A New Look at Contraceptive Prevalence Plateaus in Sub-Saharan Africa: A Probabilistic Approach

APPENDIX B: Supplementary Figures

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1 Contraceptive Prevalence Plateaus by Country

1.1 Modern Contraceptive Prevalence among Married In-Union Women

The following pages contain plots of modern contraceptive prevalence (MCP) and the probability of a contraceptive prevalence plateau among married/in-union women of reproductive age, for all countries in sub-Saharan Africa. The change condition threshold is 0.5 and the probability condition threshold is 80 percent. The local linear smoothing method was used. Countries are grouped by subregion, which appear in alphabetical order; countries appear alphabetically within subregion. Panels in the left column show posterior median MCP (solid lines), posterior central 90 percent uncertainty intervals (UIs; dashed lines) and posterior central 95 percent UIs (grey ribbons). The underlying survey data (DHS, MICS, etc.) are shown as filled black circles. Panels in the right column show the plateau probabilities under different rate condition thresholds. Also shown are the years where the probability of a plateau exceeded 80 percent using the rate condition threshold of 0.5 and, separately, where Schoumaker (2019) found evidence for a fertility transition stall.
Modern Contraceptive Prevalence Plateau Probability

Burundi (Eastern Africa)

Comoros (Eastern Africa)

Djibouti (Eastern Africa)

Eritrea (Eastern Africa)

Plateau Type

- Level condition not met
- MCP Plateau (Rate cond. threshold = 0.5, probability = 80%)
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence
Modern Contraceptive Prevalence Plateau Probability

Ethiopia (Eastern Africa)

Kenya (Eastern Africa)

Madagascar (Eastern Africa)

Malawi (Eastern Africa)

Plateau Type

- Level condition not met
- MCP Plateau (Rate cond. threshold = 0.5, probability = 80%)
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence

TFR:
- Limited evidence
- Moderate evidence
- Strong+ evidence
Modern Contraceptive Prevalence Plateau Probability

Mauritius (Eastern Africa)

Mozambique (Eastern Africa)

Reunion (Eastern Africa)

Rwanda (Eastern Africa)

Plateau Type

- Level condition not met
- MCP Plateau (Rate cond. threshold = 0.5, probability = 80%)
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence

TFR:
- Limited evidence
- Moderate evidence
- Strong+ evidence
Modern Contraceptive Prevalence Plateau Probability

Somalia (Eastern Africa)

South Sudan (Eastern Africa)

Uganda (Eastern Africa)

United Republic of Tanzania (Eastern Africa)

Plateau Type

- Level condition not met
- MCP Plateau (Rate cond. threshold = 0.5, probability = 80%)
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence

TFR:
- Limited evidence
- Moderate evidence
- Strong+ evidence
Modern Contraceptive Prevalence Plateau Probability

Zambia (Eastern Africa)

Zimbabwe (Eastern Africa)

Angola (Middle Africa)

Cameroon (Middle Africa)

Plateau Type

- Level condition not met
- MCP Plateau (Rate cond. threshold = 0.5, probability = 80%)
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence
Modern Contraceptive Prevalence Plateau Probability

Central African Republic (Middle Africa)

Chad (Middle Africa)

Congo (Middle Africa)

Democratic Republic of the Congo (Middle Africa)

Plateau Type

- Level condition not met
- MCP Plateau (Rate cond. threshold = 0.5, probability = 80%)
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence
Plateau Type

- Modern Contraceptive Prevalence Plateau Probability
- TFR:
  - Limited evidence
  - Moderate evidence
  - Strong evidence
- MCP Plateau
  - Rate cond. threshold = 0.5,
  - probability = 80%

Plateau Probability
Modern Contraceptive Prevalence Plateau Probability

Eswatini (Southern Africa)

Lesotho (Southern Africa)

Namibia (Southern Africa)

South Africa (Southern Africa)

Plateau Type

- Level condition not met
- MCP Plateau (Rate cond. threshold = 0.5, probability = 80%)
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence

TFR:
- Limited evidence
- Moderate evidence
- Strong+ evidence
Modern Contraceptive Prevalence Plateau Probability

Benin (Western Africa)

Burkina Faso (Western Africa)

Cabo Verde (Western Africa)

Cote d'Ivoire (Western Africa)

