Methodological Experiment on Measuring Asset Ownership from a Gender Perspective (MEXA)
An EDGE-LSMS-UBOS Collaboration

TALIP KILIC

Senior Economist

Living Standards Measurement Study Team

Development Research Group, The World Bank

tkilic@worldbank.org

Objectives

- Assess the effects of different approaches to respondent selection in household surveys on measuring individual ownership of & rights to assets

- Support the design of 9 pilot surveys that will be implemented throughout 2015 with support from the UN Evidence and Data for Gender Equality (EDGE) initiative

- Inform the UN EDGE guidelines on measurement of individual ownership of & rights to assets
  - To be submitted to the UN Statistical Commission for adoption in 2017

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Key Questions

- Are we doing enough to capture individual asset ownership patterns by only interviewing the self-identified most knowledgeable household member in household surveys?

- Do females provide different information on their asset ownership when interviewed separate from their partners?

- Do reporting patterns change when respondents know that other household members are also being interviewed?

Overview of Treatment Arms

Arm	Who?	How?	What?
1	"Most Knowledgeable" Household Member	Alone	Assets Owned Exclusively/ Jointly by Household Members
2	Randomly Selected Member of Principal Couple	Alone	Assets Owned Exclusively/ Jointly by Household Members
3	Principal Couple	Together	Assets Owned Exclusively/ Jointly by Household Members
4	Adult (18+) Household Members	Alone, Simultaneous	Assets Owned Exclusively/ Jointly by Household Members
5	Adult (18+) Household Members	Alone, Simultaneous	Assets Owned Exclusively/ Jointly by **Respondent**

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Sampling Design

- **140** Enumeration Areas (EAs) selected with probability proportional to size across Uganda

- **Rural/Urban** EA Split: **60/40** percent

- HH listing in each EA for random selection of sample HHs

- **20** HHs randomly selected in each EA, **4** randomly allocated to **each treatment arm** in **each EA** prior to field work

Scope of Data Collection (1)

- Basic Socio-Economic Information (Individual Level)
- Core Asset Information (Asset Level)
  - Dwelling & Residential Land
  - Agricultural Land
  - Non-Agricultural Land & Other Real Estate
  - Livestock
  - Non-Agricultural Businesses
  - Agricultural Equipment
  - Consumer Durables
  - Financial Assets & Liabilities
  - Valuables

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Scope of Data Collection (2)

Type of Ownership/Rights	Individual Disaggregation
Reported Ownership	Within-Household Identification of Individuals
Economic Ownership	
Documented Ownership	Outside-Household Identification of Individuals
Bundle of Rights - Bequeath - Sell - Rent Out - Use as Collateral - Make Improvements/Invest	Capacity to Exercise Right Independently? Identification of Provider of Consent/Permission

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Fieldwork

- Implementing agency: **Uganda Bureau of Statistics (UBoS)**

- Implementation period: March-August 2014

- Used computer-assisted personal interviewing (**CAPI**) application designed in *Survey Solutions*
  - MEXA CAPI application publically available to *Survey Solutions* users

- Arms 4 & 5 interviews attempted to be conducted in parallel

- Female (male) respondents attempted to be paired w/ female (male) enumerators

Sample Composition

Table 1: MEXA Households Interviewed

| | Initial Allocation | Expected | Interviewed | % of Expected | Interviewed w/ a Couple | | Both Members of Couple Interviewed |
					Any	More than 1 Interview	
TA #1	548	490	495	100%	324	--	N/A
TA #2	548	299	304	100%	304	--	N/A
TA #3	548	299	272	91%	272	--	272
TA #4	548	490	475	97%	302	187	150
TA #5	548	490	481	98%	310	182	160
Total	**2,720**	**2,068**	**2,027**	**98%**	**1512**	**369**	**570**

Sample Composition (2)

Table 2. Distribution of Treatment Arm 4 & 5 Households
According to # of Adults Interviewed

	TA #4		TA #5	
	Total	**%**	**Total**	**%**
Households Interviewed	**475**		**481**	
All Eligible Adults Interviewed	**295**	**0.61**	**286**	**0.59**
4 adults	14	0.03	15	0.03
3 adults	20	0.04	23	0.05
2 adults	137	0.29	133	0.28
1 adults	124	0.26	115	0.24
Subset of Eligible Adults Interviewed	**180**	**0.38**	**195**	**0.41**
3 out of 4	15	0.03	12	0.02
2 out of 4	20	0.04	21	0.04
1 out of 4	11	0.02	12	0.02
2 out of 3	26	0.05	23	0.05
1 out of 3	8	0.02	12	0.02
1 out of 2	100	0.21	115	0.24
Average # of Adults Interviewed	**1.62**		**1.61**	

Interview Dynamics

- **Gender Match-up :** 81.6% of female respondents paired w/ female respondents; 74.6 % for male respondents

- **Duration of Interviews**: 34 minute avg. (5 min., 132 max.) across Arms (29 vs. 39 minute avg. in Arms 5 vs. 3)

