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2018 Federal CASIC Workshops

Paradata from Canada's 2016 Census of Population Electronic
Questionnaires



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Canada

Content of presentation

- ❑ Overview of Canada's 2016 Census of Population online forms
- ❑ Paradata analysis of online application
 - Device Type Used
 - Profiles of Internet users
 - Respondent Behaviour
 - Patterns of respondent behaviour
 - Switching devices
 - Respondent Burden
 - Completion time
 - Last page of activity
 - Survival rate
 - Edits and Correction Rates
- ❑ Summary and recommendations


Internet submission rate

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



WET - Design for mobile devices

Desktop/Laptop

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

Smartphone

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Example: 1974

Proportion of devices showing Internet submission rate

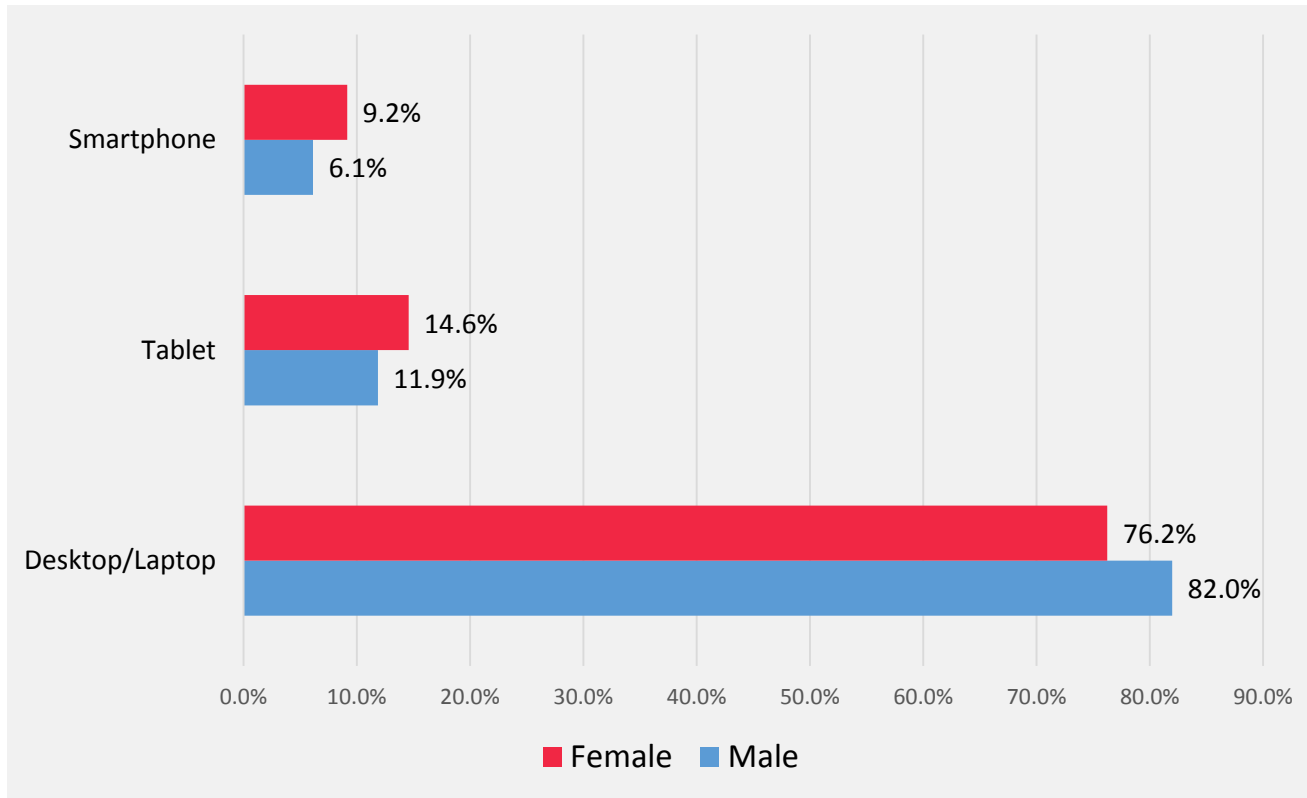
- 20% of Internet submissions were completed on mobile devices.

