



404 Error

# DATA QUALITY IN ONLINE SURVEYS 4.1

## VARIABLE INCENTIVES



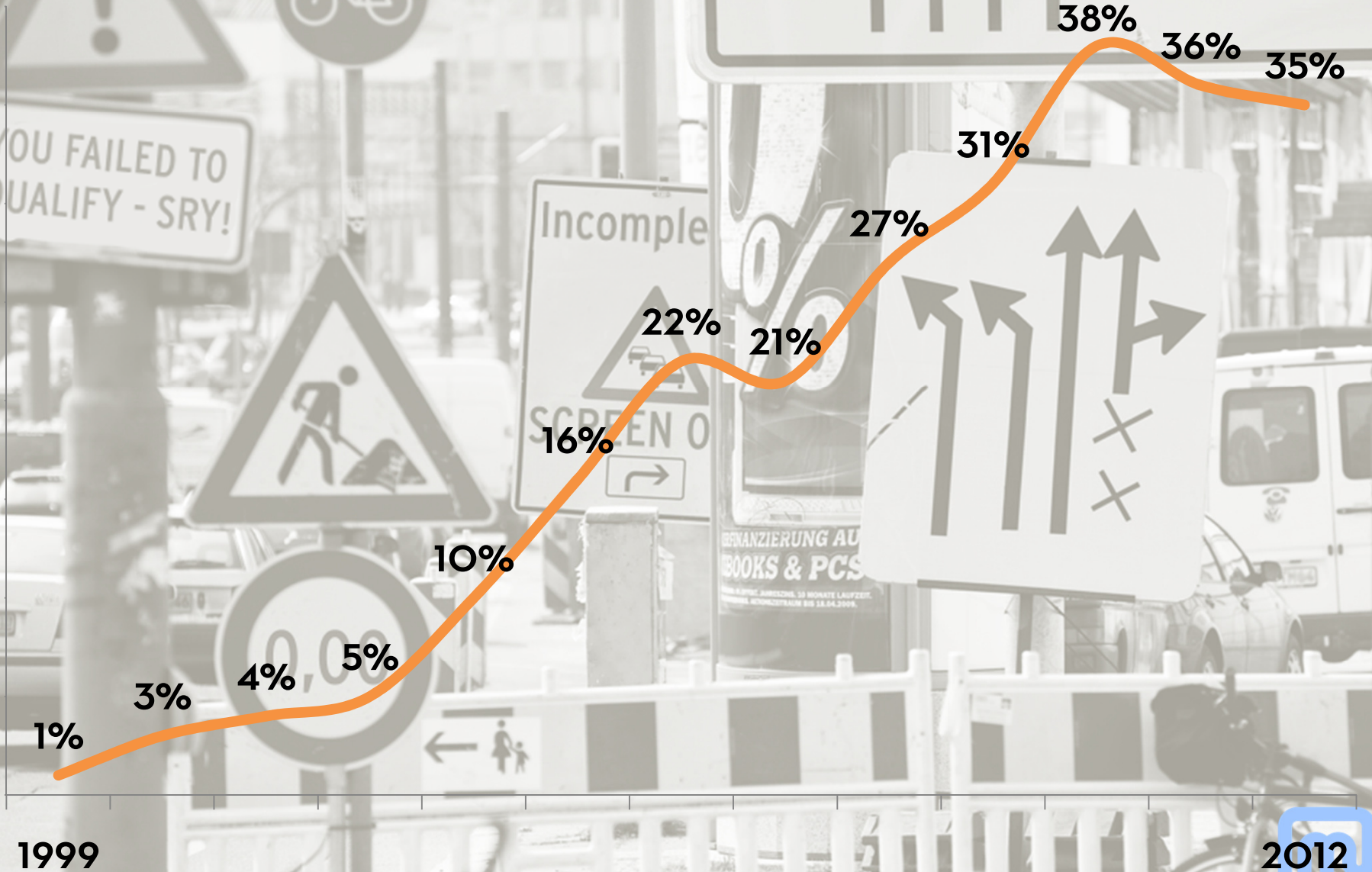


**HERBERT HÖCKEL / MD / MO'WEB**  
**FULL-SERVICE ONLINE MARKET RESEARCH**  
**AND I OWE YOU AN APOLOGY!**



# STATUS QUO

Source: ADM Annual Reports 1999-2012





**1. INFLUENCE OF RESPONDENT**

**INTEGRITY ON DATA QUALITY**

**2. INFLUENCE OF QUESTIONNAIRE**

**DESIGN ON DATA QUALITY**

**3. INFLUENCE OF INCENTIVES**

**ON DATA QUALITY**

**4. INFLUENCE OF CONDITIONAL &**

**VARIABLE INCENTIVES**



## **TEST DESIGN**

## **RESPONDENT INTEGRITY**

Longitudinal survey on „Economic Climate“

N= 70k interviews in 2012 months in UK, FR, DE, IT & ES

Identification of manipulative respondents

