



Statistics  
Canada

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# Paradata from the Canada's 2016 Census of Population Online Forms

2017 Federal CASIC Workshops

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Telling Canada's  
story in numbers

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Canada 



# Content of presentation

- Overview of Canada's 2016 Census of Population online forms
- Online application design
- Paradata analysis of online application
- Summary and recommendations



# Internet submission rate

2011 Census		2016 Census	
Actual (%)	Planned (%)	Actual (%)	
53.8	65	68.3	



# Proportion of devices showing Internet submission rate

- 20% of Internet submissions were completed on mobile devices.

Device category	Internet submission rate (%)	Relative rate (%)
Desktop/Laptop	54.4	79.6
Tablet	8.8	12.9
Smartphone	5.1	7.5
Miscellaneous	Less than 0.03%	Less than 0.04%
<b>Total</b>	<b>68.3</b>	<b>100.0</b>



# Design of online form for desktops, laptops and tablets

## Landscape

3. What is this person's **date of birth**? ?

If exact date is not known, enter best estimate.

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▶ **John Smith**

---

Day                      Month                      Year  
Example: 1974

<<< Select >>> ▾    <<< Select >>> ▾   

## Portrait

3. What is this person's **date of birth**? ?

If exact date is not known, enter best estimate.

---

▶ **John Smith**

---

Day                      Month                      Year  
Example: 1974

<<< Select >>> ▾    <<< Select >>> ▾



# Design of online form for smartphones

## Landscape

Question 3. 

What is this person's **date of birth**?

If exact date is not known, enter best estimate.

▶ **John Smith**

Day

Month

Year

Example: 1974

## Portrait

Question 3. 

What is this person's **date of birth**?

If exact date is not known, enter best estimate.

▶ **John Smith**

Day

Month


Year

Example: 1974



# Features of online form: Clickable zone

- Clickable zone was limited to the length of the response categories to avoid accidental selection.

4. What is this person's **marital status**? 

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**> John Smith**

Never legally married

Legally married (and not separated)

Separated, but still legally married

Divorced

Widowed



# Features of online form: Edits

7. Can this person speak English or French well enough to conduct a conversation? ?

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**> John Smith**

**> Please complete question 7 for John Smith.**

English only

French only

Both English and French

Neither English nor French

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8 a) What language does this person speak **most often** at home? ?

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**> John Smith**

English

French

Other language — specify:

**> Please be more specific in question 8 a) for John Smith. For example, instead of Chinese, report: Cantonese, Mandarin, Cheochow, Fukien, Hakka, Shanghainese, Taiwanese, etc.**

