



Using paradata to monitor iwers' instrument navigation behavior and inform instrument technical design

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Challenges for Conducting Large CAI Social Survey

- Selected challenges among many others...

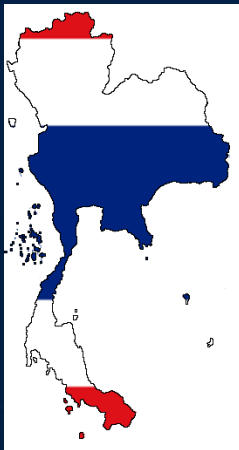
- **Complex questionnaire designs (large grids, skips, etc..)**
- More question fills (greater complexity with multiple languages)
- Long interview length
- Field/Remote management, supports, and monitoring
- Large number of staff and interviewers
- Dynamic interview environment
- Multiple respondents
- Cultural awareness or sensitivity
- Group/Team interviews
- Conversational interviewing techniques
- Consistency of interviewer training





Two studies

- Both studies collaborated with Survey Research Center in its wave 2
- Transition from PAPI to CAPI



Study Design	Ghana Socioeconomic Panel Study (Ghana) wave 2	Evolution of Health, Aging, and Retirement in Thailand (HART) wave 2
Sample size	~5500 HHs	~5600 HHs
Mode	FtF	FtF
Iwer-administered?	Iwer-administered	Iwer-administered
Allow proxy IW?	Yes	Yes (only allowed for non-assessment questions)
# of Rs per HH to be interviewed	All HH members	Up to 2 Rs (45 yrs or older)
# of sections to be administered	2 to 4 sections (household, personal, agriculture, enterprise)	Only 1 “person” section
Offer payments to R?	Yes	Yes
Collaborator(s)	Yale University University of Ghana	National Institute of Development Administration



Challenges from PAPI to CAI



Transition

Transition from **complex grid designs** on paper to a **computer assisted interview (CAI)** instrument

Flexibility

Need to have total flexibility to **jump in/out from different sections** of the instrument (depending on the availability of the respondents)

Real-time

Need to track **real-time status** of interviewing progress on multiple respondents within the same instrument.





PAPI to CAI Design Comparisons

- PAPI examples
- Instrument designs
- Instrument “technical” designs



Example: Paper version of household roster

Up to 25 HH



Section 1: Household Information

Part B2: Household Roster

Part B2: Household Roster

Member ID	6a. Name	6b. Nicknames, Other Names	7. Sex (M/F)	8. Age (If age less <1, record 0)	9. Relationship to HH Head (see codes to the right of the page)	10. Marital Status (see codes)	11. Current Cell Phone Number	<u>CODES FOR Q.9</u> 1 – Household Head 2 – Spouse 3 – Child 4 – Grandchild 5 – Parent/ Parent-in-law 6 – Son/Daughter-in-law 7 – Other relative 8 – Adopted/Foster/ Stepchild 9 – House help 10 – Non-relative <u>CODES FOR Q.10</u> 1 – Never Married 2 – Consensual union 3 – Betrothed 4 – Married 5 – Separated 6 – Divorced 7 – Widowed
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Household Roster

4

6



Example: Checklist of completed modules



Checklist of Completed Modules

(i) *Household Specific Modules*: Enumerator: for each of the following sections, please ask the head and spouse which person in the household would be the most knowledgeable about questions regarding these issues. Please schedule an interview date with such members of the household. Record your initials and date when the interview was completed.

Section	2. members of the HH	3. HH assets	4. HH production	5. non-farm enterprise	11. consumption module	12. Housing Characteristics
1. Who in the household is most knowledgeable about?	family history, relatives and spouses that don't live in household	land holdings, farm tools, animals, financial assets, household durables	plots, crops, interaction with village officials/ organizations	non-farm business ventures, costs, revenues, employees, assets	how much food the family eats, household bills	Housing Characteristics and property
2. Name	_____	_____	_____	_____	_____	_____
3. ID number	ID ____	ID ____	ID ____	ID ____	ID ____	ID ____
4. Date & time for Individual Interview: dd.mm / time	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
5. Checkpoint: Interview Complete? 1. Yes 2. No Initials and date when the interview was completed	____ ____	____ ____	____ ____	____ ____	____ ____	____ ____

(ii.) *Limited respondent Modules* Enumerator: each of the following sections must be asked to the head of the household, the spouse, and one person RANDOMLY chosen. Please schedule an interview date with these selected household members. Record your initials date and when the interview was completed.

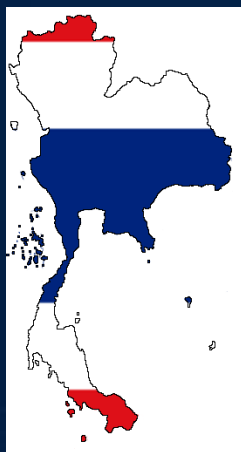
1. Write the names on pieces of papers for the household head to select:

Section 10. Psych/Personality	Head	Spouse	Randomly chosen individual
6. ID number	ID ____	ID ____	ID ____
7. Name	_____	_____	_____
8. Date & time for Individual Interview : dd.mm/time	____/____/____	____/____/____	____/____/____
9. Checkpoint: Section 10, Psychology/Personality complete? 1. Yes 2. No Initials and date when the interview was completed	____ ____	____ ____	____ ____

