

Contraceptive Use and Needs  
among Adolescent Women Aged 15-19:  
Regional and Global Estimates and Projections from 1990 to 2030  
from a Bayesian Hierarchical Modelling Study  
**S1 APPENDIX: Supplementary Figures**

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<sup>†</sup>The views and opinions expressed in this paper are those of the authors and do not necessarily represent those of the United Nations. This paper has not been formally edited and cleared by the United Nations.

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## 1 Data and Methods

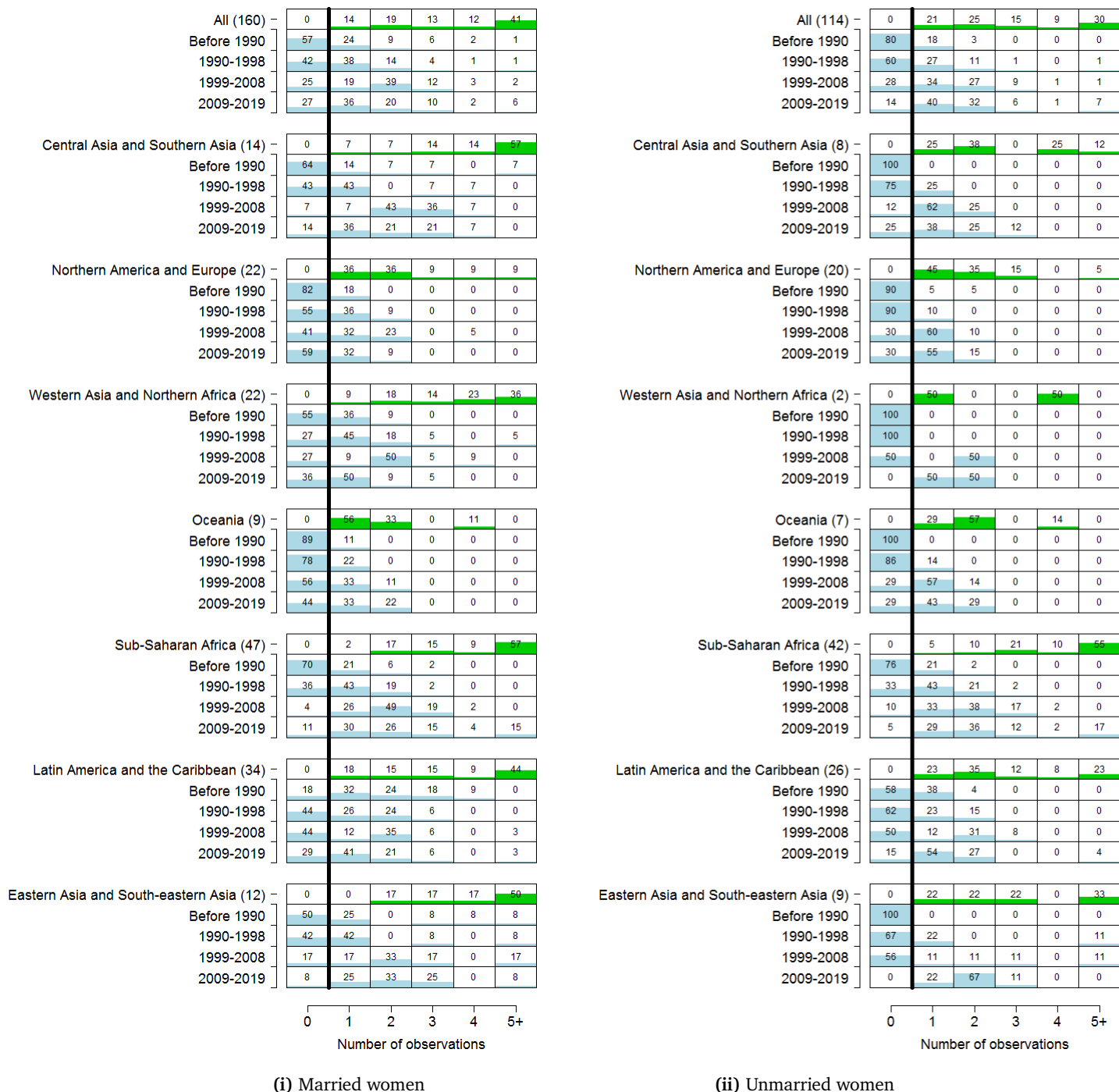
Data availability by region, time-period, and marital status is summarized in Figure A.

## 2 Estimates and Projections for Level 2 Regions

Estimates and projections are plotted for Level 2 regions in Figure B.

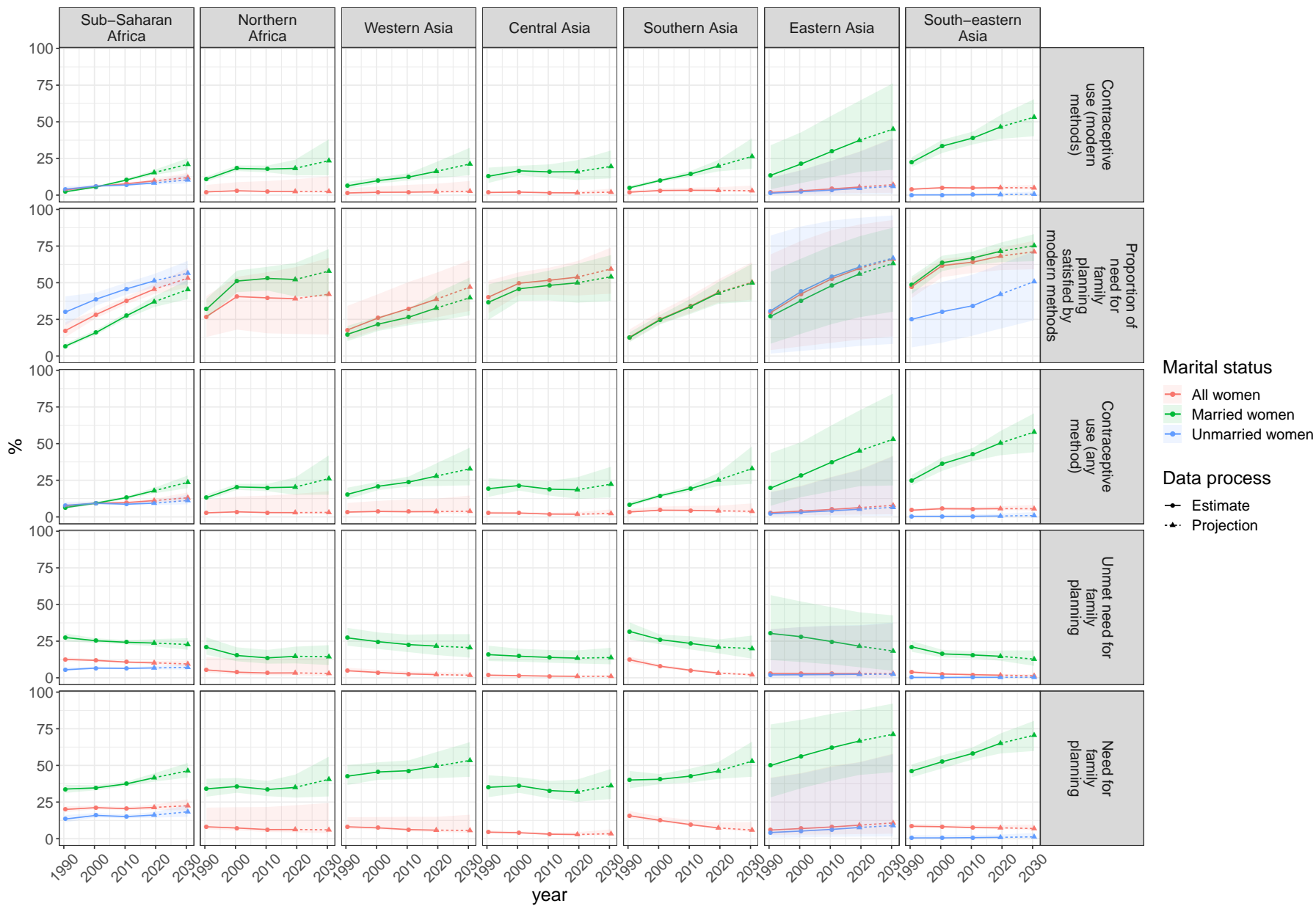
## 3 Ternary Colour Maps with Re-centred Colour Scales

In most countries, the majority of adolescent women aged 15–19 who are unmarried and not in-union experienced no need for family planning in 2019. This makes it difficult to identify relative differences among countries from a plot using a ternary colour scale centred at the point  $(1/3, 1/3, 1/3)$ , as in Figures 8 and 9 in the main article. Relative differences can be highlighted by re-centring the colour scale to the compositional mean (e.g., Pawlowsky-Glahn et al., 2015) of the data. We do this for unmarried and all women in Figures C and D. Maps with centred colour schemes are useful for comparing countries in the same population (i.e., in the same map). They cannot be used for cross-population comparisons.



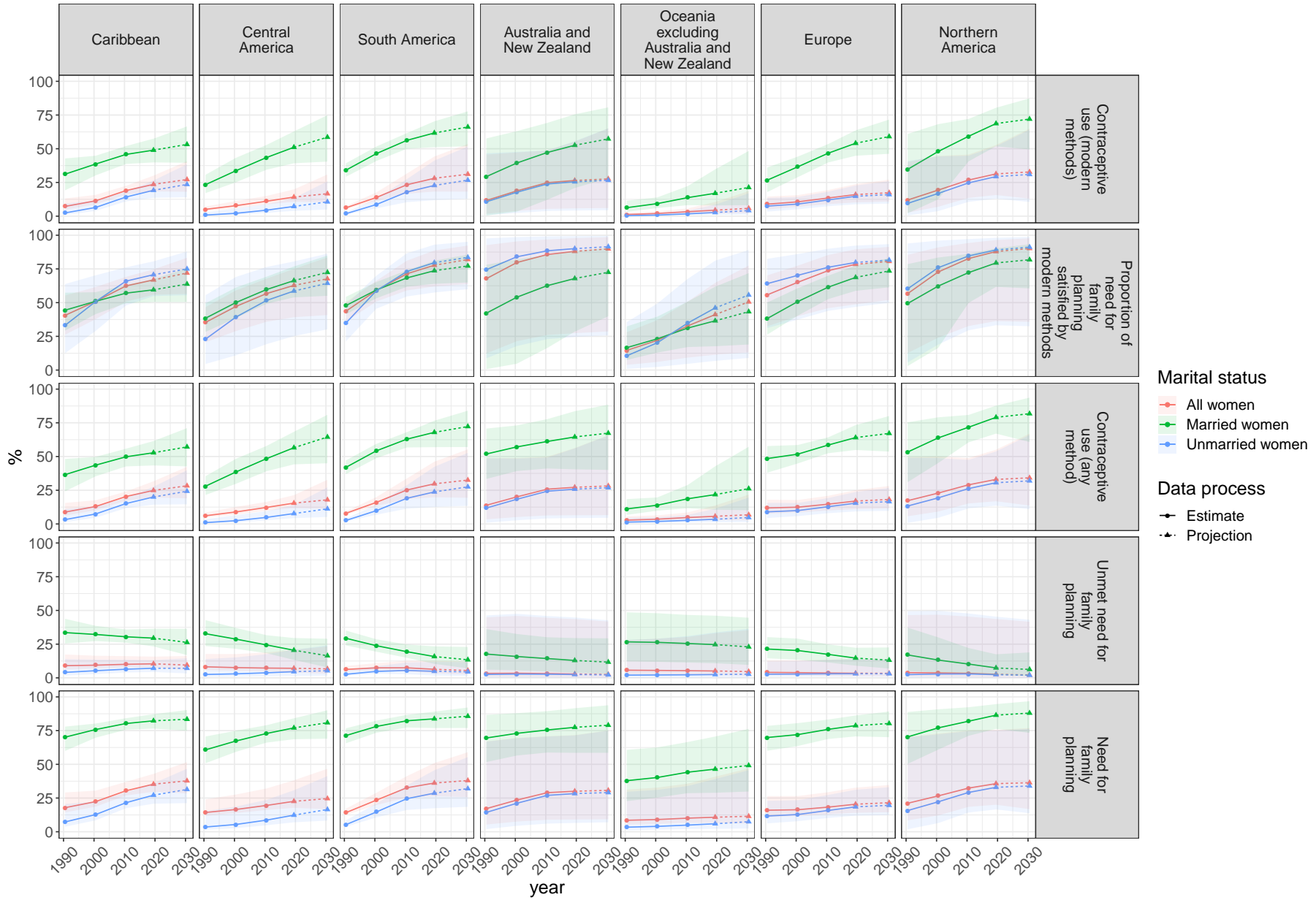
**Figure A. Data availability by region, time-period and marital status.** Proportion of countries by number of observations of contraceptive prevalence (any method) by region and time period for (i) married and (ii) unmarried women aged 15–19. The cells give the percentage of all countries for the given region and time period with the number of observations according to column. The cells sum to 100 (within rounding) across each row. The numbers in parentheses next to the region names are the number of countries in that region with at least one observation





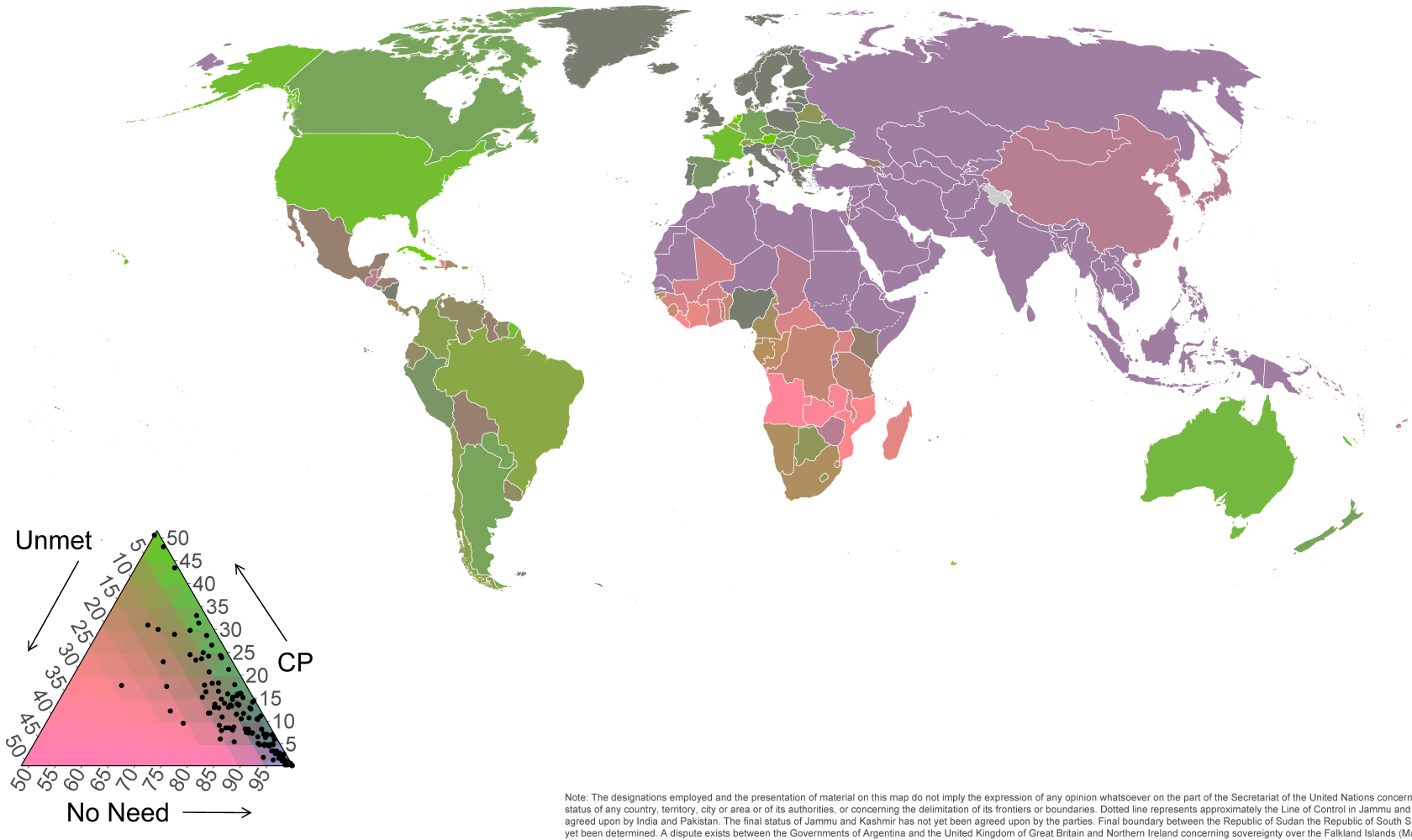
(i)

**Figure B.** Estimates and projections of the proportion of adolescent women (15-19 years) using contraception (any method and modern methods) and having unmet need for family planning, by marital status and regions, 1990–2030. Given are the posterior medians (solid lines) posterior 95% uncertainty intervals (ribbons).



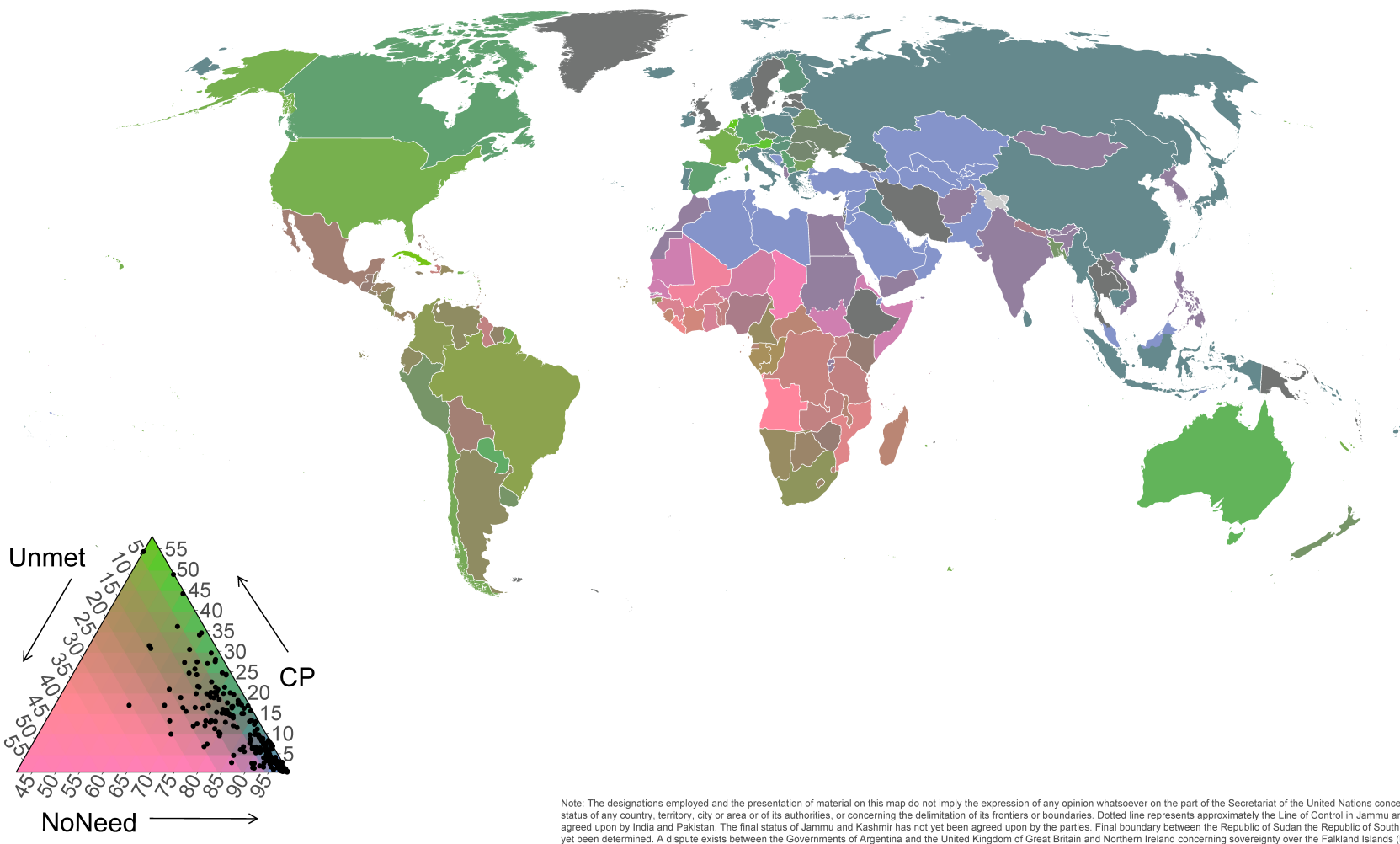
(ii)

Figure B. (cont'd).



Note: The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

**Figure C. Ternary colour scheme map for unmarried adolescent women aged 15–19, with centred colour scheme.** The map shows contraceptive use (any method), unmet need for family planning, and no need for family planning for unmarried women aged 15–19 years, 2019. The colour scheme is centred at the compositional mean so that relative differences among countries are highlighted. However, it also means that this map is not directly comparable with the other ternary colour scheme maps. Note that the legend has been cropped.



Note: The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

**Figure D. Ternary colour scheme map for all adolescent women aged 15–19, with centred colour scheme.** The map shows contraceptive use (any method), unmet need for family planning, and no need for family planning for unmarried women aged 15–19 years, 2019. The colour scheme is centred at the compositional mean so that relative differences among countries are highlighted. However, it also means that this map is not directly comparable with the other ternary colour scheme maps. Note that the legend has been cropped.

## 4 Country-Specific Estimates and Projections of Family-Planning Indicators

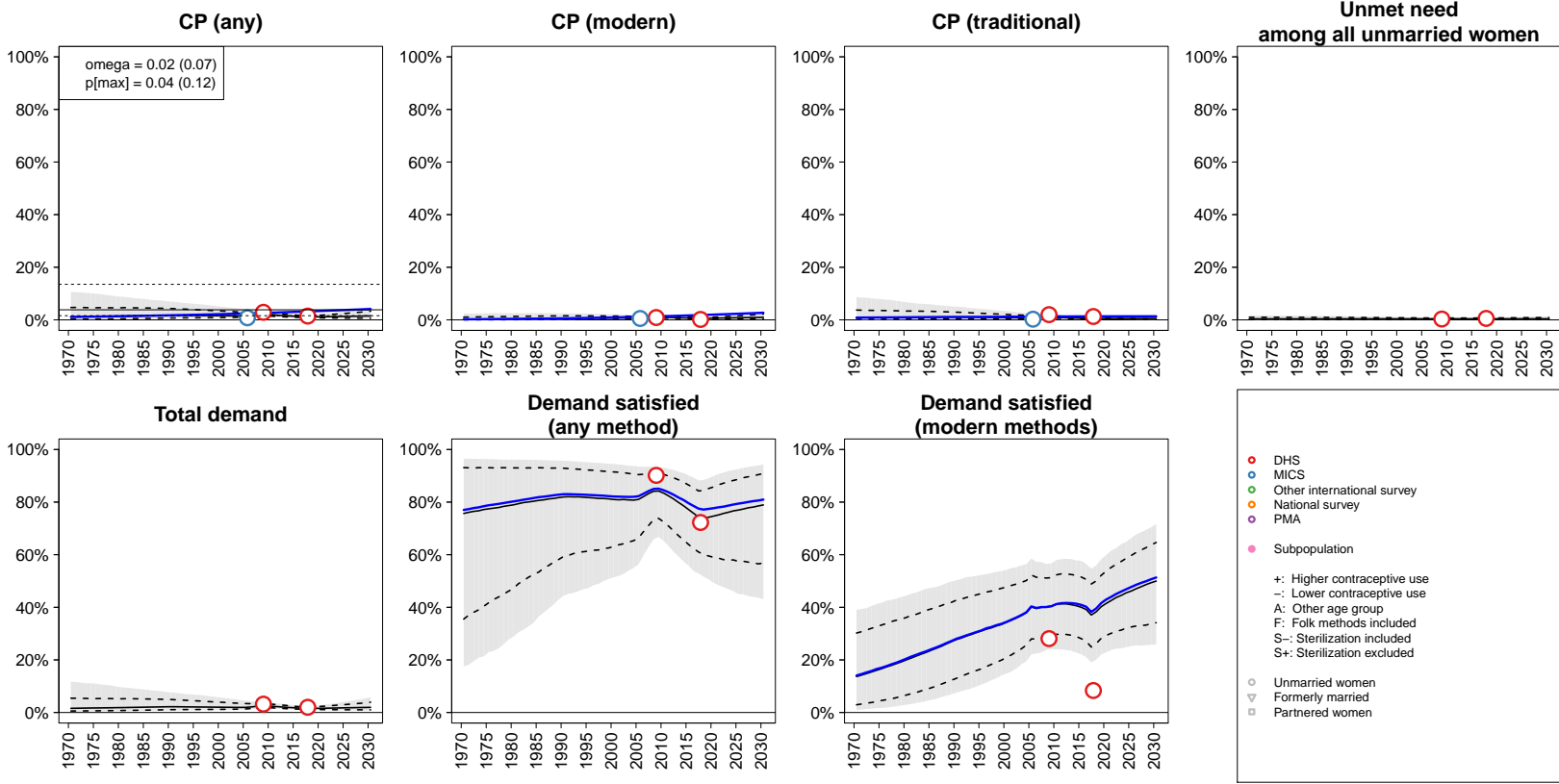
These figures contain a systematic and comprehensive set of annual, model-based estimates and projections, and underlying survey-based observations, for a collection of family planning indicators, including contraceptive prevalence, the unmet need for family planning, and the demand for family planning satisfied by use of contraception (any method or modern methods alone). They pertain to the population of adolescent women aged 15–19 years.

The results pertain to adolescent women aged 15–19 years who are unmarried and not in a union ('unmarried'), married or in a union ('married'), and all adolescent women aged 15–19. They cover the period from 1970 to 2030. Estimates based on medians, as well as 80 per cent uncertainty intervals (represented by lines) and 95 per cent uncertainty intervals (represented by shaded areas), are provided for 185 countries or areas. The results are based on data available as of February 2019.

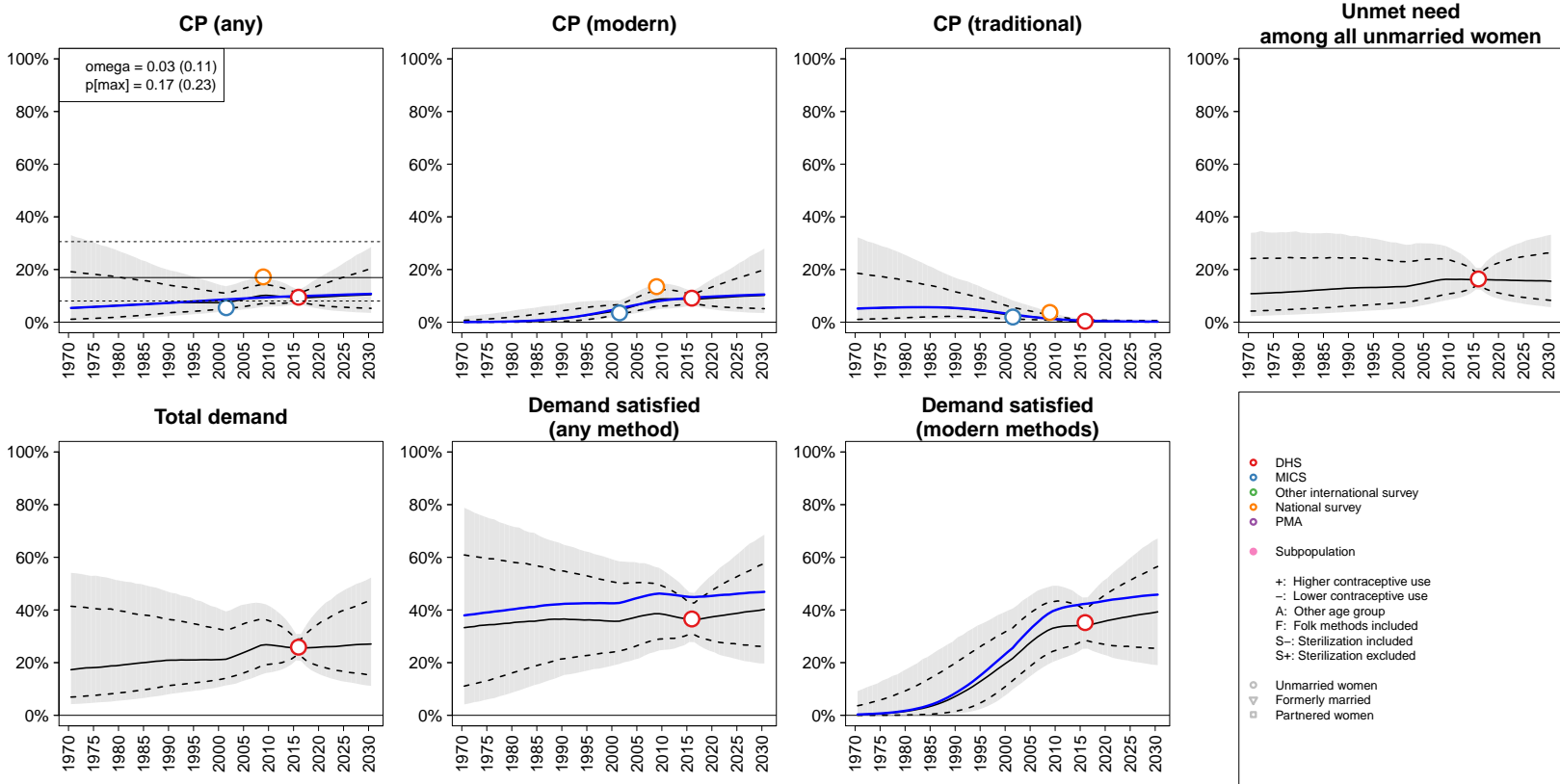
*Note:* The designations employed and the material presented in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The term "country" as used in this publication also refers, as appropriate, to territories or areas. Countries or areas listed individually are only those with 90,000 inhabitants or more in 2017 and ; the rest are included in the aggregates but are not listed separately.

### 4.1 Unmarried Adolescent Women

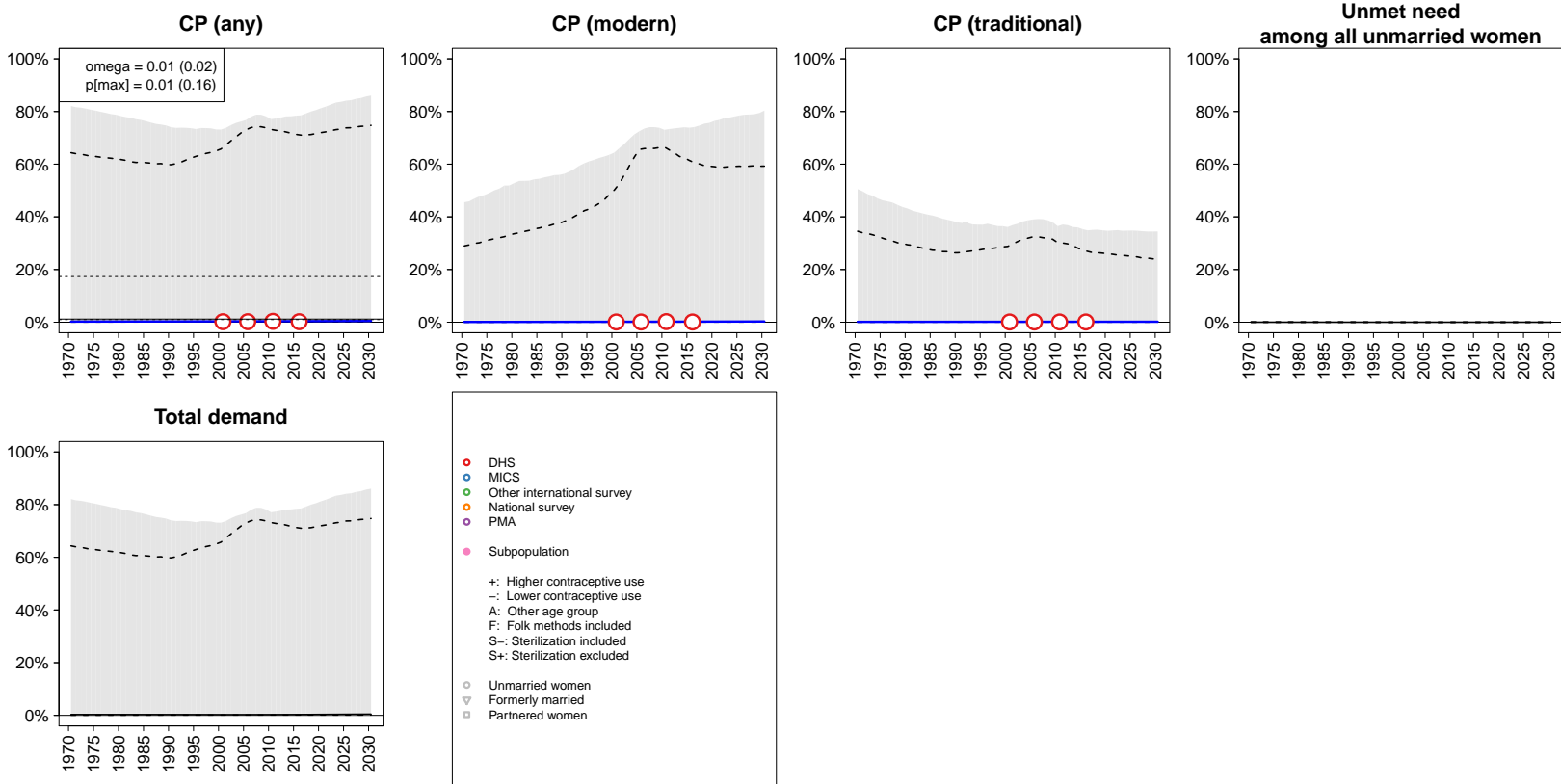
Albania (Southern Europe, SA Group 1) --- Unmarried / Not In-Union



Angola (Middle Africa, SA Group 1) --- Unmarried / Not In-Union

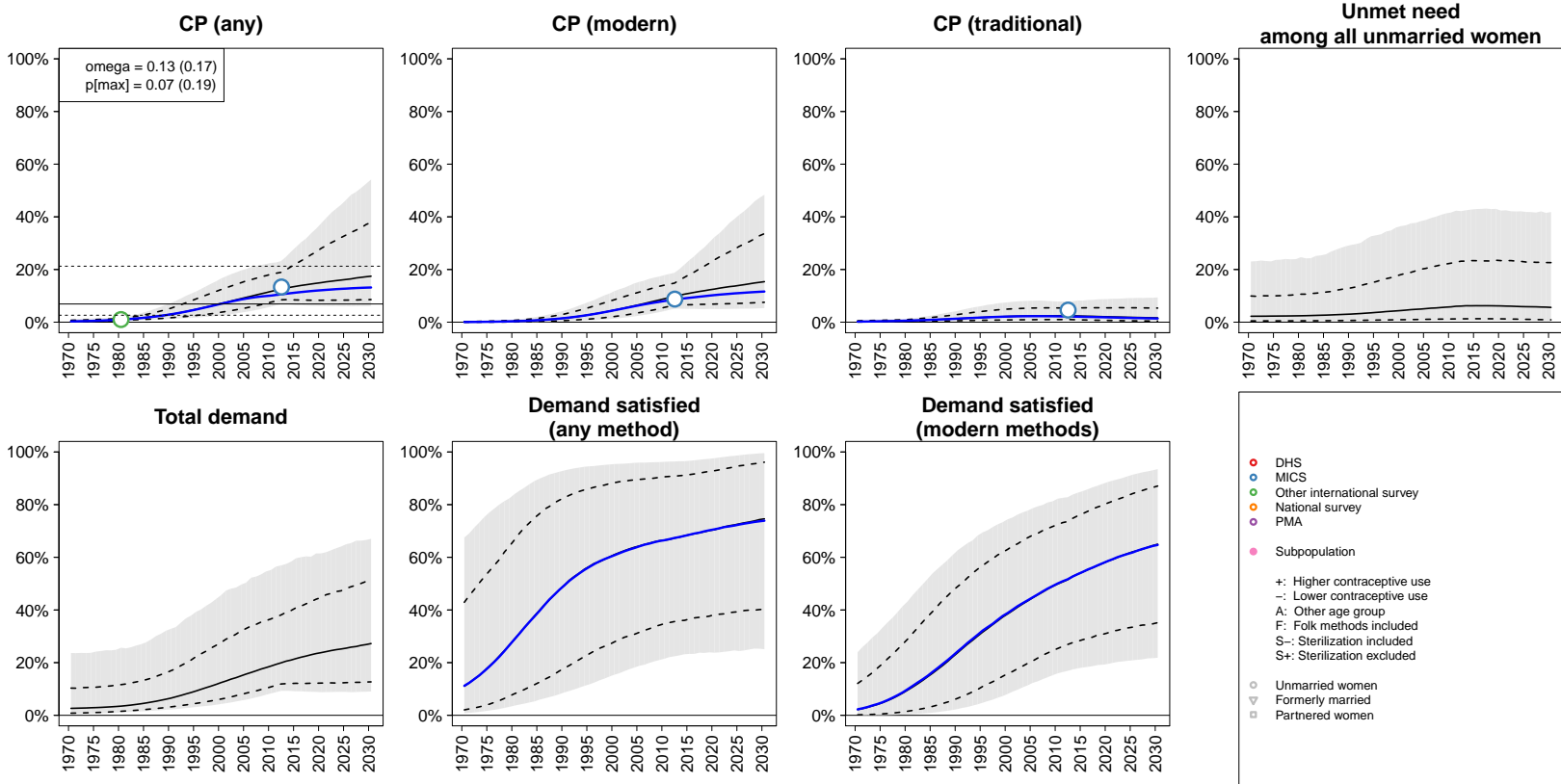


Armenia (Western Asia, SA Group 0) --- Unmarried / Not In-Union

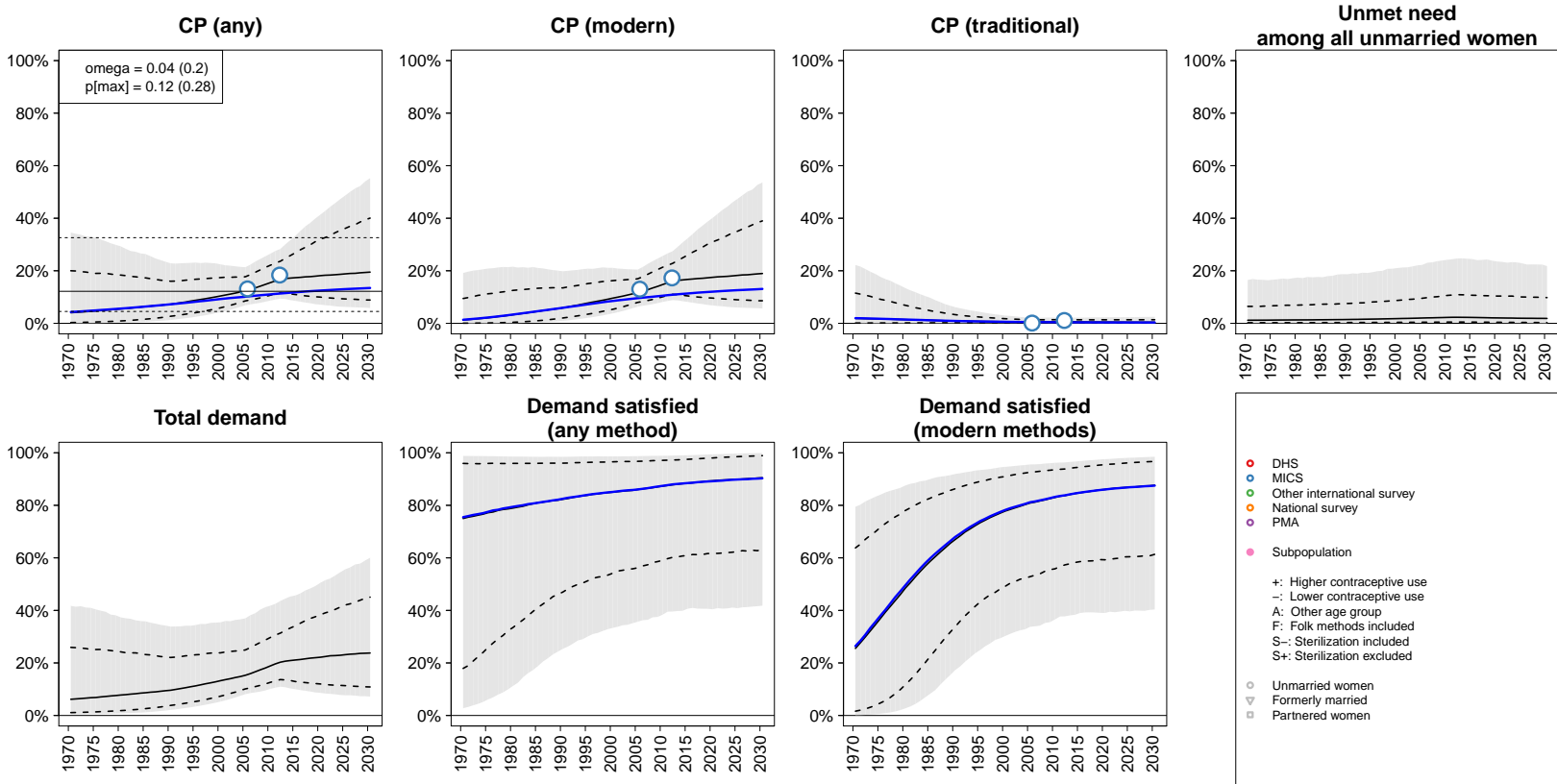




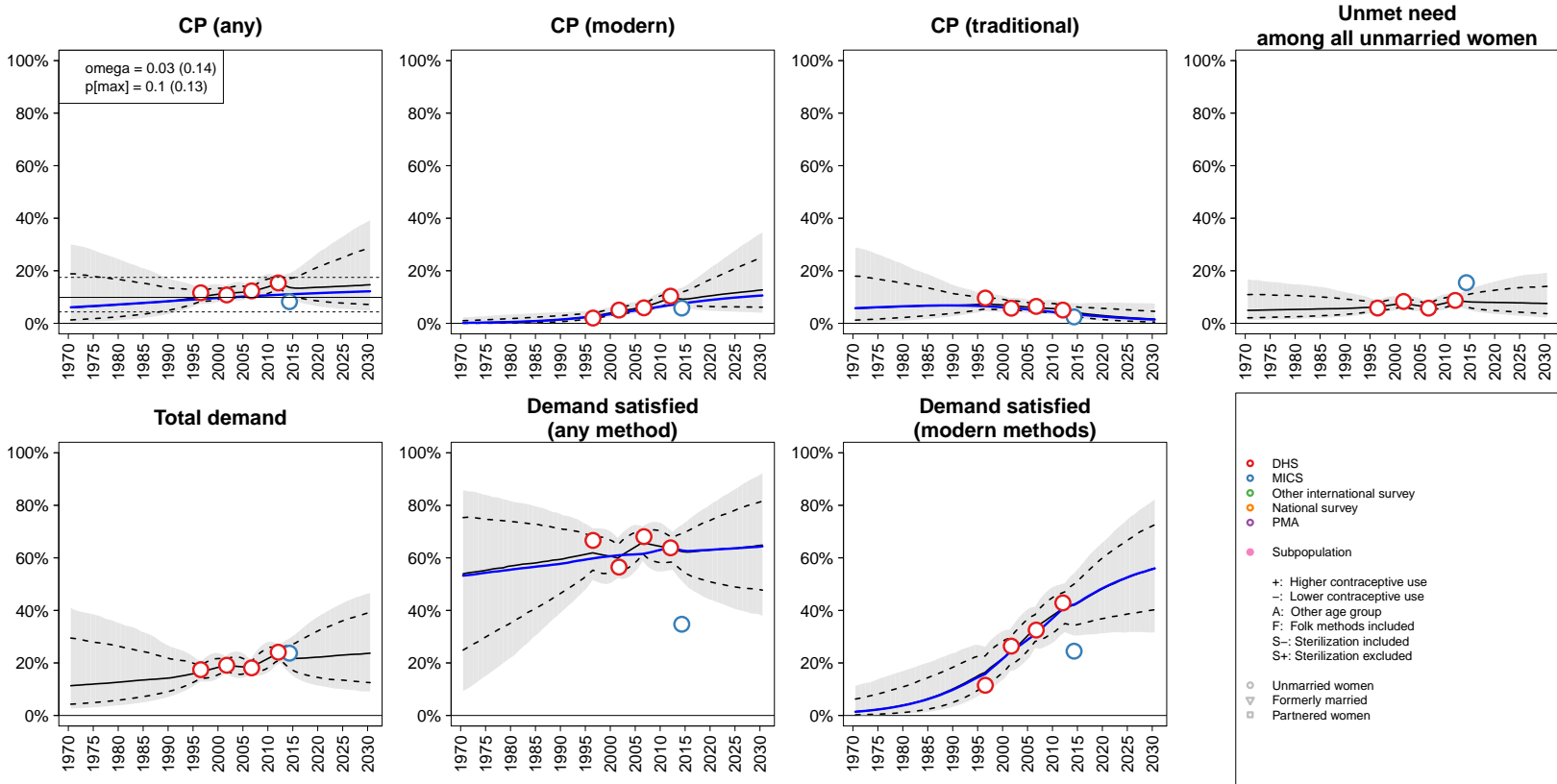
Barbados (Caribbean, SA Group 1) --- Unmarried / Not In-Union



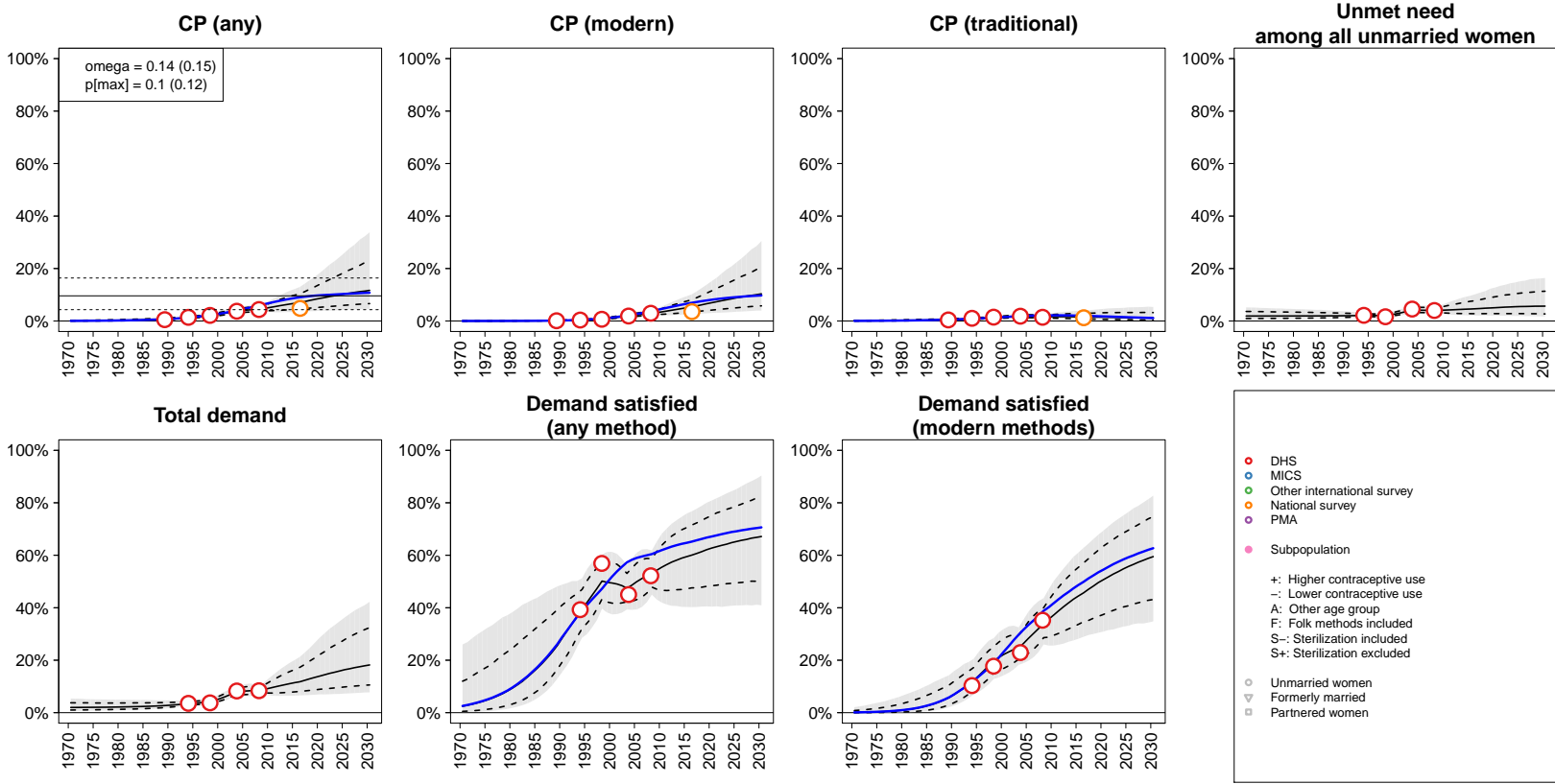
Belarus (Eastern Europe, SA Group 1) ---- Unmarried / Not In-Union



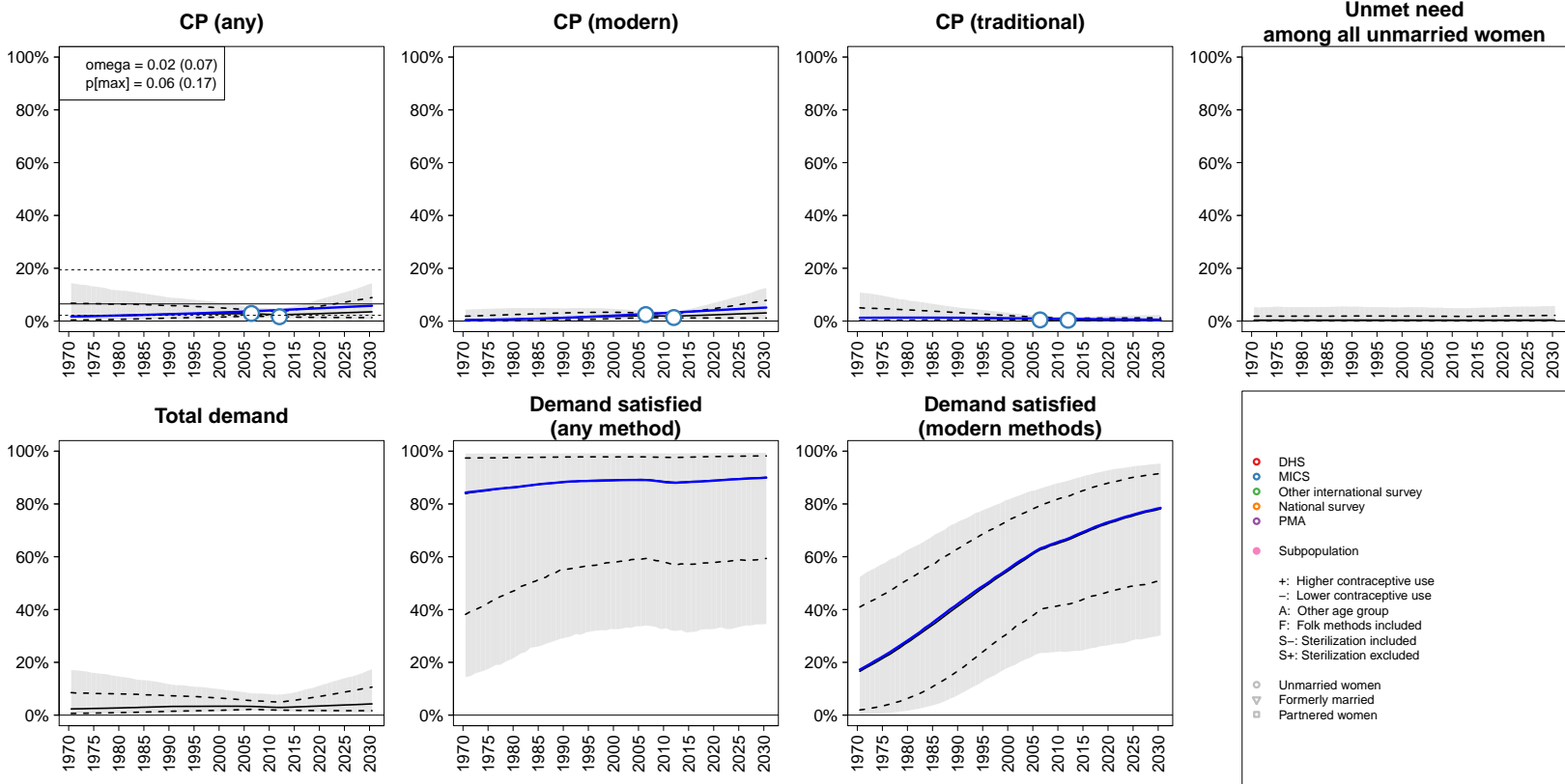
Benin (Western Africa, SA Group 1) --- Unmarried / Not In-Union



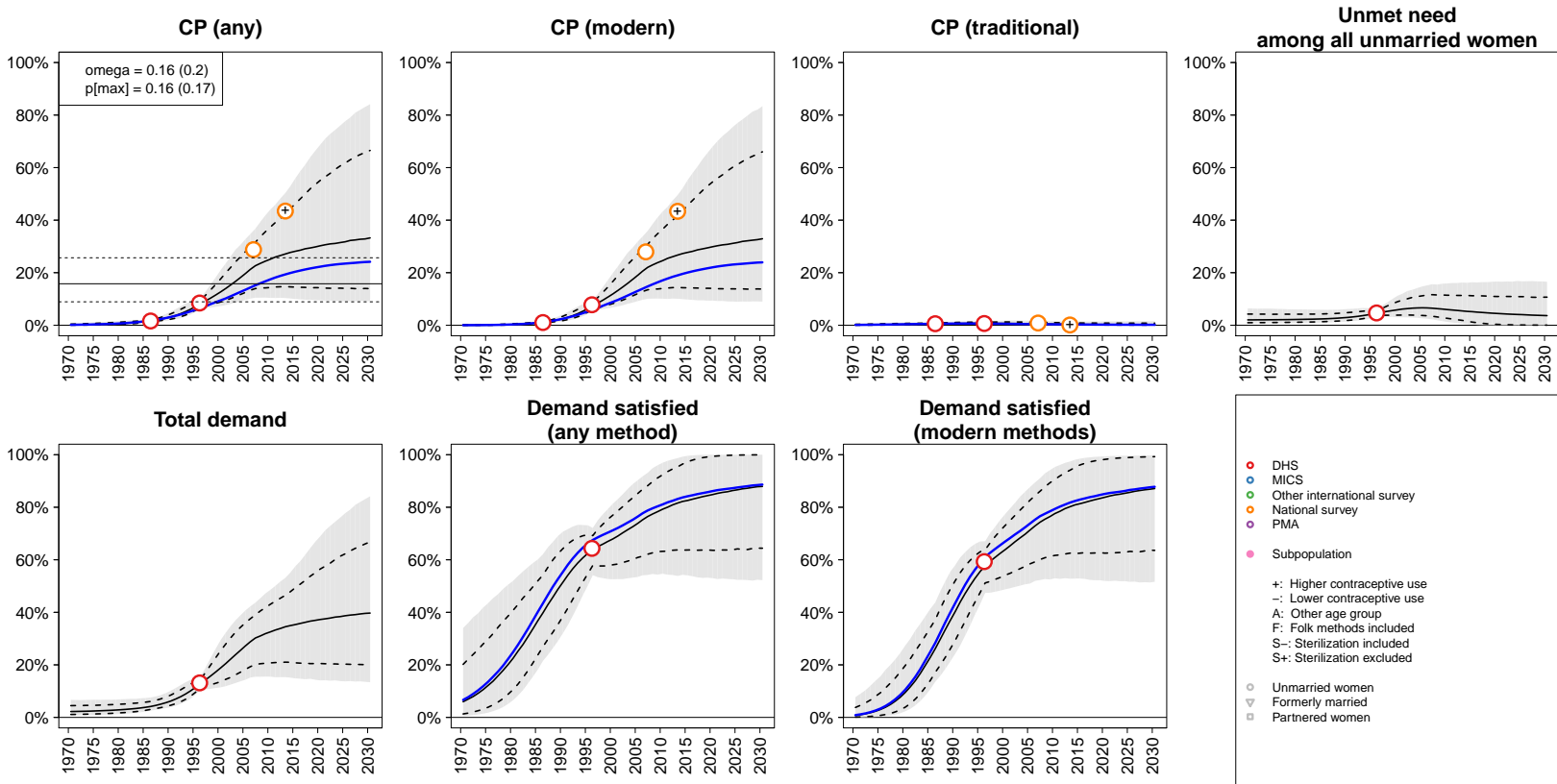
Bolivia, Plurinational State of (South America, SA Group 1) --- Unmarried / Not In-Union



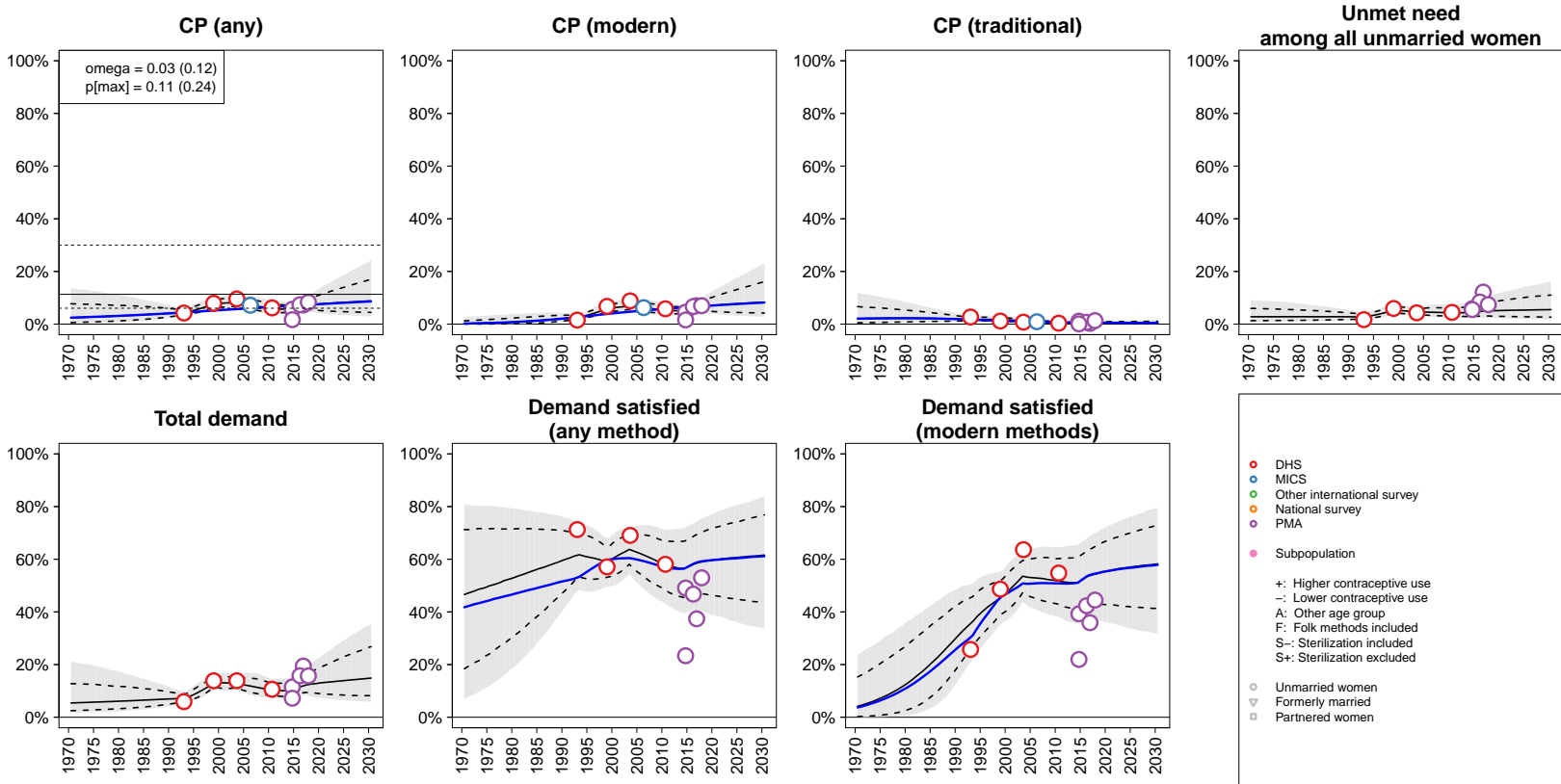
Bosnia and Herzegovina (Southern Europe, SA Group 1) --- Unmarried / Not In-Union



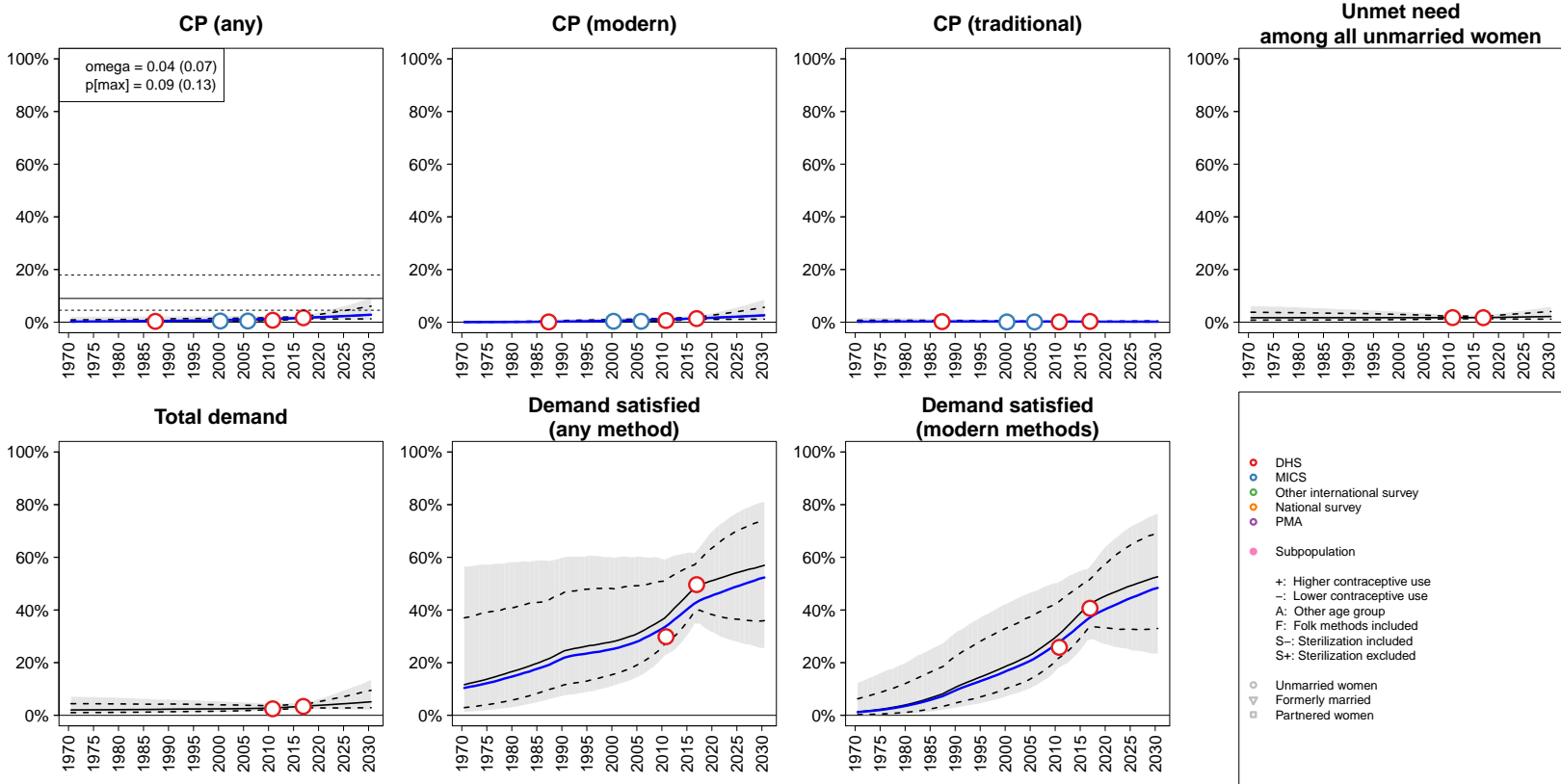
Brazil (South America, SA Group 1) --- Unmarried / Not In-Union



Burkina Faso (Western Africa, SA Group 1) --- Unmarried / Not In-Union

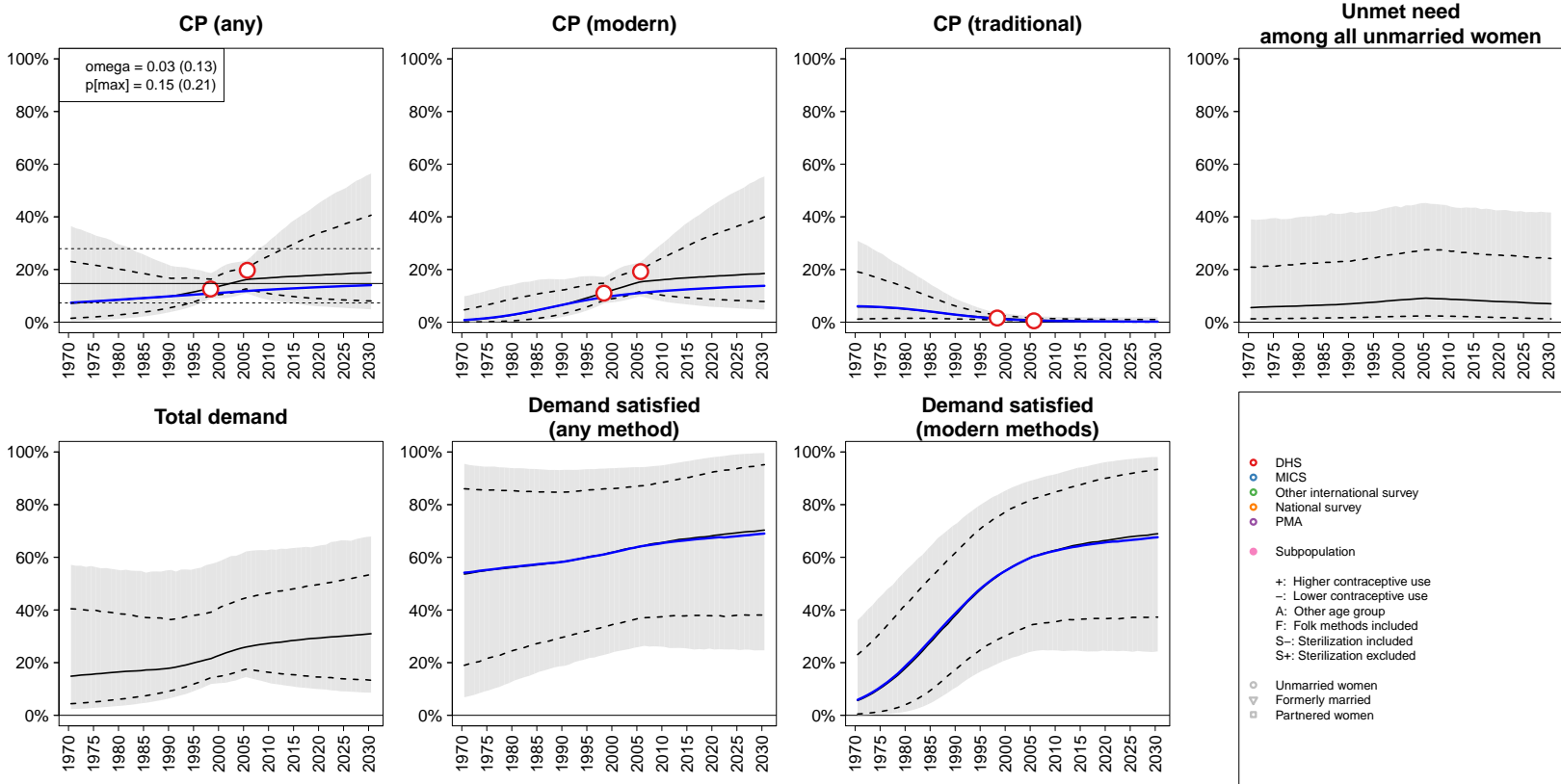


Burundi (Eastern Africa, SA Group 1) --- Unmarried / Not In-Union

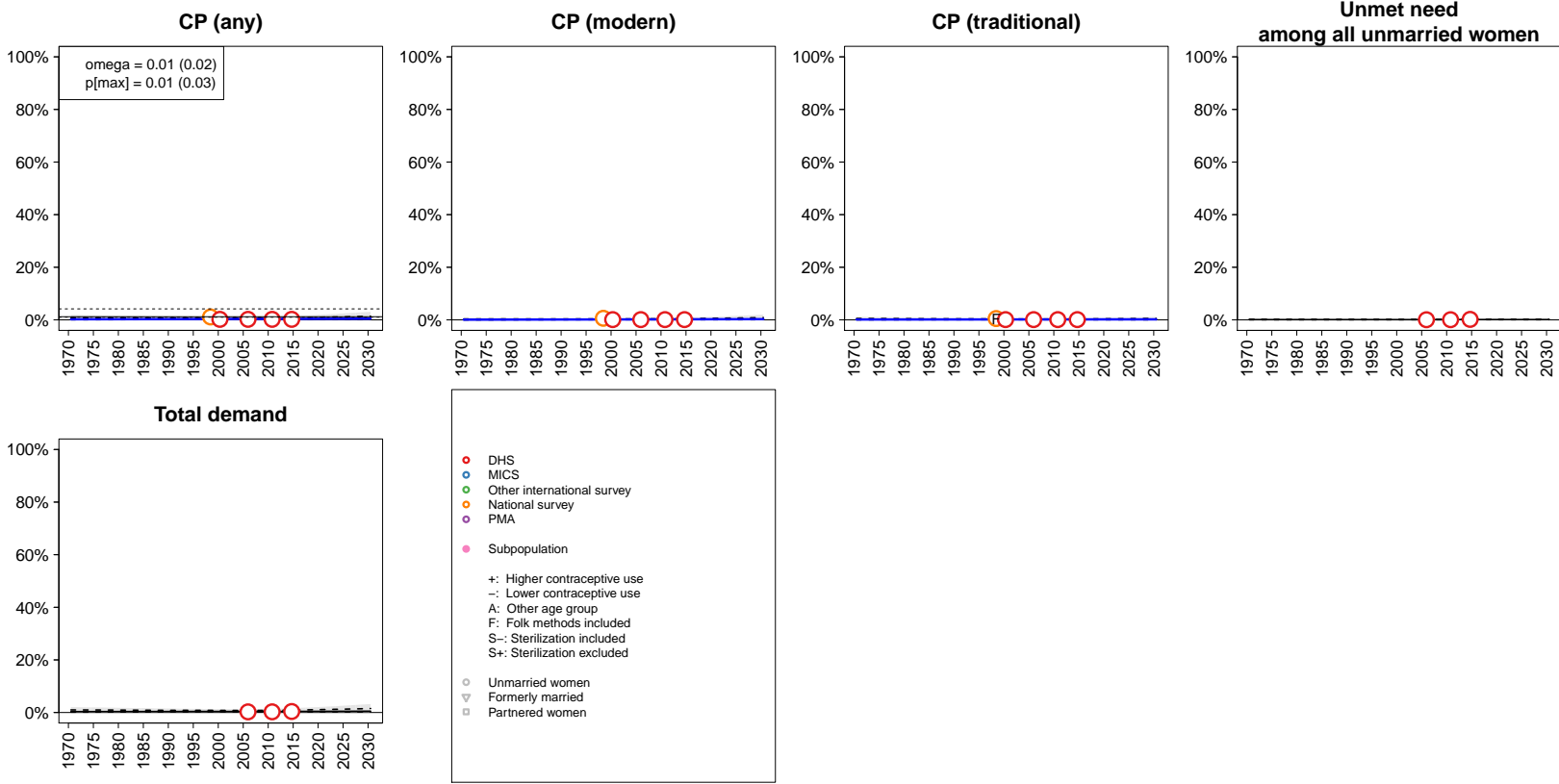




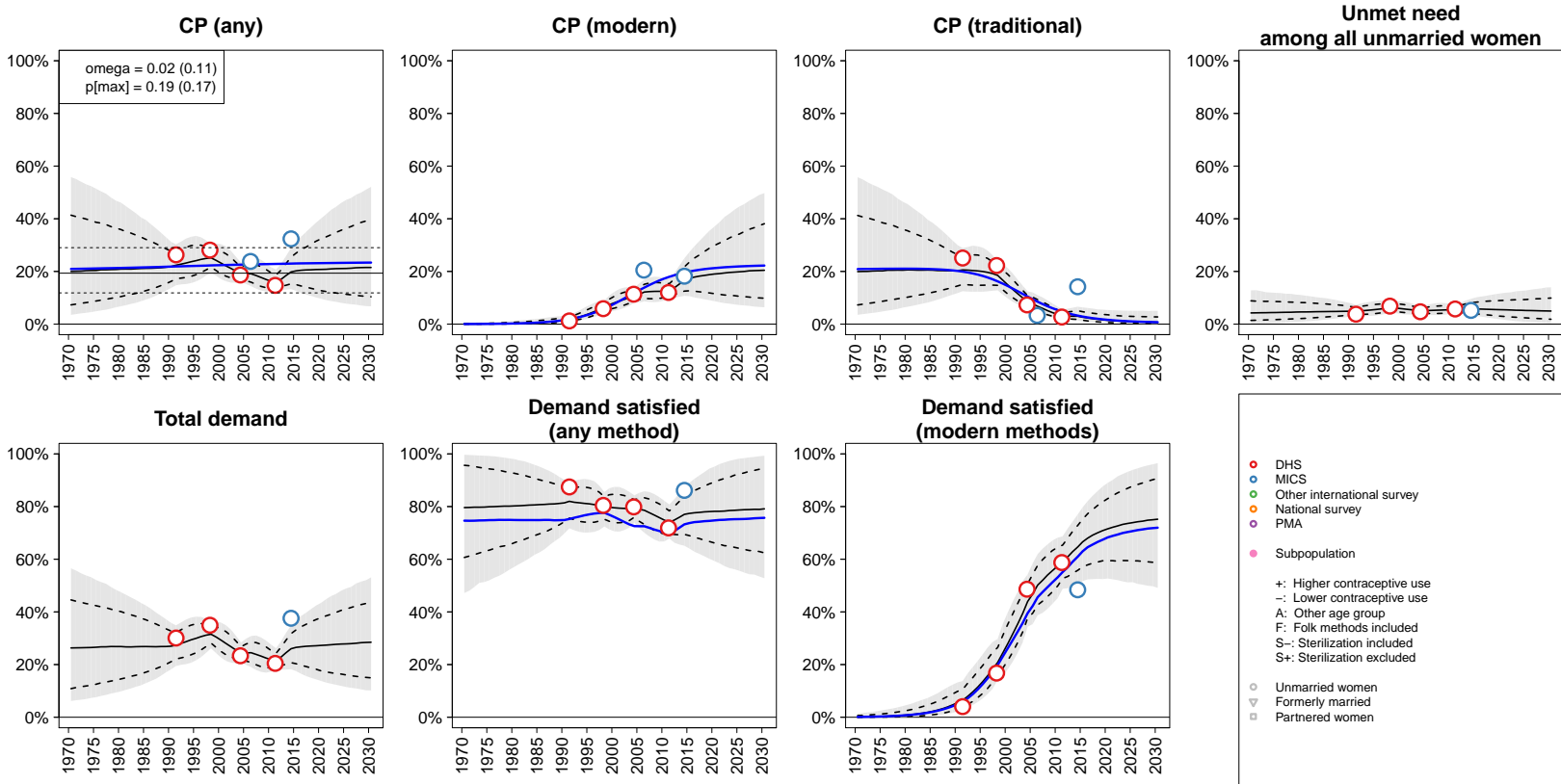
Cabo Verde (Western Africa, SA Group 1) ---- Unmarried / Not In-Union



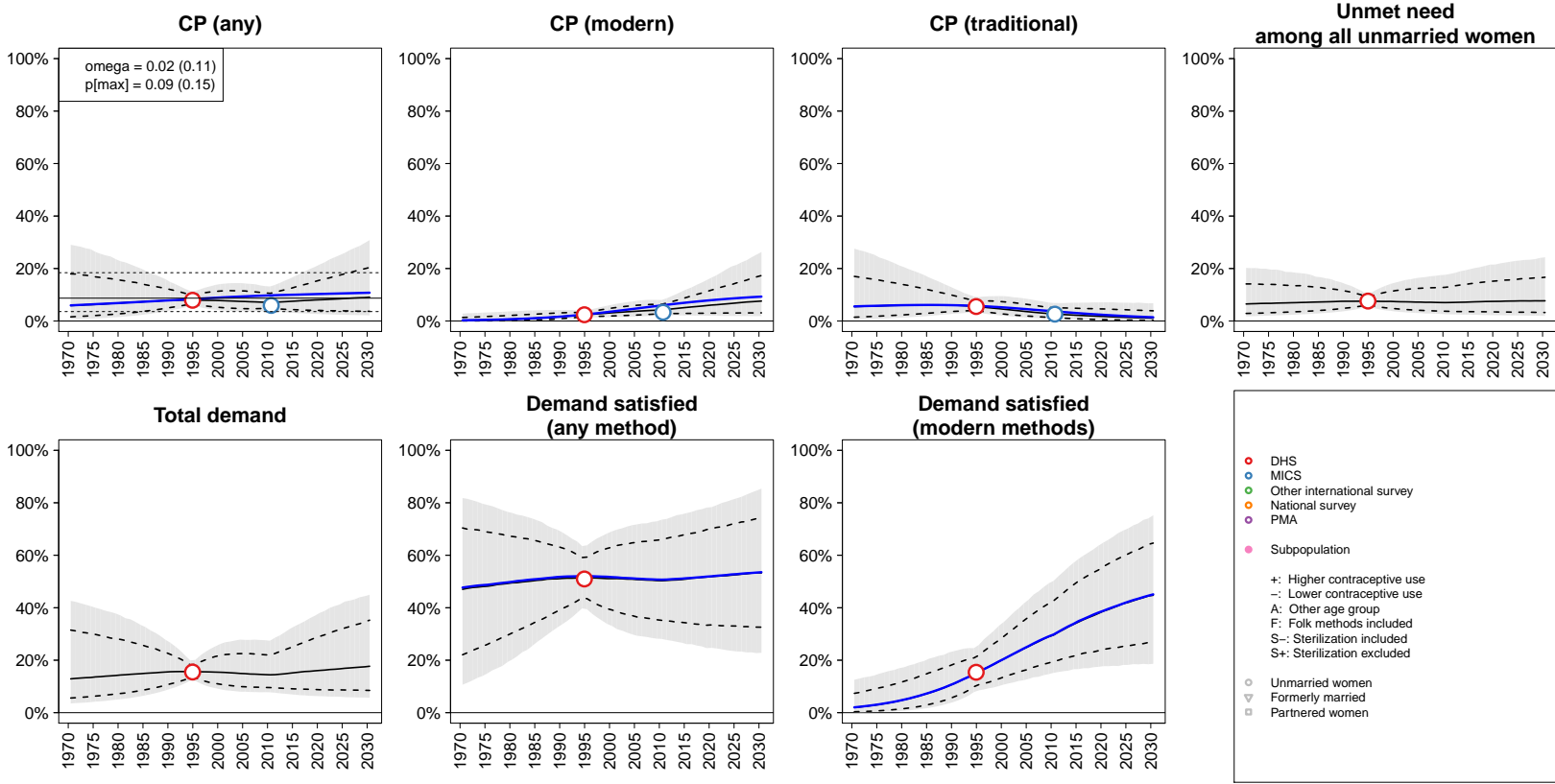
Cambodia (South-eastern Asia, SA Group 0) --- Unmarried / Not In-Union



