

# PC vs Mobile: does the device affect people's answers in online surveys?

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# Our contribution

We assess the comparability of subjective answers to an online survey administered via PC and smartphone:

- ▶ we use a nationally representative survey;
- ▶ a battery of 20 subjective questions;
- ▶ we account for users' heterogeneity.

## “Unintended mobile respondent”



(Peterson, 2012; Wells et al., 2013; de Bruijne & Wijnant, 2014)

# A new layer of concern

## Are data issued from different devices comparable?

- ▶ technical features:
  - ▶ screen size;
  - ▶ processing power;
  - ▶ hardware capabilities (GPS, camera, sensors,...);
  - ▶ input capabilities;
- ▶ portability:
  - ▶ presence of bystanders;
  - ▶ multitasking;
  - ▶ interruptions/distractions.

## What we know



Main differences found:

- ▶ longer completion time;
- ▶ higher number of characters typed;
- ▶ lower respondent's satisfaction.

(Mavletova, 2013; Wells, 2015; Couper et al., 2017; Lugtig & Toepoel, 2015; Antoun et al., 2017)

# Behind a veil of ignorance



- ▶ lab experiments;
- ▶ completion time;  
straightlining; acquiescence;  
primacy; break off; item non  
response; answer length;  
scale orientation.

(Revilla & Couper, 2018; Keusch &  
Yan, 2017; Couper & Peterson, 2017)

# Behind a veil of ignorance



- ▶ lab experiments;
- ▶ completion time; straightlining; acquiescence; primacy; break off; item non response; answer length; scale orientation.



- ▶ We evaluate whether the device affects the answers to 20 subjective questions;
- ▶ We test whether the device effect is heterogeneous.

(Revilla & Couper, 2018; Keusch & Yan, 2017; Couper & Peterson, 2017)

# Global Entrepreneurship Monitor

## Features:

- ▶ In 2017 STATEC administered the GEM survey;
- ▶ CATI: 40% CATI; web-survey: 60%;
  - ▶ CATI: sampled from the telephone registry;
  - ▶ web-survey: sampled from a registry of 12000 e-mail contacts;
  - ▶ Mobile: 687; PC: 573;
- ▶ internet penetration is above 95%.

## Key-variables:

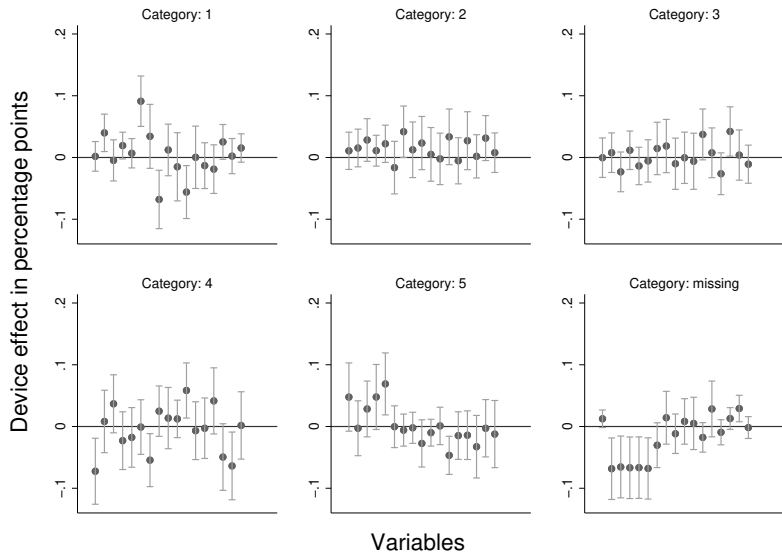
A battery of 20 questions about people's opinion, e.g.:

- ▶ I am satisfied with my life;
- ▶ So far I have obtained the important things I want in life;
- ▶ ...
- ▶ Age, gender, education, occupation, language, immigration, income.

