The Grouping of Items in Mobile Web Surveys

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Scrolling vs Paging

- McGeeney & Marlar (2013): lower breakoff rate in the scrolling version (13% of mobile respondents).

13 items (1 page vs 3 pages vs 13 pages).

- Mavletova & Couper (2013): shorter completion time, less number of technical problems, lower breakoff rate, higher subjective evaluation in the scrolling version. No significant differences in item nonresponse.

17 items (2 pages vs 17 pages).

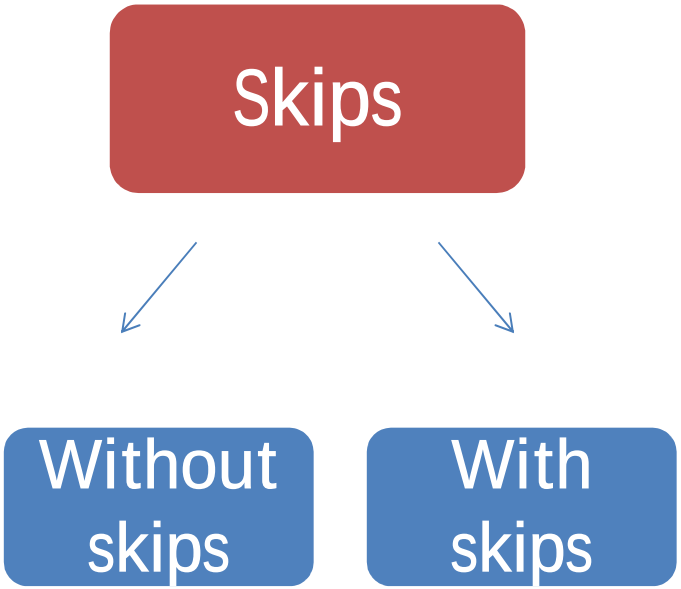
Research Questions

- Does the number of questions presented on the page have an effect on data quality in the scrolling design in mobile web surveys?

- Is it different in the survey with skips and in the survey without skips in the scrolling design?