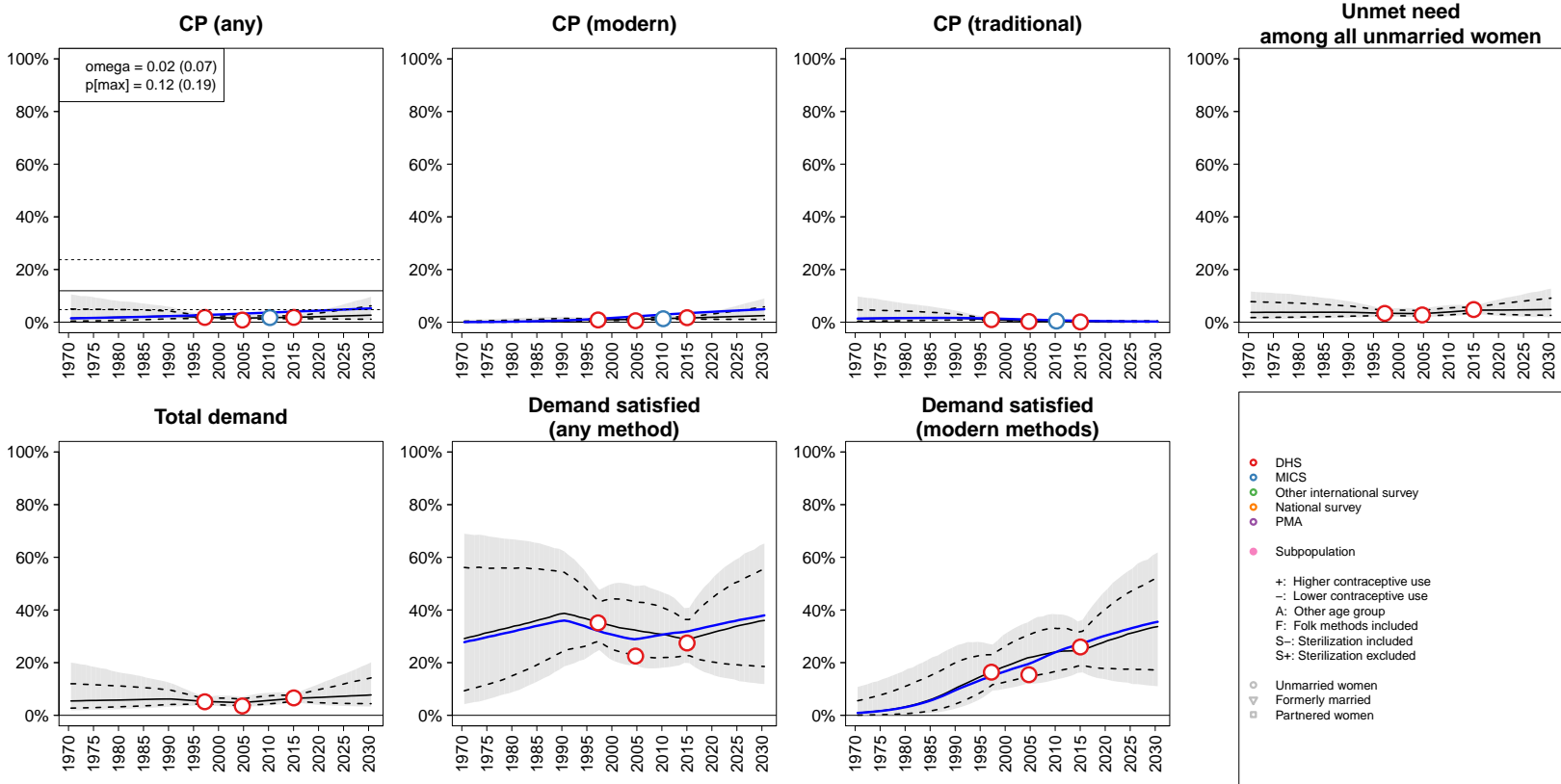
Cameroon (Middle Africa, SA Group 1) --- Unmarried / Not In-Union



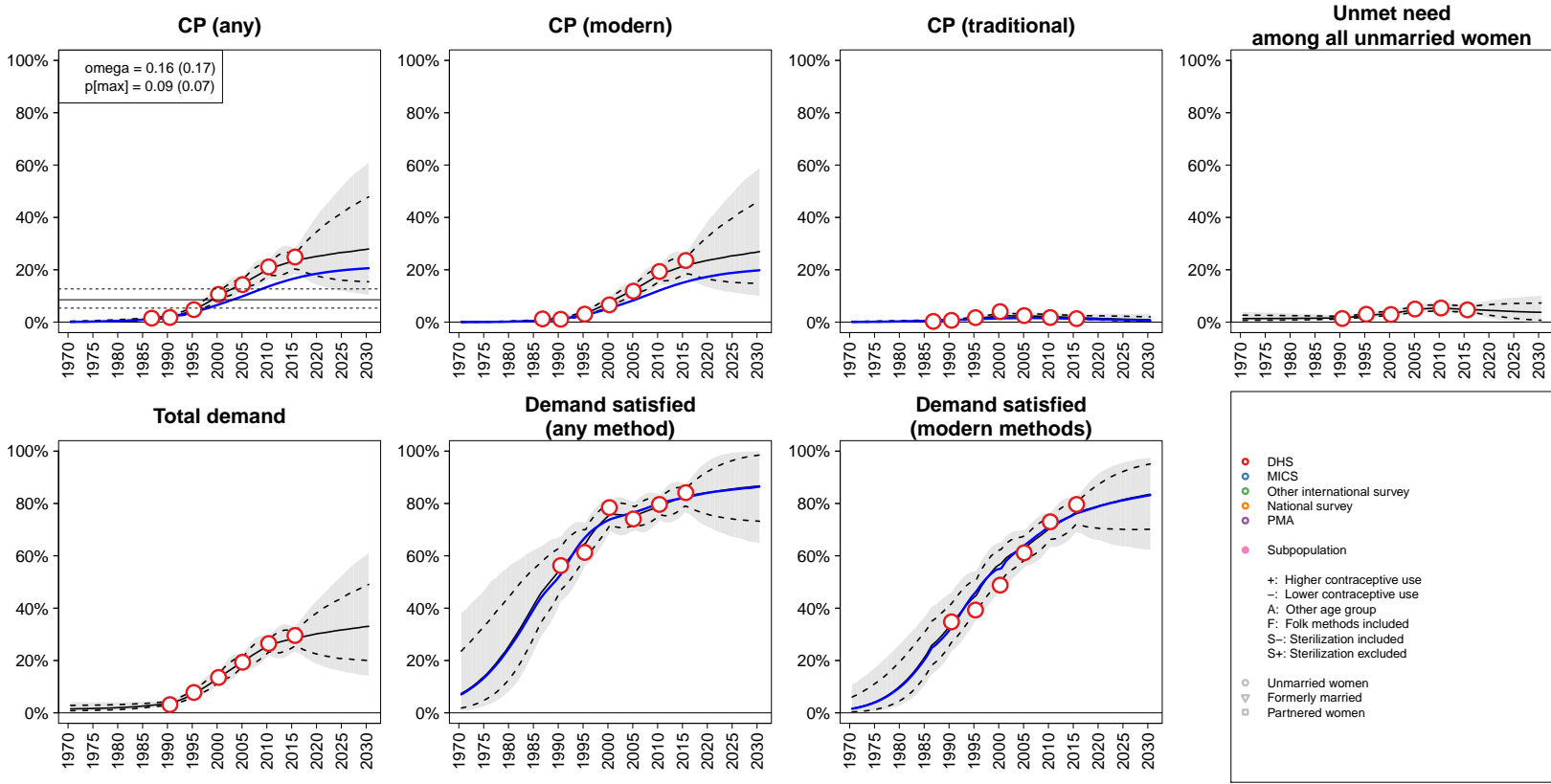
Central African Republic (Middle Africa, SA Group 1) --- Unmarried / Not In-Union



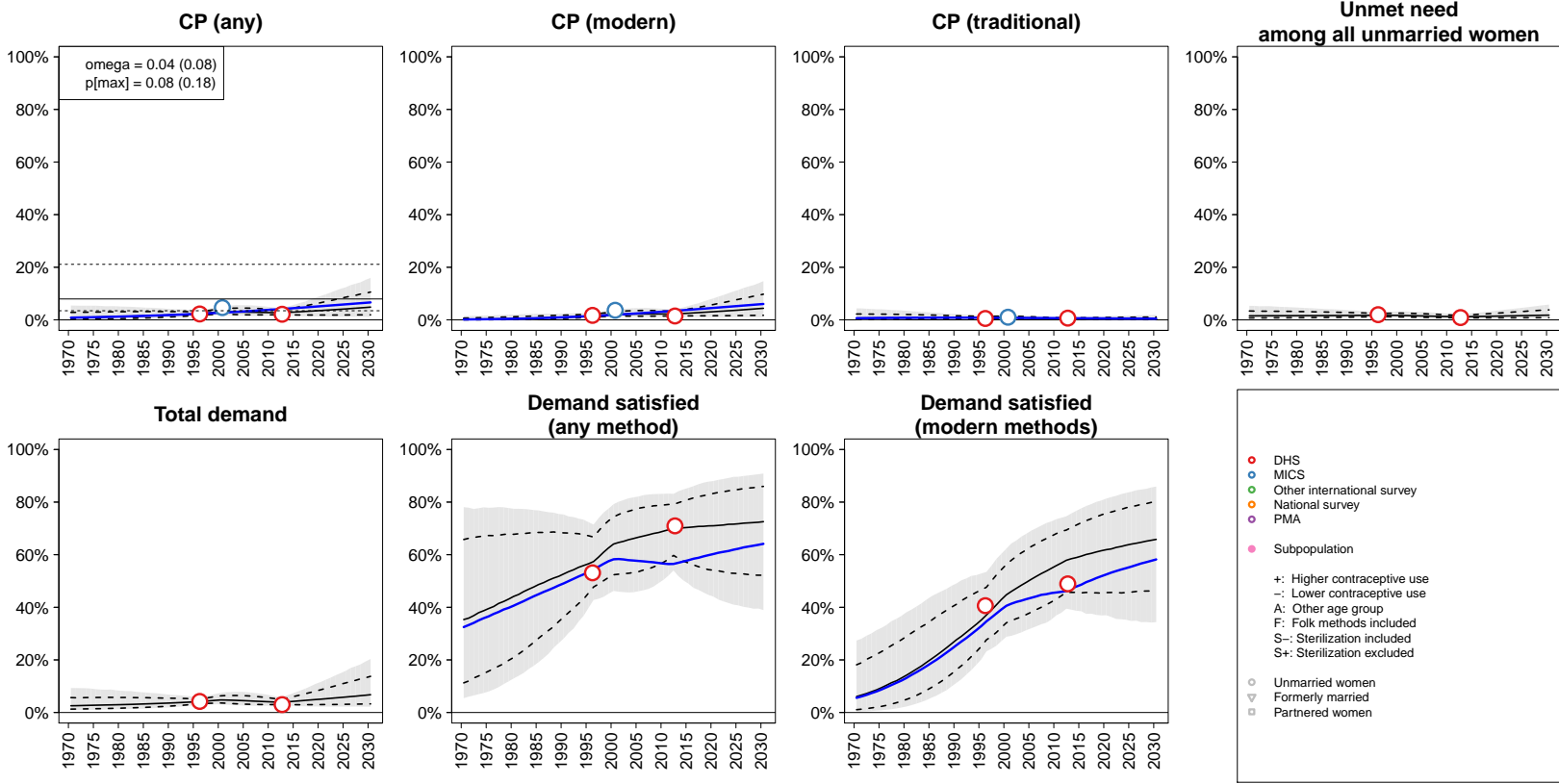
Chad (Middle Africa, SA Group 1) --- Unmarried / Not In-Union



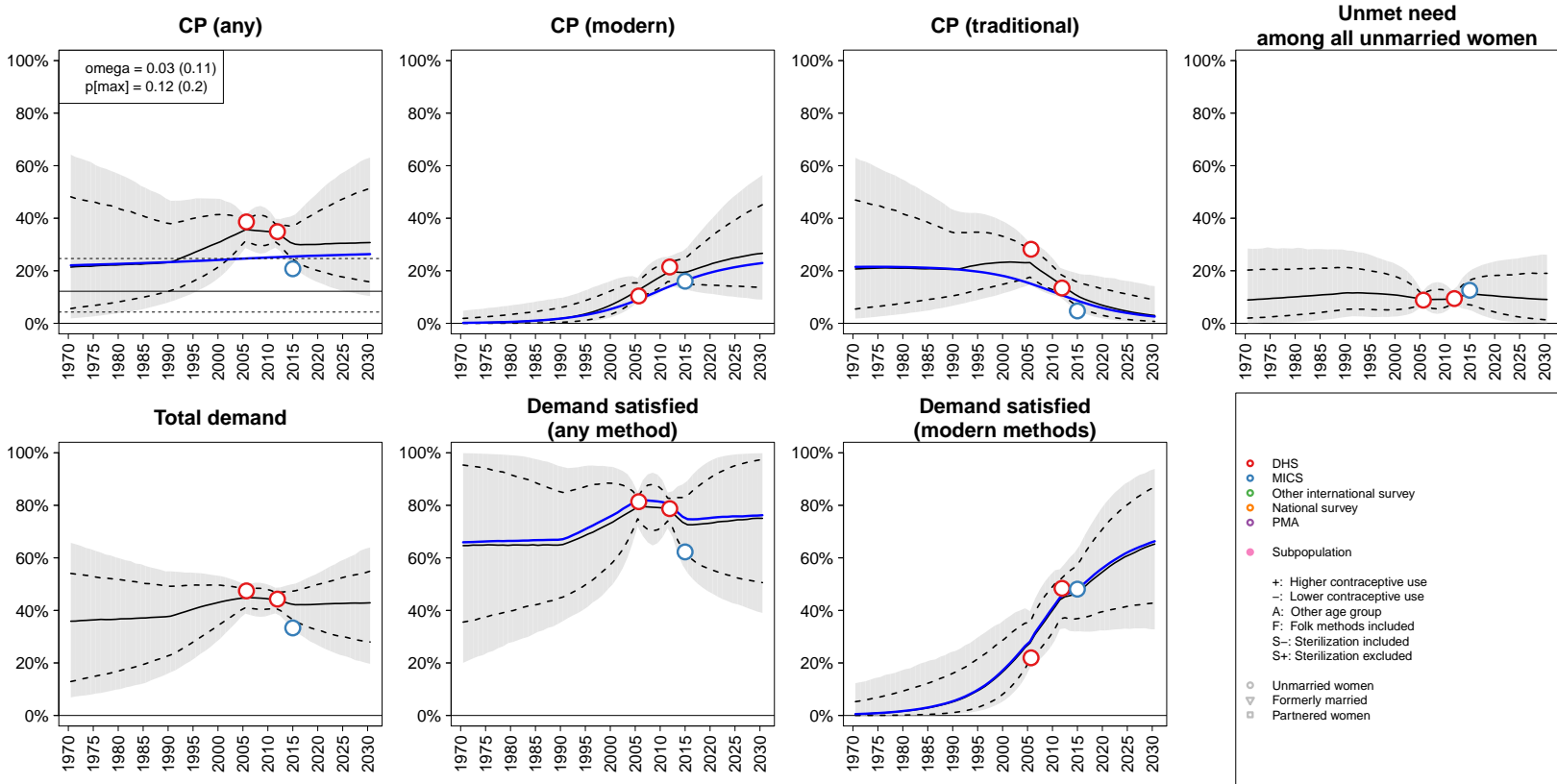
Colombia (South America, SA Group 1) — Unmarried / Not In-Union



Comoros (Eastern Africa, SA Group 1) ---- Unmarried / Not In-Union

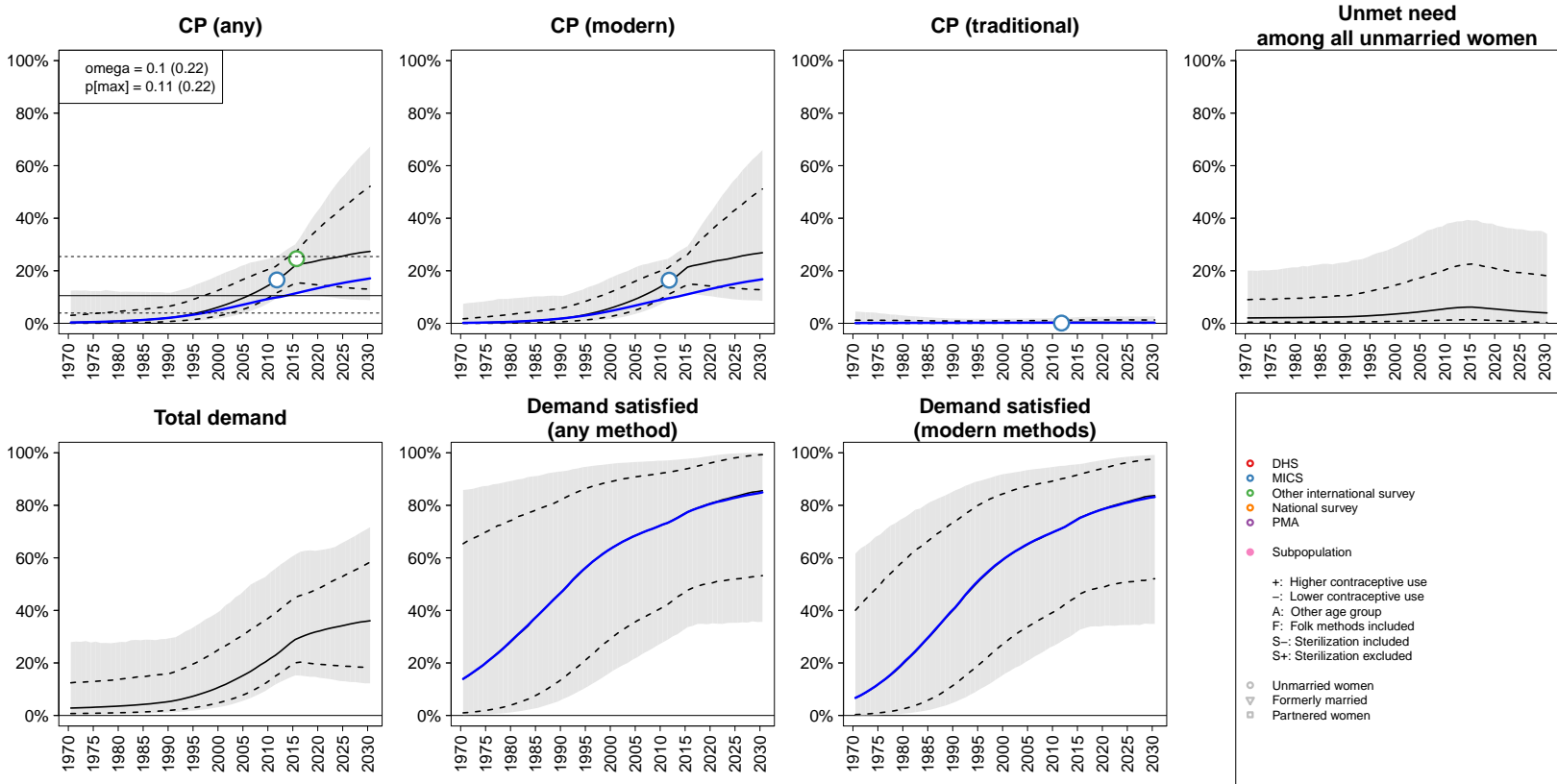


Congo (Middle Africa, SA Group 1) --- Unmarried / Not In-Union

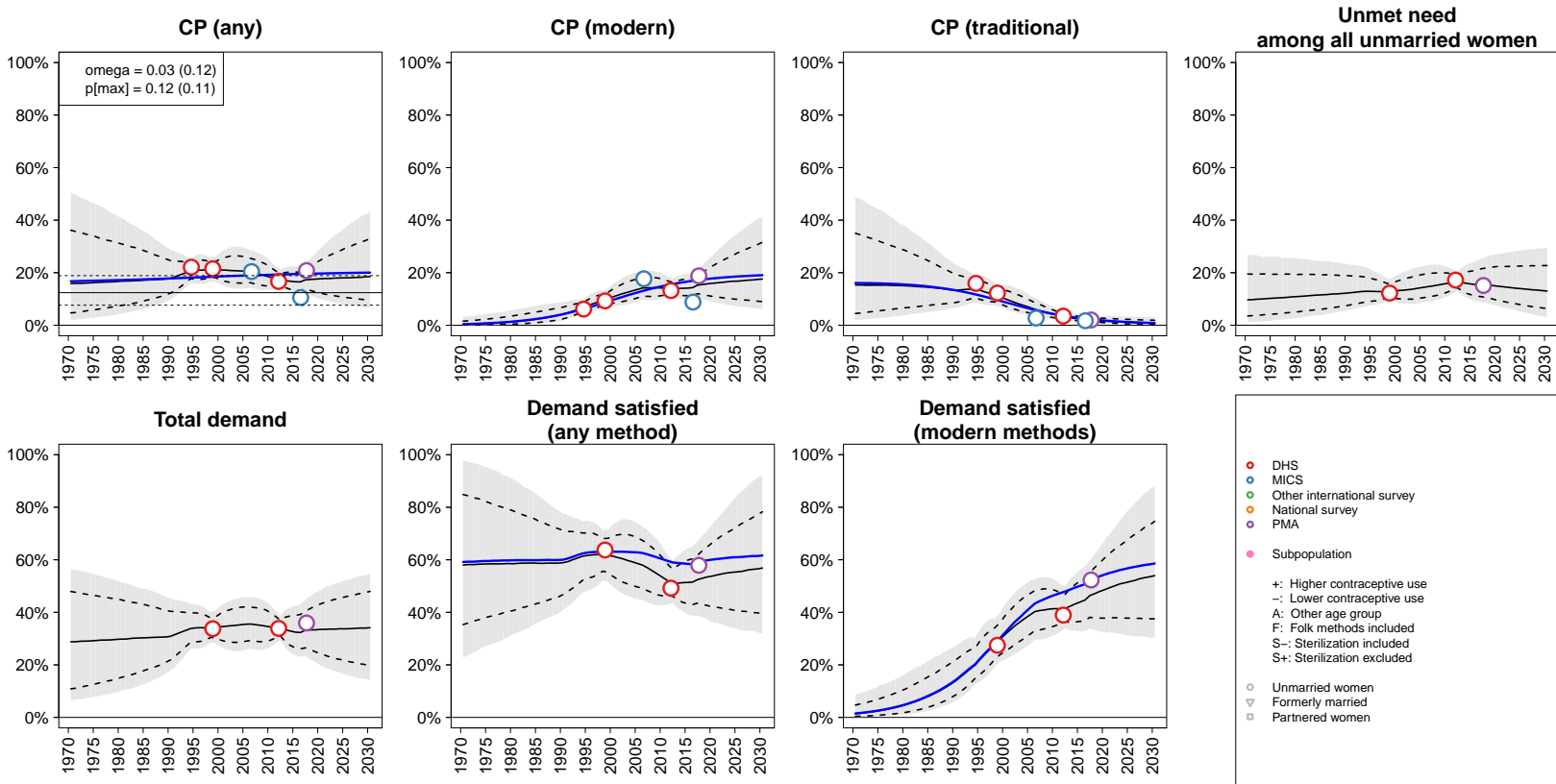




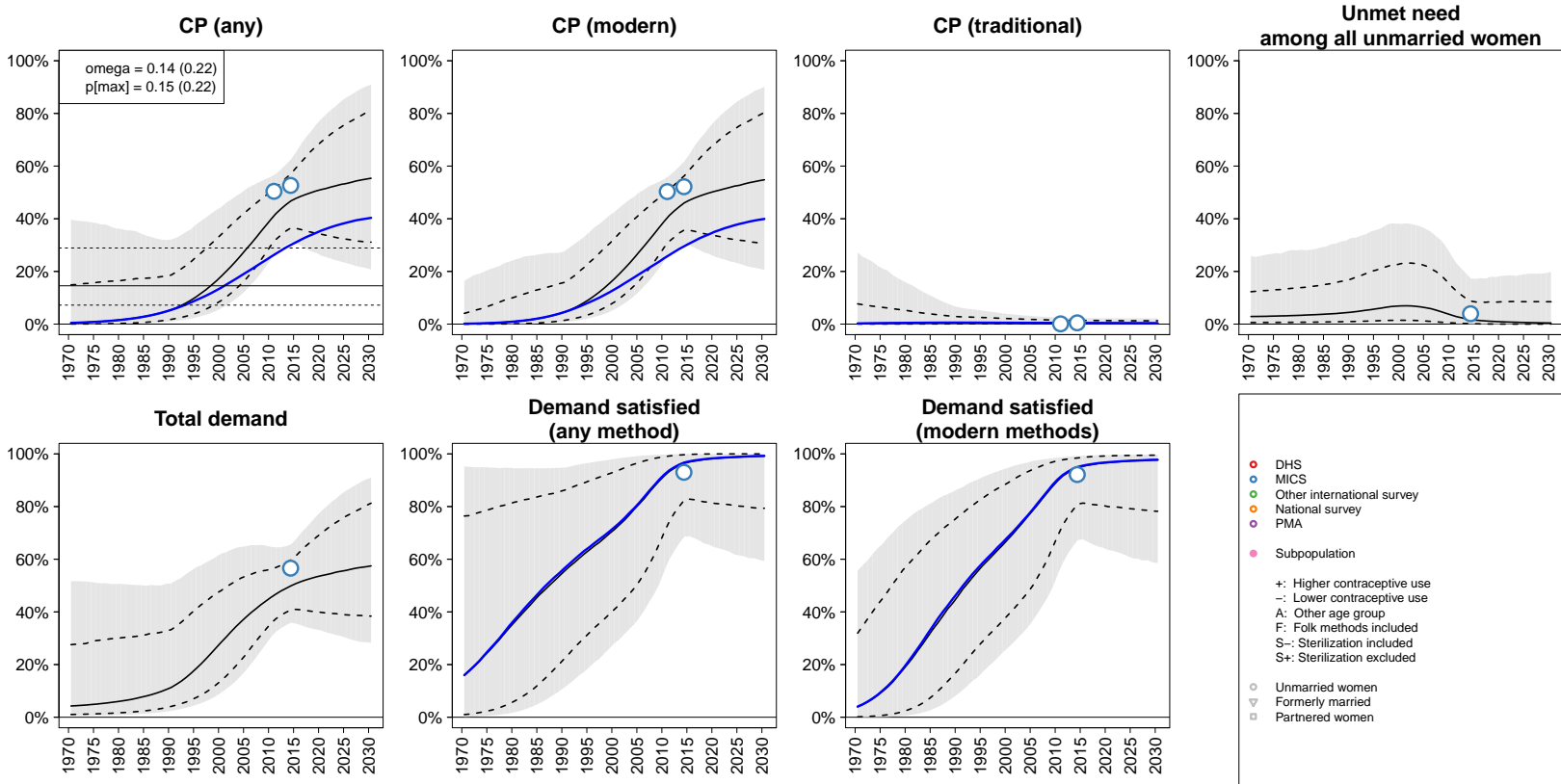
Costa Rica (Central America, SA Group 1) --- Unmarried / Not In-Union



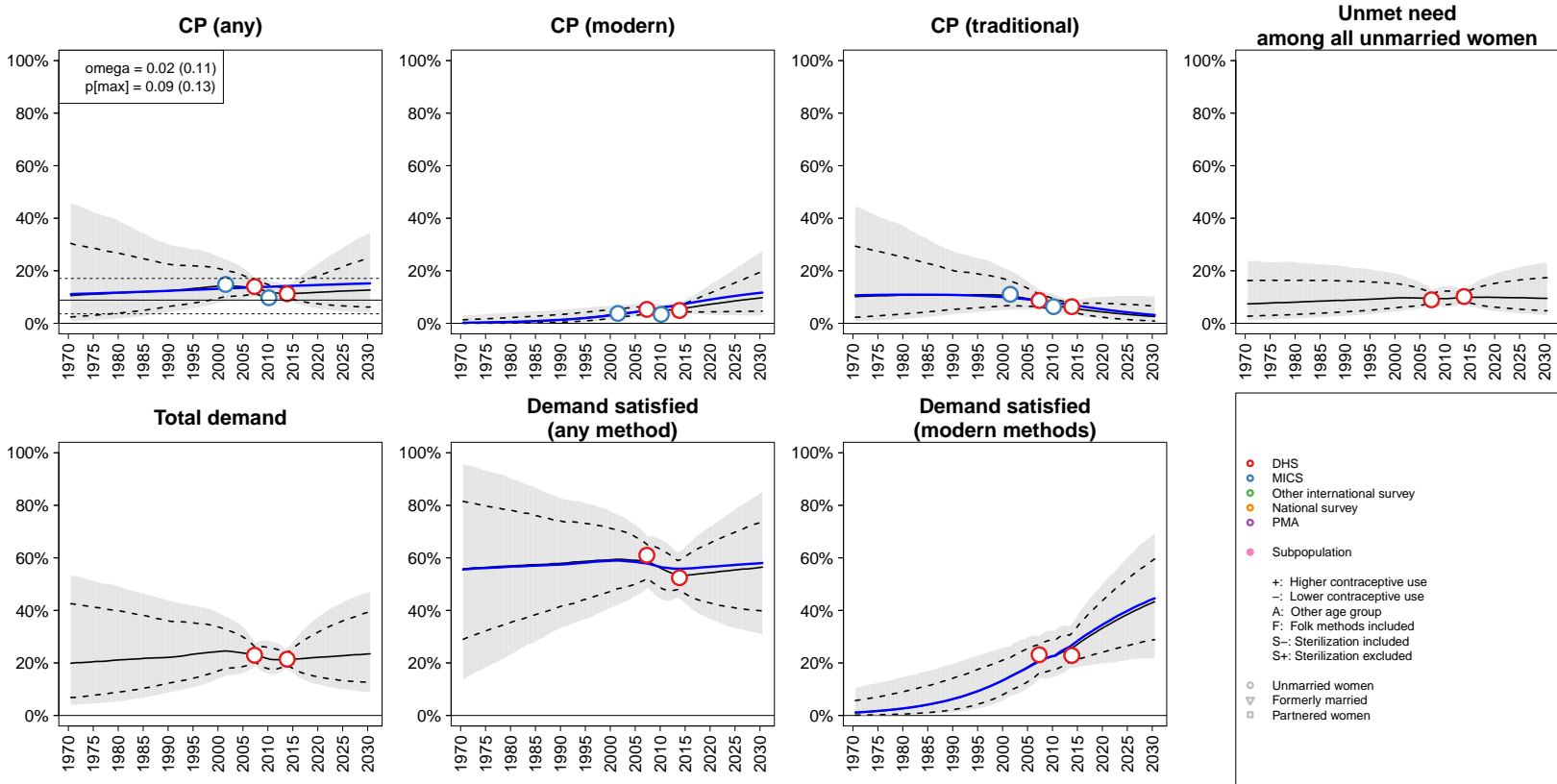
Côte d'Ivoire (Western Africa, SA Group 1) --- Unmarried / Not In-Union



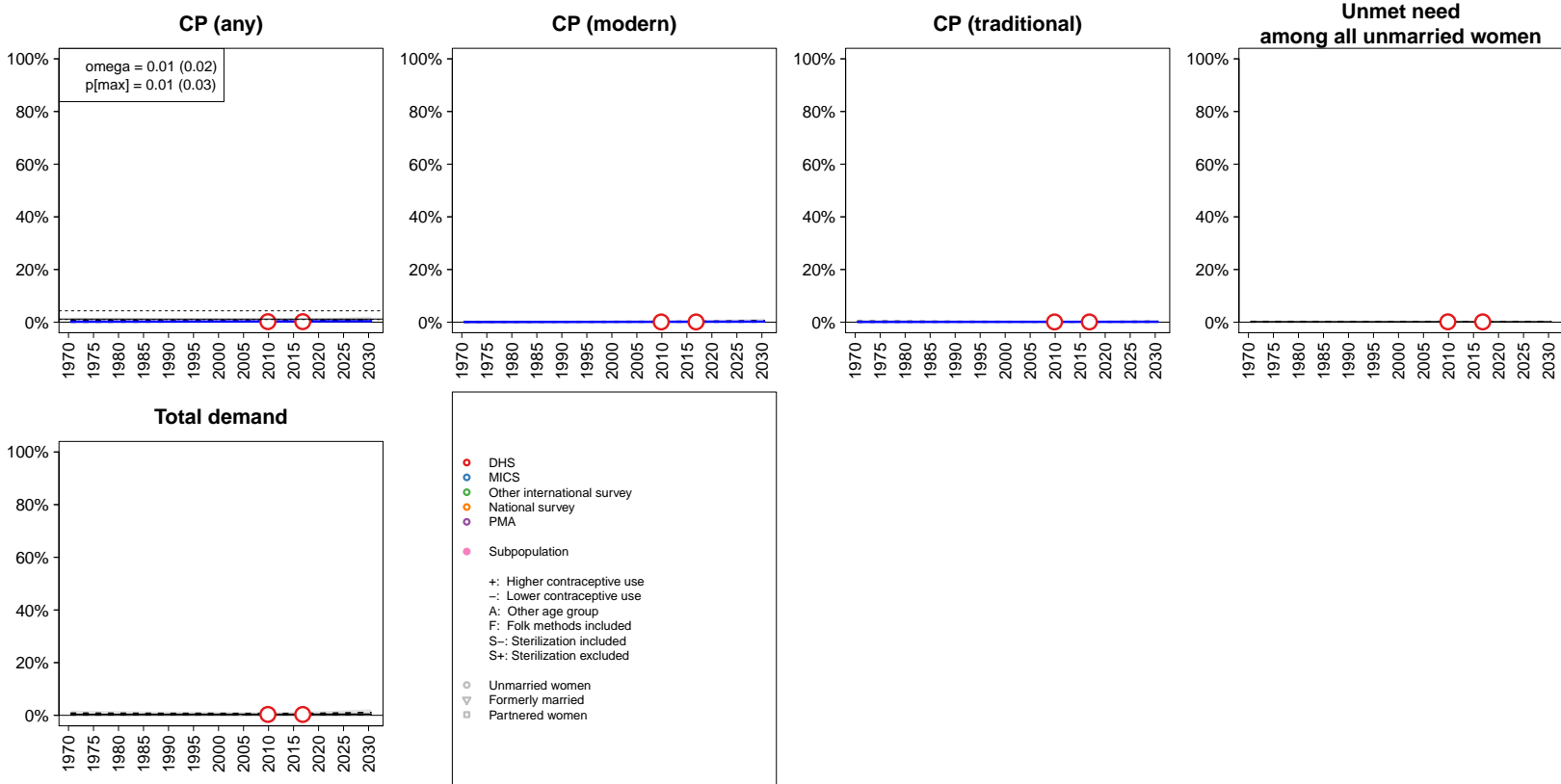
Cuba (Caribbean, SA Group 1) --- Unmarried / Not In-Union



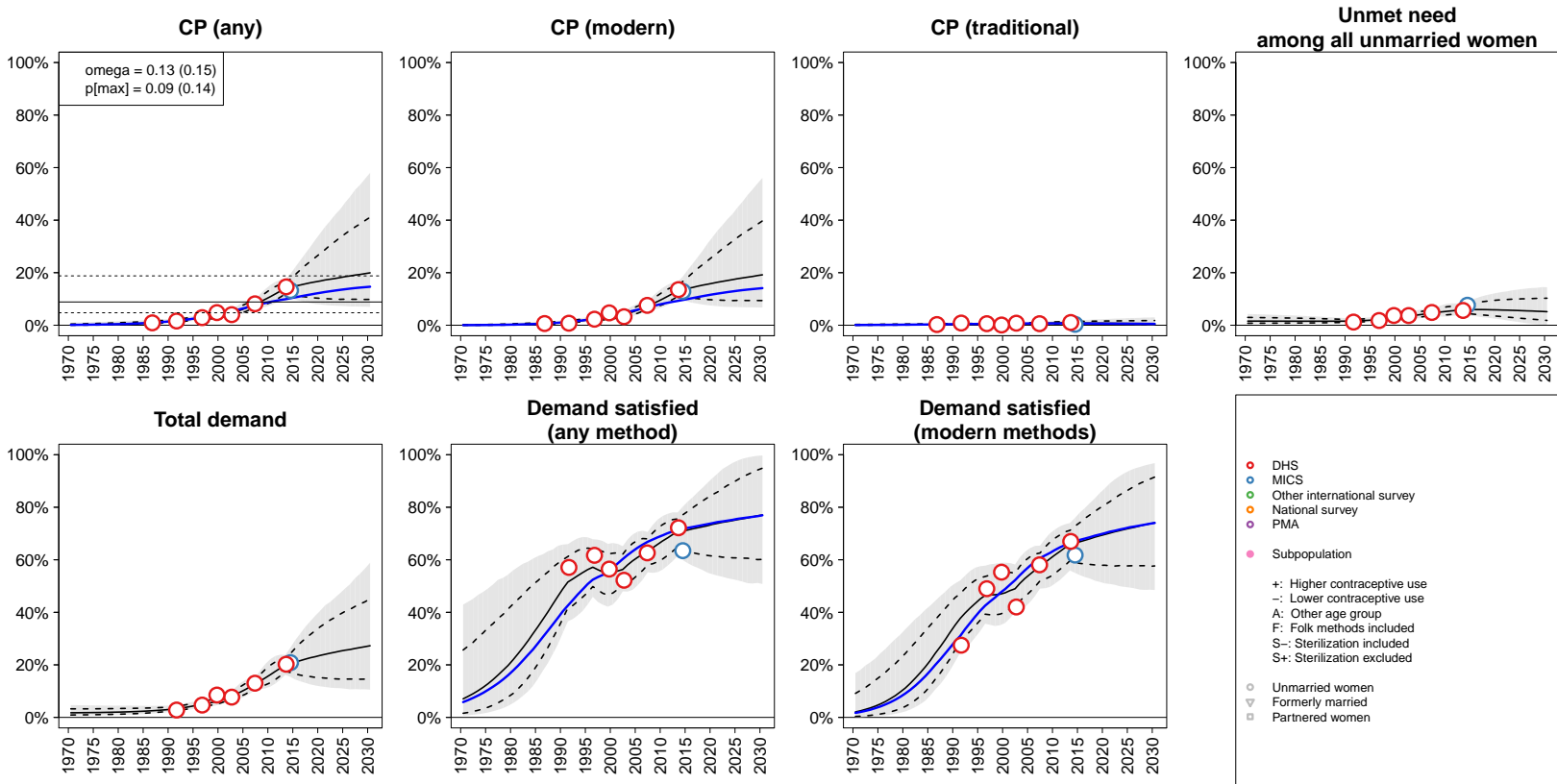
Democratic Rep. of the Congo (Middle Africa, SA Group 1) ---- Unmarried / Not In-Union



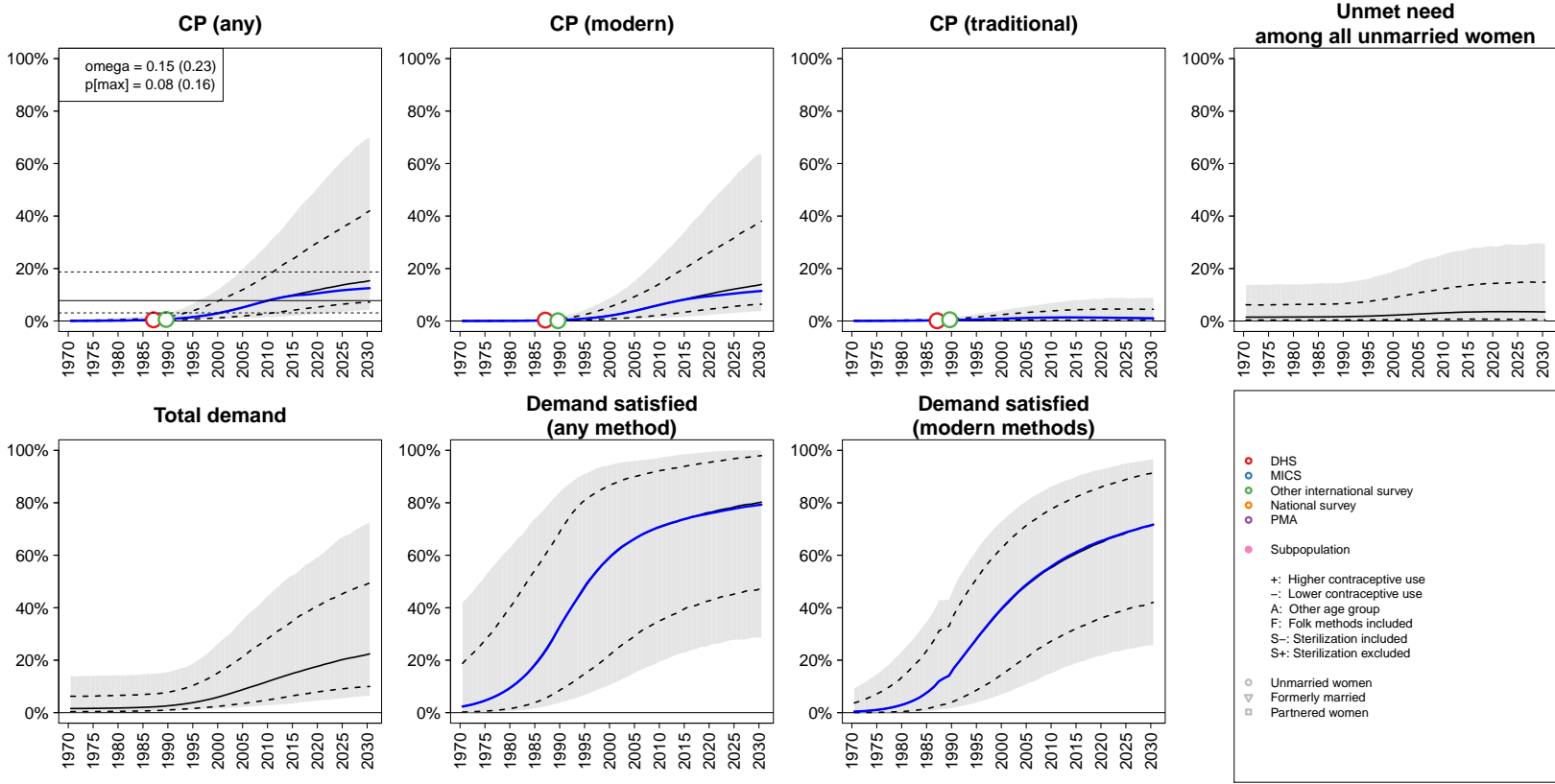
Democratic Republic of Timor-Leste (South-eastern Asia, SA Group 0) --- Unmarried / Not In-Union



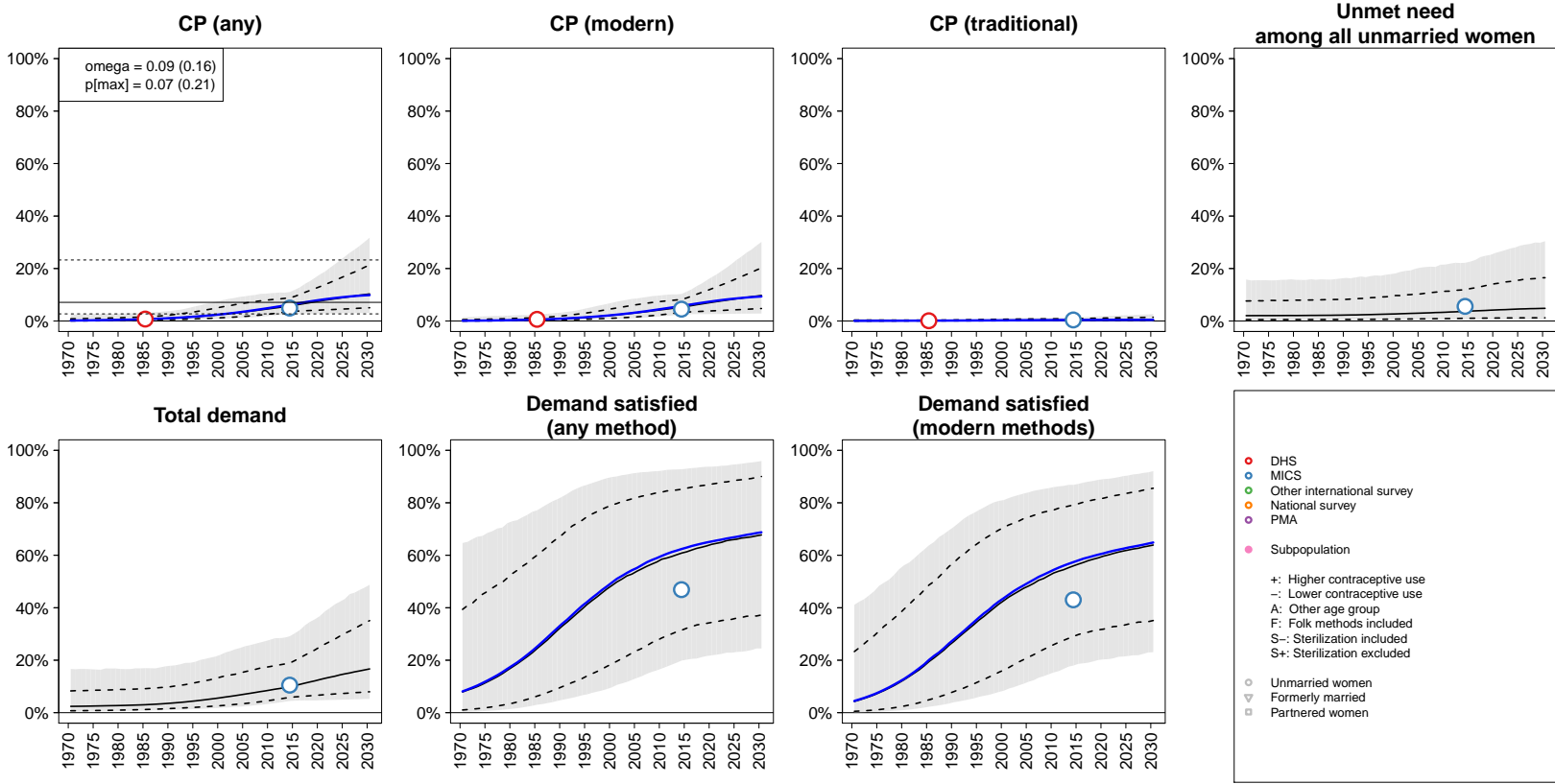
Dominican Republic (Caribbean, SA Group 1) --- Unmarried / Not In-Union



Ecuador (South America, SA Group 1) --- Unmarried / Not In-Union

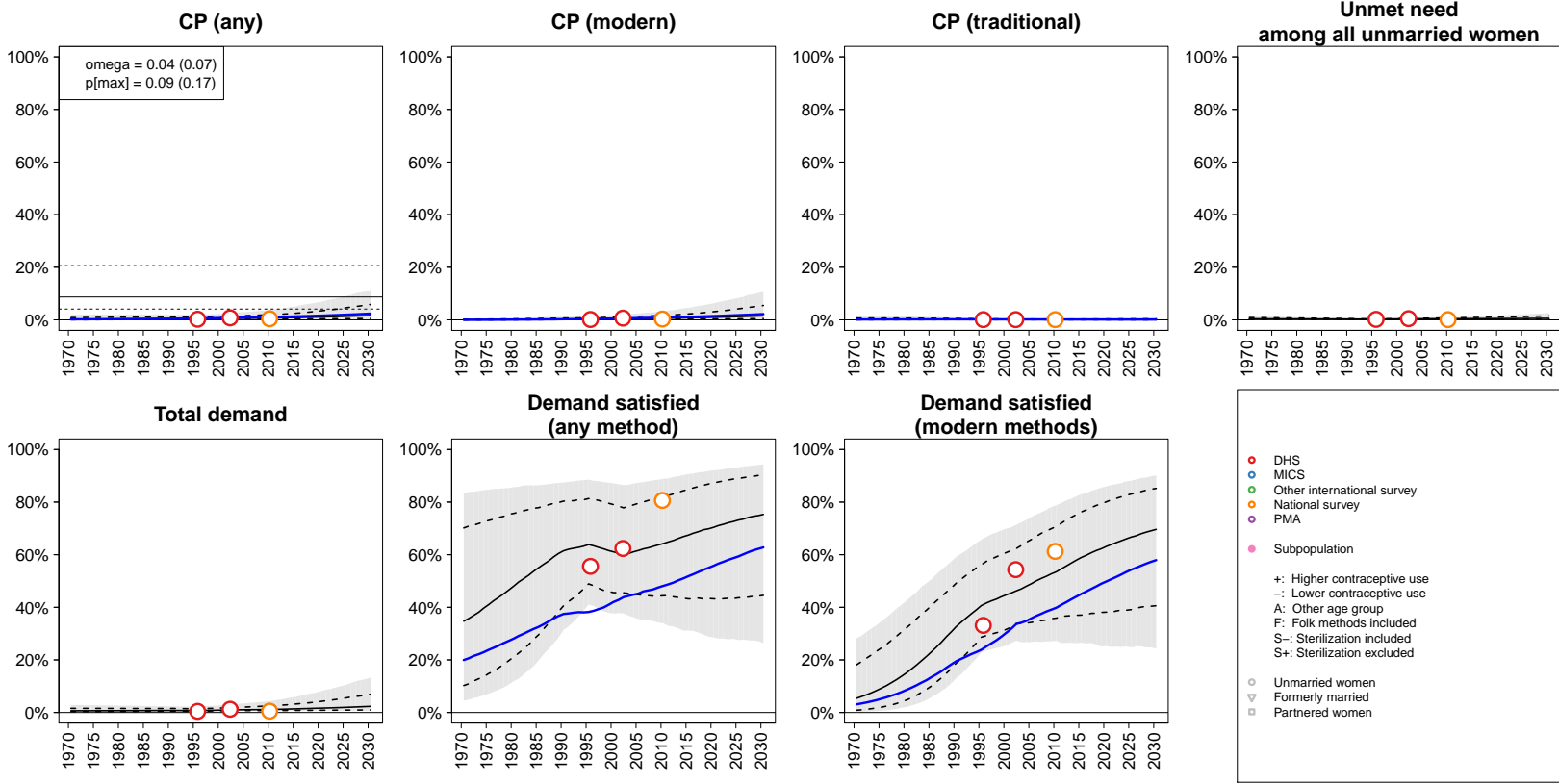


El Salvador (Central America, SA Group 1) --- Unmarried / Not In-Union

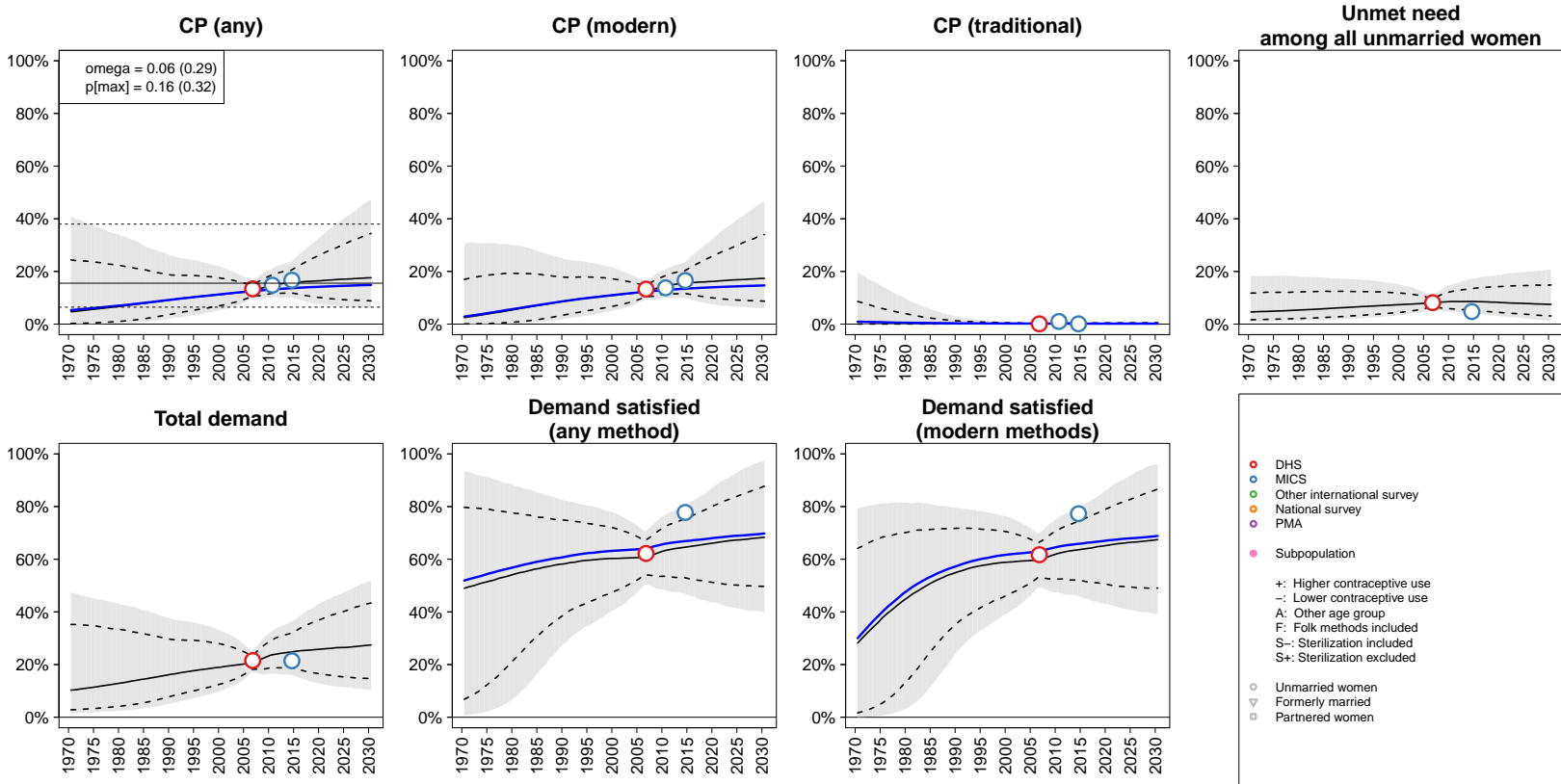




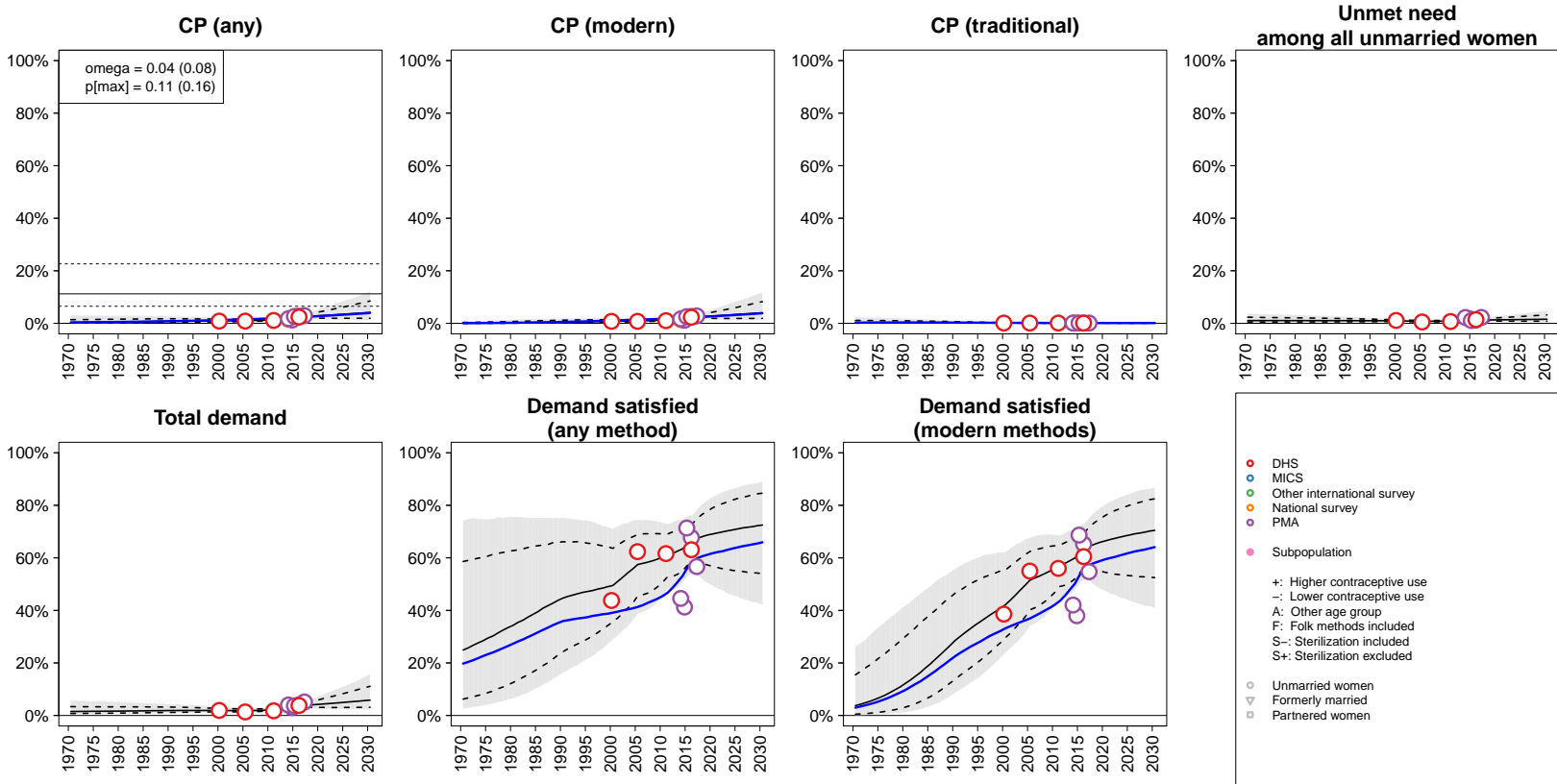
Eritrea (Eastern Africa, SA Group 1) --- Unmarried / Not In-Union



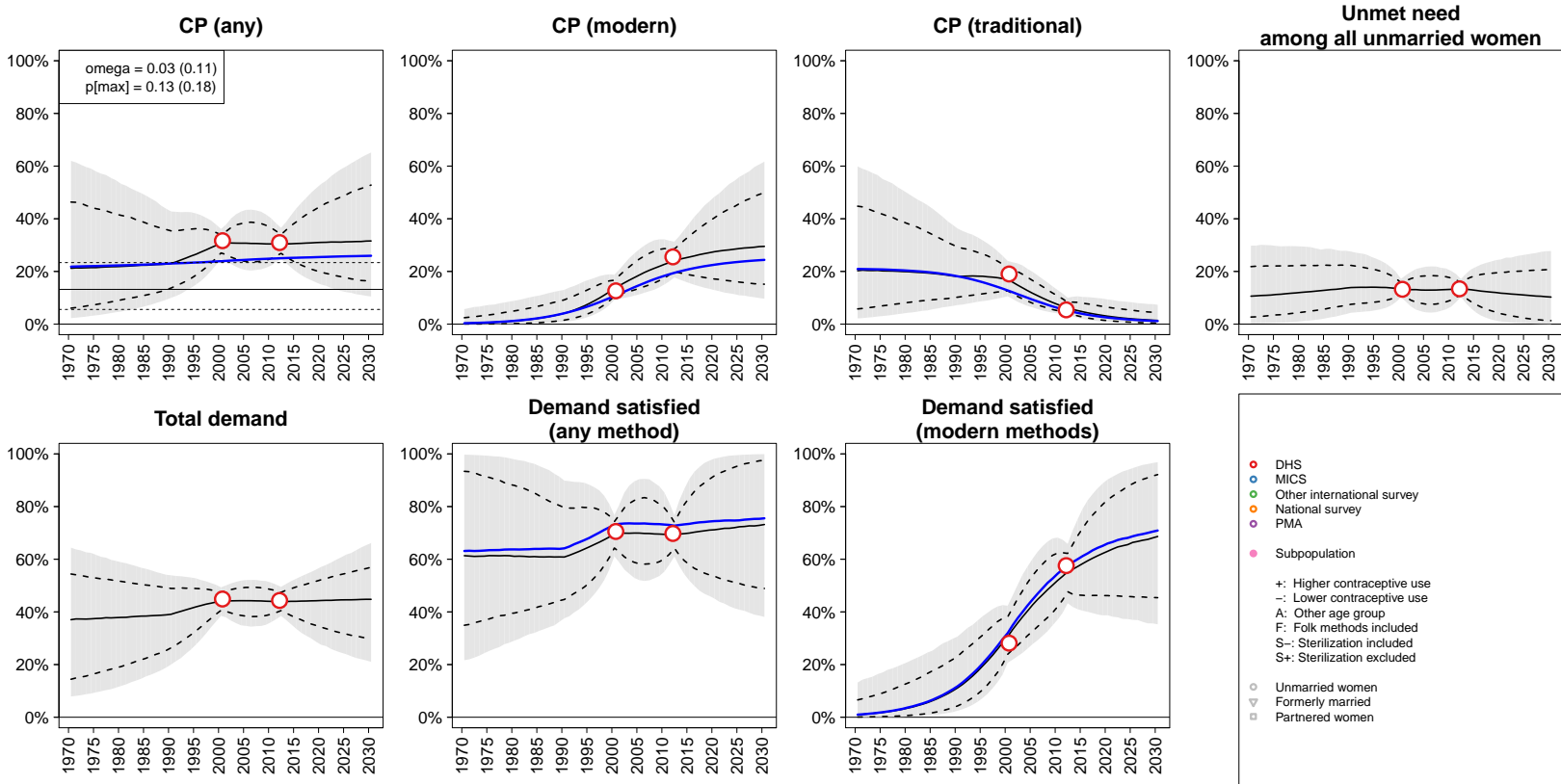
Eswatini (Southern Africa, SA Group 1) --- Unmarried / Not In-Union



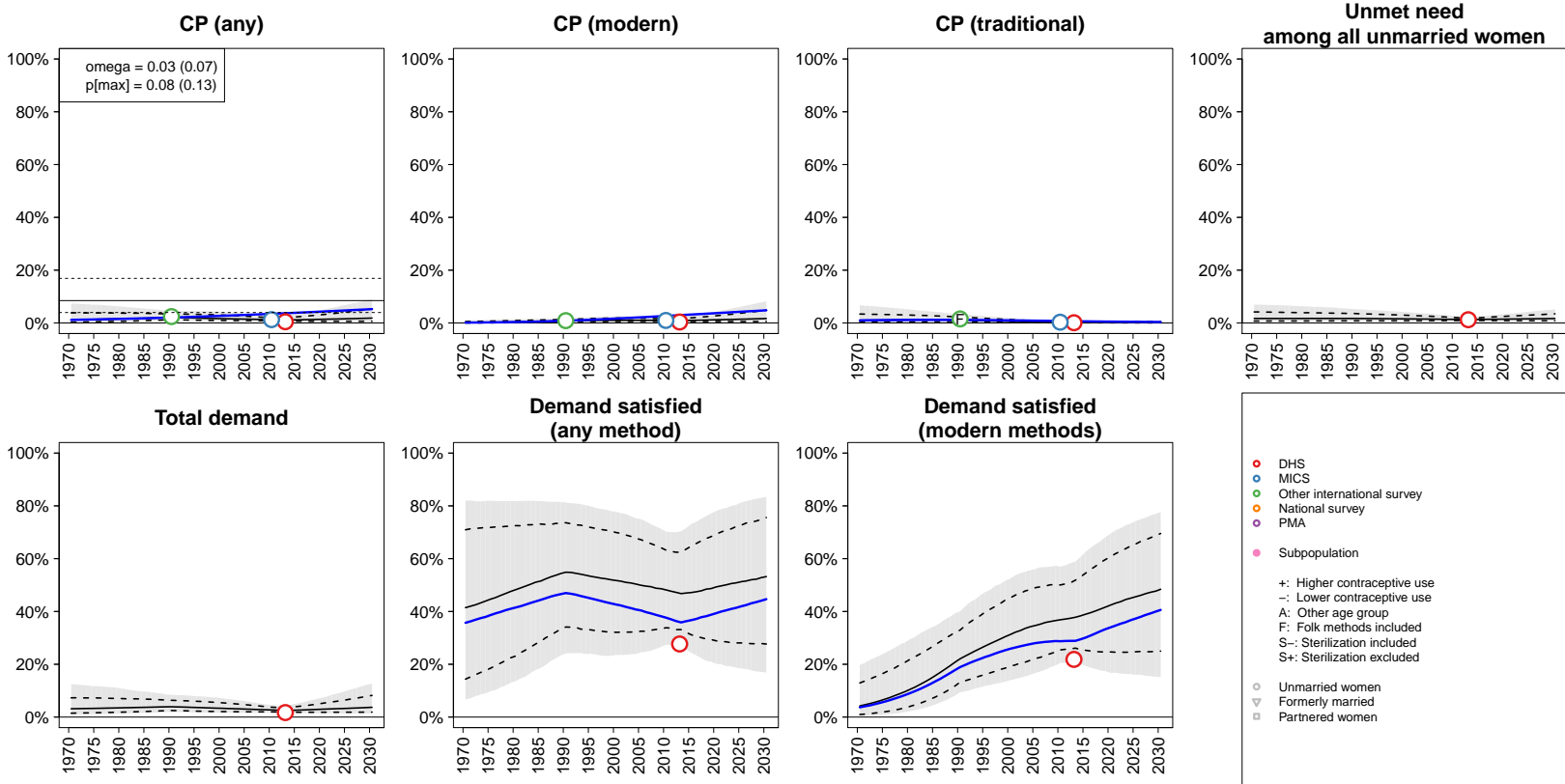
Ethiopia (Eastern Africa, SA Group 1) --- Unmarried / Not In-Union



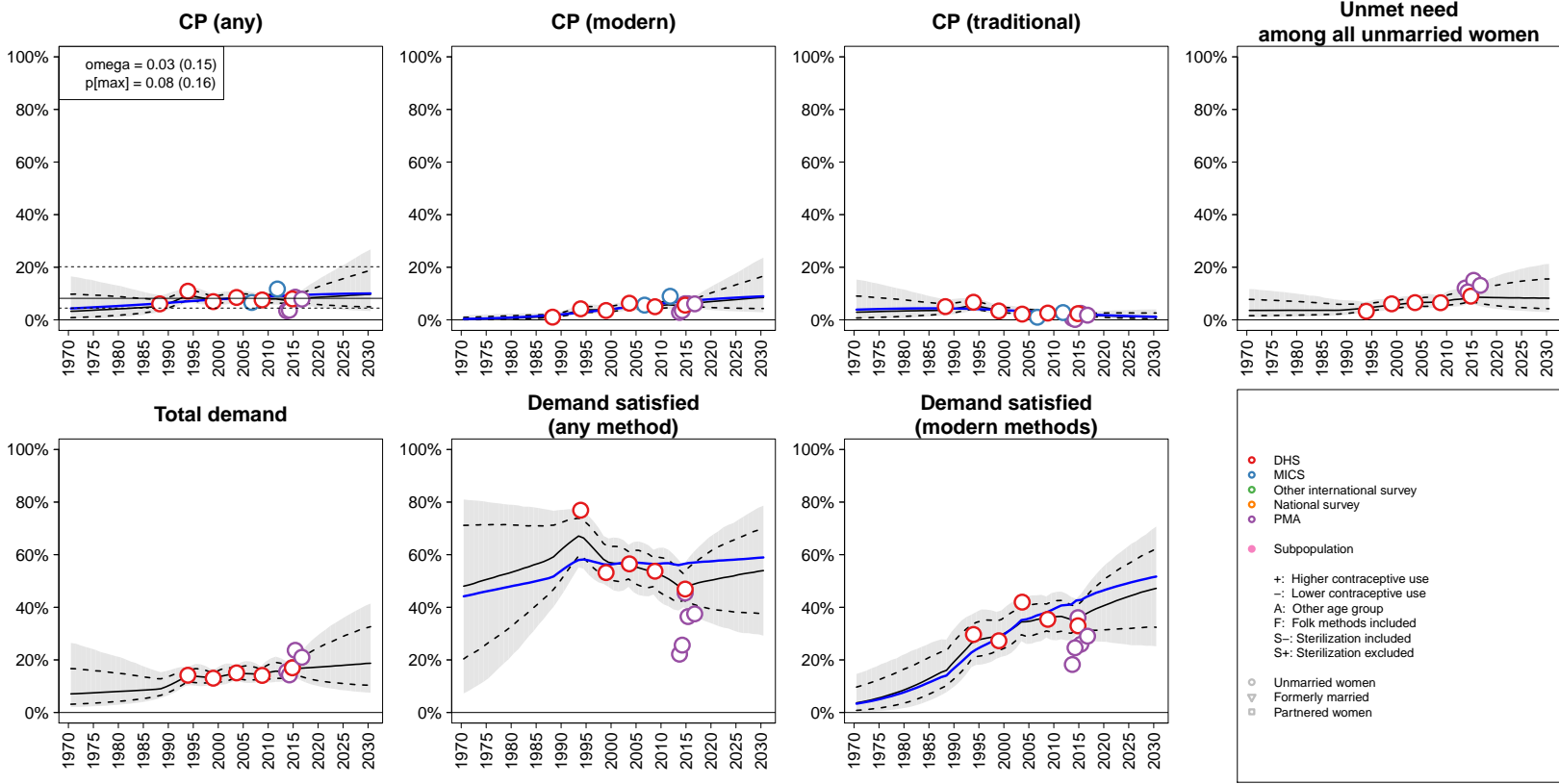
Gabon (Middle Africa, SA Group 1) --- Unmarried / Not In-Union



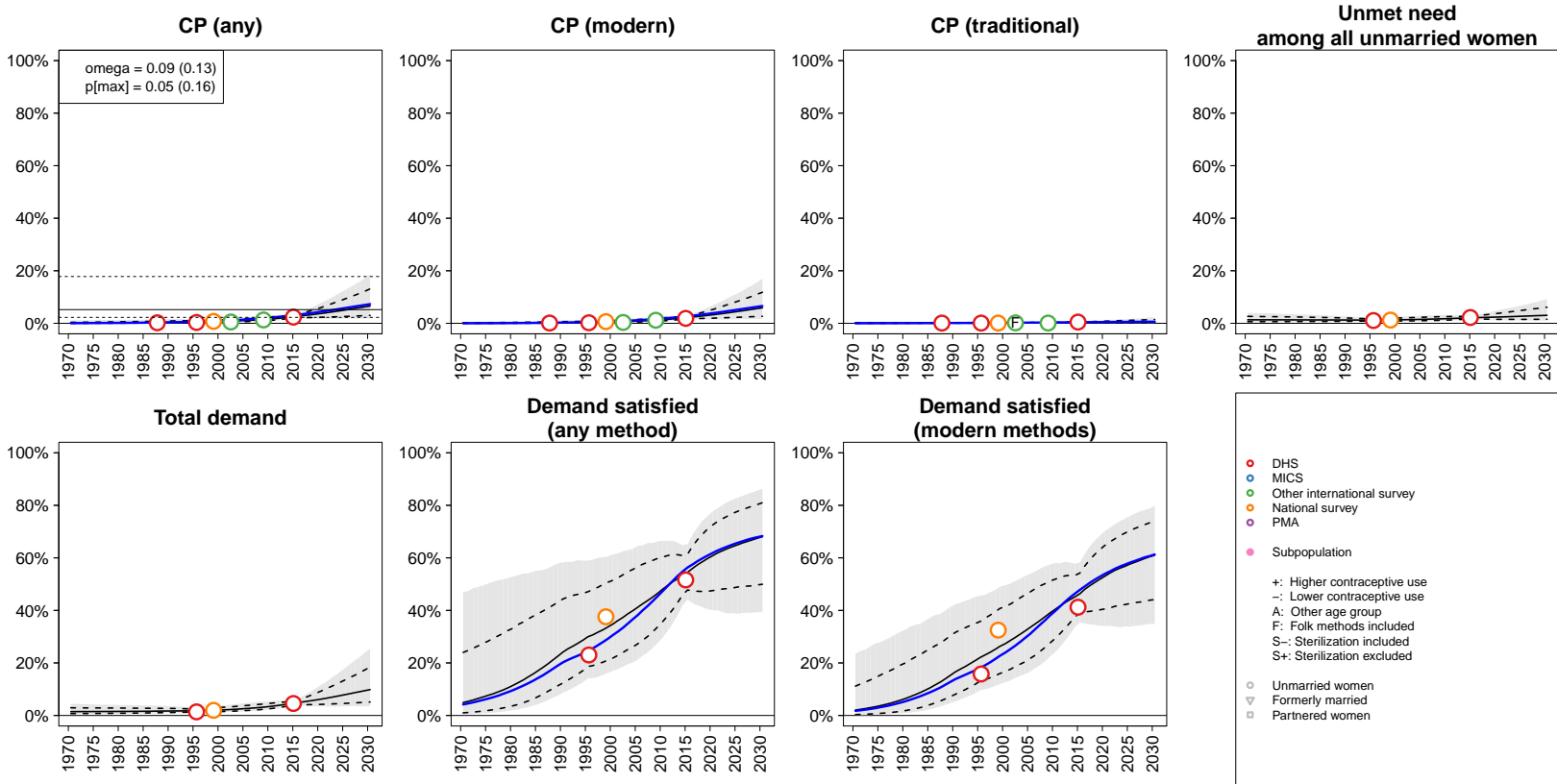
Gambia (Western Africa, SA Group 1) --- Unmarried / Not In-Union



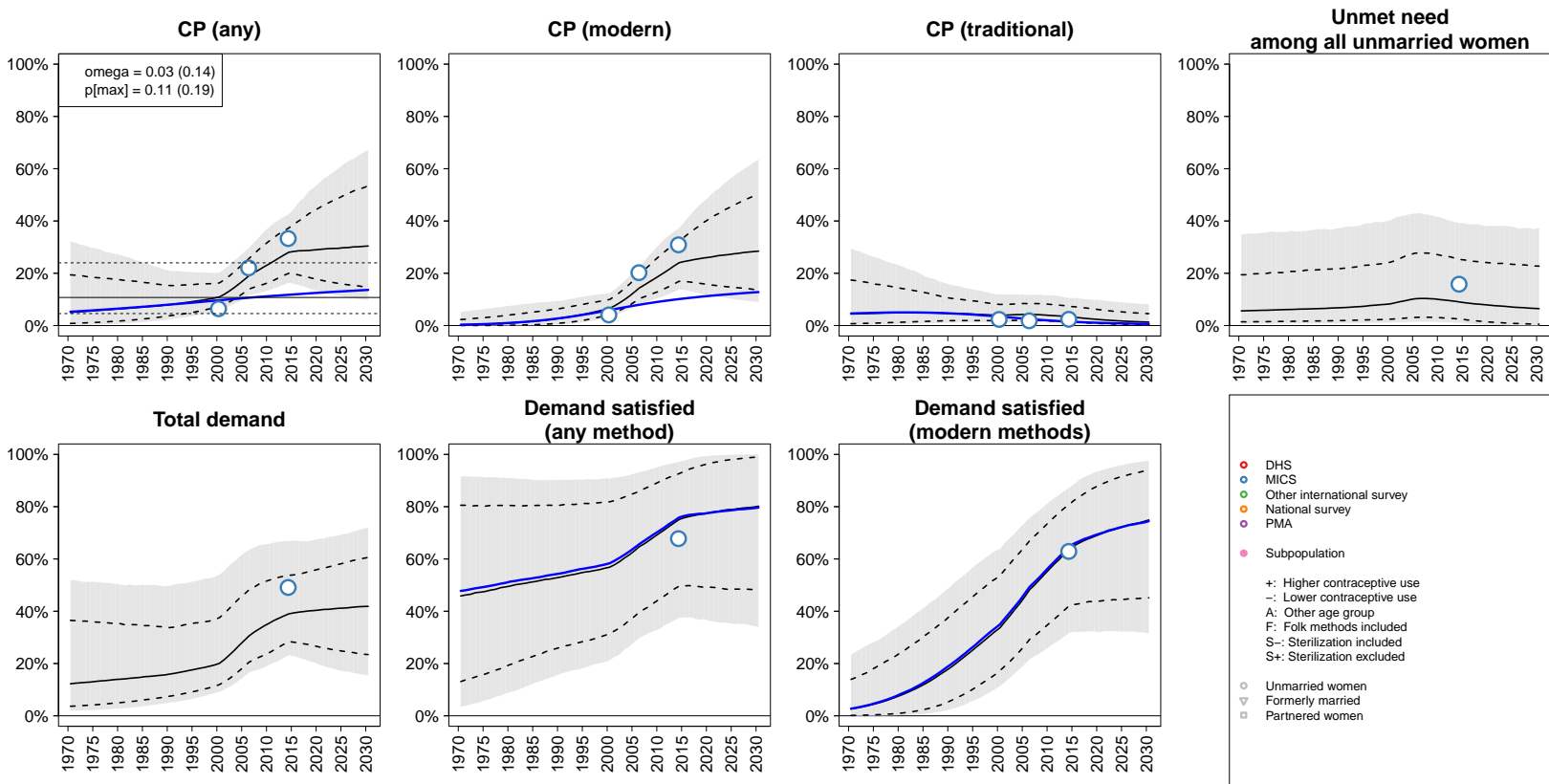
Ghana (Western Africa, SA Group 1) — Unmarried / Not In-Union



Guatemala (Central America, SA Group 1) --- Unmarried / Not In-Union

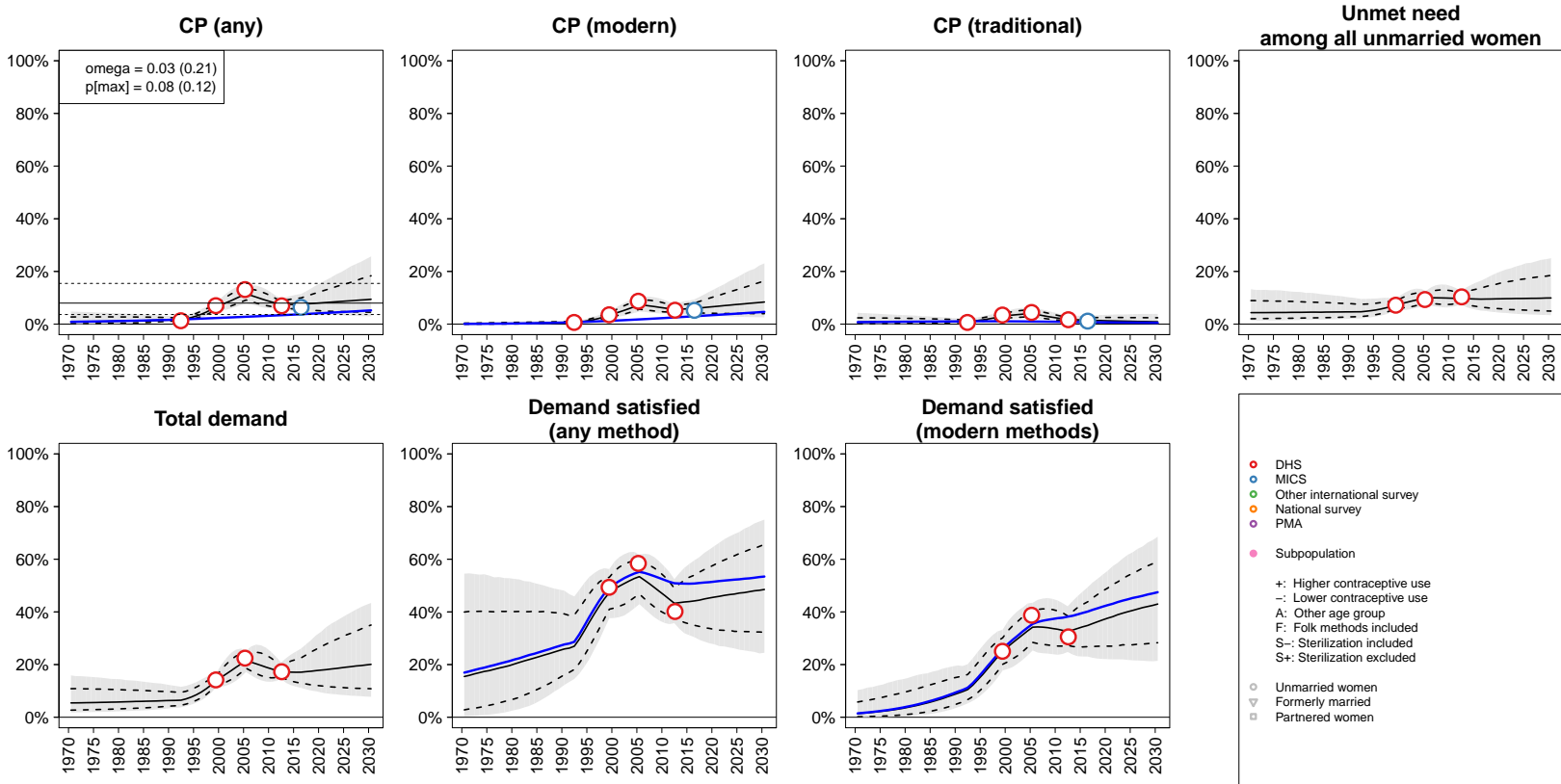


Guinea-Bissau (Western Africa, SA Group 1) --- Unmarried / Not In-Union

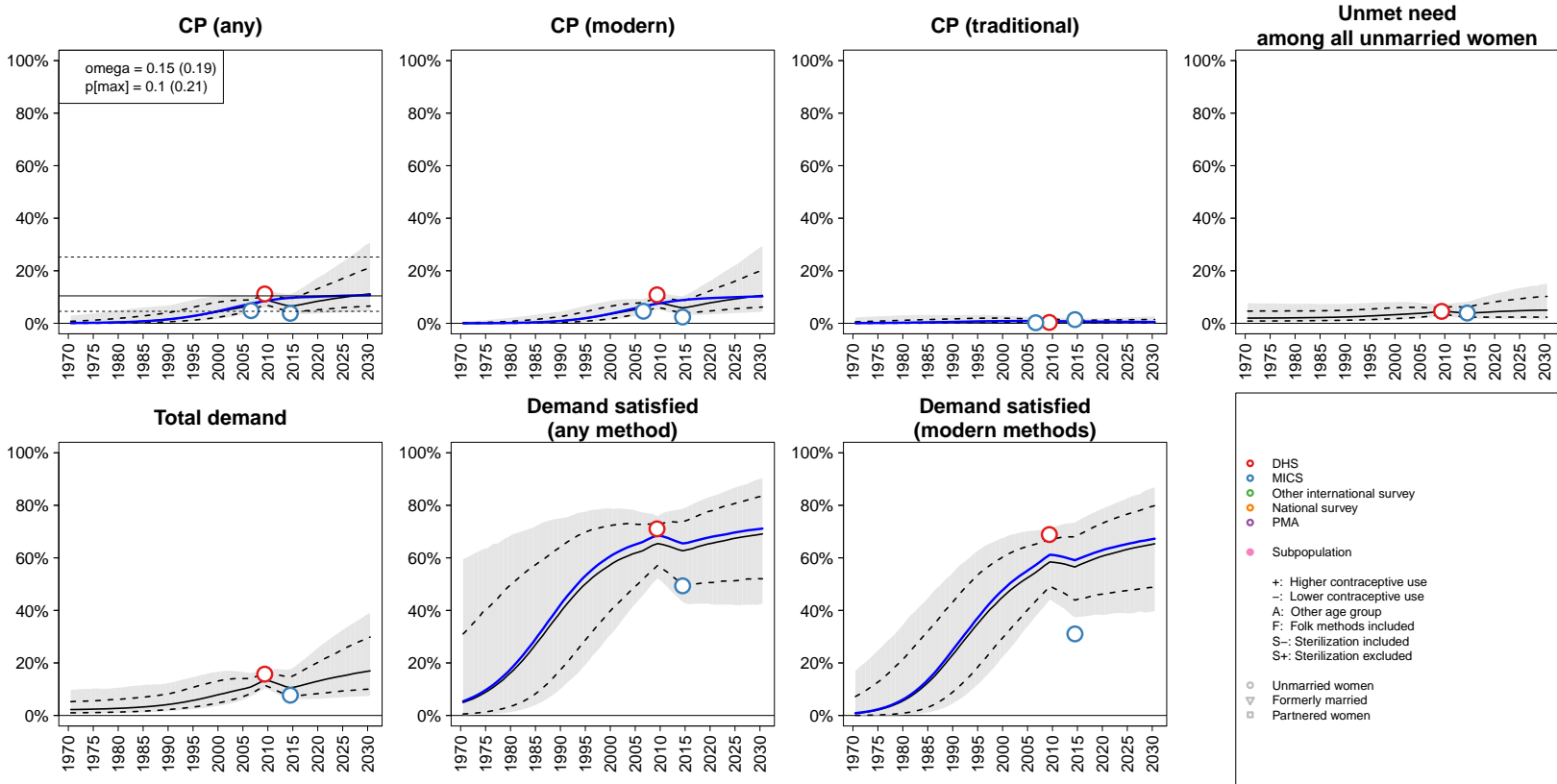




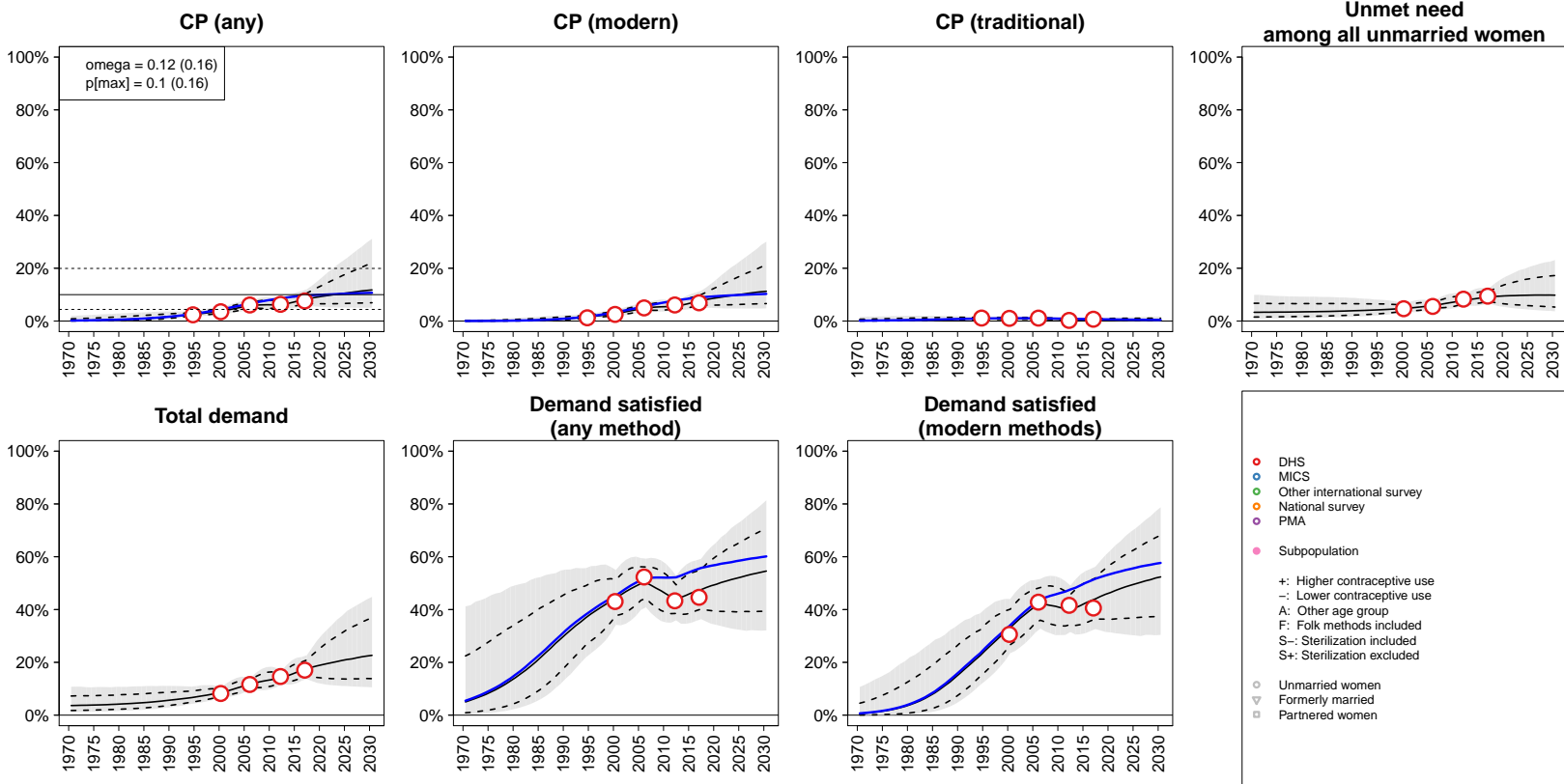
Guinea (Western Africa, SA Group 1) --- Unmarried / Not In-Union



