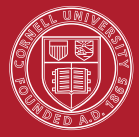

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Marriage Age, Social Status and Intergenerational Effects in Uganda

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UNU-WIDER Human Capital and Growth Conference

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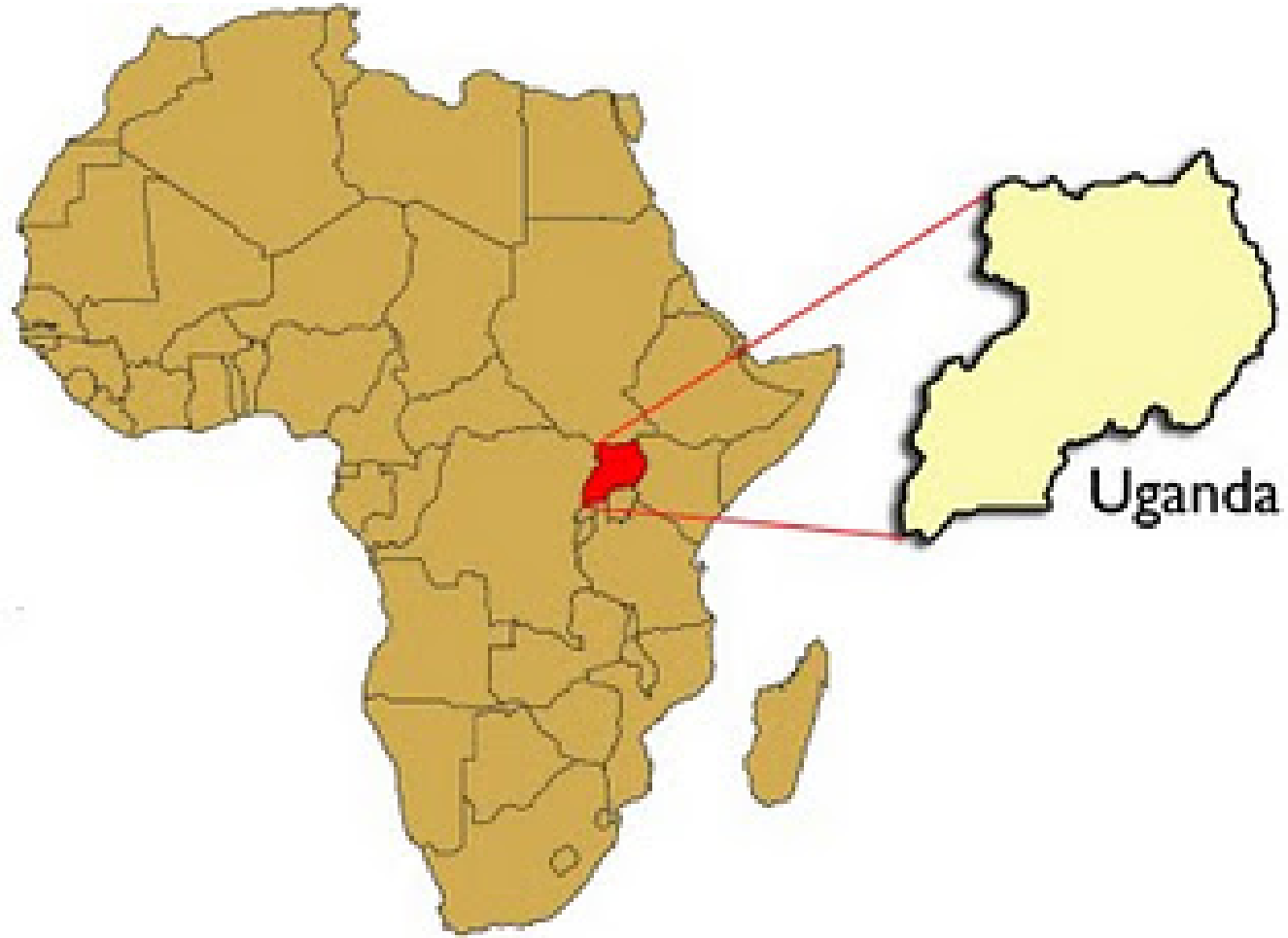
Research Questions

- What is the impact of women's marriage age on her own later life socio-economic outcomes?
- What is the intergenerational health impact of woman's marriage age?