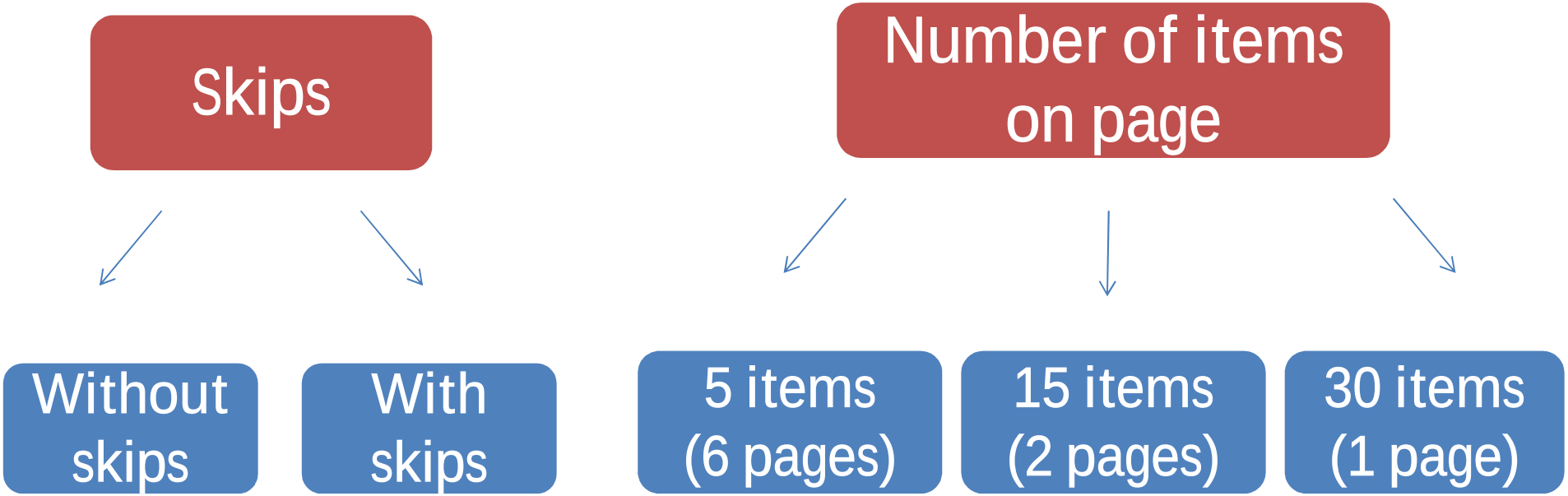
Hypotheses and Experimental Design

Experimental Design



- Simple user-controlled skips
- not as hyperlinks
- 7 skips

Experimental Design



- Simple user-controlled skips
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Questionnaire with or without skips

	Hypotheses
Breakoff rate	Higher in survey with skips
Underreporting	

Number of items on page

	Hypotheses
Breakoff rate	Higher in the 30 items on page
Completion time	Lower in the 30 items on page

Number of items on page

	Hypotheses
Breakoff rate	Higher in the 30 items on page