Chinese





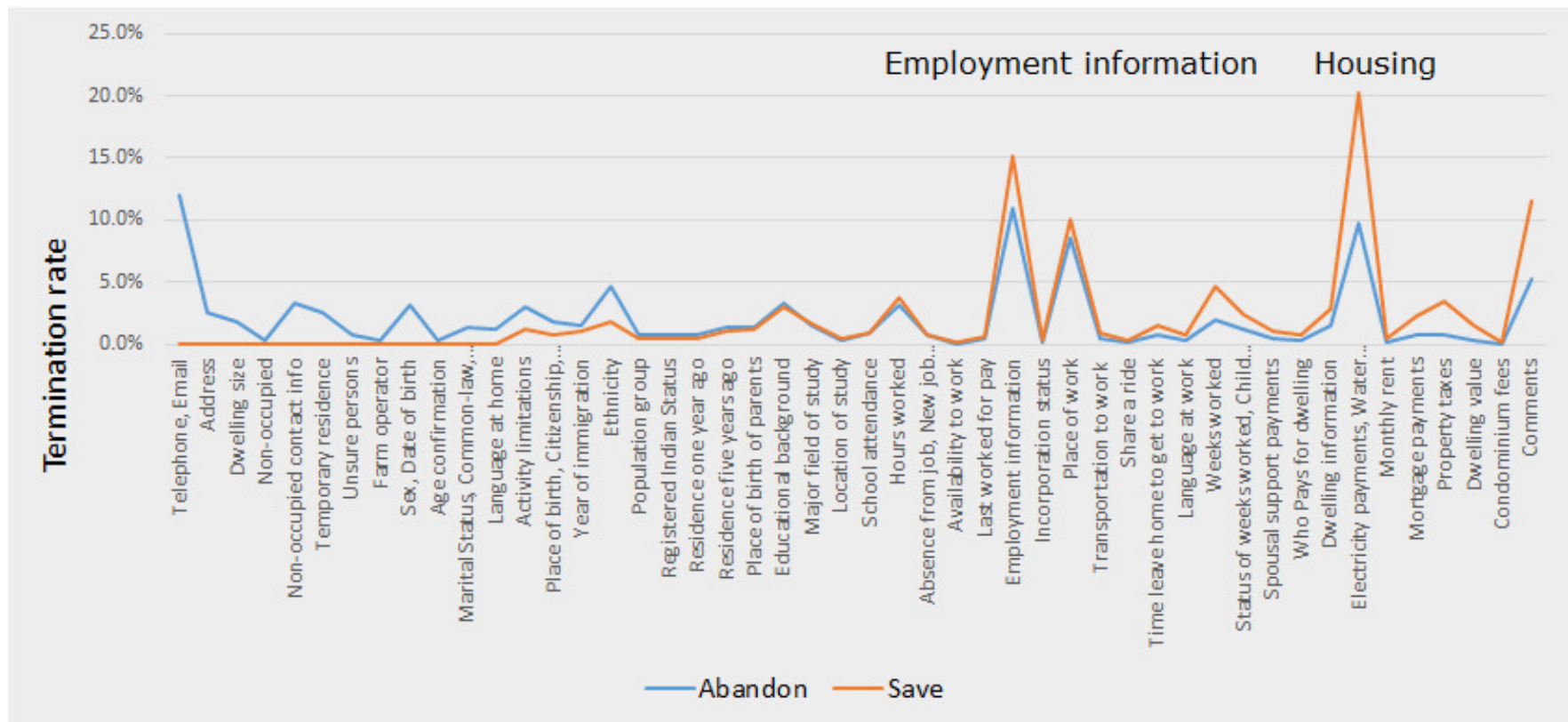
# Patterns of respondent behaviour

Behaviour	Event					Short-form (%)	Long-form (%)
1	Login	Submit				94.1	73.3
2	Login	Abandon	Login	Submit		3.1	4.7
3	Login	Save	Abandon	Login	Submit	N/A	2.8
4	Login	Save	Logout	Login	Submit	N/A	2.8
5	Other patterns					2.8	16.4



# Pages where respondents abandoned or saved (Long-form)

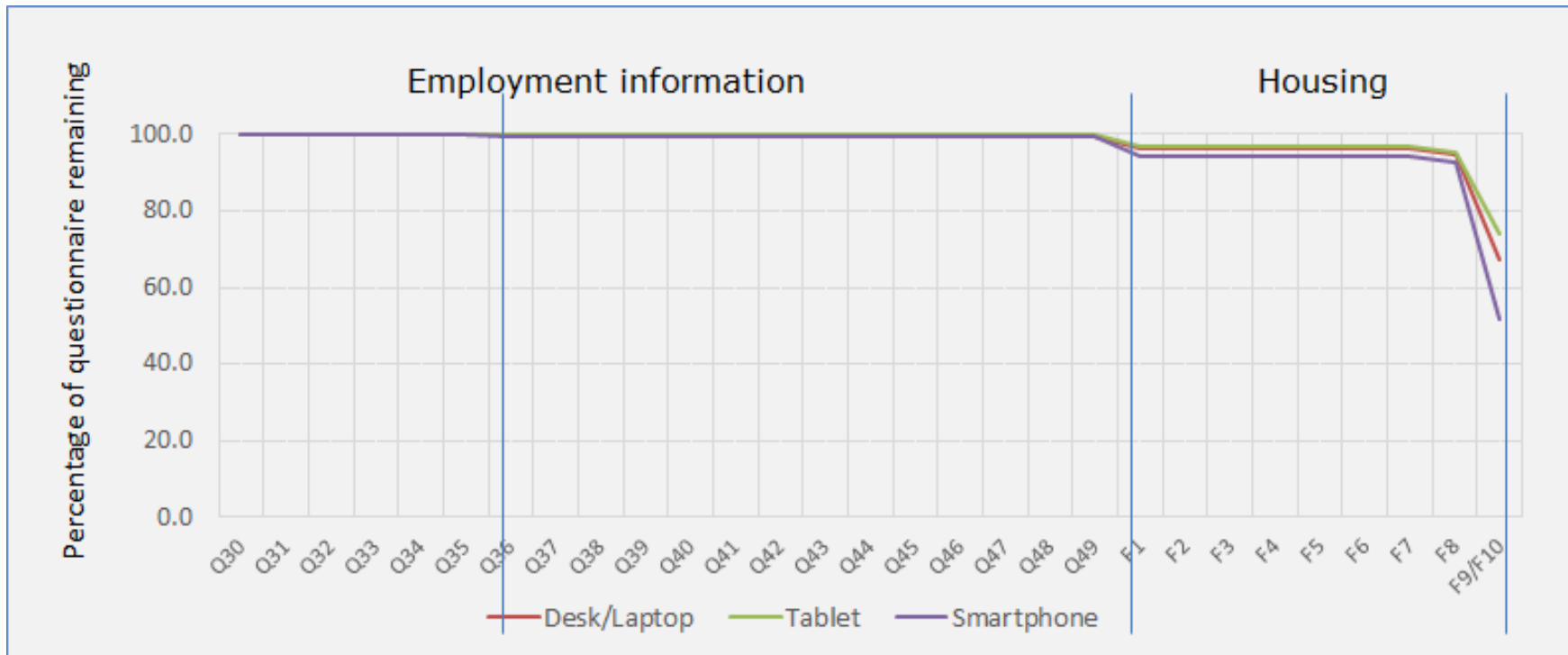
- People most often abandoned or saved the questionnaire when asked about Employment or Housing (bills).