Plateau Type

- Level condition not met
- MCP Plateau (Rate cond. threshold = 0.5, probability = 80%)
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence

TFR:
- Limited evidence
- Moderate evidence
- Strong+ evidence
Modern Contraceptive Prevalence Plateau Probability

Gambia (Western Africa)

Ghana (Western Africa)

Guinea (Western Africa)

Guinea-Bissau (Western Africa)

Plateau Type

- Level condition not met
- MCP Plateau (Rate cond. threshold = 0.5, probability = 80%)
- Limited evidence
- Moderate evidence
- Strong+ evidence

TFR:
- Limited evidence
- Moderate evidence
- Strong+ evidence
Modern Contraceptive Prevalence Plateau Probability

Liberia (Western Africa)

Mali (Western Africa)

Mauritania (Western Africa)

Niger (Western Africa)

Plateau Type

- Level condition not met
- MCP Plateau (Rate cond. threshold = 0.5, probability = 80%)
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence
Modern Contraceptive Prevalence Plateau Probability

Nigeria (Western Africa)

Senegal (Western Africa)

Sierra Leone (Western Africa)

Togo (Western Africa)

Plateau Type

- Level condition not met
- MCP Plateau (Rate cond. threshold = 0.5, probability = 80%)
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence

TFR:
Limited
evidence
TFR:
Moderate
evidence
TFR:
Strong+
evidence
1.2 Need for Family Planning Satisfied by Modern Methods among All Women

The following pages contain plots of need for family planning satisfied by modern methods (DS) and the probability of a contraceptive prevalence plateau among all women of reproductive age, for all countries in sub-Saharan Africa. The change condition threshold is 0.5 and the probability condition threshold is 80 percent. The local linear smoothing method was used. Countries are grouped by subregion, which appear in alphabetical order; countries appear alphabetically within subregion. Panels in the left and center columns show posterior medians (solid lines), posterior central 90 percent uncertainty intervals (UIs; dashed lines) and posterior central 95 percent UIs (grey ribbons). Underlying survey data for WRA are not shown because they were not used to produce the estimates (Kantorová et al., 2020). Panels in the right column show the plateau probabilities under different rate condition thresholds. Also shown are the years where the probability of a plateau exceeded 80 percent using the rate condition threshold of 0.5 and, separately, where Schoumaker (2019) found evidence for a fertility transition stall.
Need for Family Planning Satisfied by Modern Methods

Plateau Probability

Burundi (Eastern Africa)

Comoros (Eastern Africa)

Djibouti (Eastern Africa)

Eritrea (Eastern Africa)

Plateau Type

- DS Plateau
  (Rate cond. threshold = 0.5, probability = 80%)
- Level condition not met
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence

TFR:
- Limited evidence
- Moderate evidence
- Strong+ evidence
Need for Family Planning Satisfied by Modern Methods

Plateau Probability

Ethiopia (Eastern Africa)

Kenya (Eastern Africa)

Madagascar (Eastern Africa)

Malawi (Eastern Africa)

Plateau Type

DS Plateau (Rate cond. threshold = 0.5, probability = 80%)
Level condition not met
TFR: Limited evidence
TFR: Moderate evidence
TFR: Strong+ evidence
Need for Family Planning Satisfied by Modern Methods

Plateau Probability

**Mauritius (Eastern Africa)**

- **Plateau Probability**
  - Probability: 0\%, 20\%, 40\%, 60\%, 80\%

**Mozambique (Eastern Africa)**

- **Plateau Probability**
  - Probability: 0\%, 20\%, 40\%, 60\%, 80\%

**Reunion (Eastern Africa)**

- **Plateau Probability**
  - Probability: 0\%, 20\%, 40\%, 60\%, 80\%

**Rwanda (Eastern Africa)**

- **Plateau Probability**
  - Probability: 0\%, 20\%, 40\%, 60\%, 80\%

**Plateau Type**

- **DS Plateau**
  - (Rate cond. threshold = 0.5, probability = 80\%)
- **Level condition not met**
- **TFR:**
  - Limited evidence
  - Moderate evidence
  - Strong+ evidence
Need for Family Planning Satisfied by Modern Methods

Plateau Probability

Somalia (Eastern Africa)

South Sudan (Eastern Africa)

Uganda (Eastern Africa)