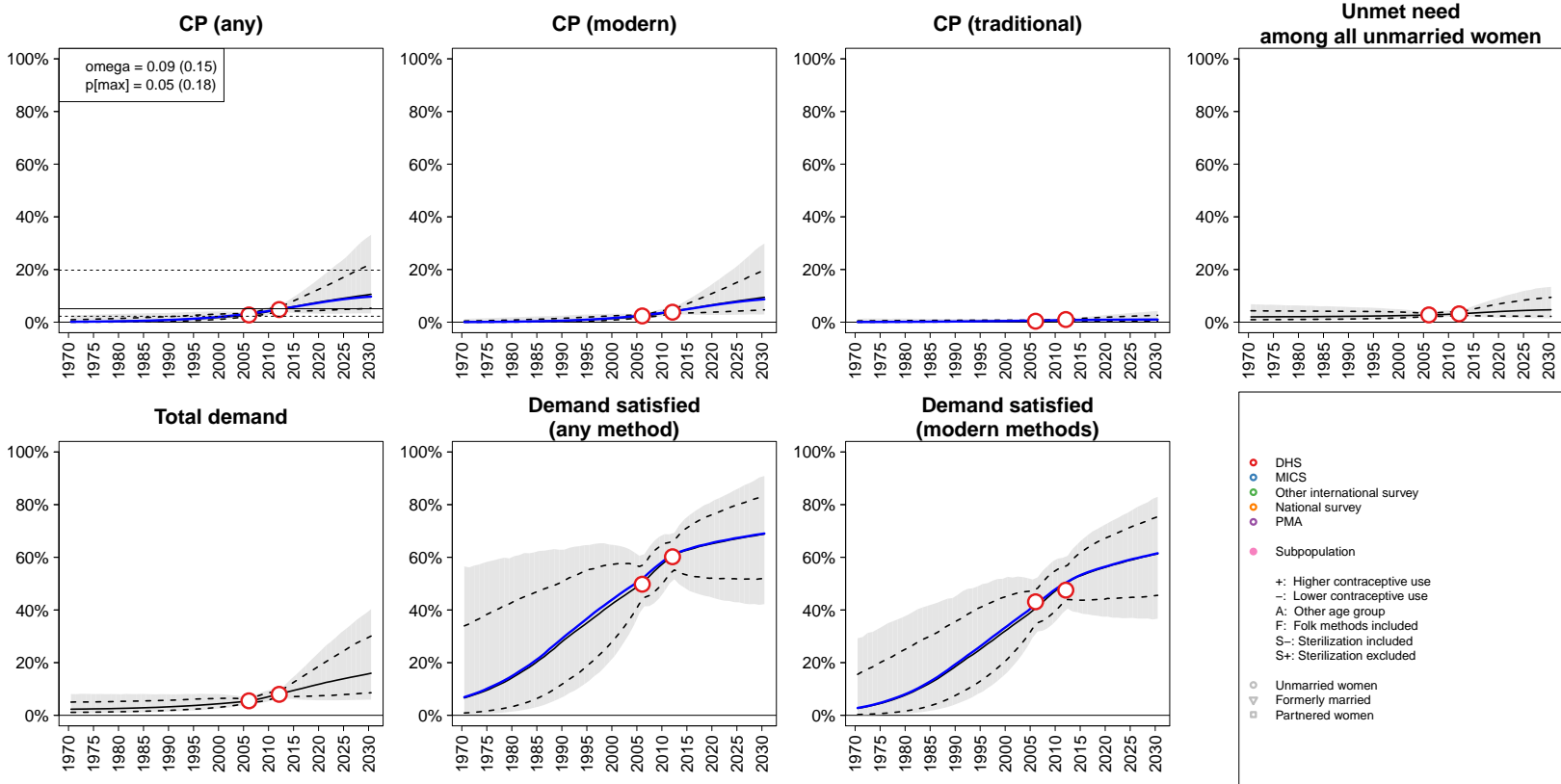
Guyana (South America, SA Group 1) --- Unmarried / Not In-Union



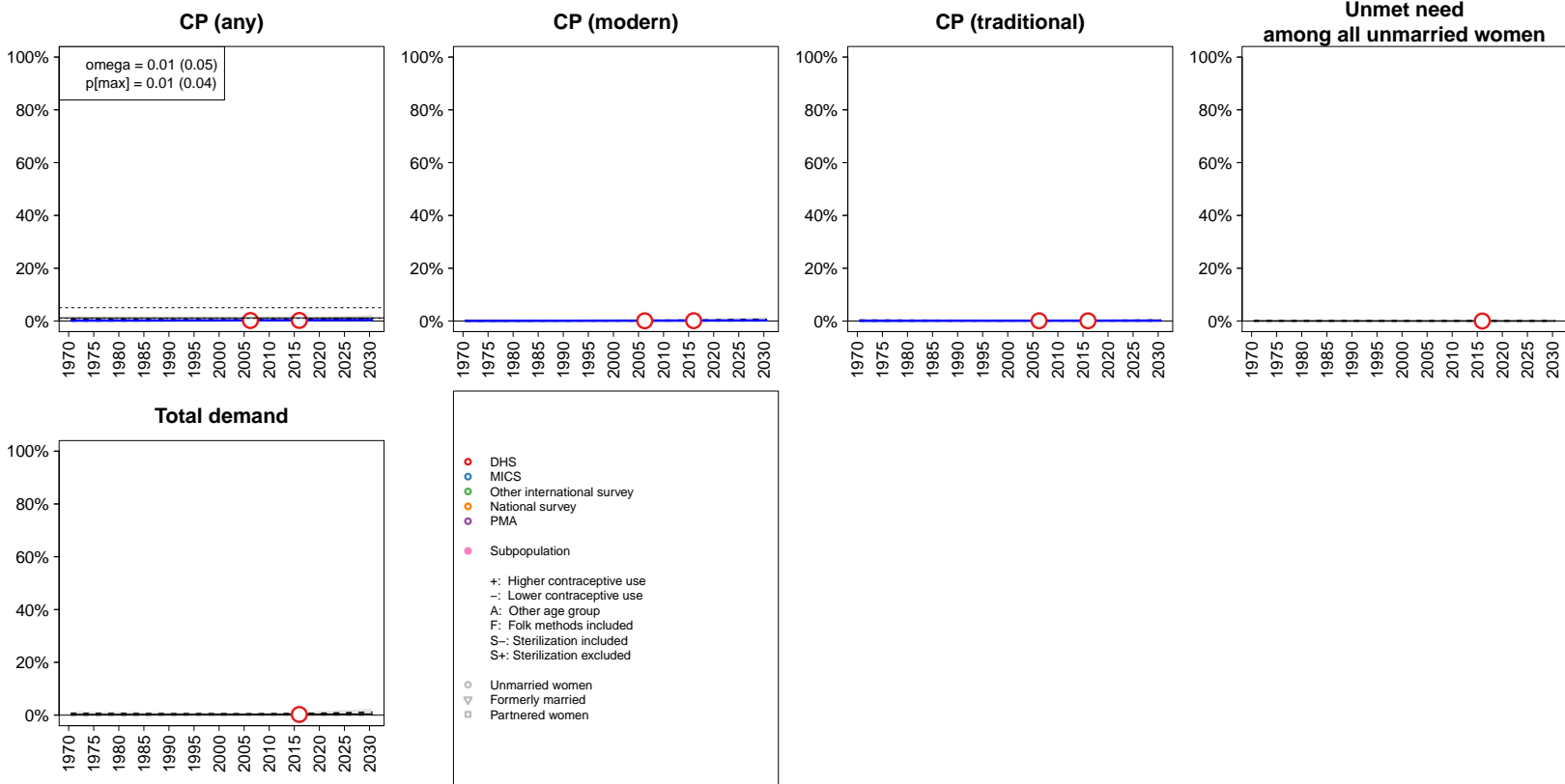
Haiti (Caribbean, SA Group 1) --- Unmarried / Not In-Union



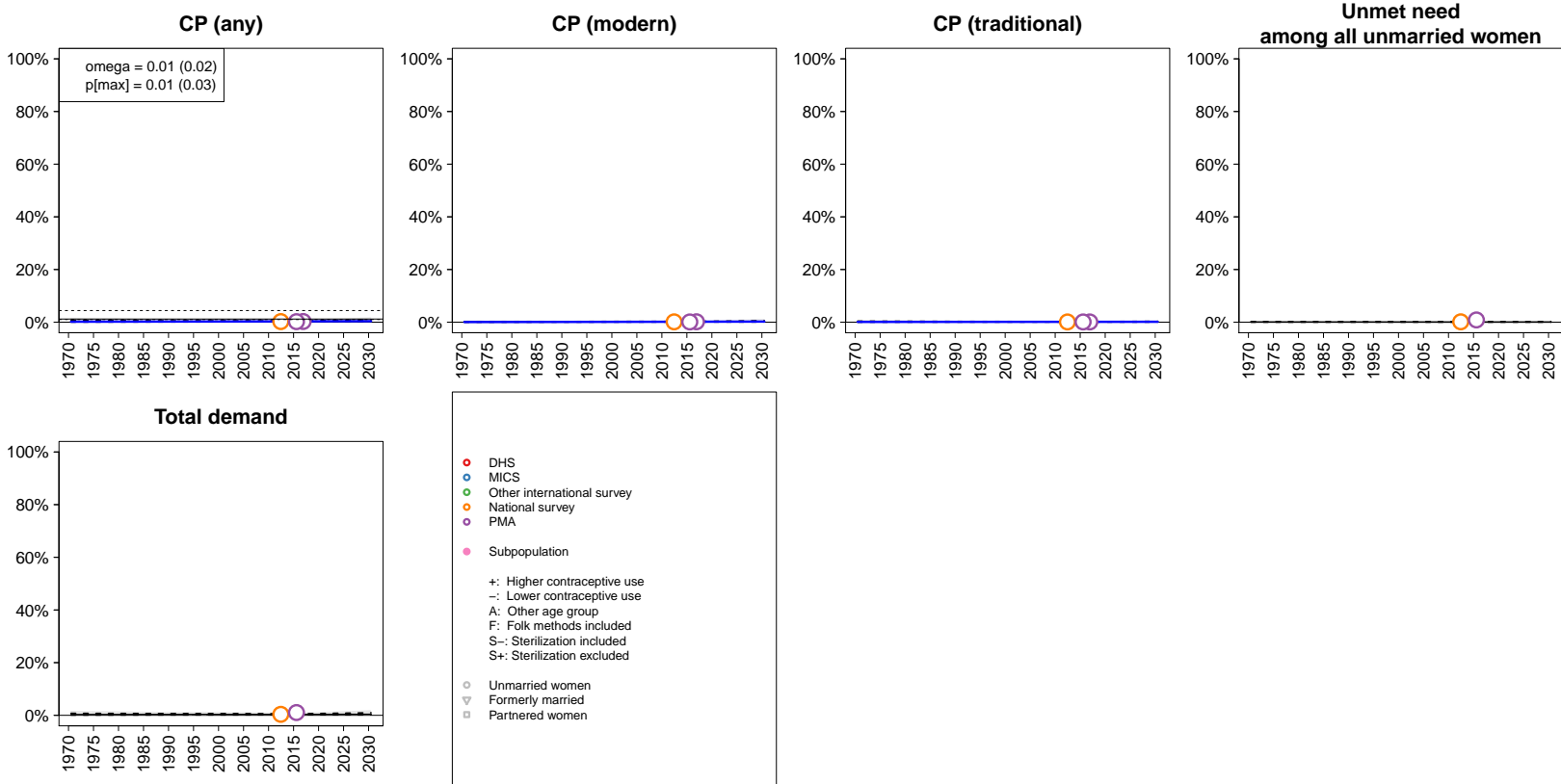
Honduras (Central America, SA Group 1) --- Unmarried / Not In-Union



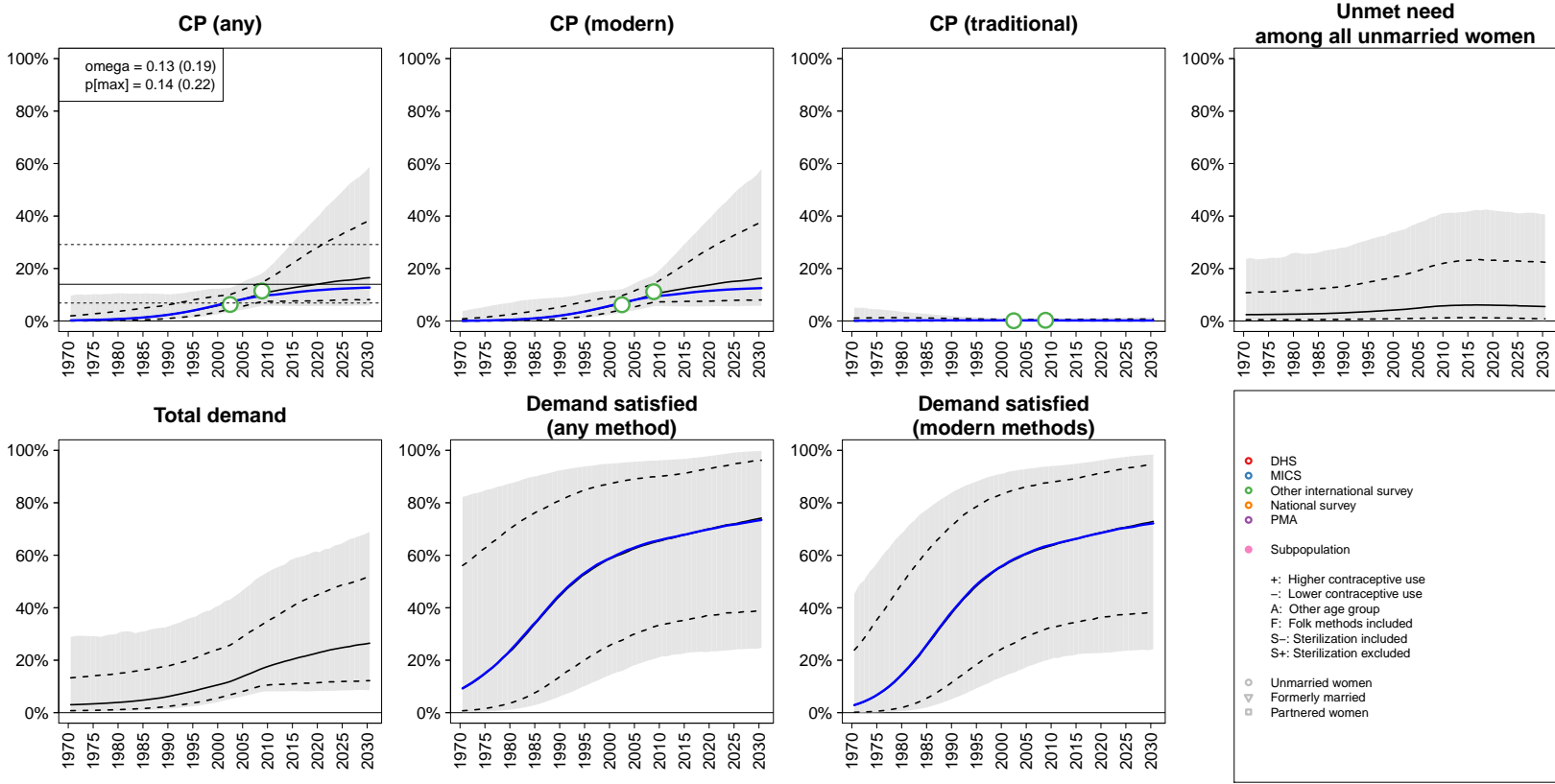
India (Southern Asia, SA Group 0) --- Unmarried / Not In-Union



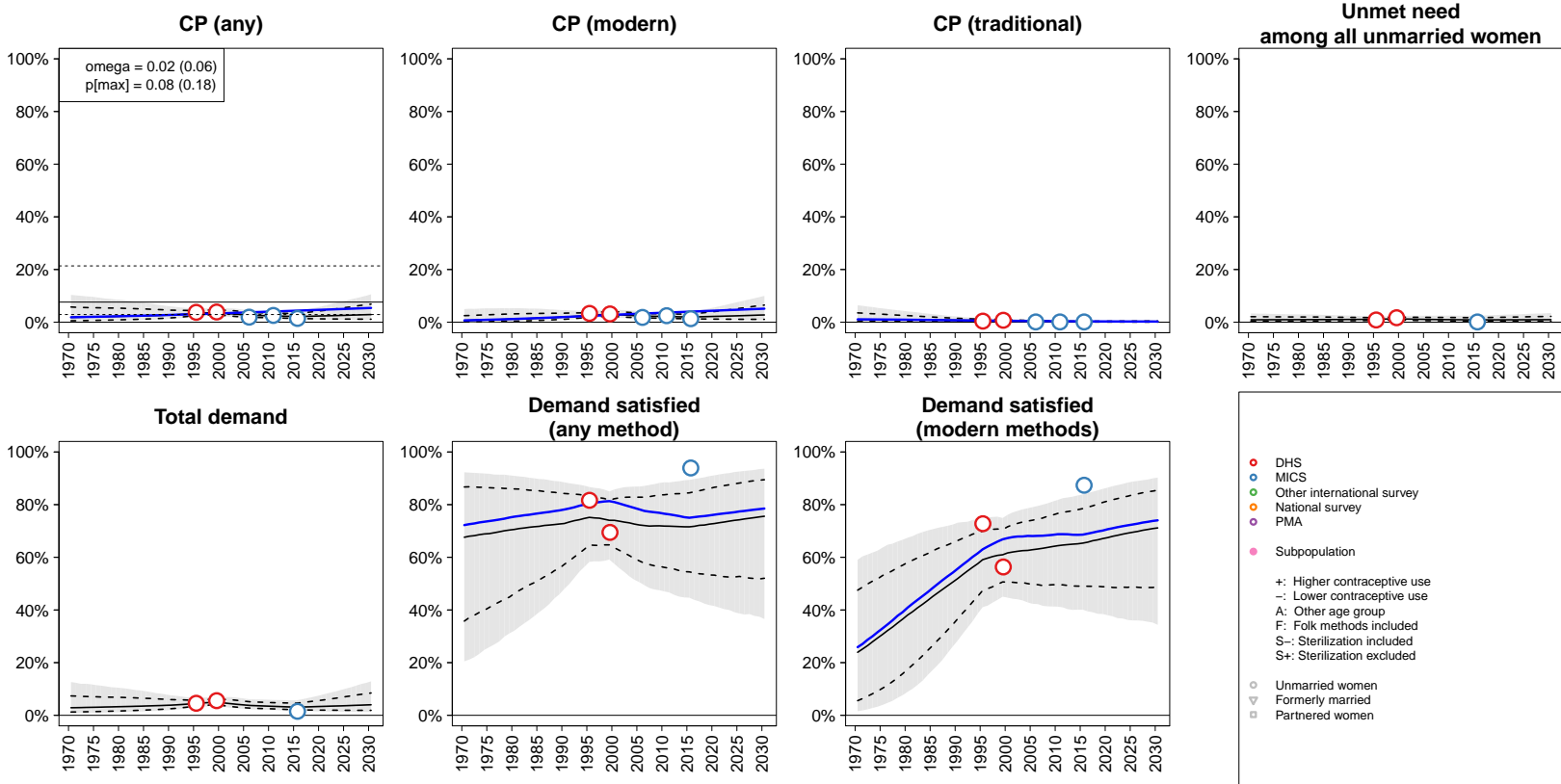
Indonesia (South-eastern Asia, SA Group 0) --- Unmarried / Not In-Union



Jamaica (Caribbean, SA Group 1) --- Unmarried / Not In-Union

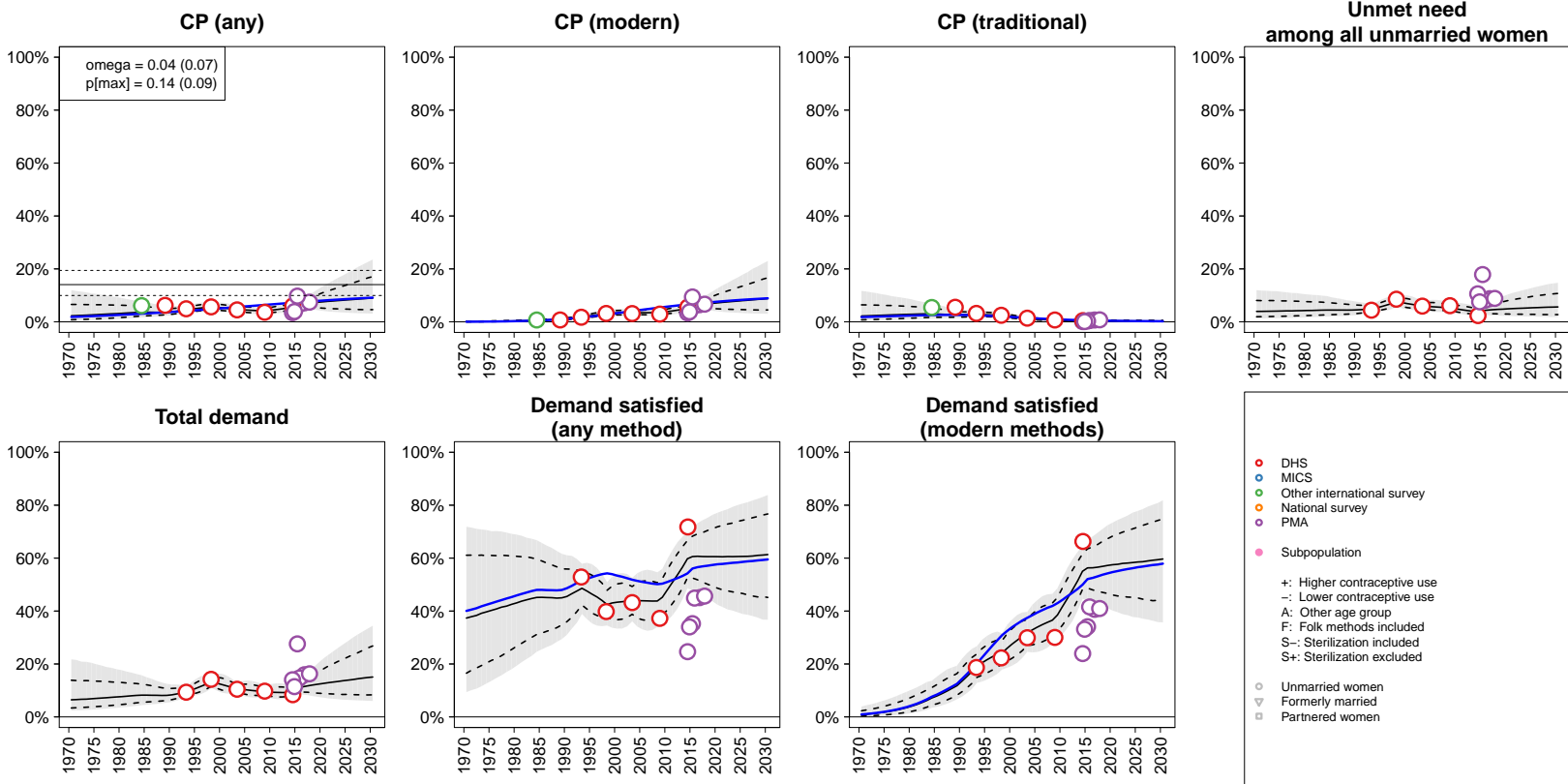


Kazakhstan (Central Asia, SA Group 1) --- Unmarried / Not In-Union

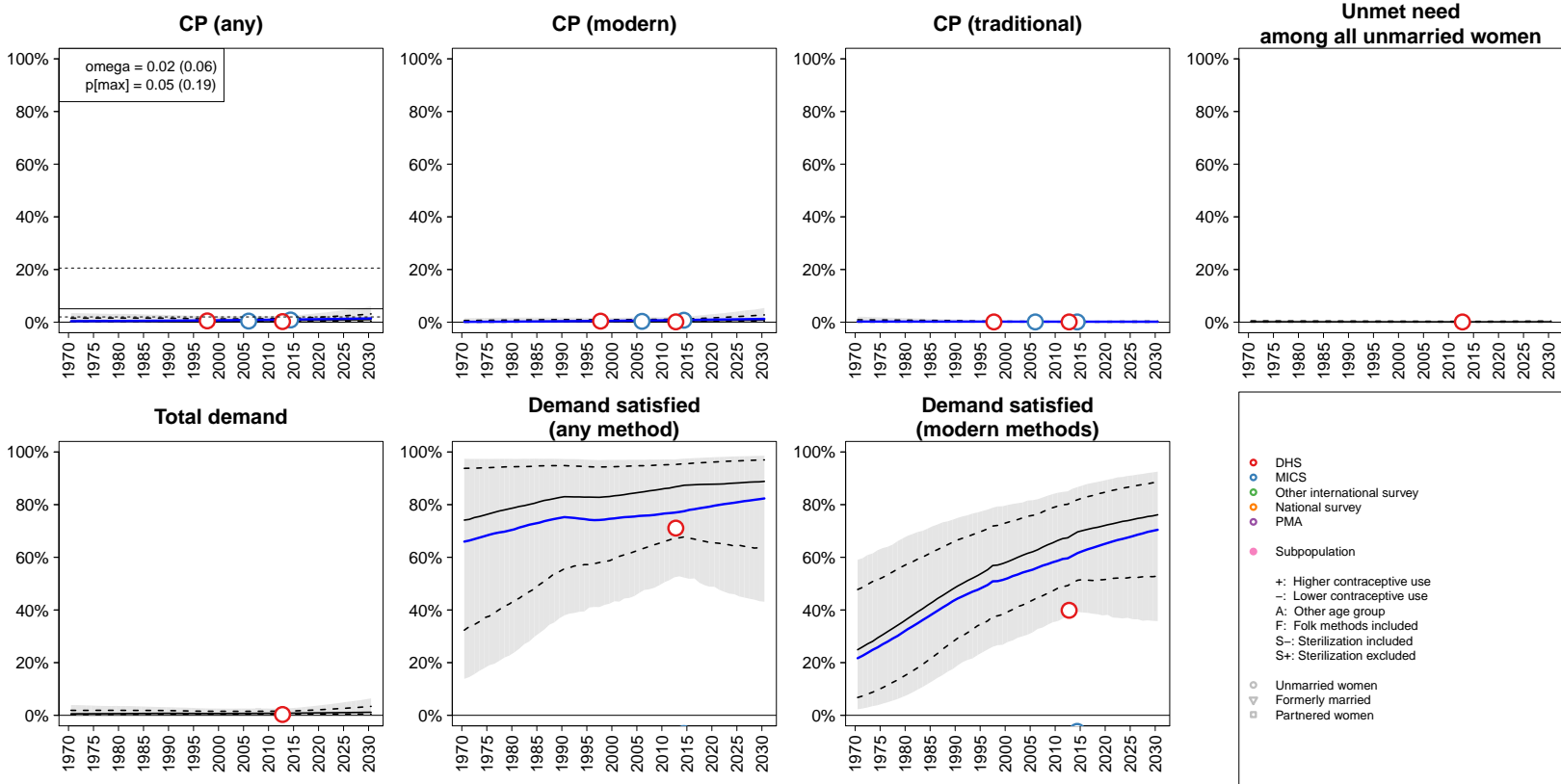




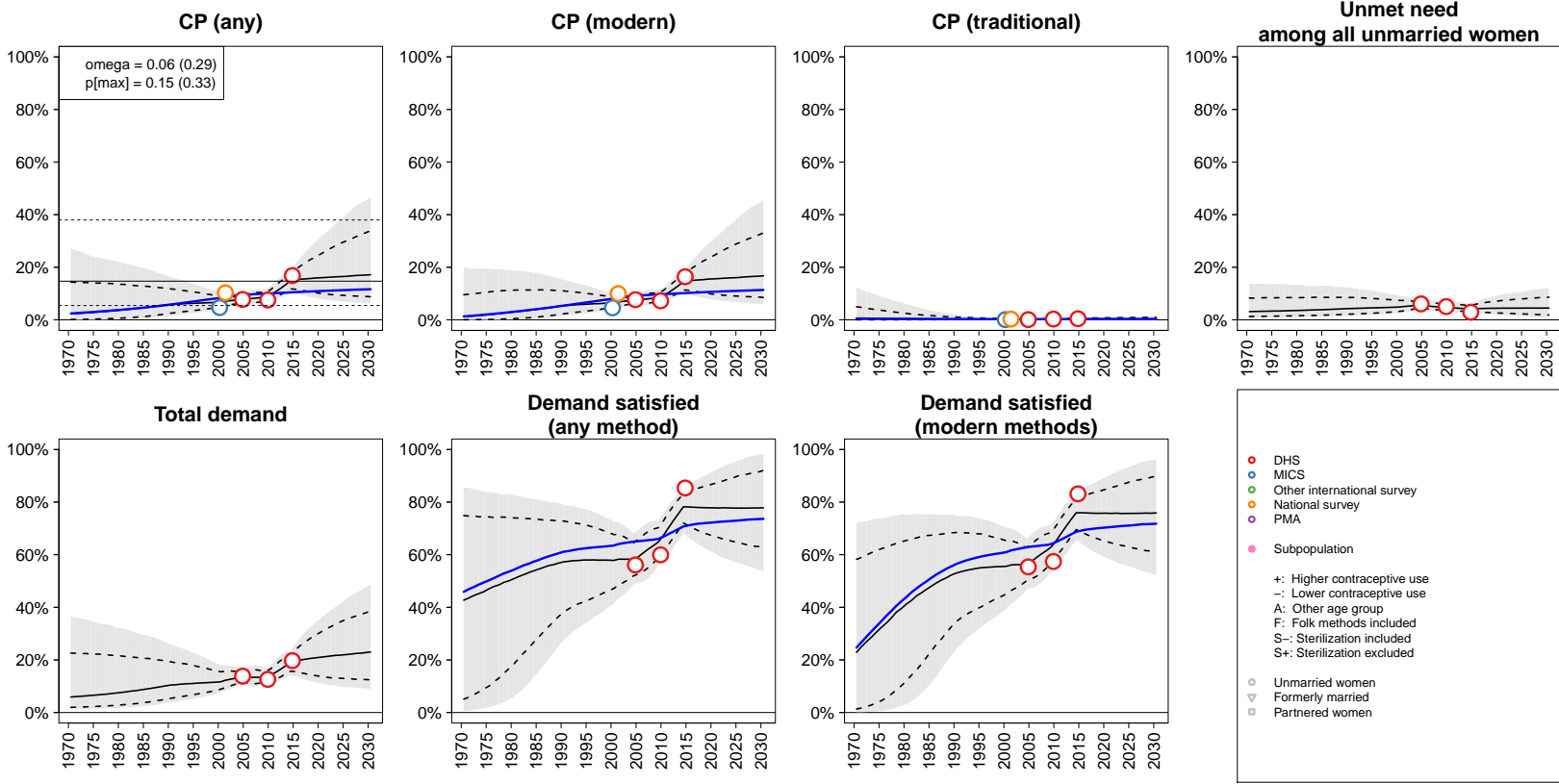
Kenya (Eastern Africa, SA Group 1) --- Unmarried / Not In-Union



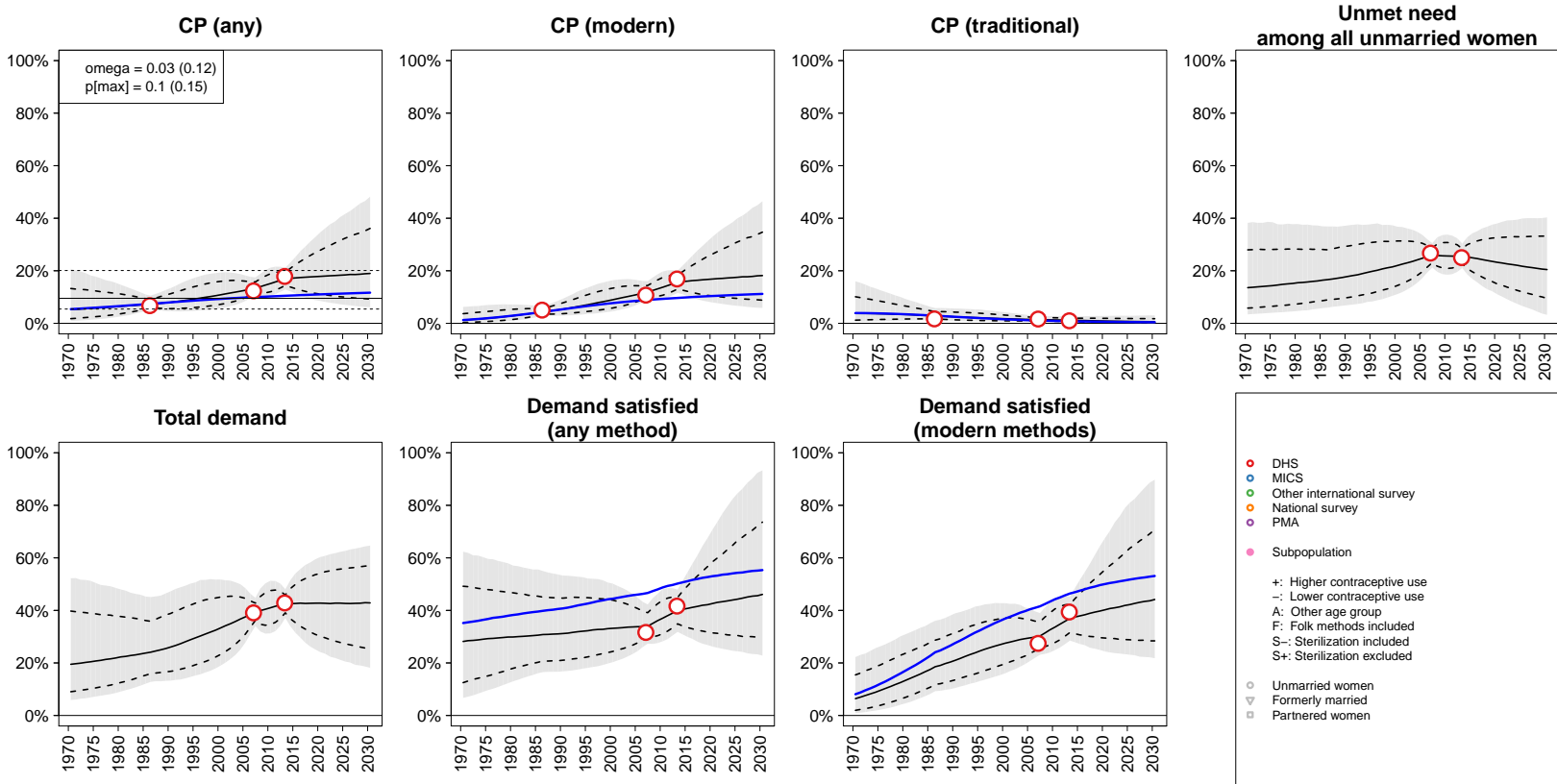
Kyrgyzstan (Central Asia, SA Group 1) --- Unmarried / Not In-Union



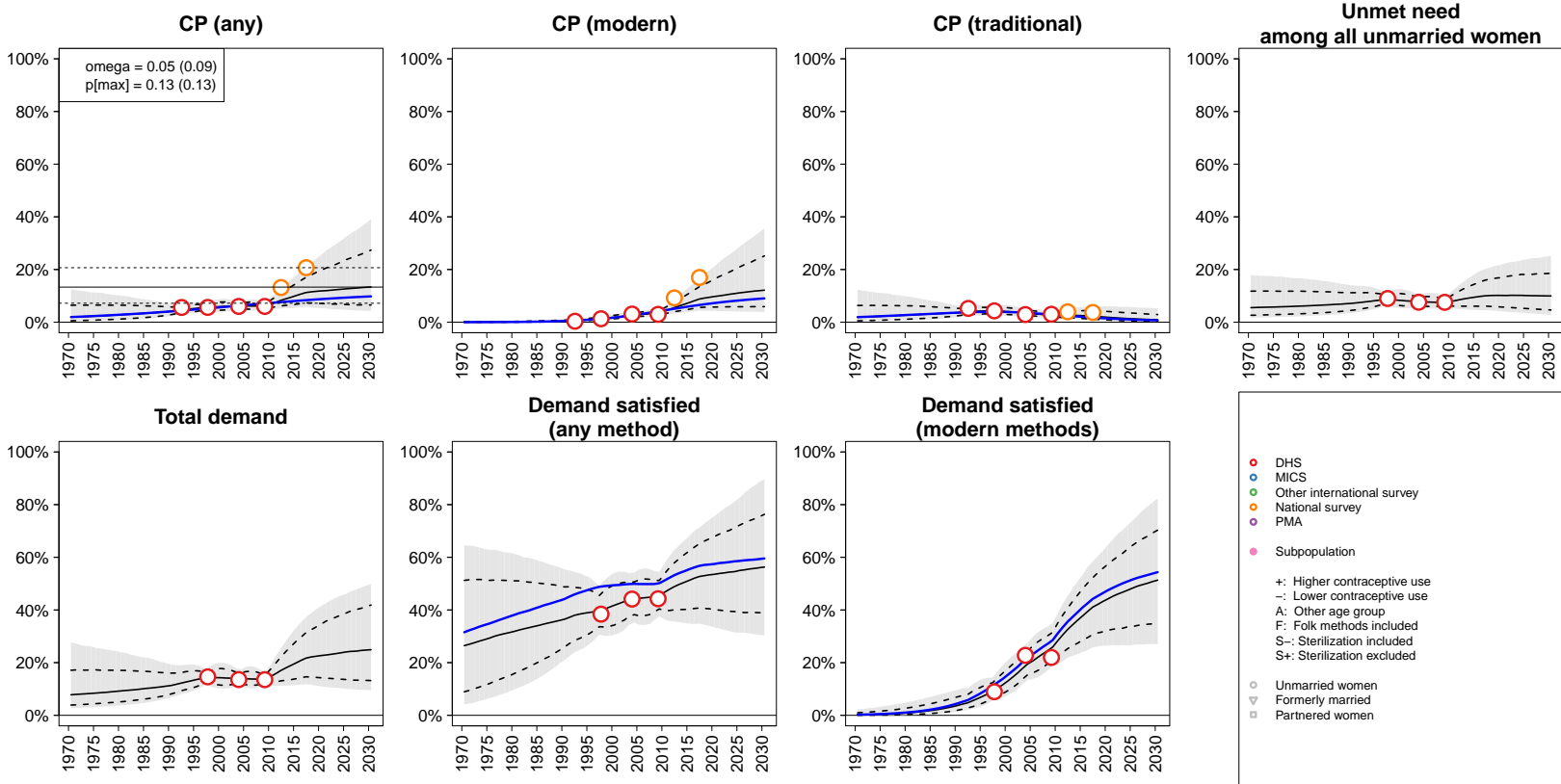
Lesotho (Southern Africa, SA Group 1) --- Unmarried / Not In-Union



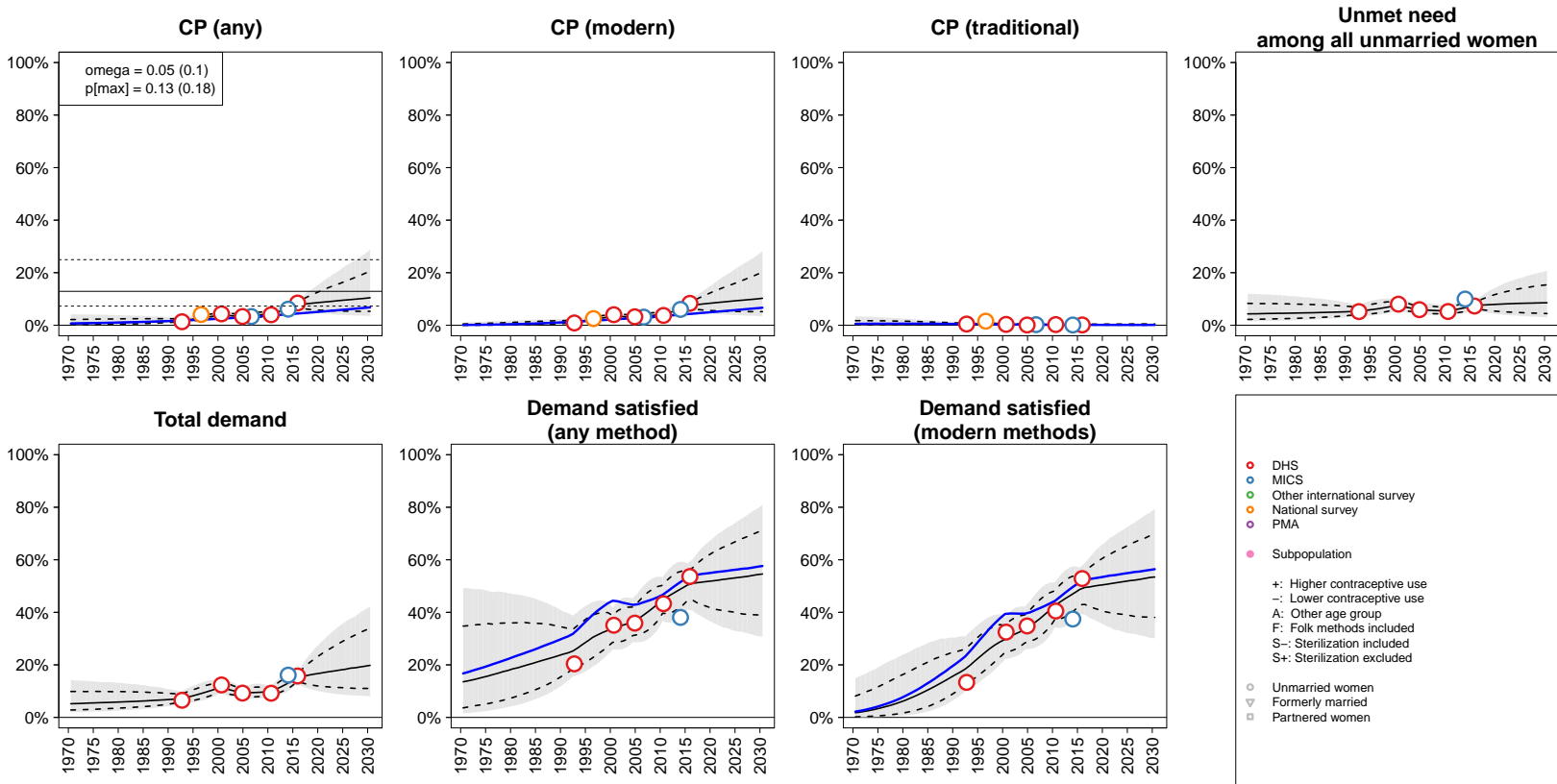
Liberia (Western Africa, SA Group 1) — Unmarried / Not In-Union



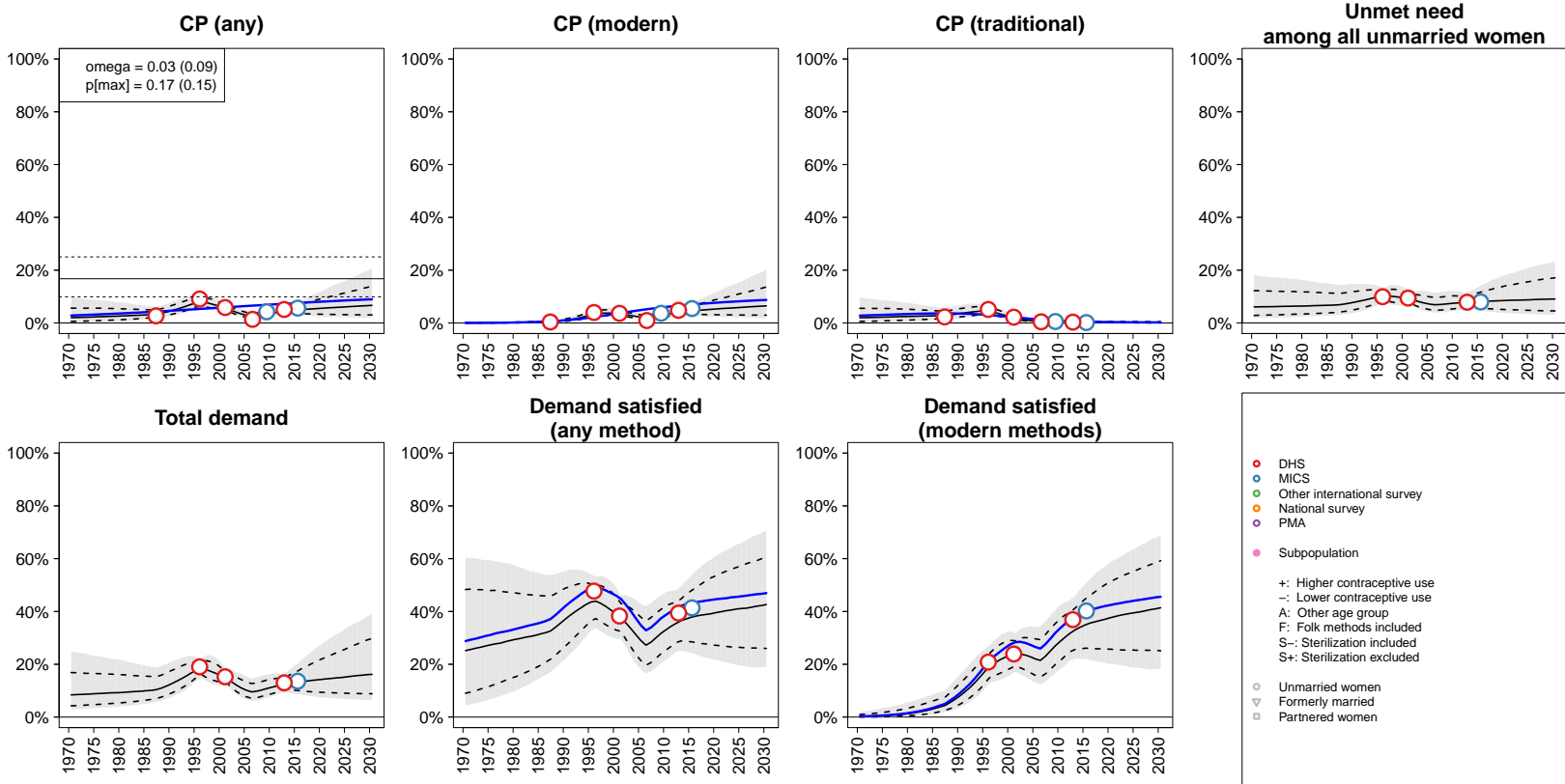
Madagascar (Eastern Africa, SA Group 1) ---- Unmarried / Not In-Union



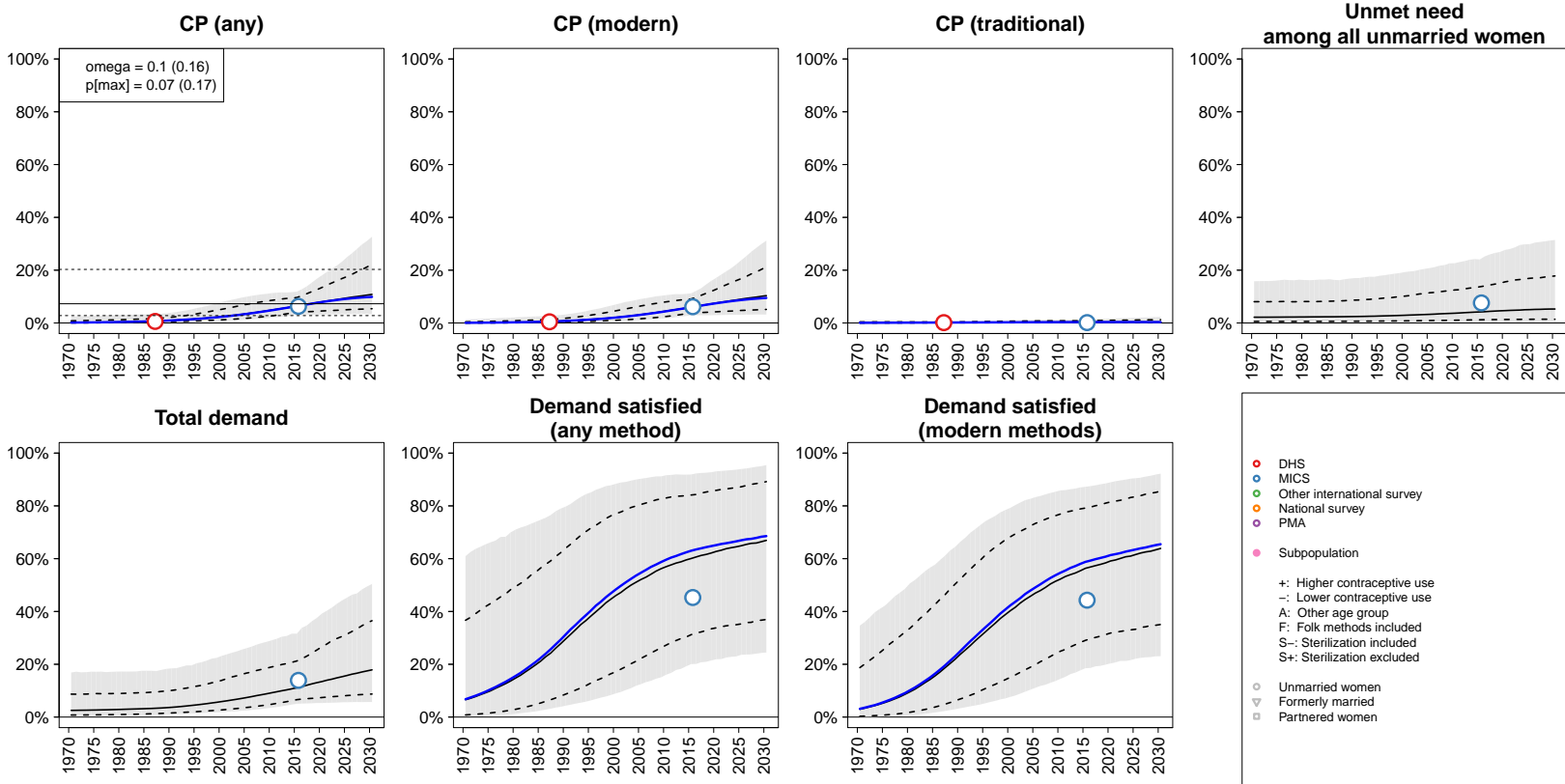
Malawi (Eastern Africa, SA Group 1) --- Unmarried / Not In-Union



Mali (Western Africa, SA Group 1) --- Unmarried / Not In-Union

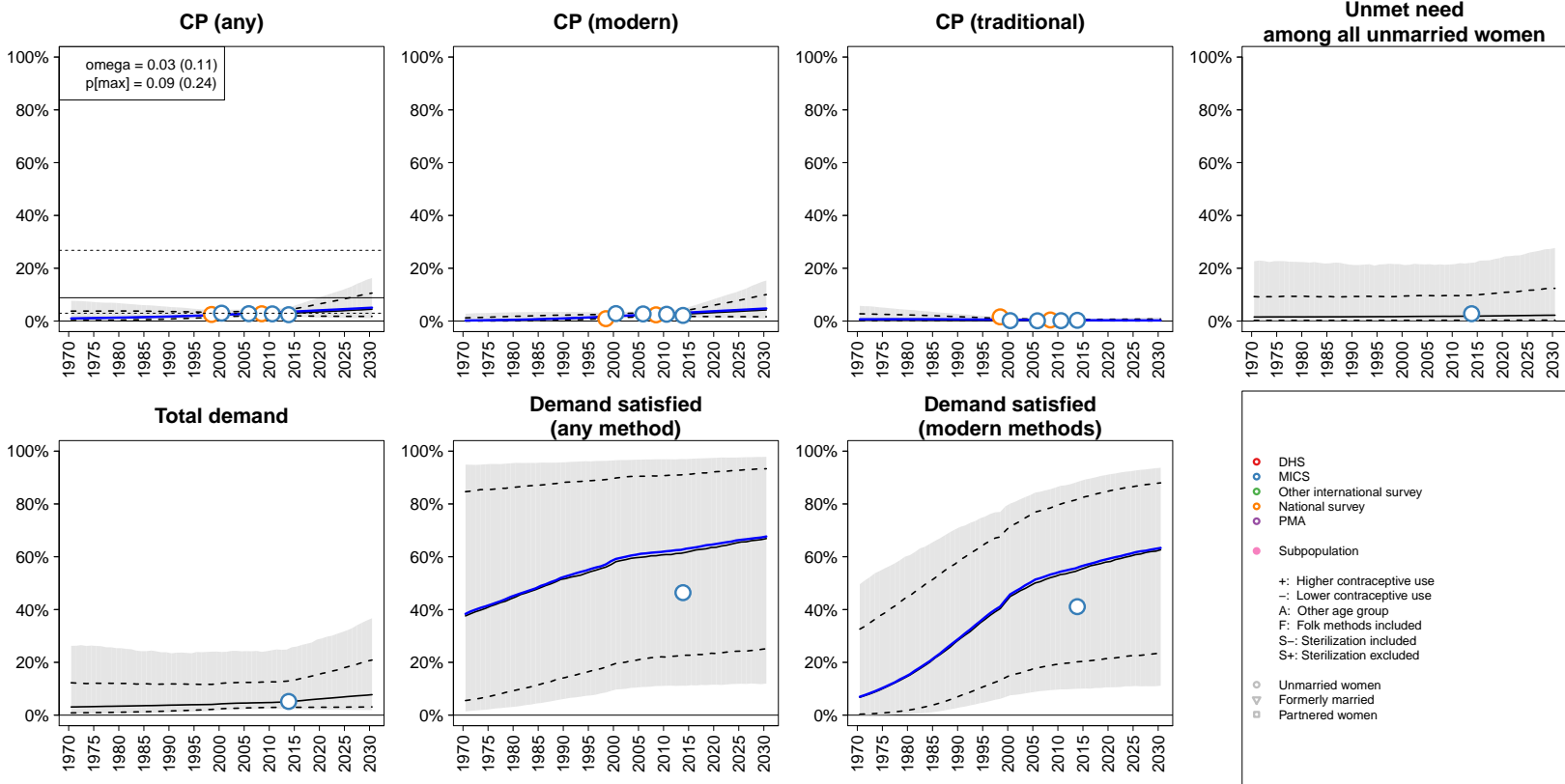


Mexico (Central America, SA Group 1) --- Unmarried / Not In-Union

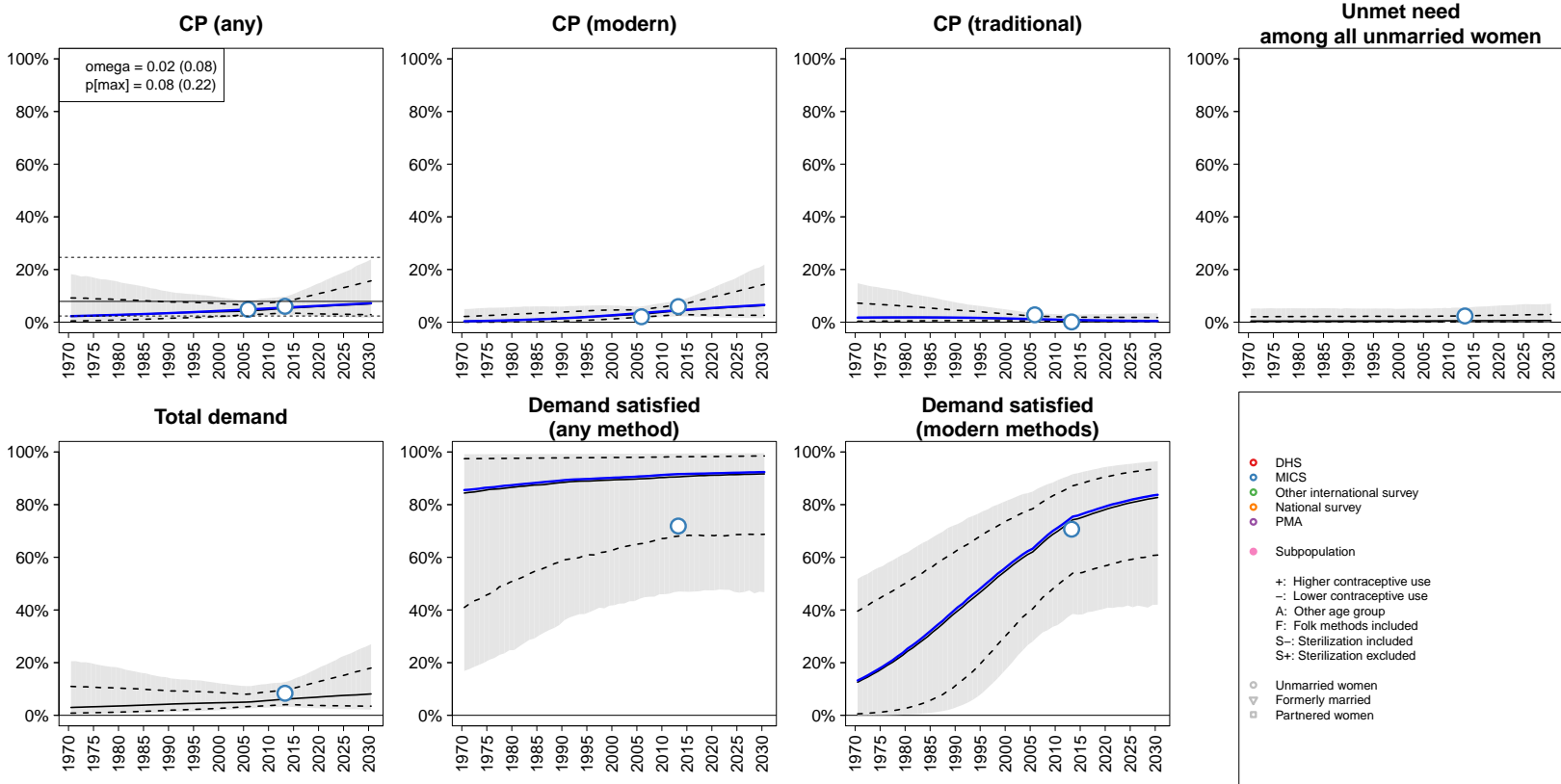




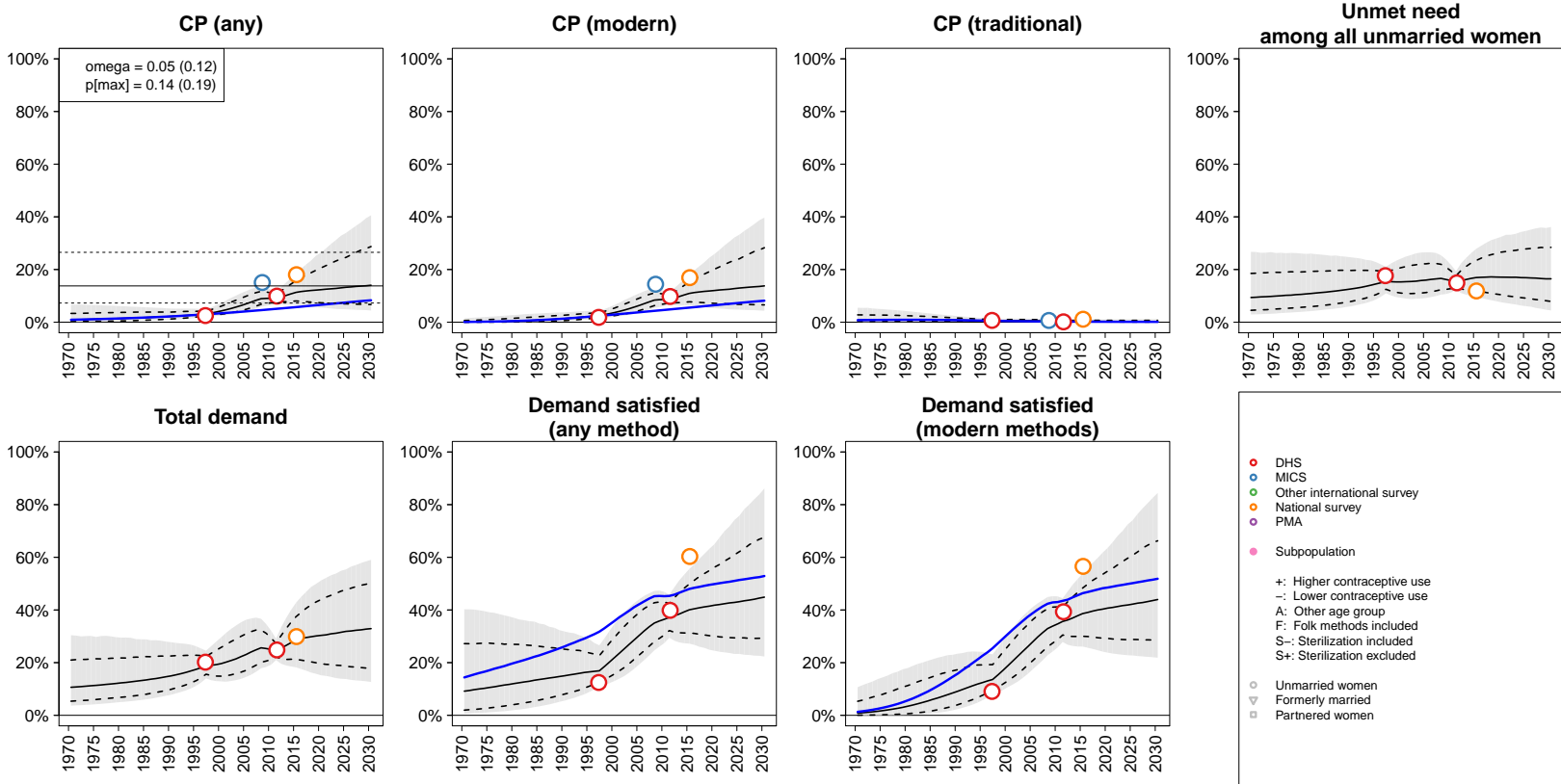
Mongolia (Eastern Asia, SA Group 1) --- Unmarried / Not In-Union



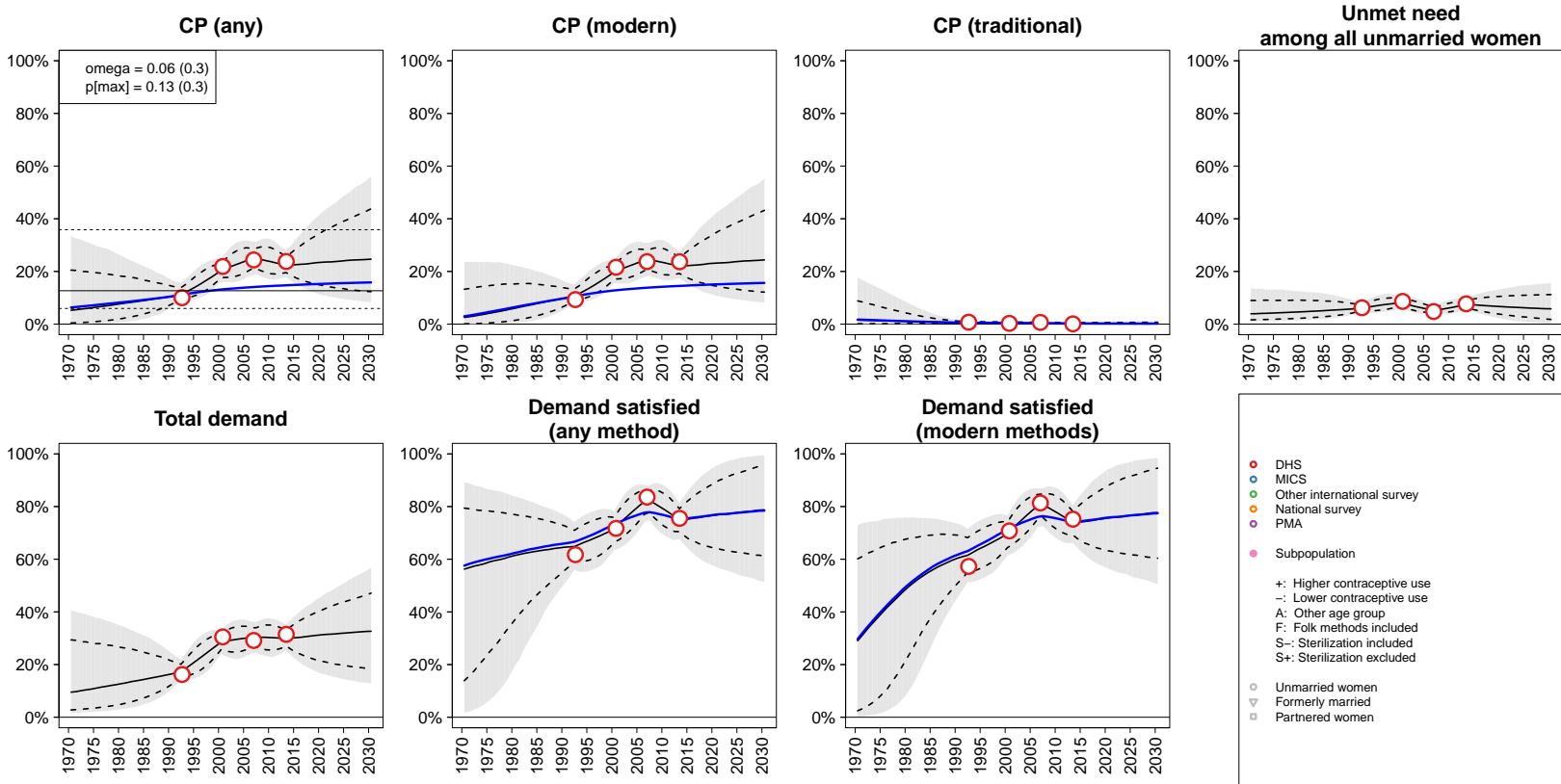
Montenegro (Southern Europe, SA Group 1) --- Unmarried / Not In-Union



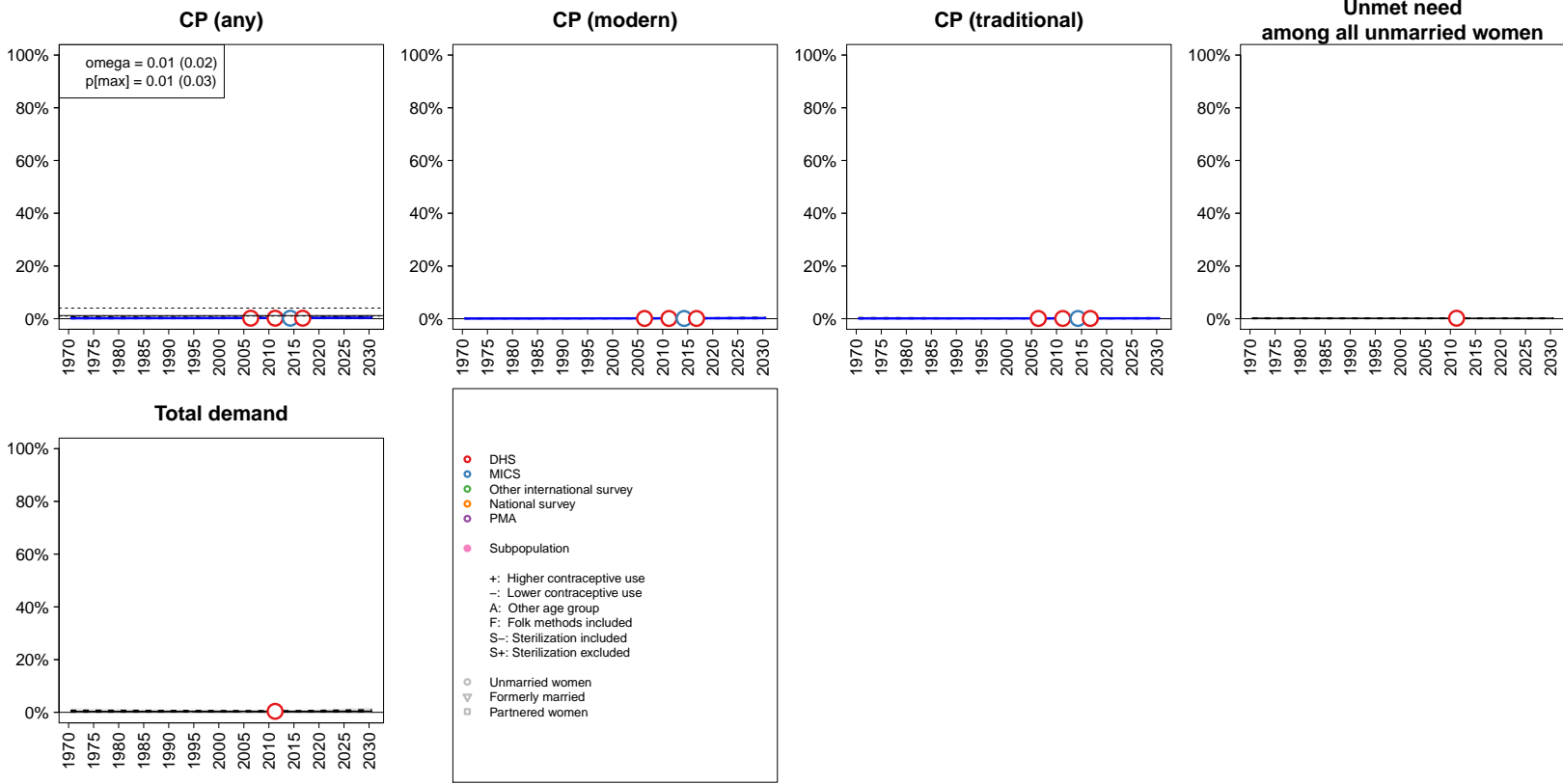
Mozambique (Eastern Africa, SA Group 1) --- Unmarried / Not In-Union



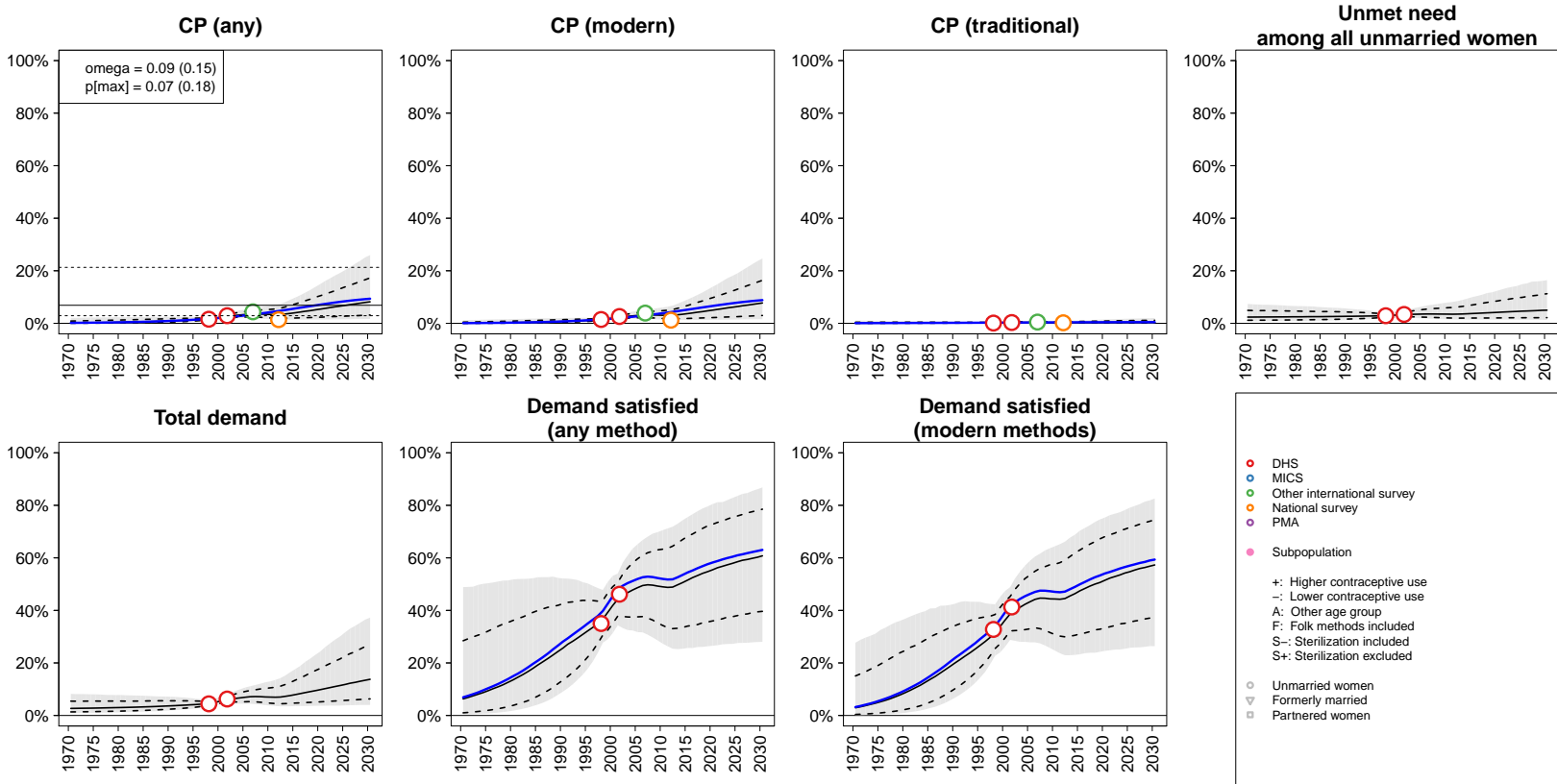
Namibia (Southern Africa, SA Group 1) --- Unmarried / Not In-Union



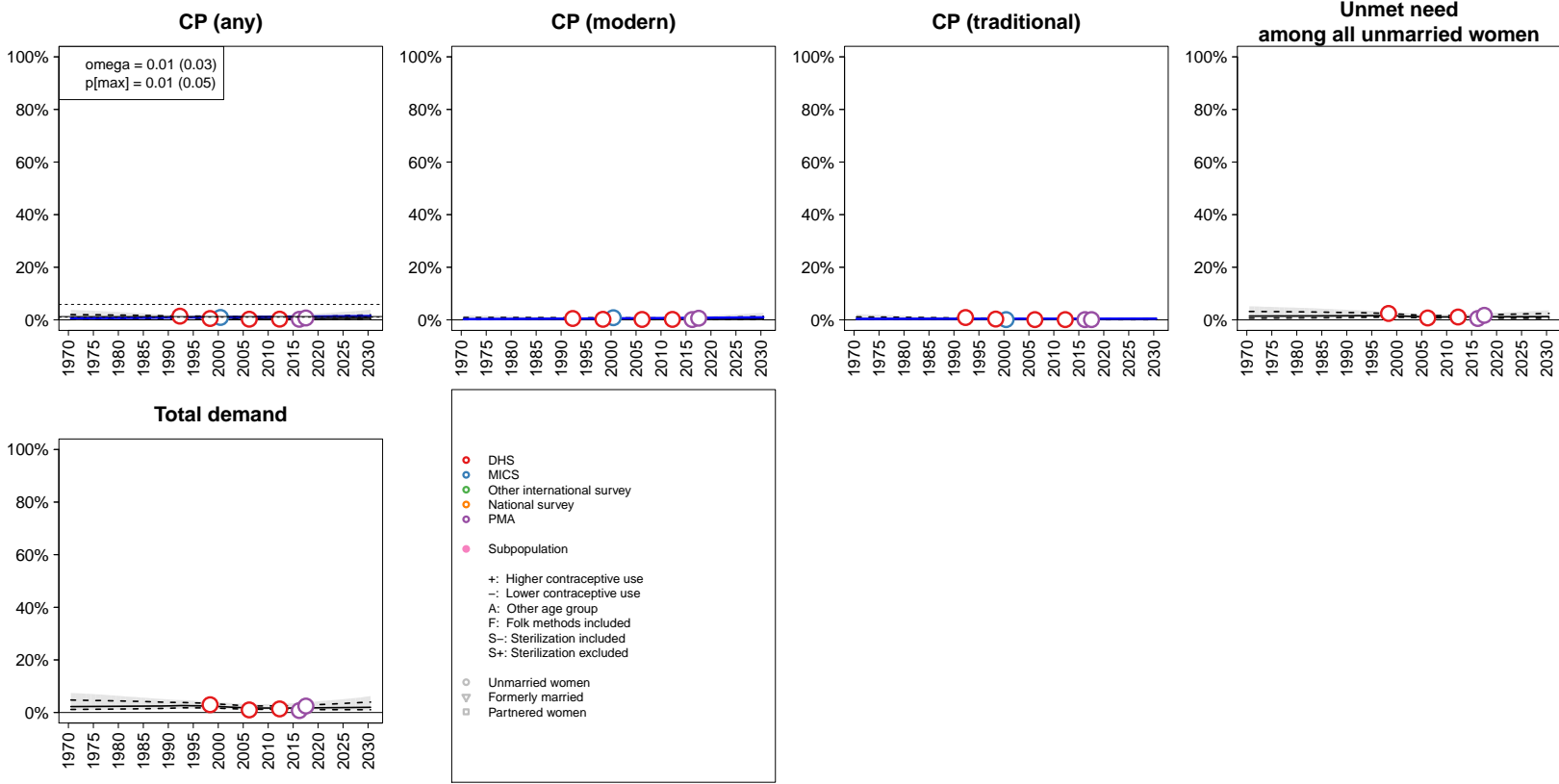
Nepal (Southern Asia, SA Group 0) --- Unmarried / Not In-Union