Completion time	Lower in the 30 items on page
Item nonresponse	Higher in the 30 items on page
Measurement error	Higher in the 30 items on page

Data Collection

- Volunteer online access panel (Online Market Intelligence), mobile web subpanel.
- 10 minutes survey.
- Respondents were encouraged to complete the survey via mobile phone.
- Fieldwork: 9-20th October, 2013, Russia.
- Software: Unipark.
- 2,032 respondents: 7, 740 SMS invitations,

participation rate=26.8%

Questionnaire

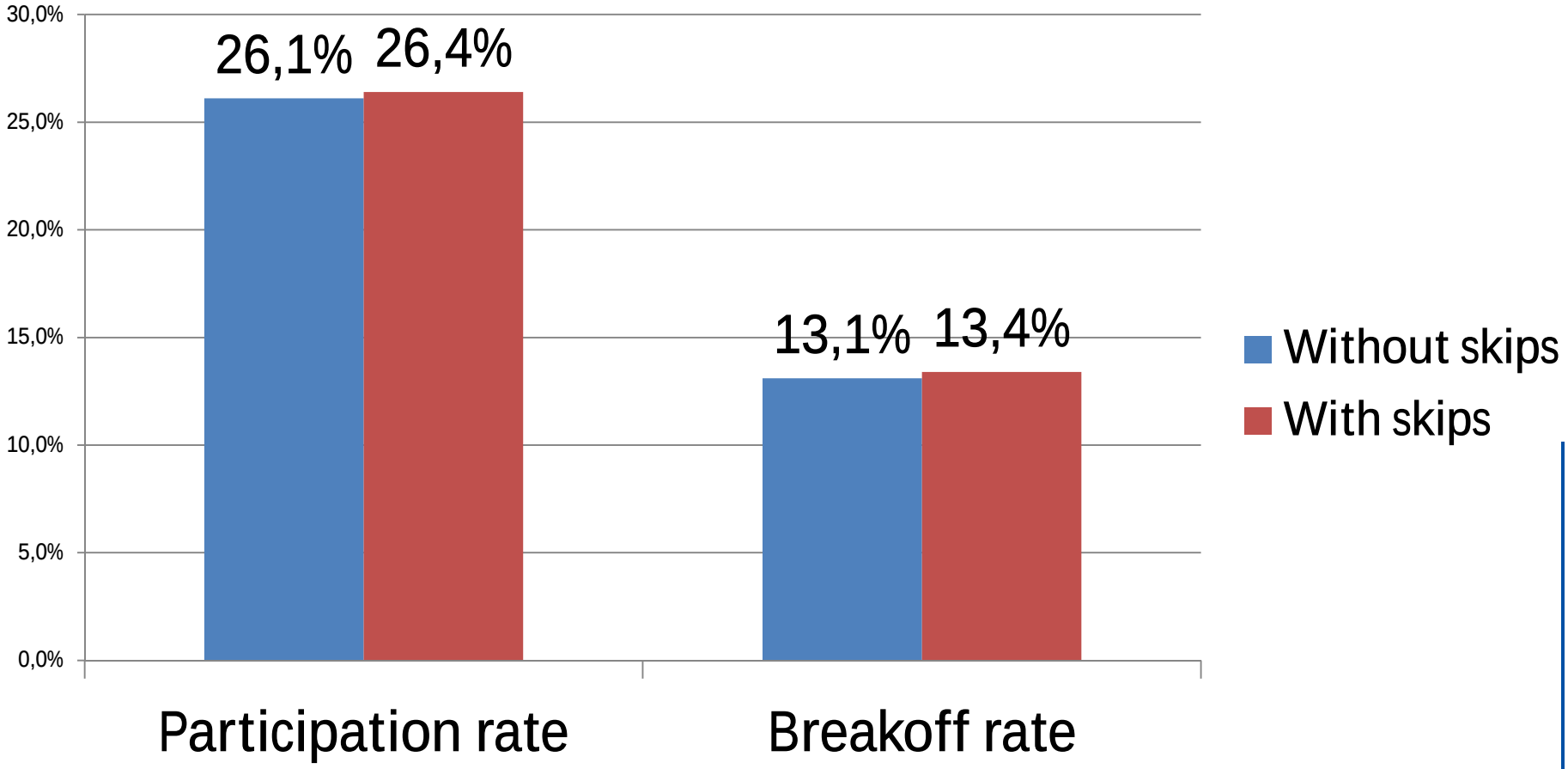
- ***30 questions:*** **discrimination with a special focus on age discrimination.**