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%
Total	68.3	100.0



Profile: Device type by Sex

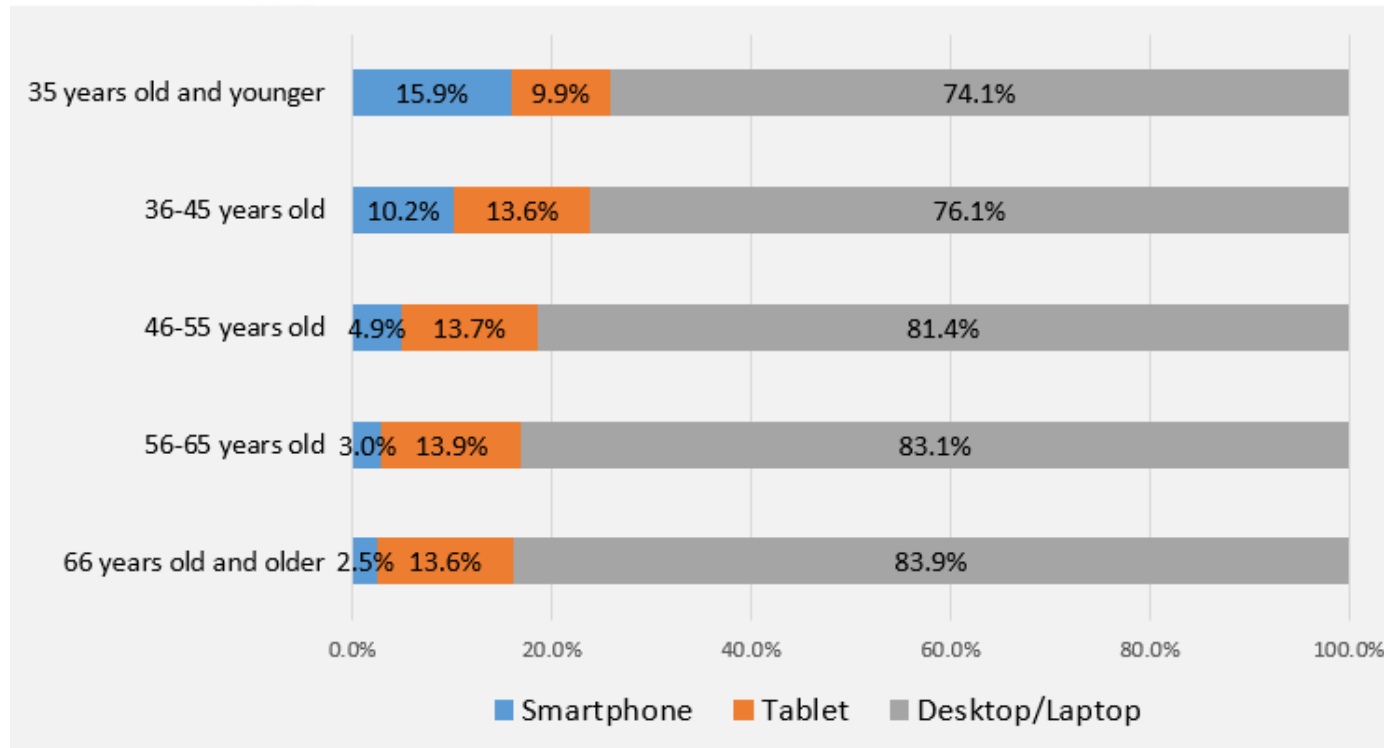
- Women were more likely to use tablets or smartphones than men.