## **QUESTIONNAIRE DESIGN**

Experimental test design with 3 questionnaire types

N= 4.1K interviews

## **INCENTIVES**

Experimental test design with 8 different incentive types

N= 4K interviews

Incentive experiment with a choice of incentives

Incentive experiment with variable incentives





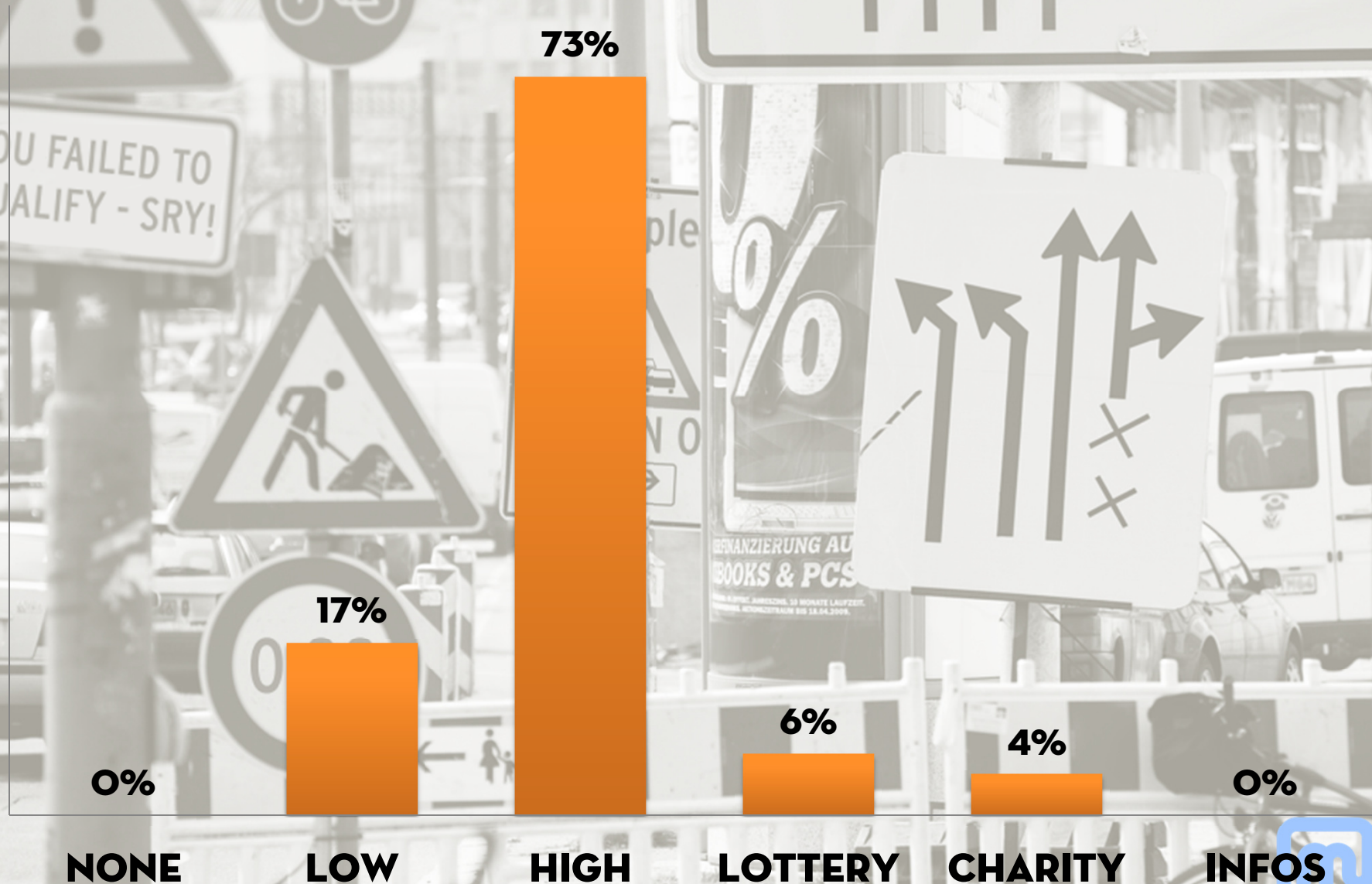
# INCENTIVES - SUMMARY

	NONE	LOW	HIGH	LOTTERY	CHARITY	INFOS	CHOICE
RESPONSE RATE	24,6%	26,6%	28,5%	26,6%	15,0%	19,2%	24,3%
QUALITY XCLUSIONS	70	73	52	77	80	75	58
AVG TIME COMPLETE	5,7	6,4	5,7	5,5	6,1	5,1	6,9
CRONBACH ALPHA	0,897	0,920	0,917	0,917	0,917	0,907	0,914
LIKABILITY	89%	90%	96%	86%	83%	87%	85%
WILL TO REPEAT	96%	98%	99%	98%	96%	95%	98%
POSITIVE	4%	10%	14%	8%	6%	2%	18%