- **Two questionnaires (with and without skips) were made as similar as possible.**

- **All questions were not obligatory.**

Results: survey with or without skips

Participation Rates and Breakoff Rates



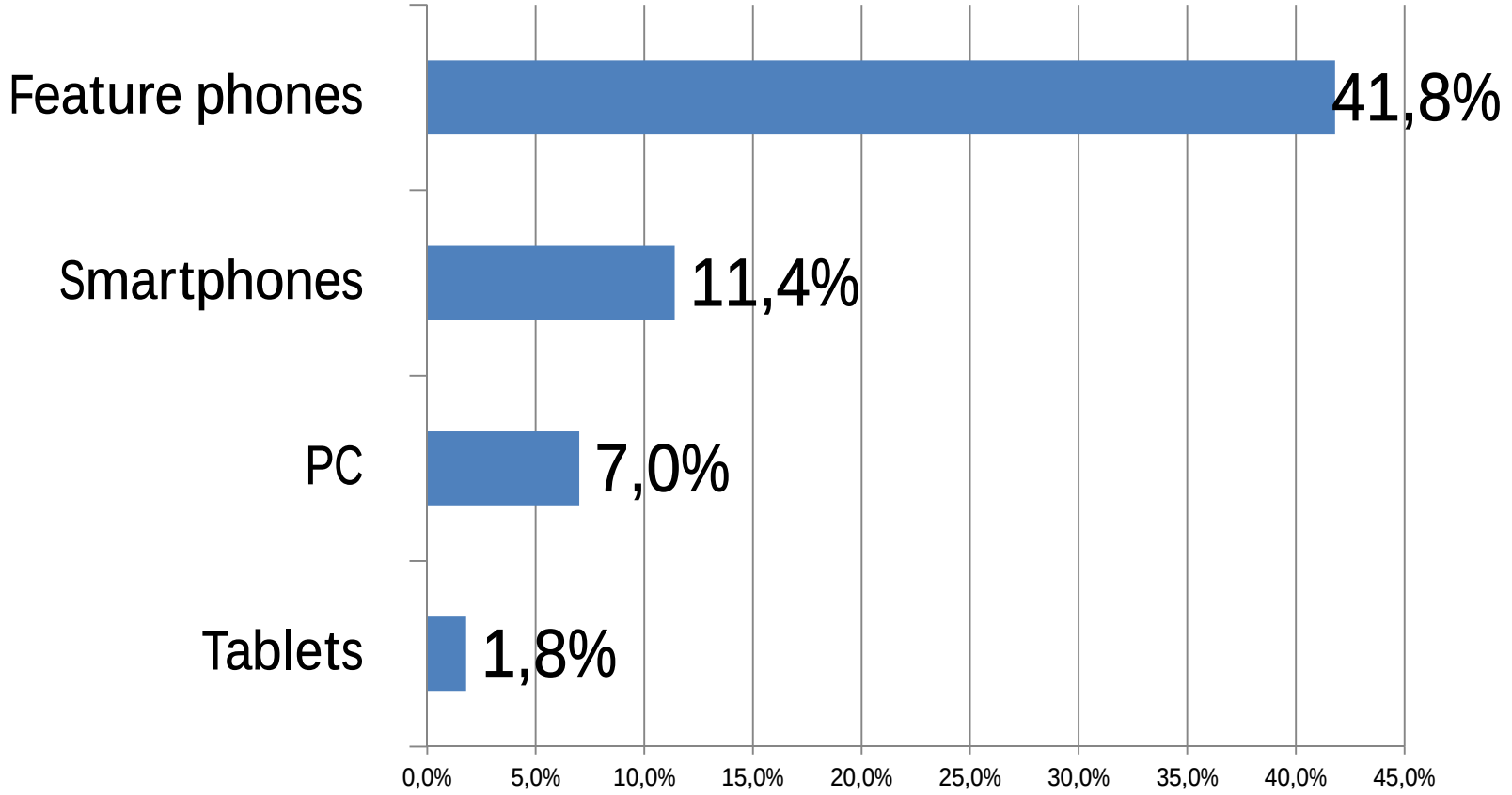
Sample Composition by Devices

Device	%
Smartphones	90.6%
Feature phones	4.7%
Tablets	2.7%
PC	2.0%
Total	2,032

Breakoff Rate by Devices

Device

Chi-square= 131.123* (*df*=3)**



***p<0.001

Underreporting

Without skips	With skips
13. What opinion do you agree mostly? • In each professional area it is permissible to set age limit • In none of professional areas it is permissible to set age limit • In some professional areas it is permissible to set age limit, in others – not • Difficult to answer	13. What opinion do you agree mostly? • In each professional area it is permissible to set age limit → GO TO Q16 • In none of professional areas it is permissible to set age limit→ GO TO Q16 • In some professional areas it is permissible to set age limit, in others – not • Difficult to answer → GO TO Q16

Q14, Q15 – open-ended questions

Underreporting

Without skips	With skips
13. What opinion do you agree mostly? • In some professional areas it is permissible to set age limit, in others – not (75%)***	13. What opinion do you agree mostly? • In some professional areas it is permissible to set age limit, in others – not (58%)