Context



Findings

- Increased education and participation in labor force
- Enhanced post marriage decision making power
- Increased use of contraception
- Higher age at first birth and usage of antenatal care
- Better intergenerational health outcomes

Data Source

I use data from the Uganda Demographic and Health Survey (UDHS). This is a nationally representative sample survey comprising of 3 modules:

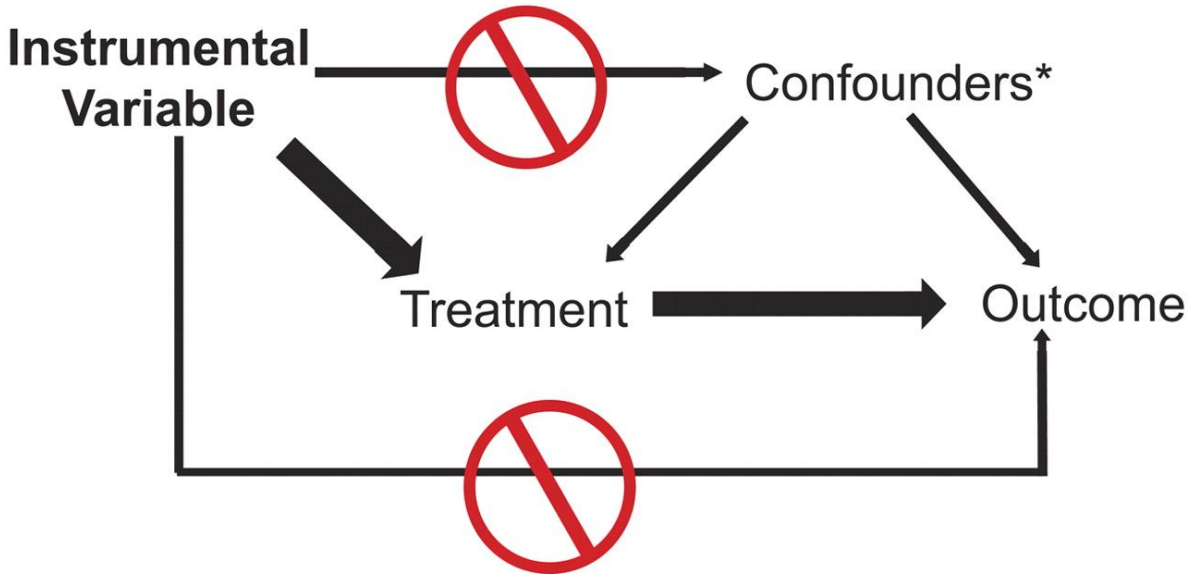
- Household Survey
- Women's Survey: Administered to women between the ages of 15-49 years.
- Men's Survey

Final Sample Size: 6867 Women and 5665 Children

Endogeneity Issue

- Endogeniety issue due to confounding factors.
- For example- effect of marriage age of woman on her educational outcome. Both are confounded by parent's attitude towards a girl child.

Instrumental Variables (IV)



To solve the endogeniety issue, I use an Instrumental Variable (IV) analysis. I employ ***Age of Puberty Onset*** for women as an instrument for their marriage age.

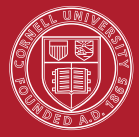
Potential Concerns

- **Genetics Vs. Childhood nutritional status**
  - It would have been ideal to control for a woman's early life nutritional input. I use *adult height* as a proxy for early life nutrition. (Martorell and Habicht[1986], Martorell[1993], Herrington and Husson[2001])
- **Early life adverse events affecting puberty onset**
  - I add *birth year dummies* for the women to control for adverse events like flood, famine, drought etc.

Potential Concerns

- **Geographical factors affecting onset of puberty**
  - I use *dummies for the birth district* of the women to control for factors like temperature and altitude.
- **Direct effect of menarche on outcome variables**
  - I check for this and find that this is not a concern.
- **Recall Bias**
  - Researchers have found across different African countries that people can recall the onset of puberty with reasonable accuracy due to it's social importance.(Leenstra et al[2005], Ellis[2004])

Contribution



- Establishing a plausibly ***causal*** link between woman's marriage age and her later life socio-economic outcomes in an African country.

- *Causal* evidence from Africa on the intergenerational impact of marriage age of woman on the health of her children.