PRESENTED AT RESEARCH&RESULTS 2013

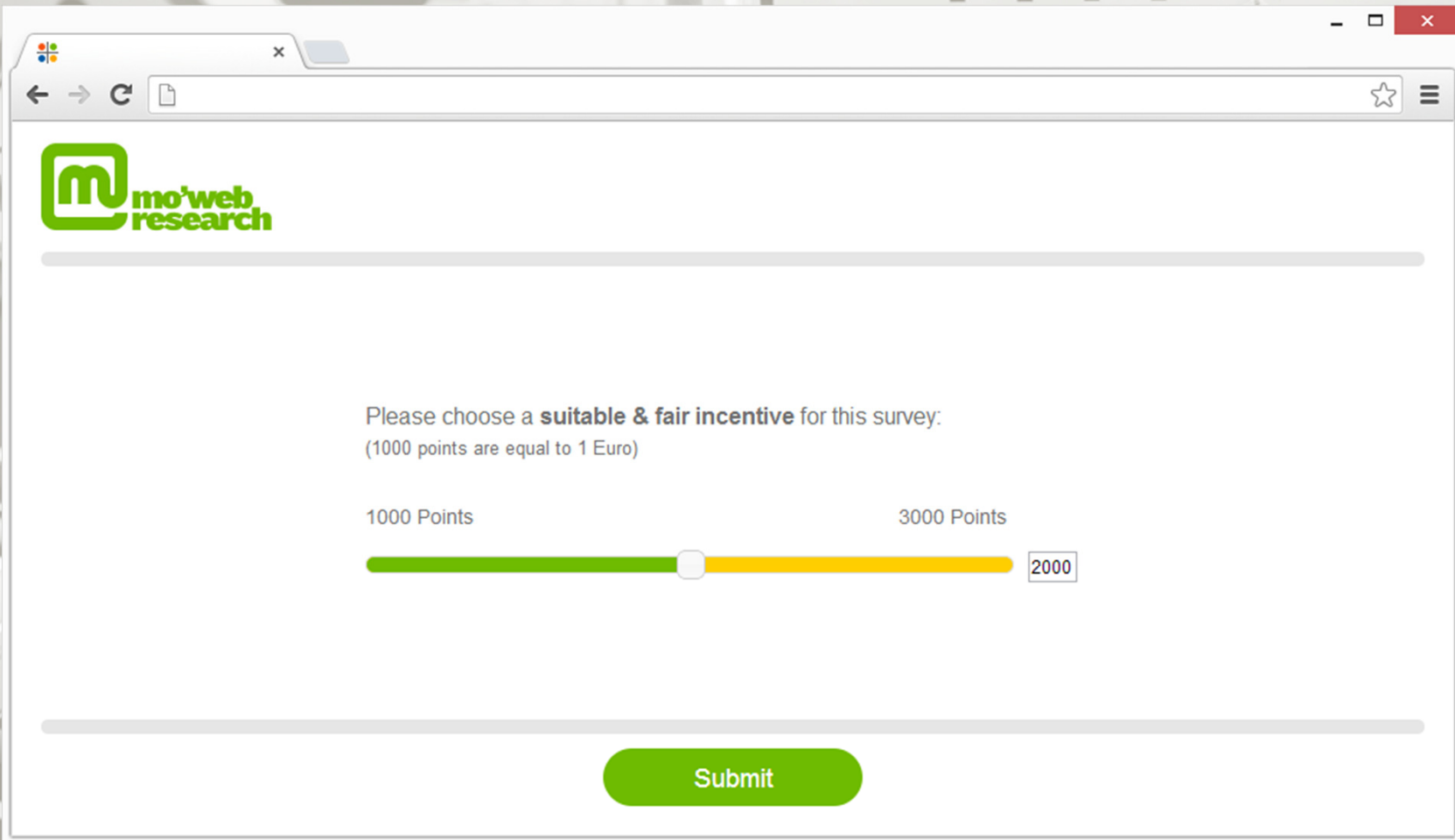


# INCENTIVE CHOICE



# INCENTIVE SLIDER EXPERIMENT

<http://surveys.myiyo.com/slider/>



The screenshot shows a web browser window with the 'mo'web research' logo. The survey text asks the user to choose a suitable and fair incentive for the survey, with a note that 1000 points are equal to 1 Euro. A horizontal slider is displayed, ranging from 1000 Points on the left to 3000 Points on the right. The slider is currently set to 2000 points, with a white knob and a numerical display box showing '2000'. A green 'Submit' button is located at the bottom of the survey area.

**WHAT WOULD YOU ASSUME?**





## KEY QUESTIONS

IS A VARIABLE INCENTIVE WORKABLE?

WILL RESPONDENTS PUSH THE LIMIT OVER TIME?

DO DEMANDS INCREASE OVER TIME?

## SURVEY DESIGN

LONGITUDINAL SURVEY OVER A 4 MONTH PERIOD  