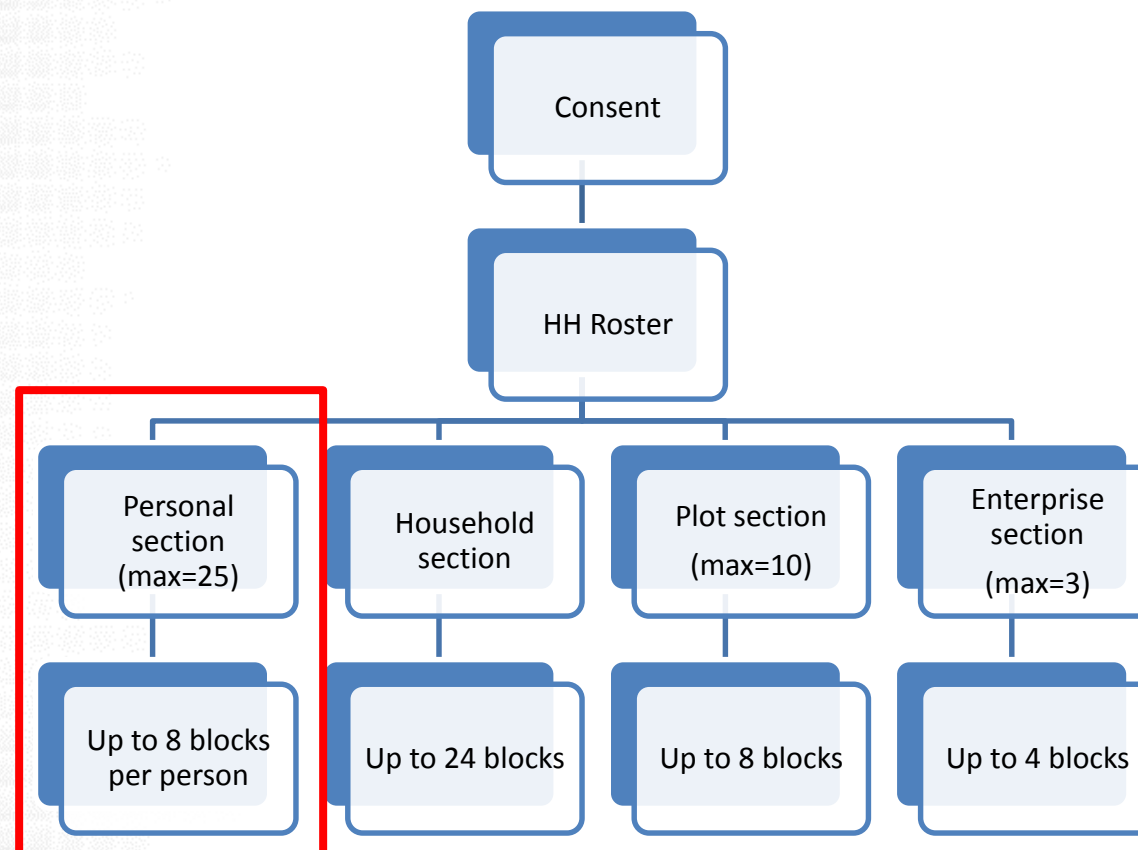


Instrument design

Each section has multiple blocks

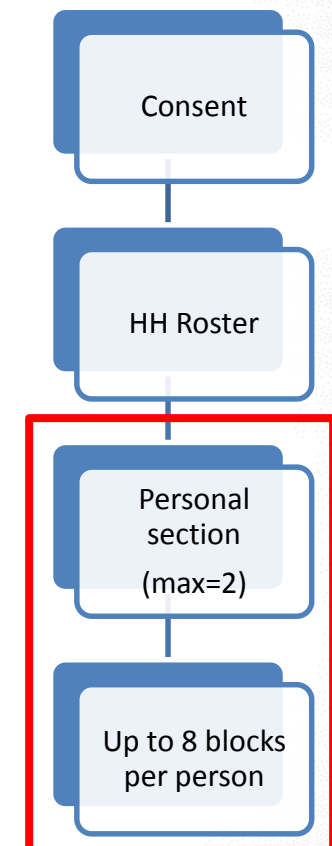


Ghana



Up to 4 sections per HH

HART



Only 1 section per HH



Instrument “technical” design 1

- Up to 4 sections
- All HH members, up to 10 plots, 3 businesses



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 Health	Mens Health	Children	Pysch/Social
ADAM K (AK)	Started	Done	Done	Done	Started	---n/a---	Not Started	---n/a---	Not Started
AMINA A (MNA)	Not Started	Not Started	Not Started	Not Started	Not Started	Not Started	---n/a---	---n/a---	Not Started
ABDUL A	Not Started	Not Started	Not Started	Not Started	Not Started	---n/a---	Not Started	---n/a---	Not Started
TANLIDOW A	Not Started	Not Started	Not Started	Not Started	Not Started	---n/a---	---n/a---	Not Started	---n/a---
YUSUF 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---

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

Forms Answer Help

HOUSEHOLD SURVEY Person Status Enterprise Status Agriculture

Survey Status

S0Consent Forms

S01A: Consent	Done	S01B3: Consent for Under 26	Done
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Rosters

S01B2: Household Roster	Done	Person Sections	Started
S04: Plot Roster	Done	Plot Sections	Done
S05: Non-Farm Enterprise Roster	Done	Non-Farm Enterprise Sections	Not Started

