

# AGE OF MARRIAGE, WEATHER SHOCKS, AND THE DIRECTION OF MARRIAGE PAYMENTS

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# Motivation

- 700 Million women alive today were married before age of 18
- Especially common in South Asia and Sub-Saharan Africa
  - 56% of women in South Asia
  - 42% of women in Sub-Saharan Africa
- Early marriage associated with a wide range of adverse outcomes for women and their offspring including:
  - higher rates of domestic violence
  - harmful effects on maternal, newborn, and infant health
  - reduced sexual and reproductive autonomy
  - lower literacy and educational attainment

# Research Question

- Do aggregate Economic forces influence marriage decisions?
- In particular, do aggregate shocks affect rates of child marriage?
- In what direction?
  - Dowry vs. Brideweath (Brideprice)

# This Paper

- Builds an equilibrium model of child marriage incorporating income shocks
- Matches drought data and survey data to test what [if any] effect a drought has on marriage decision
- Finds:
  - Africa: droughts increase the probability of child marriage
  - India: droughts decrease probability

# Optimal Stopping Problem

```
Editor - /Users/alexweinberg/Desktop/Code/Economics/Research/Voena/alex_SellingDaughters/life_cycle_women.m
life_cycle_women.m
10 %***TERMINAL PERIOD
11 %*** daughter is already married
12 V1(:,T)=utility(Income_unc',gamma); %Utility of Income going forward
13 V0(:,T)=-Inf; %Already married, so V0 not an option
14
15 %***** periods in which daughter can no longer get married
16 for t = T-1:-1:ages(end)+1
17     %***** calculate expectations
18     ev1 = repmat((expected_value(PWeights,V1(:,t+1),1)),[I,1]); %Exp_value of V1 given income probs
19     V1(:,t) = utility(Income_unc',gamma)+beta*ev1; %utility today + expval tomorrow
20     V0(:,t) = -Inf;
21 end
22
23 %***** PERIODS IN WHICH DAUGHTER CAN MARRY %*****
24 for t = ages(end):-1:ages(1)
25     %***** calculate expectations
26     %If already sold daughter
27     ev0 = repmat((expected_value(PWeights,V0(:,t+1),1)),[I,1]); %Exp_val of staying unmarried
28     ev1 = repmat((expected_value(PWeights,V1(:,t+1),1)),[I,1]); %Exp_val of already married
29     V1(:,t) = utility(Income_unc',gamma)+beta*ev1; %Val_func if already married
30     %*** if have not yet married and sell
31     v1 = utility(Income_unc' + BPAmount(t),gamma)+beta*ev1; %Val_func for period when sell
32     %*** if have not yet married and not sell
33     v2 = utility(Income_unc' - scale(t),gamma)+beta*ev0; %Val_func for all periods not sell
34     Sell(:,t)=(v1>=v2); %Policy function
35     V0(:,t)=max(v1,v2); %Val_func for not yet married
36 end
37
38 %***** ages in which daughter cannot yet marry
```

# My Work

- More detailed subset of the paper in Tanzania
- Finite horizon VFI, Optimal Stopping Problem
  1. No savings decision
  2. When to sell your daughter?
- **Answer:** Using bridewealth as consumption smoothing technique to smooth consumption when facing low-income shock.
- **Policy Counterfactual:** If allow savings? Marriage age goes up because want to accrue more of the benefit daughter provides to home.