WITH BASE SAMPLE N= 1.000 RESPONDENTS IN FIRST WAVE  
AND RE-INVITES FOR CONSECUTIVE WAVES





# SAMPLE PLAN & ENGAGEMENT

	WAVE 1 Nov 13	WAVE 2 Dec 13	WAVE 3 Jan 14	WAVE 4 Feb 14
<b>GROSS SAMPLE</b>	<b>1.562</b>	<b>1.000</b>	<b>1.000</b>	<b>1.000</b>
Non response	--	206	115	139
Dupes	11	0	0	0
Screen out	25	2	3	4
Overquota	478	0	0	0
<b>INCOMPLETE</b>	<b>48</b>	<b>61</b>	<b>32</b>	<b>17</b>
<b>CLEANED GROSS SAMPLE</b>	<b>1.000</b>	<b>740</b>	<b>827</b>	<b>814</b>



# VARIABLE INCENTIVES

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	WAVE 1 Nov 13	WAVE 2 Dec 13	WAVE 3 Jan 14	WAVE 4 Feb 14
<b>AVERAGE INCENTIVE</b>	<b>€ 2,63</b>	<b>€ 2,61</b>	<b>€ 2,52</b>	<b>€ 2,47</b>
Minimum (1.000 Points)	0%	0%	0%	0%
1.000 to 1.500	5%	5%	4%	4%
1.500 to 2.000	9%	8%	13%	11%
2.000 to 2.500	17%	22%	25%	32%
2.500 to 3.000	69%	65%	58%	53%
thereof max (3.000)	62%	57%	49%	31%