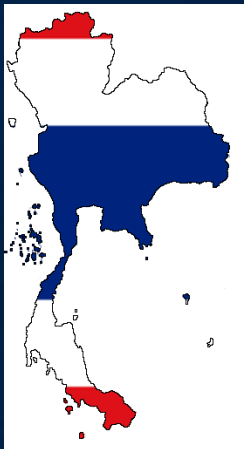
Household Level Sections

S02B: Non-Resident Spouses	Not Started	S03Ai: Animals	Done
S02A: Non-Resident Relatives	Not Started	S03Aii: Tools	Started
S10C: Social Networking	Started	S03Aiii: Durable Goods	Started
S10D: Information Seeking	Done	S03Bi: Borrowing	Not Started
S11: Household Consumption	Not Started	S03Bii: Lending	Done
S12: Housing Characteristics	Not Started	S03Biii: Out-Transfers	---n/a---
S04NN: Gathering	Done	S03Biv: In-Transfers	---n/a---
		S03Bv: Savings	Done



Instrument “technical” design 2

- Up to 2 Rs (>90% HHs have single R)



HOUSEHOLD ROSTER Done

Sections	Respondent 1 (R1)	Spouse (R2)
Coverscreen	<u>Done</u>	<u>Not Started</u>
A. Demographics	<u>Done</u>	<u>Not Started</u>
B. Family Transfer	<u>Started</u>	<u>Not Started</u>
C. Health	<u>Not Started</u>	<u>Not Started</u>
D. Employment	<u>Not Started</u>	<u>Not Started</u>
E. Income	<u>Not Started</u>	<u>Not Started</u>
F. Assets & Debts	<u>Not Started</u>	<u>Not Started</u>
G. Life Satisfaction	<u>Not Started</u>	<u>Not Started</u>



“Benefits” of this design

Expectations



High-level of autonomy

Interviewers are able to

- Jump to any section/block quickly
- Switch respondents easily

Master dashboard

show the **interview status**

- All questionnaire sections/blocks
- All respondents

Programming

The parallel blocks programming needs to match with the **optimal navigation design**

Training

The interviewer training needs to **emphasize the design and avoid “jump around too much”**



How does instrument design affect instrument navigation?

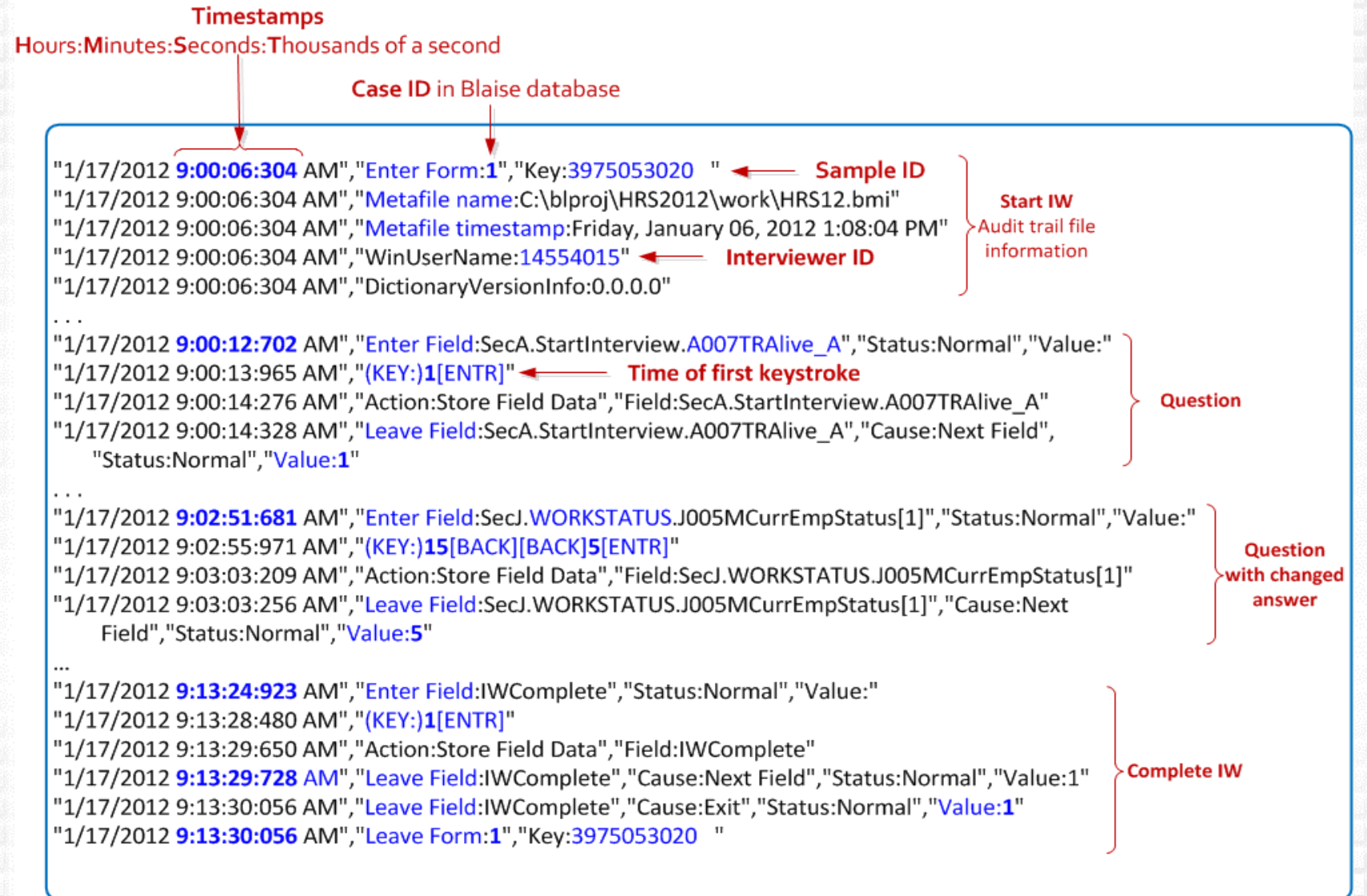
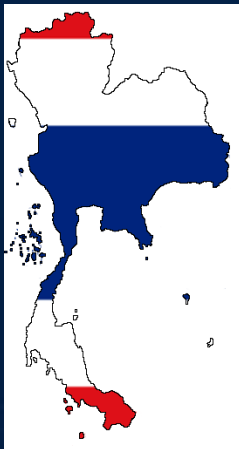
Sections w/ parallel blocks –

