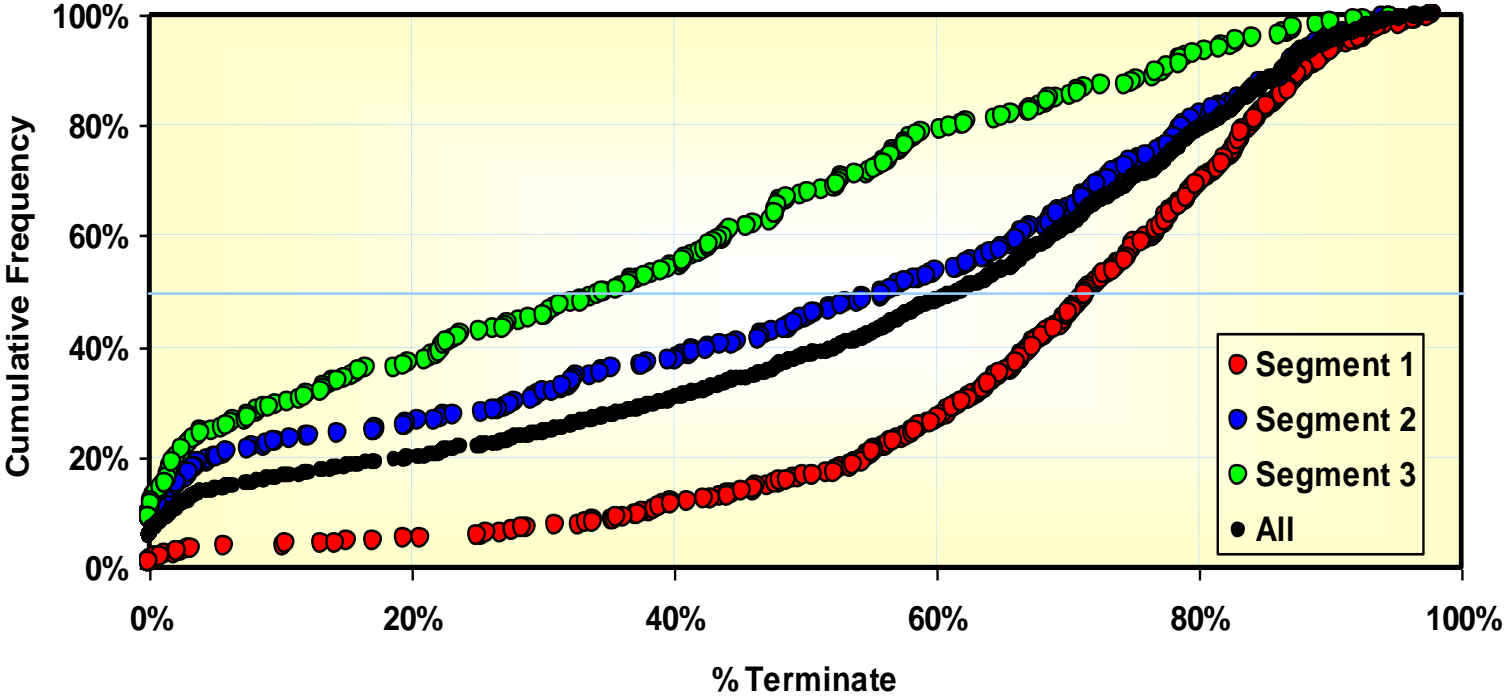


# Clustered Regression Model – Breakoffs

		All (R <sup>2</sup> = .27)	Segment 1 (R <sup>2</sup> = .621)	Segment 2 (R <sup>2</sup> = .826)	Segment 3 (R <sup>2</sup> = .68)
Sample & Demography	Number	1014	446	314	254
	% Terminated	-	-	-	-
	Cropduster				
	Concept Test	-	-		
	Screened				-
	Gender				
	Age				-
	Income	-	-		
Questionnaire Structure	Length			-	
	Question Length			-	
	Early Demographics		-		-
	Graphics	-		-	-
	Factual Ratio			-	
	Ranking Ratio		-		-
	Adding Ratio	-	-		
	Reference Ratio	-	-		
	Hypothetical Ratio	-	-		-
	SP Ratio		-	-	-
	MP Ratio	-	-	-	
	Numeric Ratio				
	MNL Ratio	-	-		
	MNS Ratio		-		-
	Open End Ratio		-		-
Source Quality	Source Speeding				-
	Source Straight-lining				
	Source Hyperactivity		-	-	-
	Source Invalid	-			

	>10%
	0-10%
	-10% - 0%
	< -10%

# Clustered Regression Analysis - % Terminated





# Regression Model – Disengagement by Incidence

		All (R <sup>2</sup> = .12)	Incidence > 80% (R <sup>2</sup> = .21)	10% - 80% Incidence (R <sup>2</sup> = .18)	Incidence < 10% (R <sup>2</sup> = .2)	
Sample & Demography		Number	1014	446	314	254
		% Terminated	-	-	-	-
		Cropduster	-	-	-	-
		Concept Test	-	-	-	-
		Screened	-	-	-	-
		Gender	-	-	-	-
		Age	-	-	-	-
		Income	-	-	-	-
Questionnaire Structure		Length	-	-	-	-
		Question Length	-	-	-	-
		Early Demographics	-	-	-	-
		Graphics	-	-	-	-
		Factual Ratio	-	-	-	-
		Ranking Ratio	-	-	-	-
		Adding Ratio	-	-	-	-
		Reference Ratio	-	-	-	-
		Hypothetical Ratio	-	-	-	-
		SP Ratio	-	-	-	-
		MP Ratio	-	-	-	-
		Numeric Ratio	-	-	-	-
		MNL Ratio	-	-	-	-
		MNS Ratio	-	-	-	-
		Open End Ratio	-	-	-	-
Source Quality		Source Speeding	-	-	-	-
		Source Straight-lining	-	-	-	-
		Source Hyperactivity	-	-	-	-
		Source Invalid	-	-	-	-

	>10%
	0-10%
	-10% - 0%
	< -10%

# Conclusions

1. Driver's of engagement are complex.
2. Sourcing seems to have a strong influence: differences between sources are small but the driver's are different.
3. Length appears to be a good predictor but only within sources: it becomes inconsistent across sources.
4. Subject affinity appears to diminish disengagement.
5. Incidence may correlate with subject affinity by aggregating groups of similar demography or product interest.
6. Segments created through cluster regression show differences in their incidence profiles and the driver's of disengagement.
7. There is no silver bullet.

# Questions?

**Steven Gittelman**

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