

Using paradata to monitor interviewers' behavior: A case study from a national household survey in Ghana

Comparative Survey Design and Implementation (CSDI) 2016 Workshop

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Overview

- Background and instrument
- How does instrument design affect instrument navigation?
 - Instrument blocks as nodes in a network
- How does interview navigation affect interview length?
 - Order of interview initiation
 - Movements between blocks
- Conclusions & Next Steps



Ghana Socioeconomic Panel Survey

- Yale University and the Institute for Statistical, Social and Economic Research (ISSER) at the University of Ghana
- First wave on paper 2009 2010

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- Sample size of 5009 households, ~ 18000 individuals
- Revisit households at 3-4 year intervals for 20 years











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		Forms Answer Help HOUSEHOLD SURVEY Person Status Enterprise Status Agriculture									
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Most Common Block Moves All Types

Edge Weight >= 500 Movement within sections dominates Exceptions are rosters and Personal to Household





Blaise 4.8 Data Entry - c:\blproj\ghana_p\work\householdsurvey

Forms Answer Help

HOUSEHOLD SURVEY Person Status Enterprise Status Agriculture

Name	Background	Employment	Education	Migration	Health	Womens Hea	Ith Mens Health	Children	Pysch/Social
ADAM K (AK)	Started	Done	Done	Done	Started	n/a	Not Started	n/a	Not Started
AMINA A (MINA)	Not Started	n/a	n/a	Not Started					
ABDUL A	Not Started	n/a	Not Started	n/a	Not Started				
TANLIDOW A	Not Started	n/a	n/a	Not Started	n/a				
YUSSIF A	Done	n/a	Not Started	n/a	Not Started	n/a	n/a	Not Started	n/a
LAILATU A	Done	n/a	n/a	n/a	Not Started	n/a	n/a	Not Started	n/a

Most Common Block Moves All Types

Tendency to move laterally or within the same questionnaire content Optional sections introduce multiple, common paths 



Most Common Block Moves All Types

Tendency to work down the columns

Non-resident Relatives and Consumption introduce multiple common paths





Moving Out of a Section

Type 4 interviews showing moves out of the Enterprise section "fourImportant" block has most exit moves No cues to influence where to go after finishing a section



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N = 4223 interviews

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- Type 1) Personal + Household
- Type 2) Personal + Household + Plot

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- Type 3) Personal + Household + Enterprise
- Type 4) Personal + Household + Plot + Enterprise

Interview Length

- Adjusted mean 290 (+/- 156) minutes
- Ranged from ~30 minutes to 22 hours
- Type 4 longer than all others (P<0.05)
- Type 1 shorter than all others (P<0.05)
- Type 2 & 3 not different



Rosters-first group showed significantly lower interview lengths

- Ave Roster First: 257.3 ٠
- Ave Others: 280.3 ٠
- P < .0001 ٠



T-test comparison of IW • length

Order of Section Entry

- Split sample into two groups: ٠
 - Completed rosters first

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- Others



Distribution of IW_LENGTH_MIN_ADJ



Number of Block Moves Per Block

- On a per household basis
- Number of Block Entries / Total Number of Available Blocks
- Minimum of 1.0 indicates every section completed when started
- No upper bound (observed = 2.39)



Number of Block Moves Per Block by Interview Type

Differences by Interview Type

- Less movement in Type 2 (Plot only, P<.05)
- Type 3 (Enterprise only) more movement than Type 1/2 (P < 0.05), trending toward more than Type 4



Interview Length & Number Block Moves Per Block

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- Interview length increases with increasing movement between blocks
- IW Length = 80.6 * MovesPerBlock
 + 216
- P = .028; R² = 0.302; Adj R² = 0.255
- Non-linear relationship?







Interview Length & Number of Block Moves Per Section

Number interviews ranges from N = 1277 to 2 Interviews are clustered under 1.5 Block Moves Per Section



Interview Length & Number Block Moves Per Block By Type



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Conclusions & Next Steps

- Design cues apparent with high degree of noise
- Lack of between-section cues apparent
- Initial order important

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- Design cues affect the interview process
- Movement between blocks are with a cost
- Refine and compare



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- University of Michigan

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End

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Most Connected Vertices

Greater than 30 connections where maximum is 40



30 or more connections

15 or fewer connections







Edge Properties		Vertex Properties			
1	9789	1999	23362		
Edge Weight	Width	Number of Moves In	Size		

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