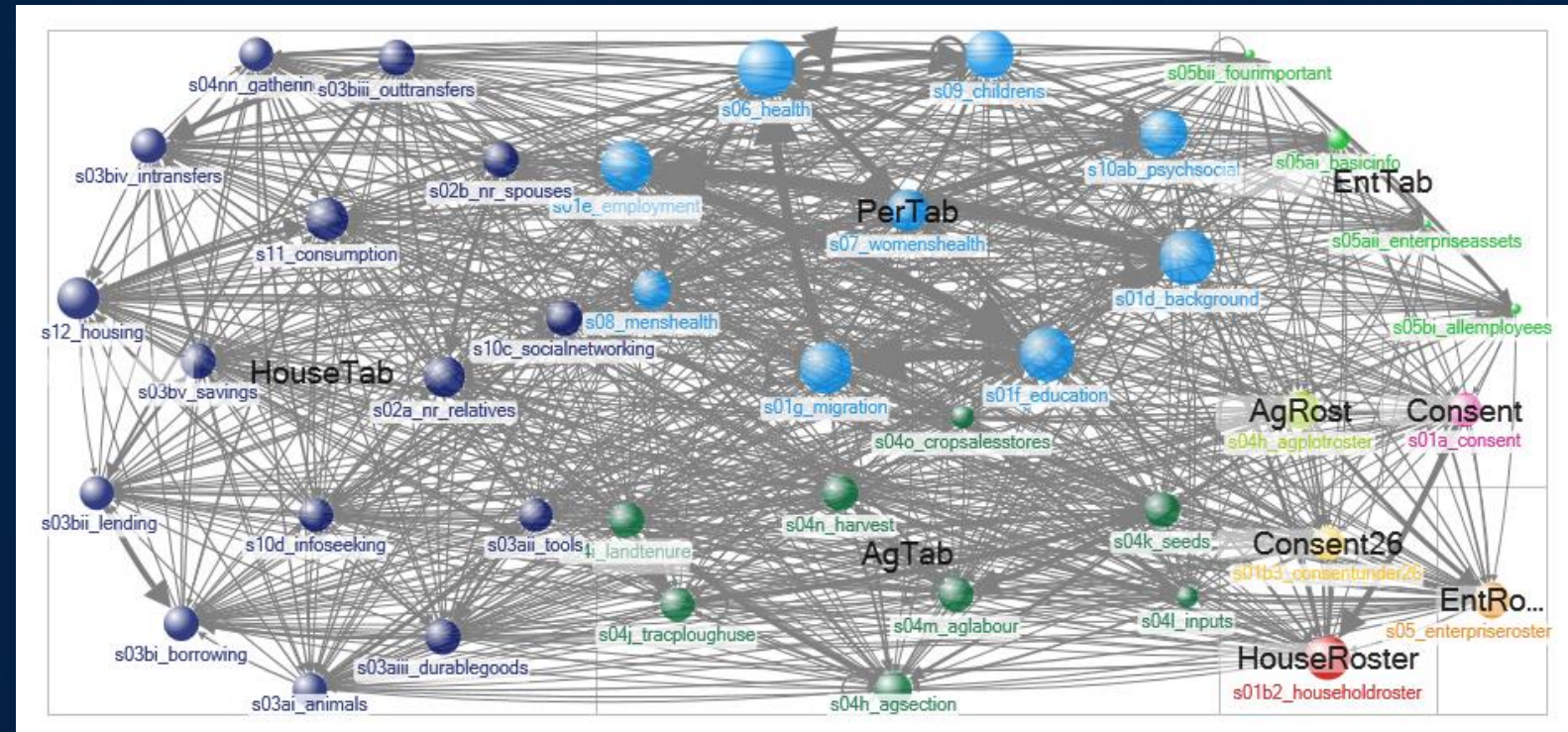
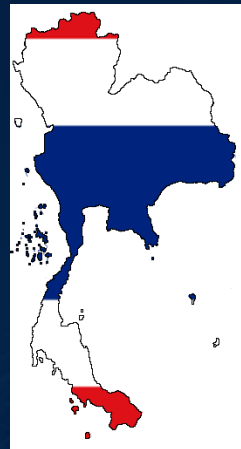
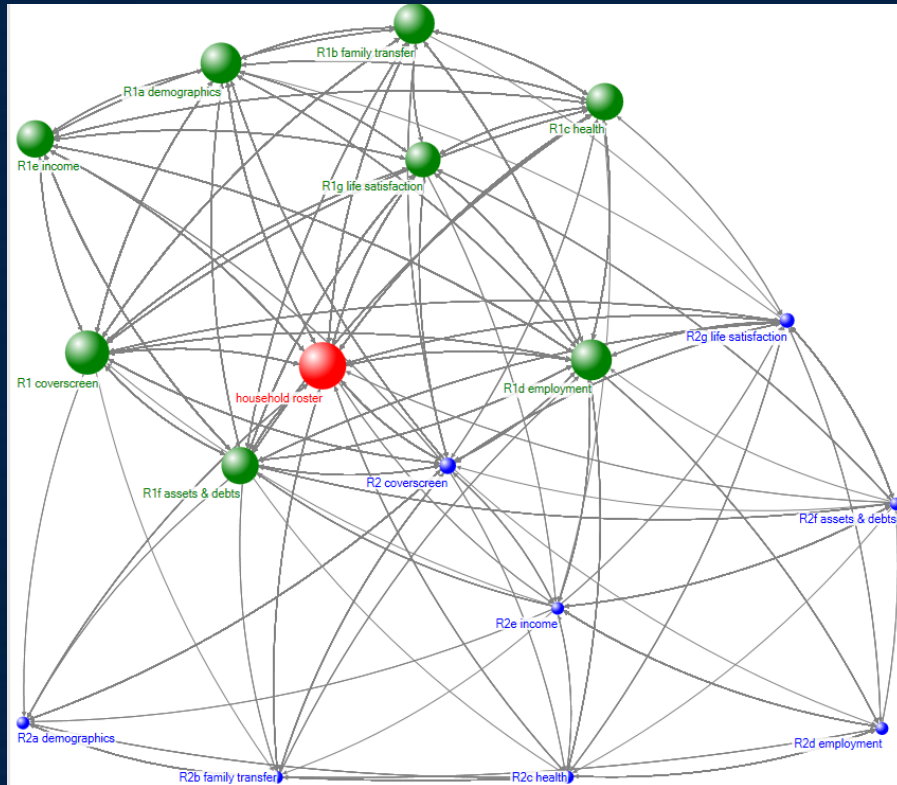
Network analysis using NodeXL ([link](#))