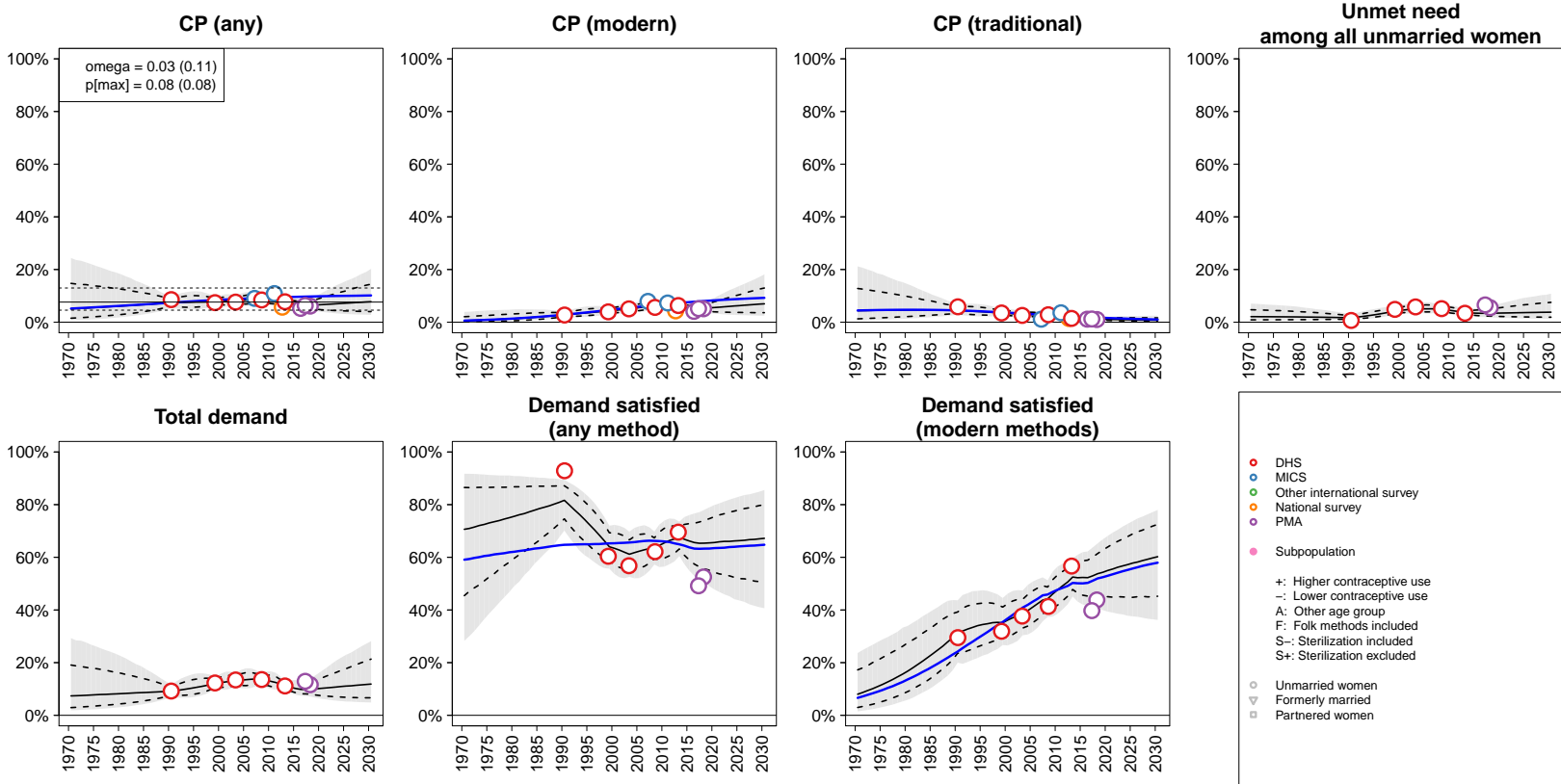
Nicaragua (Central America, SA Group 1) --- Unmarried / Not In-Union



Niger (Western Africa, SA Group 0) --- Unmarried / Not In-Union

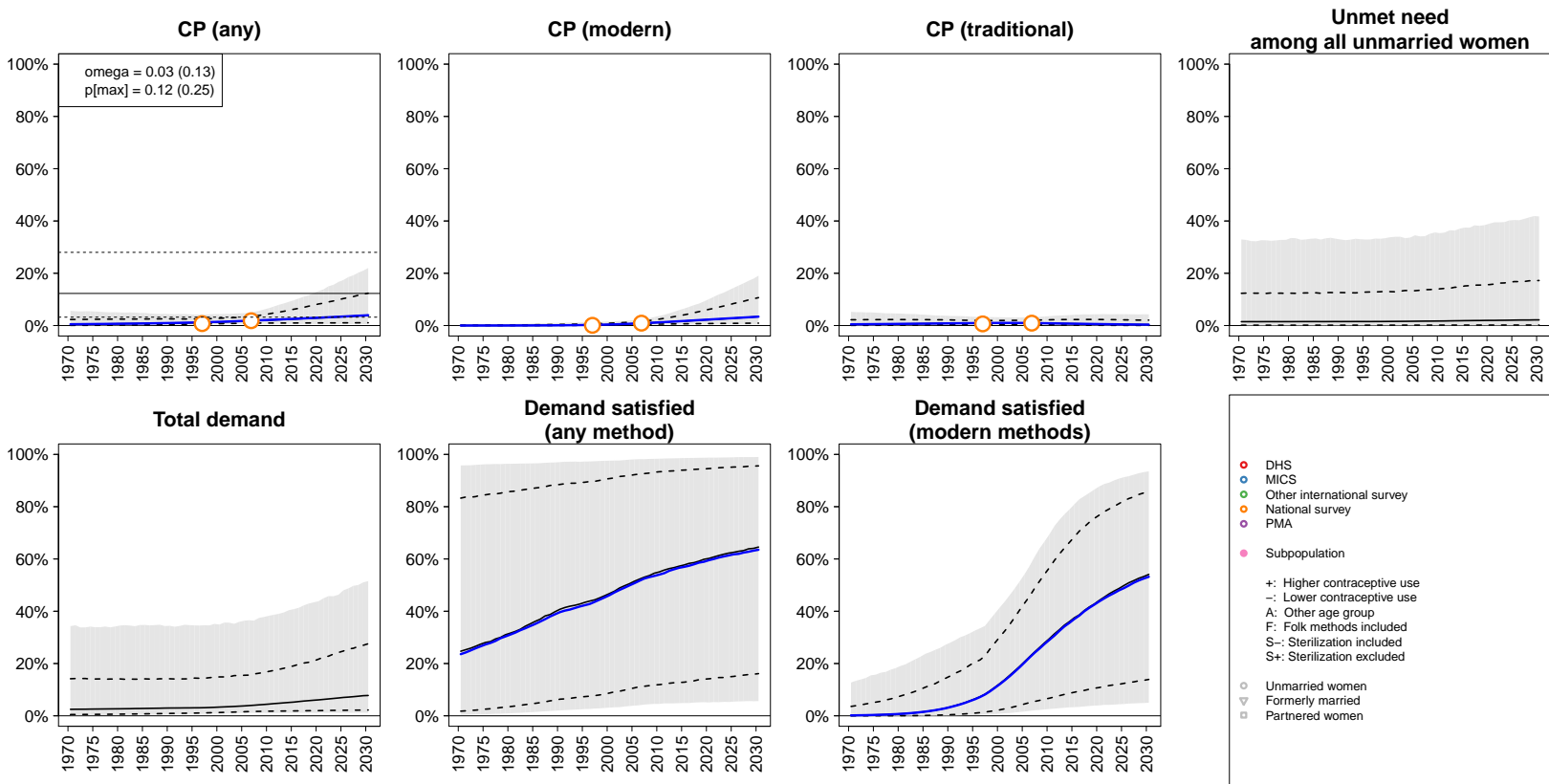


Nigeria (Western Africa, SA Group 1) --- Unmarried / Not In-Union

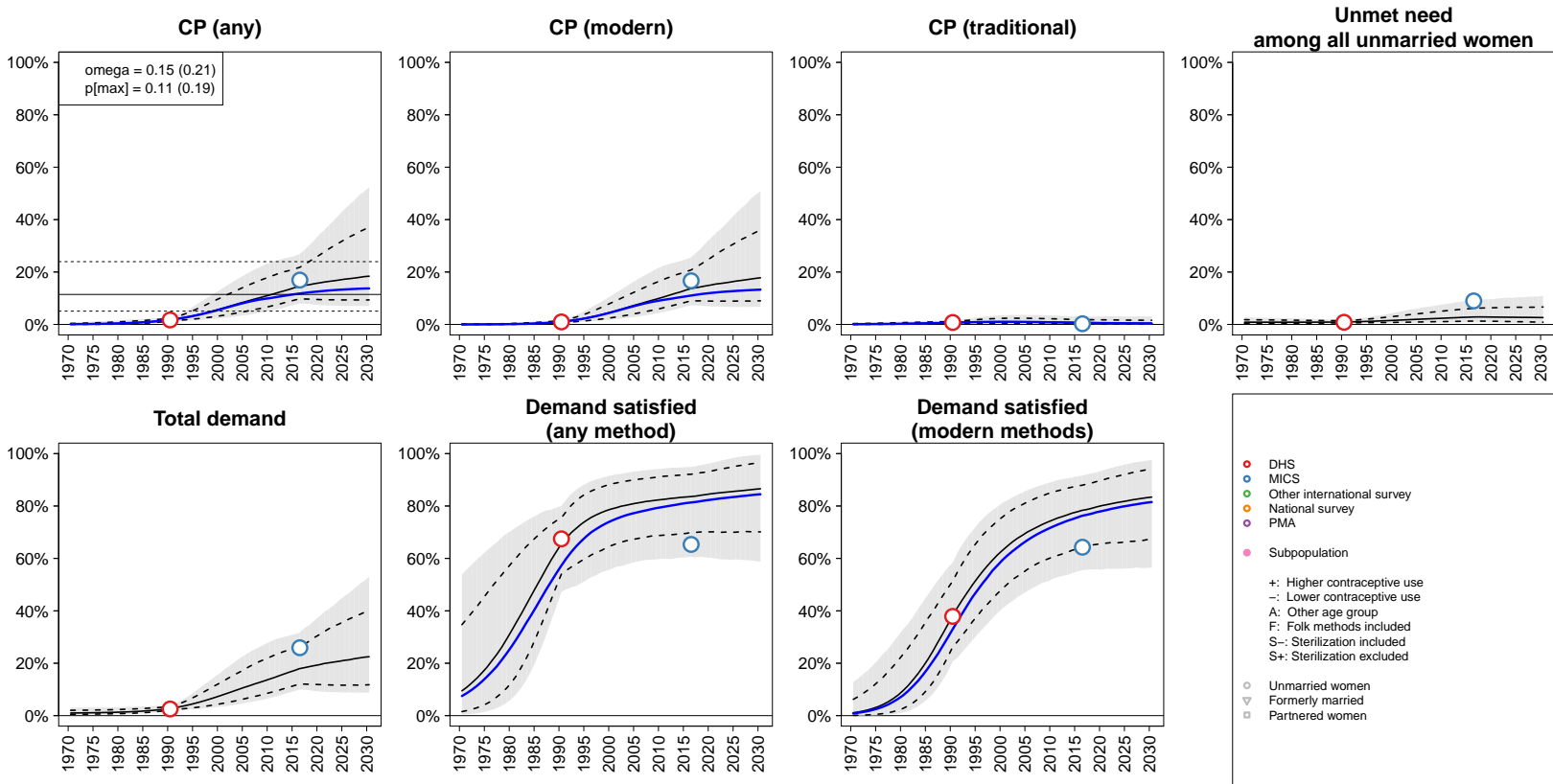




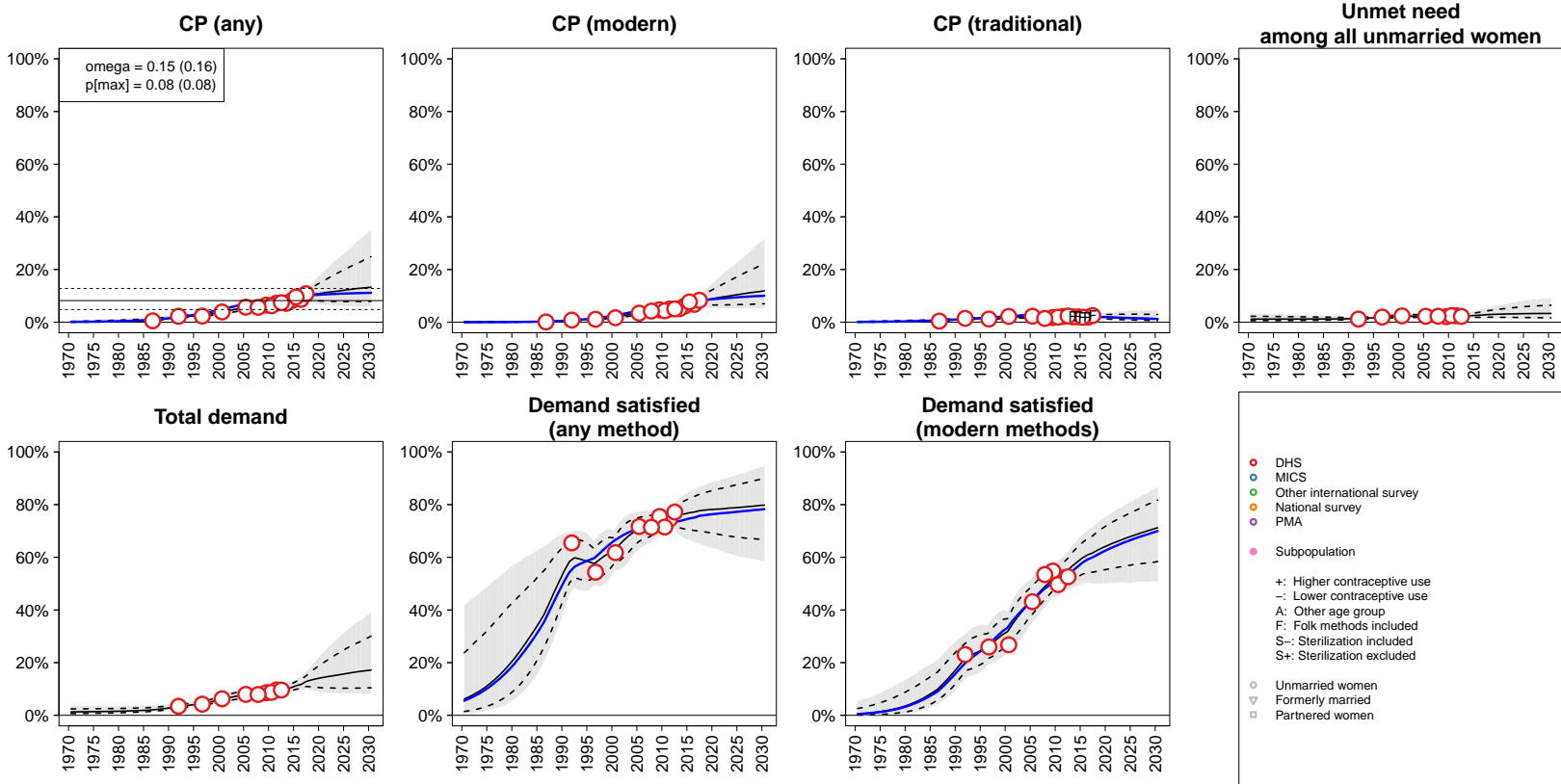
Papua New Guinea (Melanesia, SA Group 1) — Unmarried / Not In-Union



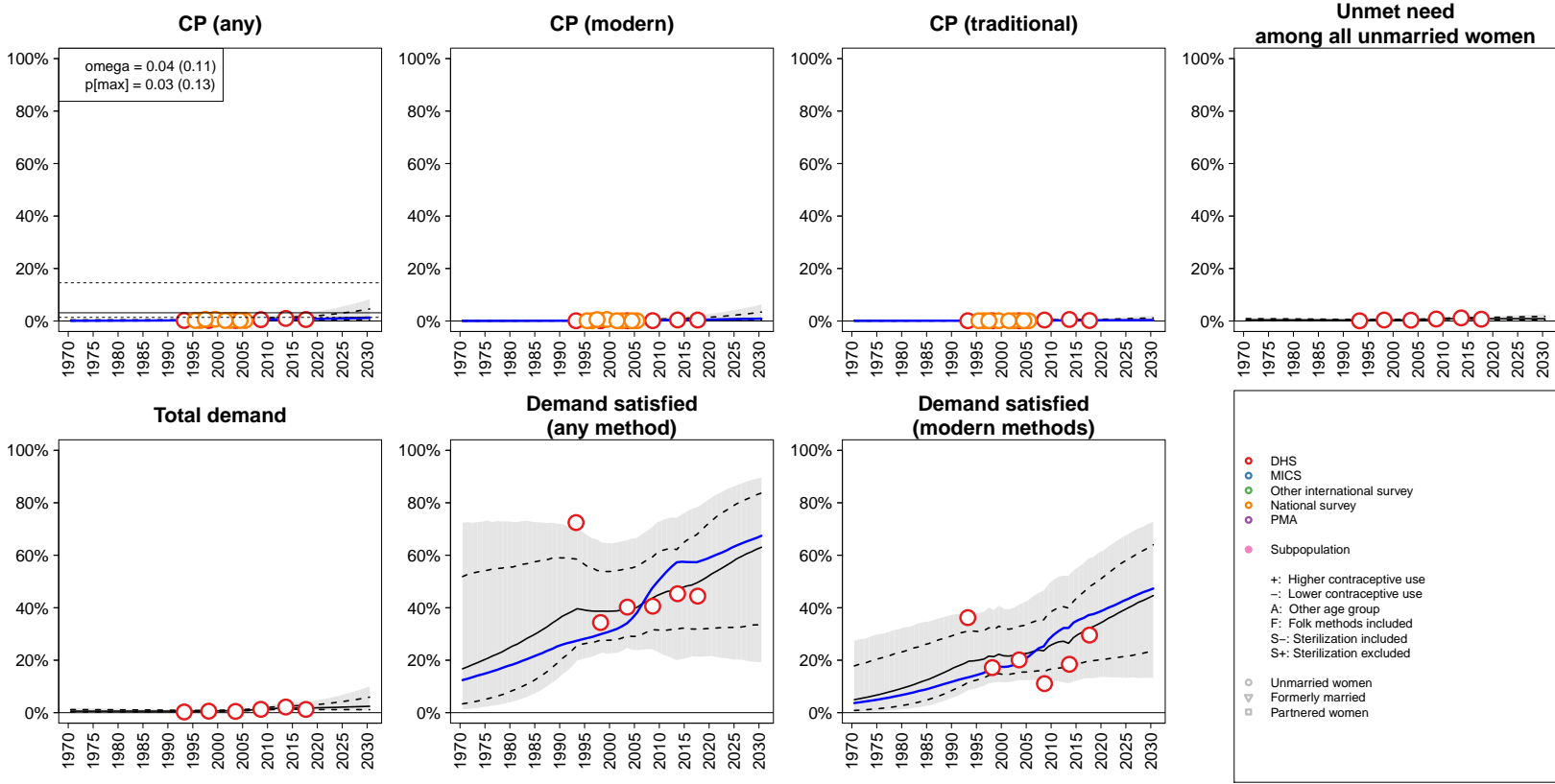
Paraguay (South America, SA Group 1) --- Unmarried / Not In-Union



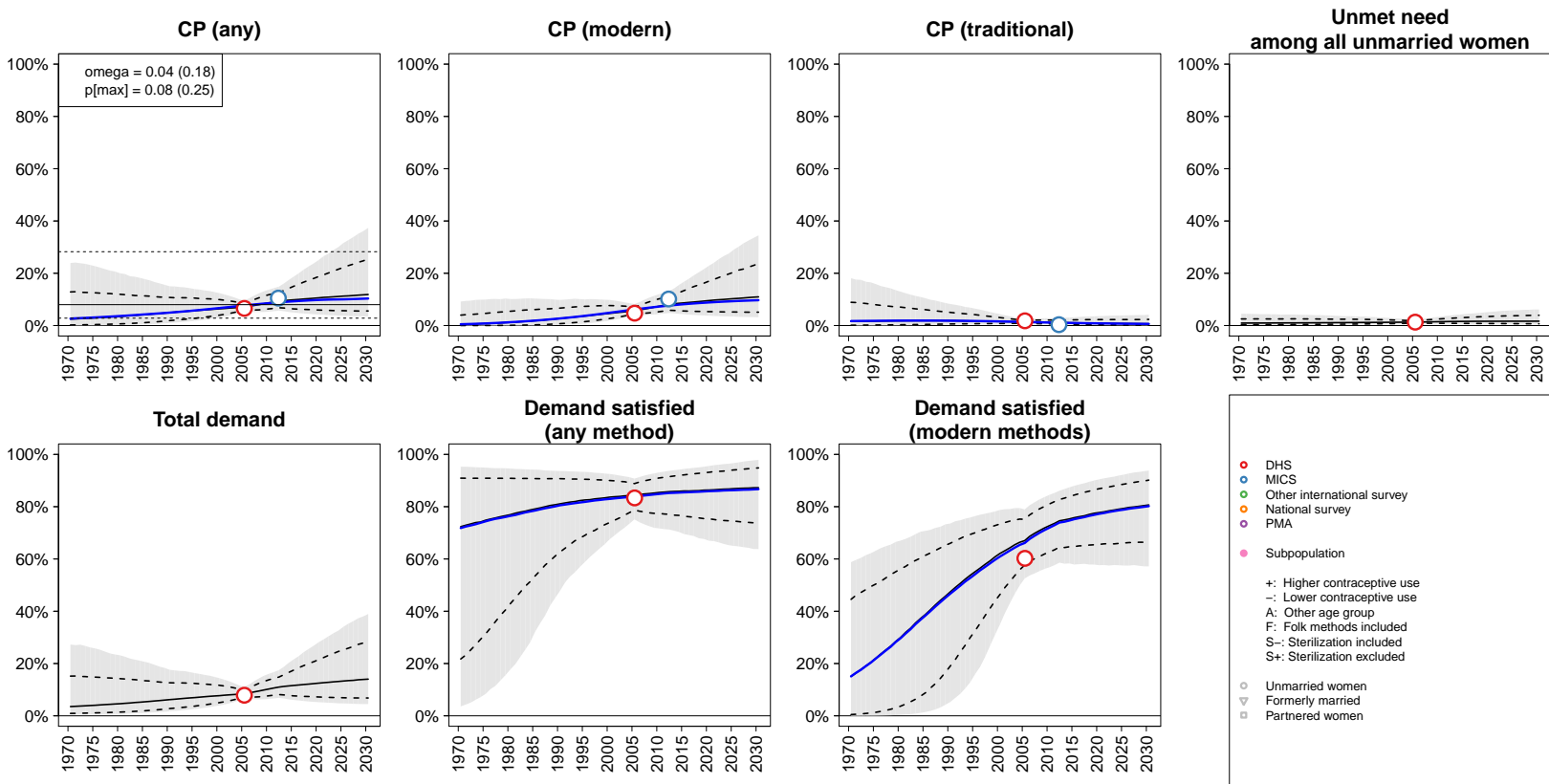
Peru (South America, SA Group 1) --- Unmarried / Not In-Union



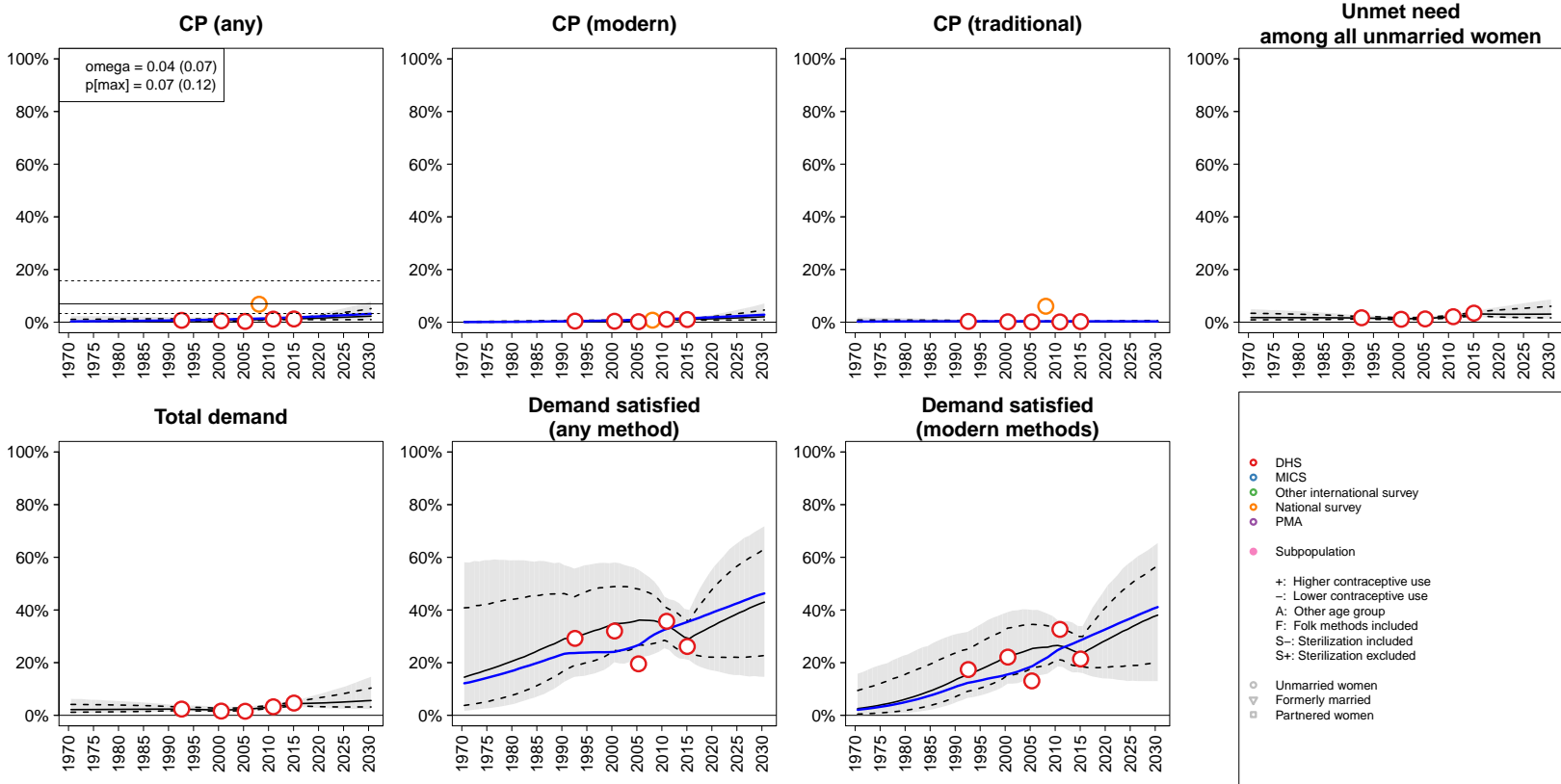
Philippines (South-eastern Asia, SA Group 1) --- Unmarried / Not In-Union



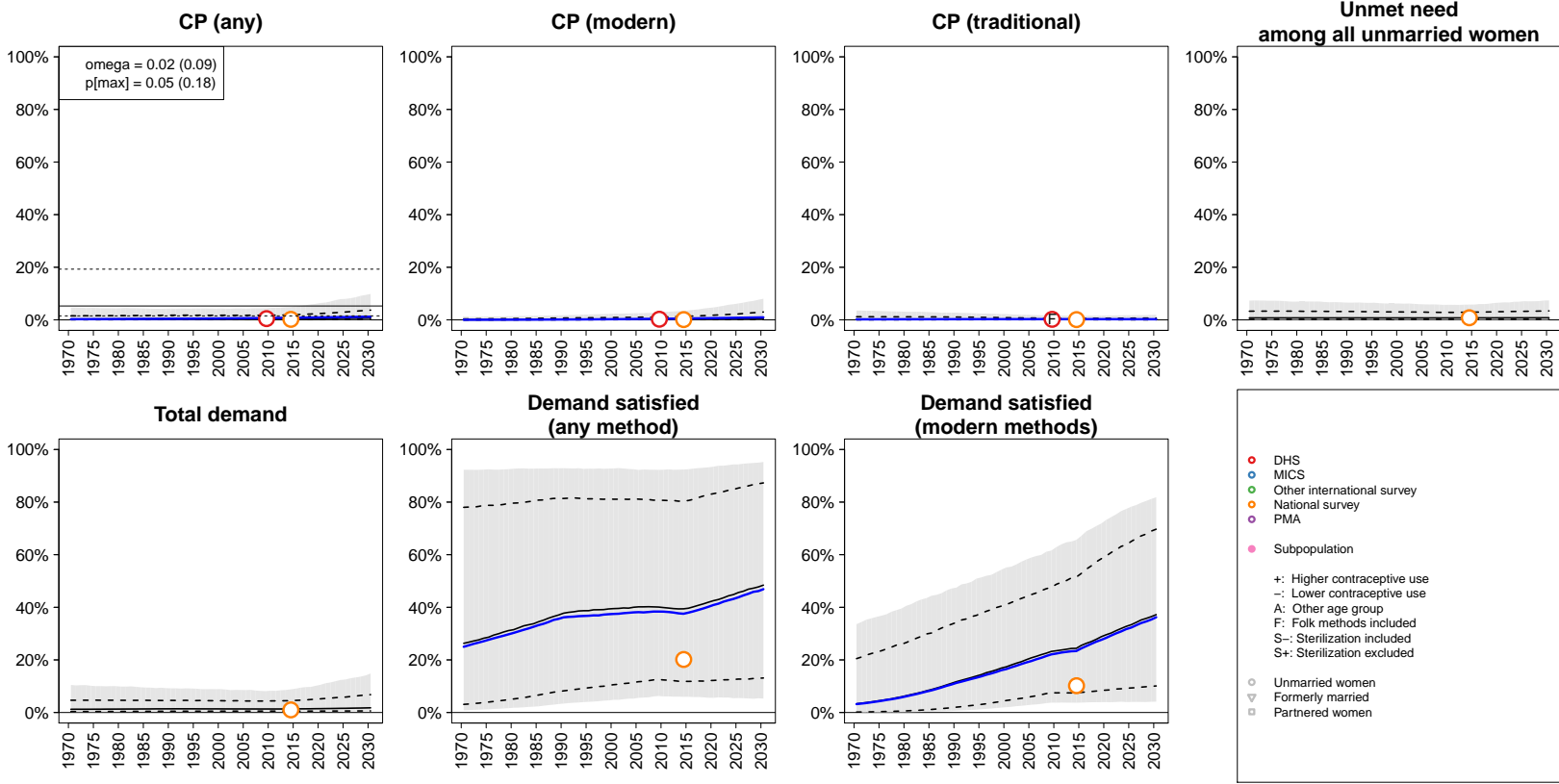
Republic of Moldova (Eastern Europe, SA Group 1) --- Unmarried / Not In-Union



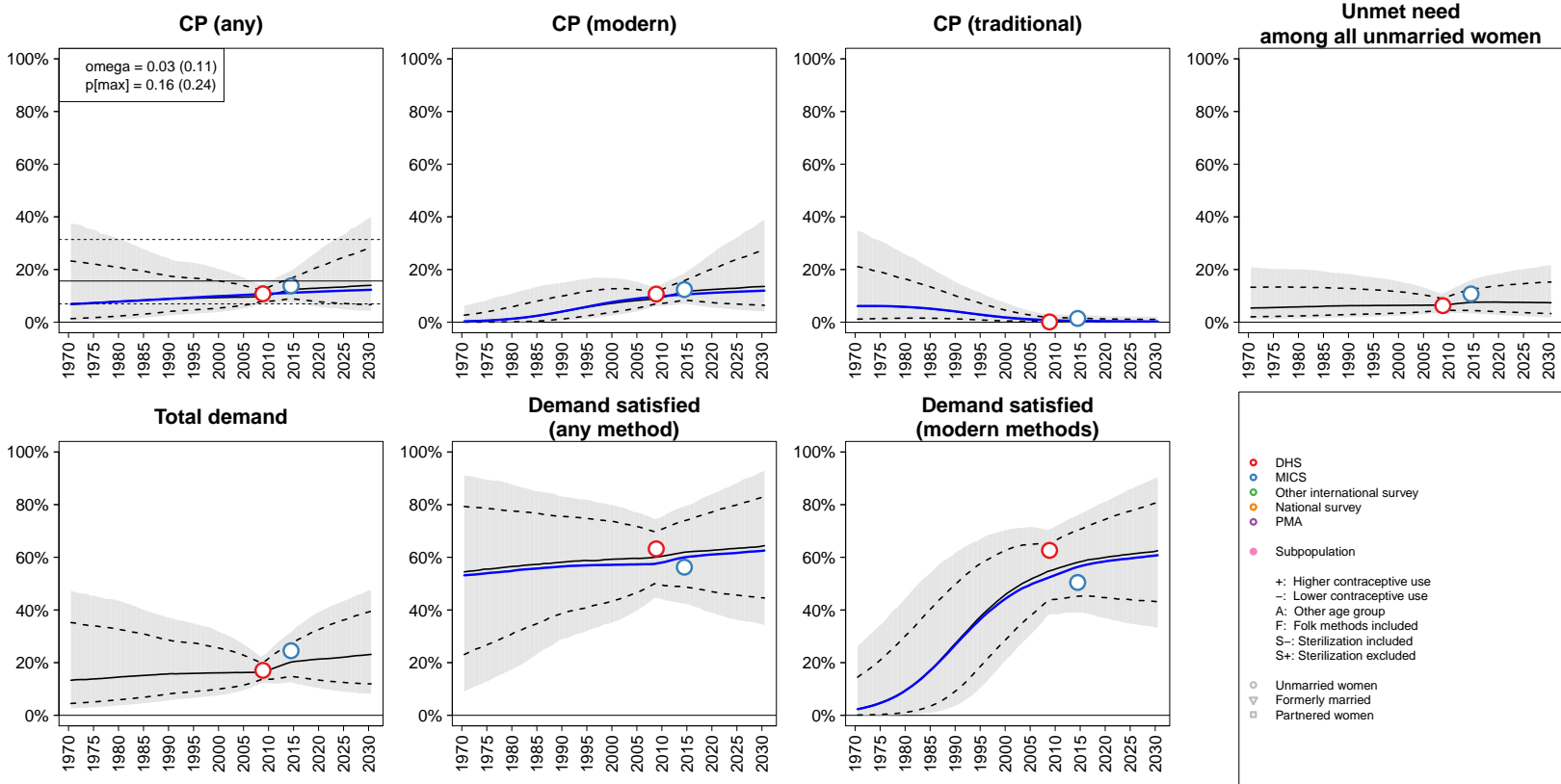
Rwanda (Eastern Africa, SA Group 1) --- Unmarried / Not In-Union



Samoa (Polynesia, SA Group 1) --- Unmarried / Not In-Union

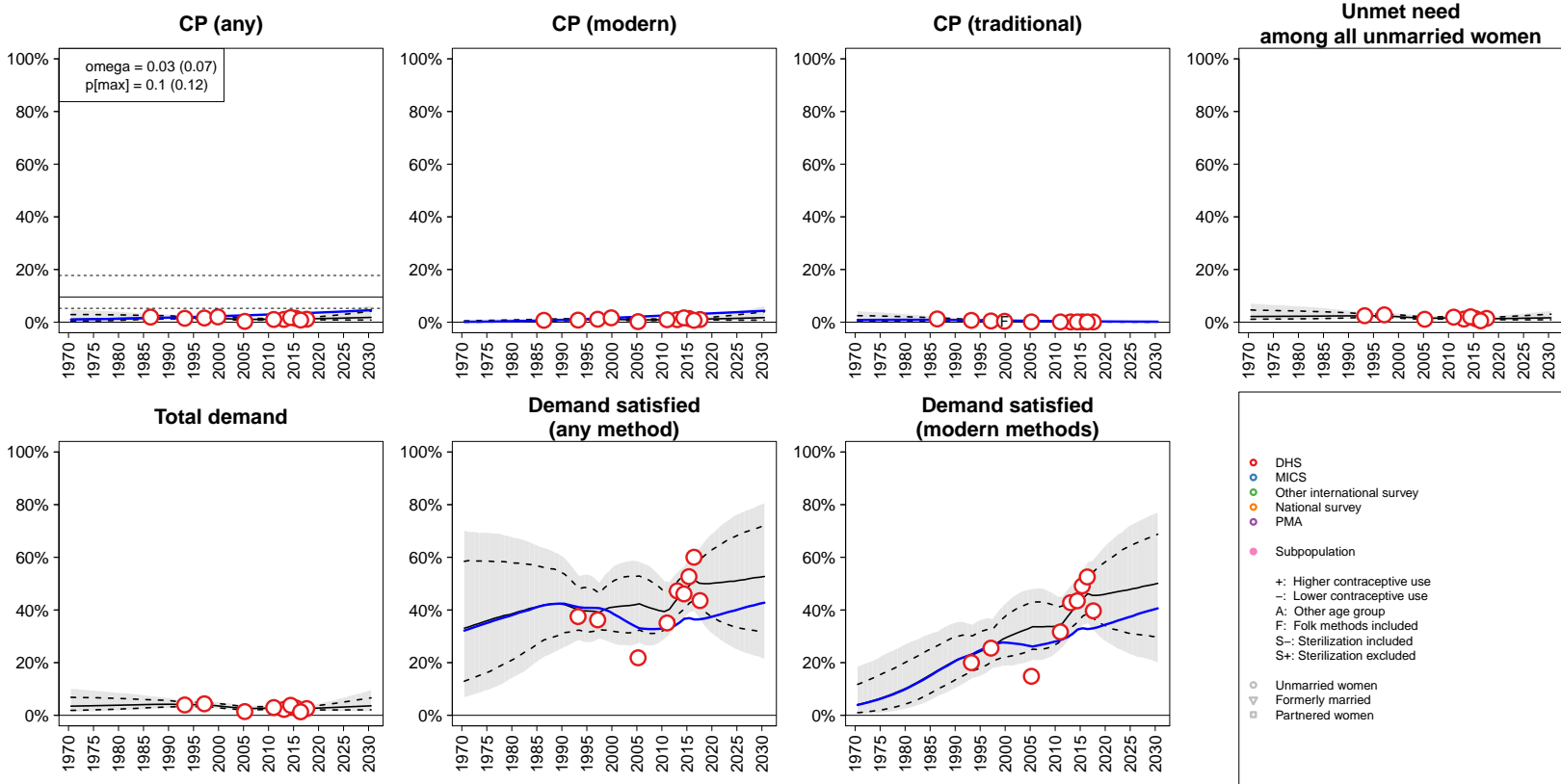


Sao Tome and Principe (Middle Africa, SA Group 1) --- Unmarried / Not In-Union

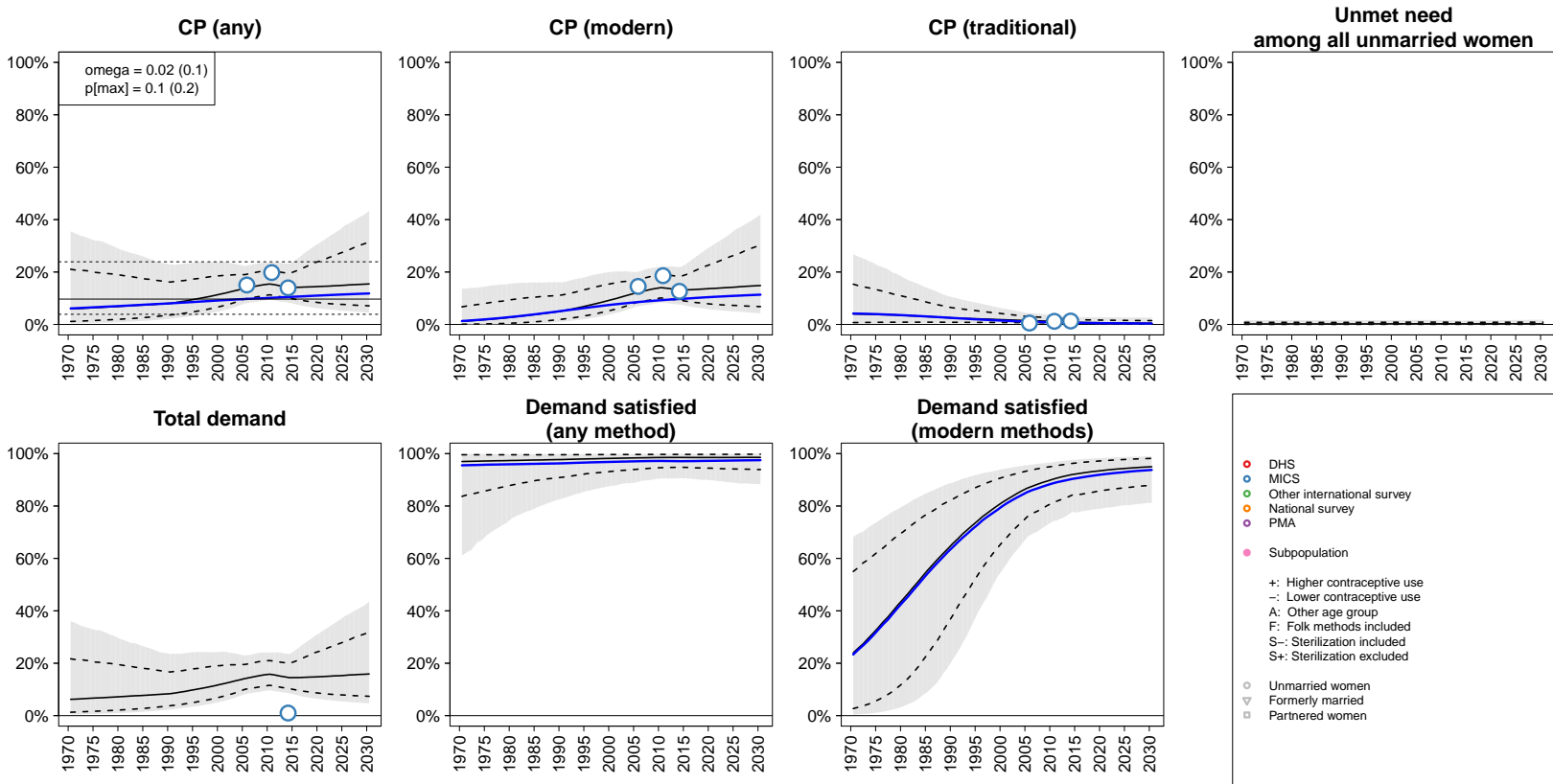




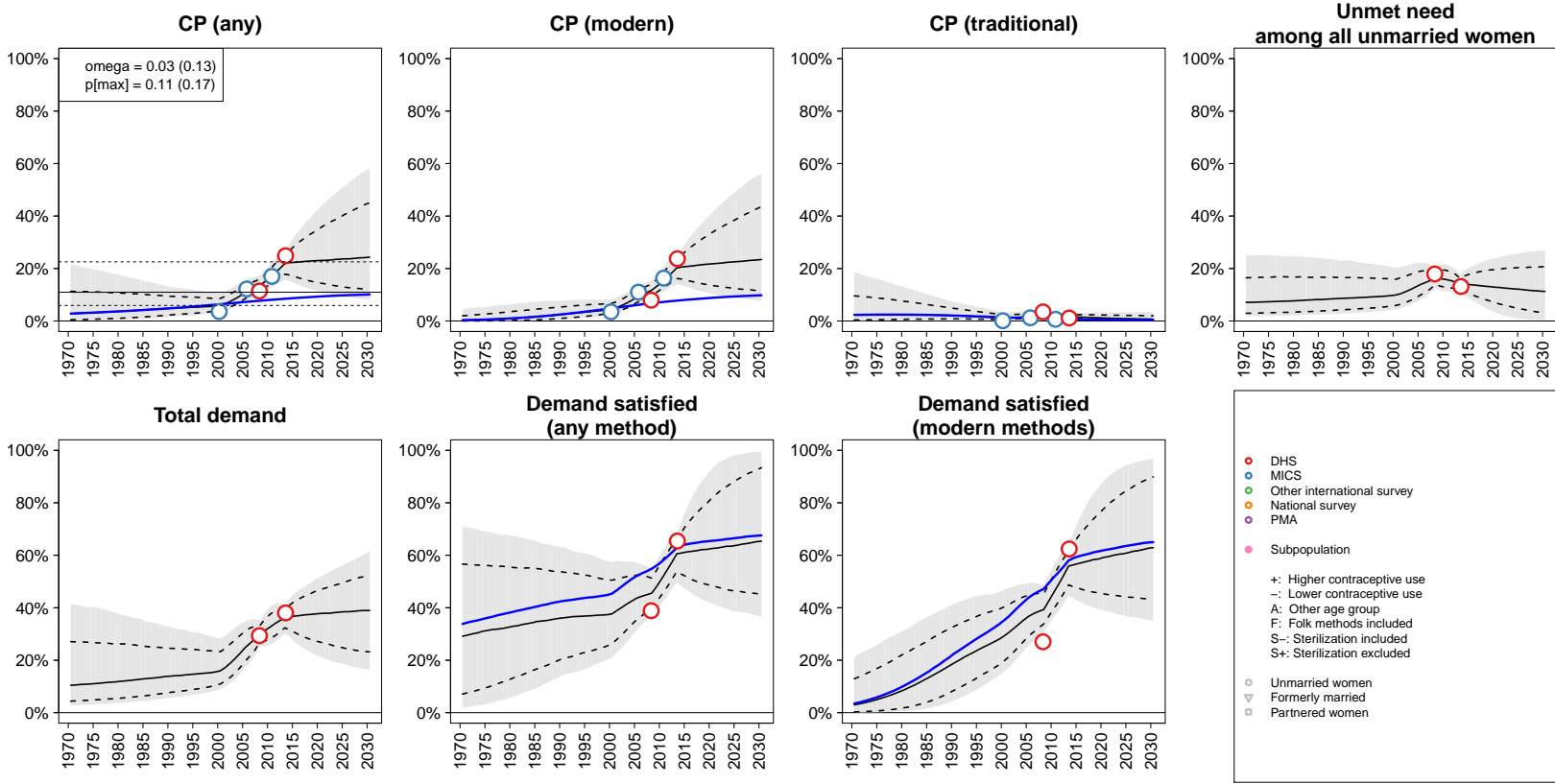
Senegal (Western Africa, SA Group 1) --- Unmarried / Not In-Union



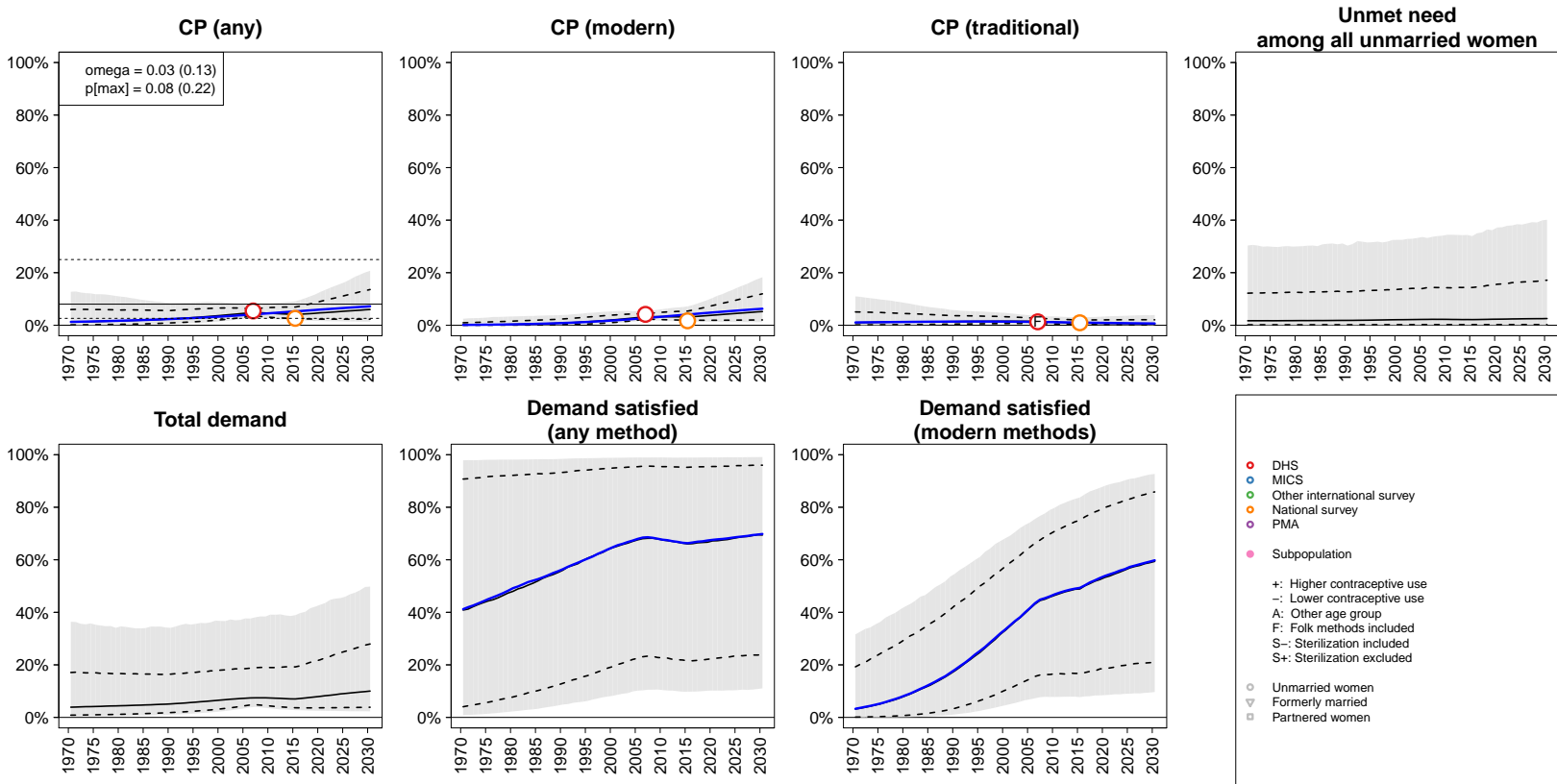
Serbia (Southern Europe, SA Group 1) --- Unmarried / Not In-Union



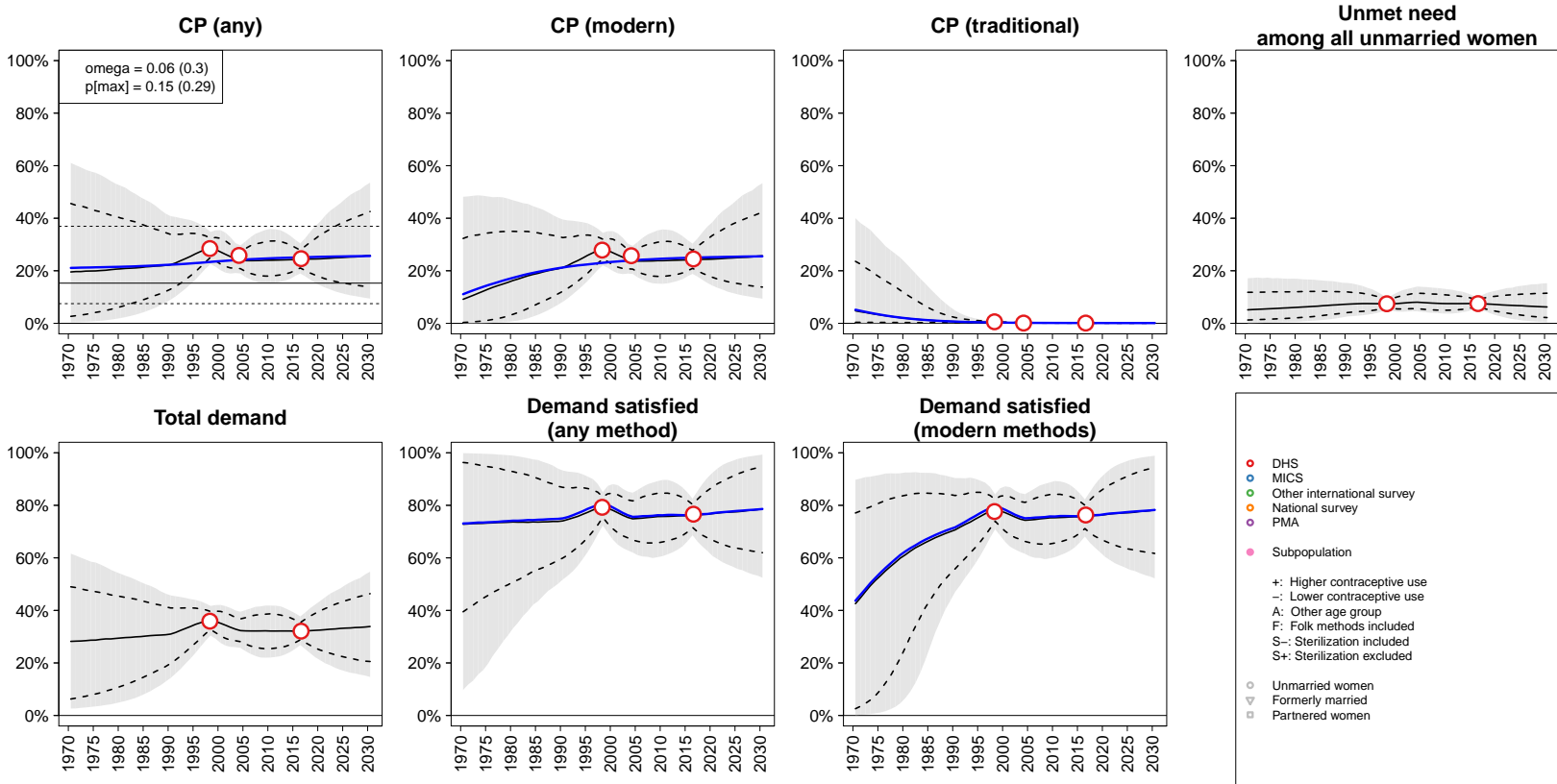
Sierra Leone (Western Africa, SA Group 1) --- Unmarried / Not In-Union



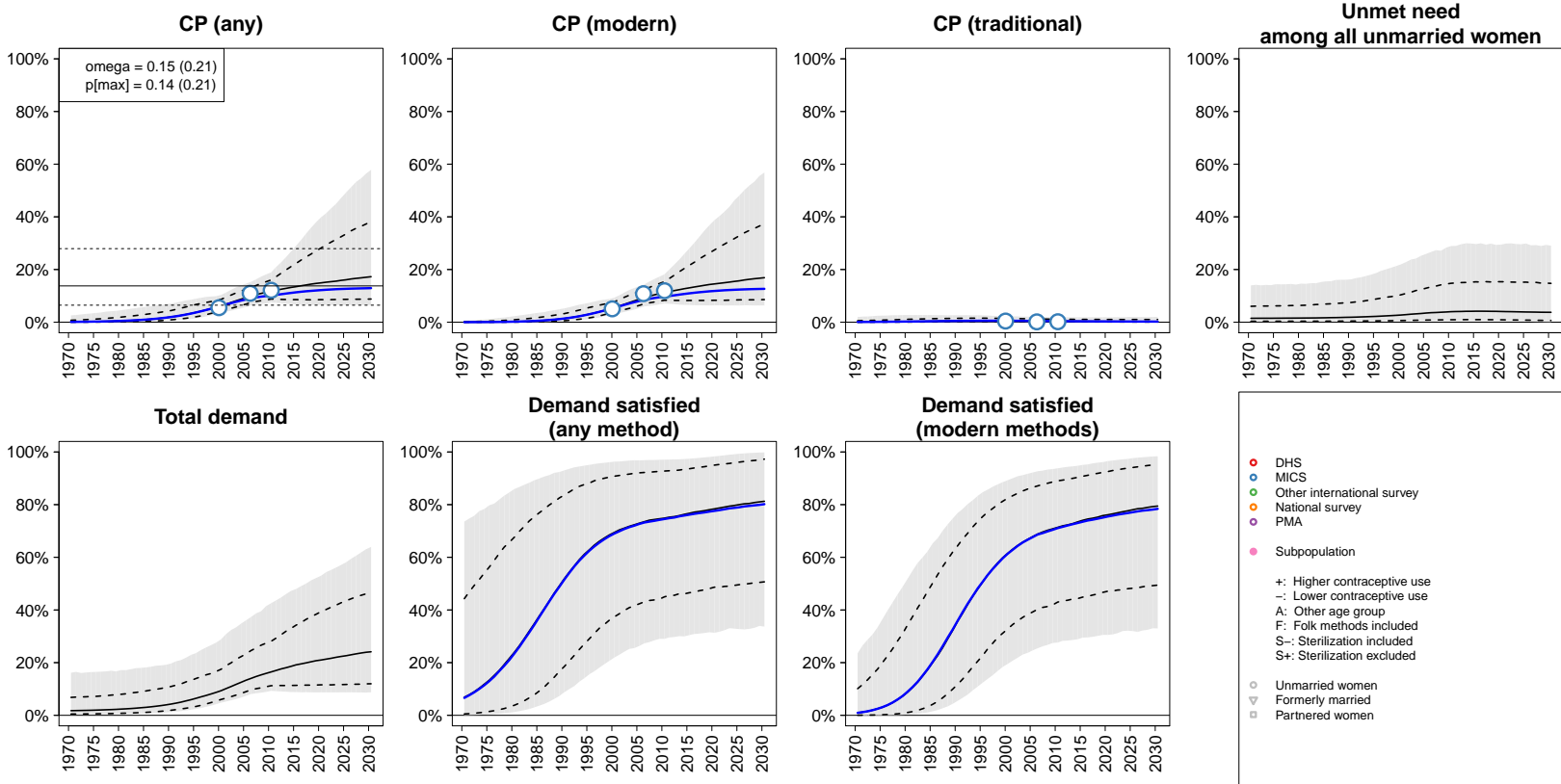
Solomon Islands (Melanesia, SA Group 1) — Unmarried / Not In-Union



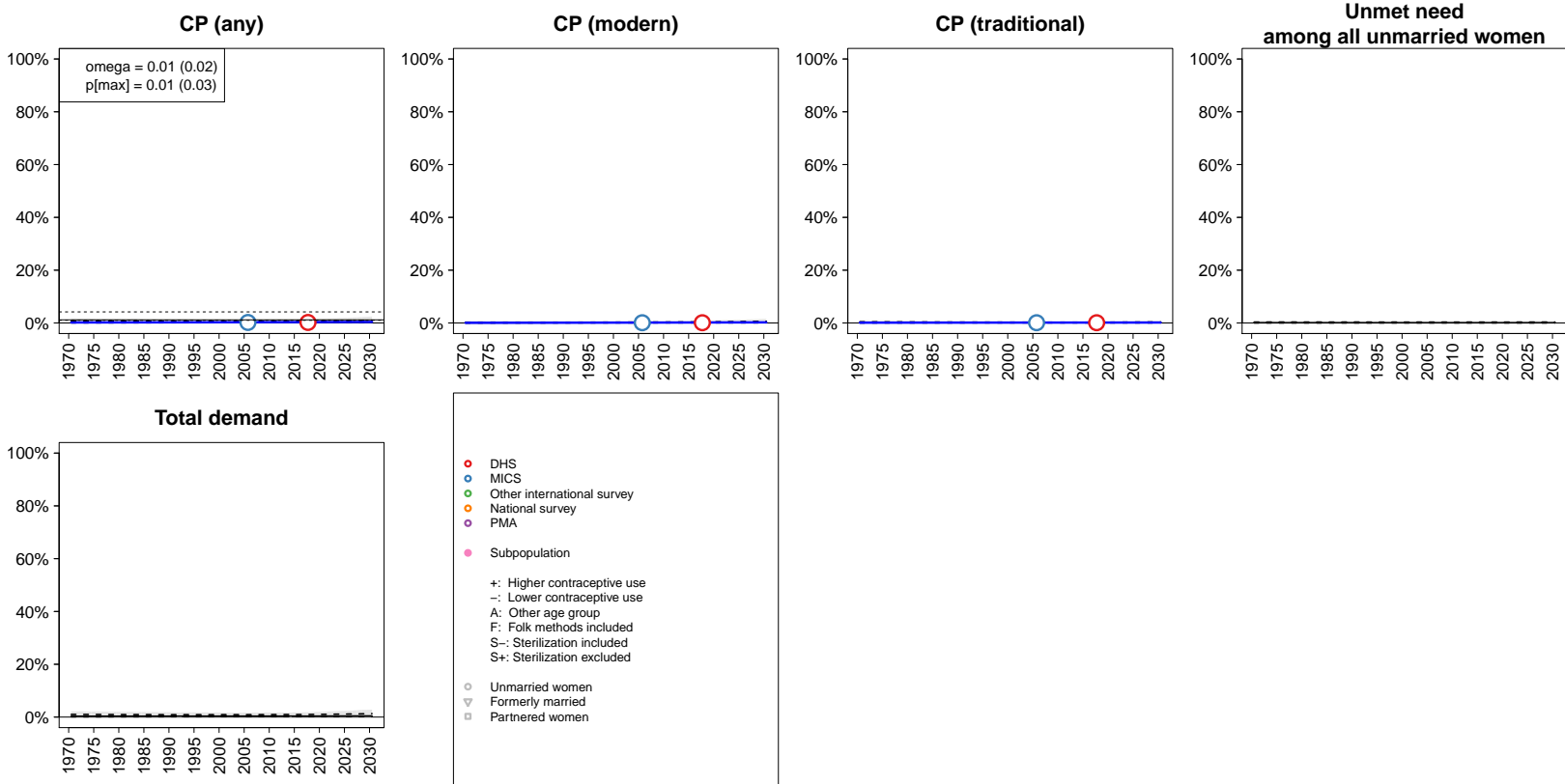
South Africa (Southern Africa, SA Group 1) --- Unmarried / Not In-Union



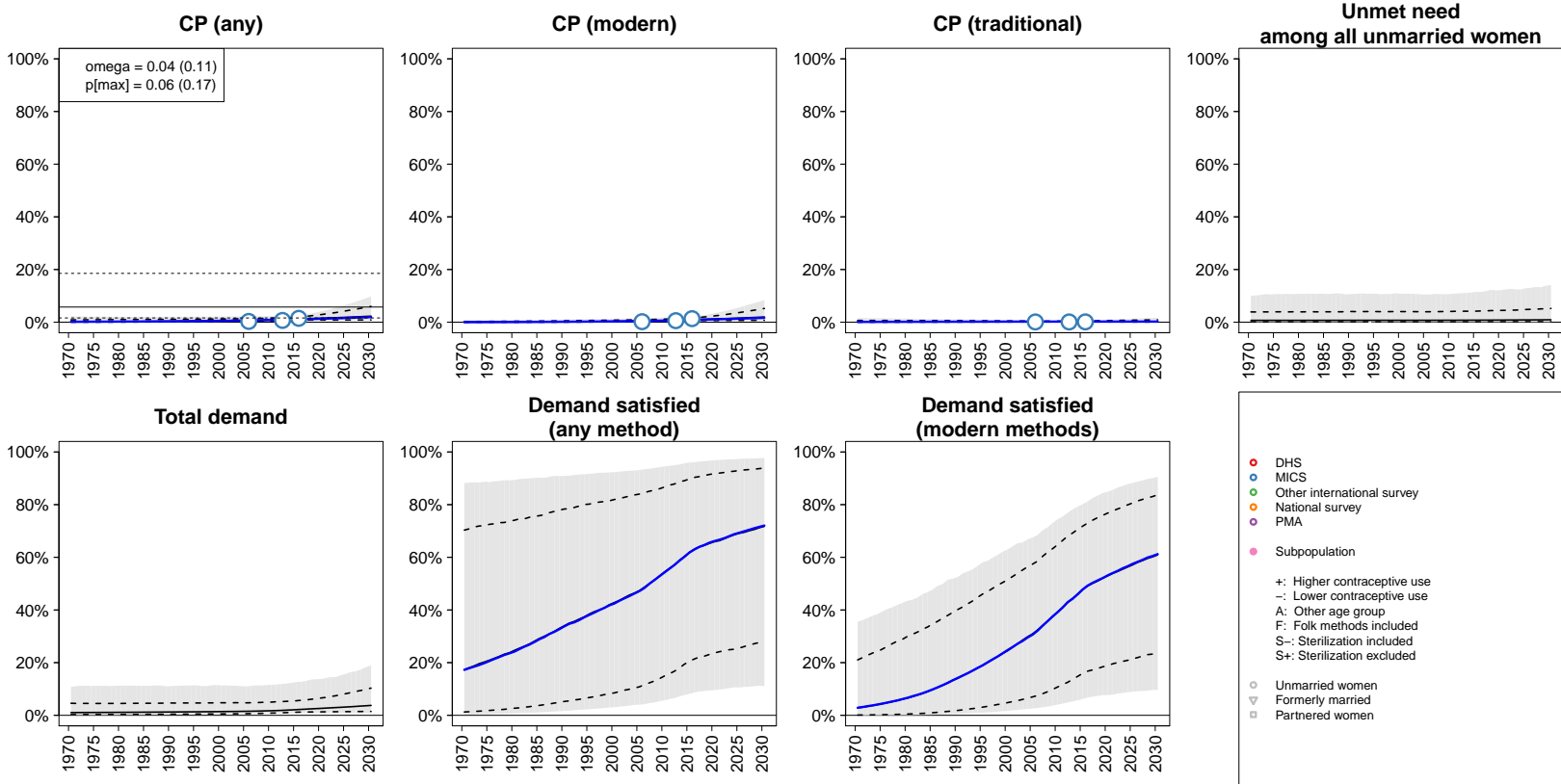
Suriname (South America, SA Group 1) --- Unmarried / Not In-Union



Tajikistan (Central Asia, SA Group 0) --- Unmarried / Not In-Union

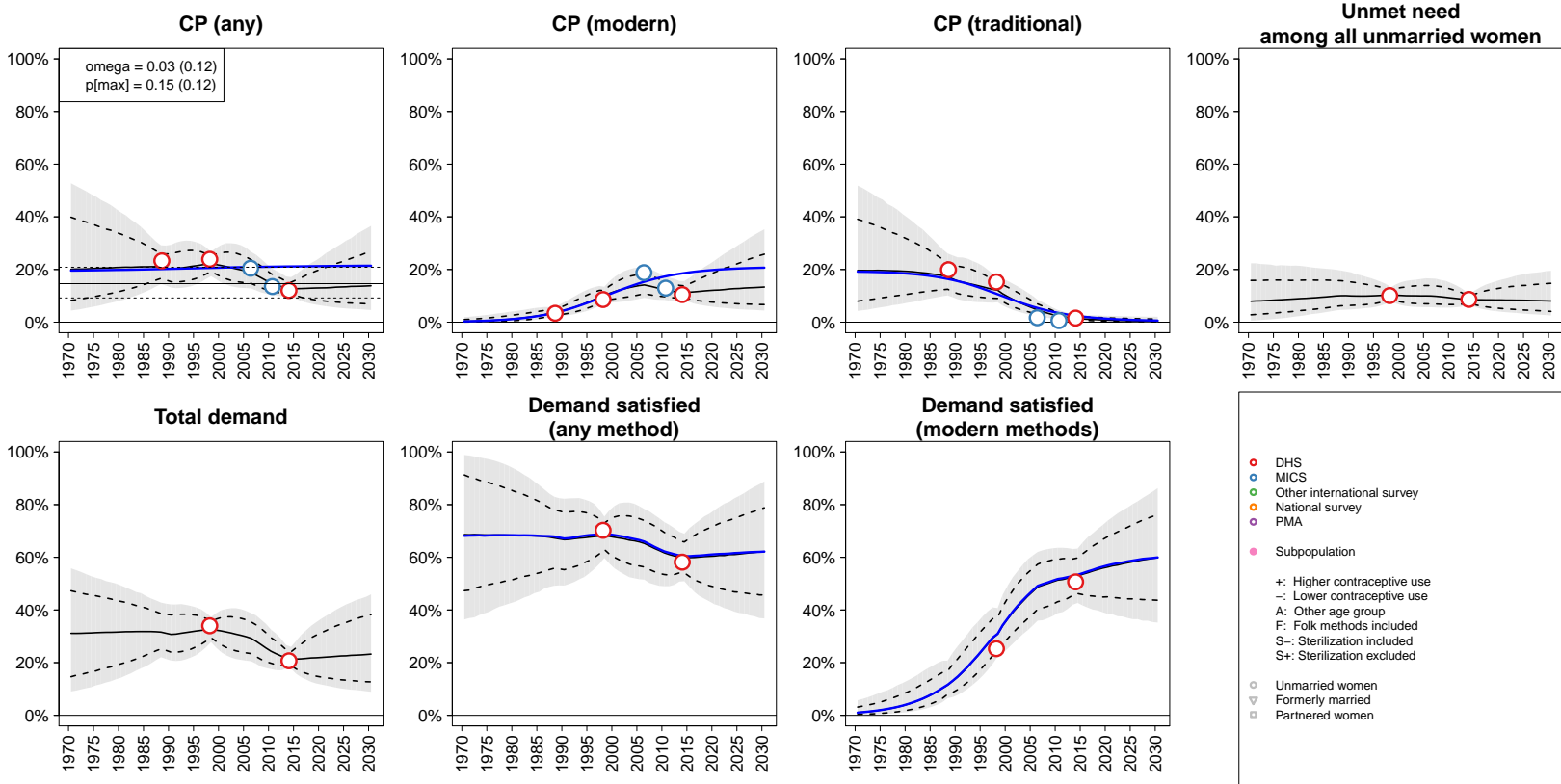


Thailand (South-eastern Asia, SA Group 1) --- Unmarried / Not In-Union

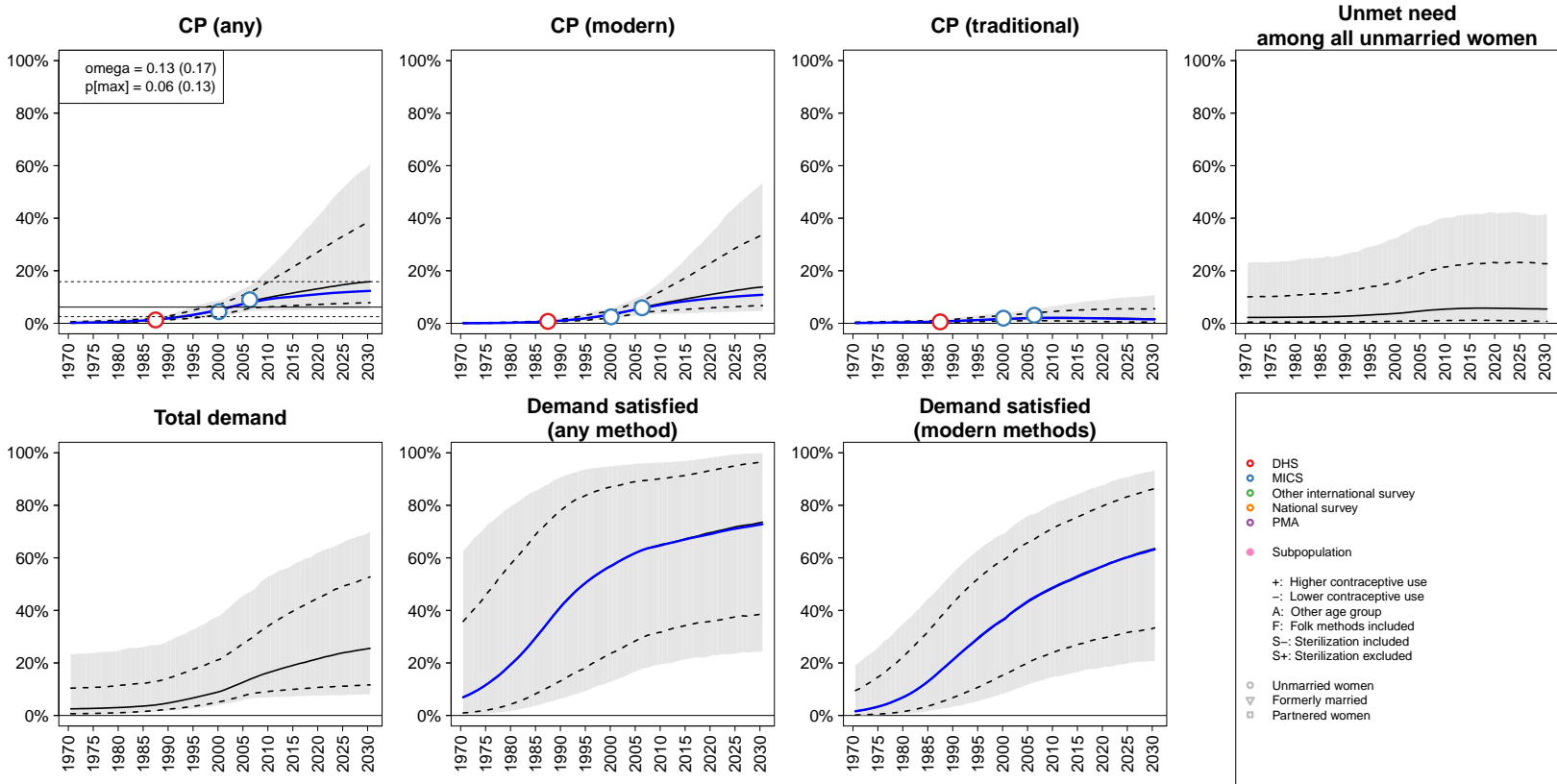




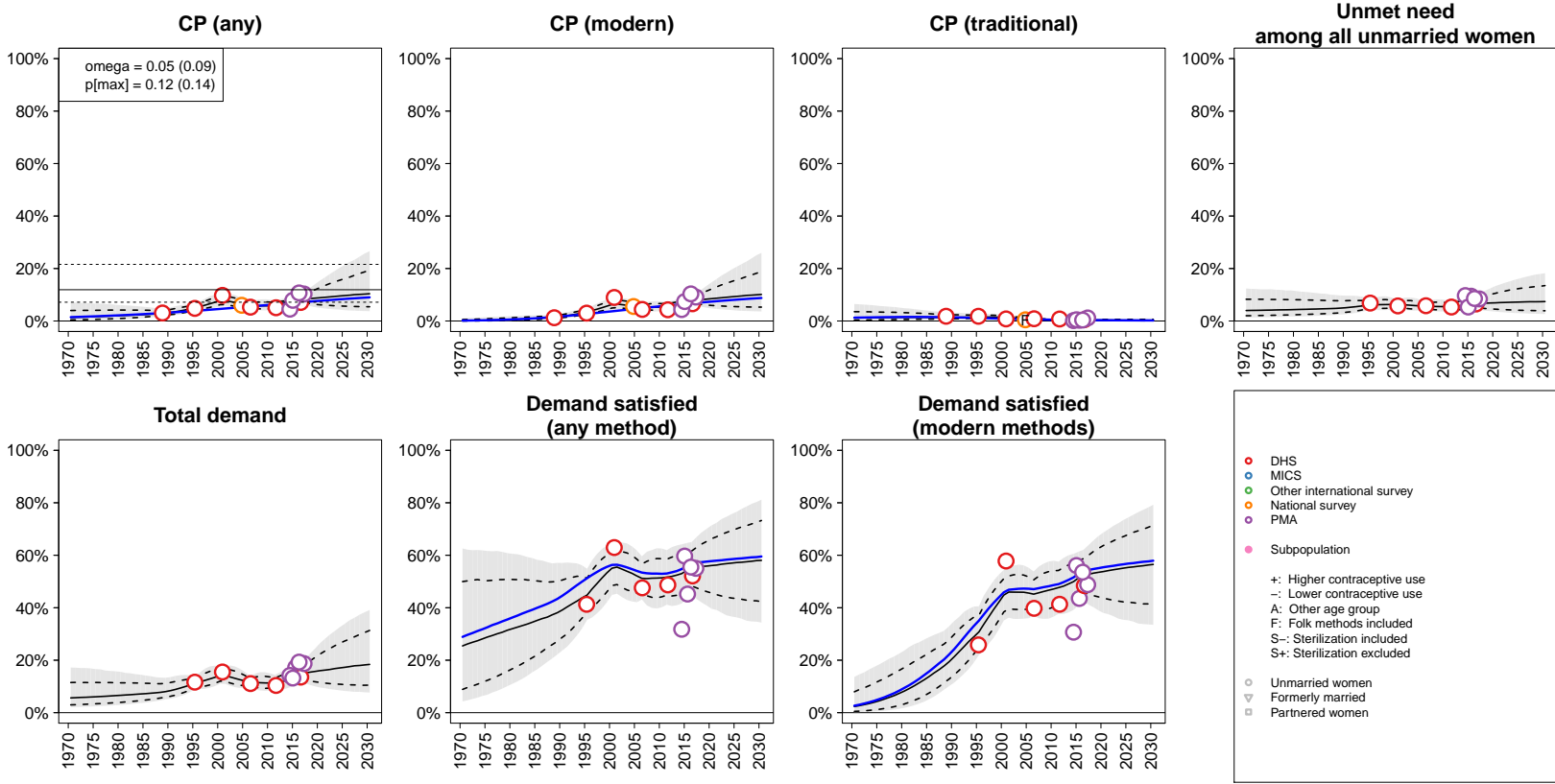
Togo (Western Africa, SA Group 1) --- Unmarried / Not In-Union



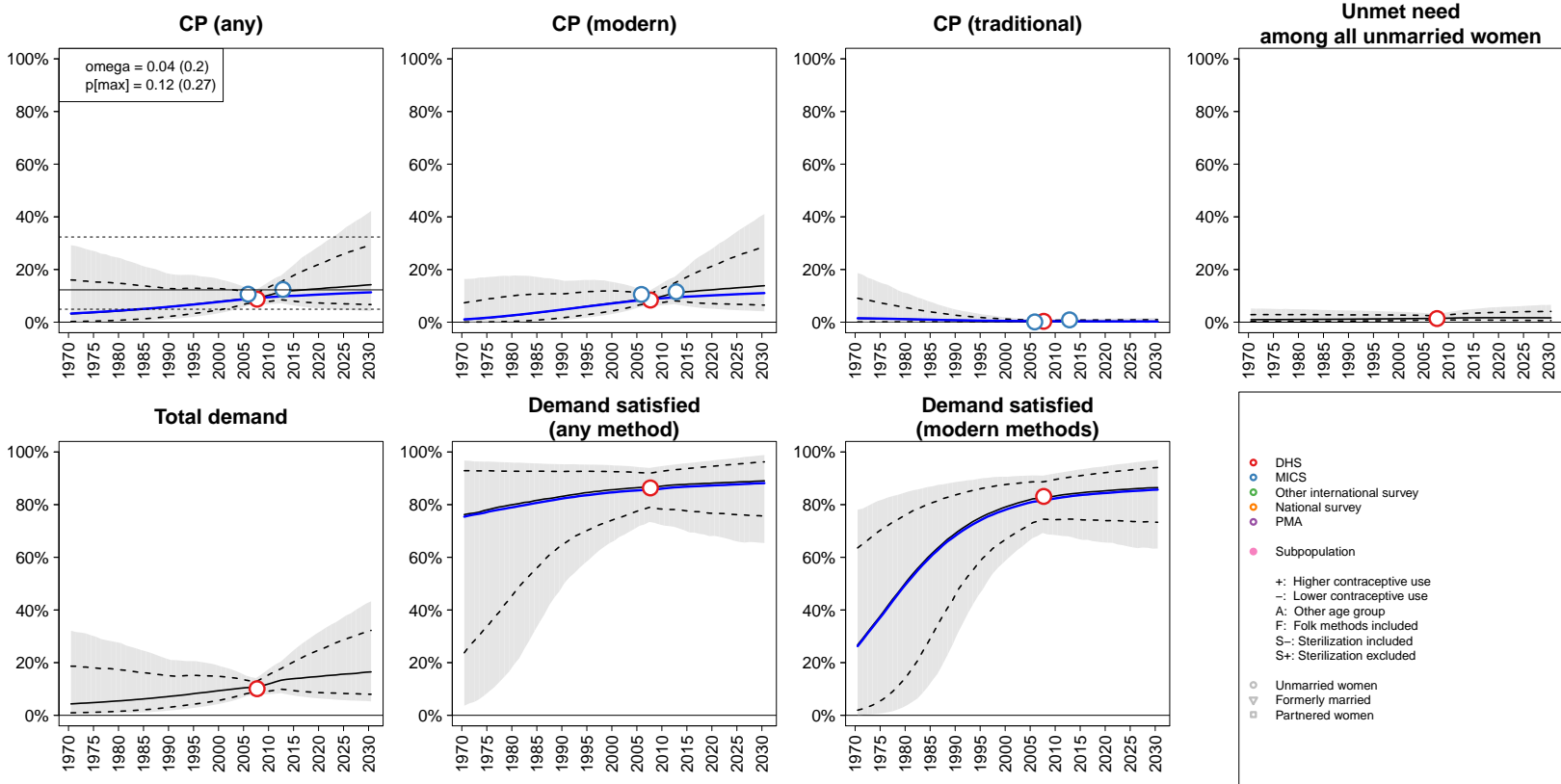
Trinidad and Tobago (Caribbean, SA Group 1) --- Unmarried / Not In-Union