No difference between
5, 15, 30-items per page conditions

*** χ2(3)=82.524, p<0.001

Survey Evaluation

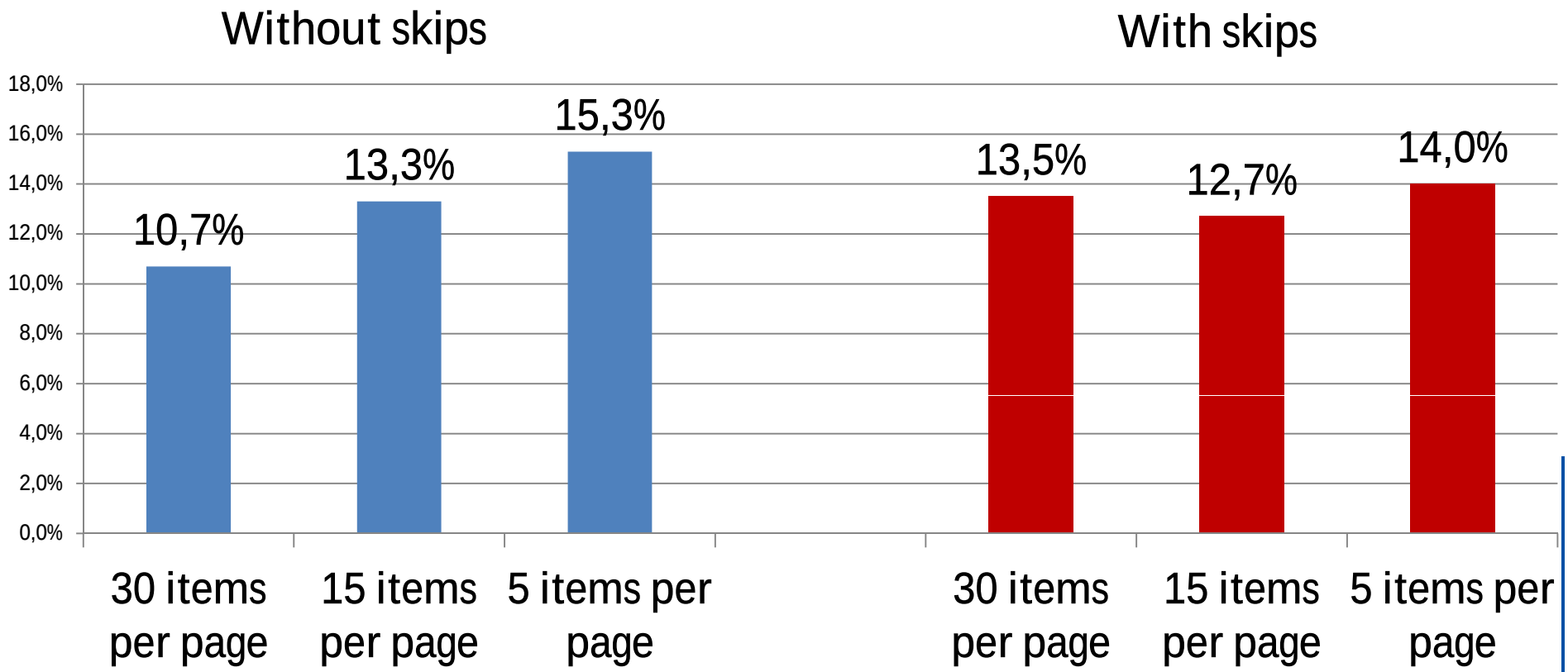
No differences:

- **Technical problems while completing the survey.**
- **Subjective rating of the survey.**
- **Subjective rating of difficulty of filling out the survey.**

Survey with skips: 2.5% - difficulties to follow instructions (no differences between 5, 15, and 30-items per page conditions).