Profile — Device type by Age

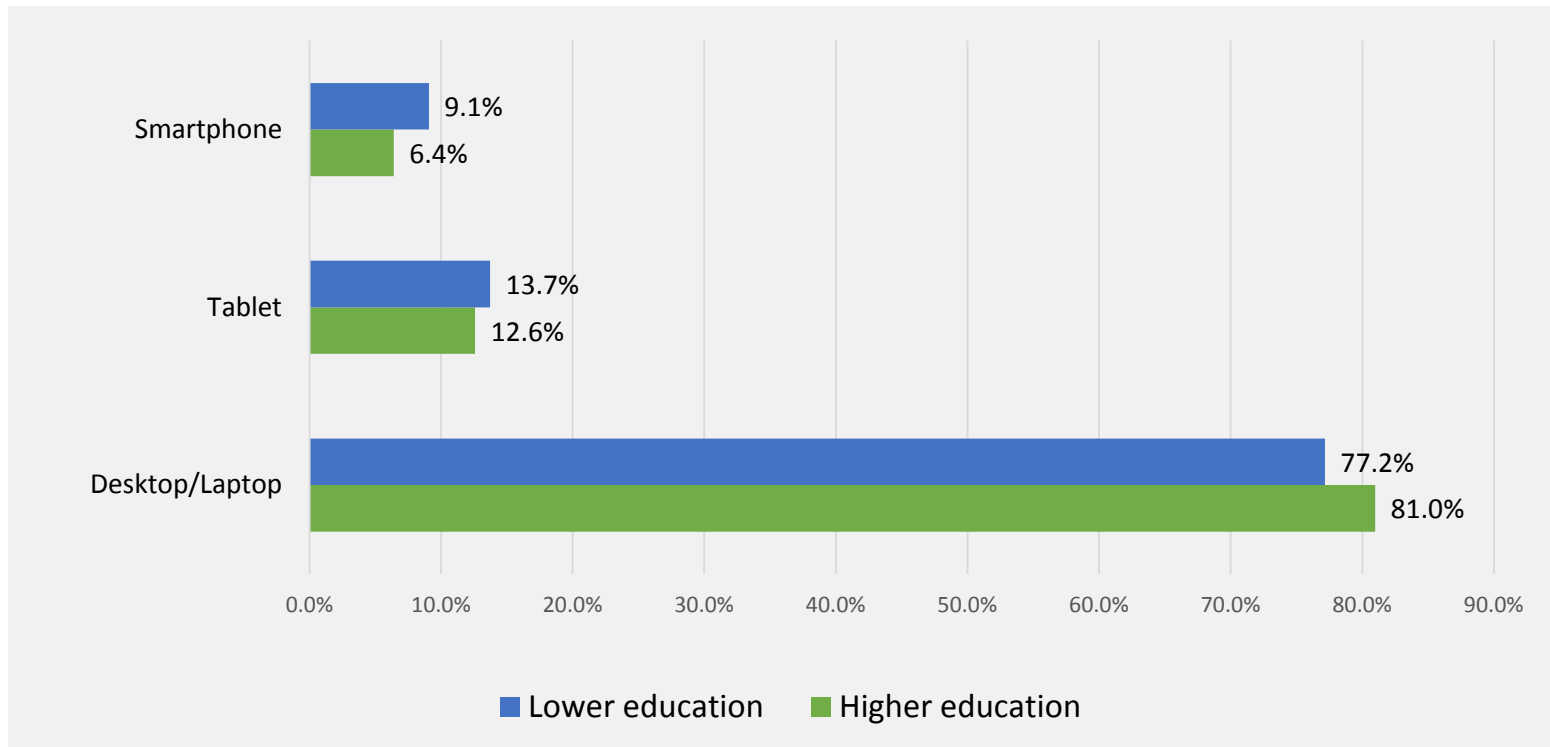
- The younger population were more likely to use smartphones than the older population.





Profile — Device type by Education

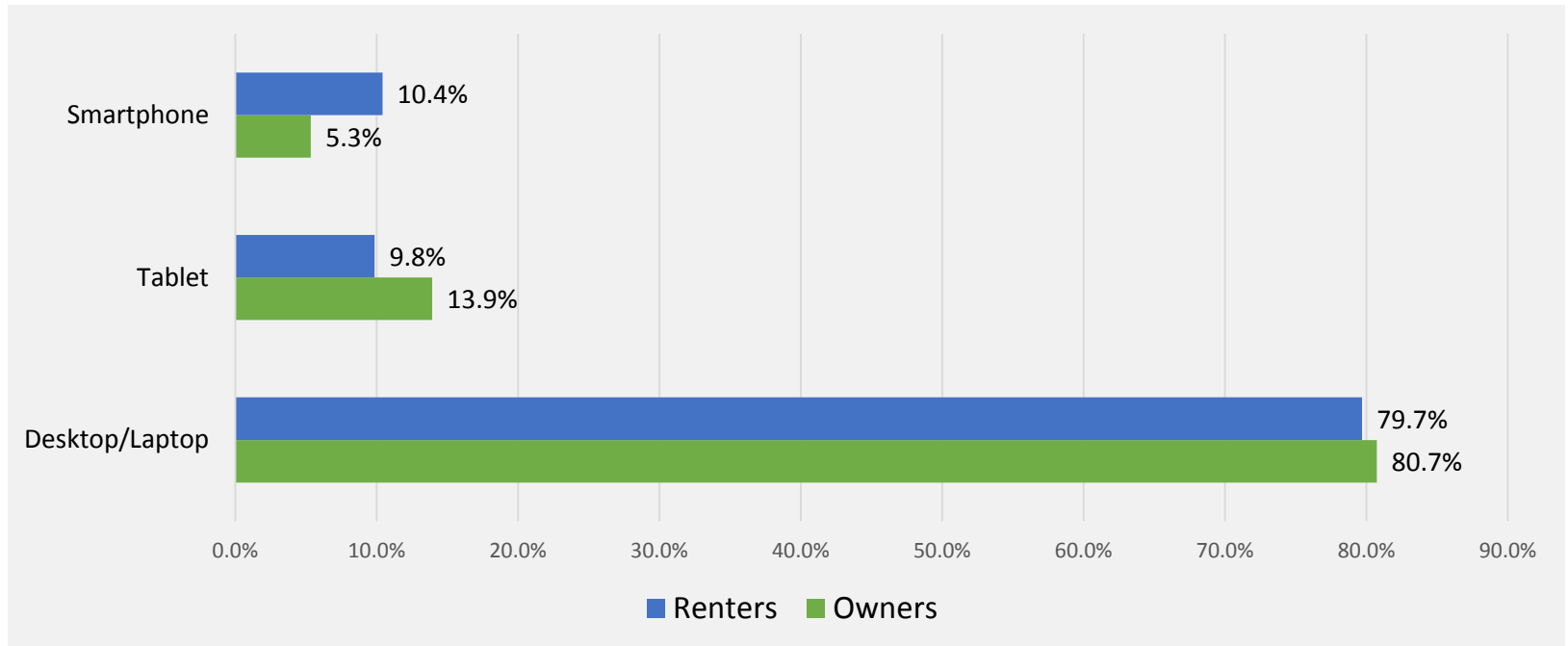
- Smartphones were more popular with people without a high school diploma.