- **Simultaneous Interviews:** 63% across Arms 4 & 5

- **Alone Interviews:** Approx. 90% (across modules & Arms)

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Scope of Preliminary Analysis

- Balance tests indicate that randomization was successful

- Priority modules: Dwelling, Agricultural Land, Non-Farm Enterprises, Financial Assets

- Unit of analysis: Adult individual

- Inter-arm comparisons
  - Across Arms 1 through 5 using only households with a couple
  - Across only Arms 1, 4 & 5 using all households

- Arms 4 & 5: Taking individual reporting as is vs. taking Presumed Most Knowledgeable Member to override others

Scope of Preliminary Analysis (2)

- Core specification:

$$y_{ih} = \propto + \beta_1 \tau 2_{ih} + \beta_2 \tau 3_{ih} + \beta_3 \tau 4_{ih} + \beta_4 \tau 5_{ih} + \gamma C + \varepsilon_{ih}$$

  – Probit (OLS) regressions for binary (continuous) dependent variables
  – Standard errors clustered at the EA-level, take into account stratification
  – i & h represent individual & household
  – $\propto$ & ε represent constant & error term
  – $\tau 2, \tau 3, \tau 4$ & $\tau 5$ represent identifiers for Arms 2 through 5
  – **Comparison category: Arm 1 (i.e. standard of practice)**
  – Tests of equality of $\beta_1, \beta_2, \beta_3$ & β_4 for complete inter-arm comparisons
  – C represents a vector of control variables
  – Regressions estimated on the whole & by gender

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Scope of Preliminary Analysis (3)

- (6) Primary dependent variables – All binary
  - Reported Ownership – Overall; Exclusive; Joint (w/ anyone)
  - Economic Ownership – Overall; Exclusive; Joint (w/ anyone)

- (8) Secondary dependent variables – Continuous in bold
  - Right to Bequeath
  - Right to Sell
  - Right to Rent Out
  - Right to Use as Collateral
  - Right to Invest/Make Improvements
  - **PCA-based overall, exclusive & joint rights indices across 5 rights**

Key Findings

- The following synthesis focuses on
  - Effects statistically significant at least at 5 percent level
  - Female adult population in households with a couple, for reported & economic ownership indicators

- No statistically significant effects assoc. with **Arm 2** – across the board

- **Arm 3** exerts statistically significant positive effects on overall & joint **dwelling** reported ownership incidence
  - No similar effect for other assets & for economic ownership

- **Arm 4** exerts statistically significant positive effects on reported & economic ownership (overall & joint) across the board
  - Indistinguishable from **Arm 5** effects

Treatment Arm 4 Effects

- Sizeable in magnitude, significant at the 1 percent level

	TA1 Mean	Average T4 Effect	Effect As a % of TA1 Mean
Dwelling Reported Ownership	0.110	0.090	82%
Dwelling Economic Ownership	0.271	0.130	48%
Agricultural Land Reported Ownership	0.120	0.077	64%
Agricultural Land Economic Ownership	0.271	0.122	45%
Financial Asset Reported Ownership	0.182	0.088	49%

- Stronger in magnitude if the Arm 4 sample is restricted households in which both members of the principal couple were interviewed

- Robust if sample includes all households, whether or not with a couple

- Wiped out if presumed most knowledgeable member reporting is assumed to override other respondents

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Messy Business

- Intra-Household Variation in Reporting on Ownership

Table 3. Agreement on Individual Reported Ownership in Arm 4

Level of Analysis: Individual Owners

	Dwelling	Ag Land	NFE	Financial
Avg. Share of Respondents Reporting an Individual as an Owner	0.80	0.73	0.69	0.62
Avg. Share of Respondents in Unanimous Agreement on Individual's Ownership Status	0.61	0.48	0.37	0.26

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Messy Business

- Intra-Household Variation in Reporting on Ownership
- Intra-Household Variation in Reporting on Valuation

Table 4. Average Within-HH Respondent Value for Dwelling As a % of Presumed Most Knowledgeable Member Reported Value in Arm 4 HHs w/ 2+ Respondents

No Trimming	298%
# of Households	195
Trimmed Top & Bottom 1%	134%
# of Households	191
Trimmed Top & Bottom 5 %	34%
# of Households	174

Messy Business

- Intra-Household Variation in Reporting on Ownership

- Intra-Household Variation in Reporting on Valuation

- Hidden Assets

Table 5. Hidden Assets

Module	# of Respondent Owners			# of Owners Reporting a Hidden Asset			
	Overall #	Male	Female	Overall #	%	Male %	Female %
Parcels	833	62.3%	37.7%	25	3.0%		
Non-Farm Enterprises	536	42.5%	57.5%	1	0.2%		
Financial Accounts	795	46.9%	53.1%	111	14.0%	16.4%	12.8%
Loans Given Out	287	56.4%	43.6%	78	27.2%	25.3%	29.6%
Loans Taken Out	410	51.1%	48.9%	93	22.7%	24.6%	17.7%