# THE „LIKE“ FACTOR

	WAVE 1 Nov 13	WAVE 2 Dec 13	WAVE 3 Jan 13	WAVE 4 Feb 14	BENCH MARK
<b>LIKEABILITY</b>					
VERY GOOD	59%	63%	64%	64%	29%
GOOD	39%	36%	34%	33%	44%
TOP 2 BOX	98%	99%	98%	97%	73%
<b>WILLINGNESS TO REPEAT</b>					
DEFINITELY	96%	96%	97%	97%	61%
PROBABLY	3%	4%	2%	2%	15%
TOP 2 BOX	99%	100%	99%	99%	76%



**I AM HAPPY...**

	WAVE 1 Nov 13	WAVE 2 Dec 13	WAVE 3 Jan 14	WAVE 4 Feb 14	BENCH MARK
<b>OXFORD HAPPINESS SCORE</b>					
Happiness Score (29 to 174)	120	120	124	124	<b>116</b>
Happiness Level (1 to 6)	4.1	4.1	4.3	4.3	<b>4.0</b>

Peter Hills and Michael Argyle of the Oxford Happiness Project, Oxford University;  
"The Oxford Happiness Questionnaire: A compact scale for the measurement of  
psychological well-being." published in Personality and Individual Differences, Vol. 33, 2001.



# INFLUENCE ON MOOD

	WAVE 1 Nov 13		WAVE 4 Feb 14	
<b>BEFORE</b>				
TOP 3 BOX (happy)	70%		75%	
BOT 3 BOX (unhappy)	8%		8%	
<b>AFTER</b>		<b>DIFF.</b>		<b>DIFF.</b>
TOP 3 BOX (happy)	82%	<b>+12%</b>	84%	<b>+9%</b>
BOT 3 BOX (unhappy)	2%	<b>-6%</b>	4%	<b>-4%</b>



## RESPONDENT FEEDBACK

MORE OF THIS  
KIND

INTERESTING  
APPROACH!  
CARRY ON!

WOW! DIFFERENT!

I FEEL HAPPIER  
ALREADY

I REALLY  
ENJOYED THAT

WHERE'S THE  
NEXT ONE



## SUMMARY

AFTER 4 MONTHS AVG INCENTIVE 6% LOWER

99% WOULD REPEAT

11% PROVIDE POSITIVE FEEDBACK

RESPONDENTS ARE HAPPIER AFTER INCENTIVE CHOICE

OXFORD HAPPINESS SCORE RISES BY 4 POINTS





# **DATA QUALITY IN ONLINE SURVEYS 4.2**

## **CONDITIONAL INCENTIVES**



**GIVE-A-DOG-A-BONE**

(a.k.a. CHING CHONG)



## **KEY QUESTIONS**

IS QUALITY IMPACTED IF RESPONDENTS ARE EXPOSED TO AN IMMEDIATE FEEDBACK ON THE QUALITY OF THEIR SURVEY COMPLETION?

CAN A LEARNING PROCESS BE INSTIGATED THUS INCREASING QUALITY OVER TIME?

## **SURVEY DESIGN**

LONGITUDINAL SURVEY OVER A 4 MONTH PERIOD WITH BASE SAMPLE N=1,000 RESPONDENTS IN FIRST WAVE AND RE-INVITES FOR CONSECUTIVE WAVES



# QUALITY FEEDBACK DEMO

<http://surveys.myiyo.com/results/>

mo'web research

Here is our feedback on the quality of your given answers:

Plausibility	✗	0 Points
Attentiveness	✓	250 Points
Time (358 Sek.)	✓	250 Points
Response pattern	✓	250 Points
Differentiation	✓	250 Points
Detailedness	✗	0 Points

According to those results you receive 1000 points for this survey

You usually wouldn't have received any incentive for this interview as you haven't met all of our quality criteria. Please make sure to pay attention to the following requirements we have for good quality interviews the next time you participate in a survey:

**Plausibility** Answers that contradict each other are considered implausible.  
**Attention** If texts aren't read carefully and the answers given are incorrect due to this.  
**Time** If the whole survey or particular questions are answered too quickly.  
**Response pattern** If the options selected resemble a pattern such as a straight row regardless of the actual respective statement of the answers.  
**Differentiation** Answers aren't differentiated enough if the selected answers stay in the same region for an unreasonable amount of questions.  
**Detailedness** Refers to written out answers. If these responses consist of too few words, the answer isn't considered detailed enough.