Data source

- Audit trail (ADT) with keystrokes (from Blaise software)
- Ghana: 4,223 Iws
- Thailand: 4,382 Iws

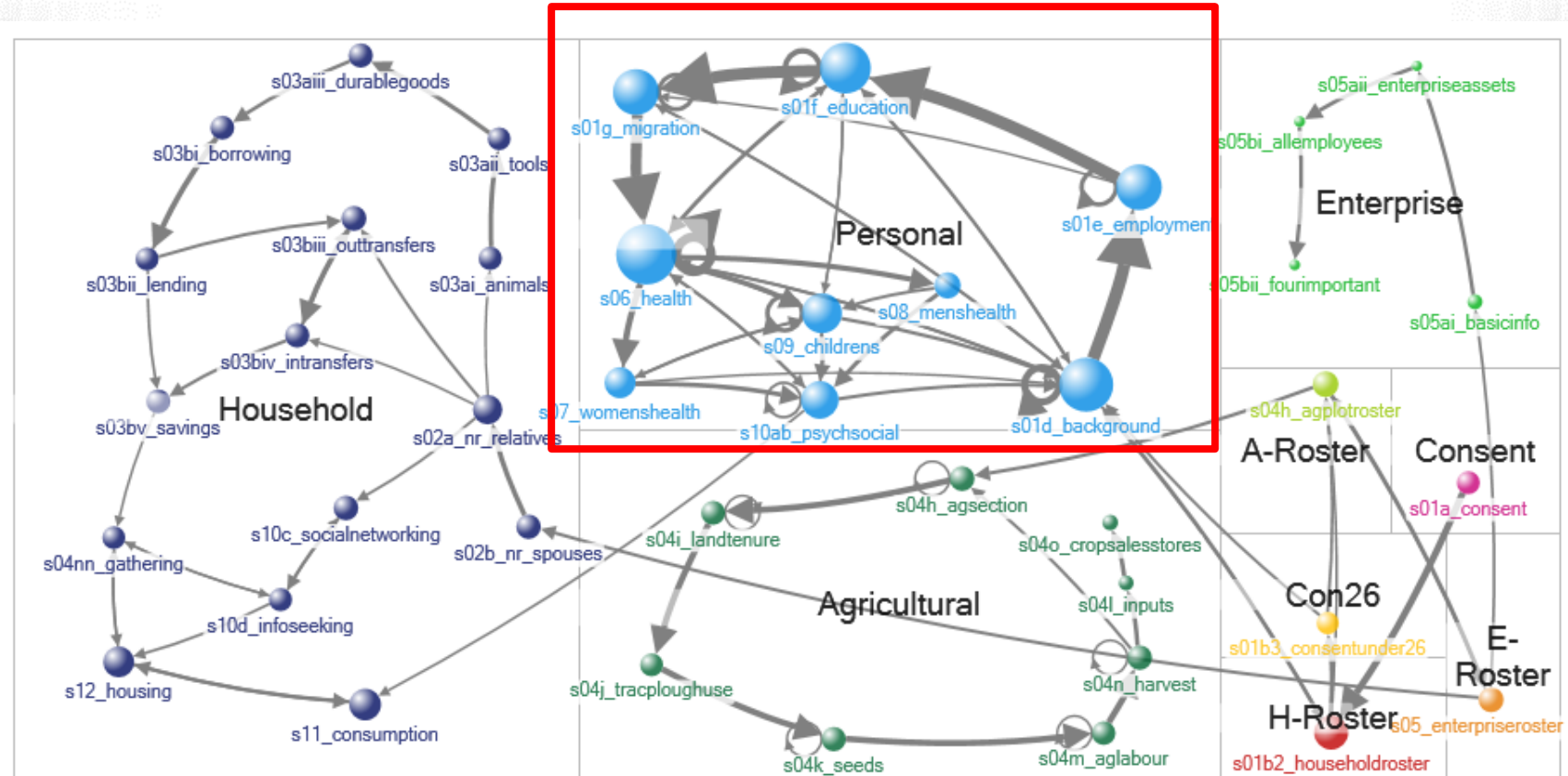






Movement within same sections dominates

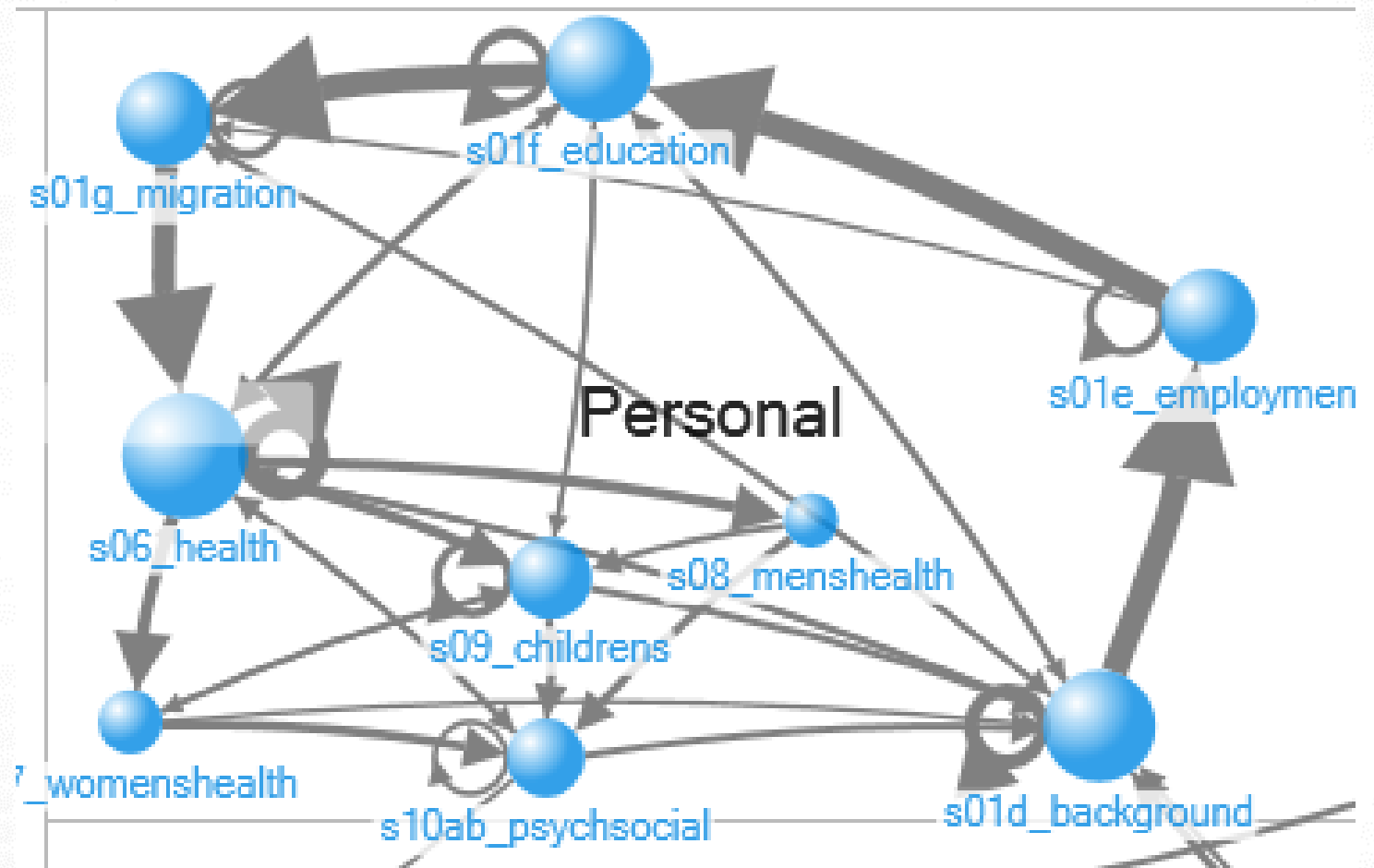
- exceptions are rosters and Personal to Household





Mixed tendencies

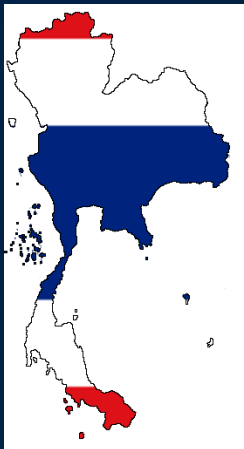
- switch different questionnaire contents
- or
- keep the same questionnaire content