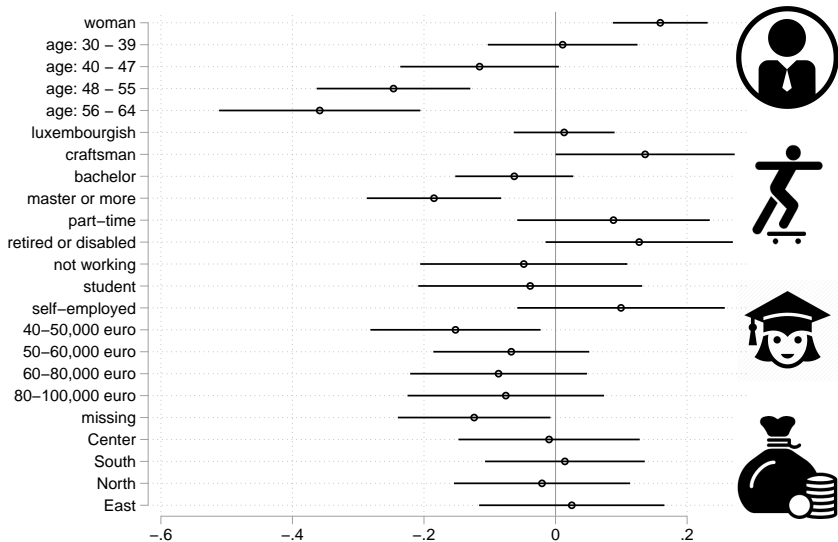
Answers are on a scale from 1 (*'strongly disagree'*) to 5 (*'strongly agree'*).



# What do the data say? (% Mobile—% PC)



# Correlates of mobile use



# Creating a counterfactual

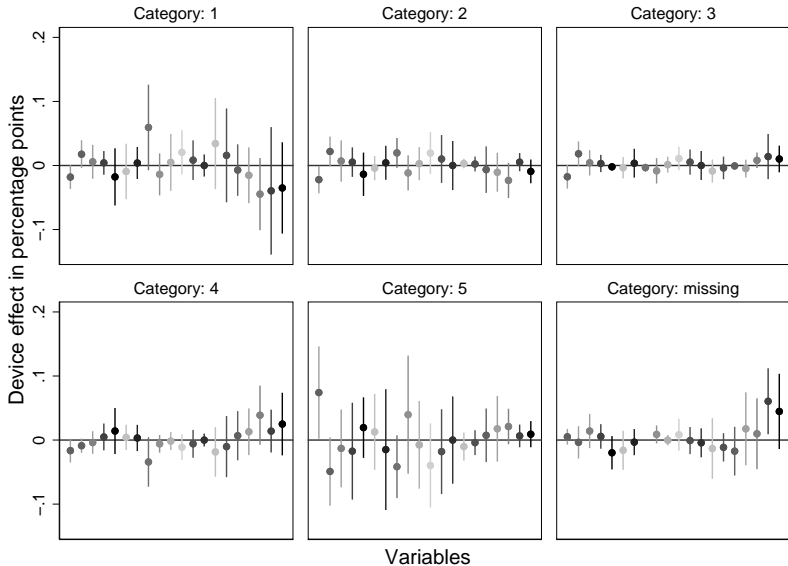
## Coarsened Exact Matching

- ▶ approximate experimental conditions by matching on observables (Iacus et al., 2012);
- ▶ matching method (as PSM) that pre-treats data to reduce imbalance among covariates;
- ▶ we run ordered logit regression after matching;
- ▶ we use robust standard errors and sampling weights.

# Sample: before and after matching



# Results from ordered logit after matching



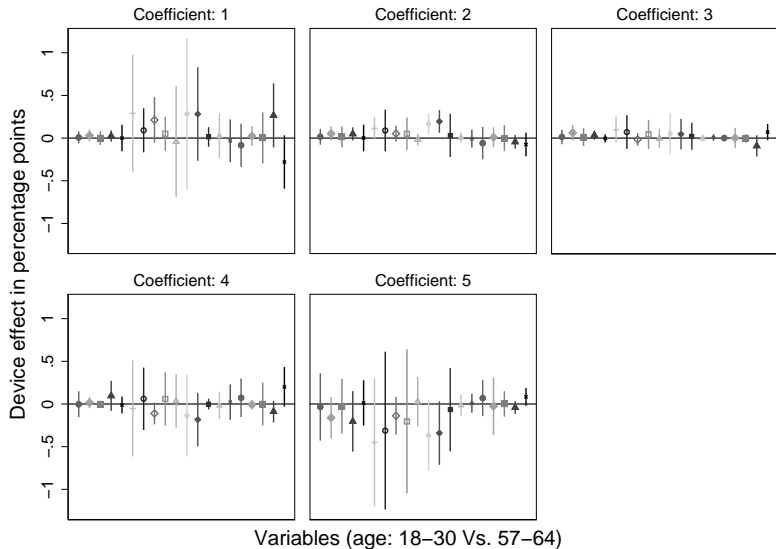
## First conclusion

There is no systematic effect of device on respondents' answers.