Submit

YOU FAILED TO QUALIFY - SRY!

## WHAT WOULD YOU ASSUME?



# SAMPLE PLAN & ENGAGEMENT

	WAVE 1 Nov 13	WAVE 2 Dec 13	WAVE 3 Jan 14	WAVE 4 Feb 14
<b>GROSS SAMPLE</b>	<b>1.510</b>	<b>1.000</b>	<b>1.000</b>	<b>1.000</b>
Non response	--	237	156	168
Dupes	8	0	0	0
Screen out	17	2	1	2
Overquota	436	2	1	0
<b>INCOMPLETE</b>	<b>49</b>	<b>19</b>	<b>15</b>	<b>16</b>
<b>CLEANED GROSS SAMPLE</b>	<b>1.000</b>	<b>740</b>	<b>827</b>	<b>814</b>



# QUALITY

	WAVE 1 Nov 13	WAVE 2 Dec 13	WAVE 3 Jan 14	WAVE 4 Feb 14
<b>CLEANED GROSS SAMPLE</b>	<b>1.000</b>	<b>740</b>	<b>827</b>	<b>814</b>
<b>QUALITY EXCLUSIONS</b>	<b>138</b> <b>13,8%</b>	<b>89</b> <b>12,0%</b>	<b>74</b> <b>8,9%</b>	<b>49</b> <b>6,0%</b>
Plausibility	54	37	25	16
Attention	88	62	51	41
Speeding	32	22	17	14
Overexerted	51	44	22	19
Straightlines	107	56	48	43
Differentiation	47	29	25	25
Diligence (Open Ends)	117	51	33	33
<b>NET CLEAN SAMPLE</b>	<b>862</b>	<b>651</b>	<b>753</b>	<b>765</b>



# RELIABILITY AND CONSISTENCY

	WAVE 1 Nov 13	WAVE 2 Dec 13	WAVE 3 Jan 14	WAVE 4 Feb 14
<b>CRONBACH'S ALPHA</b>				
Reliability $\alpha$	0,933	0,916	0,923	0,932
Std. Error	0,099	0,091	0,083	0,099
<b>PEARSON CORRELATION</b>				
„I am very happy“ vs. „I am unhappy“	-0.569	-0.399	-0,417	-4,763

Lee Joseph Cronbach (1916–2001): Cronbach's Alpha,  
The Generalizability Theory



# INFLUENCE ON MOOD

	WAVE 1 Nov 13		WAVE 4 Feb 14	
<b>BEFORE</b>				
TOP 3 BOX (happy)	73%		72%	
BOT 3 BOX (unhappy)	8%		7%	
<b>AFTER</b>		<b>DIFF.</b>		<b>DIFF.</b>
TOP 3 BOX (happy)	77%	<b>+4%</b>	79%	<b>+7%</b>
BOT 3 BOX (unhappy)	9%	<b>+1%</b>	4%	<b>-3%</b>





## **SUMMARY**

**SIGNIFICANT DECREASE IN EXCLUSIONS ON ACCOUNT OF FRAUDULENT BEHAVIOUR (13,8% -> 6,0%)**

**DATA QUALITY REMAINS STABLE (CRONBACH  $\alpha$ )**

**QUALITY FEEDBACK INTERESTS AND MOTIVATES RESPONDENTS**

**RESPONDENTS ARE SIGNIFICANTLY HAPPIER AFTER QUALITY FEEDBACK**



## **CONCLUSIO**

**INTERACTIVE PROCESSES, SELF  
DETERMINATION AND FEEDBACK  
LOOPS MAKE RESPONDENTS HAPPIER**

**MOTIVATING RESPONDENTS TOWARD  
GOOD BEHAVIOUR BENEFITS US ALL**

**FAR MORE THAN SANCTIONING BAD  
BEHAVIOUR EVER COULD**

**...LET'S SEEK TRUTH NOT SPOT LIES!**



**THANK YOU!**

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