

---

# Device use in web surveys: The effect of differential incentives

---

General Online Research 2015

Aigul Mavletova, NRU Higher School of Economics, Russia

Mick P. Couper, Survey Research Center, University of Michigan



## Background

---

üWarnings in the e-mail invitation or on the first page to use a PC or tablet had a small effect on those who started on smartphones and those who changed the device (McClain, Crawford, and Dugan, 2012; Peterson, 2012).

üNo effect of encouraging mobile use on overall participation rates, and relatively small effects on the proportion of respondents who used a mobile device (Millar and Dillman, 2012).

# Research Questions

---

RQ1: Can we increase participation rates in web surveys using differential incentives?

RQ2: Can we increase the proportion of respondents who use a particular device to complete the survey using differential incentives?

# Differential Incentives

---

The conditional differential incentives are offered simultaneously depending on the device a respondent uses to complete the web survey.

e.g.:



€1



€2

## Differential Incentives

---

- Understanding Society Innovation Panel: offering additional incentives to complete the survey on the web (vs. f2f) increases the proportion of web respondents by 7-8 p.p. (Jäckle, Lynn, and Burton, 2013; Wood and Kun, 2014).
- Differential incentives significantly increased the proportion of web respondents (vs. mail), but did not have much effect on overall response rates (Mooney et al., 2012).

---

# Hypotheses and Experimental Design

---

# Hypotheses

---

## 1. Differential incentives:

- increase the overall participation rates
- more effective at increasing the proportion of respondents who use a particular device than an encouragement to use a particular device.

# Hypotheses

---

## 1. Differential incentives:

- increase the overall participation rates
- more effective at increasing the proportion of respondents who use a particular device than an encouragement to use a particular device.

2. Larger incentives are needed to encourage the use of mobile phones than the use of PCs to get similar participation rates.



# Hypotheses

---

## 1. Differential incentives:

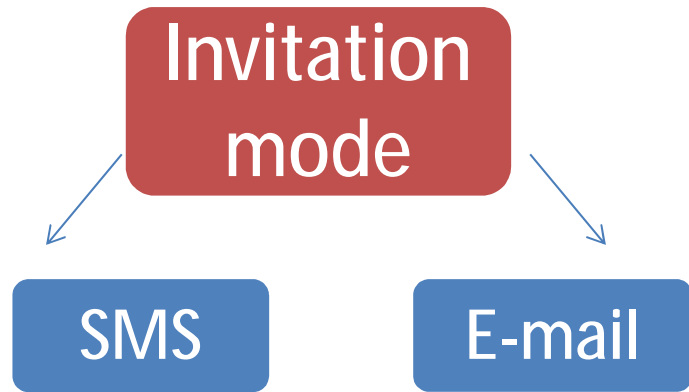
- increase the overall participation rates
- more effective at increasing the proportion of respondents who use a particular device than an encouragement to use a particular device.

2. Larger incentives are needed to encourage the use of mobile phones than the use of PCs to get similar participation rates.

3. Providing larger incentives for completing the survey on a mobile phone will increase the proportion of younger respondents.

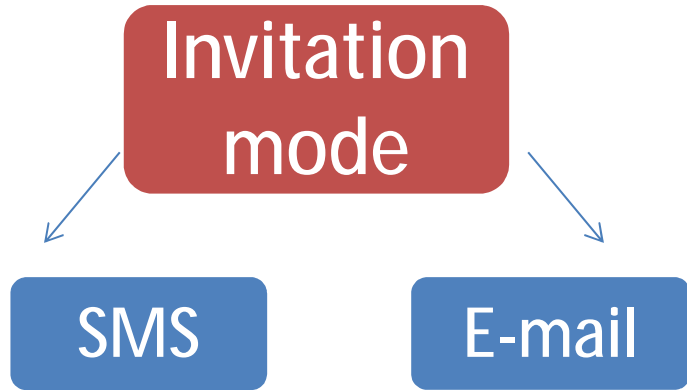
# Experimental Design

---



## Experimental Design

---



### Differential incentives

1. No encouragement for device
2. Encouragement to use mobile phones
3. Encouragement to use PC
4. 50% higher incentives for PC
5. 50% higher incentives for mobile phone
6. Doubled incentives for mobile phone

## Data Collection

---

• Volunteer online access panel (Online Market Intelligence)

• 10 minutes

• Fieldwork: October 17-November 2, 2014, Russia

• Software: Unipark

• Mobile Internet users

• Participation rate  $\approx 38\%$ : 5,474 invitations; 2,086 respondents.