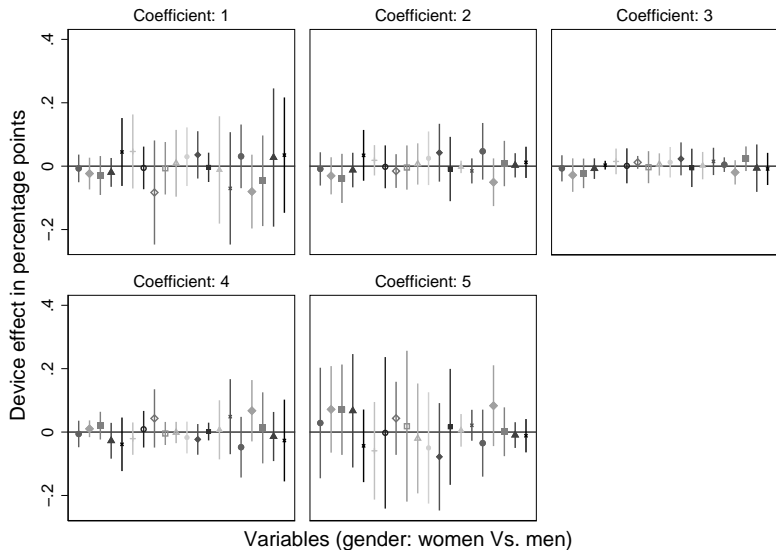
Does this result change if we consider sub-groups of the population?

- ▶ young people vs elderly;
- ▶ men vs women;
- ▶ Luxembourgish speaking vs French and English speaking people;
- ▶ rich vs poor people;
- ▶ more vs less educated people;
- ▶ employed vs self-employed people;