Profile — Device type by Renter/Owner

- Renters were more likely to use smartphones than owners.
- Owners were more likely to use tablets than renters.





Patterns of respondent behaviour

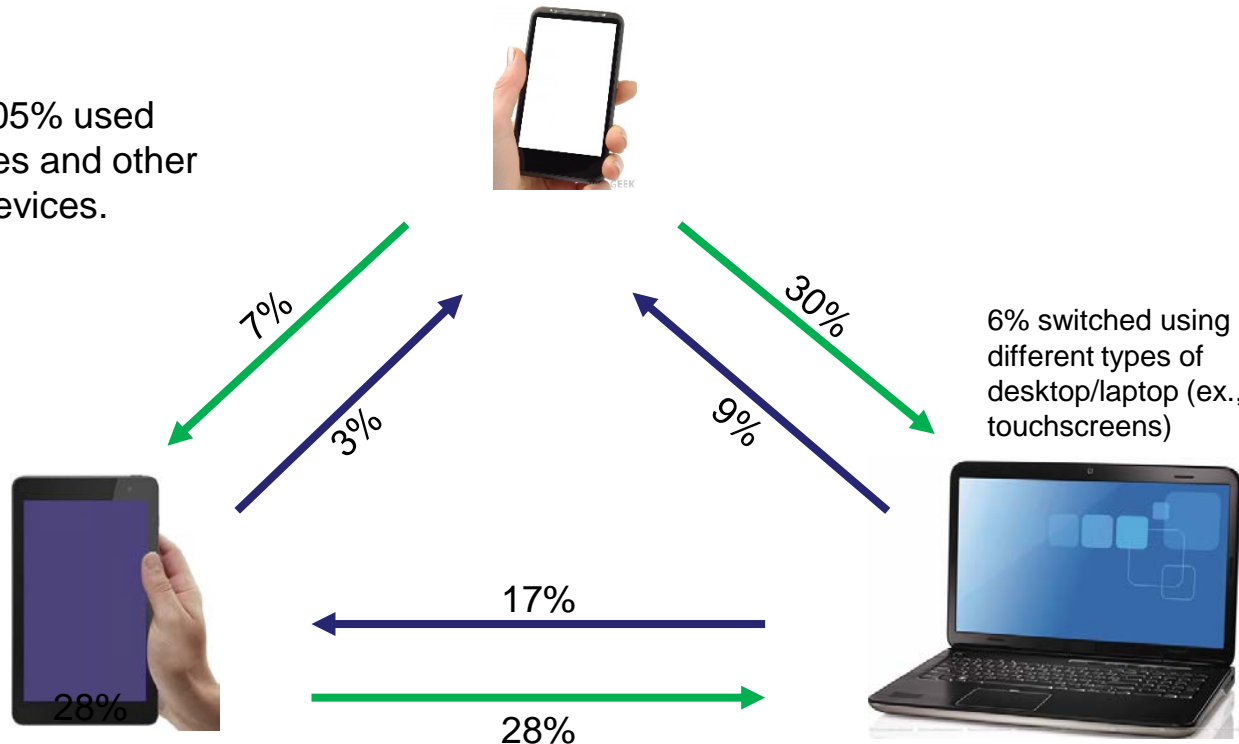
Behaviour	Event					Short form (%)	Long form (%)
1	Login	Submit				95.2	76.6
2	Login	Abandon	Login	Submit		2.7	5.0
3	Login	Save	Abandon	Login	Submit	N/A	3.1
4	Login	Save	Logout	Login	Submit	N/A	3.0
5	Other patterns*					2.1	12.3