• Breakoff rate = 9.5%

# Questionnaire

---

ü49 items:

ESS: trust in the police and courts, cooperation with the police and courts.

No screening questions, quotas, and skipping logic.

üAll questions were not obligatory.

# Completion Times

	Mobile phone	PC
Completion times (min.) ***	21.8 (SD=18.6)	15.8 (SD=15.6)
Average time spent on a survey page (seconds) ***	23.1	18.7
Average network latency (seconds) ***	3.9	1.9

- With higher education: 1 minute faster ( $p<0.05$ ).
- Each additional 100 pixels in screen size decreased the predicted completion time by 0.2 minutes ( $p<0.05$ )
- Wi-Fi: 3.4 minutes faster than those who used 2G or 3G Internet connections ( $p<0.001$ )

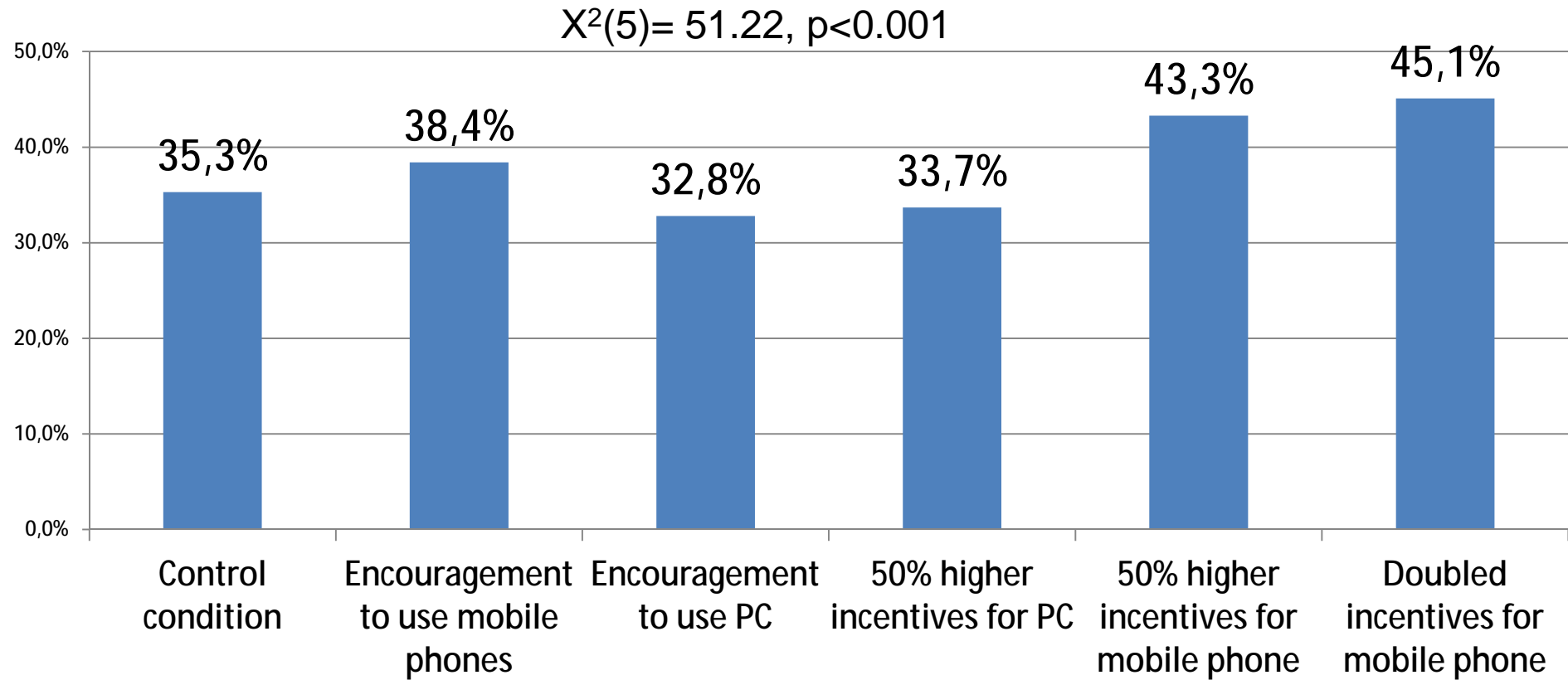