# 56-64 vs 18-30 years old

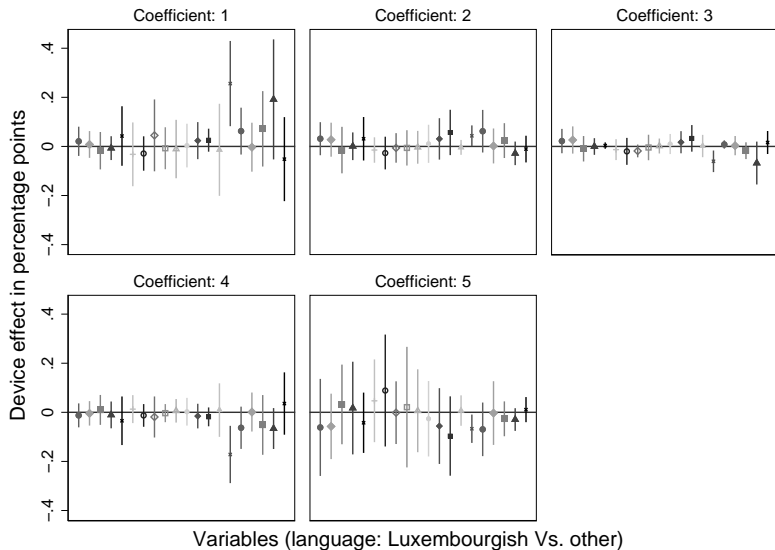


# Women vs men

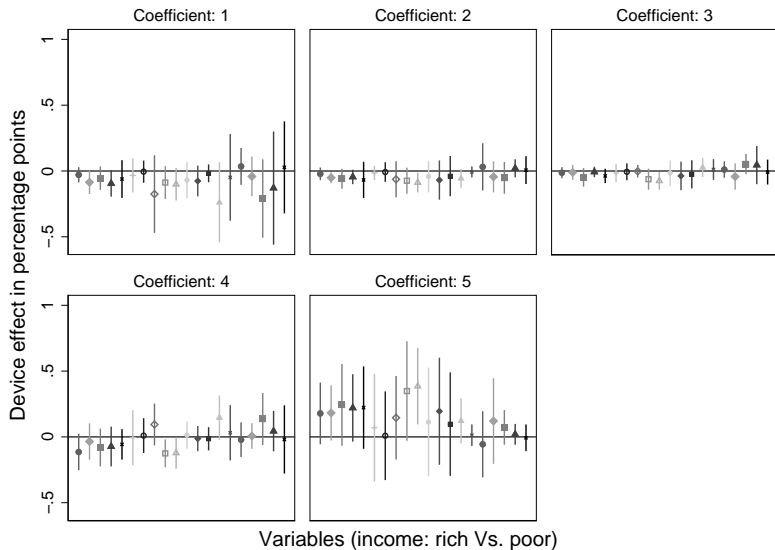




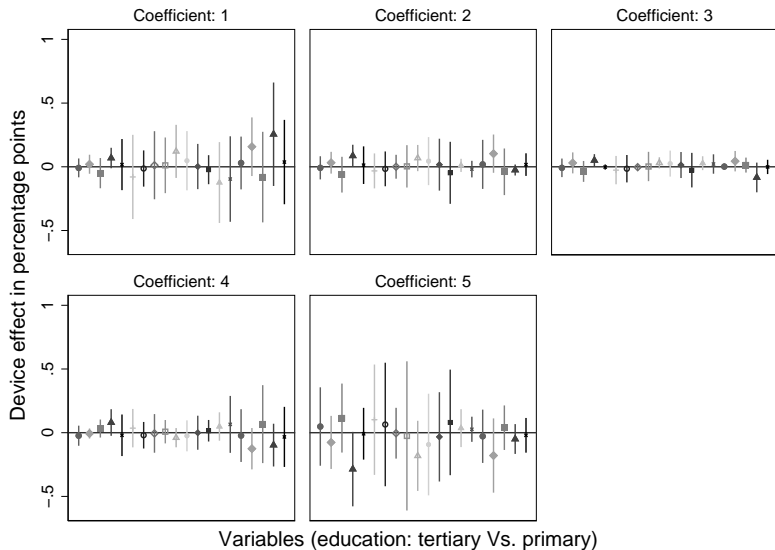
# Luxembourgish vs French & English



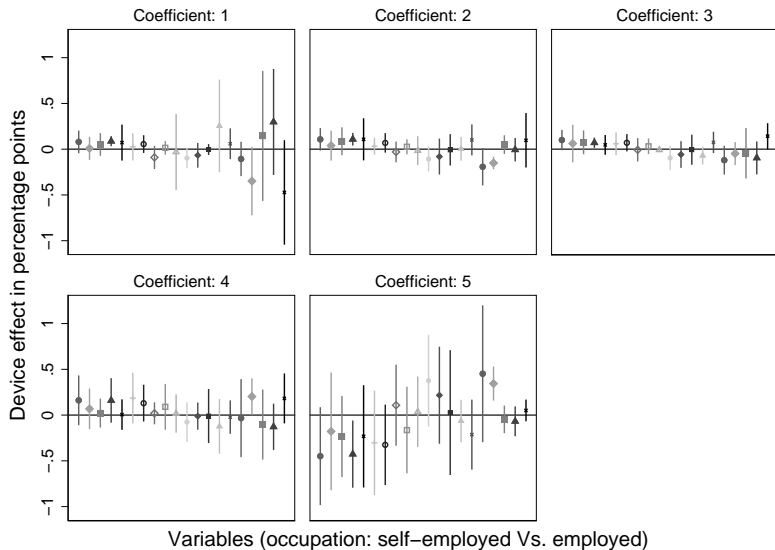
# Rich vs poor people



# Tertiary vs secondary education



# Self-employed vs employed



# Conclusions

- ▶ The choice of device does not systematically affect the answers to subjective questions;
- ▶ This result holds also for sub-groups of the population;
- ▶ Our test using nationally representative data is consistent with evidence from experiments;
- ▶ Does scale matters (2-points; 10-points)?
- ▶ This evidence suggests that the device is unimportant, and lends support to those who argue in favour of improving respondent's experience.

**Thanks a lot for your attention!**

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