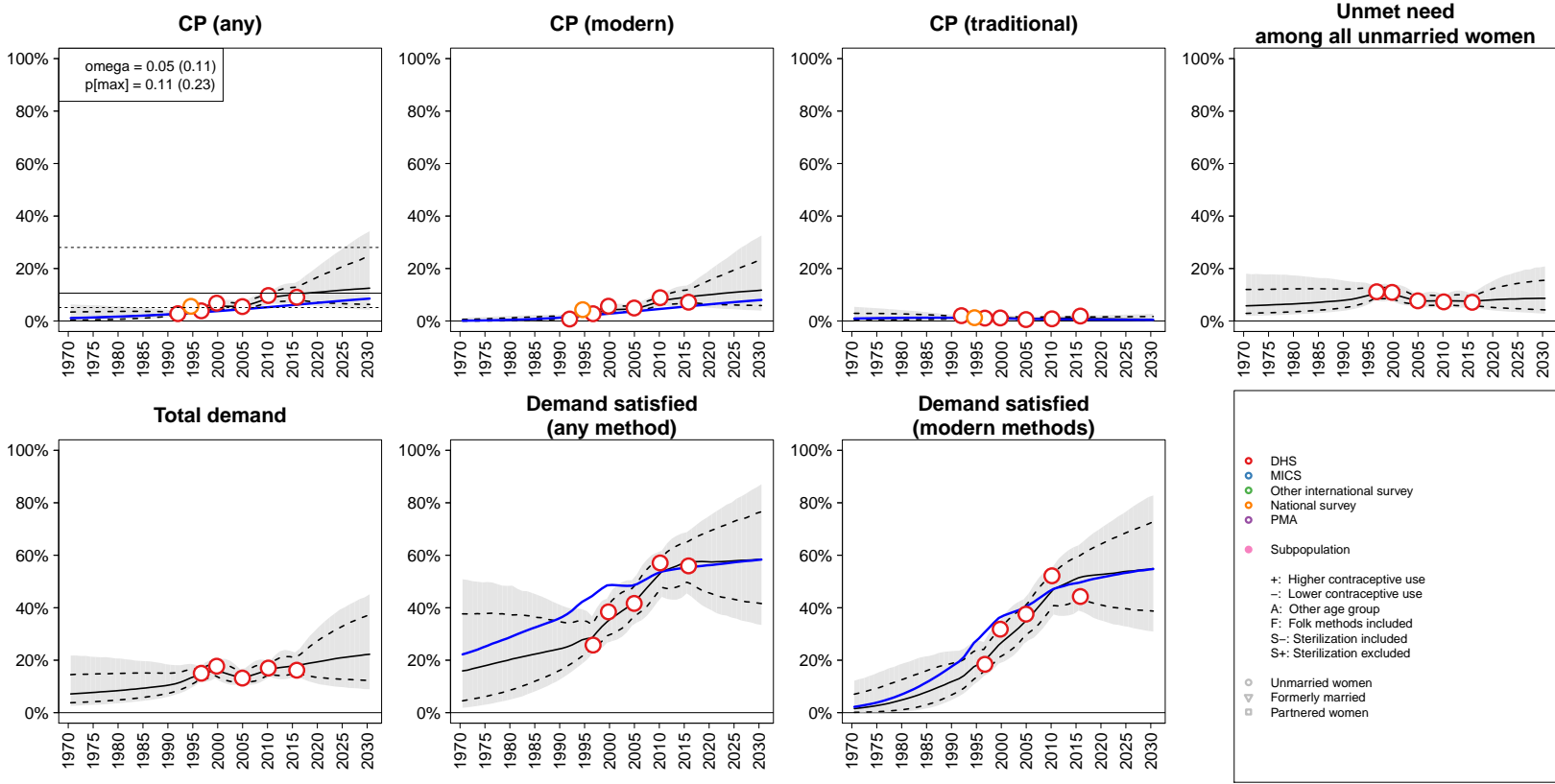
Uganda (Eastern Africa, SA Group 1) --- Unmarried / Not In-Union



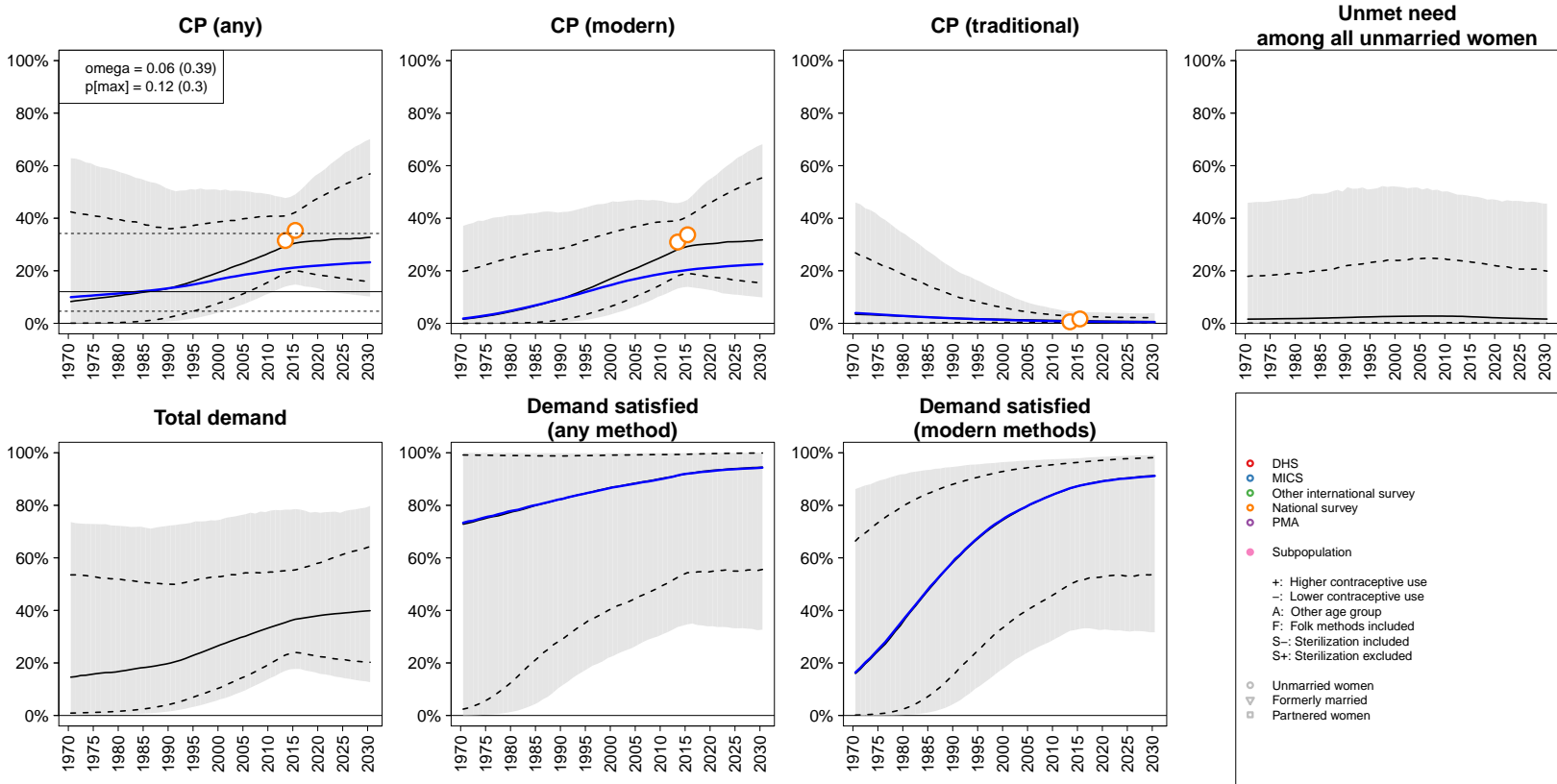
Ukraine (Eastern Europe, SA Group 1) ---- Unmarried / Not In-Union



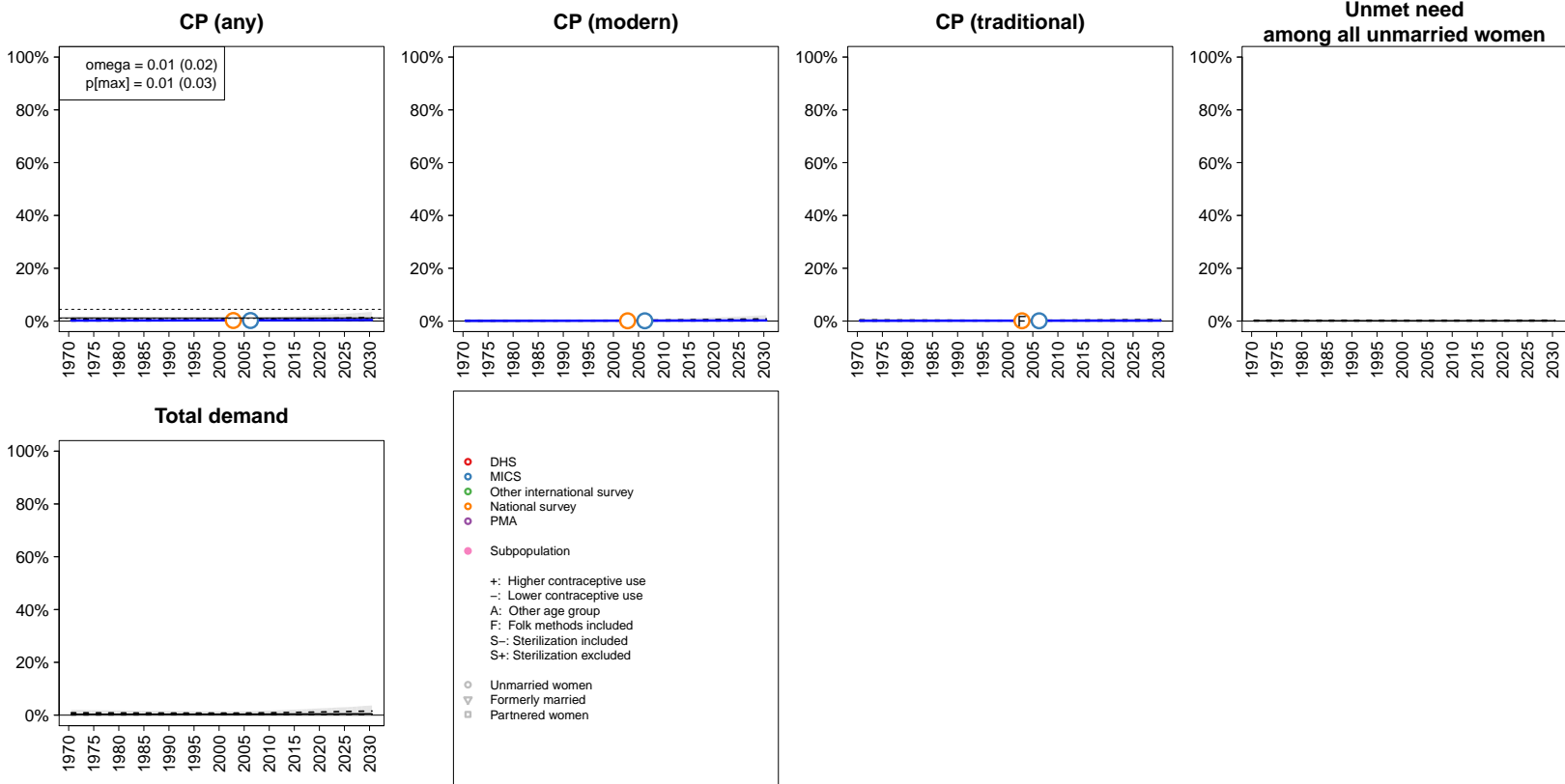
United Rep. of Tanzania (Eastern Africa, SA Group 1) --- Unmarried / Not In-Union



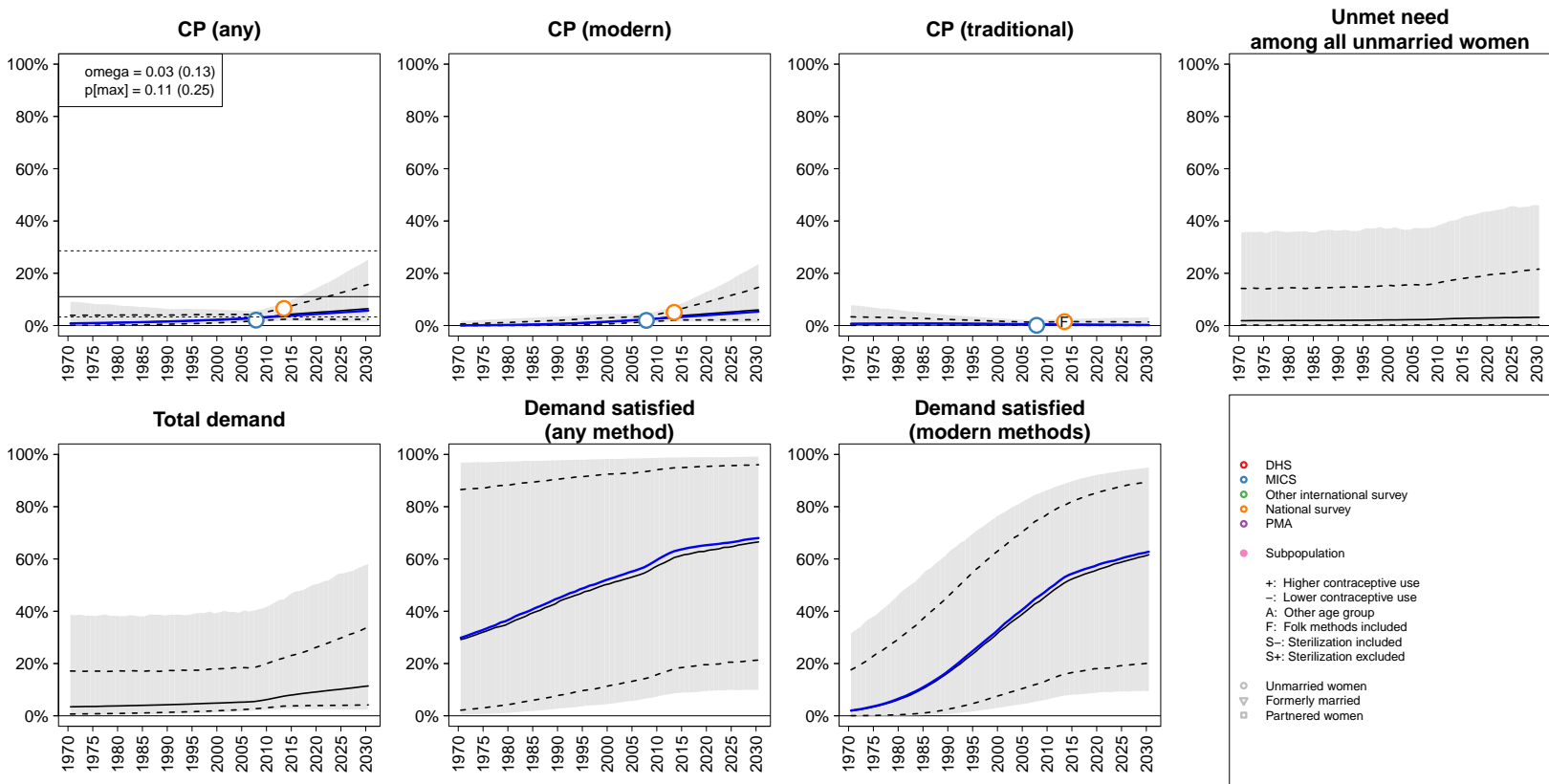
United States of America (Northern America, SA Group 1) --- Unmarried / Not In-Union



Uzbekistan (Central Asia, SA Group 0) ---- Unmarried / Not In-Union

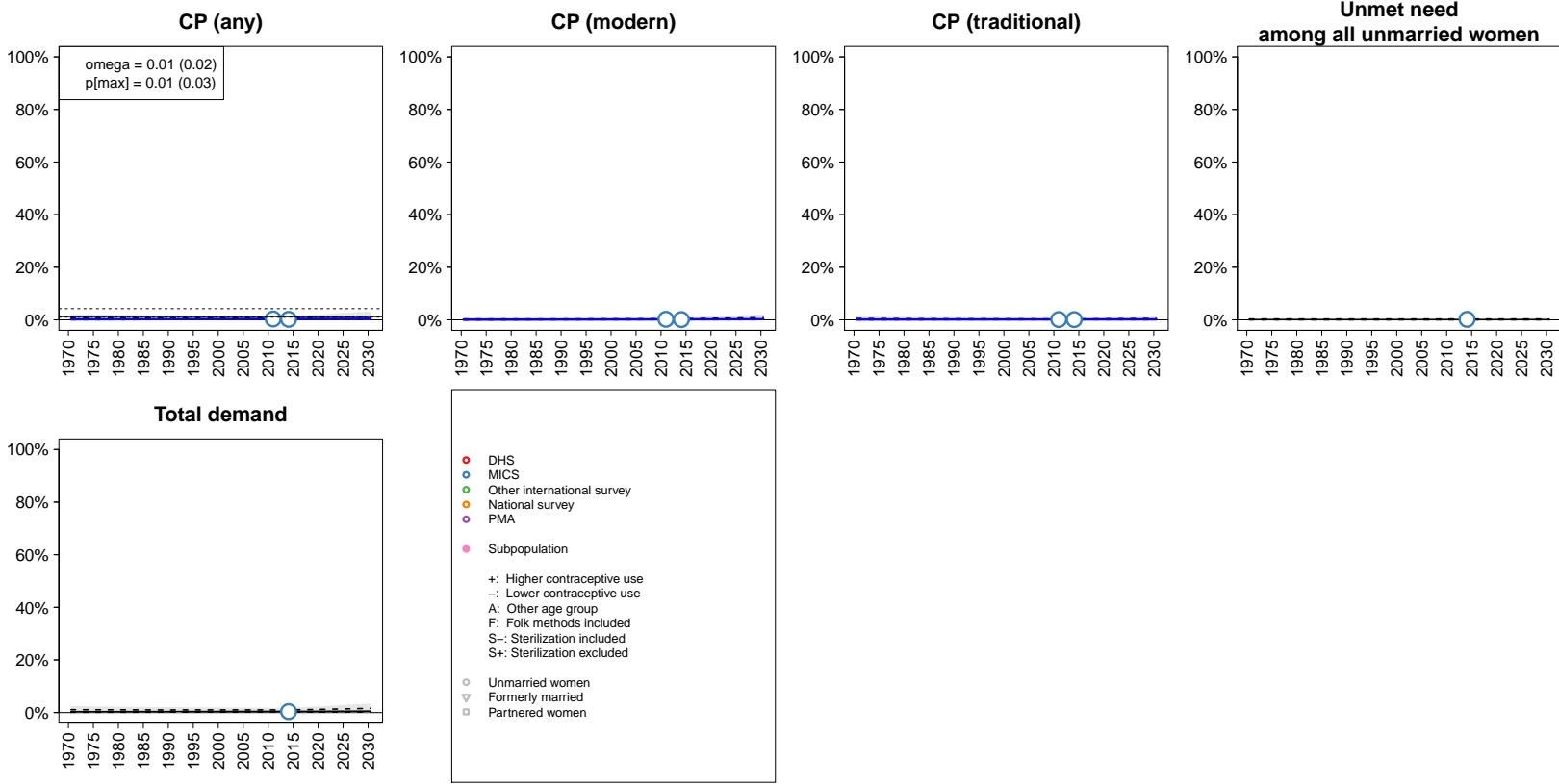


Vanuatu (Melanesia, SA Group 1) --- Unmarried / Not In-Union

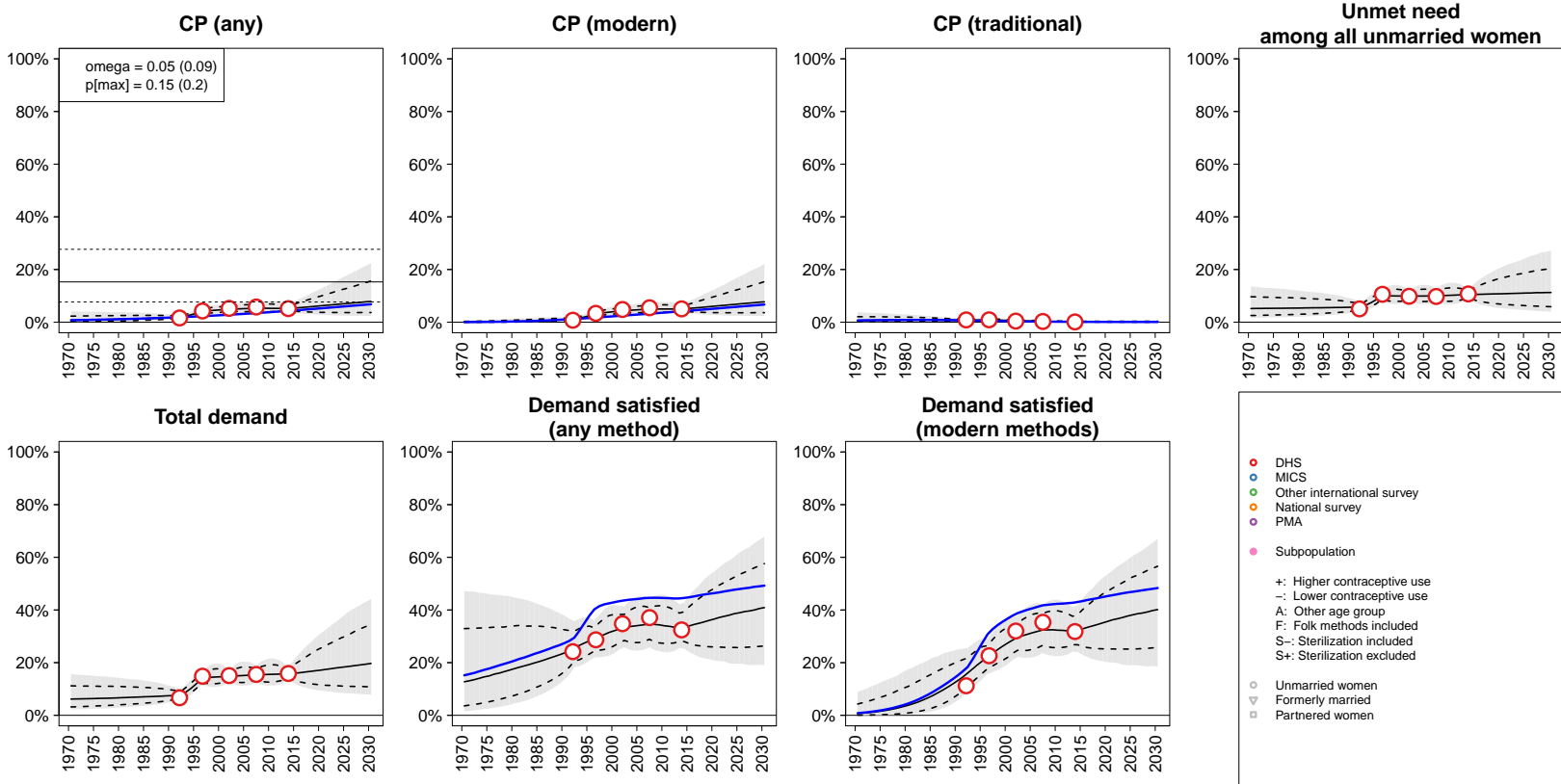




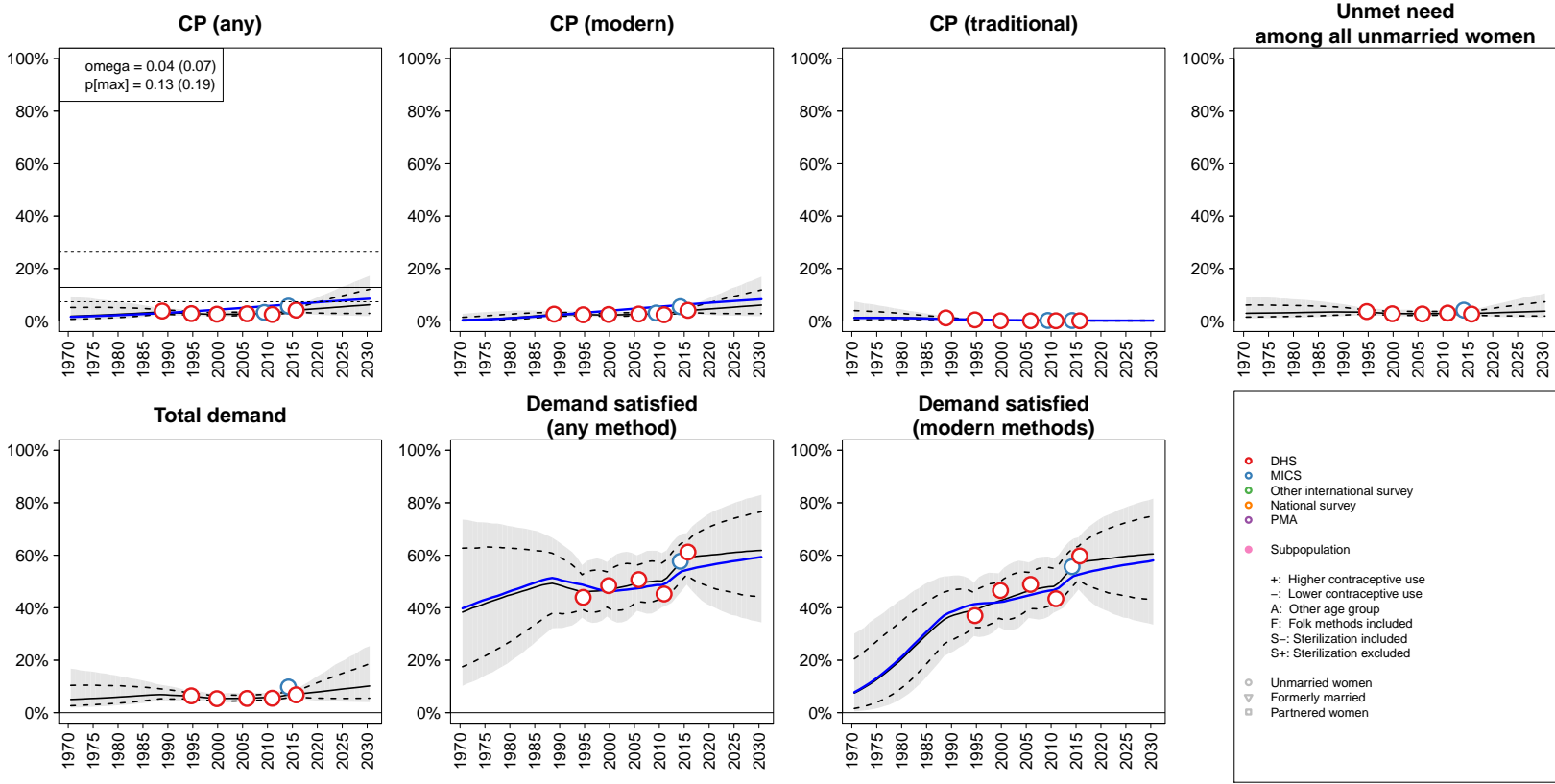
Viet Nam (South-eastern Asia, SA Group 0) --- Unmarried / Not In-Union



Zambia (Eastern Africa, SA Group 1) — Unmarried / Not In-Union

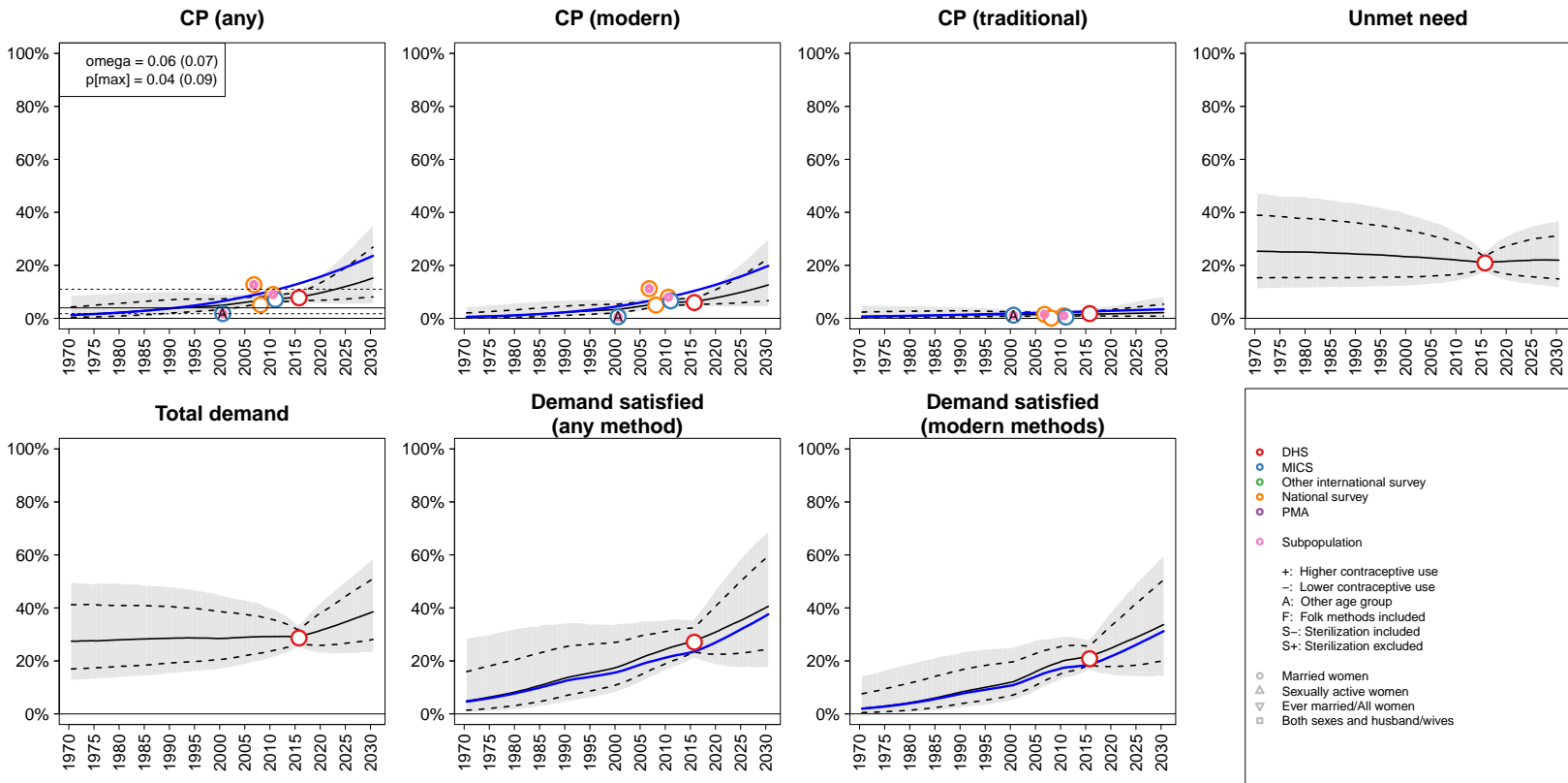


Zimbabwe (Eastern Africa, SA Group 1) --- Unmarried / Not In-Union

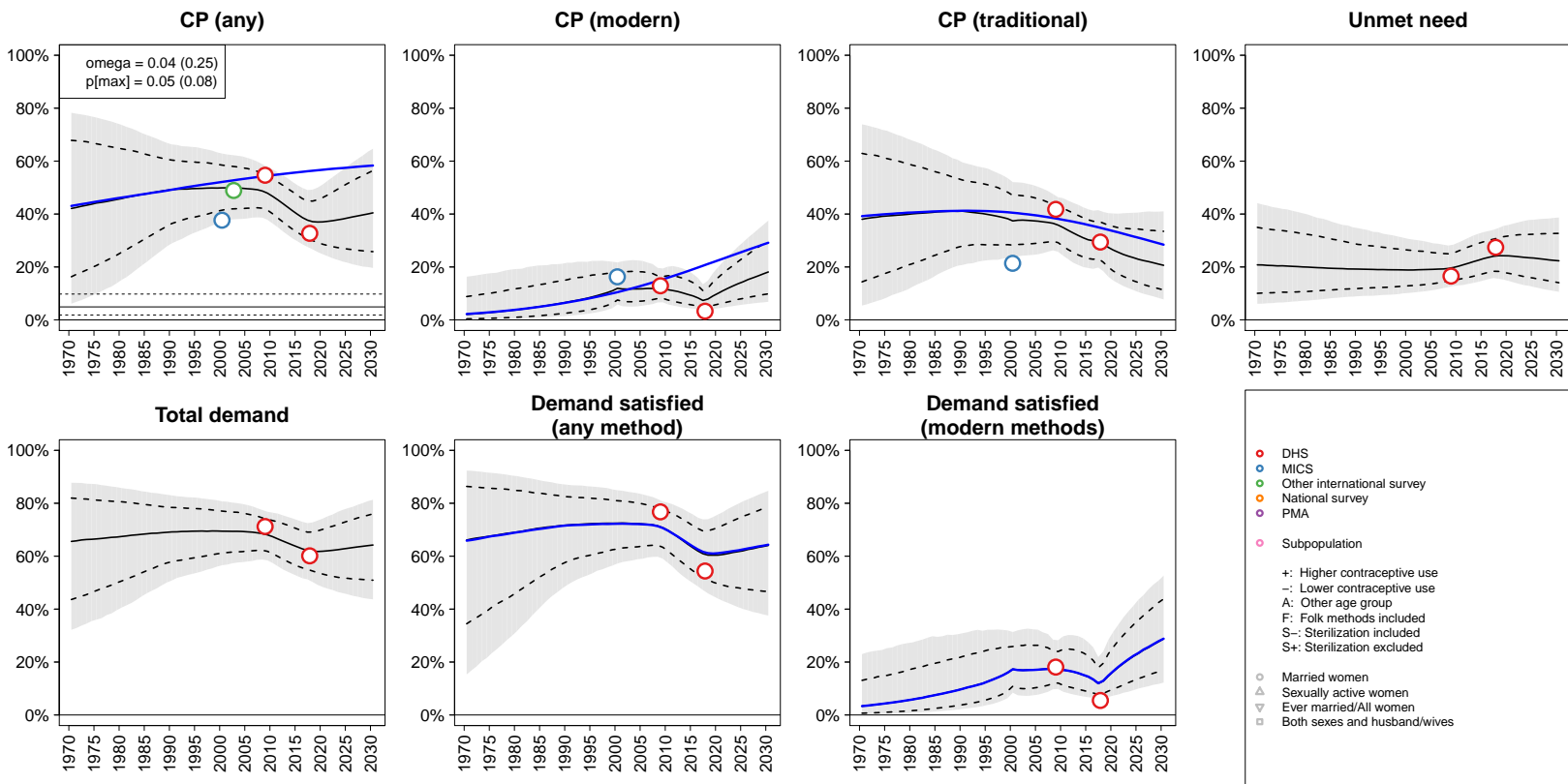


## 4.2 Married Adolescent Women

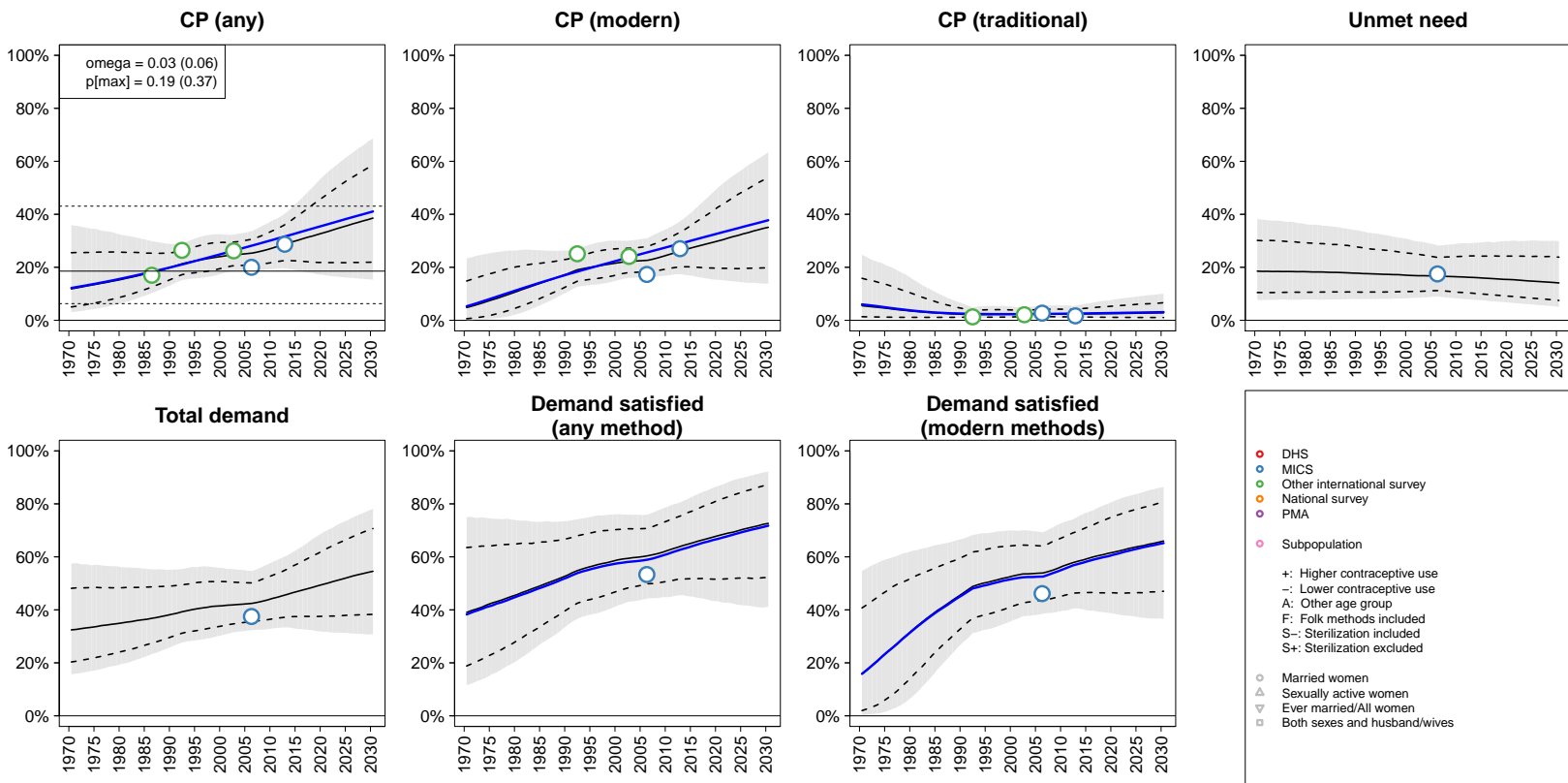
Afghanistan (Southern Asia) --- Married / In-Union



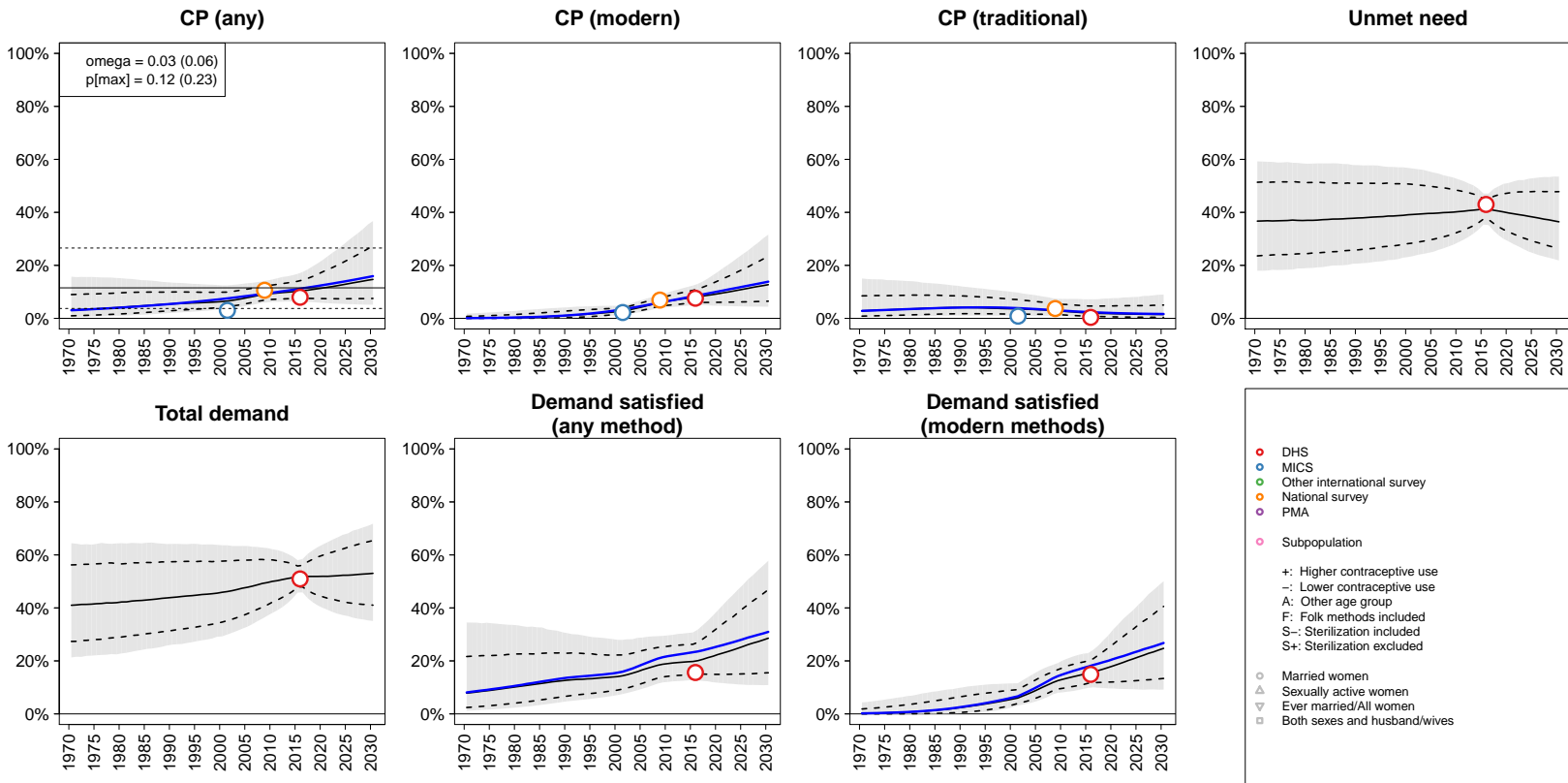
Albania (Southern Europe) --- Married / In-Union



Algeria (Northern Africa) — Married / In-Union

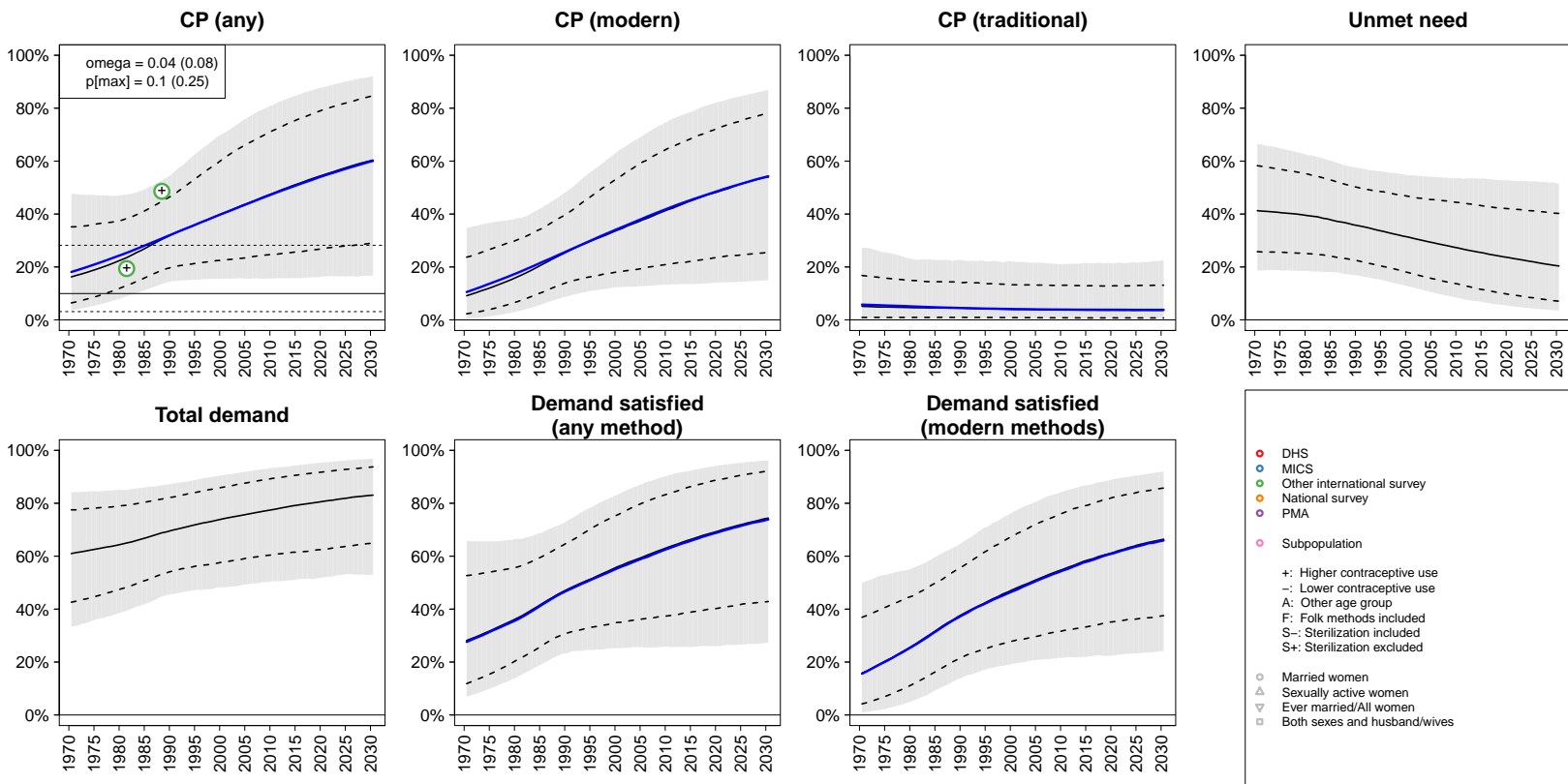


Angola (Middle Africa) --- Married / In-Union

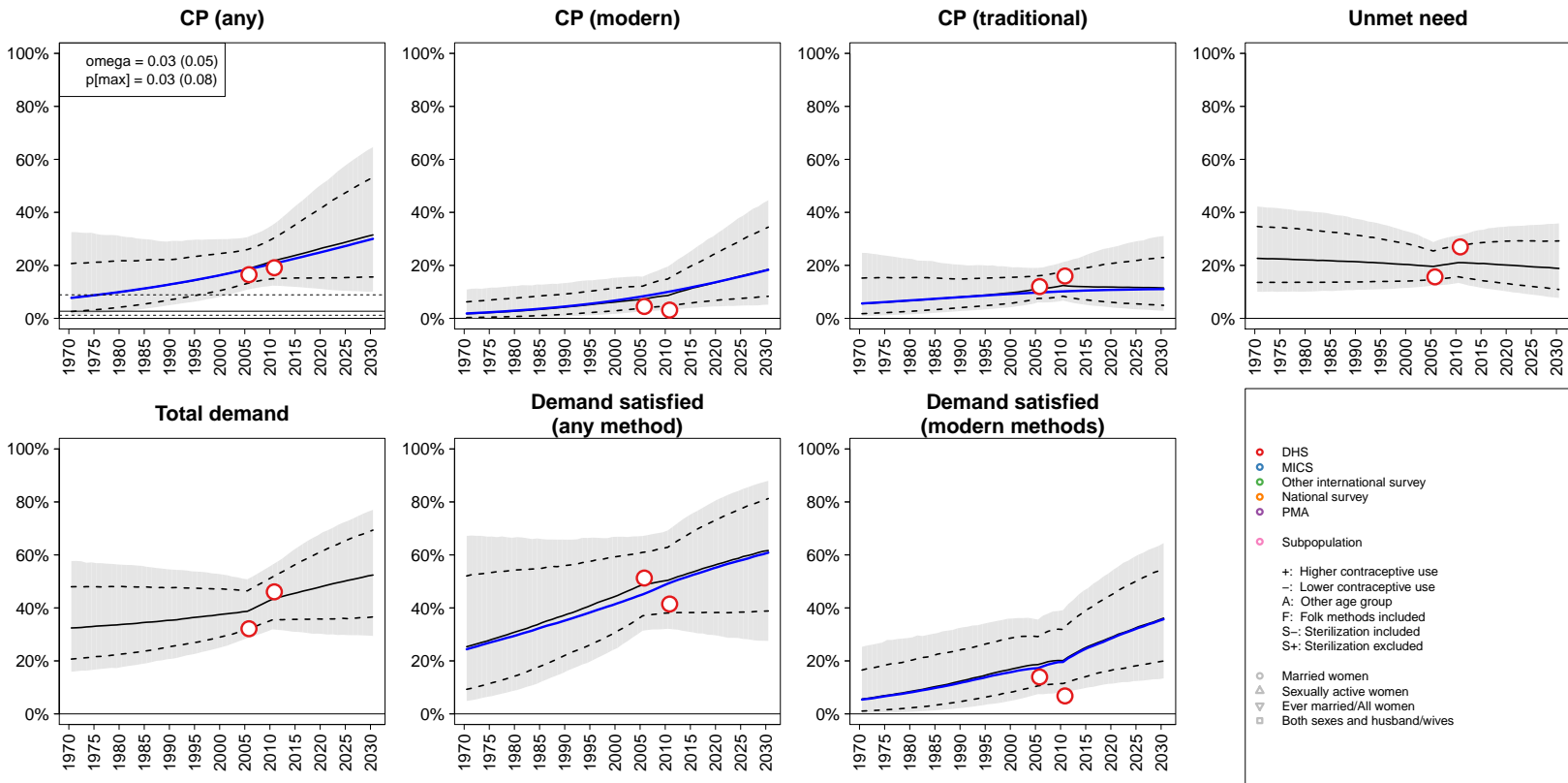




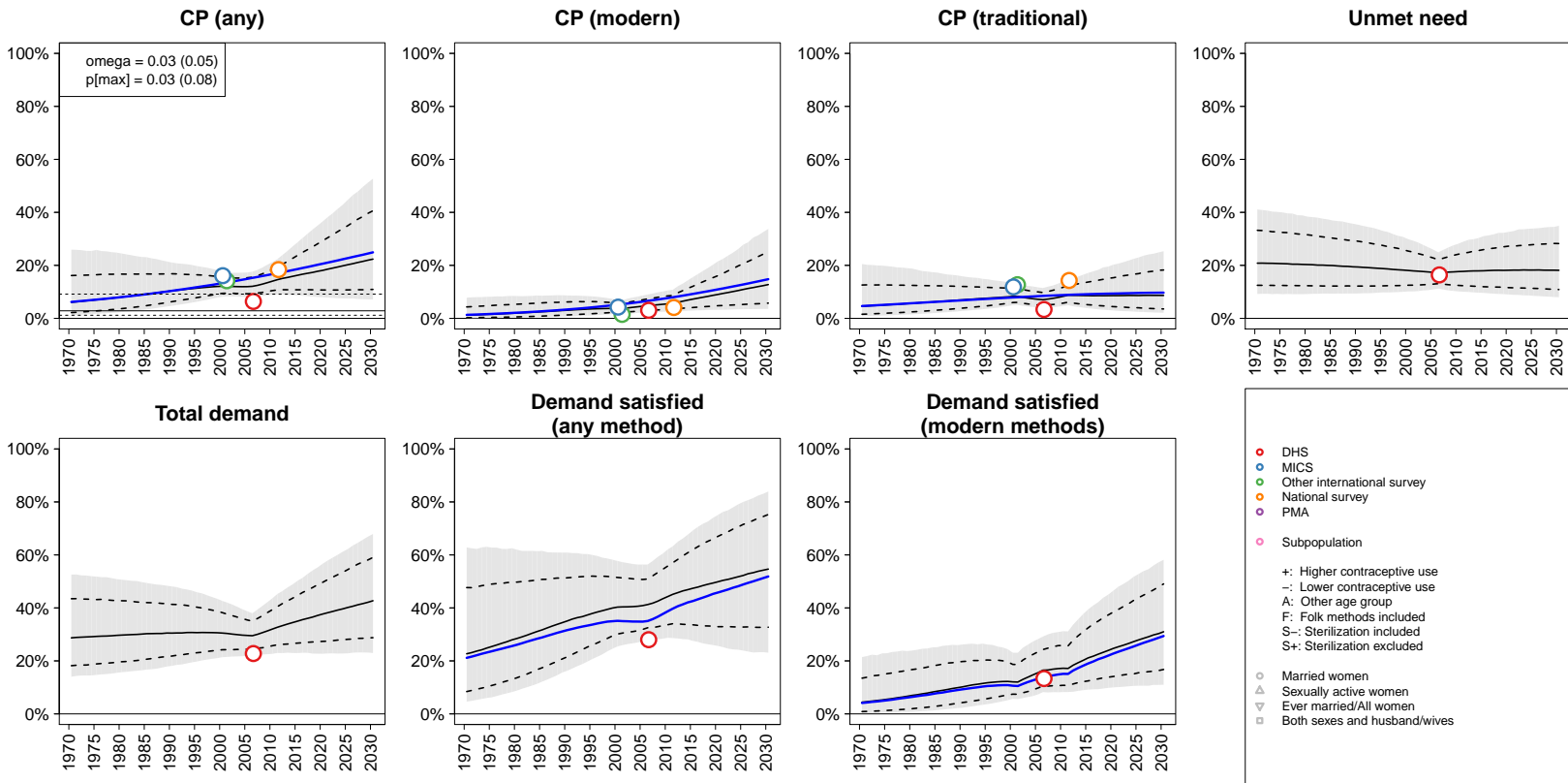
Antigua and Barbuda (Caribbean) --- Married / In-Union



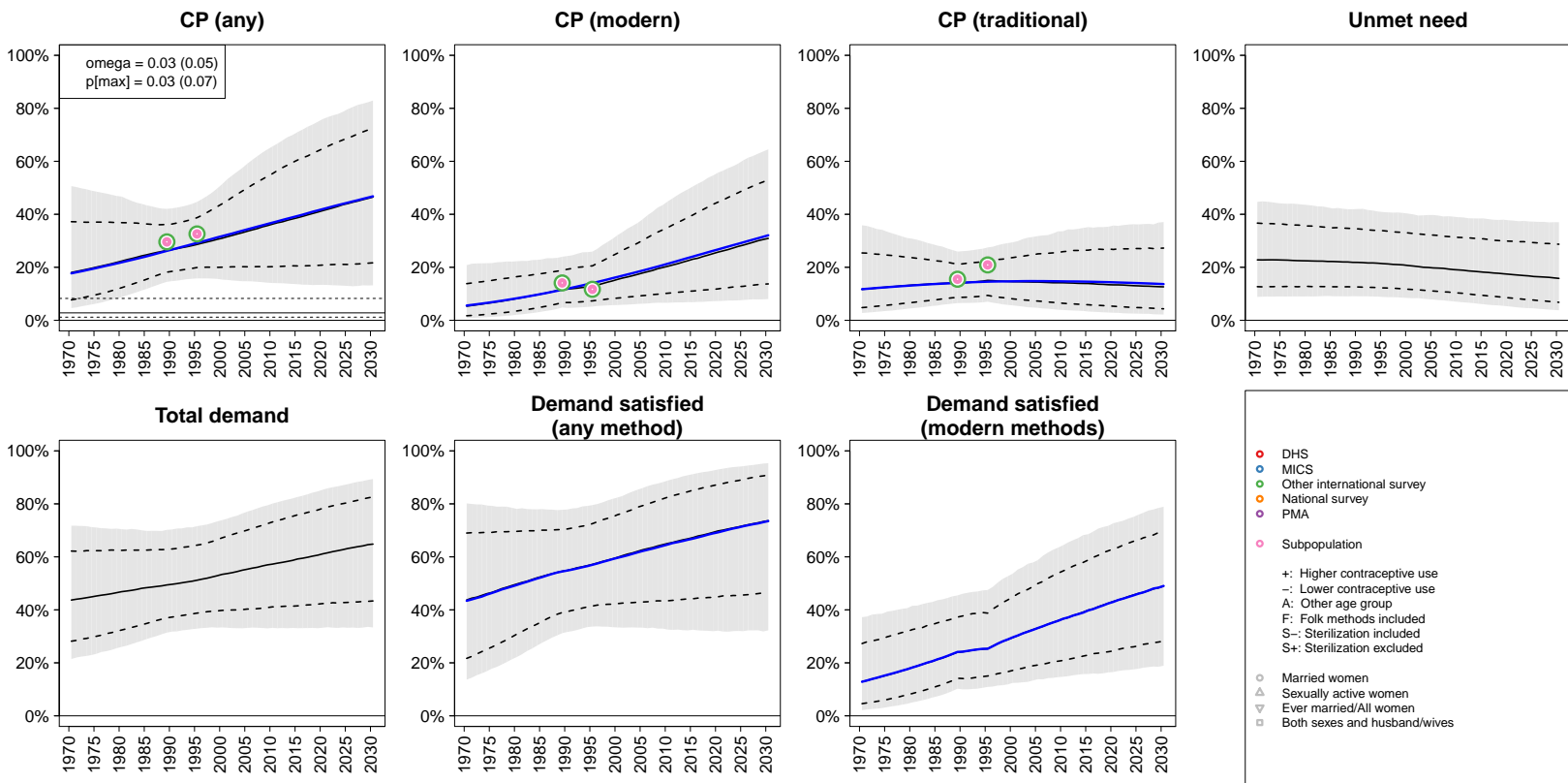
Armenia (Western Asia) --- Married / In-Union



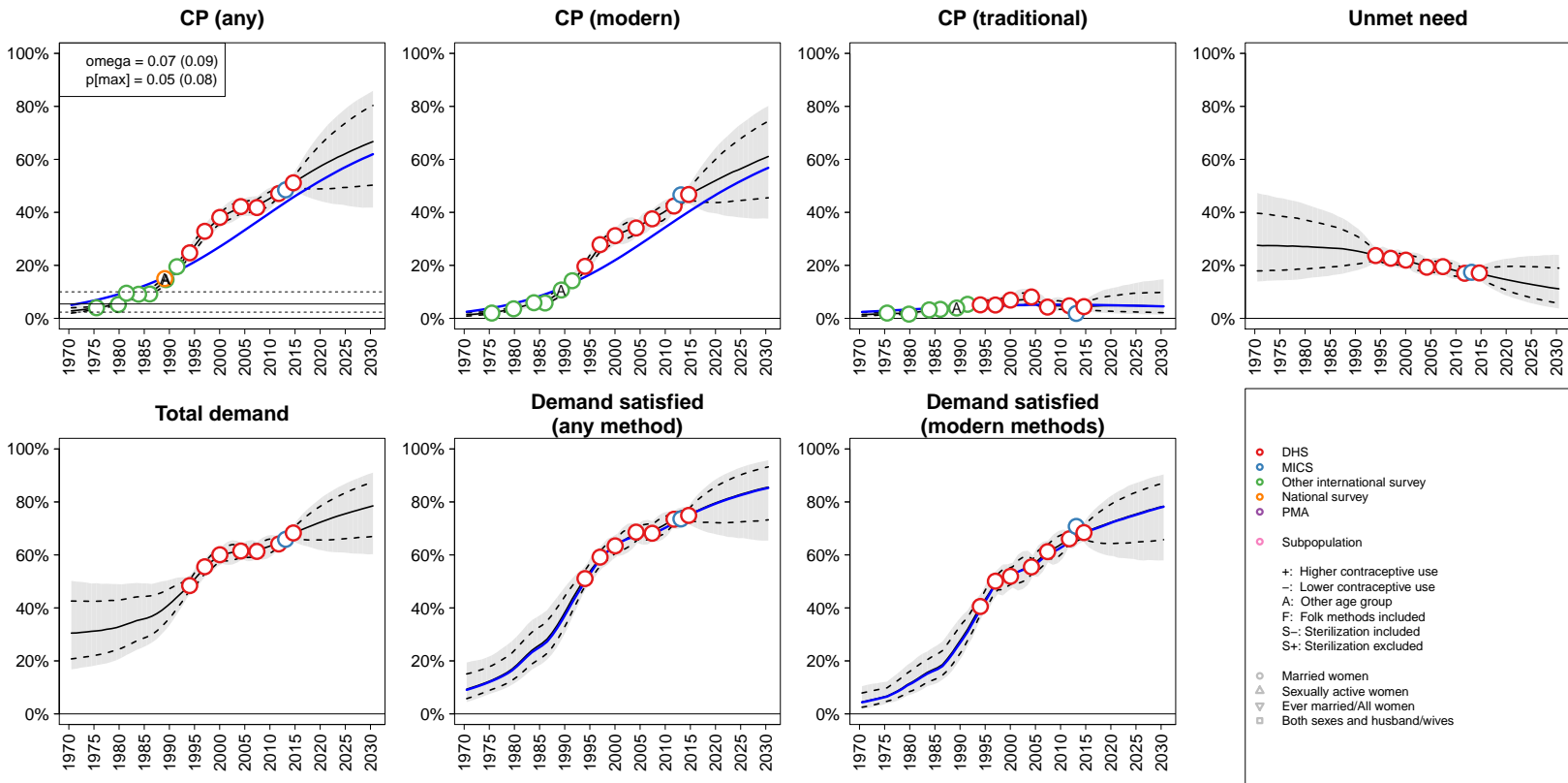
Azerbaijan (Western Asia) --- Married / In-Union



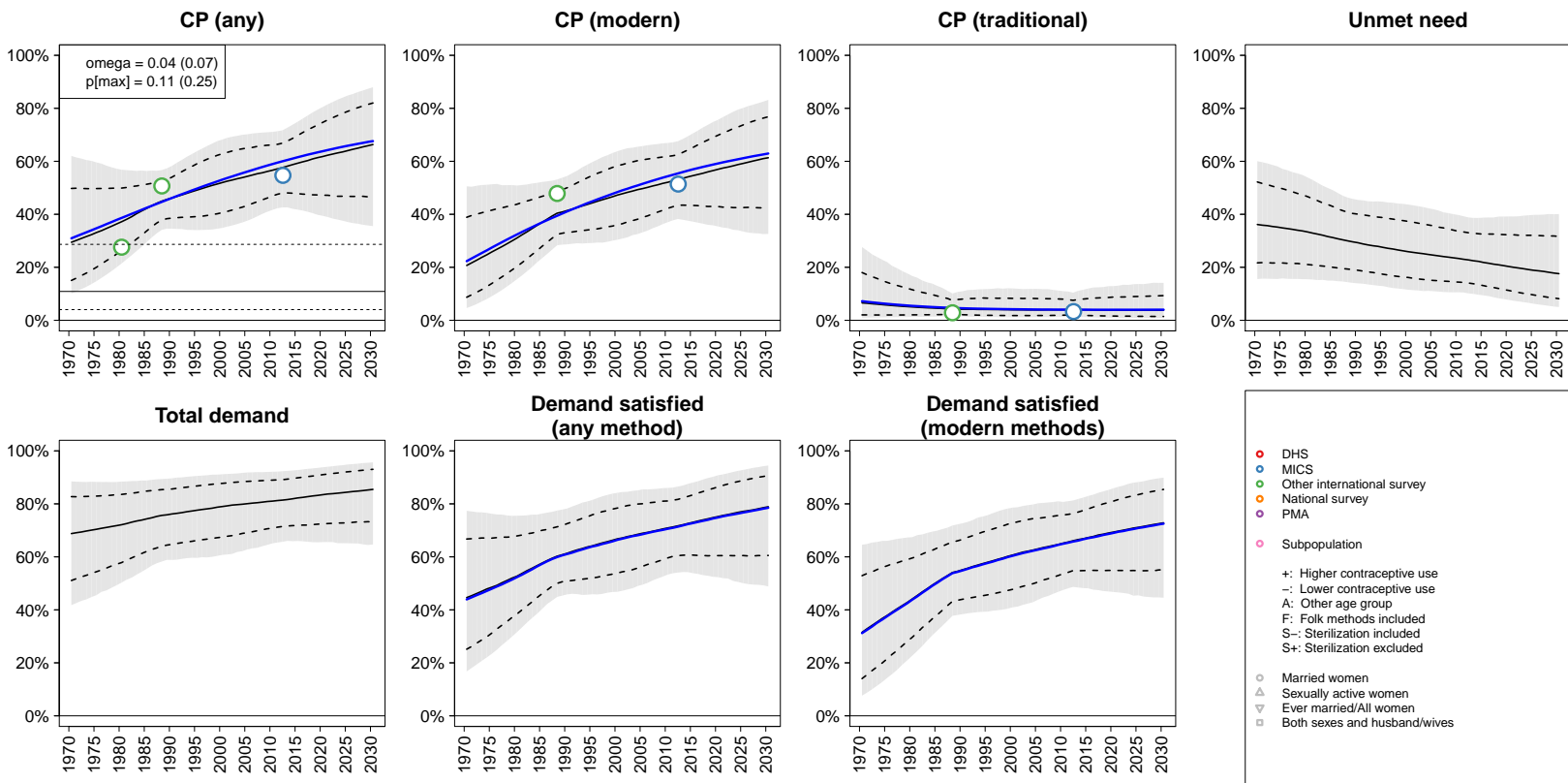
Bahrain (Western Asia) --- Married / In-Union



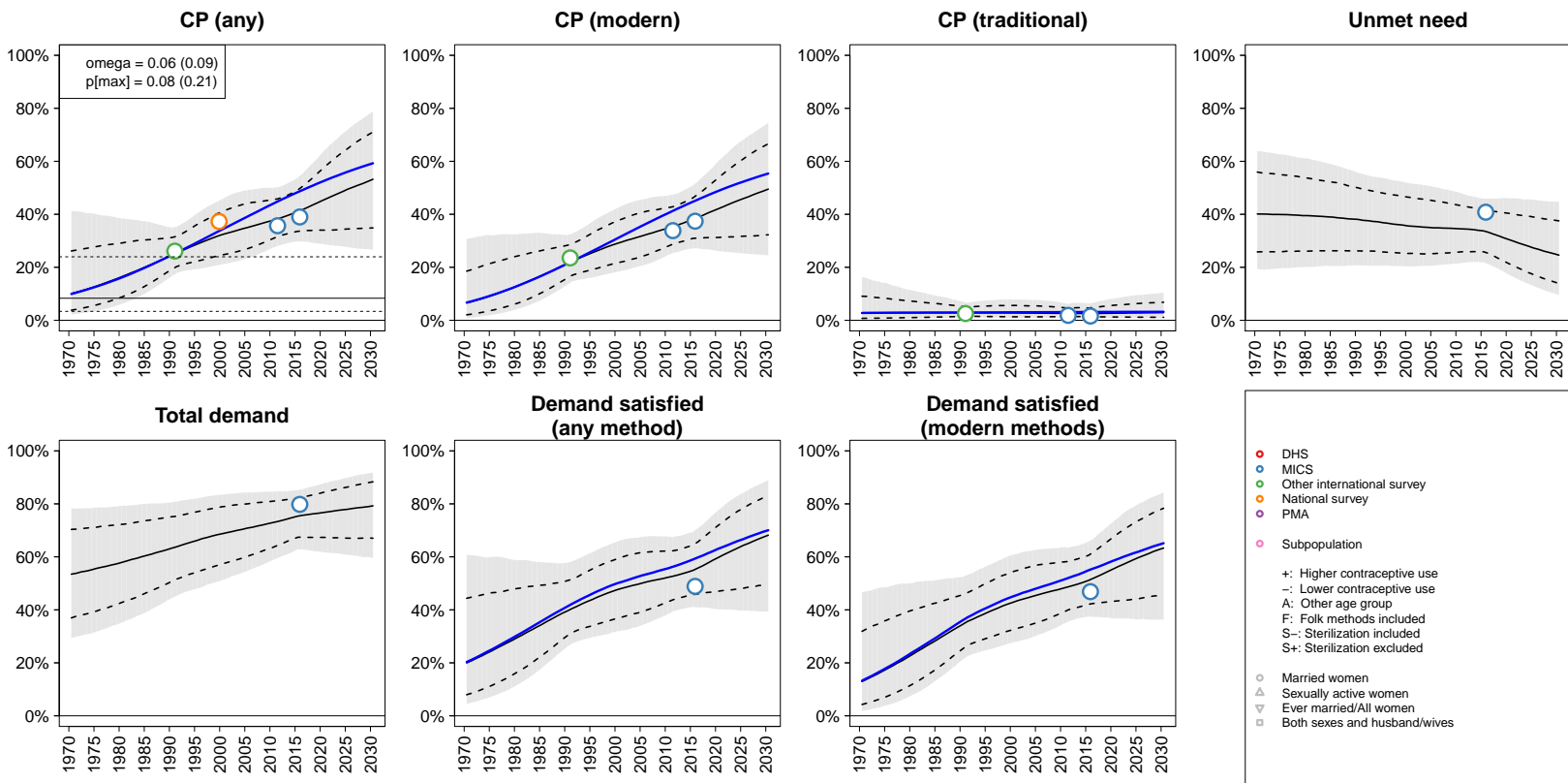
Bangladesh (Southern Asia) --- Married / In-Union



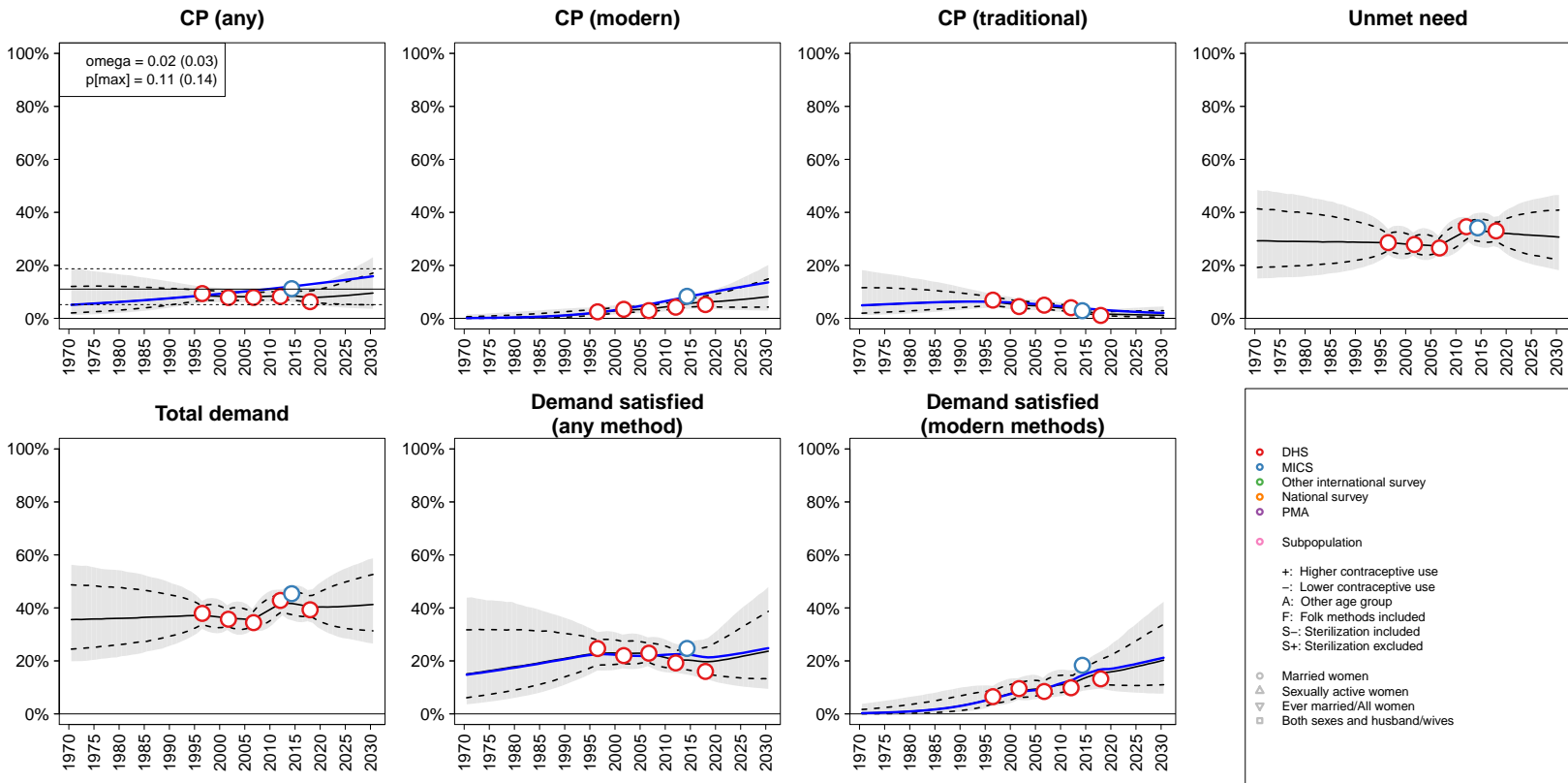
Barbados (Caribbean) --- Married / In-Union



Belize (Central America) — Married / In-Union

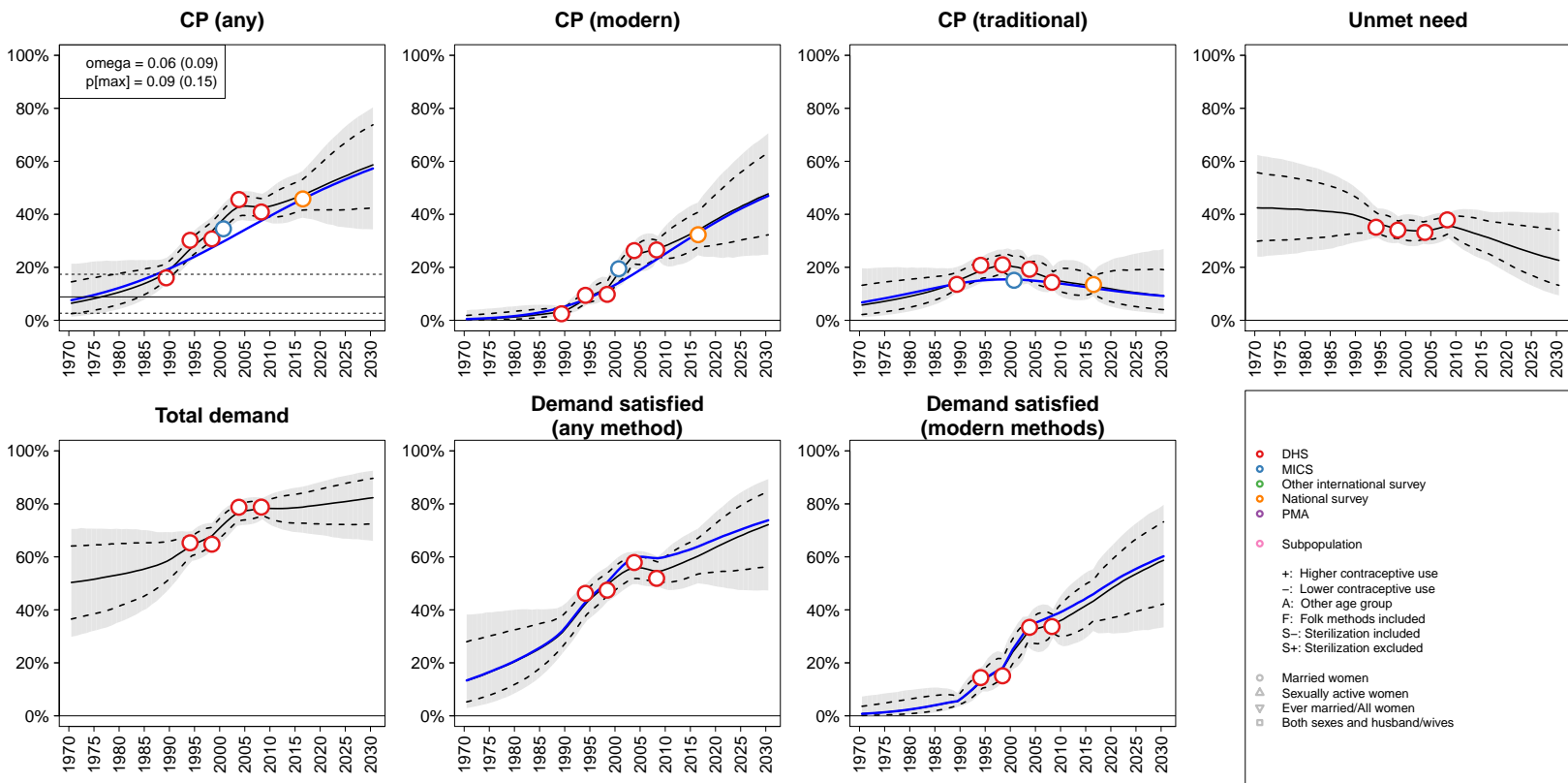


Benin (Western Africa) --- Married / In-Union

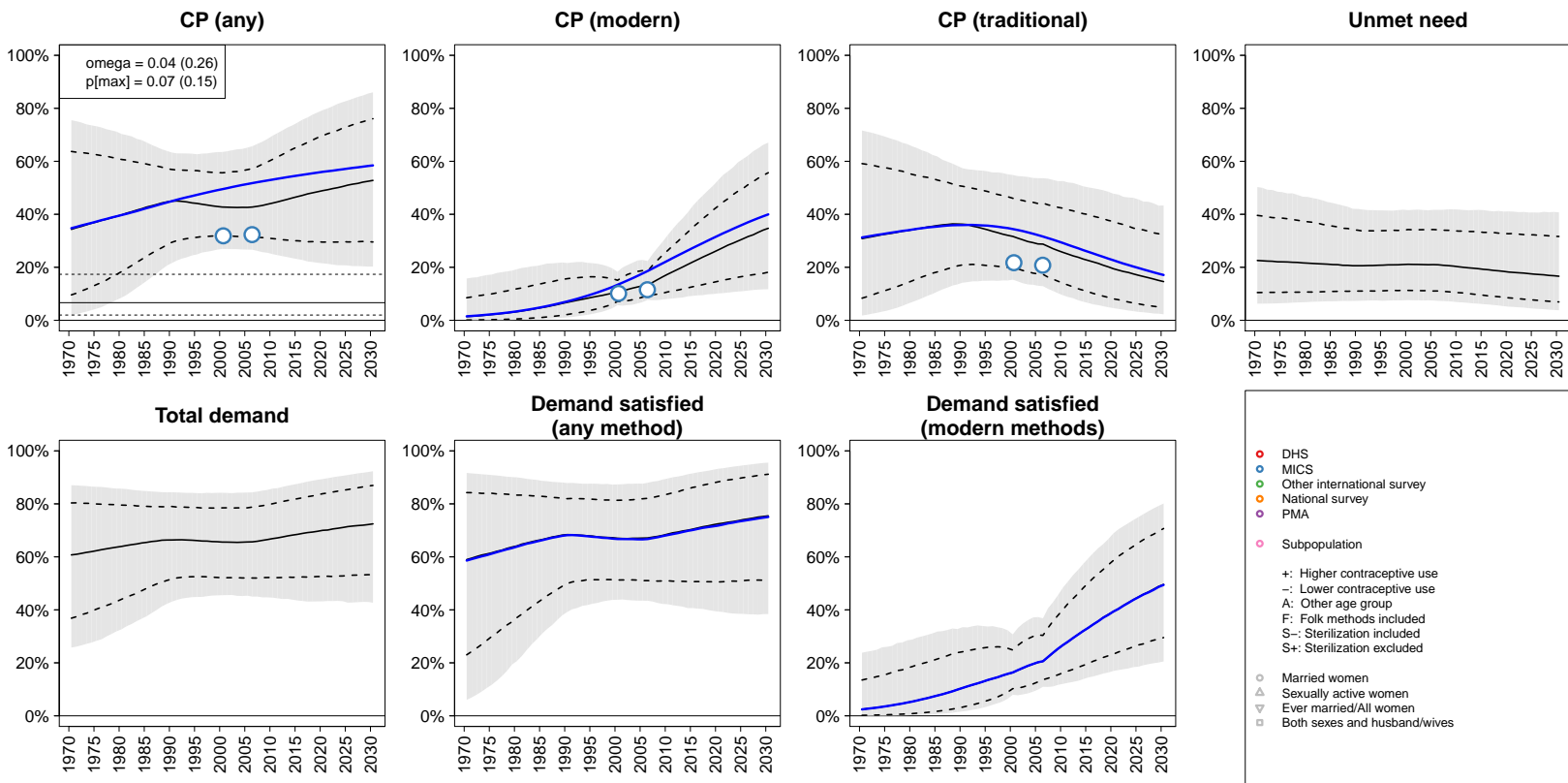




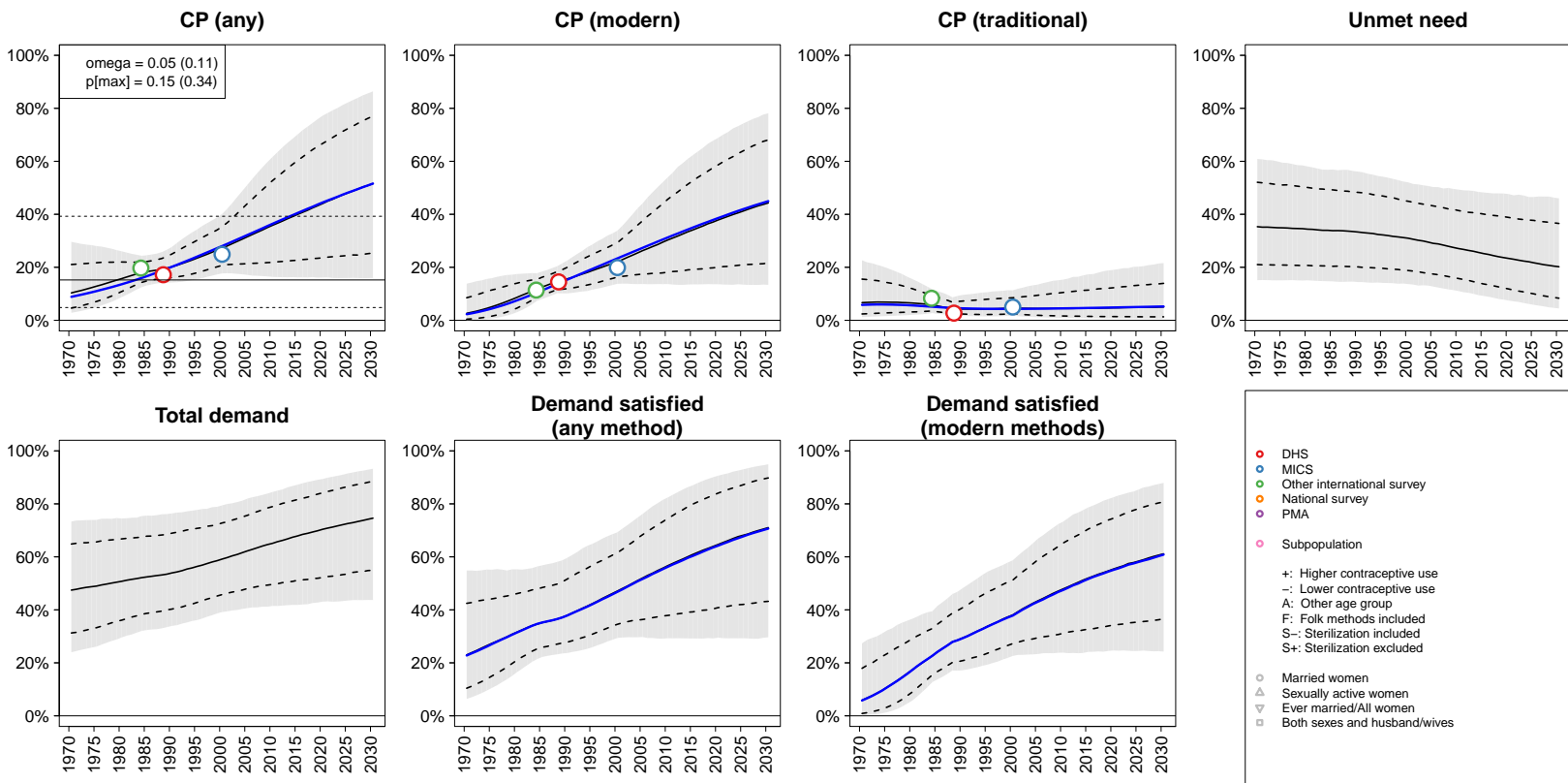
Bolivia, Plurinational State of (South America) --- Married / In-Union