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Concluding Thoughts

- Clear value addition of implementing Arm 4
  - Robust & sizeable impacts across priority modules
  - Not a pipe dream given the constraints that MEXA faced & that apply to other household surveys

  But need...
  - Careful questionnaire design & pre-fieldwork validation
  - Agile, gender-balanced, mobile teams
  - Re-thinking fieldwork management, scheduling interviews

- Remaining questions & further methodological research need
  - Specificity to Uganda & need for validation in alternative settings
  - Scope for third-party verification for selected dimensions of data collection to resolve intra-household discrepancies in reporting?
  - What does "joint" really mean?
  - Valuation remains problematic – even without discrepancies

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Concluding Thoughts (2)

- The remaining analytical work is also substantial:
  - Synthesis of treatment effects for
    - Male adult population
    - Respondents regarding self-reported ownership & rights
    - Secondary dependent variables
  - Extending the analysis beyond the priority modules
  - Moving from individual to asset level analysis

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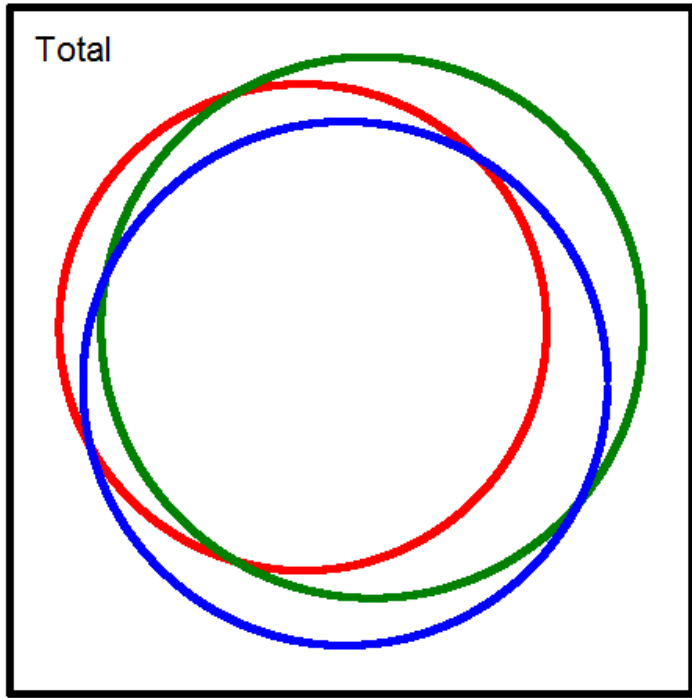Living Standards Measurement Study Team

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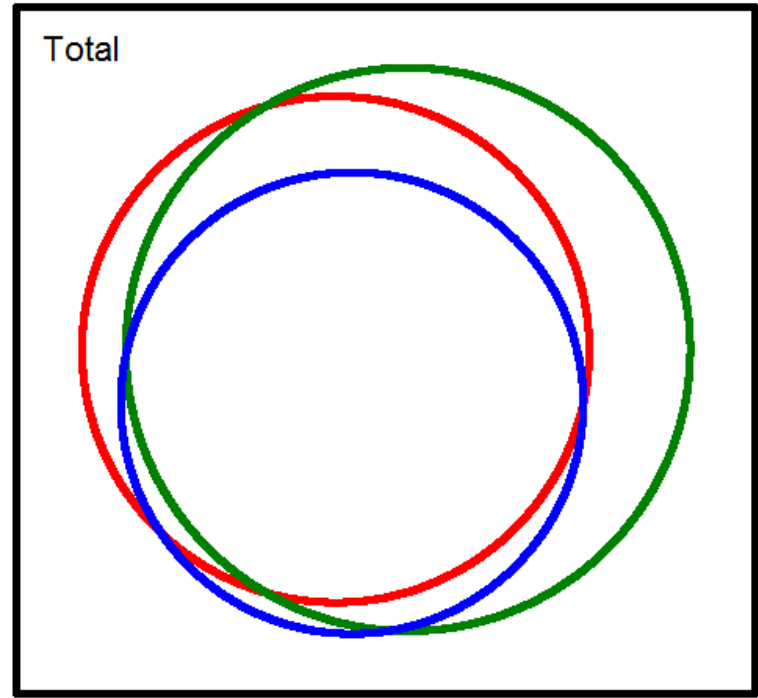tkilic@worldbank.org

Gender and Development Seminar Series
02/18/2015

TA4 Overlap between Dwelling Reported & Economic Ownership & Right to Invest

TA4 Overlap between Dwelling Reported & Economic Ownership & Right to Bequeath

Total

	Reported		Economic
	Invest		Total Population

	Reported		Economic
	Bequeath		Total Population

Treatment Arm 4	*Pairwise Correlation*	*% Overlap in Total Pop*
Reported Own. & Economic Own.	70%	37%
Reported Own. & Right to Bequeath	78%	31%
Economic Own. & Right to Bequeath	69%	32%
Reported Own. & Right to Invest	70%	35%
Economic Own. & Right to Invest	73%	41%

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