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

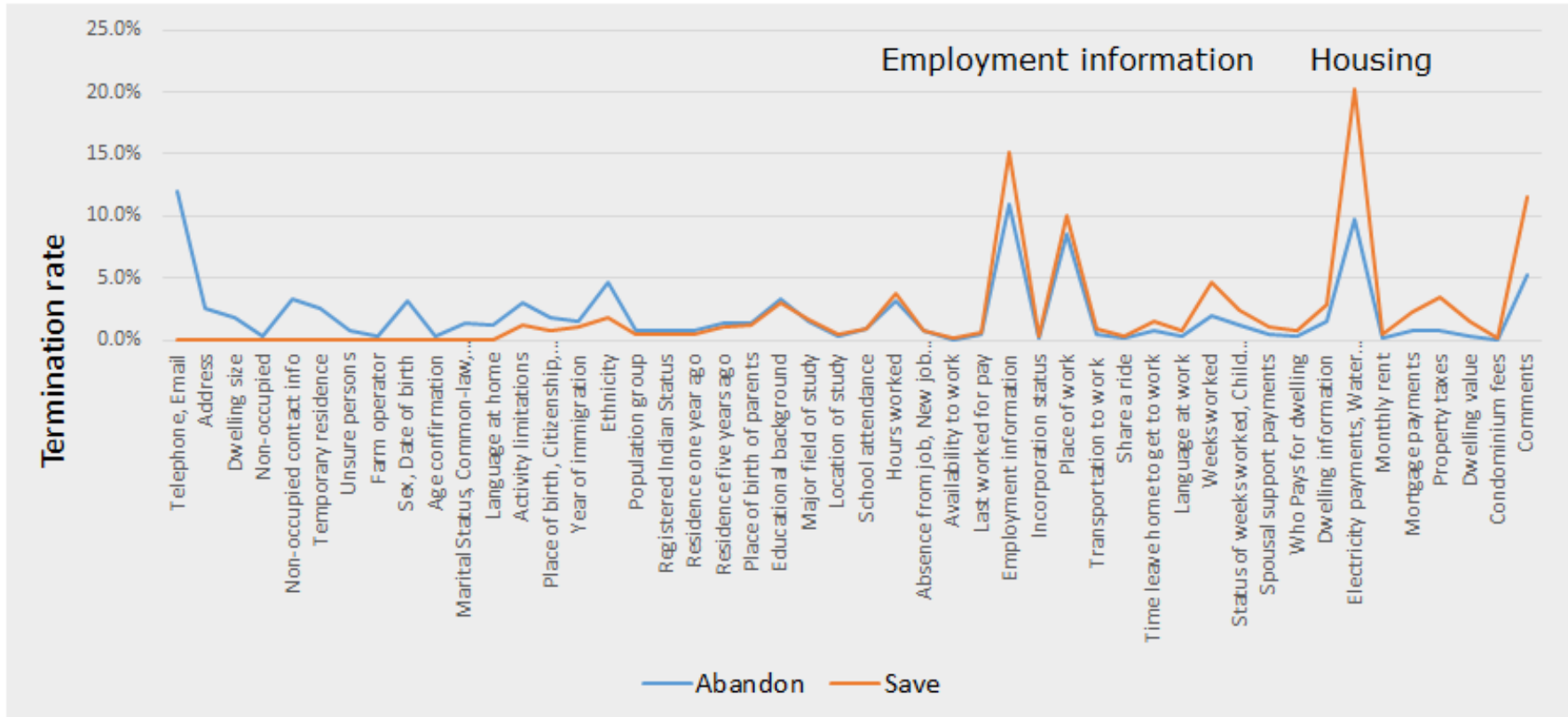
rEQ global average completion time	
EQ Form	Average time
Short	7:56
Long	32:49