United Republic of Tanzania (Eastern Africa)

Plateau Type

- **DS Plateau** (Rate cond. threshold = 0.5, probability = 80%)
- Level condition not met
- **TFR:** Limited evidence
- **TFR:** Moderate evidence
- **TFR:** Strong+ evidence
Plateau Probability

Need for Family Planning Satisfied by Modern Methods

Zambia (Eastern Africa)

Zimbabwe (Eastern Africa)

Angola (Middle Africa)

Cameroon (Middle Africa)

Plateau Type
- DS Plateau
  (Rate cond. threshold = 0.5, probability = 80%)
- Level condition not met
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence
Need for Family Planning Satisfied by Modern Methods

Plateau Probability

Equatorial Guinea (Middle Africa)

Gabon (Middle Africa)

Sao Tome and Principe (Middle Africa)

Botswana (Southern Africa)

Plateau Type

- **DS Plateau** (Rate cond. threshold = 0.5, probability = 80%)
- **Level condition not met**
- **TFR: Limited evidence**
- **TFR: Moderate evidence**
- **TFR: Strong+ evidence**
Need for Family Planning Satisfied by Modern Methods

Plateau Probability

Plateau Type
- DS Plateau
  (Rate cond. threshold = 0.5, probability = 80%)
- Level condition not met
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence
Need for Family Planning Satisfied by Modern Methods

Plateau Probability

Benin (Western Africa)

Burkina Faso (Western Africa)

Cabo Verde (Western Africa)

Cote d'Ivoire (Western Africa)

Plateau Type
- **DS Plateau**: (Rate cond. threshold = 0.5, probability = 80%)
- **Level condition not met**: Limited evidence
- **TFR: Moderate evidence**: Moderate evidence
- **TFR: Strong evidence**: Strong evidence
Need for Family Planning Satisfied by Modern Methods

Plateau Probability

Gambia (Western Africa)

Ghana (Western Africa)

Guinea (Western Africa)

Guinea–Bissau (Western Africa)

Plateau Type

- DS Plateau (Rate cond. threshold = 0.5, probability = 80%)
- Level condition not met
- TFR: Limited evidence
- TFR: Moderate evidence
- TFR: Strong+ evidence
Need for Family Planning Satisfied by Modern Methods

Plateau Probability

Liberia (Western Africa)

Mali (Western Africa)

Mauritania (Western Africa)

Niger (Western Africa)

Plateau Type

- **DS Plateau** (Rate cond. threshold = 0.5, probability = 80%)
- **Level condition not met**
- **TFR: Limited evidence**
- **TFR: Moderate evidence**
- **TFR: Strong+ evidence**
Need for Family Planning Satisfied by Modern Methods

Plateau Probability

Nigeria (Western Africa)

Senegal (Western Africa)

Sierra Leone (Western Africa)

Togo (Western Africa)

Plateau Type

- DS Plateau (Rate cond. threshold = 0.5, probability = 80%)
- Limited evidence
- Moderate evidence
- Strong+ evidence

Level condition not met
2 Sensitivity to Rate and Probability Condition Thresholds

2.1 Modern Contraceptive Prevalence among Married In-Union Women

The following pages contain plots of the probability of a contraceptive prevalence plateau in modern contraceptive prevalence (MCP) under different rate condition thresholds among married/in-union women of reproductive age (MWRA) for all countries in sub-Saharan Africa. Highlighted are the years in which the probability of a plateau exceeded 80 percent. Also shown are reference lines at 80 percent, 90 percent, and 95 percent which indicate the three probability condition thresholds. The local linear smoothing method was used.
2.2 Need for Family Planning Satisfied by Modern Methods among All Women

The following pages contain plots of the probability of contraceptive prevalence plateaus in need for family planning satisfied with modern methods (DS) under different rate condition thresholds among all women of reproductive age (WRA) for all countries in sub-Saharan Africa. Highlighted are the years in which the probability of a plateau exceeded 80 percent. Also shown are reference lines at 80 percent, 90 percent, and 95 percent which indicate the three probability condition thresholds. The local linear smoothing method was used.
Plateau Type

- DS Plateau (Rate condition threshold = 0.5, probability = 80%)
- Level condition not met

Rate Condition Threshold

- 0.1
- 0.3
- 0.5
References
