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Finding True Consumer Attitudes: Do Validation Questions Help?

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# Finding True Consumer Attitudes: Do Validation Questions Help?

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## Introduction

- Survey methods have been used to determine consumer knowledge, perceptions, attitudes and opinions.
- There are increasing number of survey research companies that have reward programs to attract consumers to take surveys.
- Rewards may increase response rate, but may not improve survey quality If the motivation to take survey is solely for the rewards.
- Actions should be taken to improve survey data quality by identifying respondents who are not serious in answering survey questions.

## Objectives

- Present a method using validation questions to identify respondents who are careless in answering survey questions.
- Determine whether there is a significant difference in demographics between respondents who pass the validation question and those do not pass.
- Determine whether the answers of respondents who do not pass validation questions are significantly different from the answers of other respondents, regarding their willingness to pay (WTP).

## Methods

- Respondents' efforts** in answering survey questions:  $E^* = E(R, I)$ ,  $\frac{\partial E}{\partial R} > 0$  and  $\frac{\partial E}{\partial I} > 0$ , where  $R$  is the social award of taking the survey and  $I$  is the monetary incentive for answering the survey.
- Researchers' objectives:**  $\text{Max } \alpha \cdot \text{Rrate} + \beta \cdot \text{Rqua}$ , where
  - $\text{Rrate} = f(R, I)$  is the response rate, and  $\text{Rqua} = g(R, I, E(R, I))$  is the data quality.
  - FOCs with respect to  $R$  and  $I$  determine the optimal social reward and incentive to maximize the sum of response rate and data quality.
  - FOC:  $\frac{f_R}{f_I} = \frac{g_R + g_E \cdot E_R}{g_I + g_E \cdot E_I} \Rightarrow g_I = (g_R + g_E \cdot E_R) \cdot \frac{f_I}{f_R} - g_E \cdot E_I$
  - The larger the impact of incentives on effort,  $E_I$ , the lower the marginal effect of incentives on data quality.
- Hypothesis**

Higher Income → Higher Data Quality

Higher Education → Higher Data Quality

### Survey Design

- A survey was designed to study consumer preferences for seafood and meats.
- A validation question was added in the middle of the survey to ask respondent to select a specific answer.
- Demographic and choice experiment questions were also included.

### Data Collection

- 2011, online survey was sent to 3,475 respondents
- Respondents must be the parents of at least one child between 6-16 years, seafood consumers, in a household with no members being allergic to seafood, and not working in fishing industry.

## Results

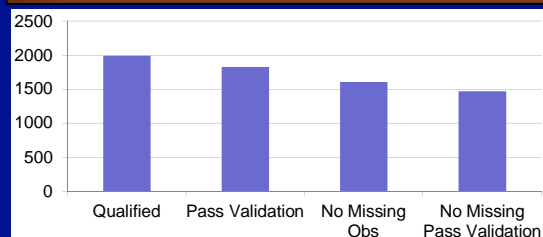


Figure 1. Different Types of Respondents

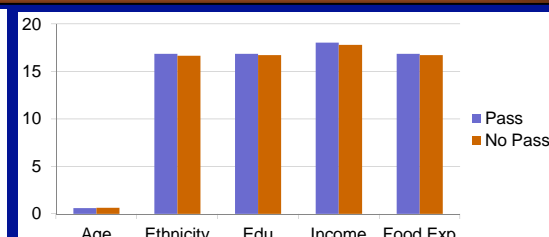


Figure 2. Non-Response to Demographic Questions

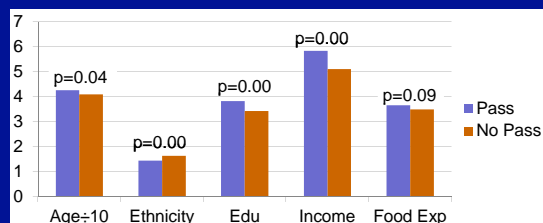


Figure 3. Demographics of Respondents by Group

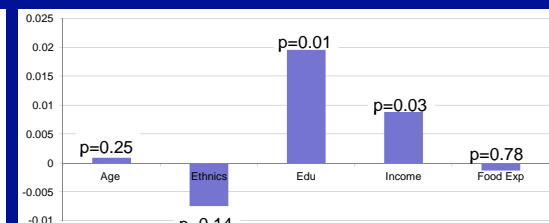


Figure 4. Marginal Effect of Demographics on Validation Question

Figure 3. Marginal WTP for Seafood and Meat over WTP for Pork of Respondents who Passed and didn't Pass the Validation Question

	Chicken	Beef	Grouper	Mahi	Salmon	Oyster	Shrimp
Pass	4.23	2.15	0.28	0.33	2.19	-4.25	1.73
No Pass	2.67	1.74	2.04	0.79	1.82	-4.17	1.16
Difference	1.56	0.41	-1.76	-0.46	0.38	-0.07	0.57
Significance	**	**	**	**	**		**

## Conclusions and Discussion

- About 92% qualified respondents passed the validation question
- There is no significant difference in the non-response rate to demographic questions between the respondents who passed and didn't pass the validation question.
- Respondents who didn't pass the validation question tend to be younger, less likely to be Caucasians, less educated and with lower income.
- All other demographics being controlled, income and education level significantly affect the probability of a respondent passing the validation question.
- Overall, there are significant differences in the marginal WTP between respondents passing and not passing validation question.
- Using validation question may be good instrument to detect careless respondents in the survey and improve data quality.