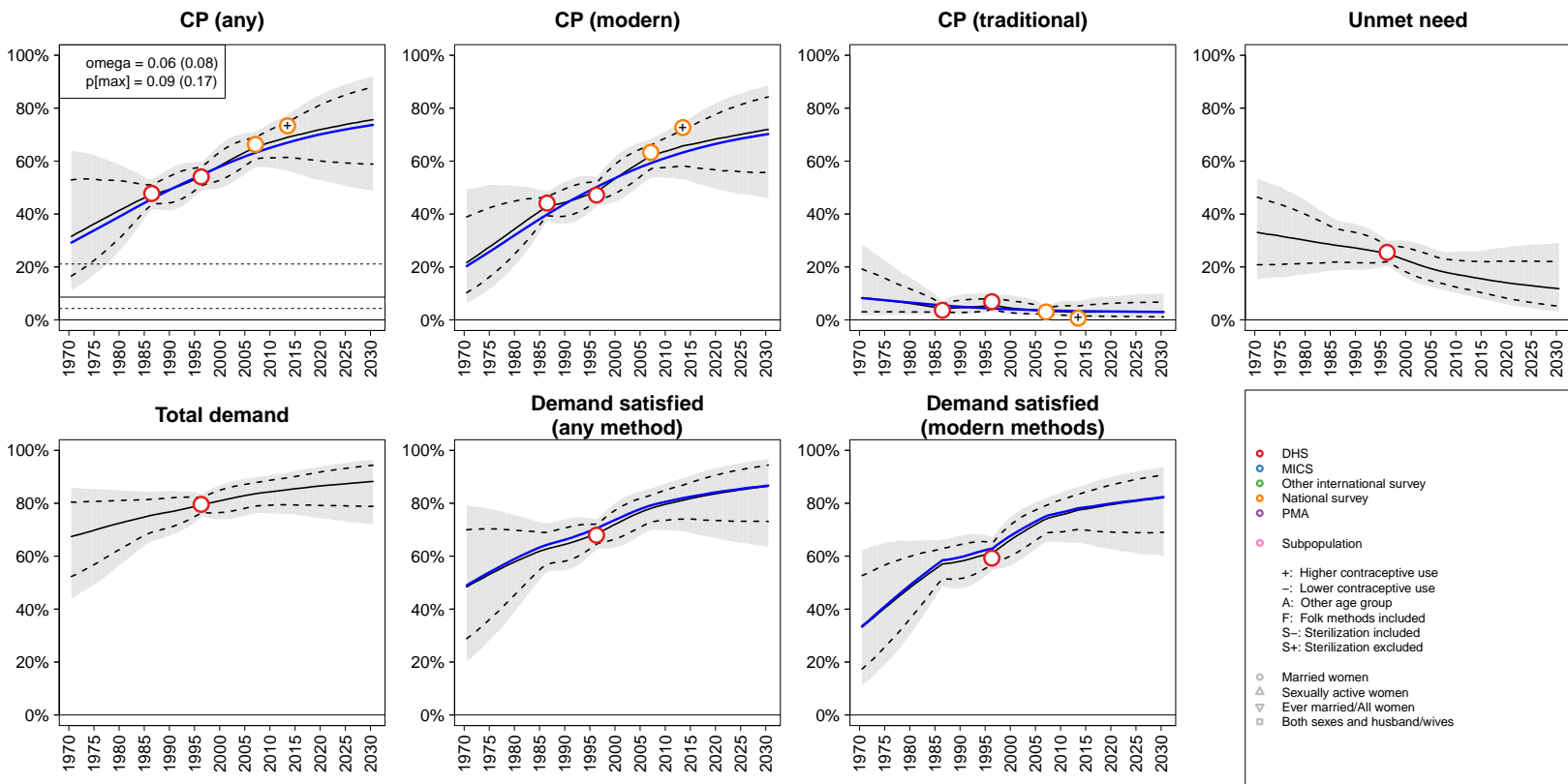
Bosnia and Herzegovina (Southern Europe) --- Married / In-Union



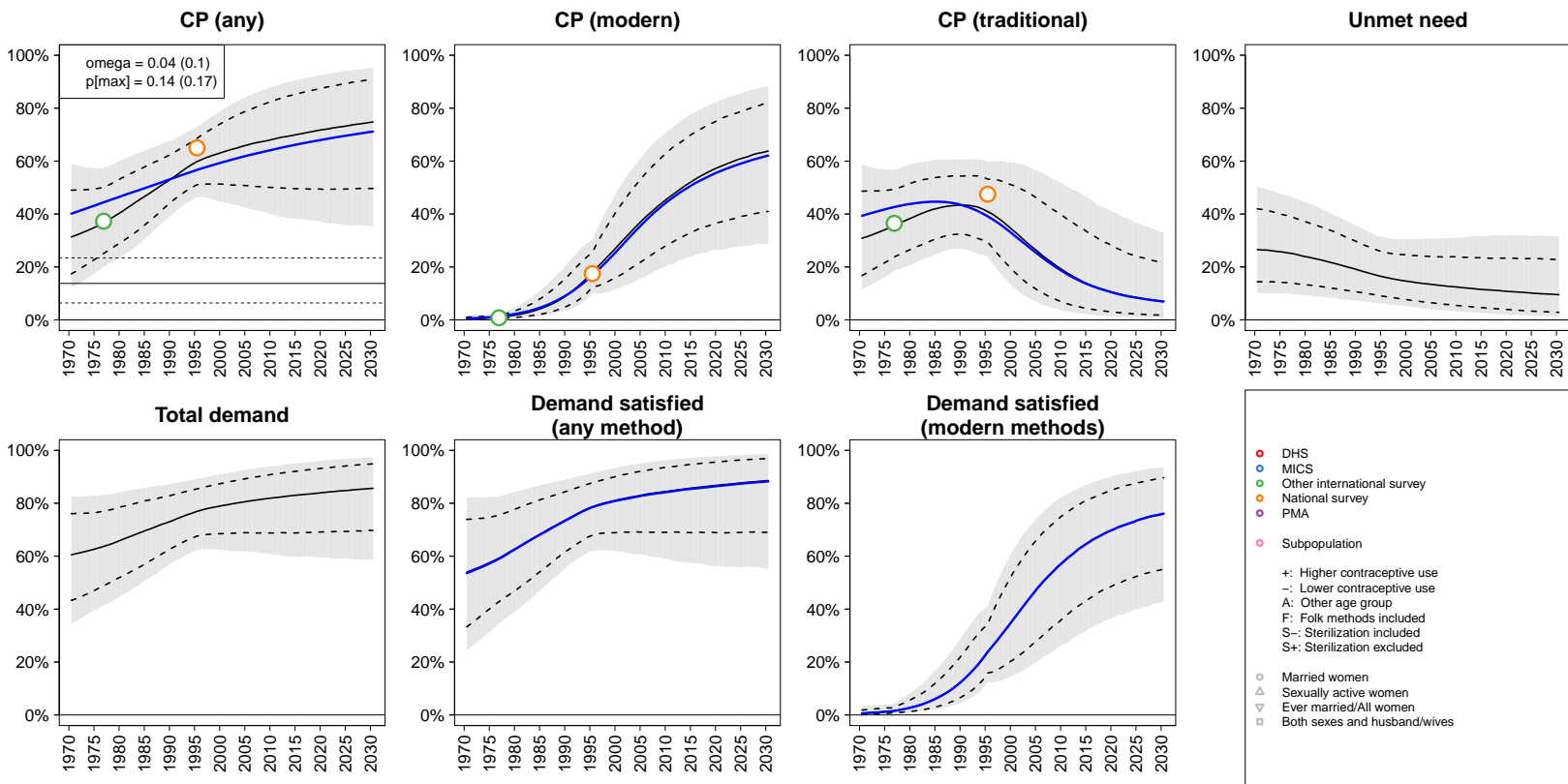
Botswana (Southern Africa) --- Married / In-Union



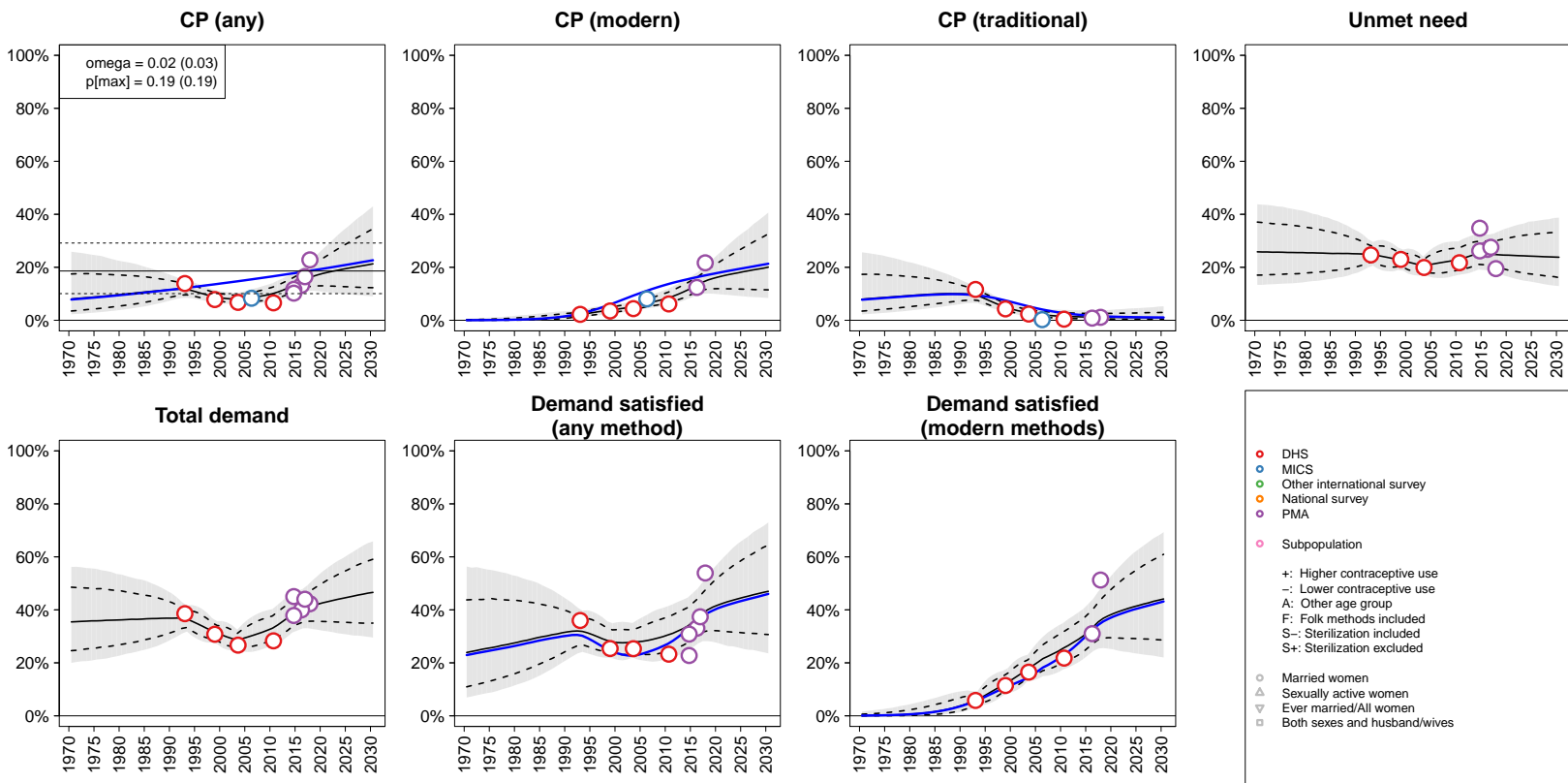
Brazil (South America) --- Married / In-Union



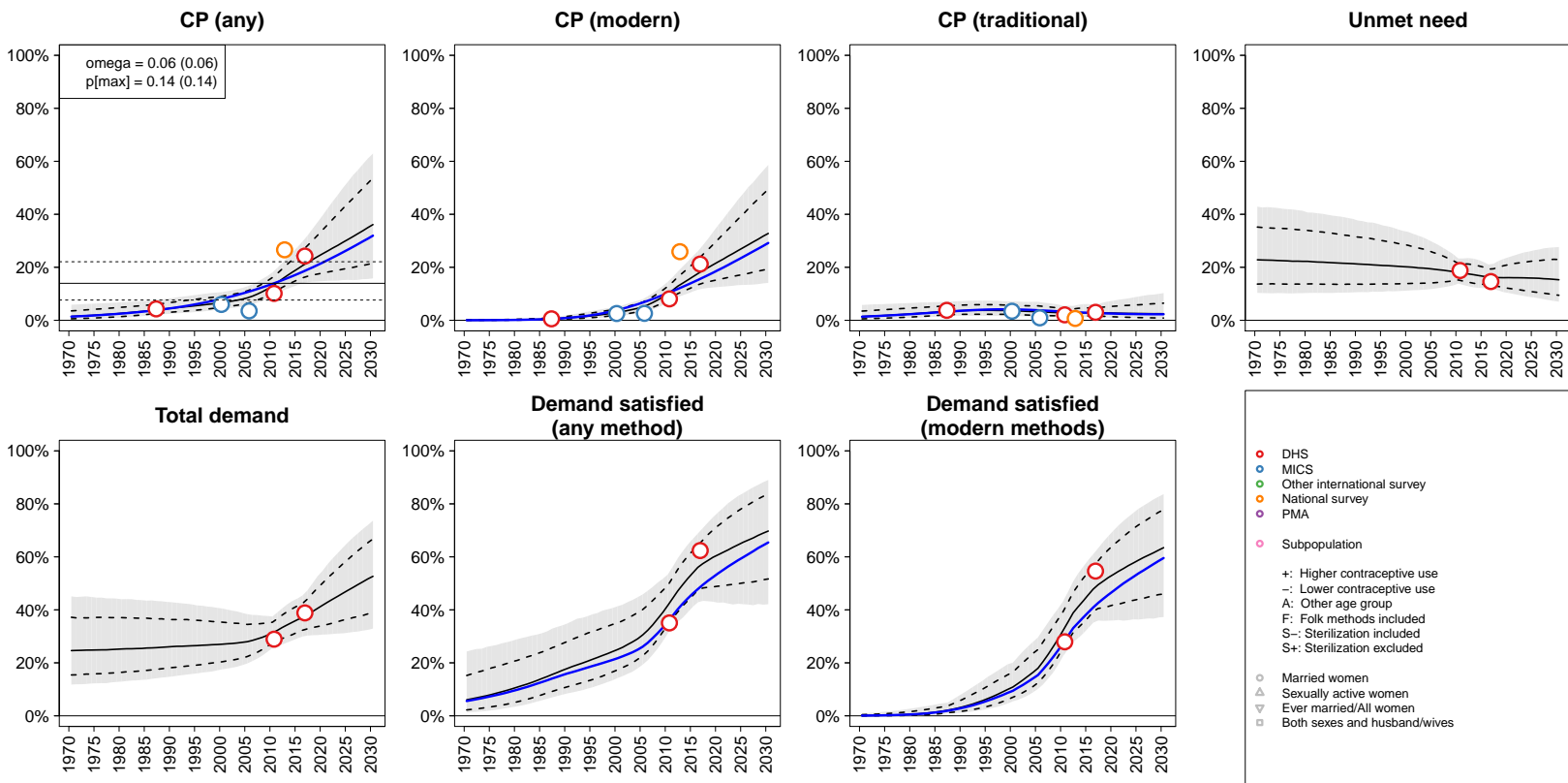
Bulgaria (Eastern Europe) --- Married / In-Union



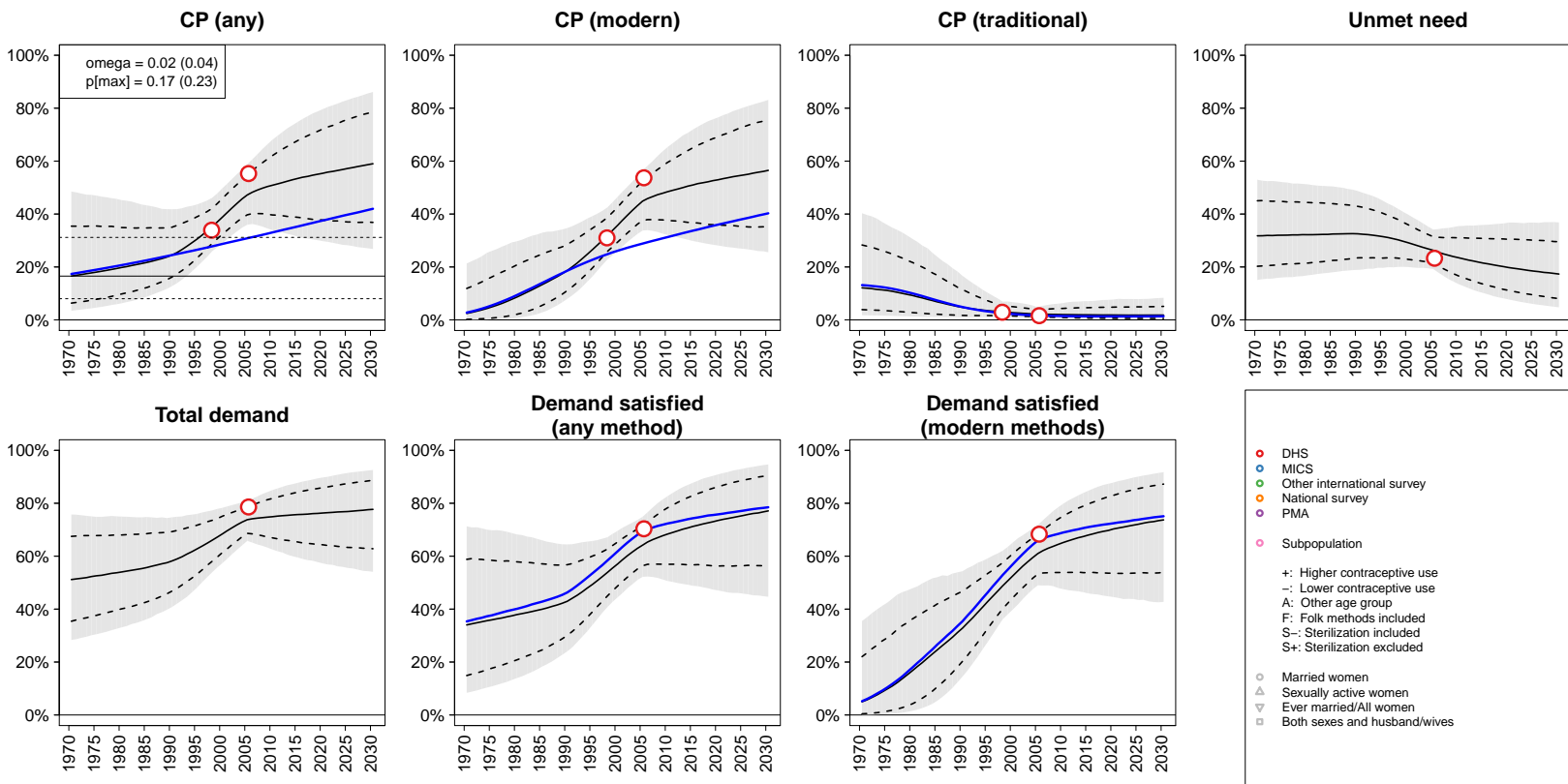
Burkina Faso (Western Africa) --- Married / In-Union



Burundi (Eastern Africa) --- Married / In-Union

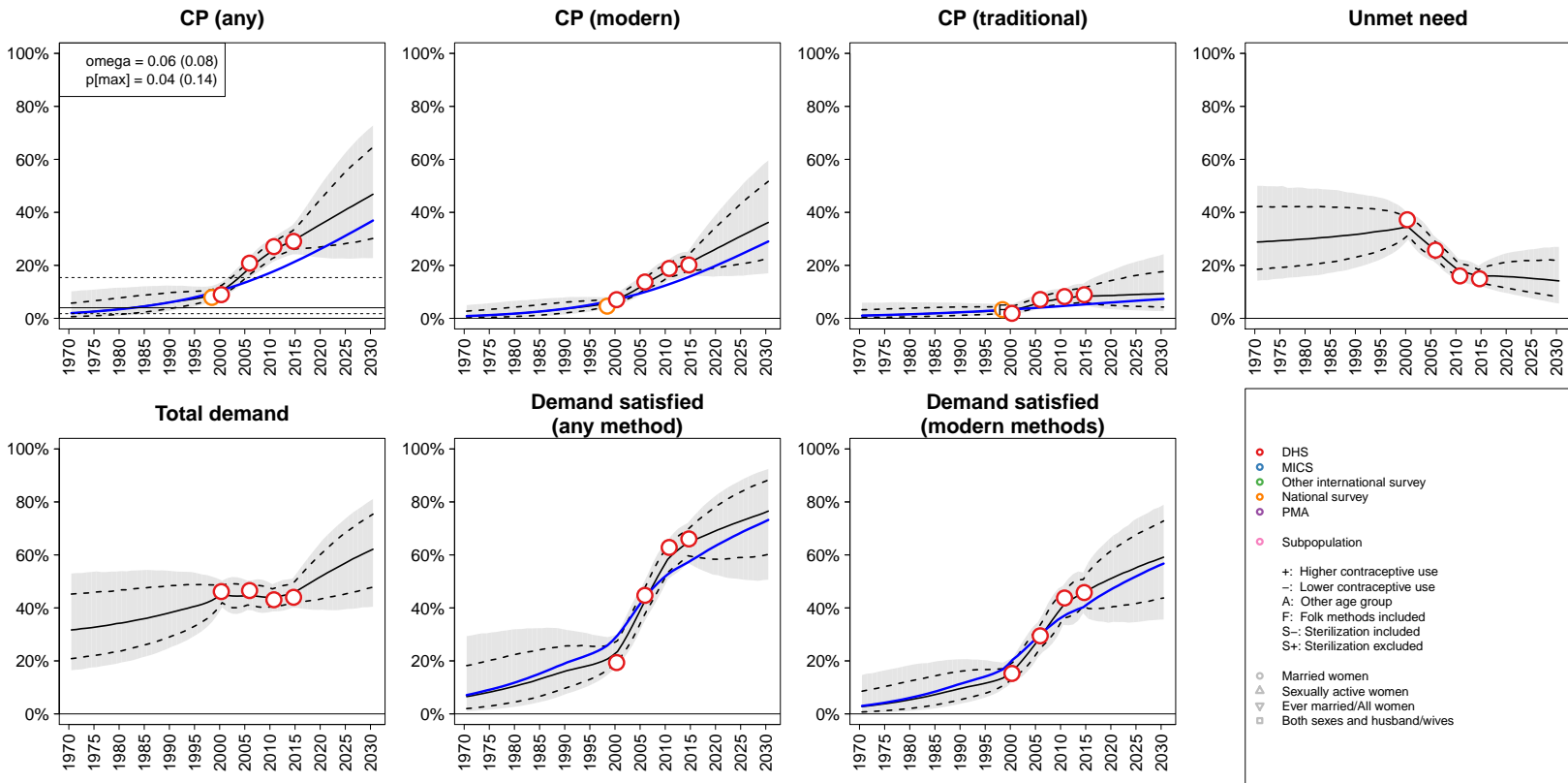


Cabo Verde (Western Africa) --- Married / In-Union

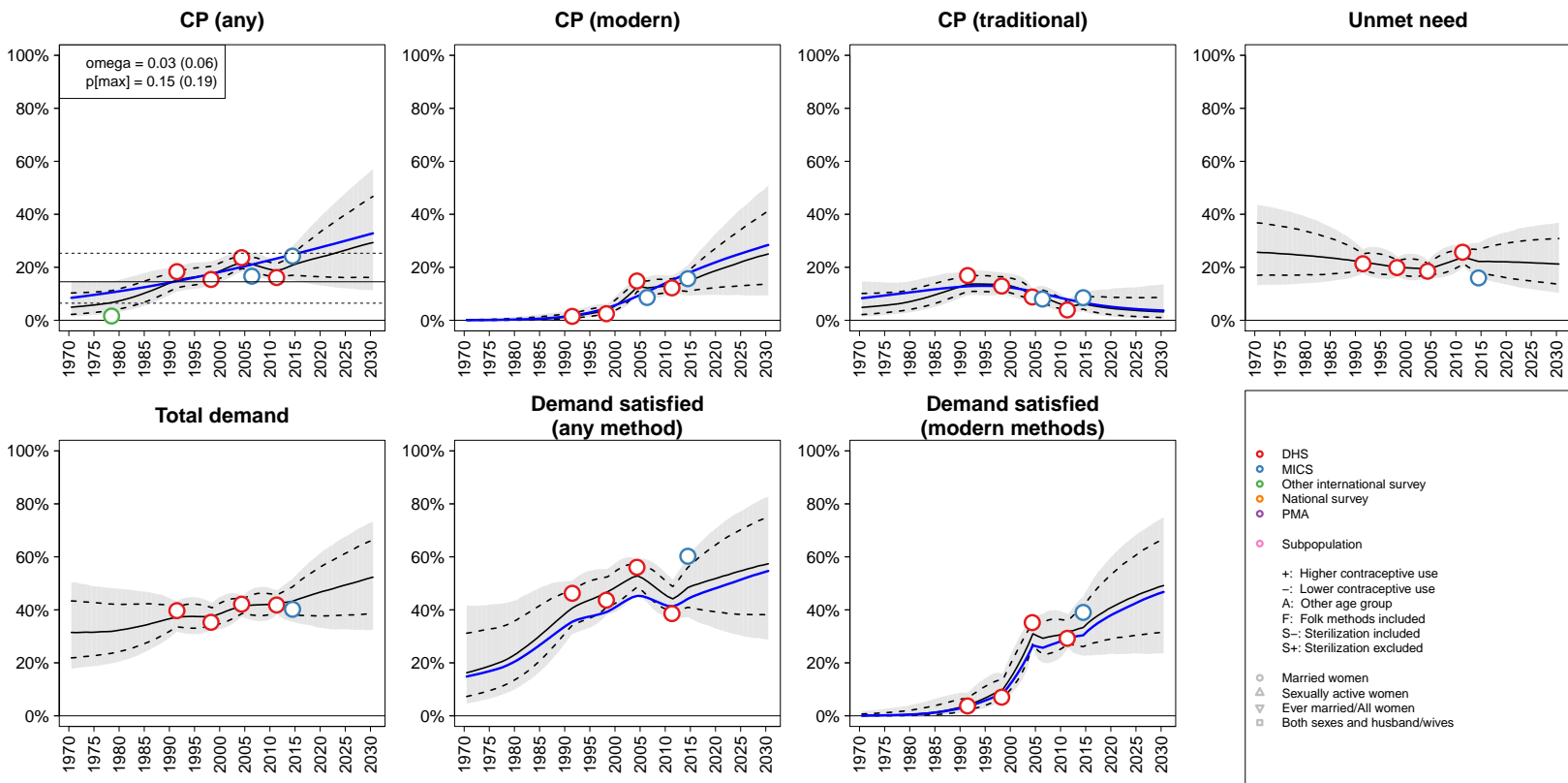




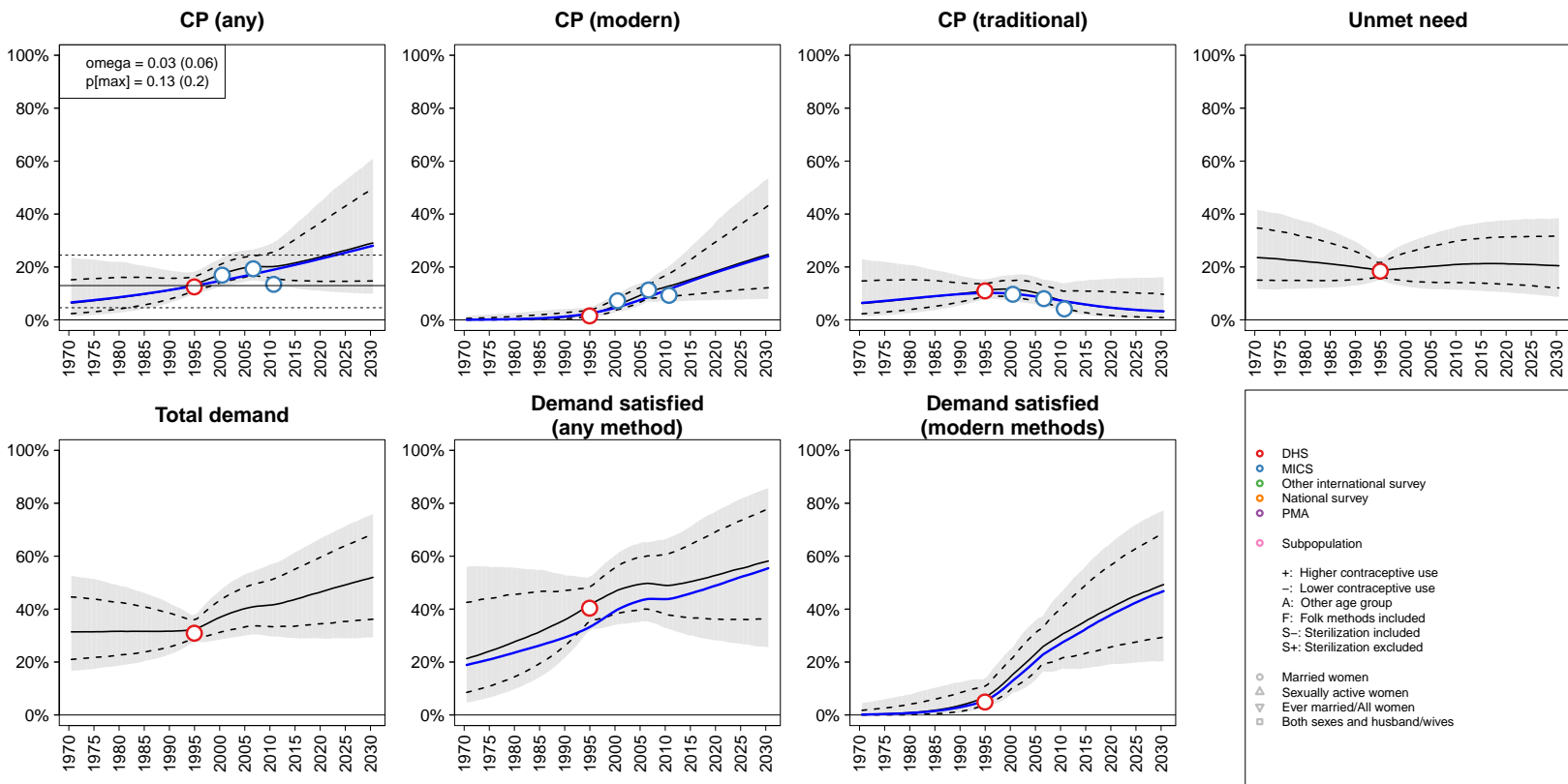
Cambodia (South-eastern Asia) --- Married / In-Union



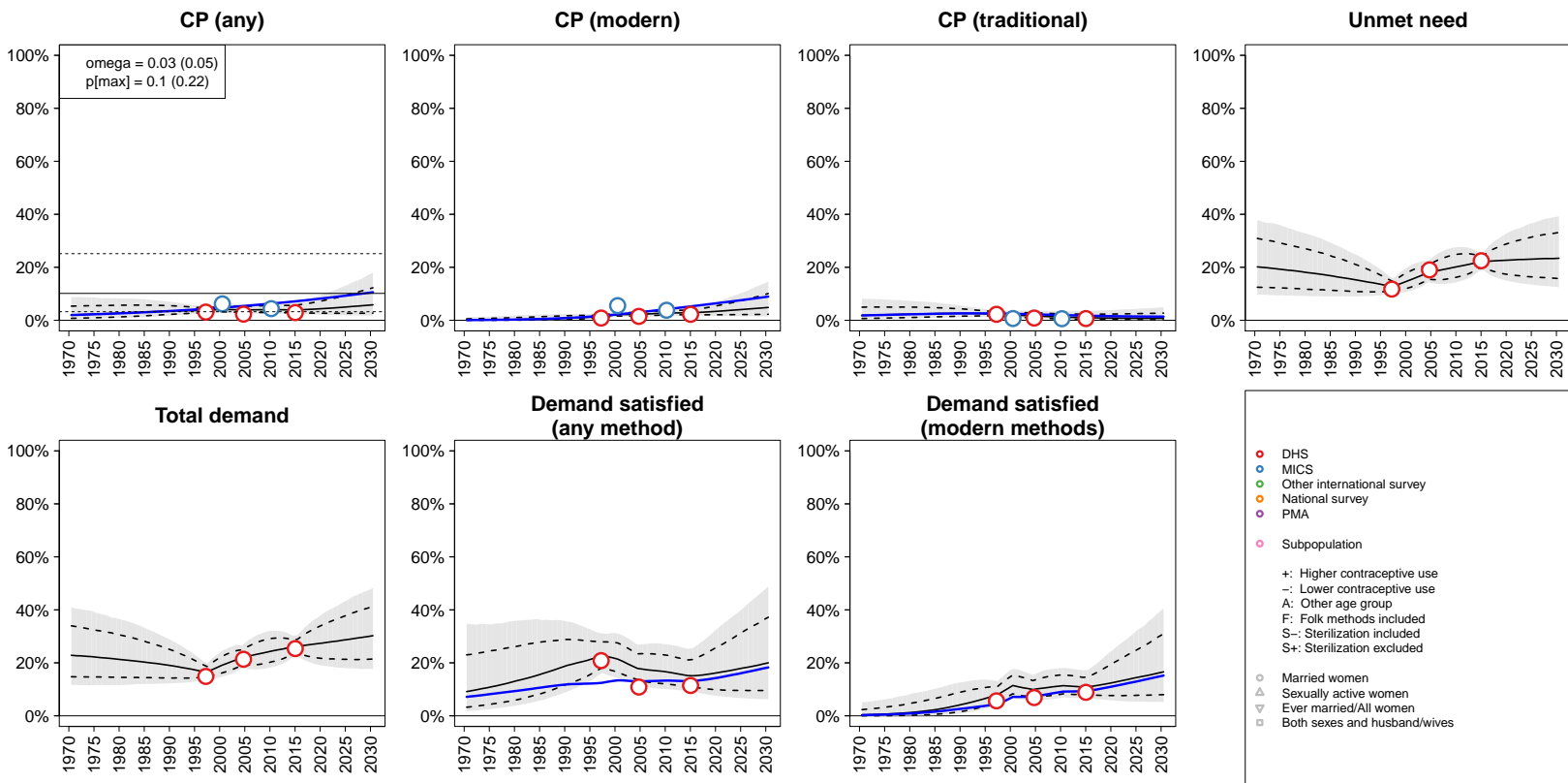
Cameroon (Middle Africa) --- Married / In-Union



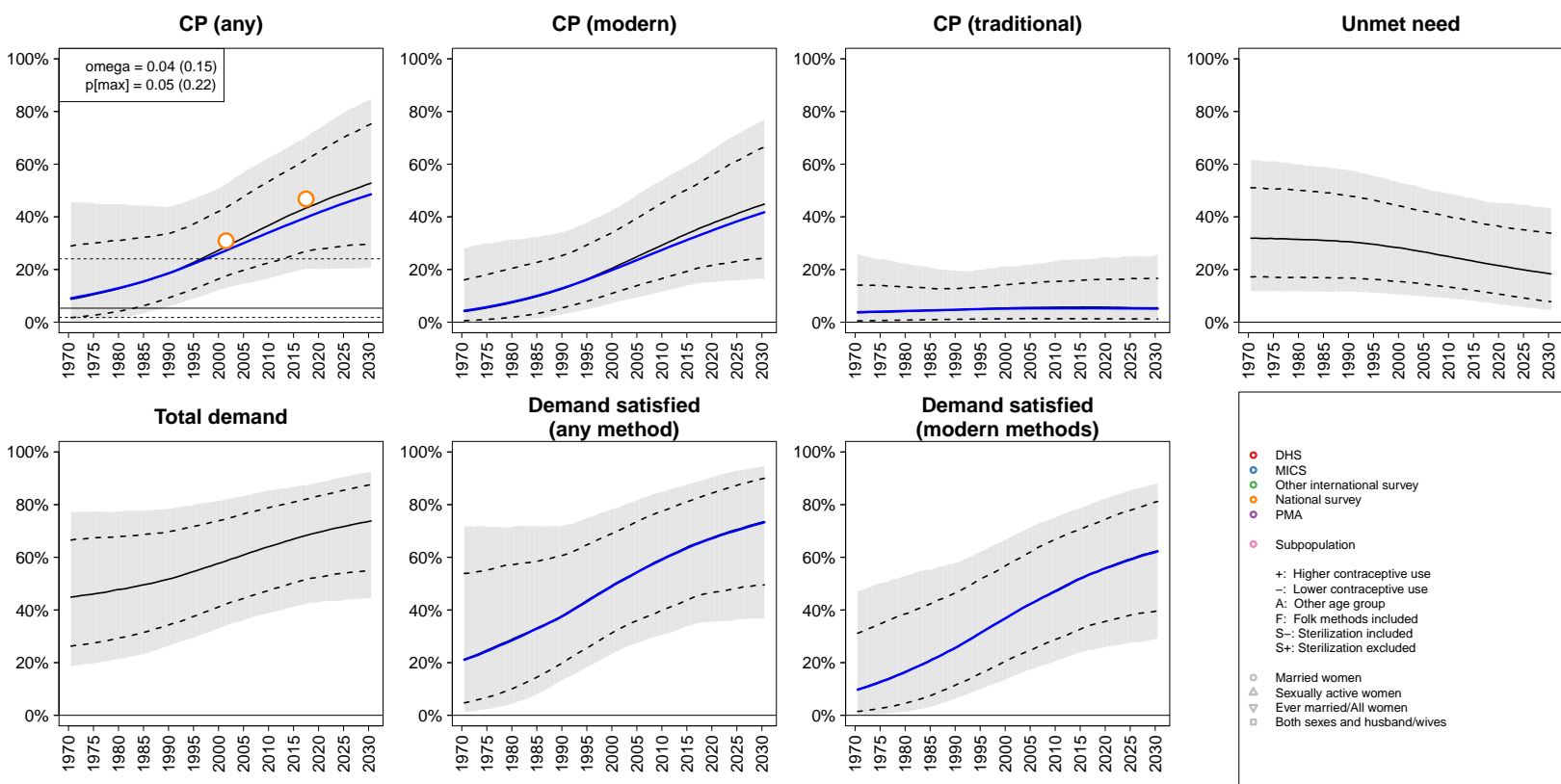
Central African Republic (Middle Africa) --- Married / In-Union



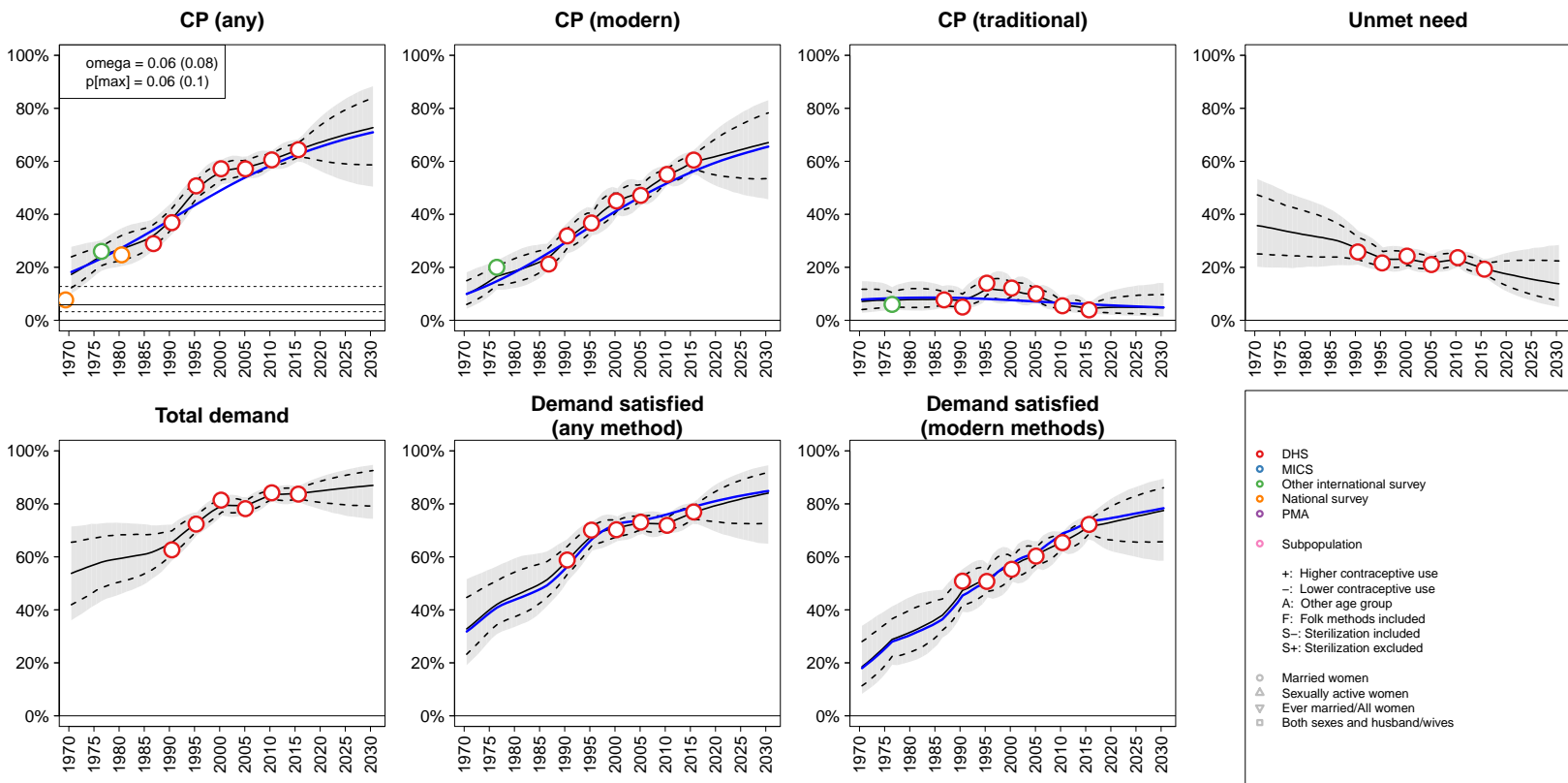
Chad (Middle Africa) --- Married / In-Union



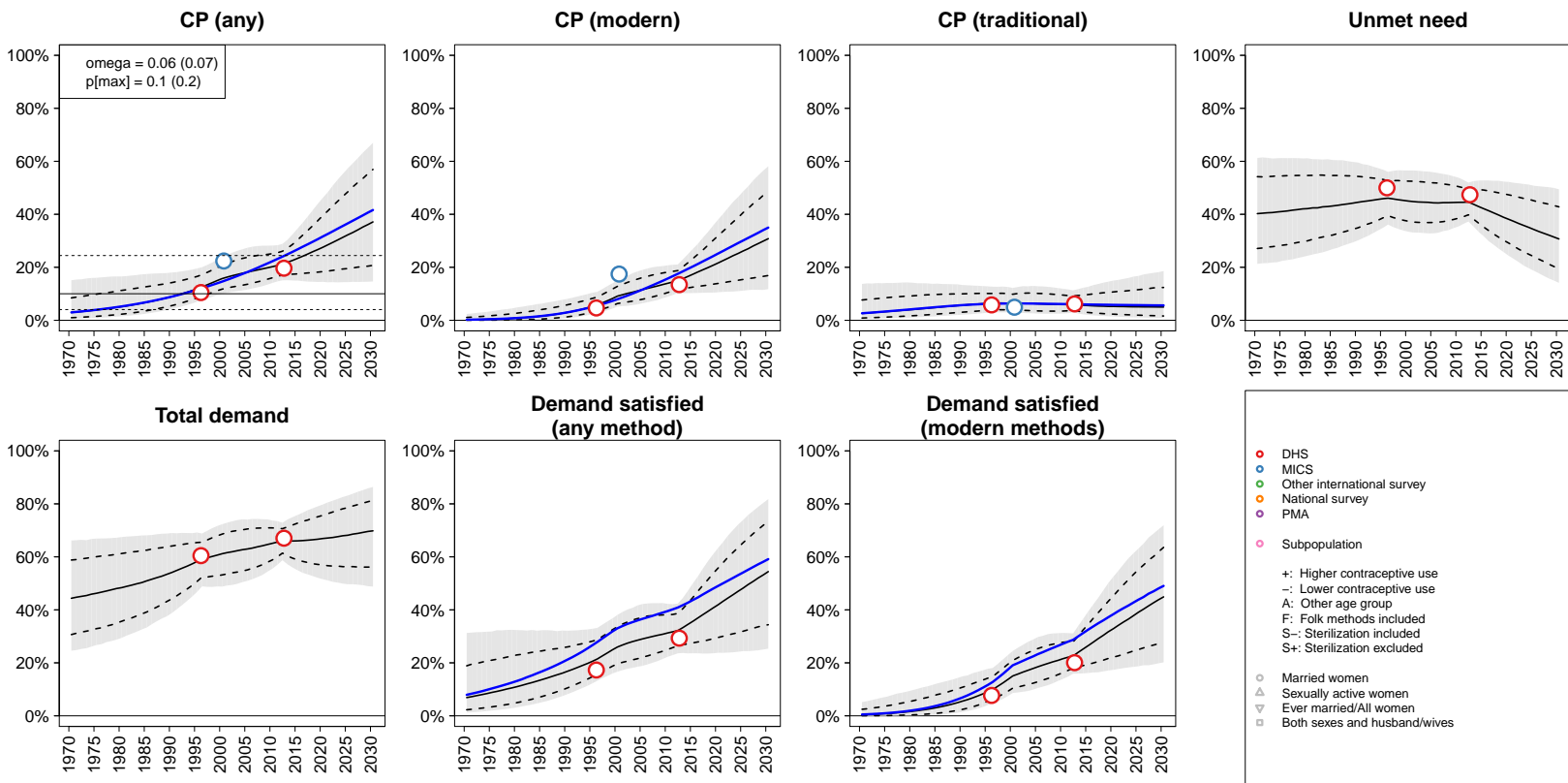
China (Eastern Asia) --- Married / In-Union



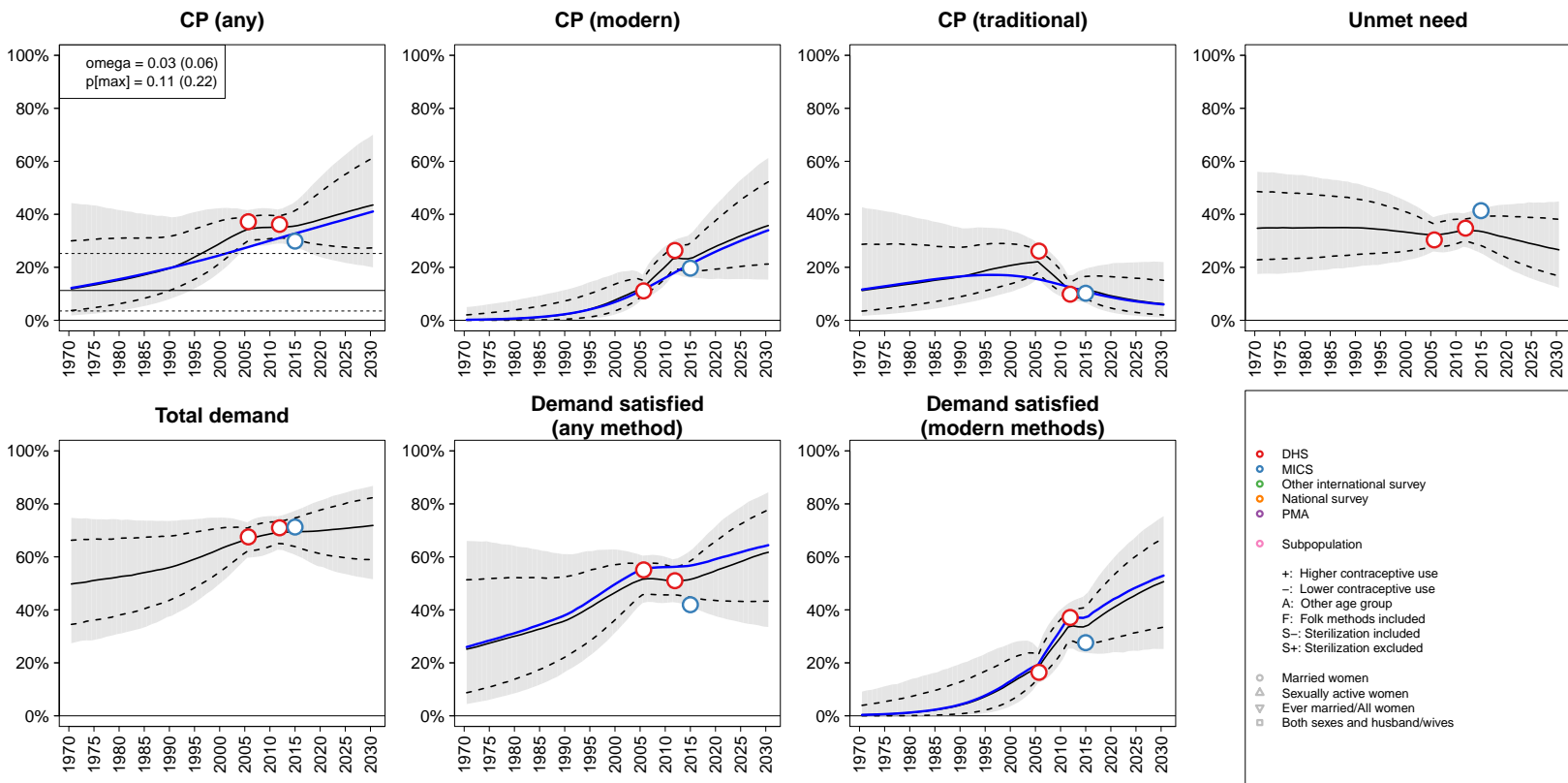
Colombia (South America) --- Married / In-Union



Comoros (Eastern Africa) --- Married / In-Union

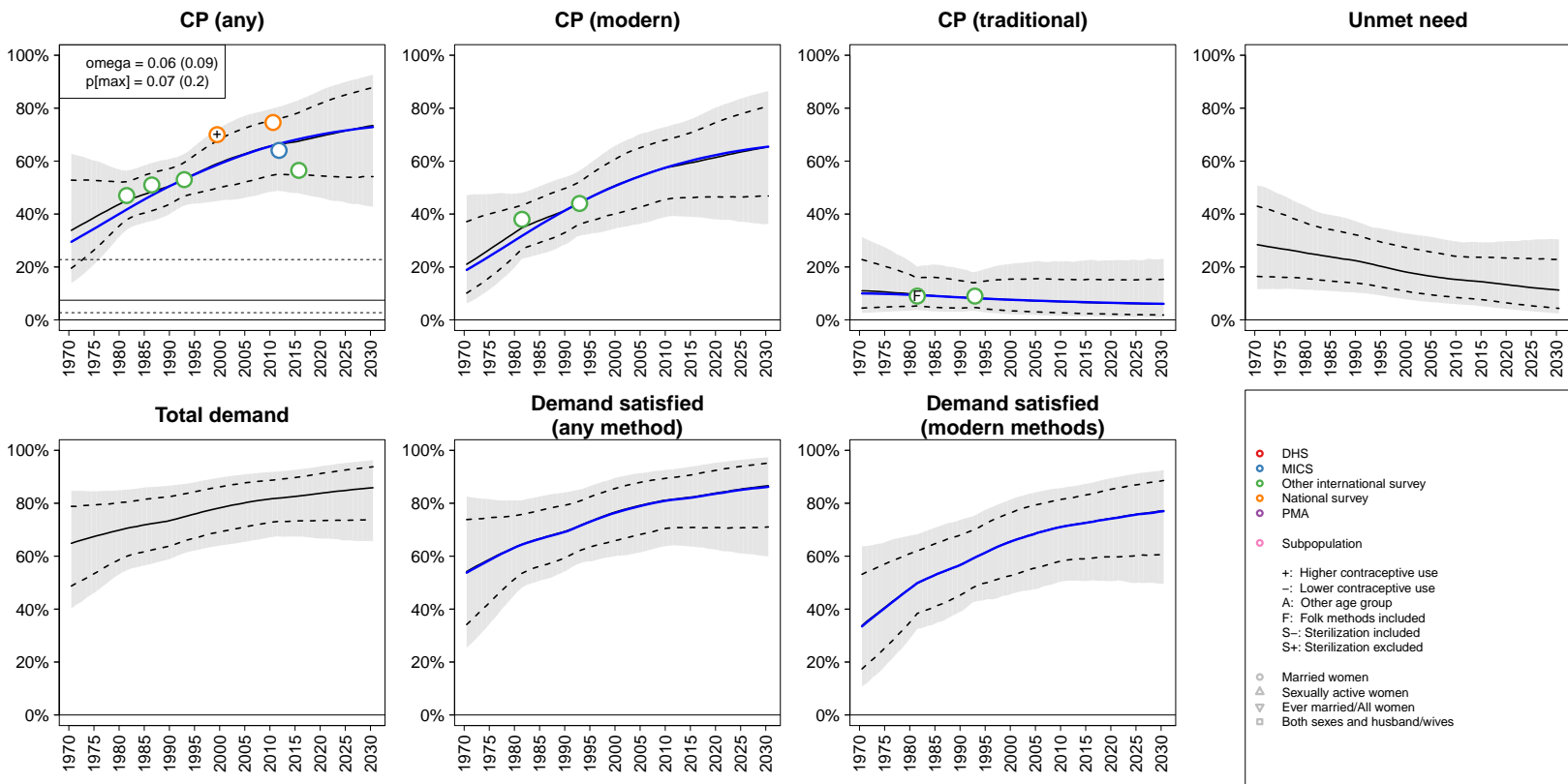


Congo (Middle Africa) — Married / In-Union

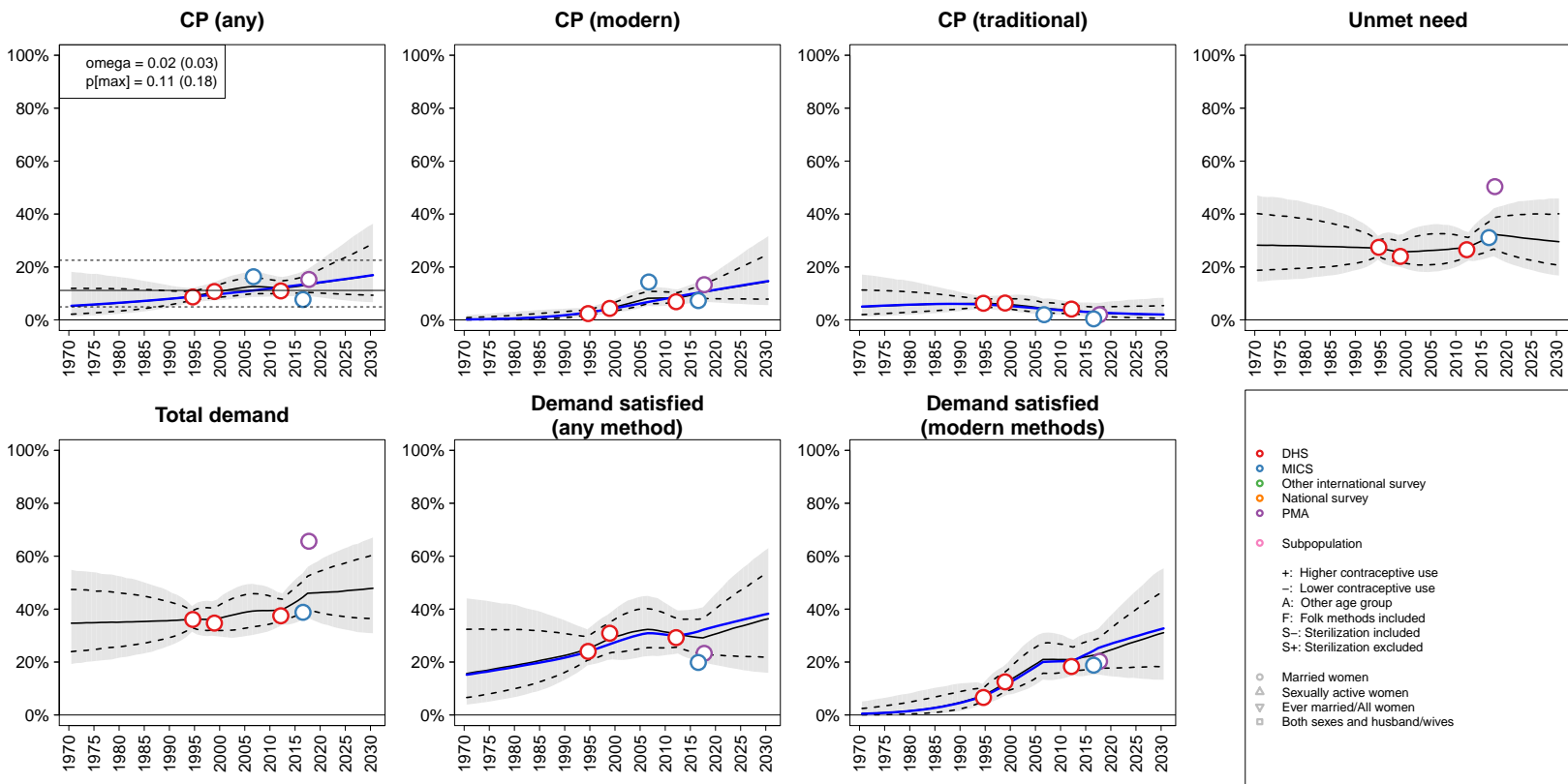




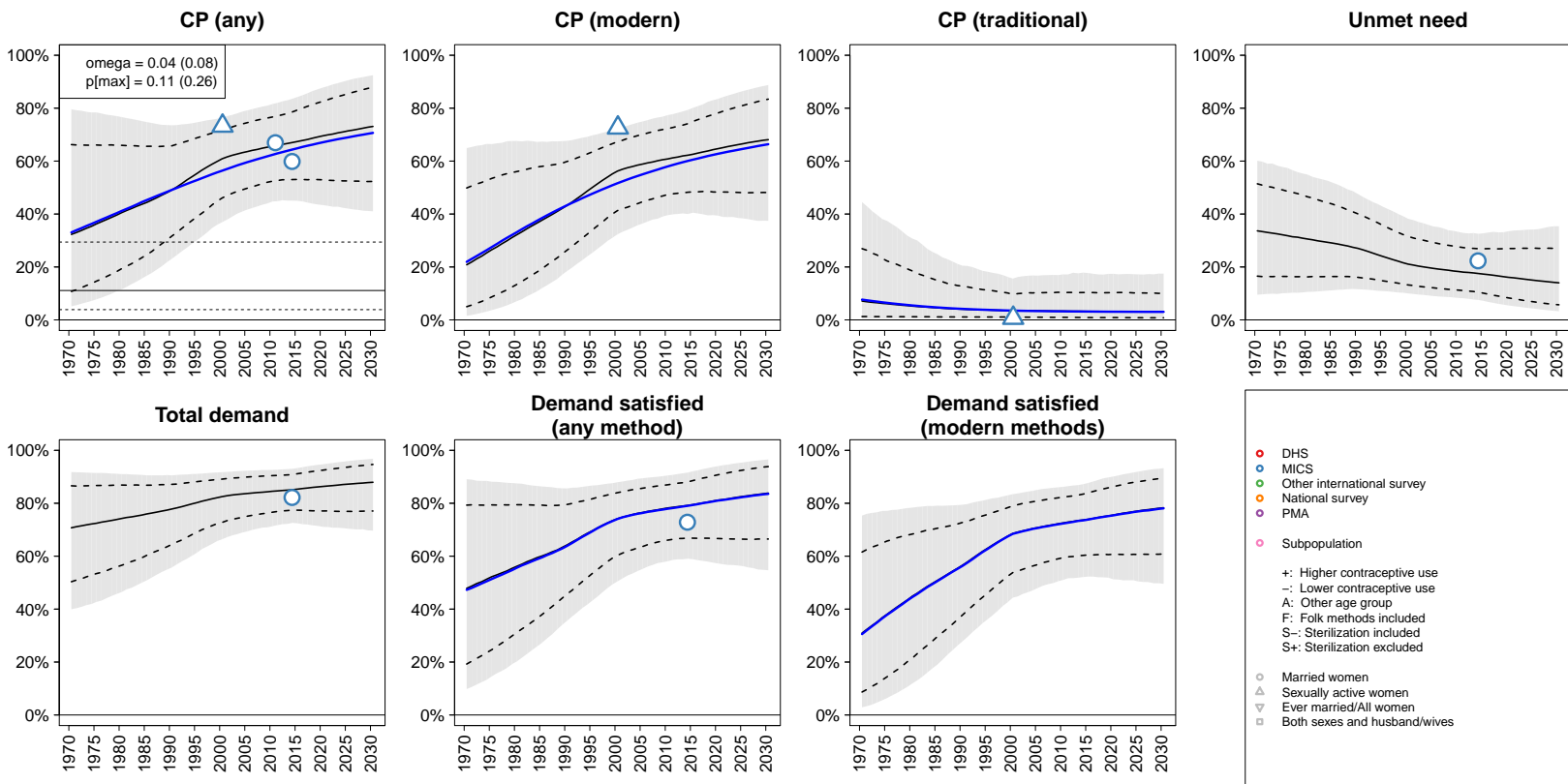
Costa Rica (Central America) --- Married / In-Union



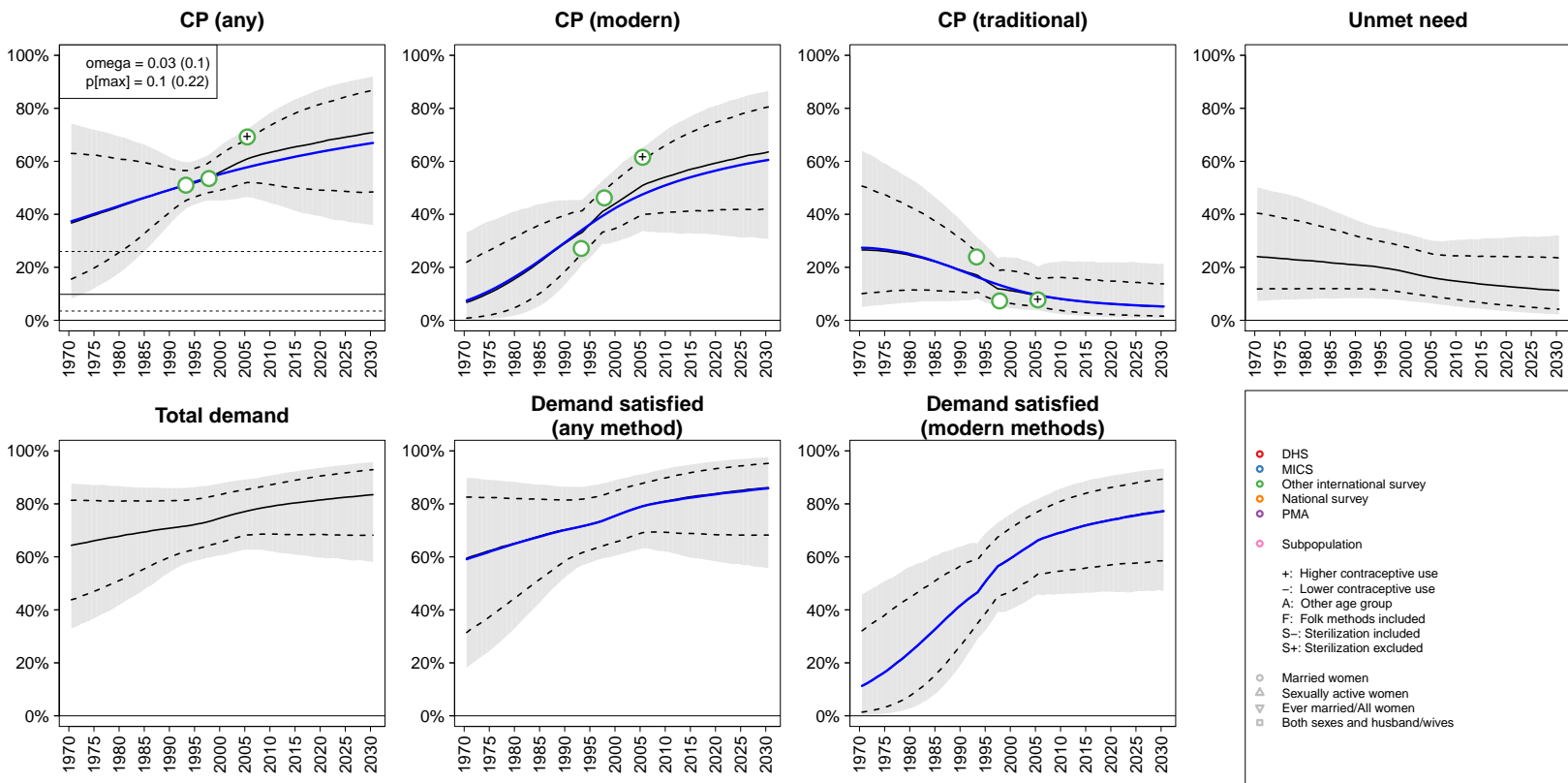
Côte d'Ivoire (Western Africa) --- Married / In-Union



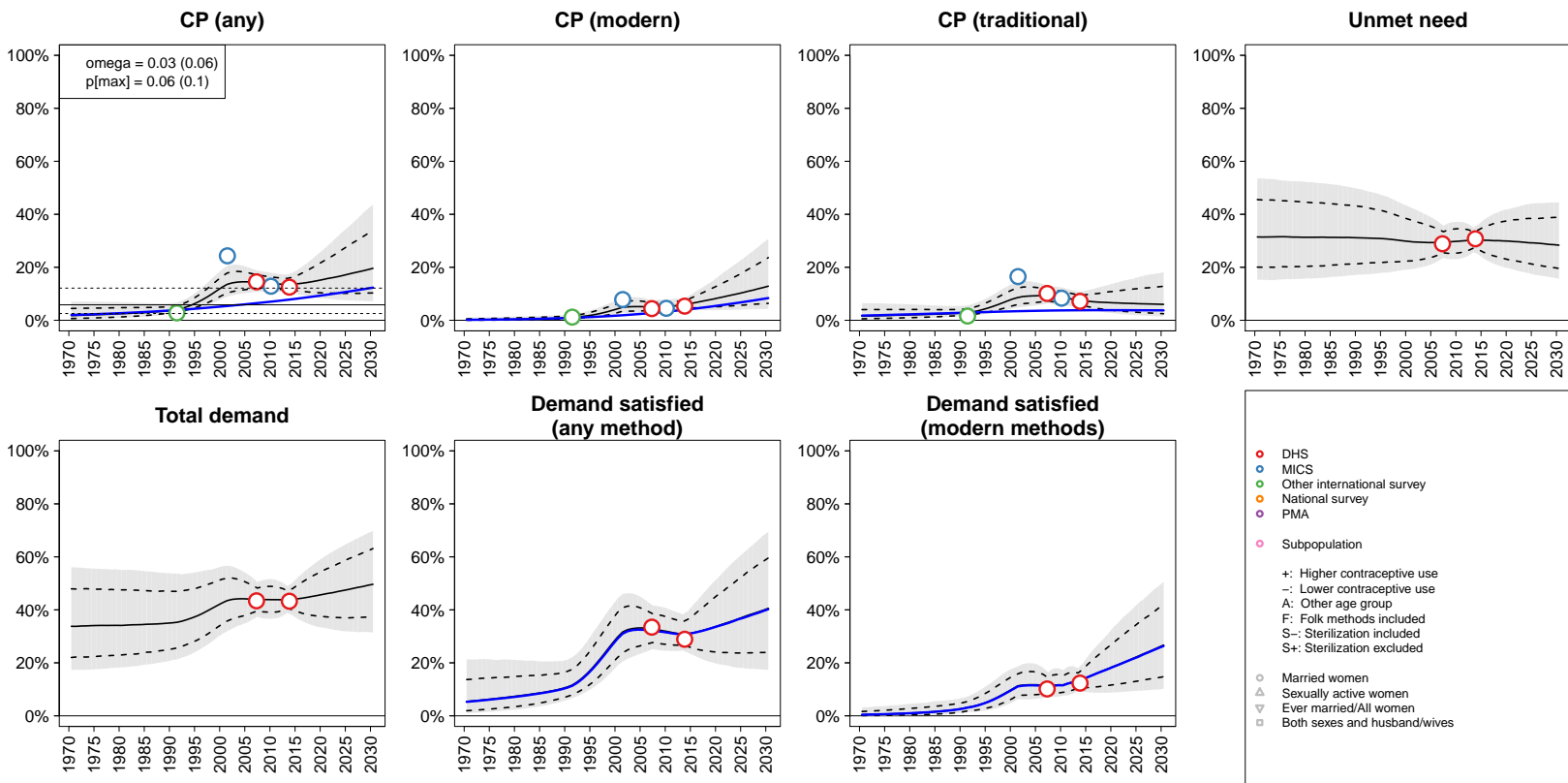
Cuba (Caribbean) --- Married / In-Union



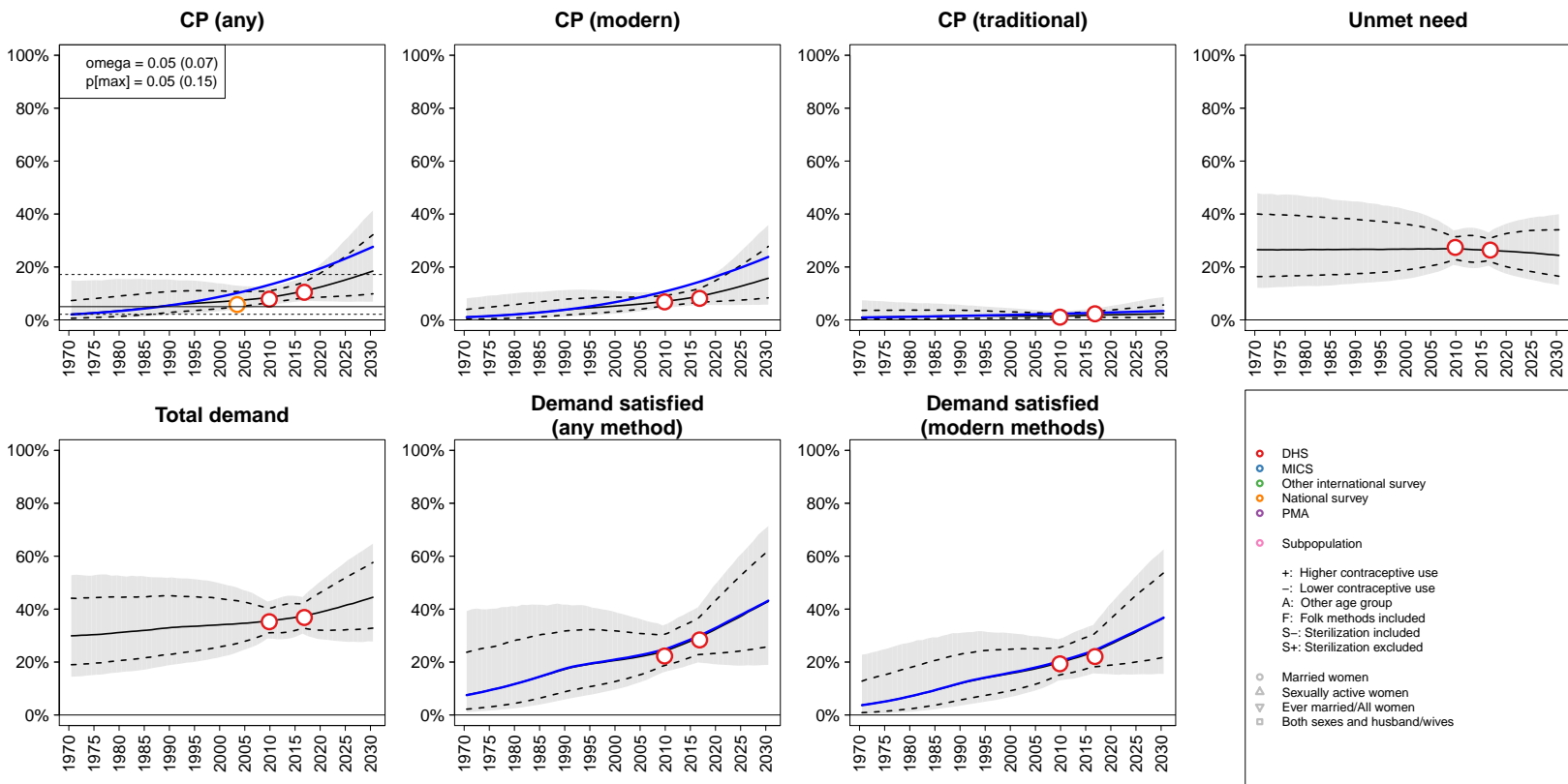
Czechia (Eastern Europe) --- Married / In-Union



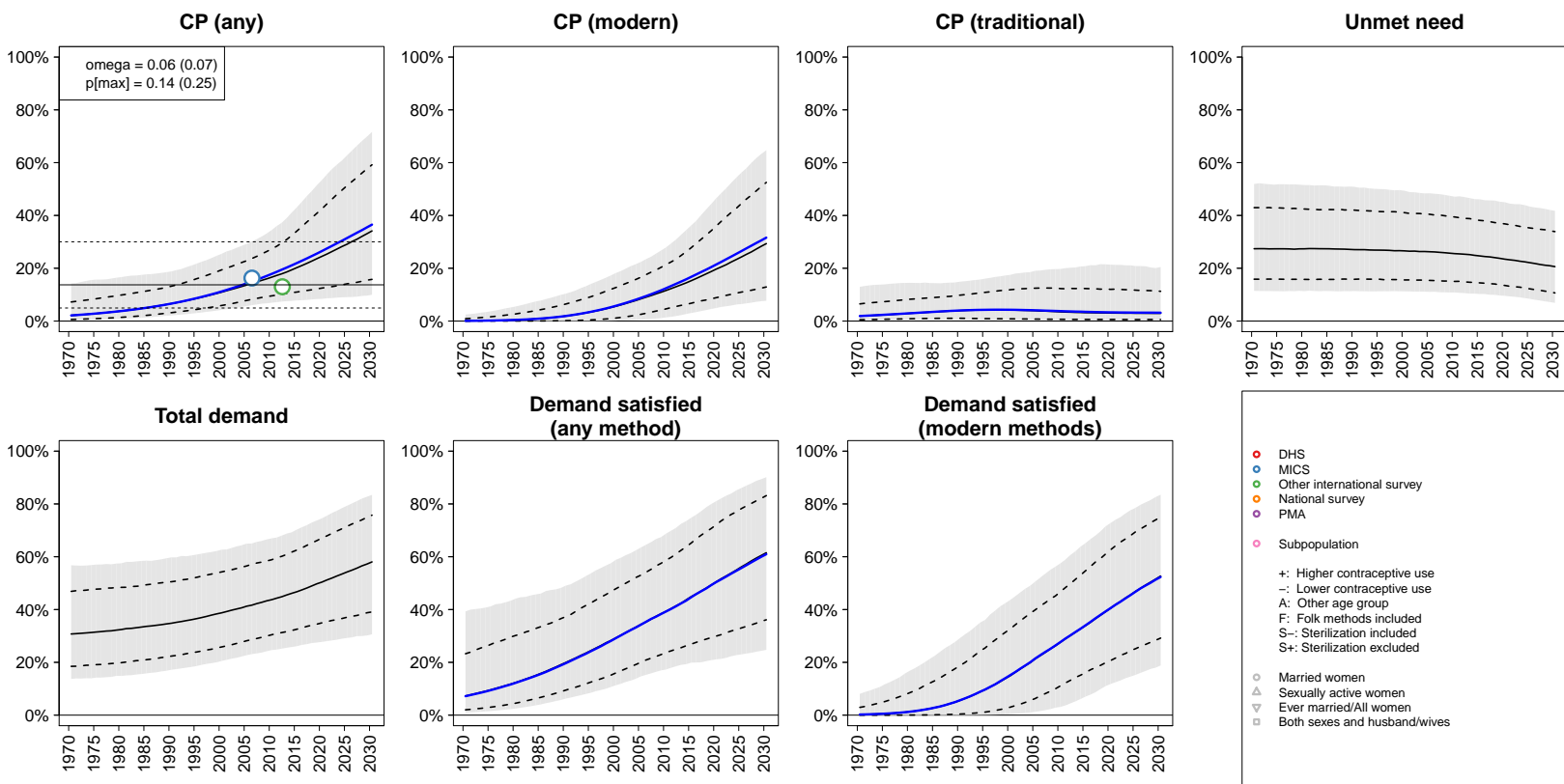
Democratic Rep. of the Congo (Middle Africa) --- Married / In-Union