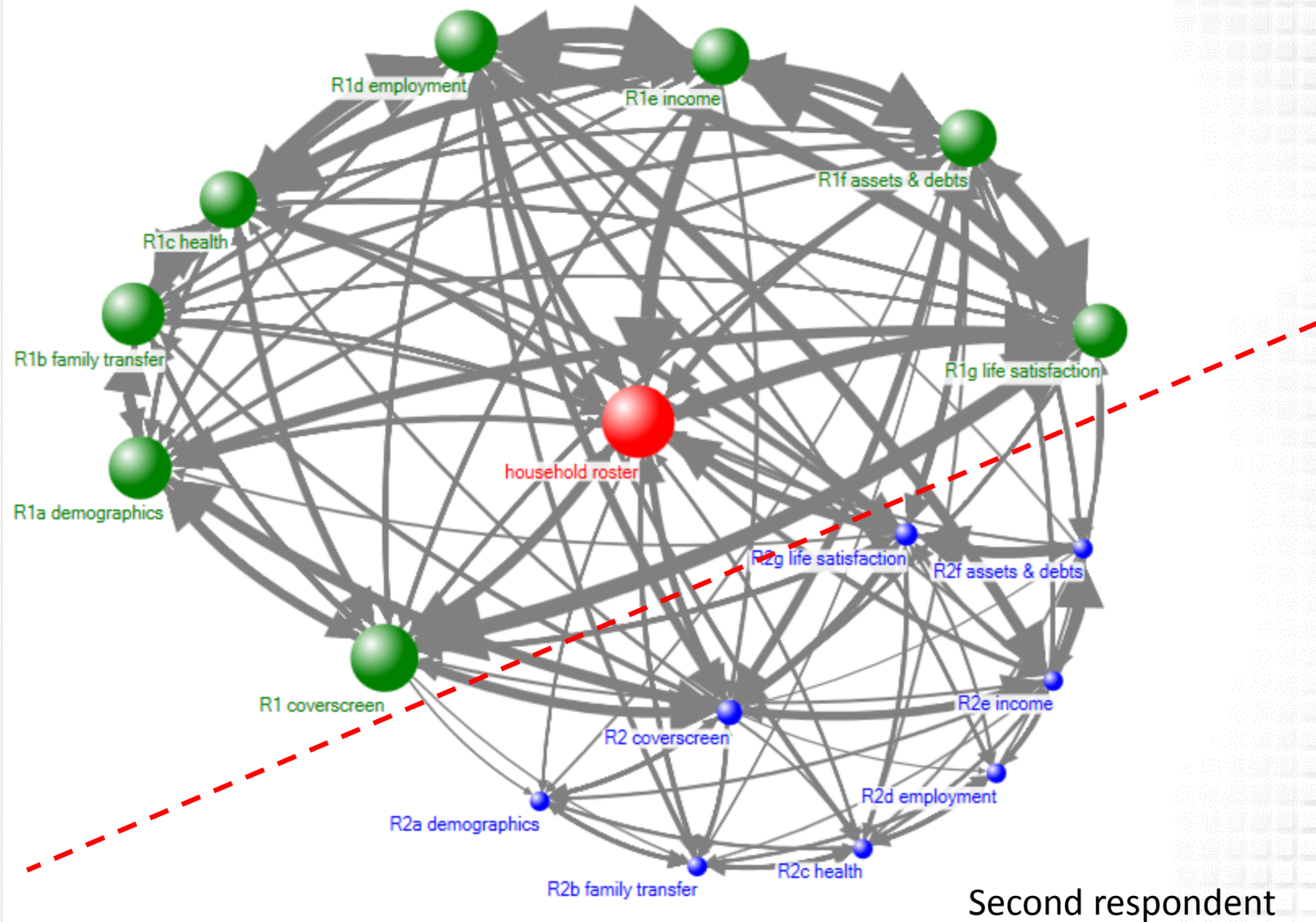


Movement within the same R dominates

- >90% HHs have single R



First respondent





Preliminary lessons learned & observations

- Considerations:
differences by location,
HH type, HH size,
leadership, question
type, etc.



Proxy interviews vs. Question types

Proxy is allowed to **complete multiple personal IWs** in Ghana

Proxy is **not allowed to perform cognitive testing or answer opinion questions** so can potentially cause switching questionnaire contents (blocks) in Thailand

Unclear purposes of frequent switches among questionnaire contents (blocks) in Thailand

It is not clear why Thailand Iwers switch back and forth among **different questionnaire contents (blocks)**

The less complex sample design in Thailand reduces the chance to switch Rs

Most HHs have only one IW in Thailand and the sample design limits the possibility to switch Rs



Next steps

- Mixed methods including focus group, in-depth paradata analysis, etc.



Confirm the ‘action outcome’ of switching

Users possibly can **enter, update, or review answers** when they switch Rs or questionnaire contents; controlling action outcomes can bring more insights on the current network analysis

Estimate impacts by choosing the optimal (or the most common) path

Further estimates on differences of **selected qc indicators** by different path groups

- the previous study (Ghana) has considered IW length, response change, item-nonresponse rate, etc.

Identify optional sections that can introduce multiple or common paths.