Results: number of items per page

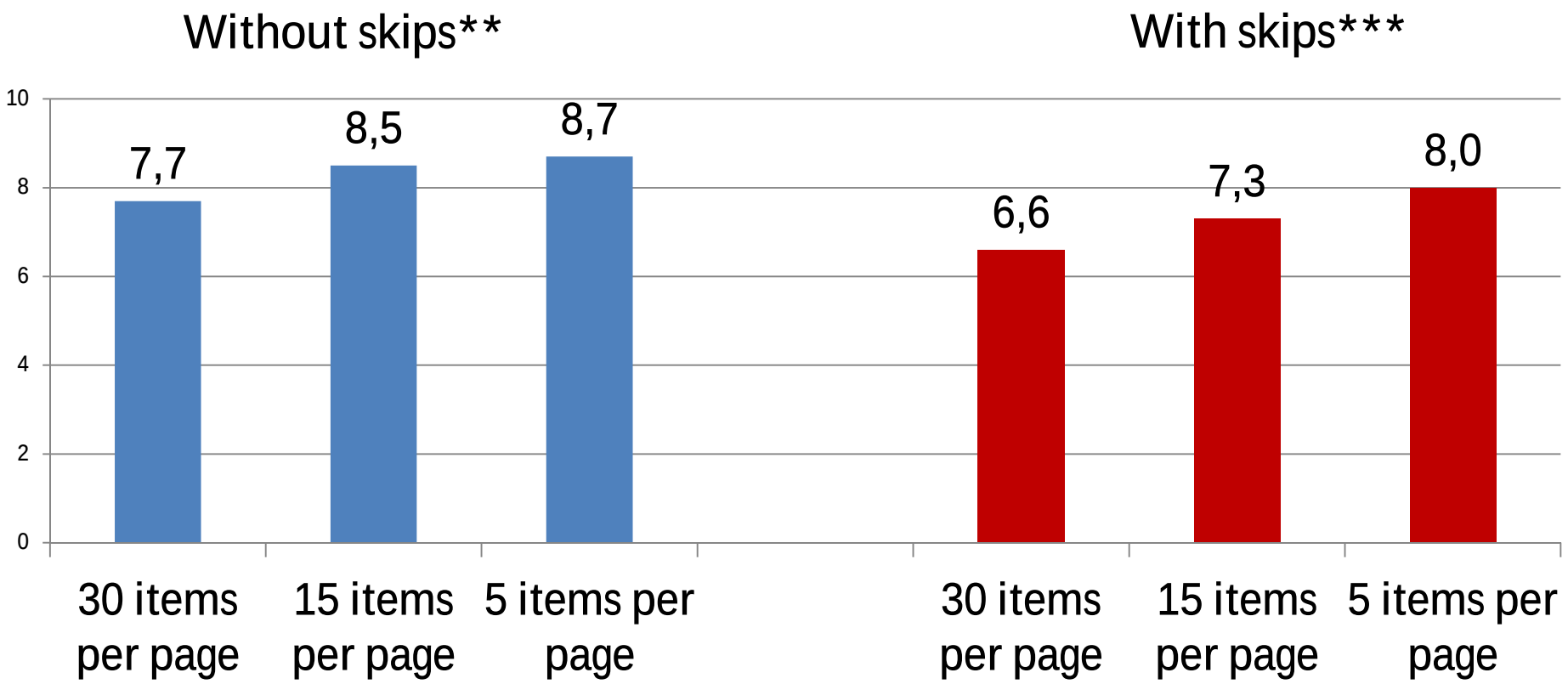
Breakoff Rates



Partial Interviews

Number of questions completed	30 items	15 items	5 items
0	100.0%	78.2%	44.7%
5	0%	0%	14.0%
10	0%	0%	19.3%
15	0%	21.8%	11.4%
20	0%	0%	5.3%
25	0%	0%	5. 3%
TOTAL	95	101	114

Completion Time (min)