\*\*\*  $p<0.001$

---

# Results

---

# Participation Rates





# Participation Rates

---

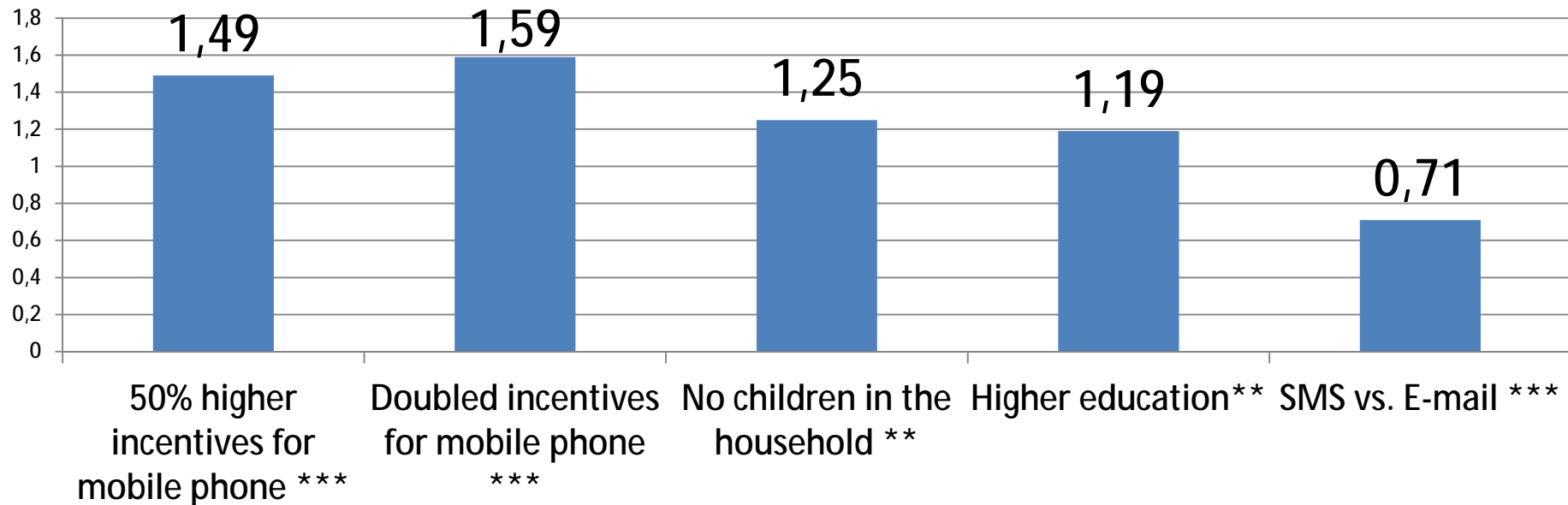
üEncouragement to use a particular device for completing the survey did not have an effect on the overall participation rates.

üOffering higher incentives to PC web respondents did not produce higher participation rates compared to the control condition.

üOffering higher incentives to mobile respondents increased participation rates by 8 p.p. and 10 p.p.

# Survey Completion

Odds ratios:



Higher odds of participation ( $p < 0.001$ ):

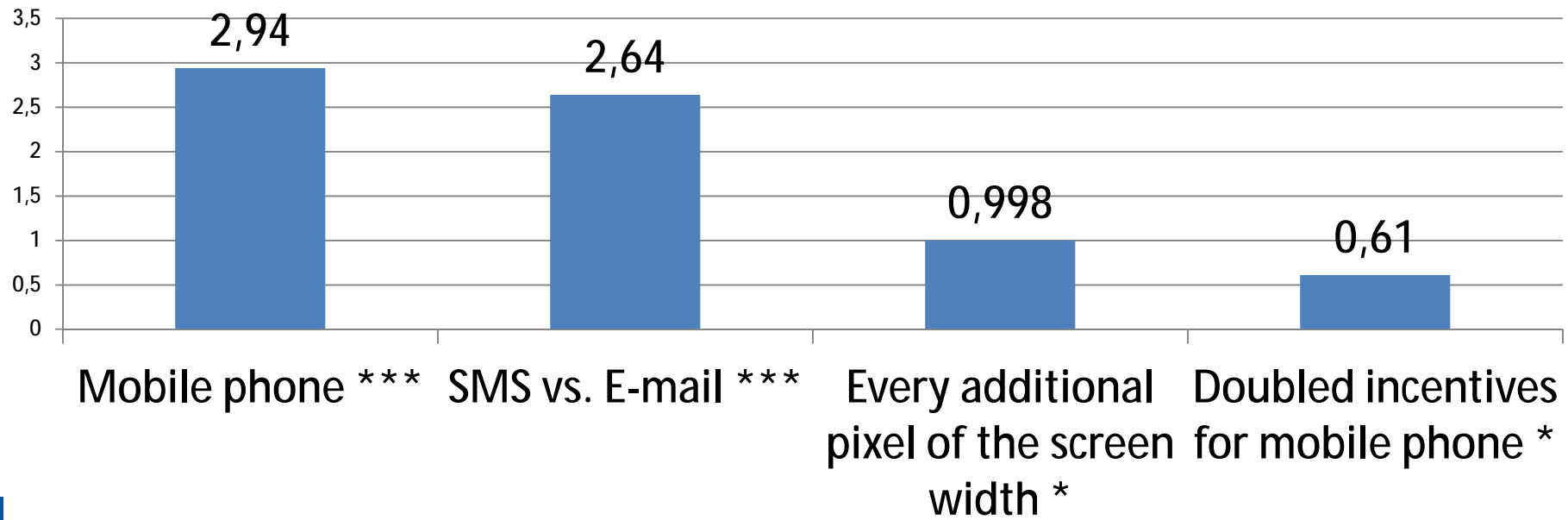
- older respondents;
- those with less time in the panel member;
- those with a higher amount of incentives in their account