For example:

- specific sample designs on “financial R” vs. “Family R” in Thailand
- additional specific female R blocks in Ghana



Acknowledgements

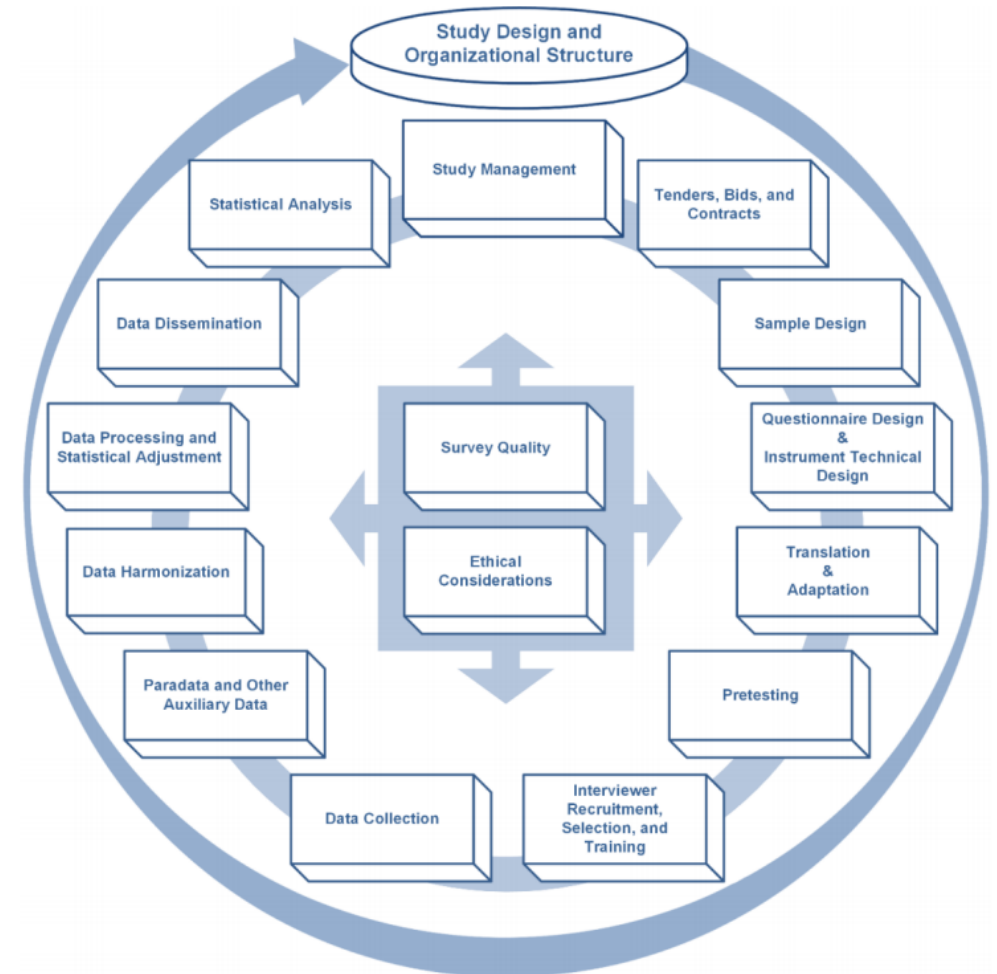
- Contributors from Yale University, Institute for Statistical, Social and Economic Research (ISSER) at the University of Ghana, Evolution of Health, Aging, and Retirement in Thailand
- Project staff: Gina-Qian Cheung, Kyle S. Kwaiser , Joel Devonshire, Zeina Mneimneh, Beth-Ellen Pennell, Jennie Williams, Lisa Wood, Xuetao (Brant) Zhang
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Cross-cultural Survey Guidelines (<http://ccsg.isr.umich.edu/>)

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감사합니다 Natick
Grazie Danke Ευχαριστίες Dalu
Thank You Köszönöm
Спасибо Dank Tack
谢谢 Merci Seé
Obrigado
ありがとう





Ghana Socioeconomic Panel Study

- Sponsored by Economic Growth Center (EGC) at Yale University
- Carried out by the Institute for Statistical, Social and Economic Research (ISSER) at the University of Ghana.
- Collaborated with Survey Research Center (SRC) at University of Michigan in wave 2

20 years plan

Revisit panel households at 3-4 year intervals for 20 years

Wave 2: CAPI

9 months in field (2014/03 – 2014/12);

6 month tracking (2015/01 – 2015/06);

additional ~500 split-off hhs were tracked and interviewed, with approximately >20,000 individuals

Wave 1: PAPI

5 months in field (2009/10 – 2010/02);

national representative sample: 5009 hhs, with approximately 18,000 individuals

No recording/ Use paradata

Interviews are **NOT** digital recorded for quality monitor purpose



Evolution of Health, Aging, and Retirement in Thailand

- Sponsored by Research Center at National Institute of Development Administration (NIDA)
- Carried out by multiple partner universities and private survey firms
- Collaborated with Survey Research Center (SRC) at University of Michigan in wave 2

3 waves plan

Revisit panel households at 2-3 year intervals for at least 3 waves;

wave 2 added high income hhs, and wave 1 respondent's spouse

Wave 2: CAPI

In field in 2016;

only ~4400 of original baseline hhs were tracked and interviewed successfully

Wave 1: PAPI

In field in 2014-2015;

one hh member aged 45 yrs or above and his/her spouse were selected in each of 5600 HHs

No recording/ Use paradata

Interviews are **NOT** digital recorded for quality monitor purpose