First Stage Regression

	(1)	(2)	(3)	(4)	(5)	(6)
menarcheage	0.47***	0.45***	0.45***	0.45***	0.44***	0.49***
	(0.03)	(0.04)	(0.04)	(0.03)	(0.04)	(0.06)
mheight		0.02**	0.01**	0.02***	0.01	0.02**
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
motherage		0.05***			0.04***	0.07***
		(0.01)			(0.01)	(0.01)
Catholic		0.39*	0.38*	0.33	0.64**	-0.06
		(0.21)	(0.22)	(0.20)	(0.27)	(0.30)
Protestant		0.17	0.13	0.07	0.39	-0.22
		(0.21)	(0.22)	(0.20)	(0.27)	(0.28)
Muslim		-0.06	-0.07	-0.07	0.16	-0.36
		(0.26)	(0.27)	(0.26)	(0.32)	(0.38)
Universe	All	All	All	All	Inschool9	Outschool9
Birth Year FE	No	No	Yes	Yes	No	No
District Dummy	No	No	No	Yes	No	No
Observations	5328	4945	4945	4945	3306	1639
F-Statistic	193	41	36	26	24	17

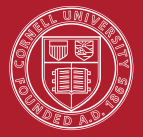
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses.

Highest Grade Attained

	(1)	(2)	(3)	(4)	(5)	(6)
marriageage	0.45***	0.49***	0.50***	0.74***	0.35*	0.66***
	(0.12)	(0.12)	(0.12)	(0.12)	(0.18)	(0.17)
mheight	0.02*	0.02	0.01	0.03**	0.00	0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
motherage	-0.07***	-0.07***				
	(0.01)	(0.01)				
Catholic		0.15	0.08	-0.13	-0.17	-0.36
		(0.30)	(0.30)	(0.28)	(0.36)	(0.34)
Protestant		0.58**	0.52**	0.30	0.14	0.02
		(0.26)	(0.26)	(0.27)	(0.28)	(0.31)
Muslim		1.24***	1.15**	0.51	0.72	0.21
		(0.48)	(0.48)	(0.42)	(0.57)	(0.50)
Universe	All	All	All	All	In at 9	In at 9
Birth Year FE	No	No	Yes	Yes	Yes	Yes
District Dummy	No	No	No	Yes	No	Yes
Observations	4943	4939	4939	4939	3300	3300
F-Statistic	17	11	7	15	5	14

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses.

Education and Labour



The effect of a one year increase in marriage age

Category	**Effect**
Highest Grade Attained	0.45-0.74 yrs***
Probability of being Literate	5-7 pp***
Labour Force Participation	4-8 pp***

Reproductive Behaviour

The effect of a one year increase in marriage age

Variable	**Effect**
Contraception Use	2-4 pp***
Antenatal Care Use	1-3 pp***
Age at First Birth	1 year***
AIDS Knowledge	1-2 % *

Women's Societal Status

The effect of a one year increase in marriage age

Decision Making Power

Category	Full Power	Some Power
Child Health	0.08***	0.13***
Own Health	0.11***	0.11***
Daily Purchase	0.09***	0.13***
Large Purchase	0.07***	0.12***
Visit family	0.07***	0.12***
Cooking Food	0.13***	0.12***

Wife Beating Perception

Category	Effect
Go Out	-0.01**
Burn Food	-0.04***
Neglect Child	-0.02**
Argue	-0.05***
Refuse Sex	-0.02***

Child Health

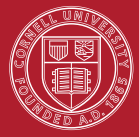
The effect of a one year increase in marriage age

Variable	**Effect**
Hemoglobin Level	0.16 g/dl***
Prob. Anemic	minus 4-5 pp***
Prob. Severely Anemic	minus 1 pp**
Height	0.07-0.11 s.d.**
Body Mass Index	0.11 s.d.*

Robustness Checks

- Results are robust to alternative definitions of early marriage.
- Provide suggestive evidence using *causal mediation analysis* that the exclusion restriction may not be violated.
- Using Conley(2012), I relax the strict exogeneity assumption and show that the results still hold.

Conclusion



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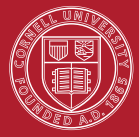
Later marriage leads to

- Large positive effects on educational and labor market outcomes
- Positive effect on decision making power and perceived societal status
- Better reproductive knowledge and practices
- Enhanced marriage market outcomes
- Improved intergenerational health outcomes

Policy Discussion

- Stricter **enforcement of marriage laws**
- Increased focus on **community based approaches**
- **Tackling income poverty** to stop "selling" of brides
- Improved **education and employment opportunities** for women



THANK YOU

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