# Survival rate — Last question answered

- Survival rates were not impacted by device type.

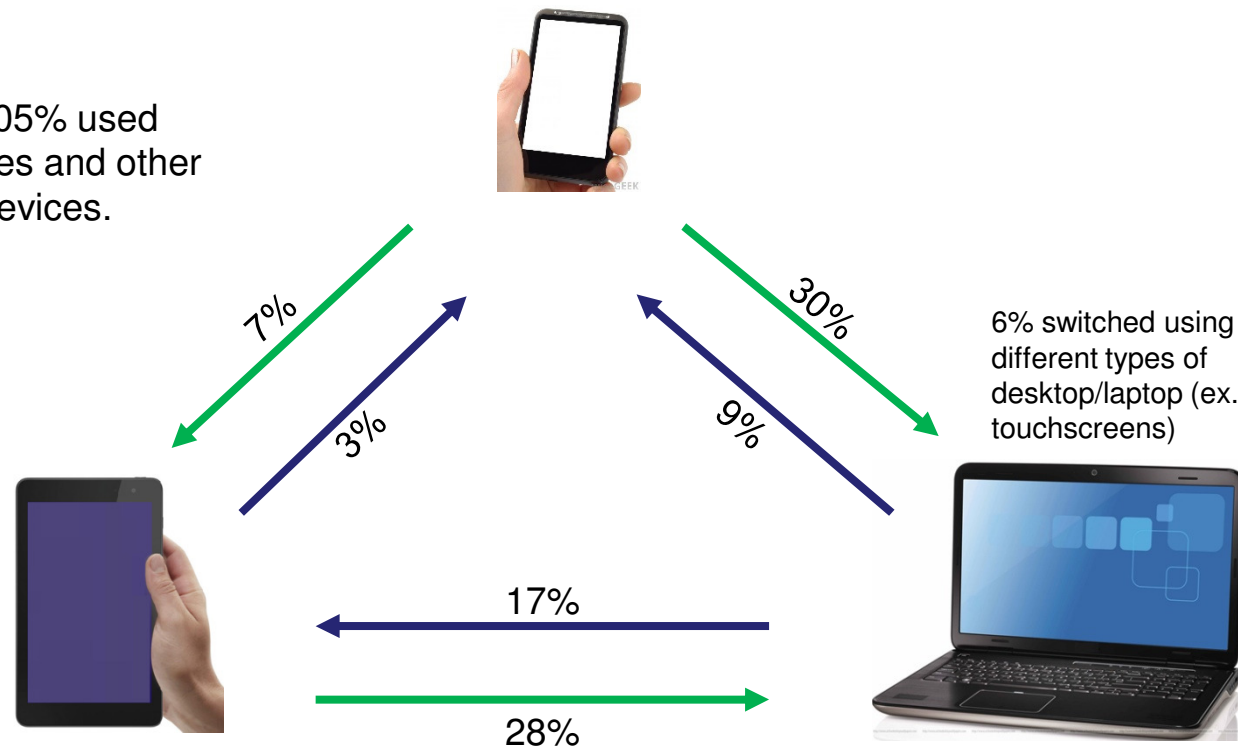


Source: 2016 Data Quality Report on EQ Self-Responding Household, C. Ciceri & L. Roy, Statistics Canada, CSMS

# Switching devices in the long-form 1.51% occurrence

- People were more likely to switch from a smaller device to a larger device.

\*Less than 0.05% used gaming devices and other unidentified devices.





## Average completion time by device

- Completion time was longer when multiple sessions were needed.
- The size of the questionnaire and the size of the household affected completion time.
- No significant difference in completion time between desktop/laptop and tablets.



## Summary of analysis

- Majority of respondents submitted in one session and in a reasonable amount of time.
- Most households submitted using a desktop/laptop.
- Paradata analysis confirms that the census forms function as expected on all devices, including smartphones.



## Future considerations

- Design questionnaires with mobiles in mind.
- Increasing number of online submissions.
- Continue to collect paradata from the 2019 Content Test, in preparation for the 2021 Census.