**** F(2, 901)=6.659**
p<0.01

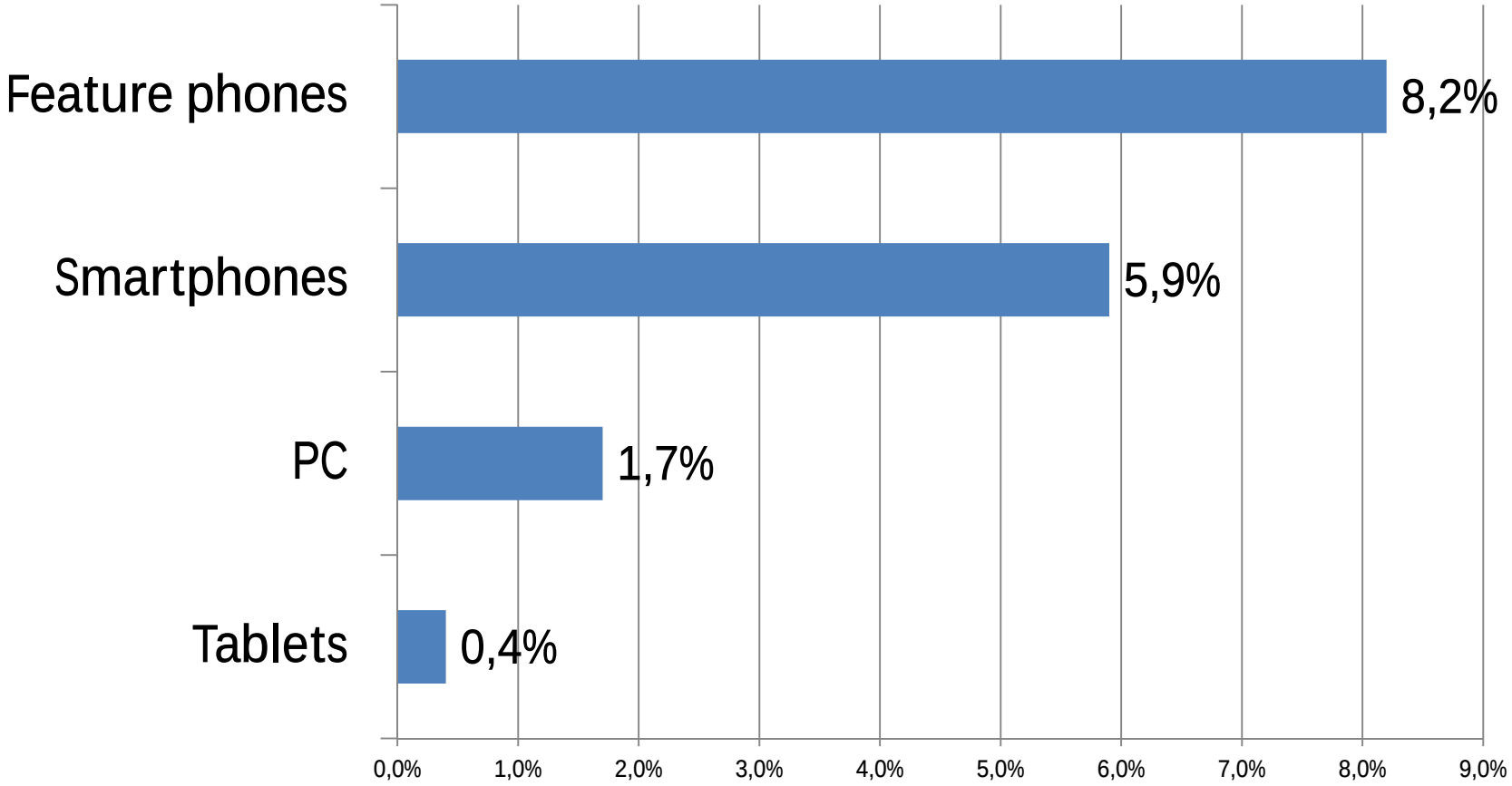
**** F(2, 930)=11.298**
p<0.001

In both questionnaires: no difference in the subjective estimate of completion time

Item Nonresponse

Without skips	30 items	15 items	5 items	F
Overall item nonresponse	7.3% (SD=19.9%)	4.7% (SD=13.1%)	3.3% (SD=10.3%)	6.104 (2, 1008)**
With skips	30 items	15 items	5 items	F
Overall item nonresponse	8.8% (SD=21.74%)	7. 9% (SD=18.0%)	2.9% (SD=7.1%)	12.116 (2, 1017)***

Item Nonresponse



F(3,2026)=3.692, p<0.05

Omission and Commission Errors

With skips	30 items	15 items	5 items	F
Omission error	5.7% (SD=17.65%)	3.2% (SD=12.6%)	3.7% (SD=12.7%)	2.797 (2, 960), p=0.06
Commission error	18.0% (SD=30.2%)	16.6% (SD=28.3%)	14.8% (SD=28.2%)	1.060 (2, 975)

Omission error rate: % of the responses where respondents skipped but were supposed to answer.

Commission error rate: % of the responses which respondents answered but were expected to skip.

Measurement error

- open-ended questions
- nonsubstantive responses
- primacy effects

No differences were found.

Main Findings

(1) Questionnaire with/without skips: almost no differences. Might be underreporting in the cognitively demanding tasks.

(2) Number of questions per screen: an effect on nonresponse but not on measurement error.

(3) Questionnaire without skips: presenting 30 items on page → lower breakoff rate, shorter completion time, but higher item nonresponse. Losing data on breakoffs.

(4) Questionnaire with skips: presenting 30 items on page → higher item nonresponse and omission error rate.