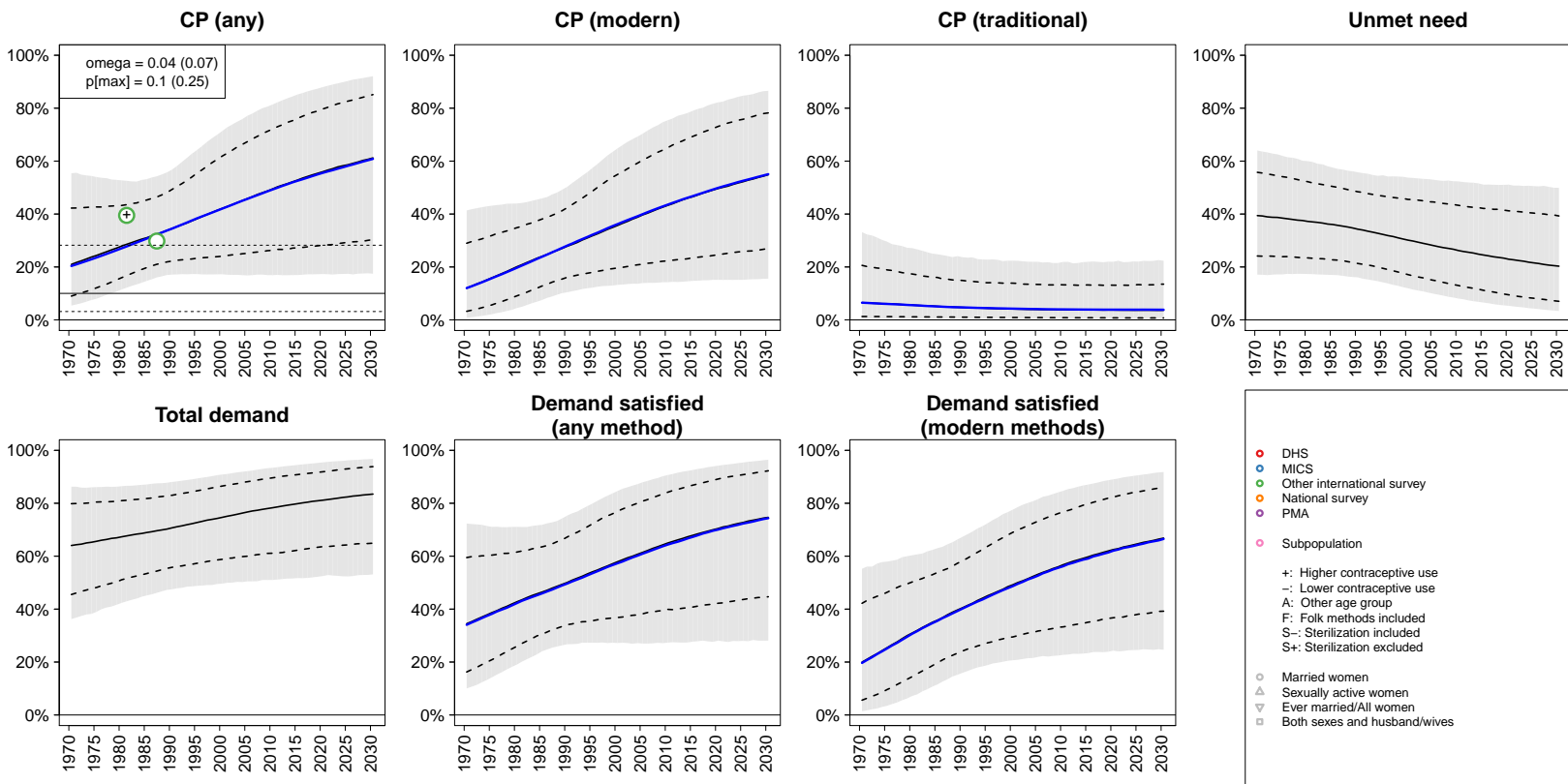
Democratic Republic of Timor-Leste (South-eastern Asia) --- Married / In-Union



Djibouti (Eastern Africa) --- Married / In-Union

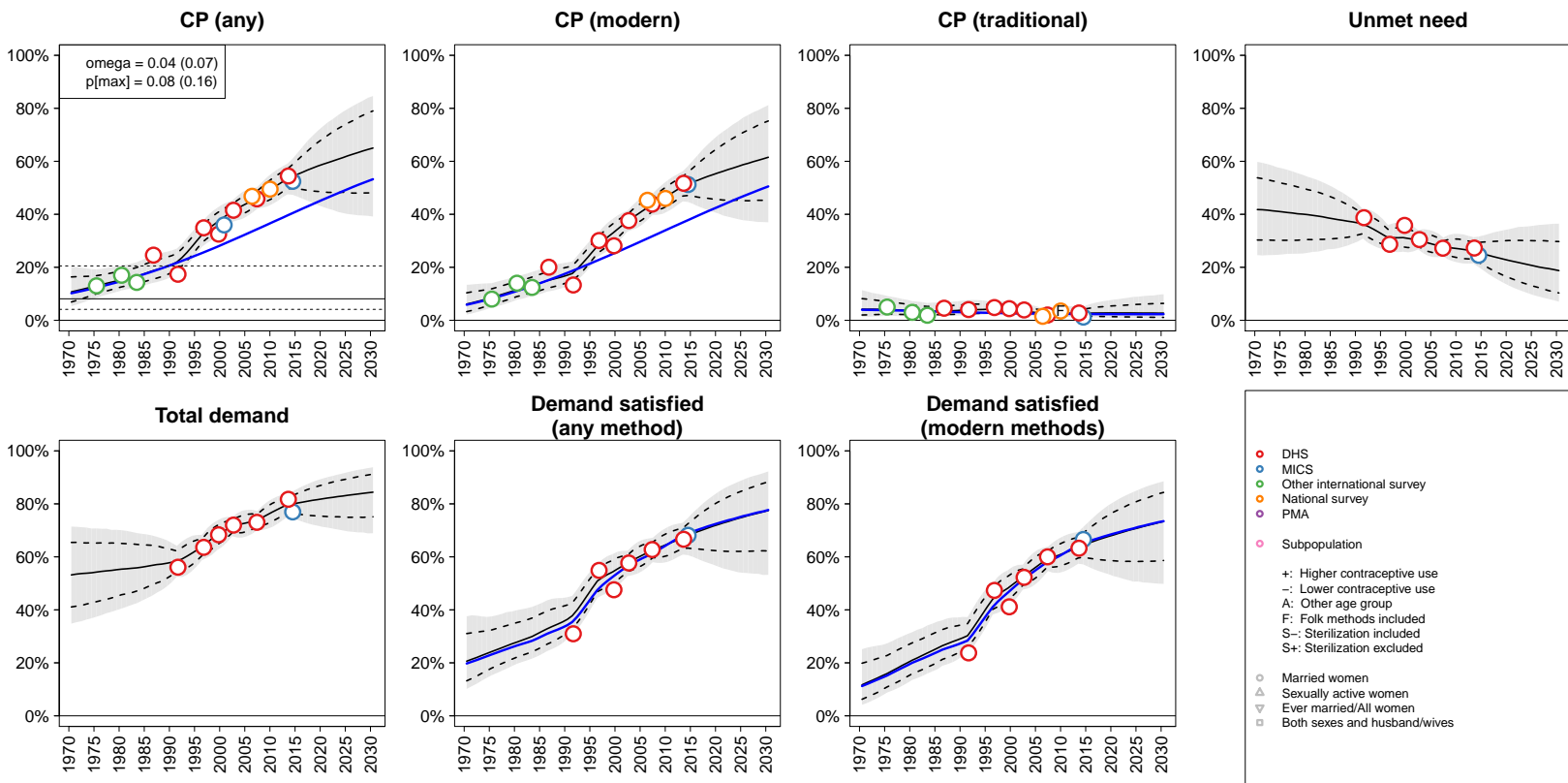


Dominica (Caribbean) --- Married / In-Union

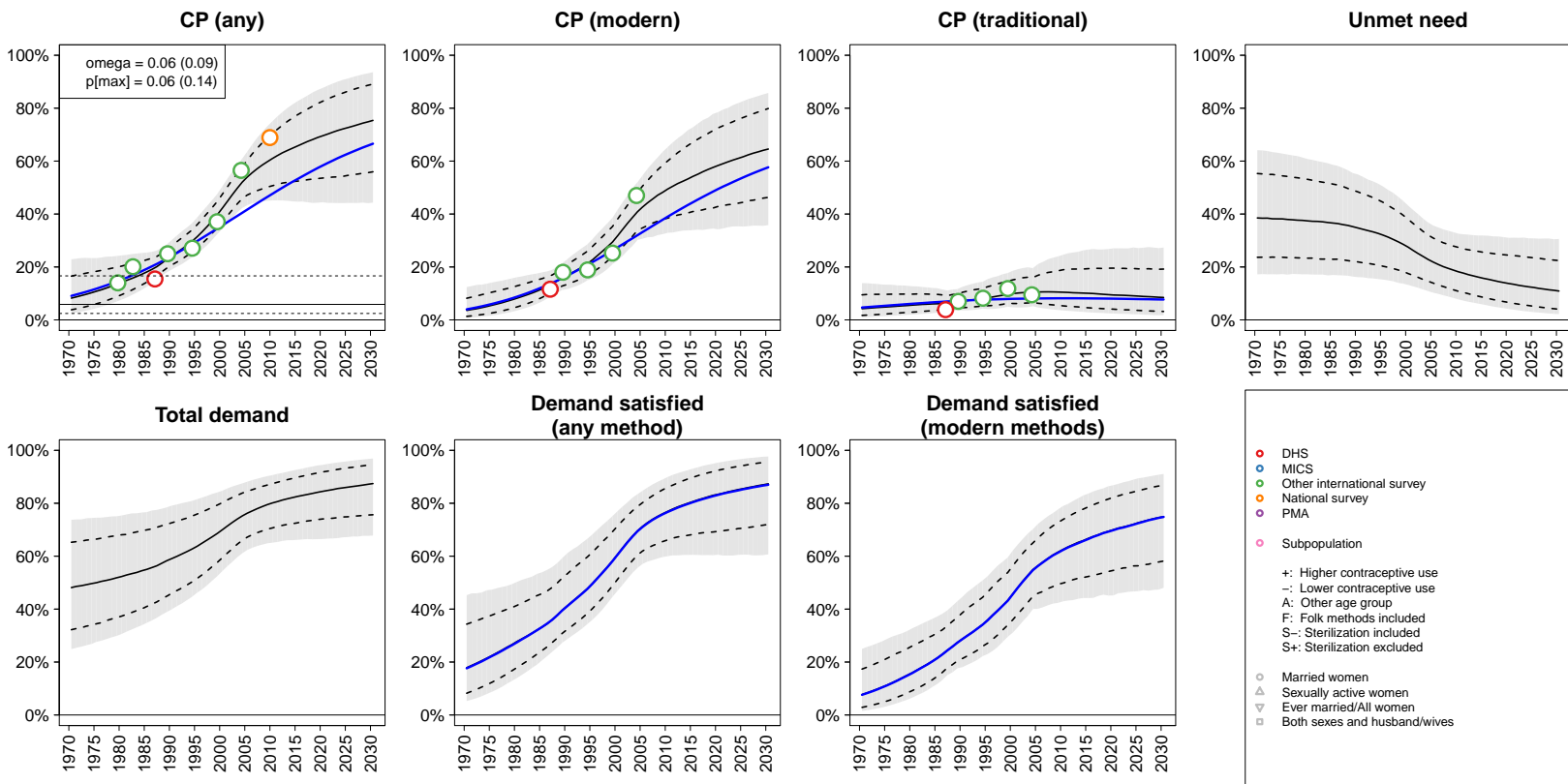




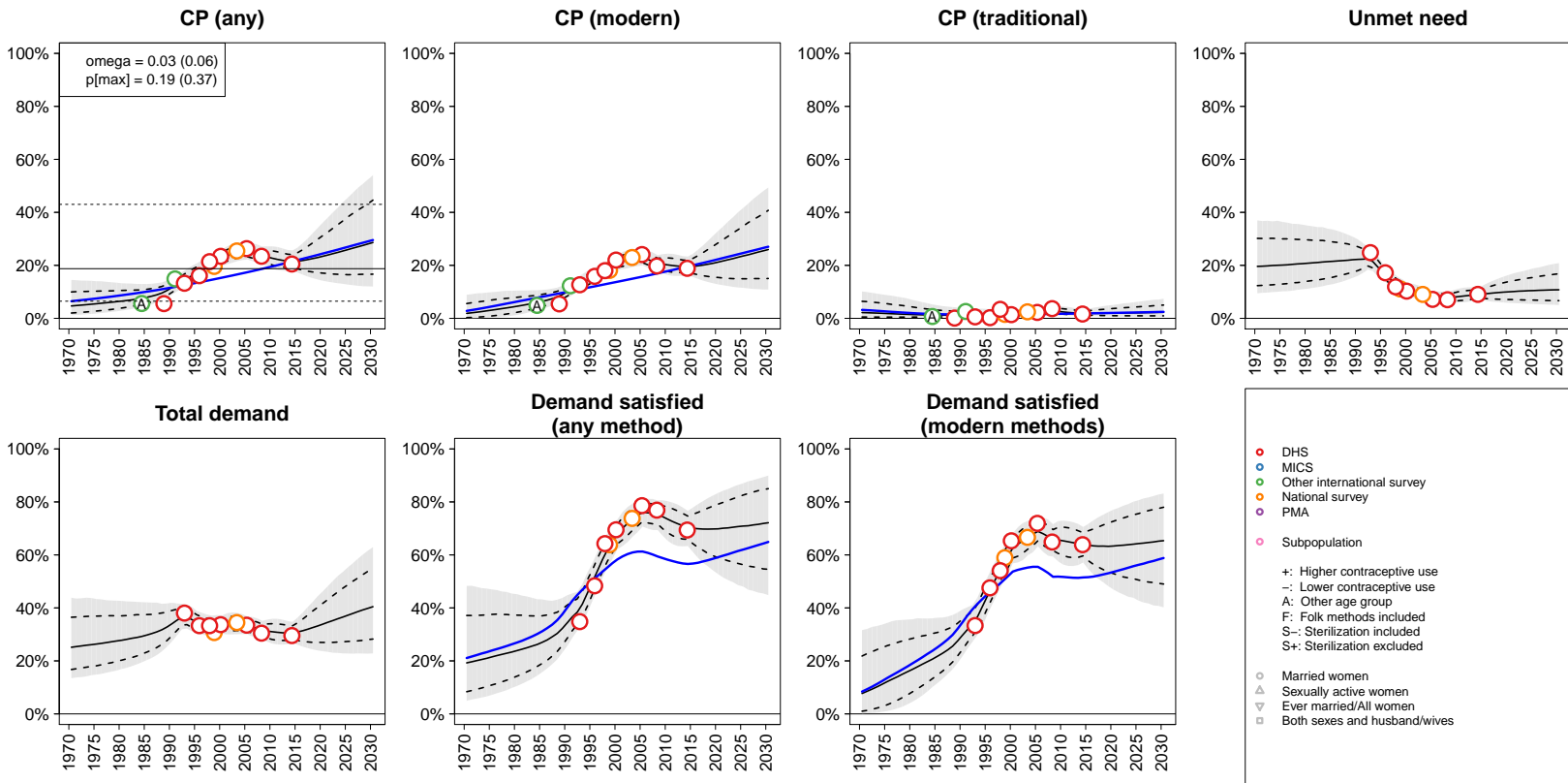
Dominican Republic (Caribbean) — Married / In-Union



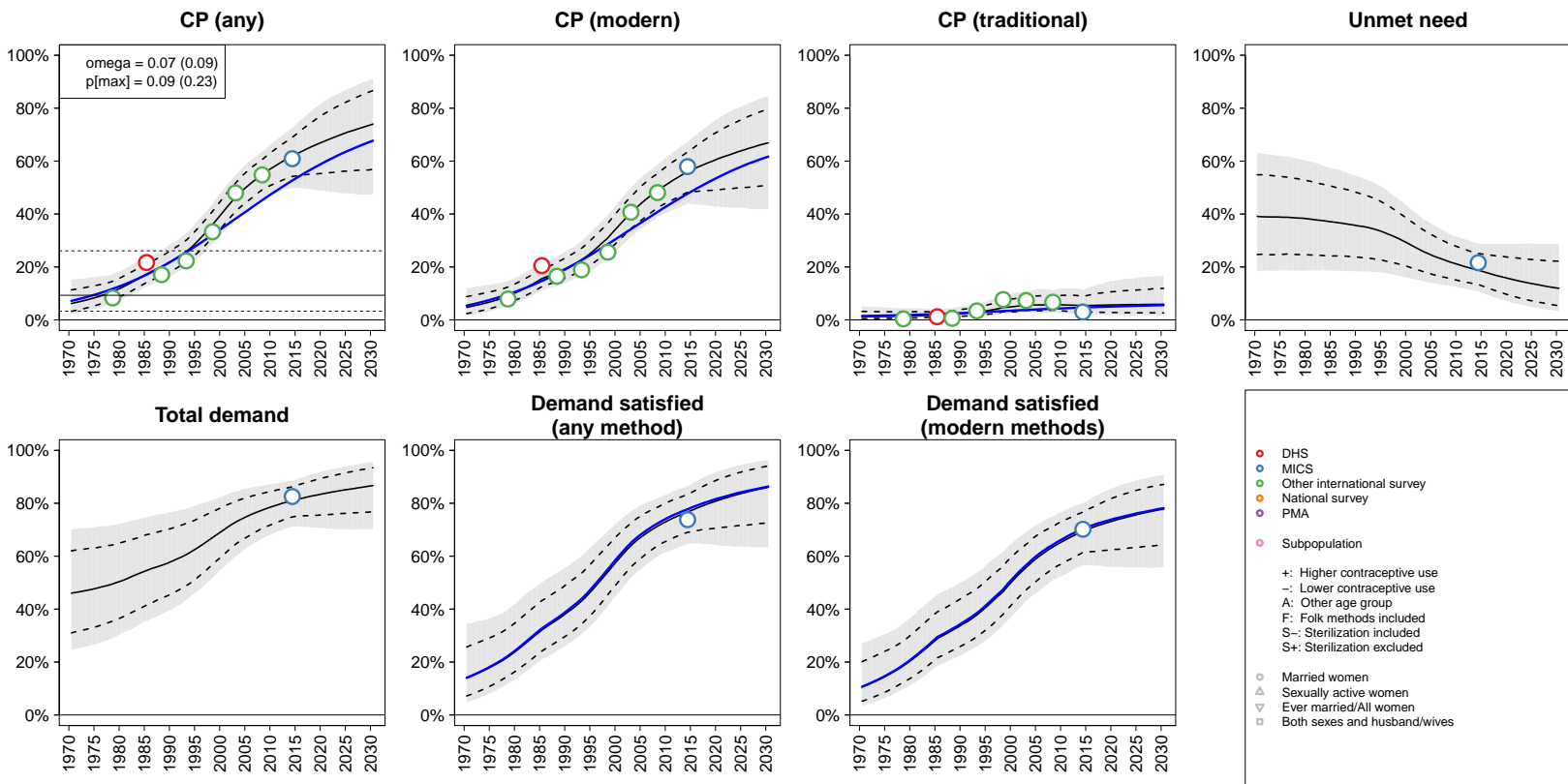
Ecuador (South America) --- Married / In-Union



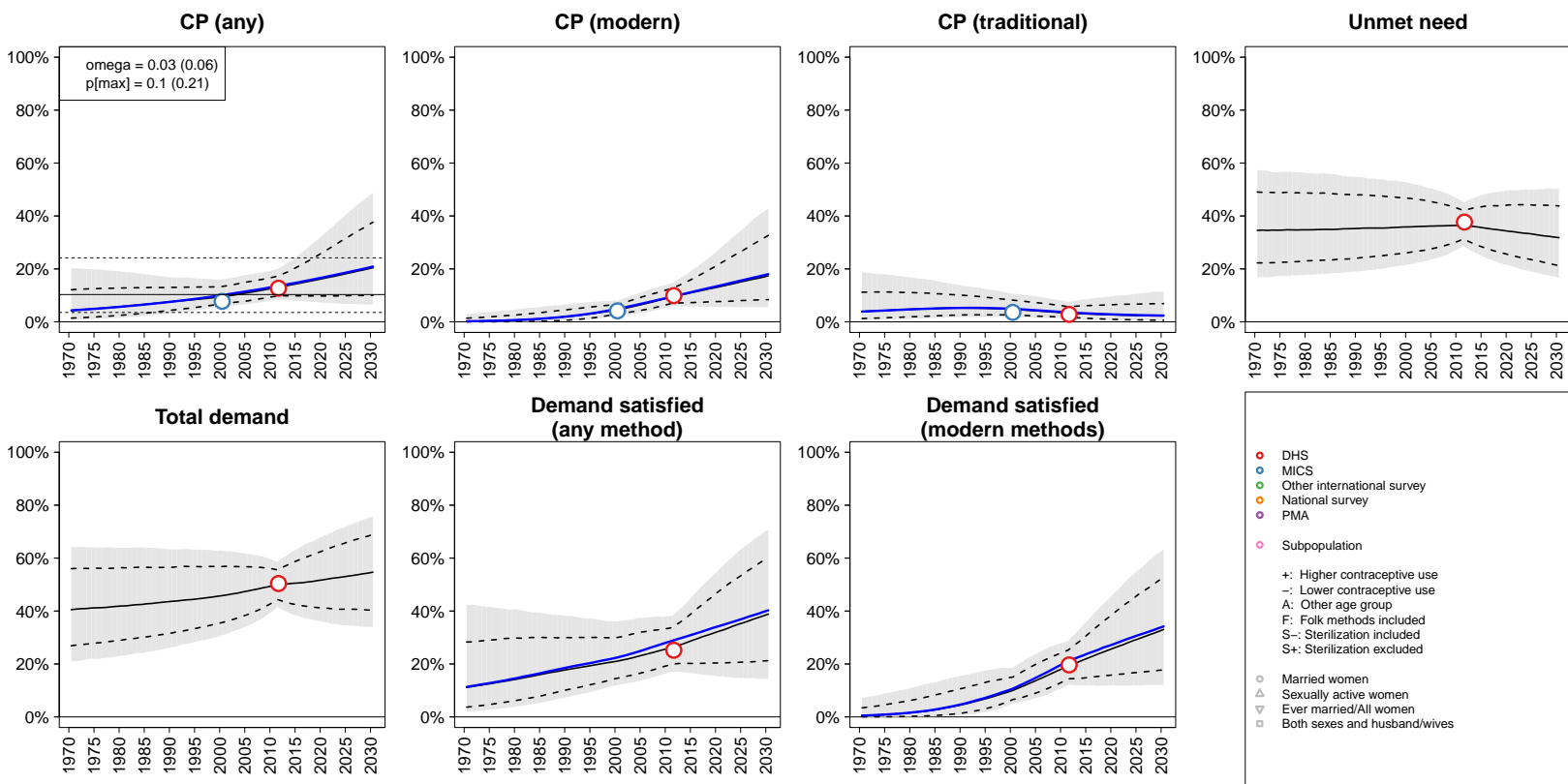
Egypt (Northern Africa) --- Married / In-Union



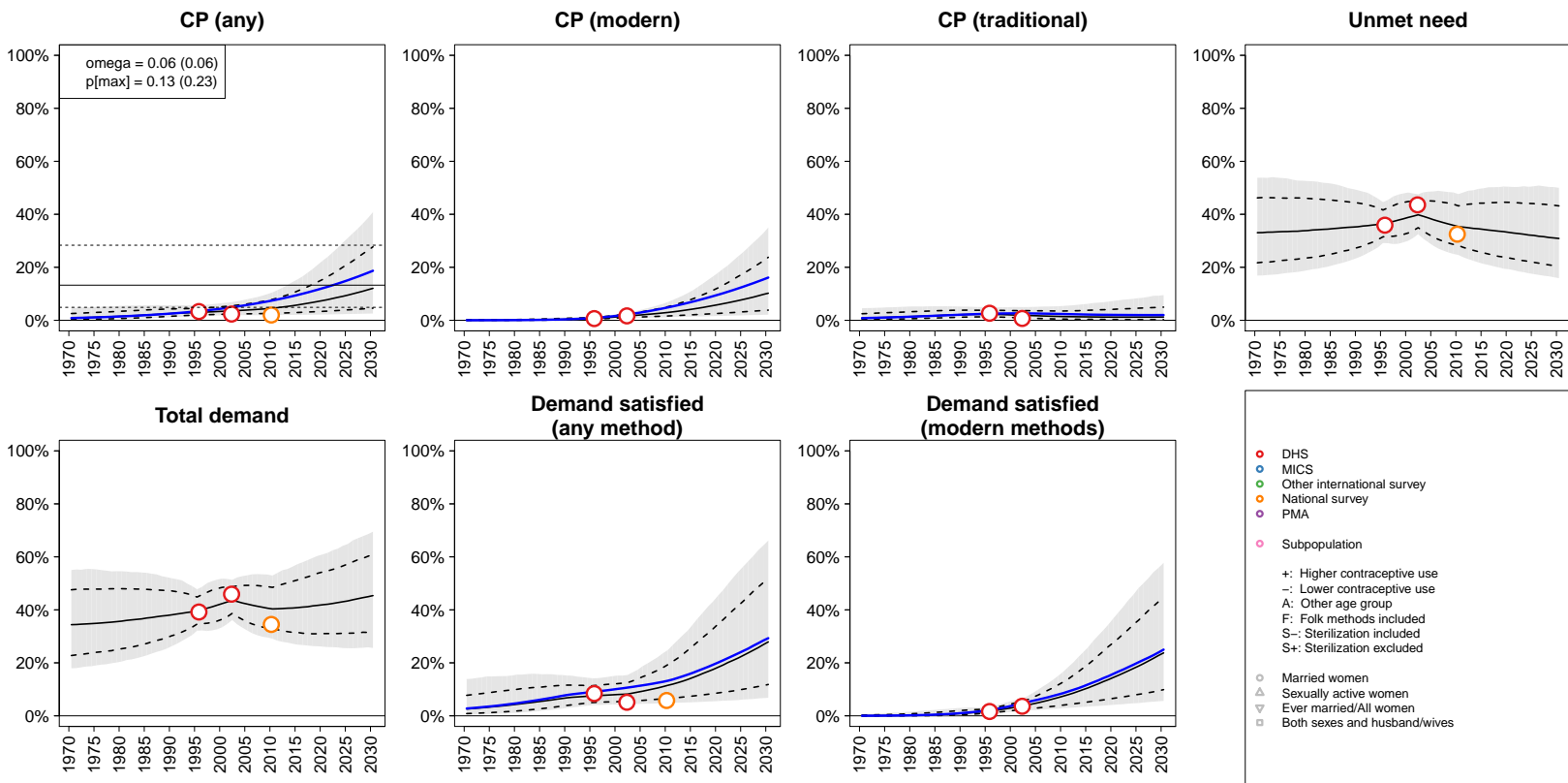
El Salvador (Central America) — Married / In-Union



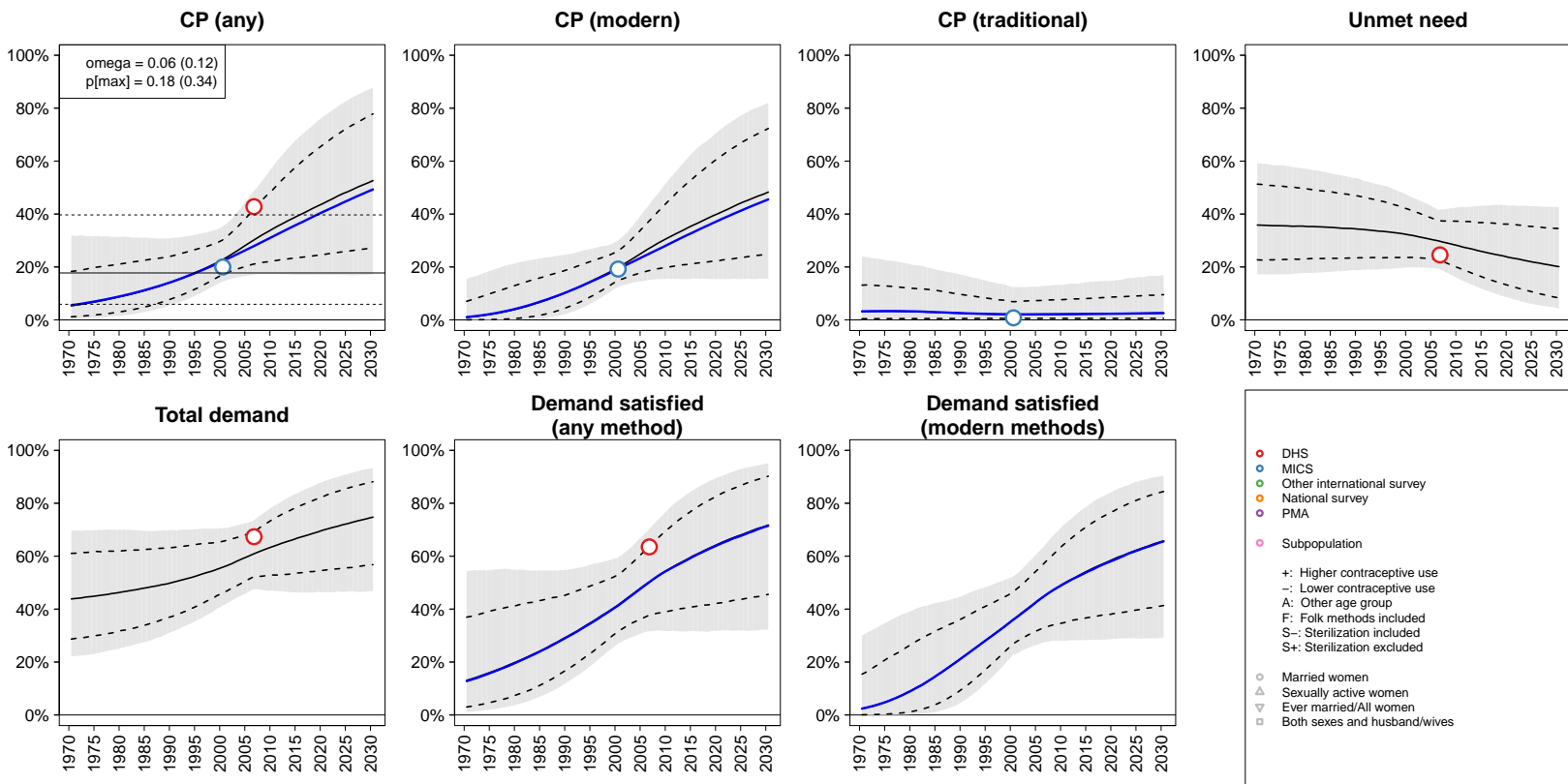
Equatorial Guinea (Middle Africa) --- Married / In-Union



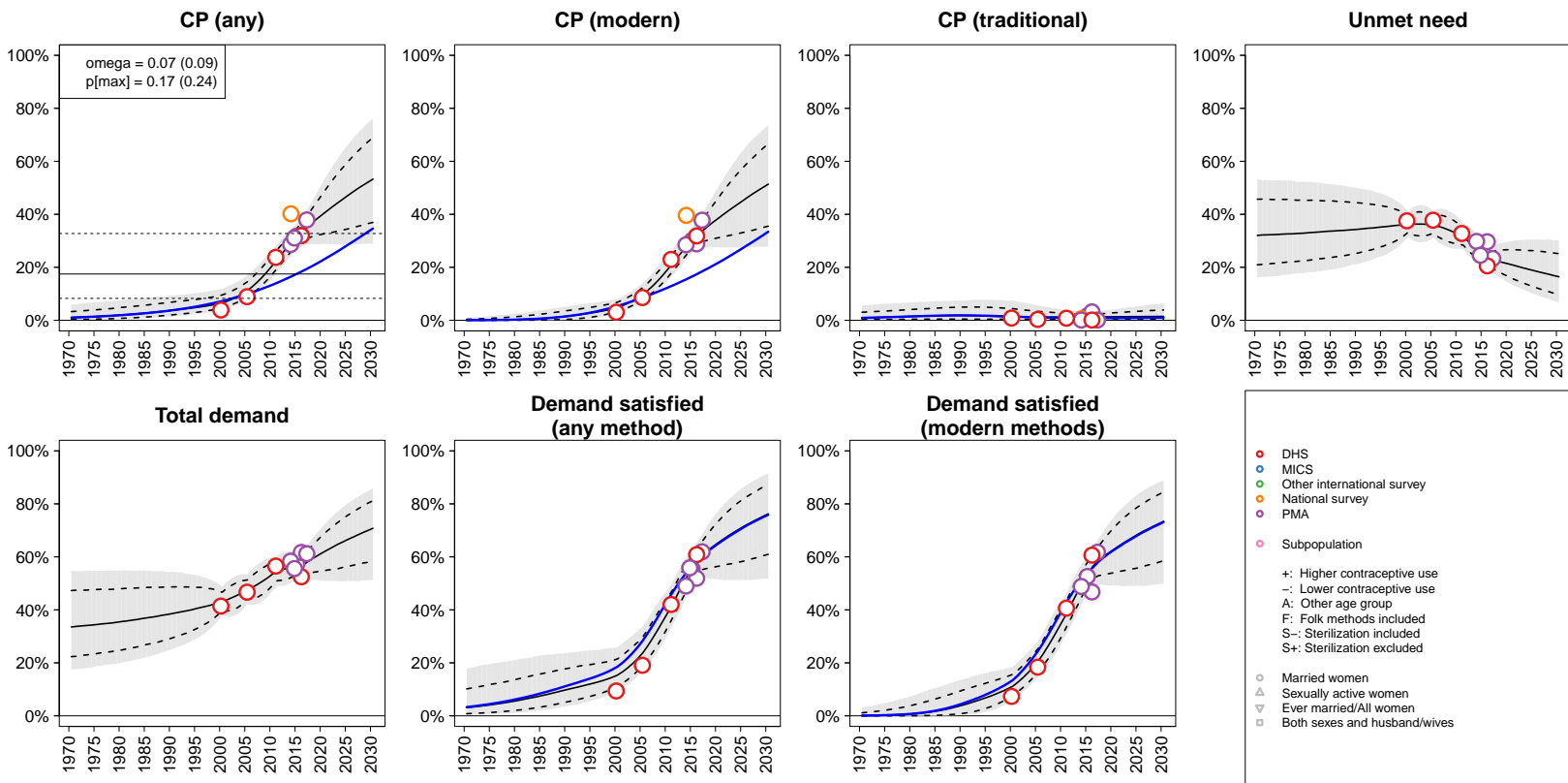
Eritrea (Eastern Africa) --- Married / In-Union



Eswatini (Southern Africa) --- Married / In-Union

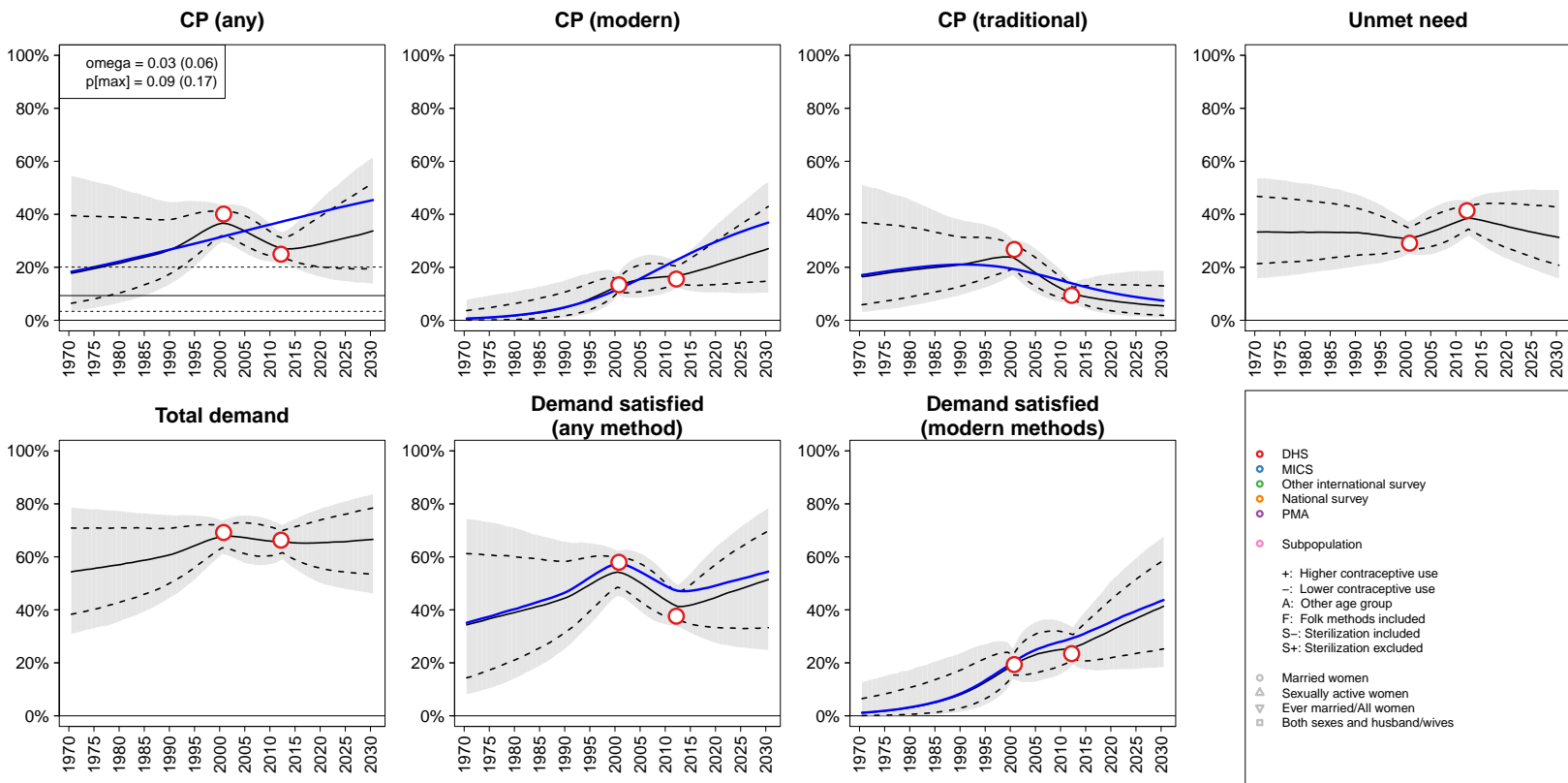


Ethiopia (Eastern Africa) — Married / In-Union

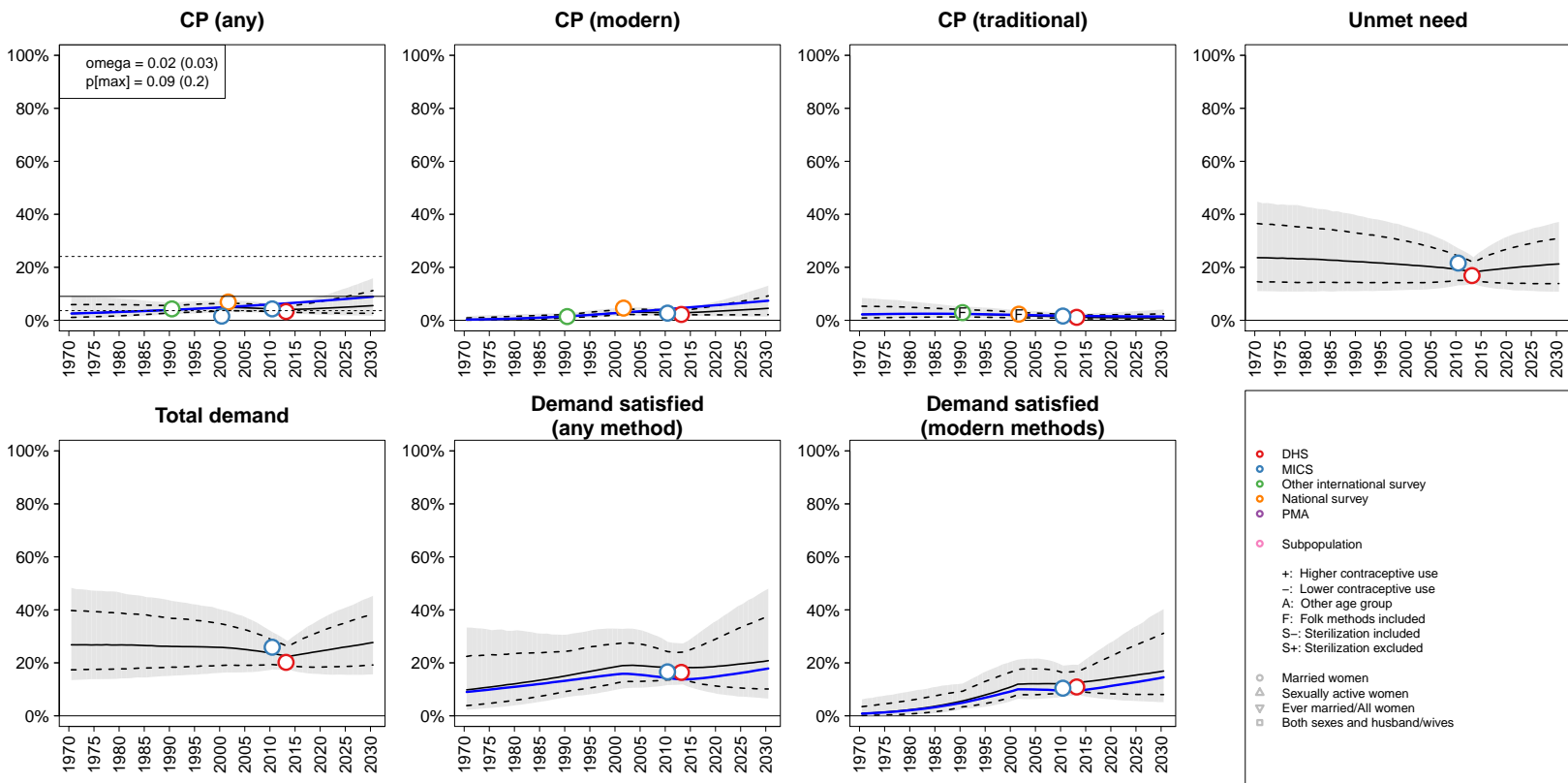




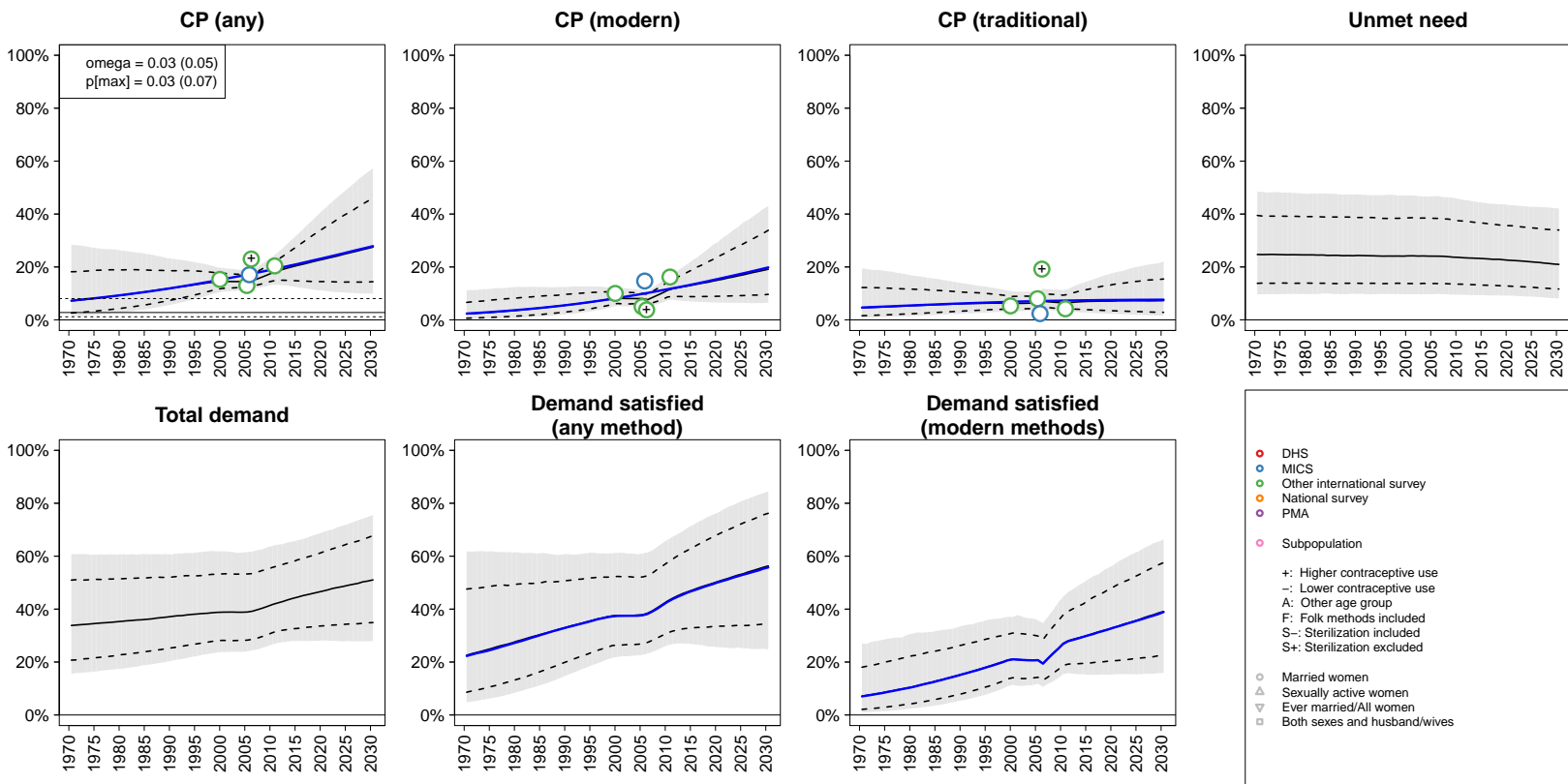
Gabon (Middle Africa) --- Married / In-Union



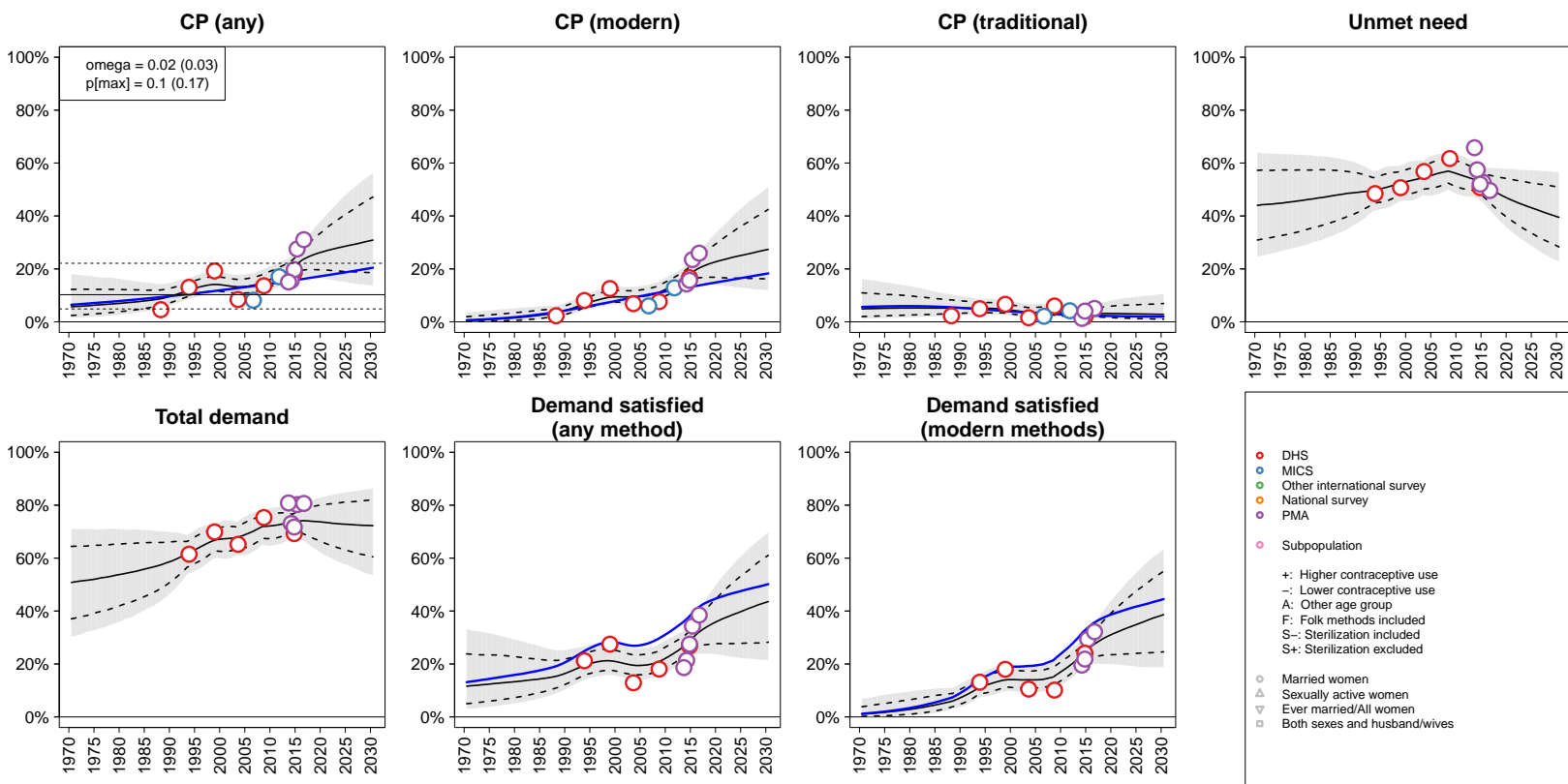
Gambia (Western Africa) --- Married / In-Union



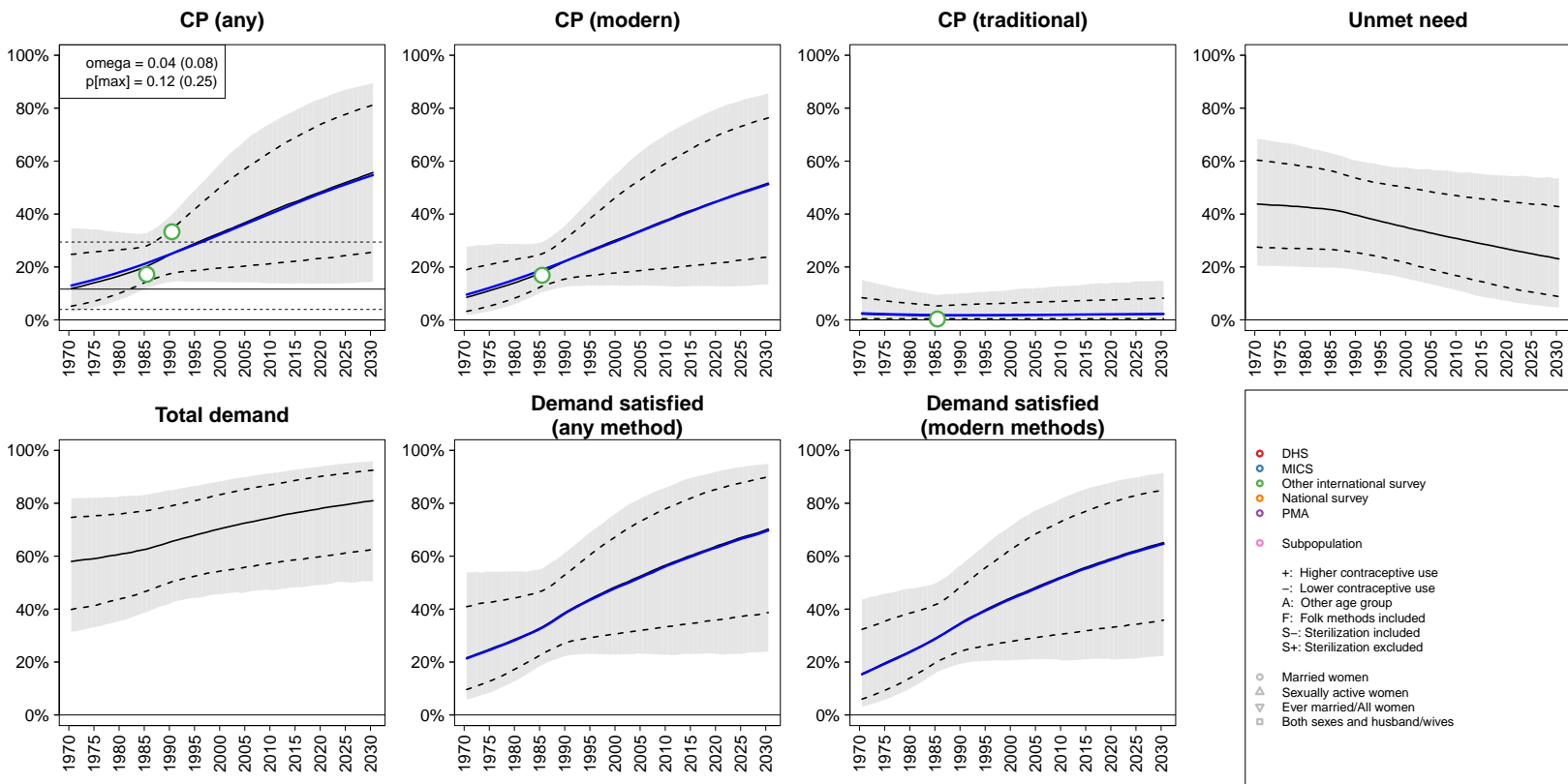
Georgia (Western Asia) --- Married / In-Union



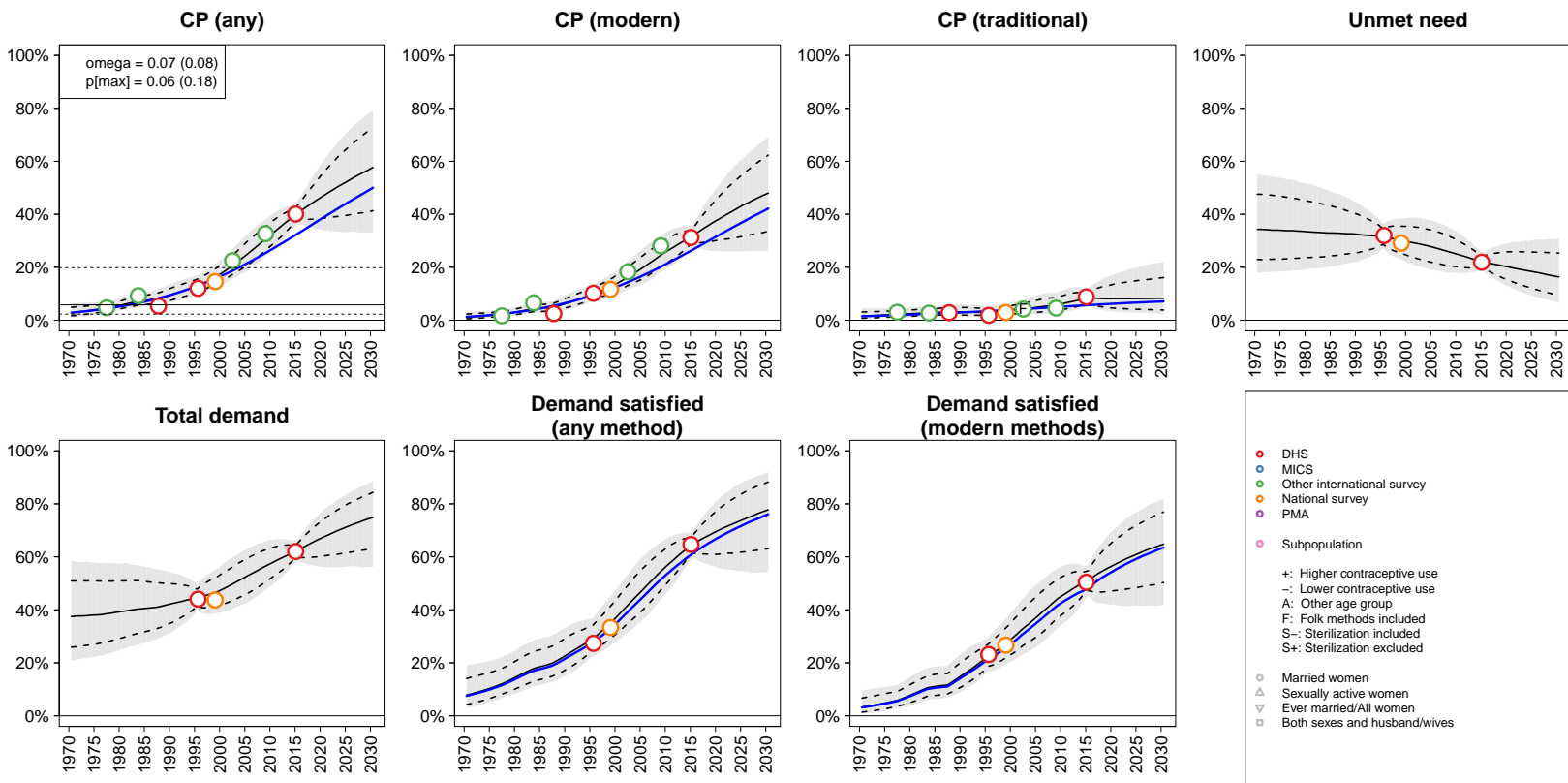
Ghana (Western Africa) --- Married / In-Union



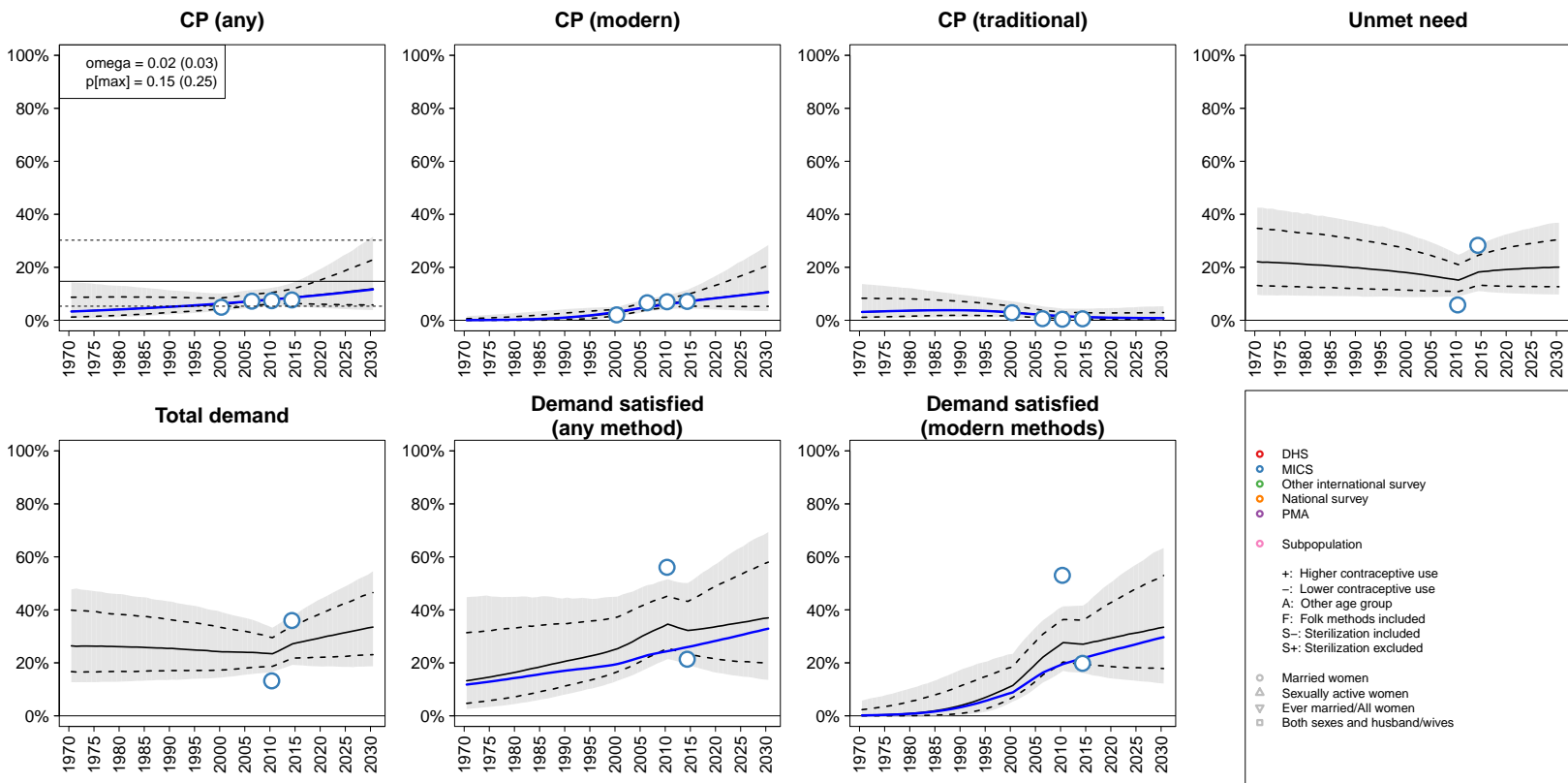
Grenada (Caribbean) --- Married / In-Union



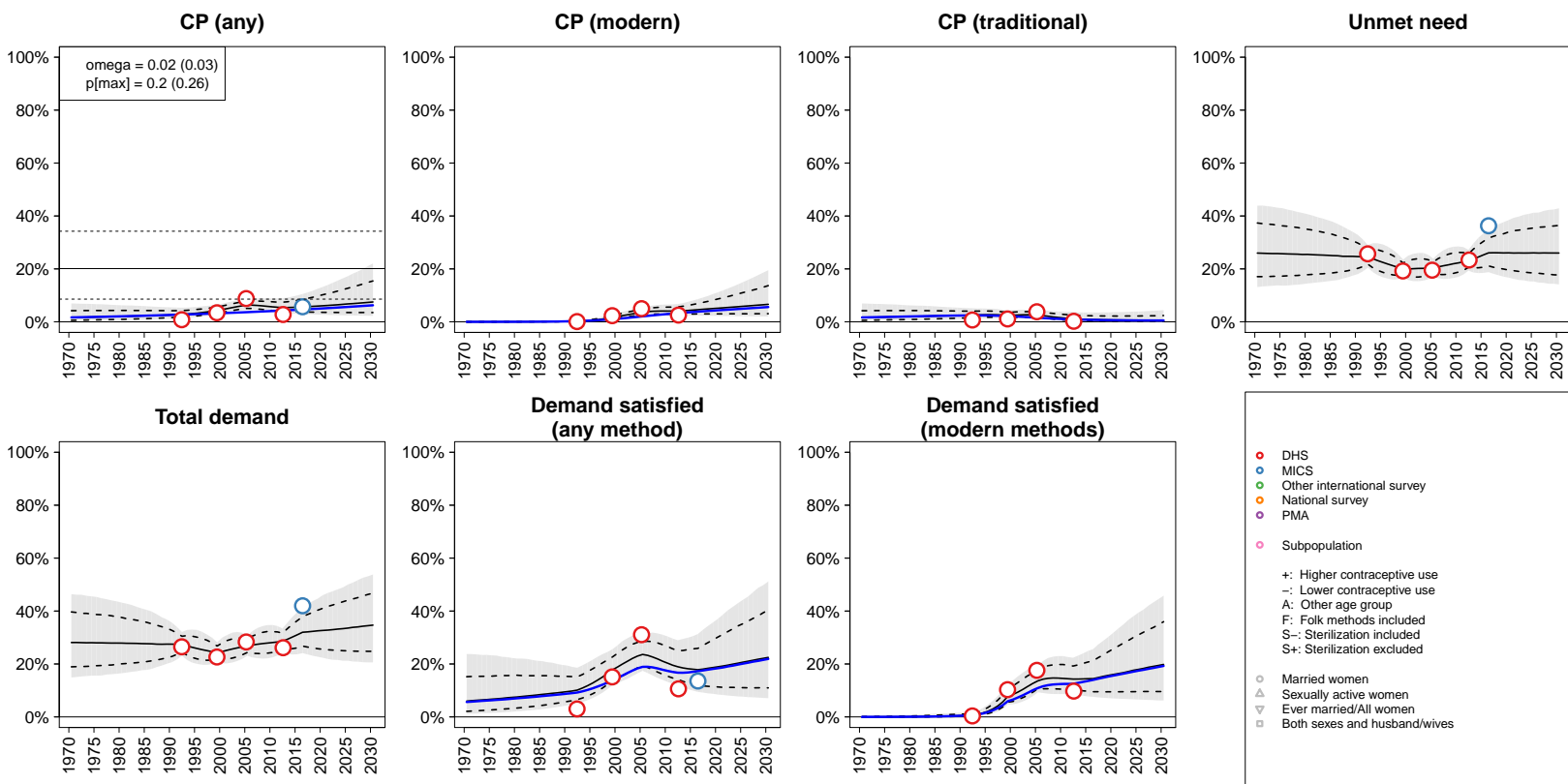
Guatemala (Central America) --- Married / In-Union



Guinea-Bissau (Western Africa) --- Married / In-Union

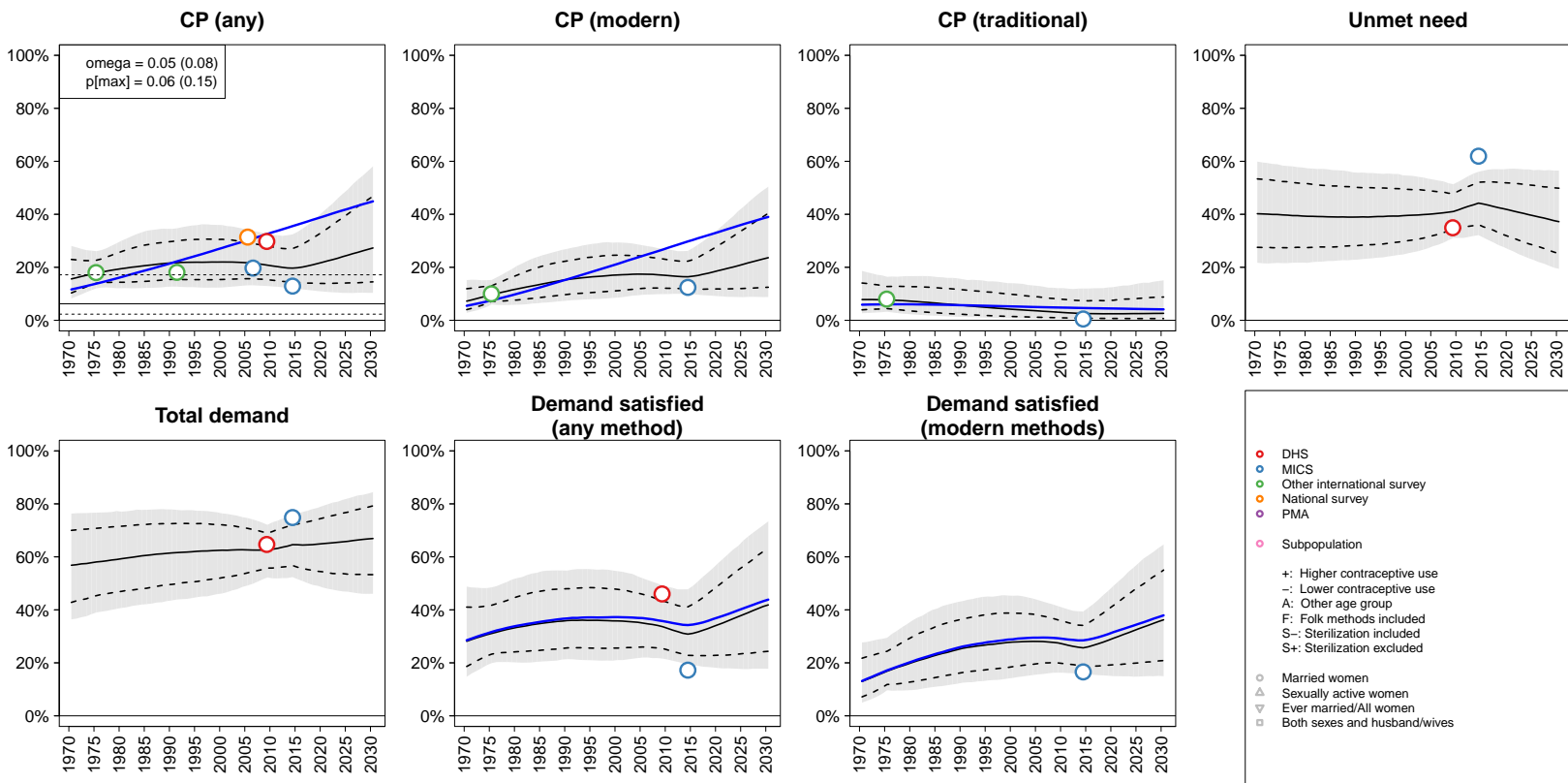


Guinea (Western Africa) --- Married / In-Union

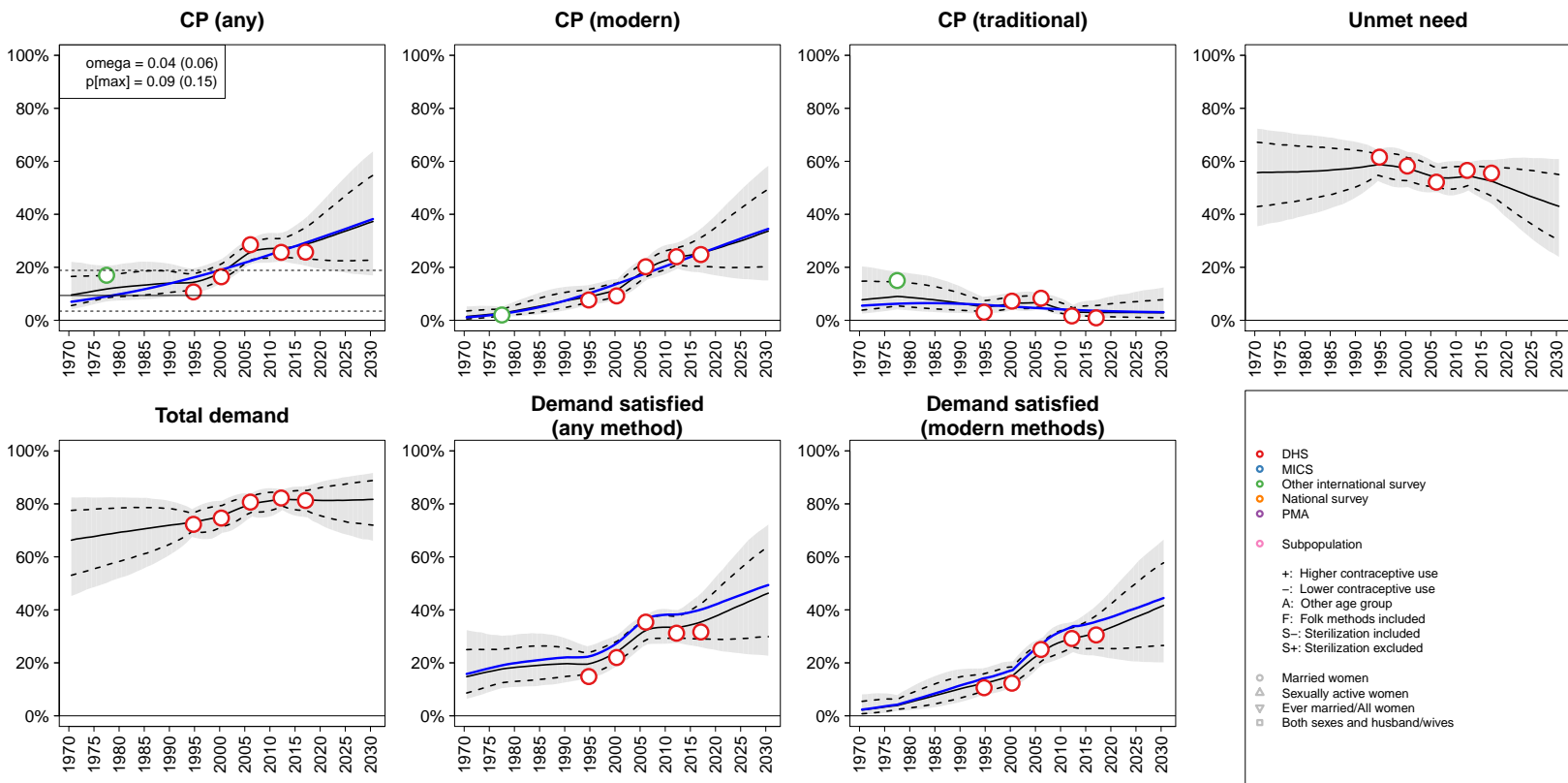




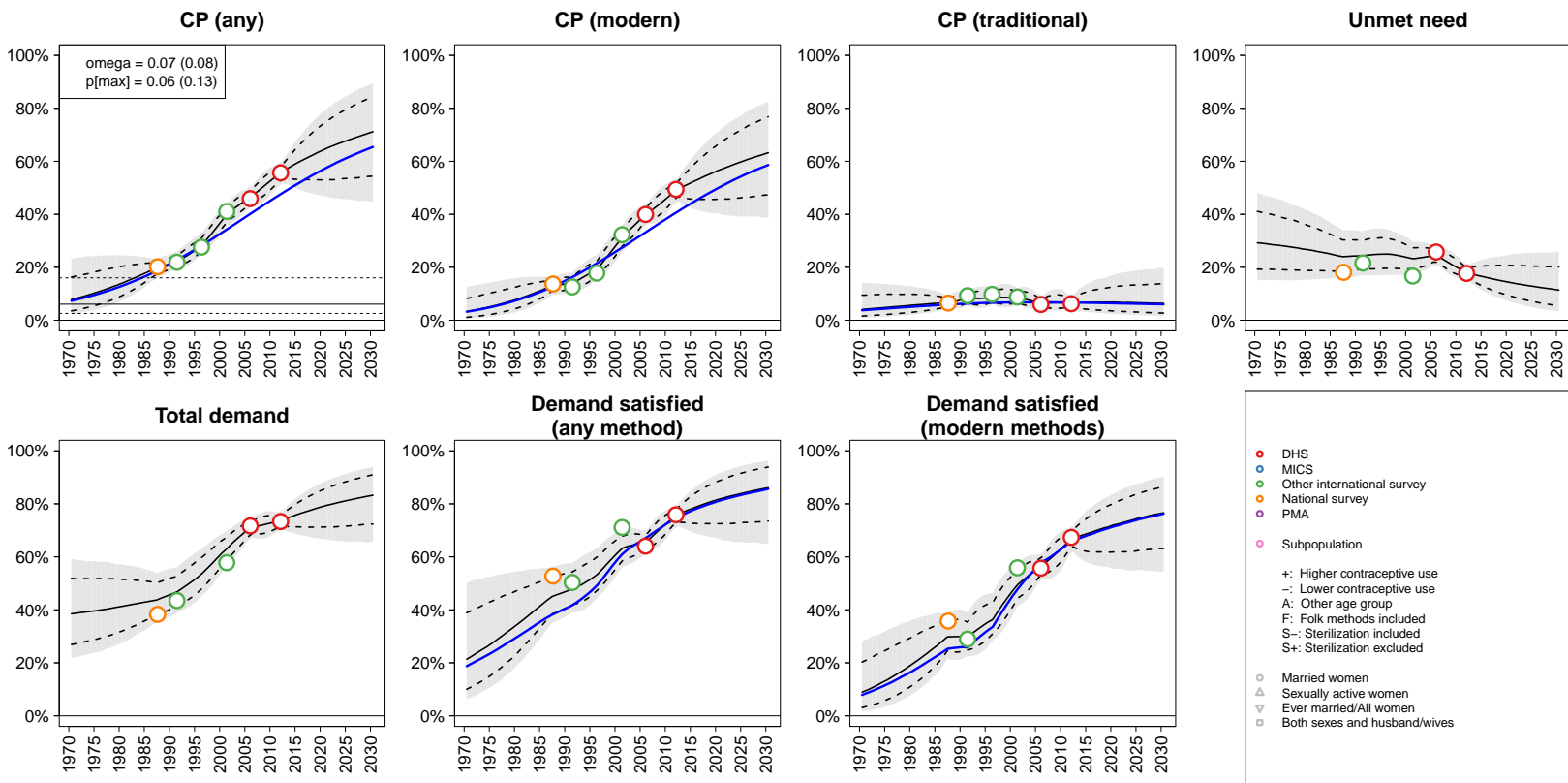
Guyana (South America) --- Married / In-Union



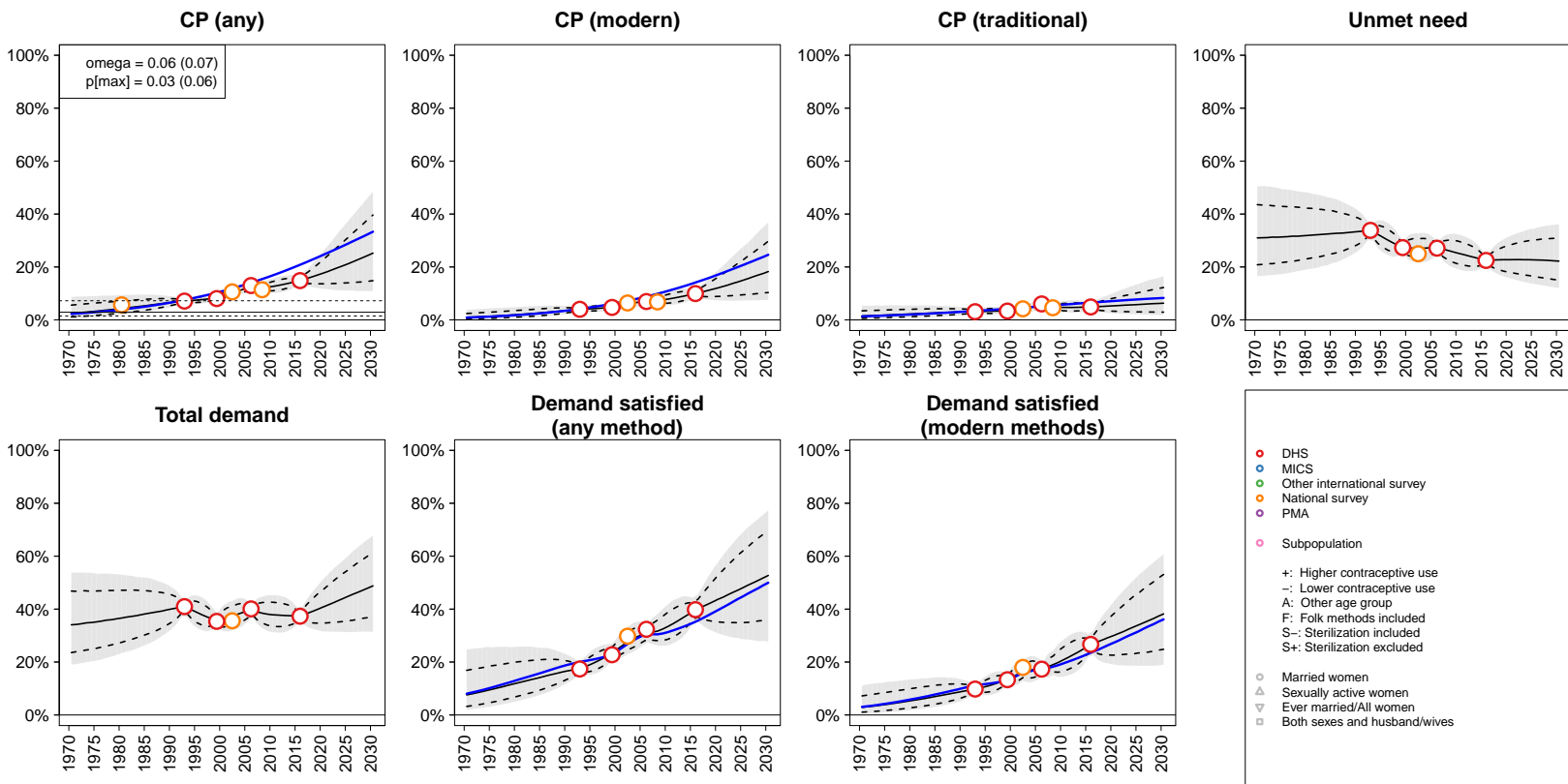
Haiti (Caribbean) --- Married / In-Union



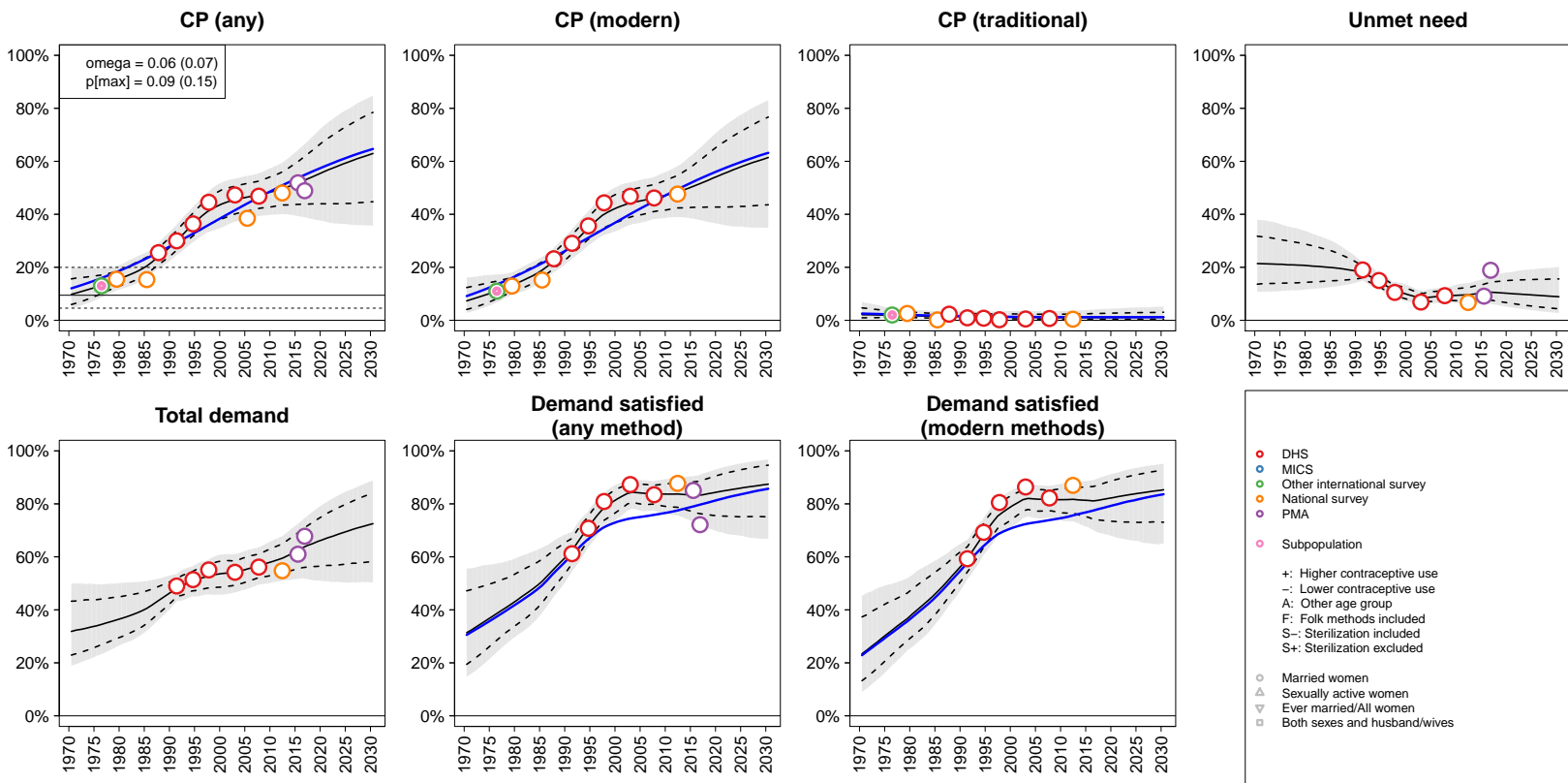
Honduras (Central America) --- Married / In-Union