Household size	Short form	Long form	
	Submissions (95.2%)	Single-session submissions (76.6%)	Submissions with saves (78.0%)
1	5:30	22:28	22:32
2	7:13	31:33	31:38
3	8:41	37:49	37:59
4	9:19	40:38	40:47
5+	12:40	48:35	48:46



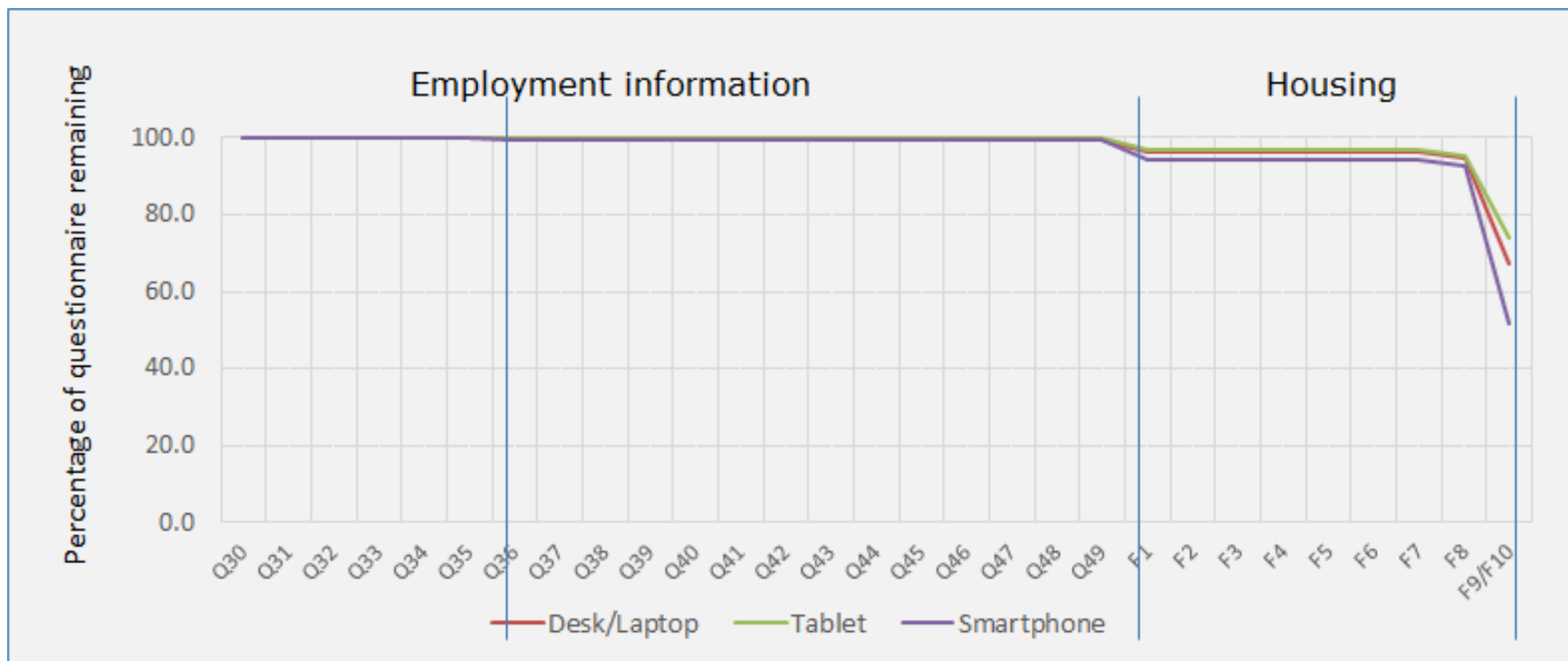
Pages where respondents abandoned or saved (Long-form)

- 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

Features of online form: Edits

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

> **John Smith**

> Please complete question 7 for John Smith.

- English only
- French only
- Both English and French
- Neither English nor French

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

> **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

Edits - Correction and Autocoding Rates

- Edits improved data quality.

Edit correction rate by device type

Device type	Edit correction rate
Desktop/Laptop	94.2%
Tablet	95.2%
Smartphone	94.9%

Auto-coding rate by device type

Device type	Auto-coding rate
Desktop/Laptop	87.8%
Tablet	87.8%
Smartphone	89.5%



Summary and recommendations

- Majority of respondents submitted in one session and in a reasonable amount of time
- Design and test online questionnaires with mobiles in mind
 - 2016 forms performed well across devices
- Increasing number of online submissions
- Paradata is essential for evaluating data quality
 - To better understand respondent behaviour and burden



QUESTIONS?

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