# Breakoff Rates

	BR
Mobile phone	15.2%
PC	3.8%
Tablet	4.1%

$\chi^2(2)=87.22, p<0.001$

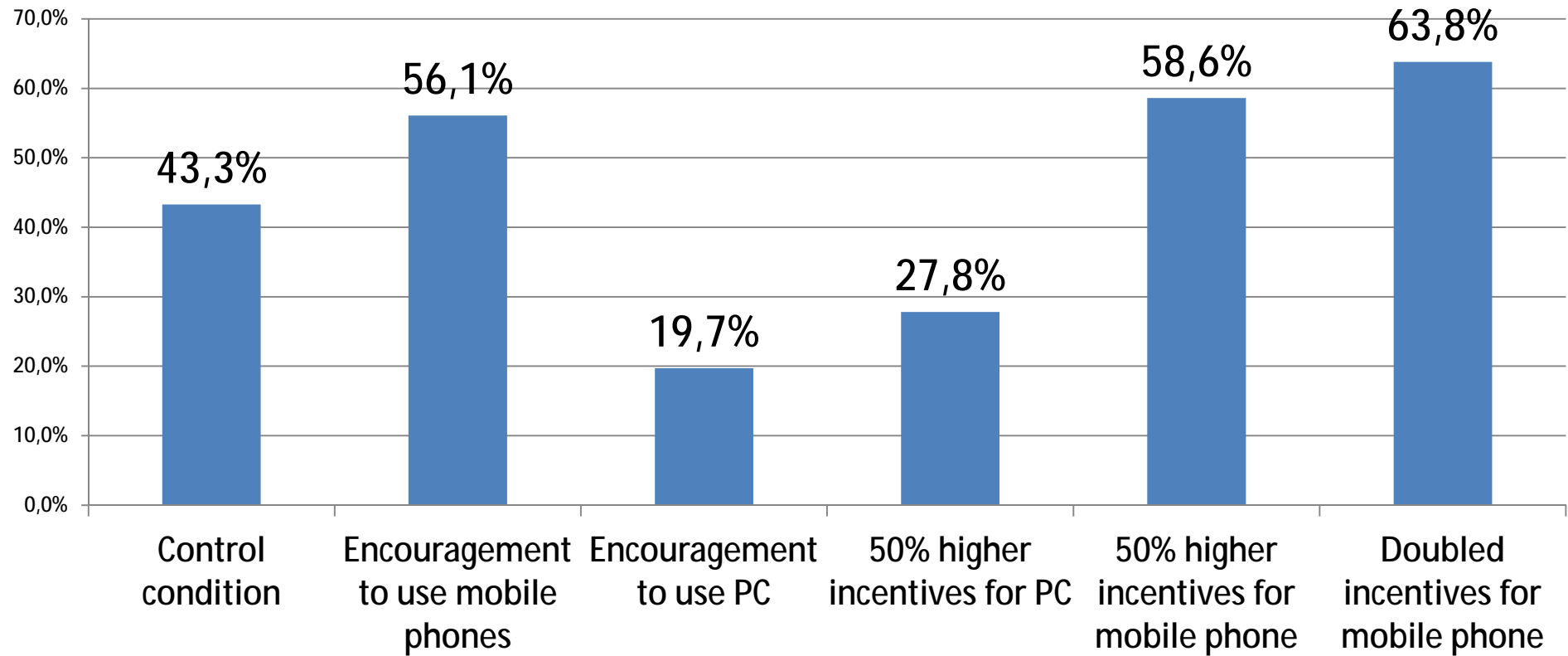
Odds ratios:



\*p<0.05, \*\*\*p<0.001

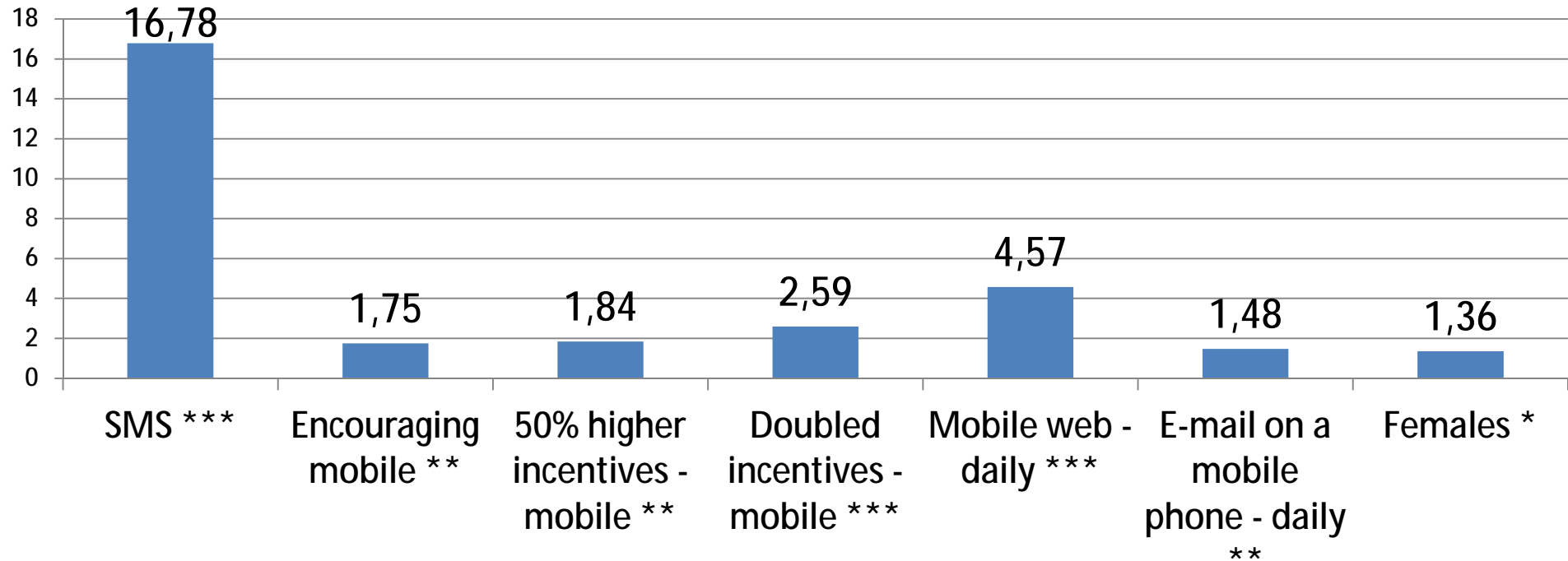
# Proportion of Mobile Phone Respondents

$X^2(5)=216.56, p<0.001$



## Mobile completion (vs. PC and tablet completion)

Odds ratios:



Higher odds of mobile completion ( $p < 0.05$ ):

- younger respondents;
- those with a longer panel experience.

# Sample Composition

	Control condition	Encouragement to use mobile phones	Encouragement to use PC	50% higher incentives for PC	50% higher incentives for mobile phone	Doubled incentives for mobile phone
Age	Older people more likely to complete the survey. No differences between the conditions.					
Females vs. males	-	-	OR*=1.62	-	OR*=1.48	-
Level of education	-	-	-	-	OR*=1.48	OR*=1.61

# Data Quality

---

No differences:

- item nonresponse rates (0.63%, SD=6.1%)
- primacy effects
- the number of nonsubstantive responses (“don’t know”)

## Main Findings

---

- Differential incentives increased the overall participation rates by 8-10 p.p. if higher incentives were offered to mobile respondents.
- E-mail invitation produced higher participation rates. SMS increased the proportion of mobile web respondents.
- Encouraging the use of a mobile phone and offering higher incentives were both effective at increasing the proportion of mobile respondents.
- Offering incentives 50% higher was as efficient as offering doubled incentives for mobile web respondents.
- Offering higher incentives to mobile web respondents had an effect on sample composition.



# Limitations

---

- Frequent mobile web users.
- Non-probability online access panel.
- It is worth exploring:
  - ü The effects of other incentives (e.g., 20% or 30% higher).
  - ü The difference in participation rates between the conditions in which higher-than-typical incentives are offered for all participants and when offered only for using a particular device.