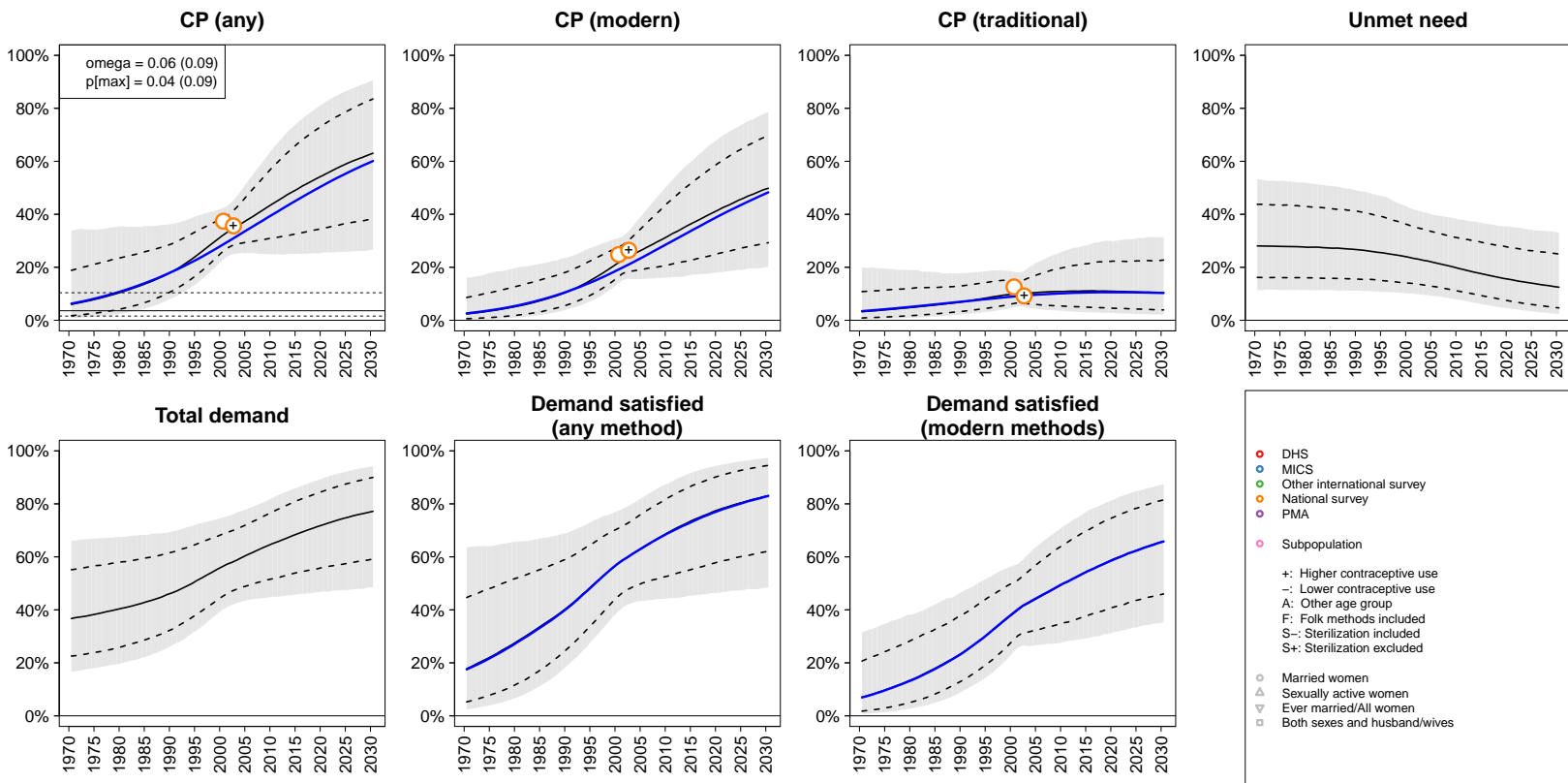
India (Southern Asia) --- Married / In-Union



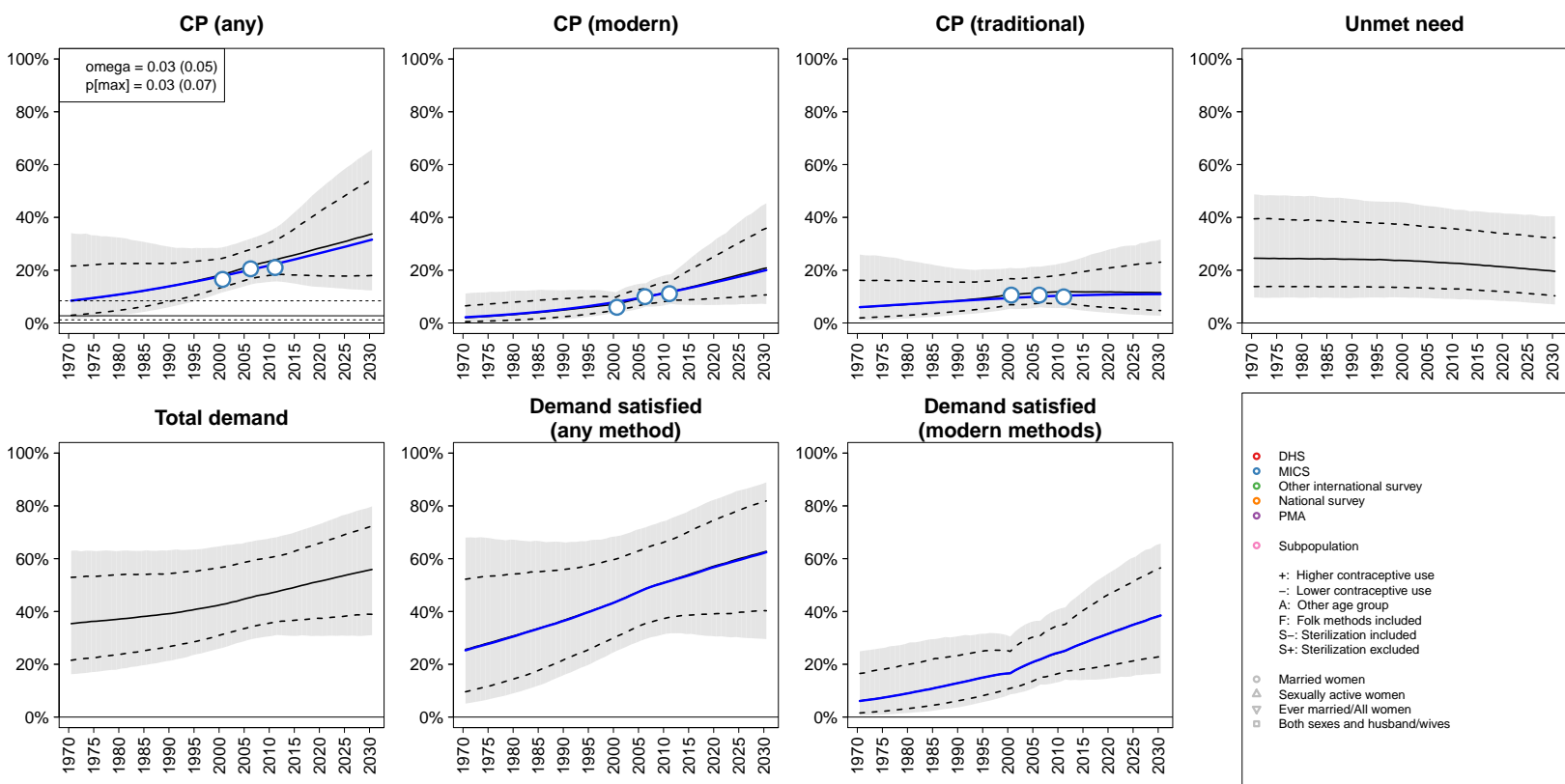
Indonesia (South-eastern Asia) --- Married / In-Union



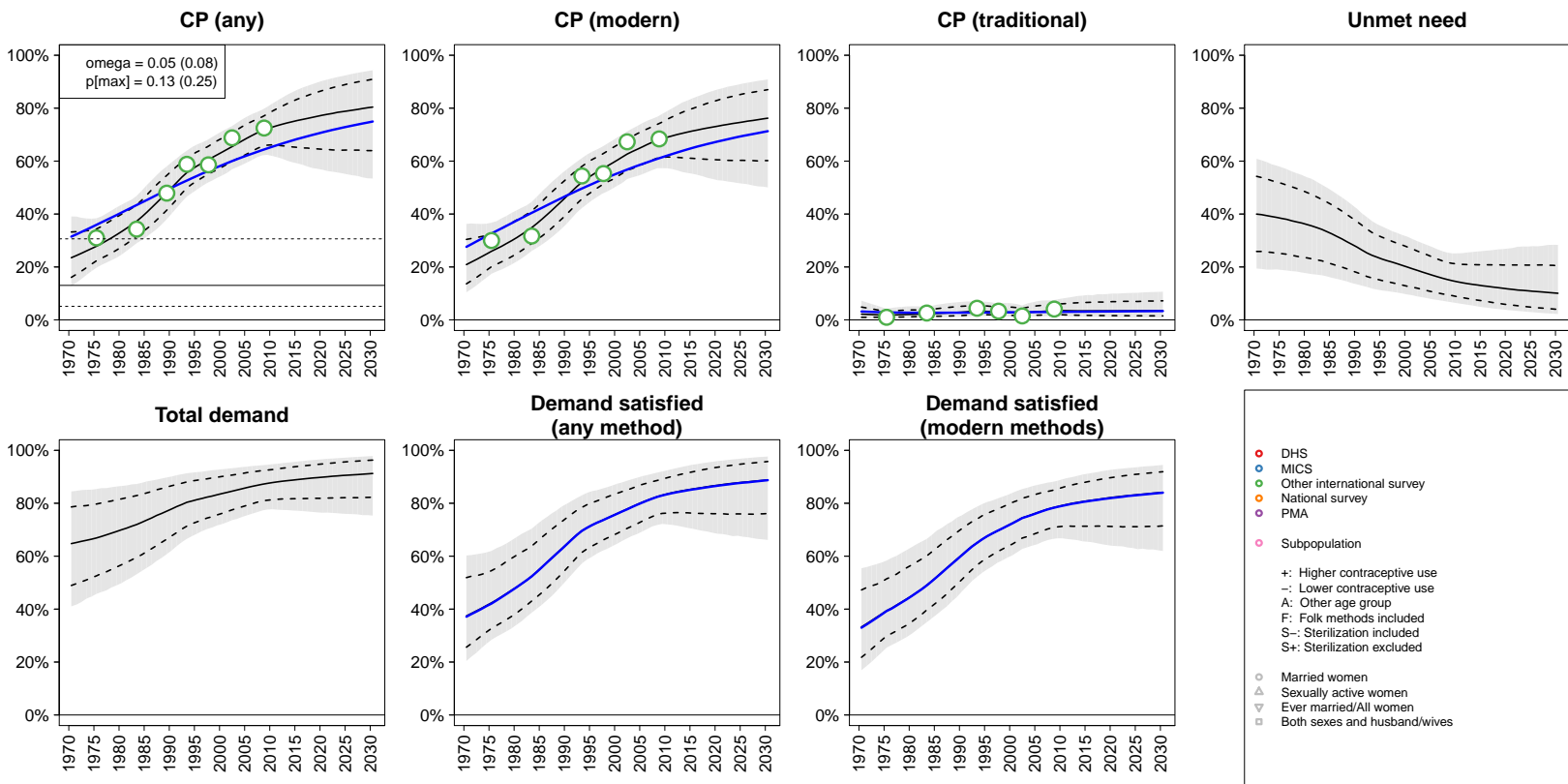
Iran, Islamic Republic of (Southern Asia) — Married / In-Union



Iraq (Western Asia) --- Married / In-Union

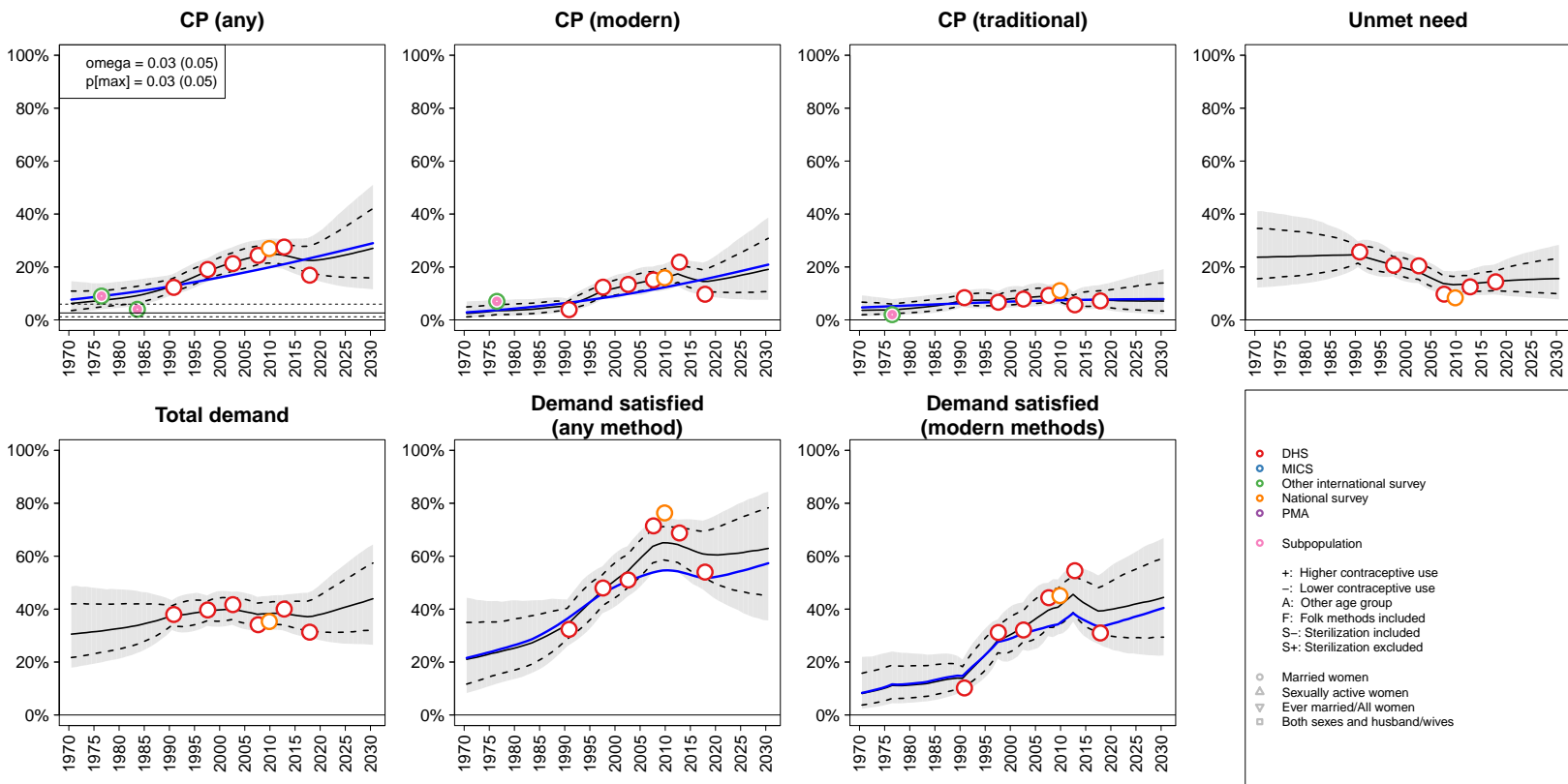


Jamaica (Caribbean) --- Married / In-Union

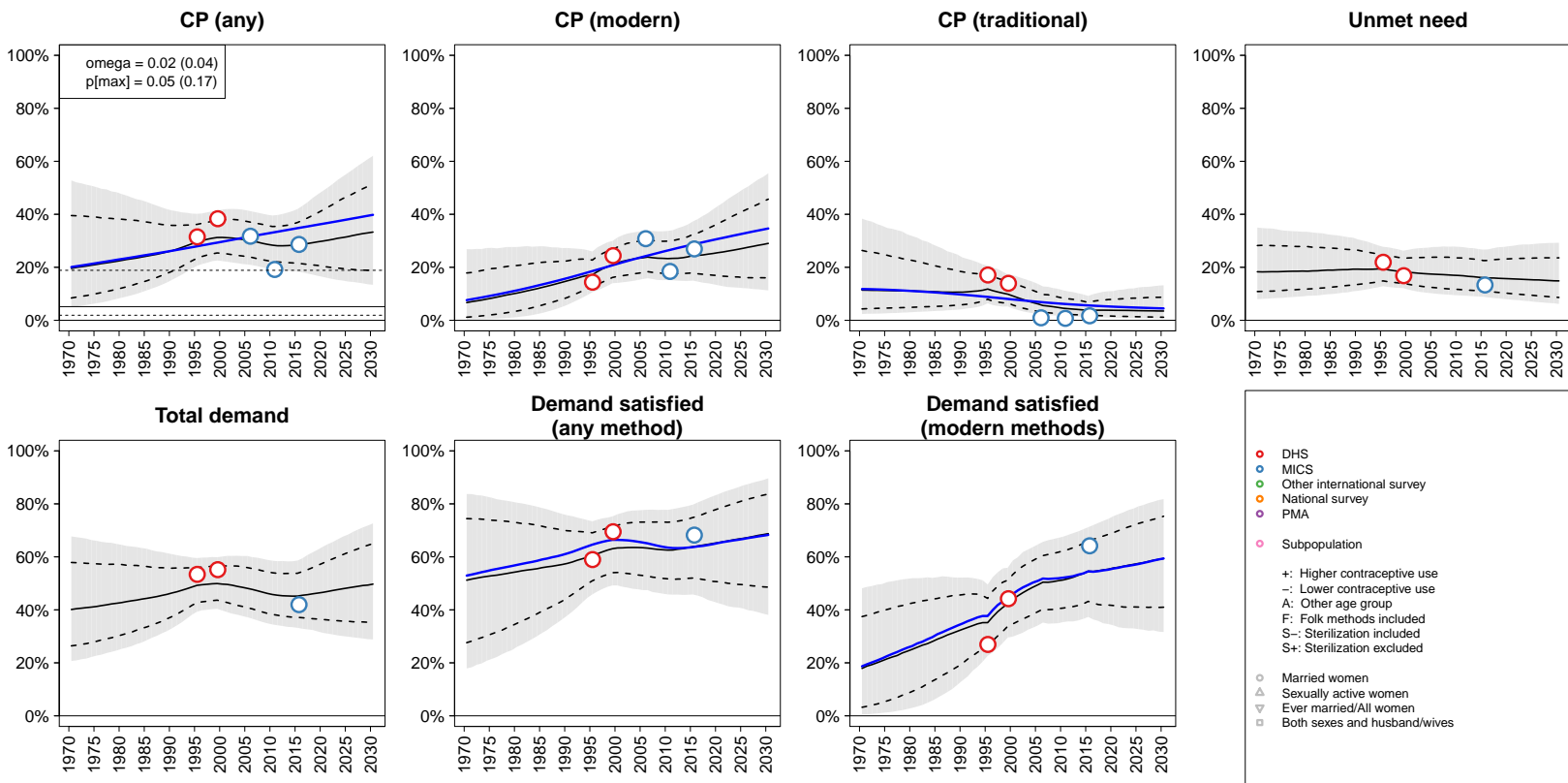




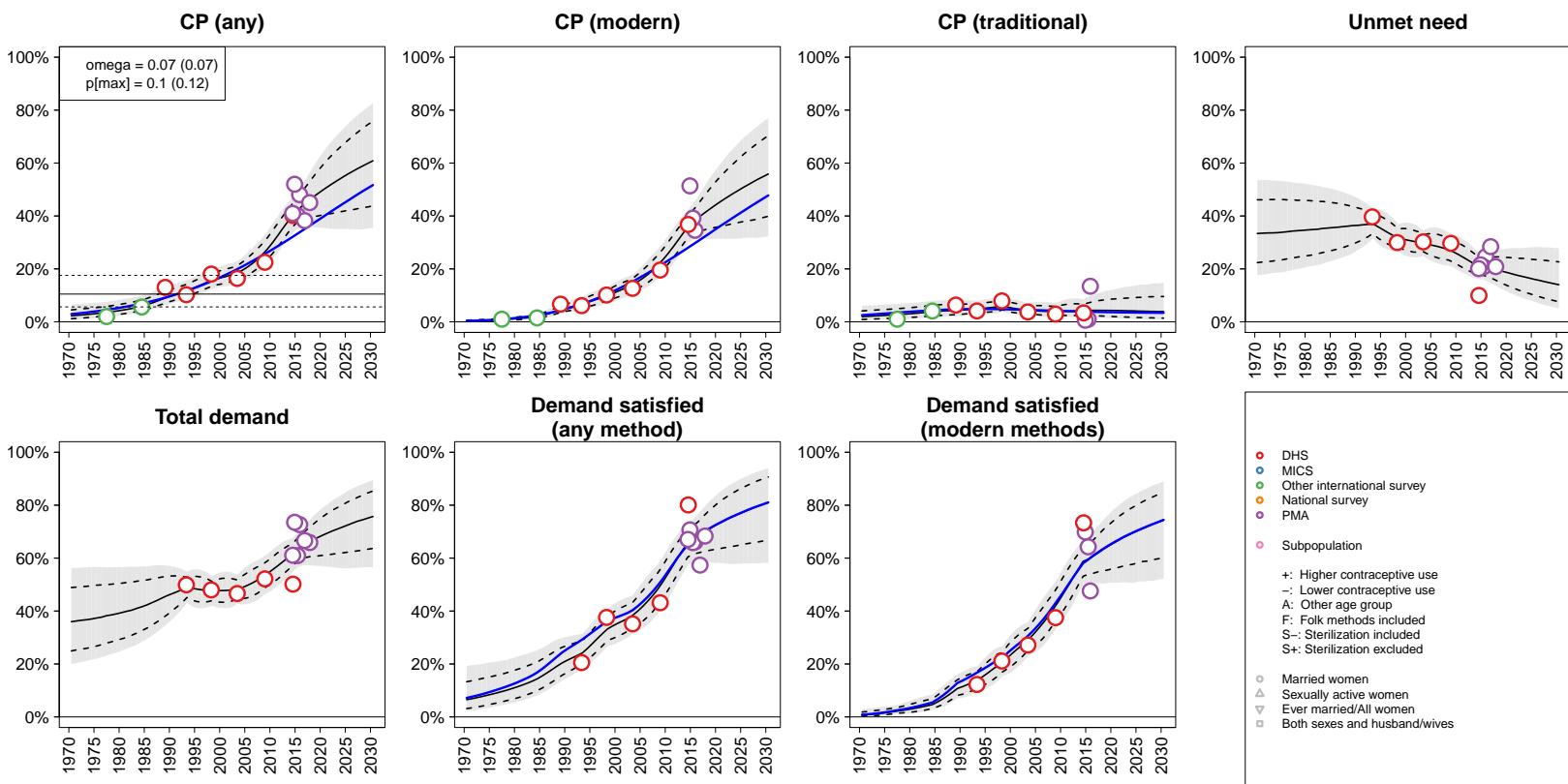
Jordan (Western Asia) --- Married / In-Union



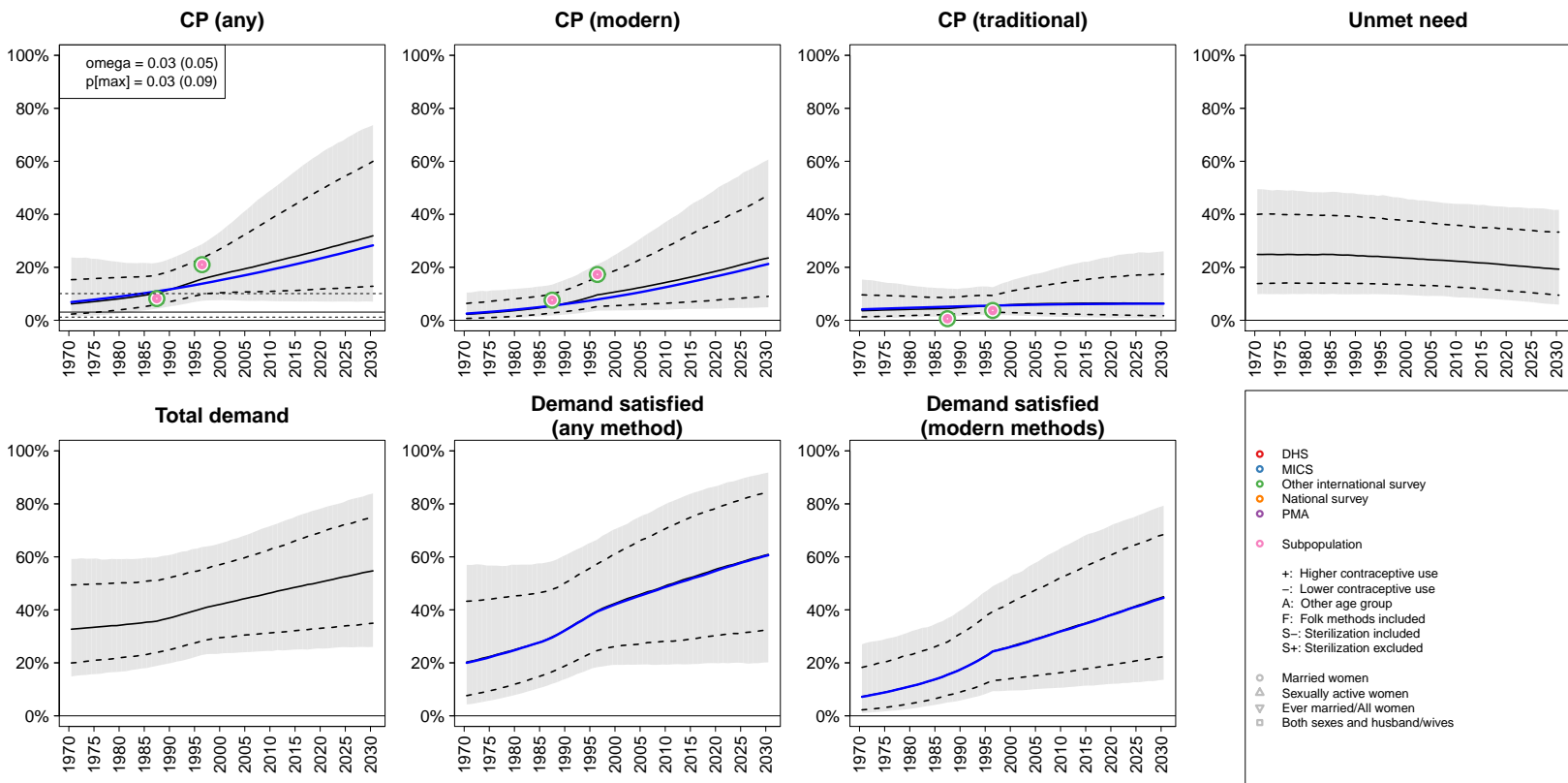
Kazakhstan (Central Asia) --- Married / In-Union



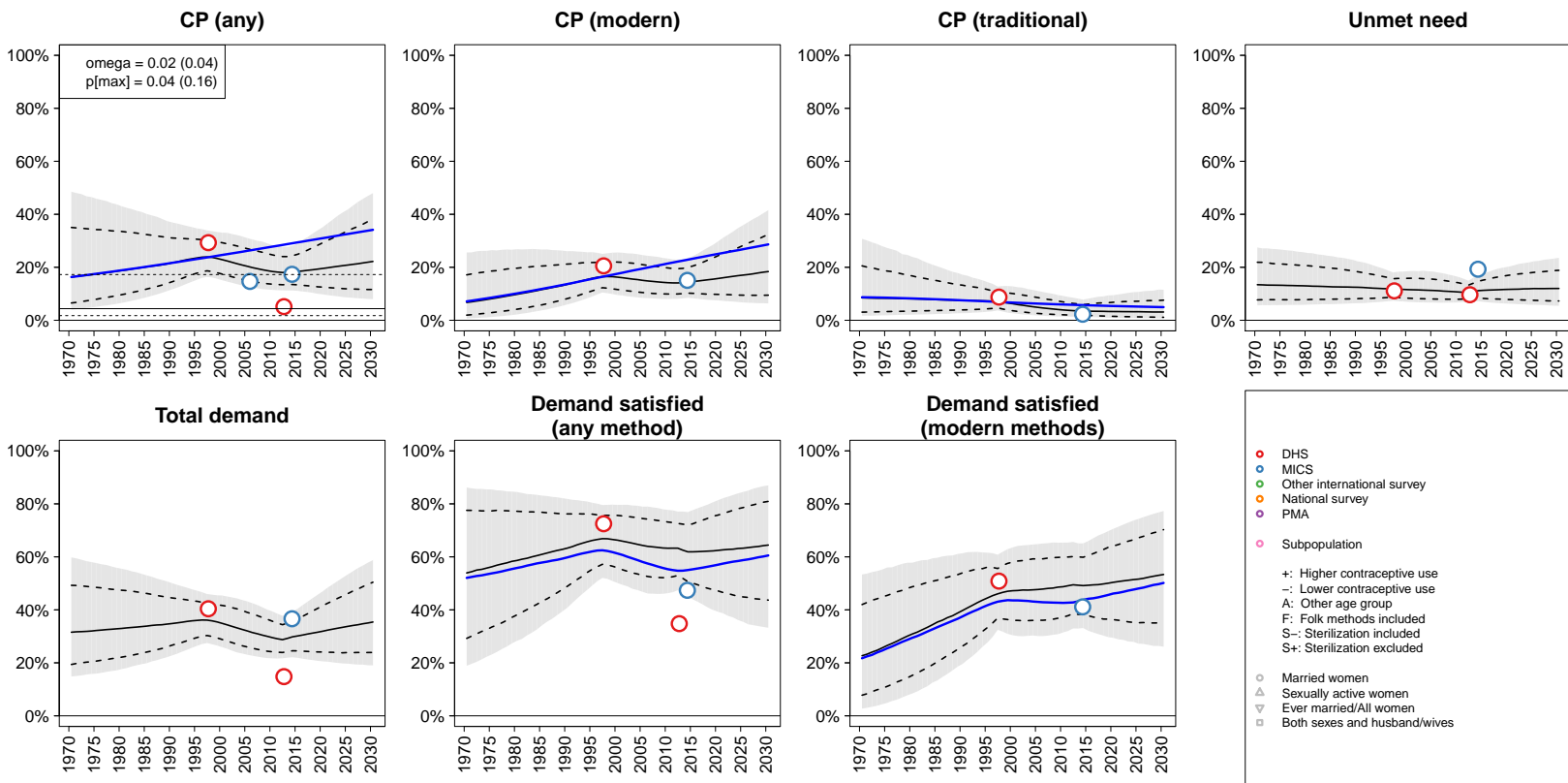
Kenya (Eastern Africa) --- Married / In-Union



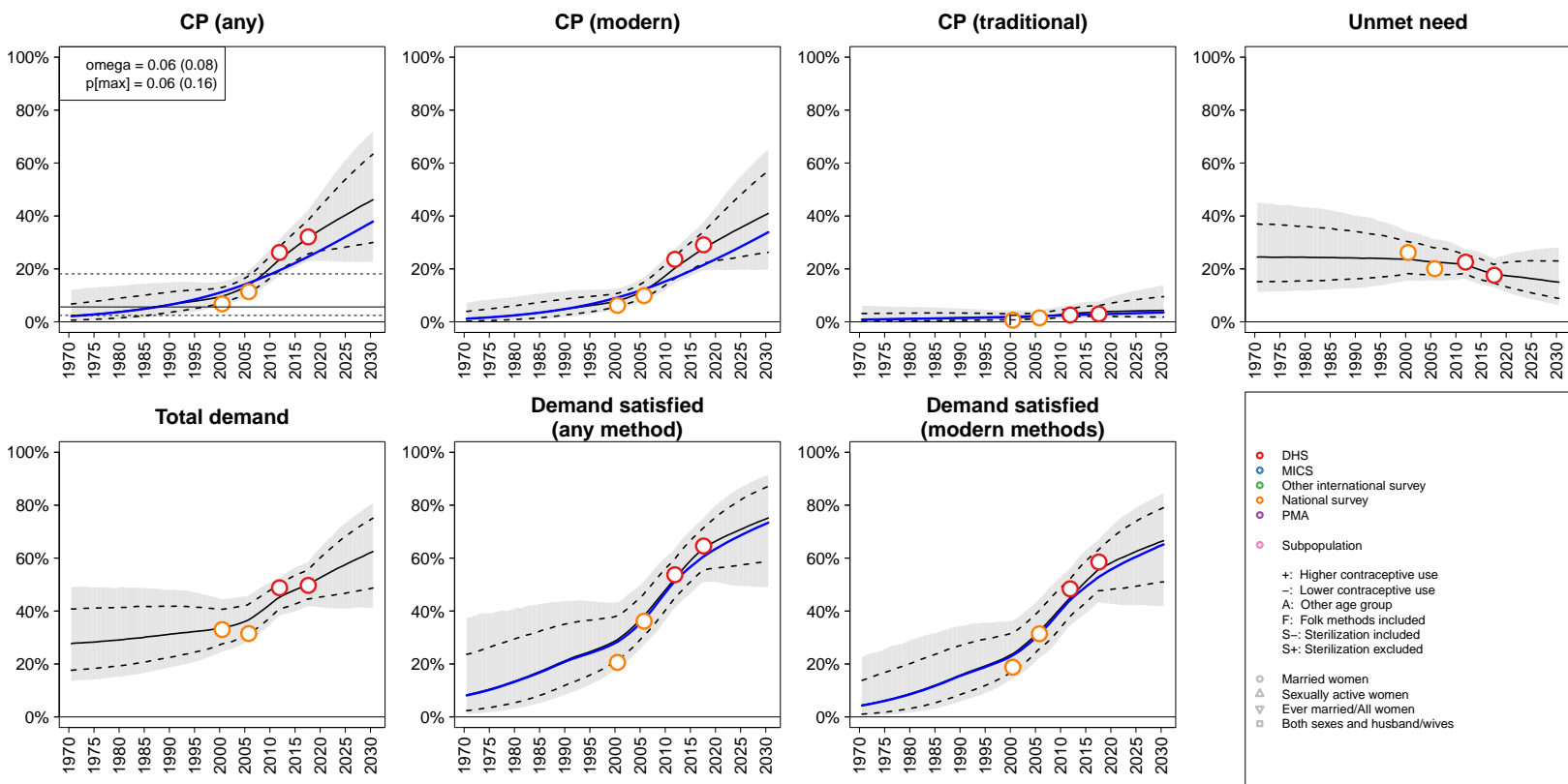
Kuwait (Western Asia) --- Married / In-Union



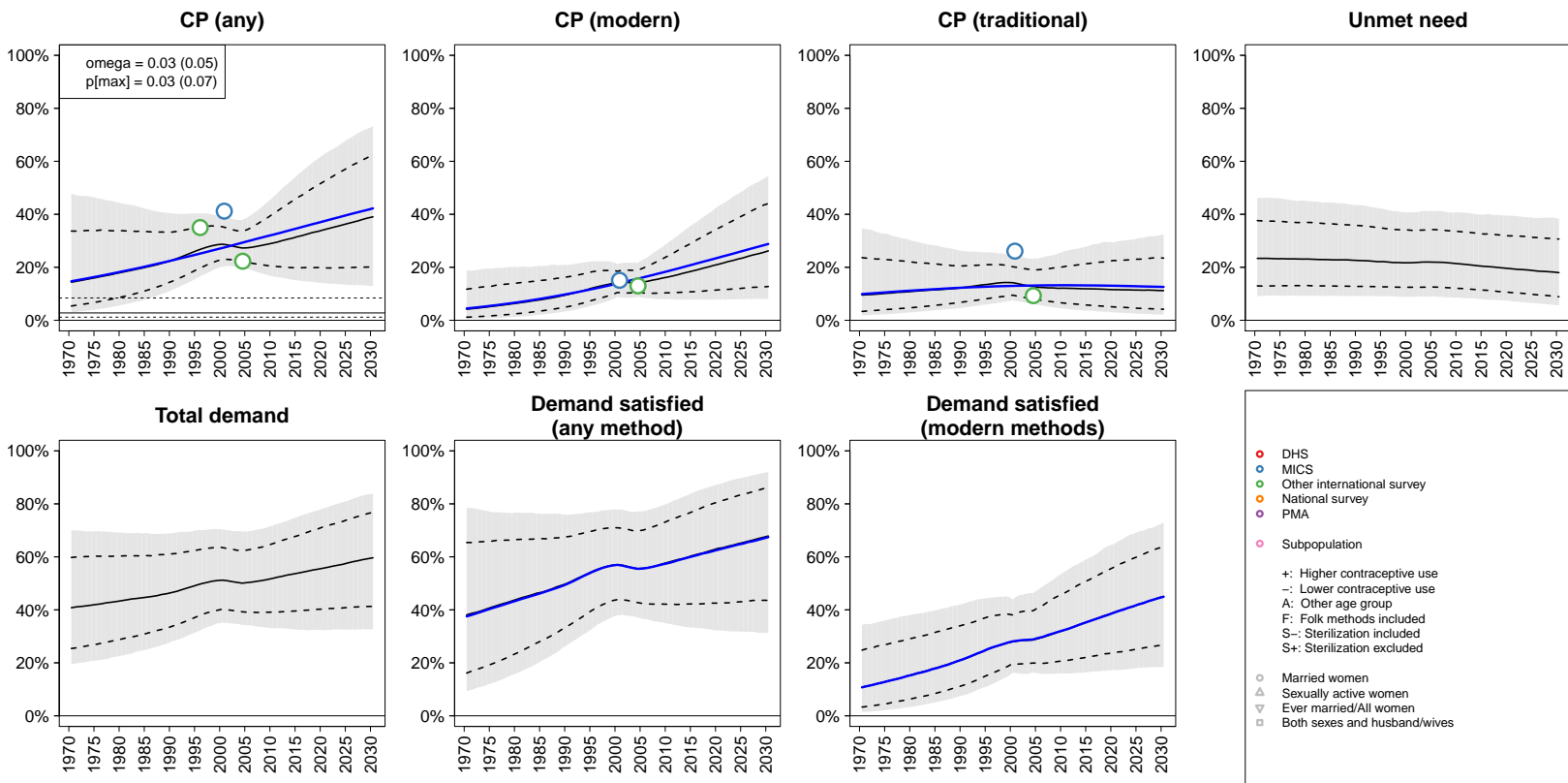
Kyrgyzstan (Central Asia) --- Married / In-Union



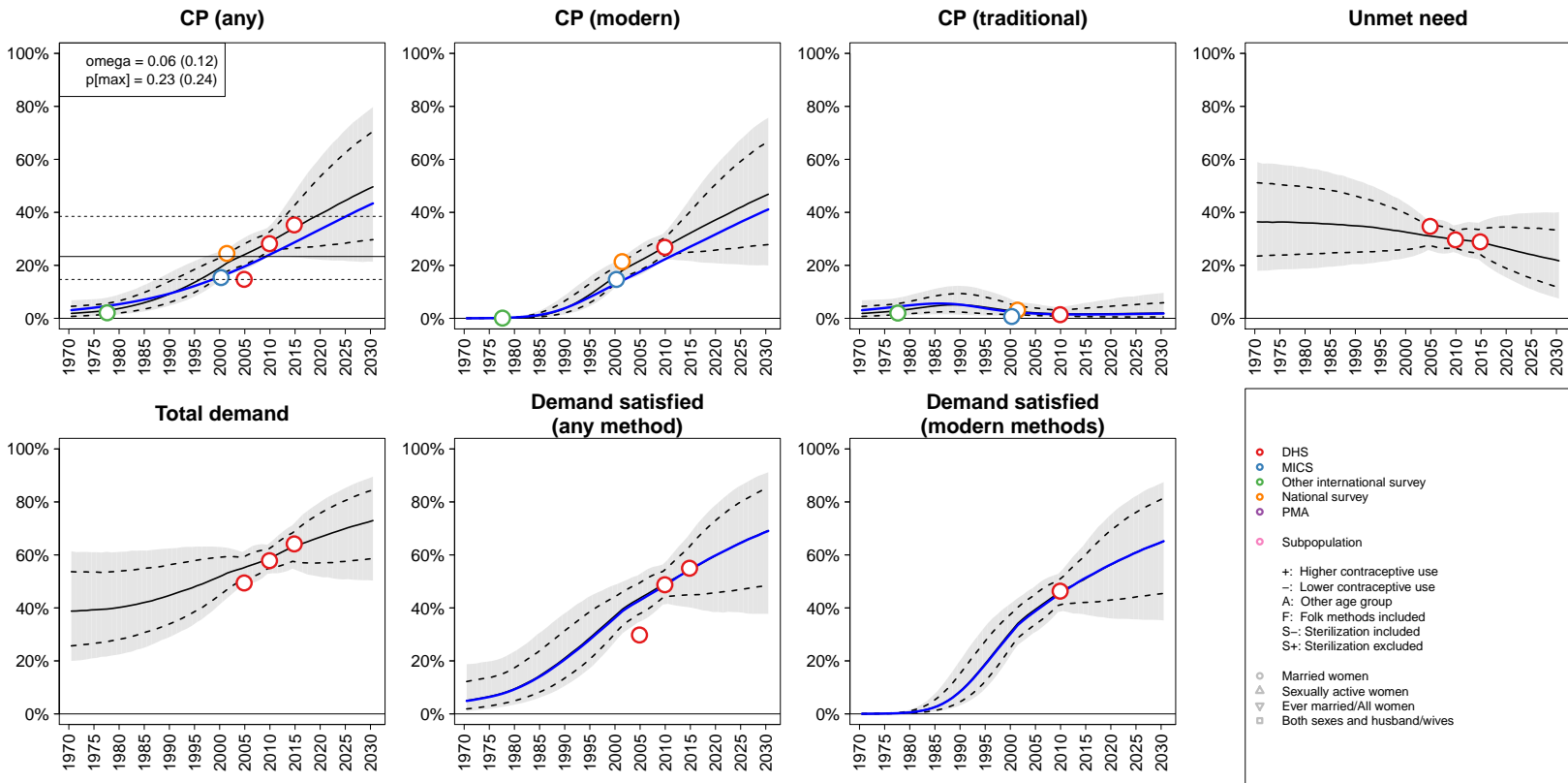
Lao People's Dem. Republic (South-eastern Asia) --- Married / In-Union



Lebanon (Western Asia) --- Married / In-Union

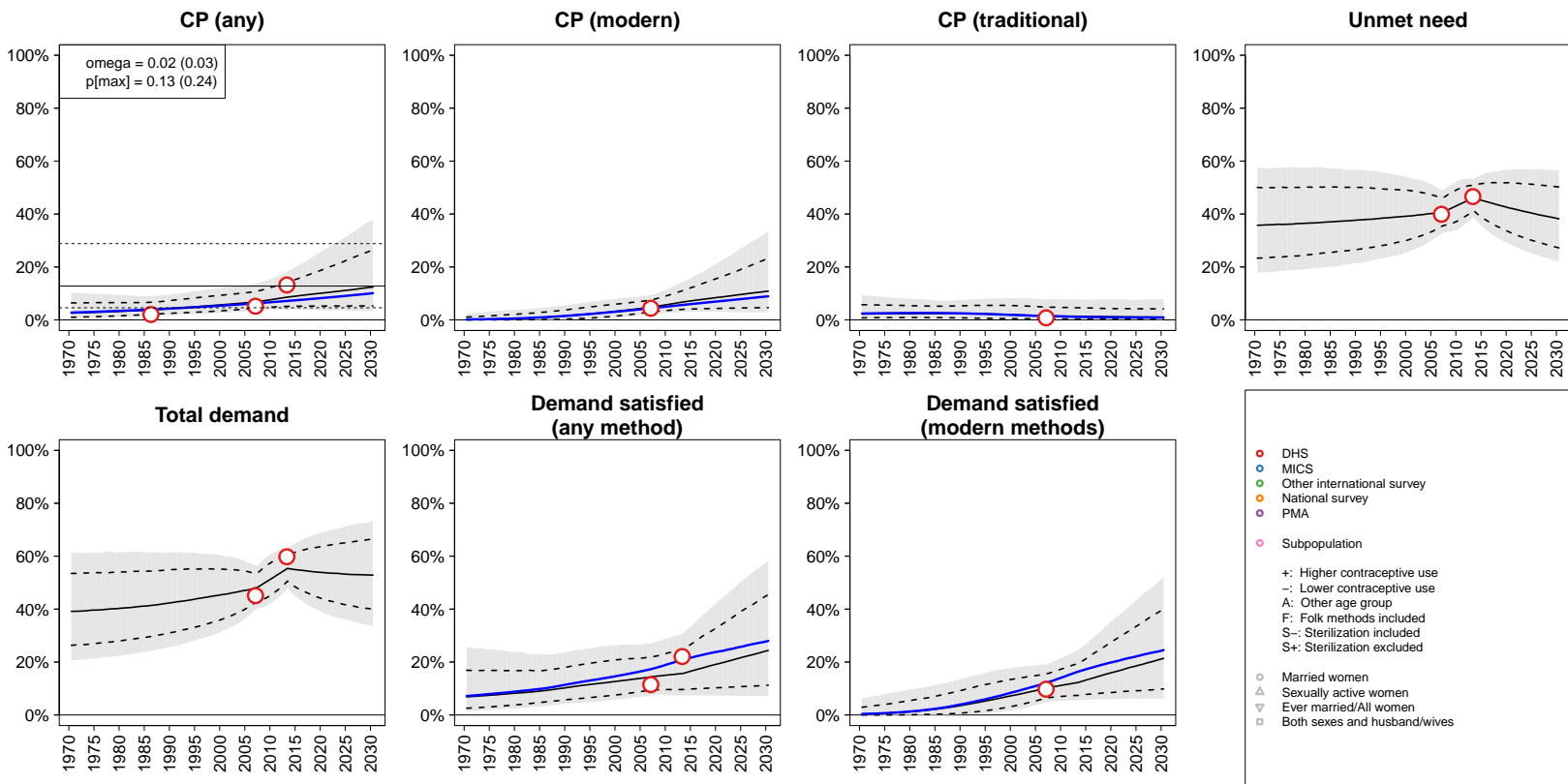


Lesotho (Southern Africa) --- Married / In-Union

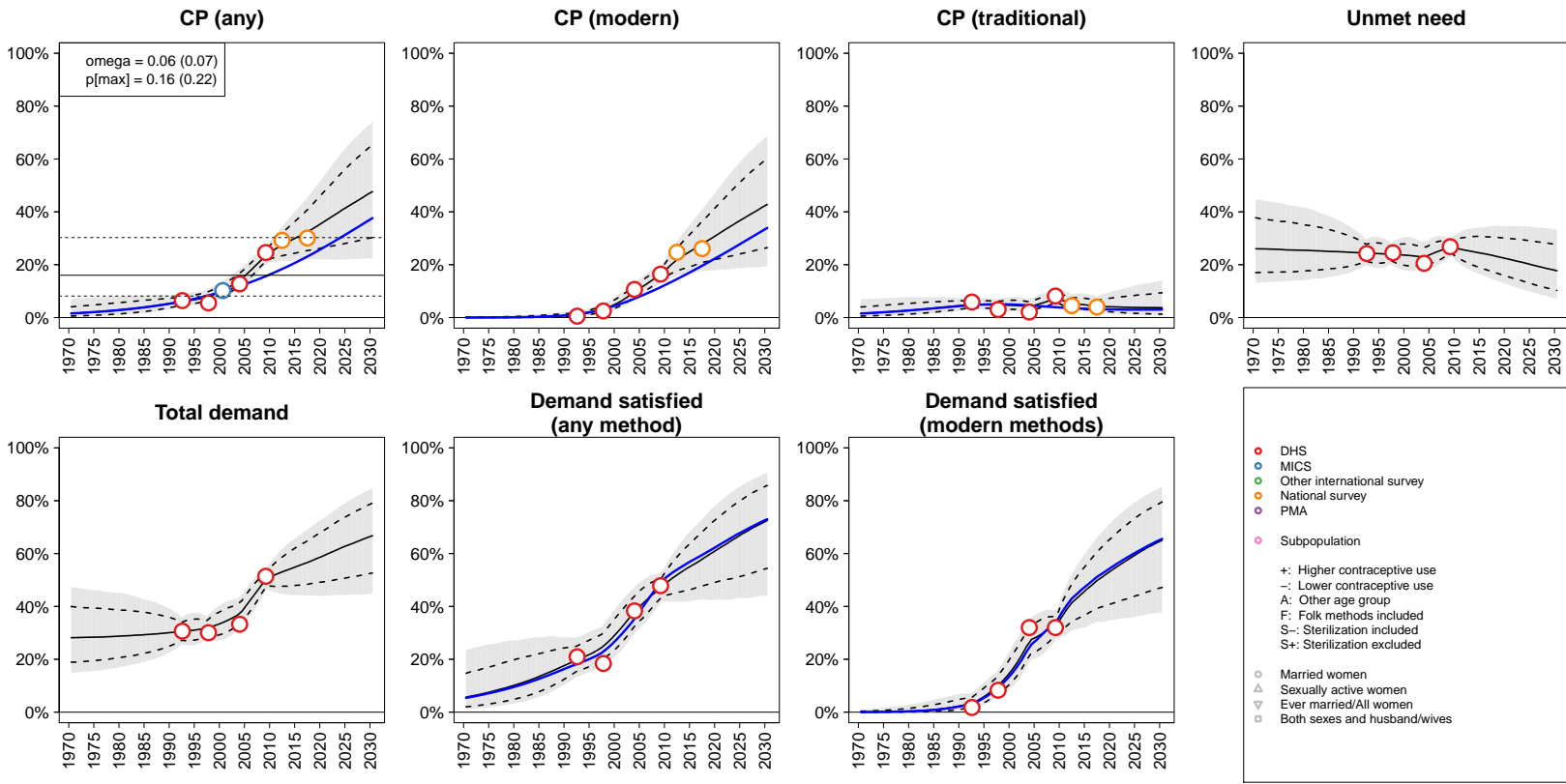




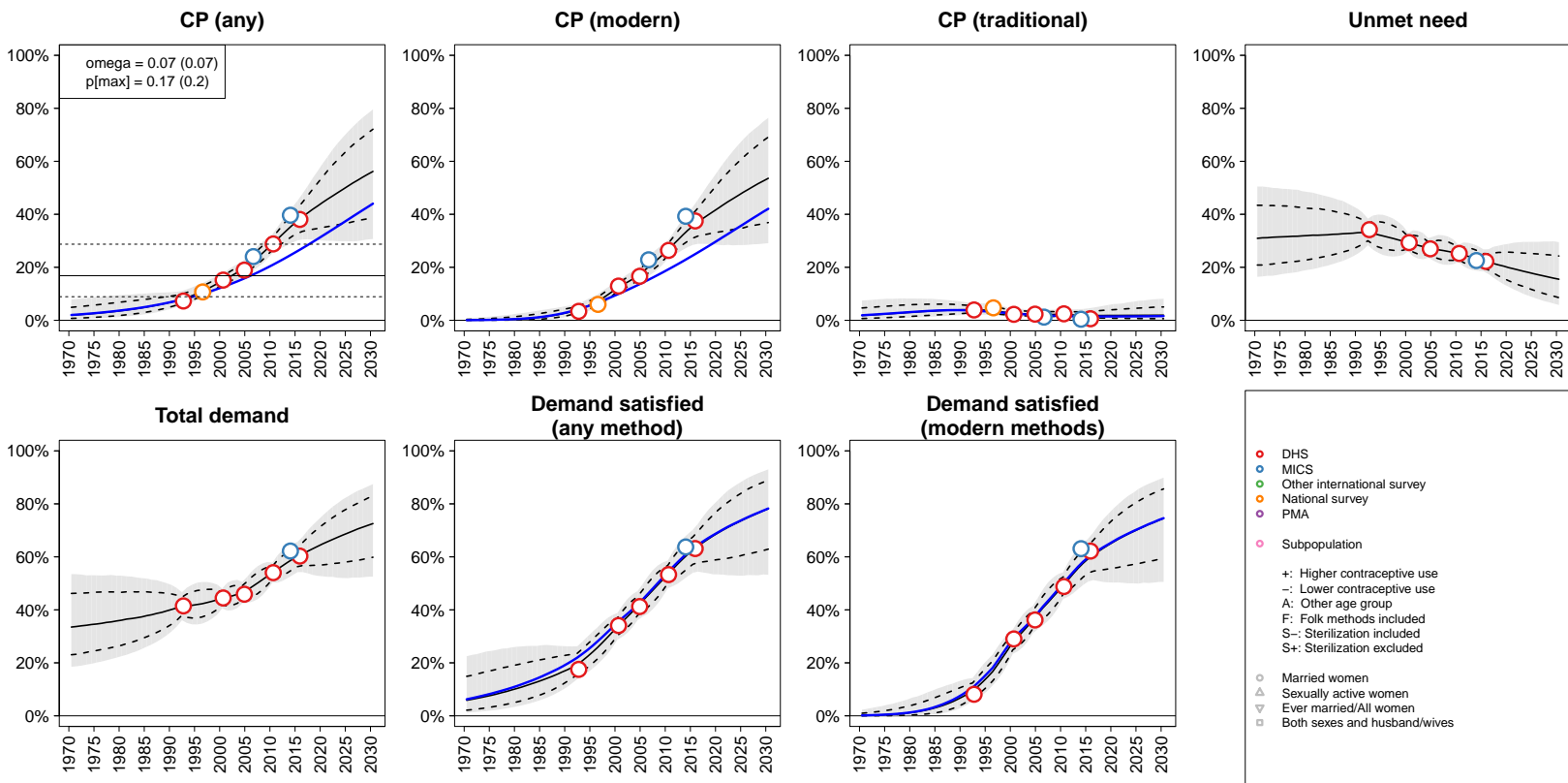
Liberia (Western Africa) --- Married / In-Union



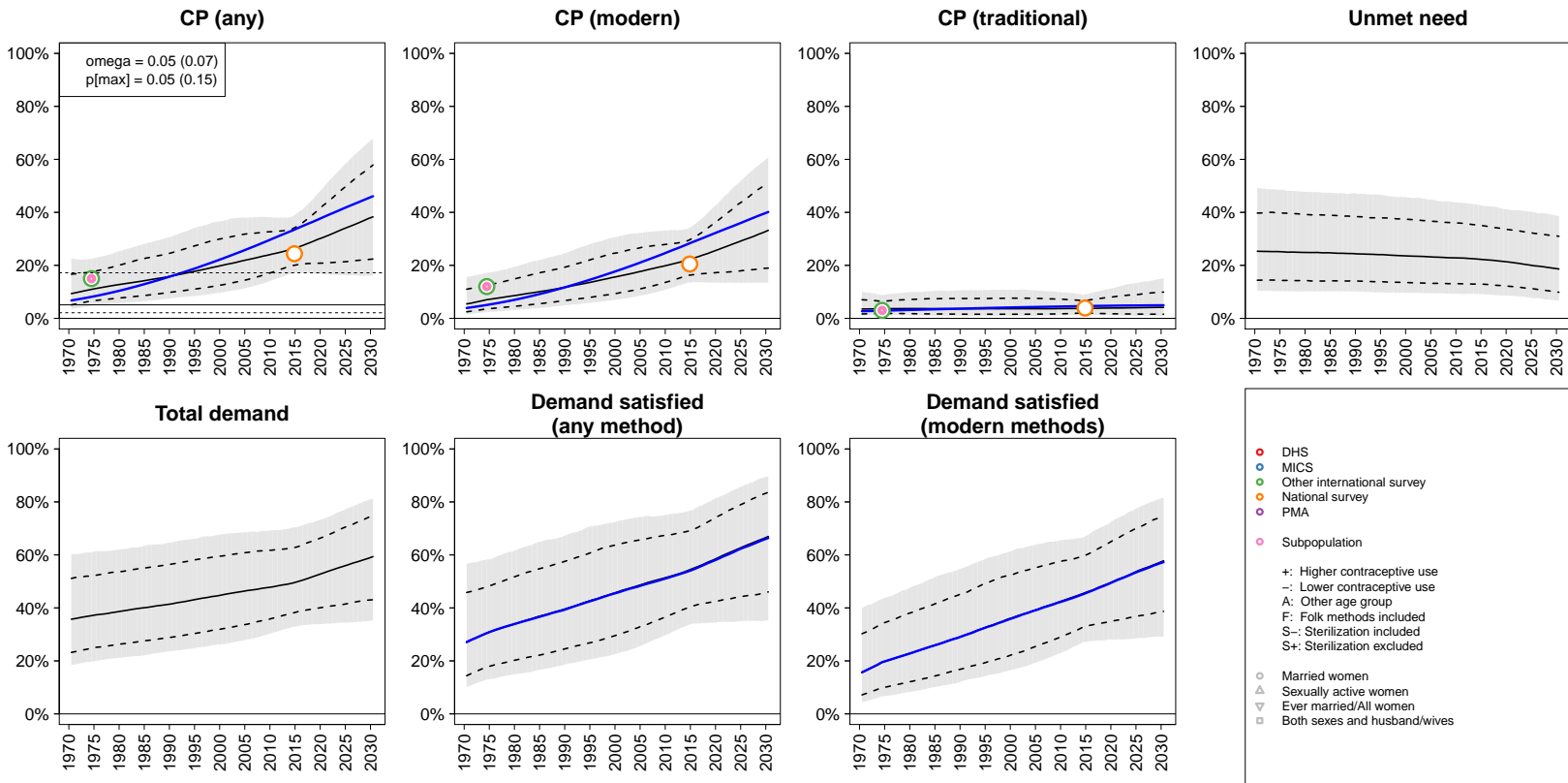
Madagascar (Eastern Africa) --- Married / In-Union



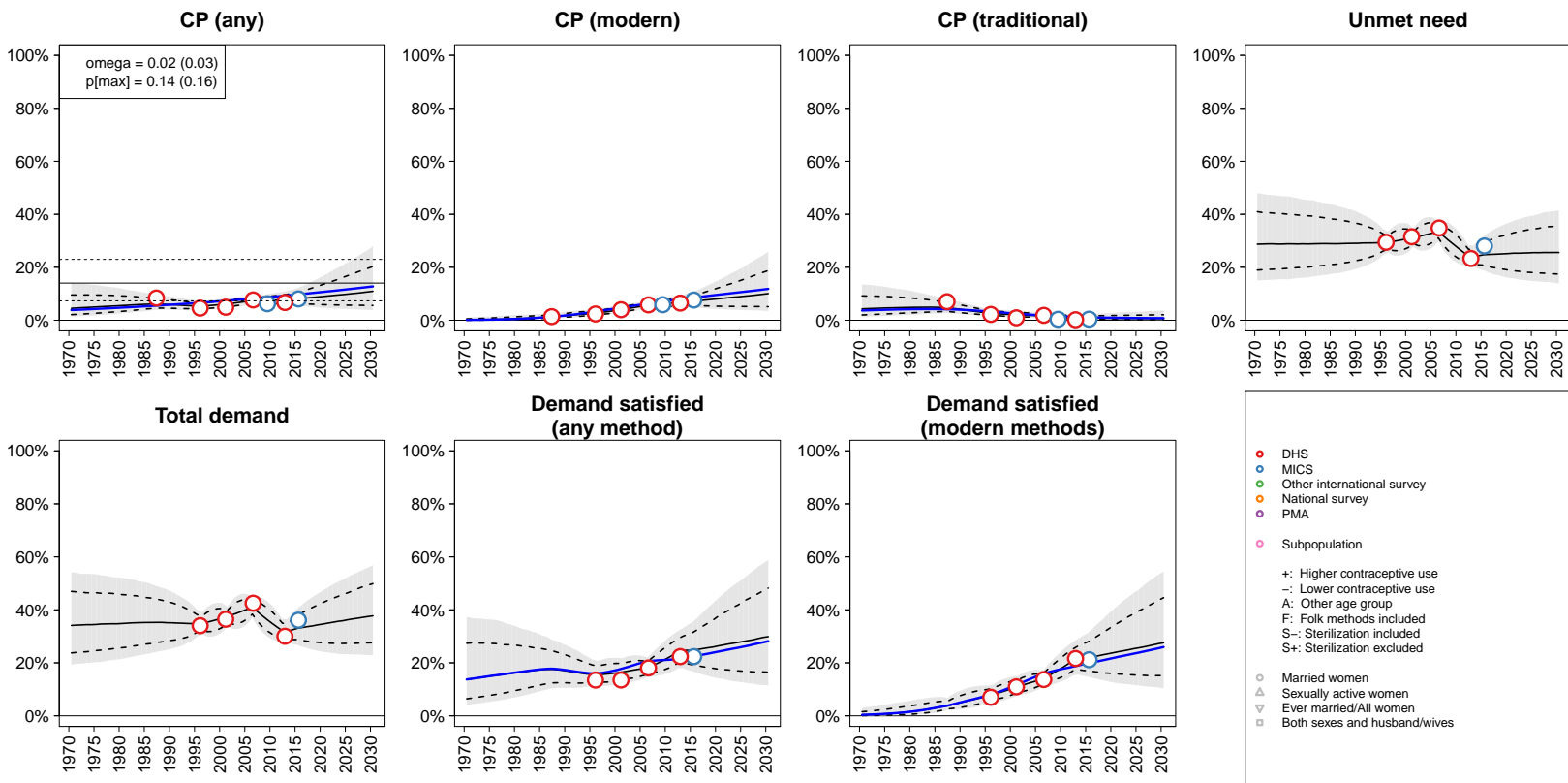
Malawi (Eastern Africa) --- Married / In-Union



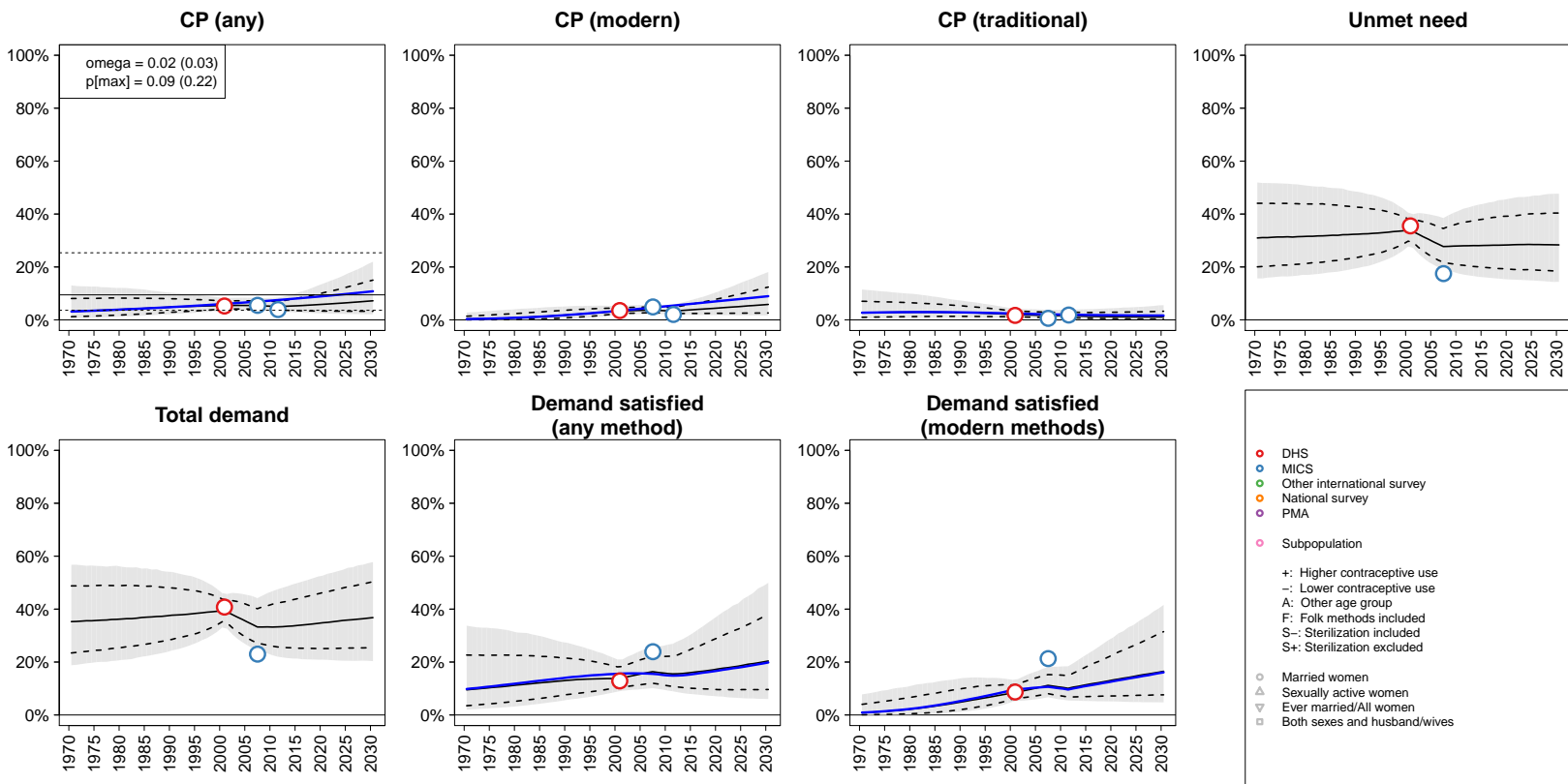
Malaysia (South-eastern Asia) --- Married / In-Union



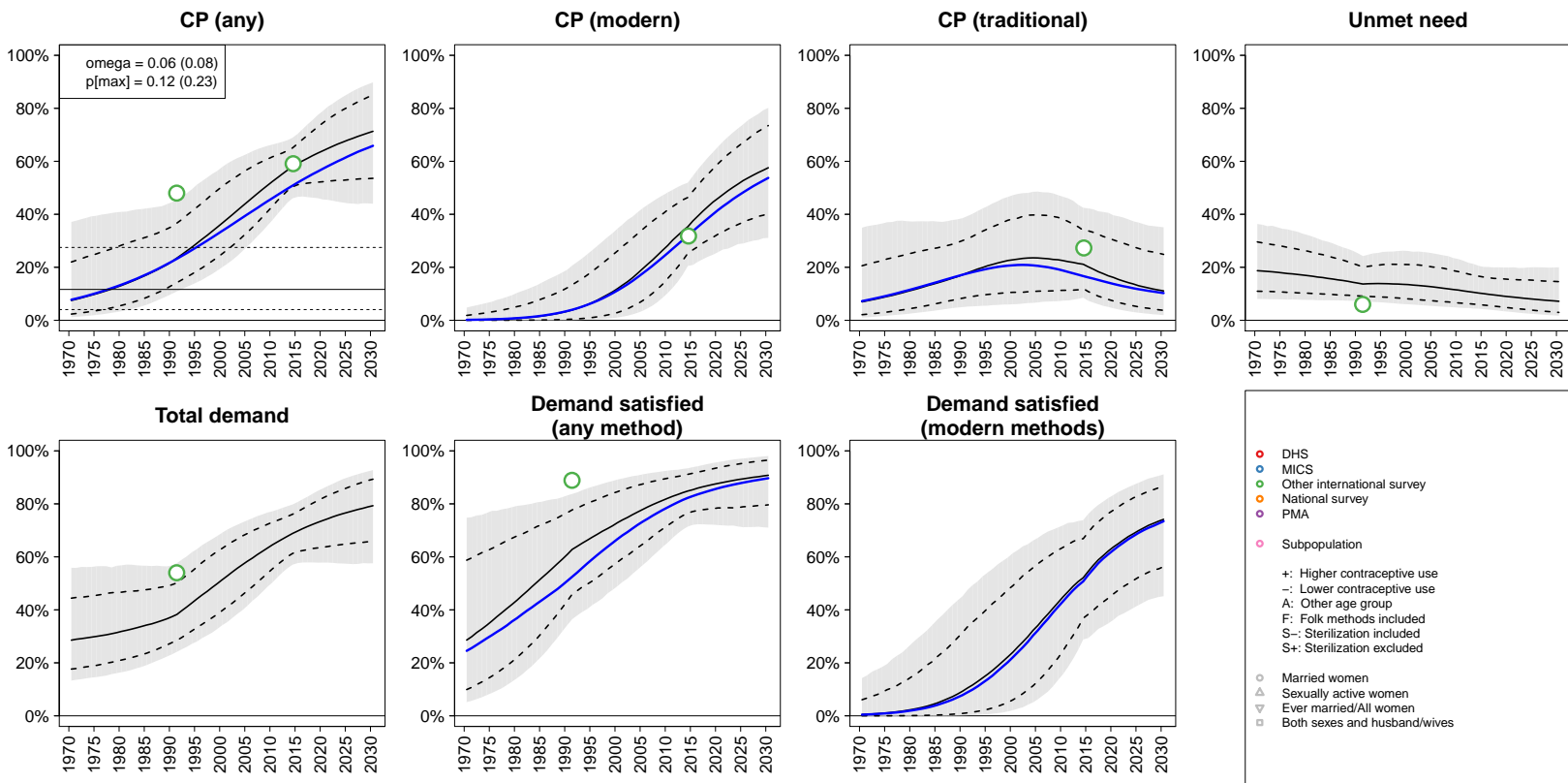
Mali (Western Africa) --- Married / In-Union



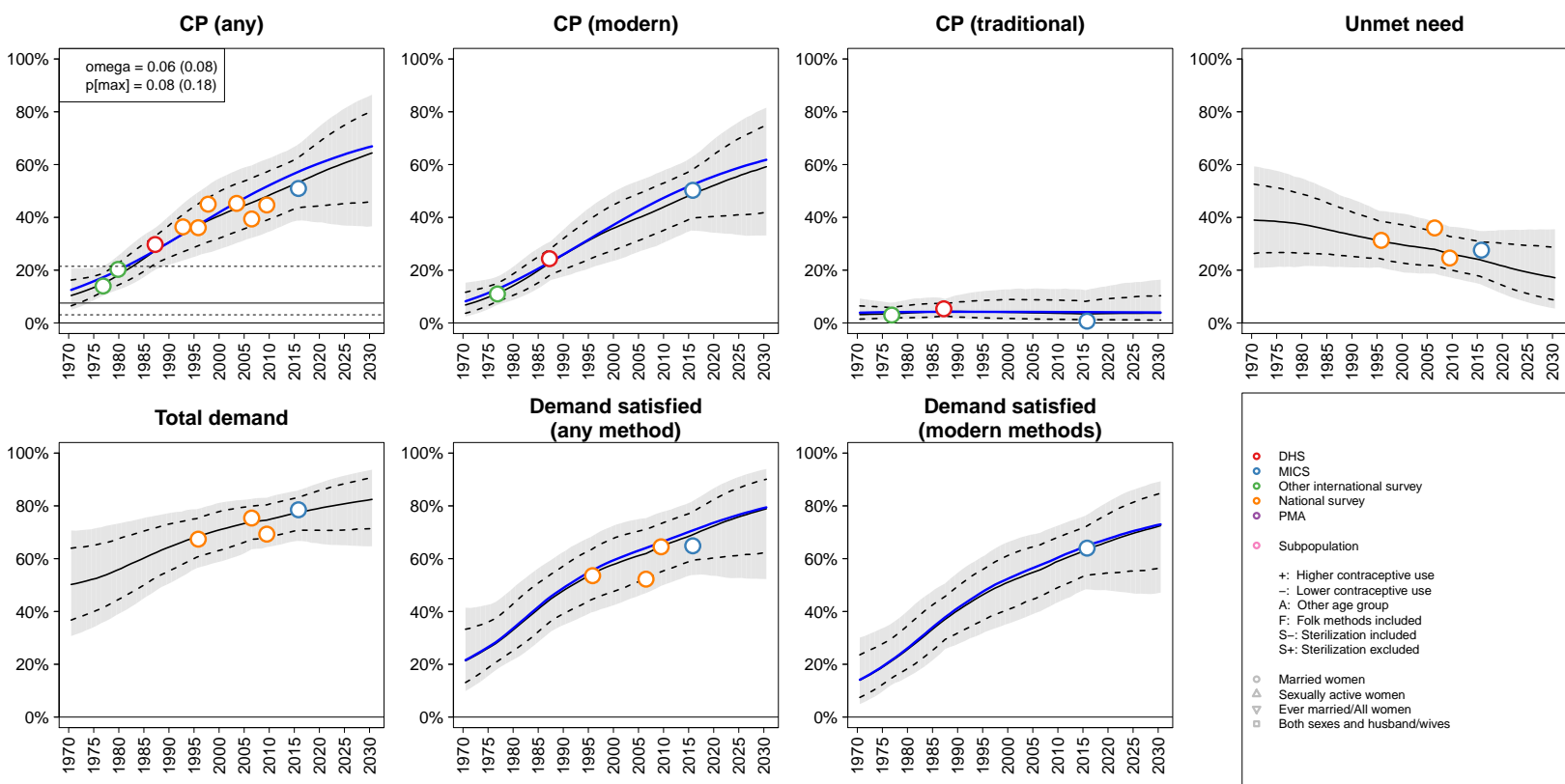
Mauritania (Western Africa) --- Married / In-Union



Mauritius (Eastern Africa) --- Married / In-Union

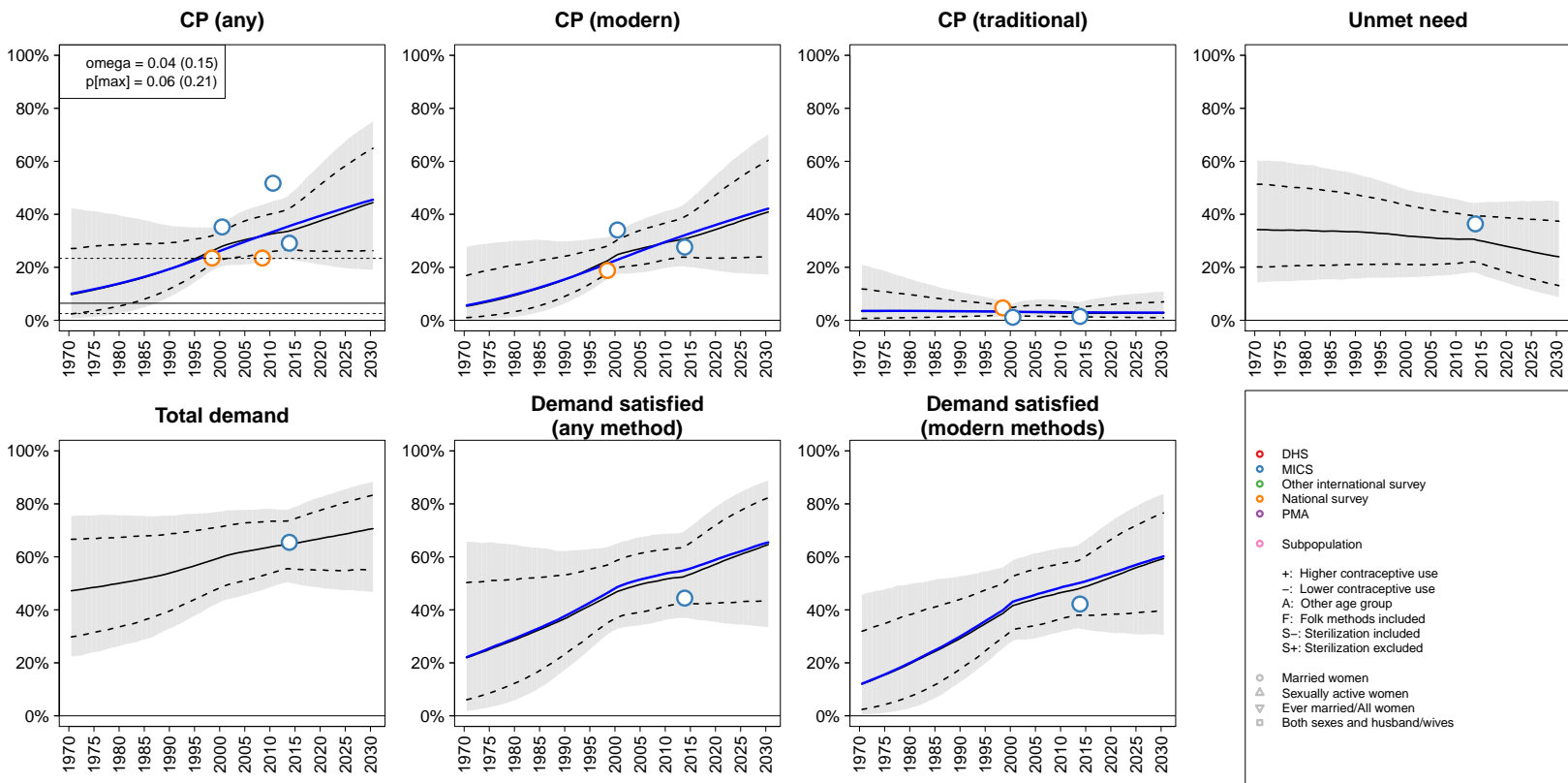


Mexico (Central America) --- Married / In-Union

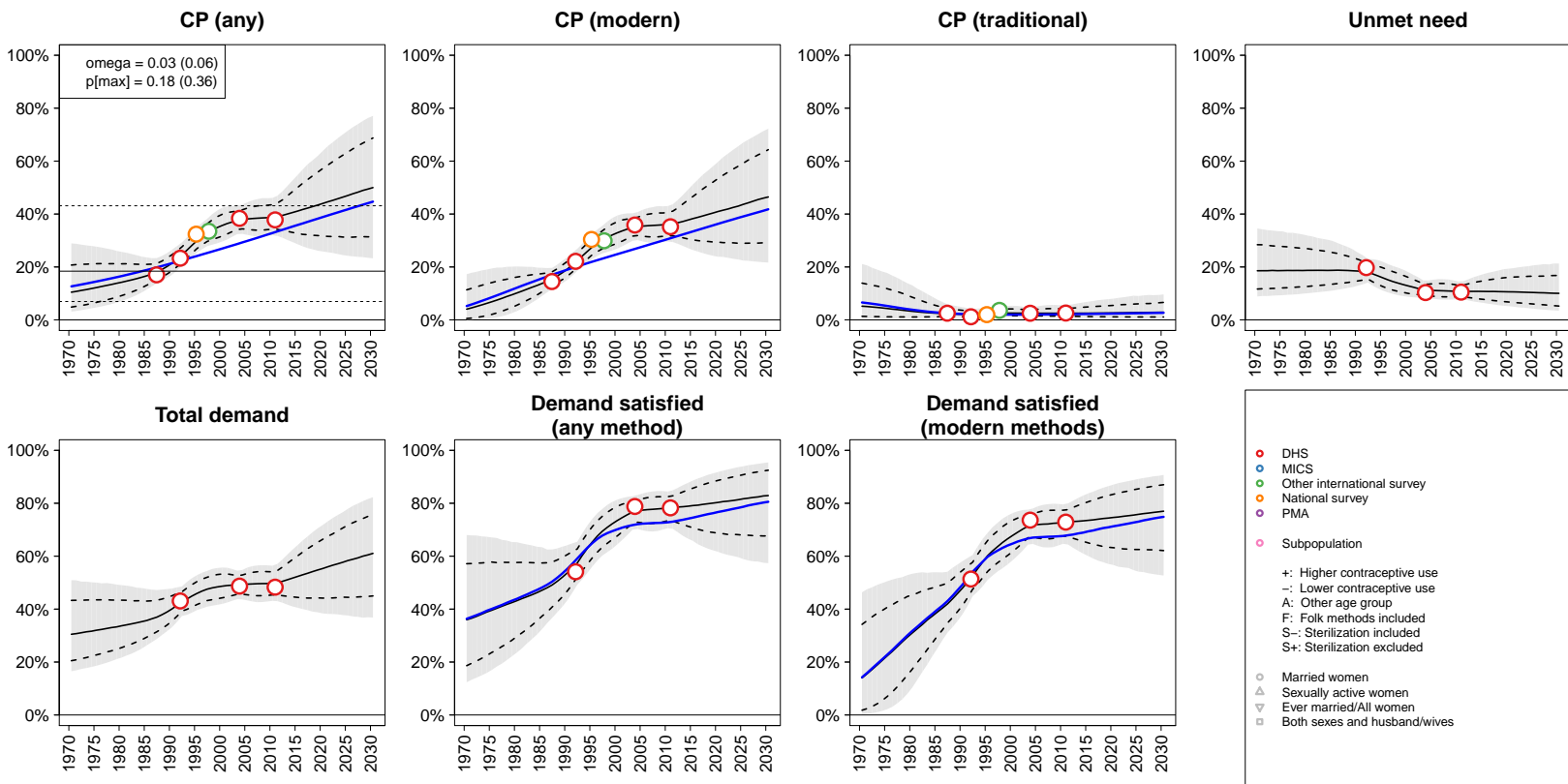




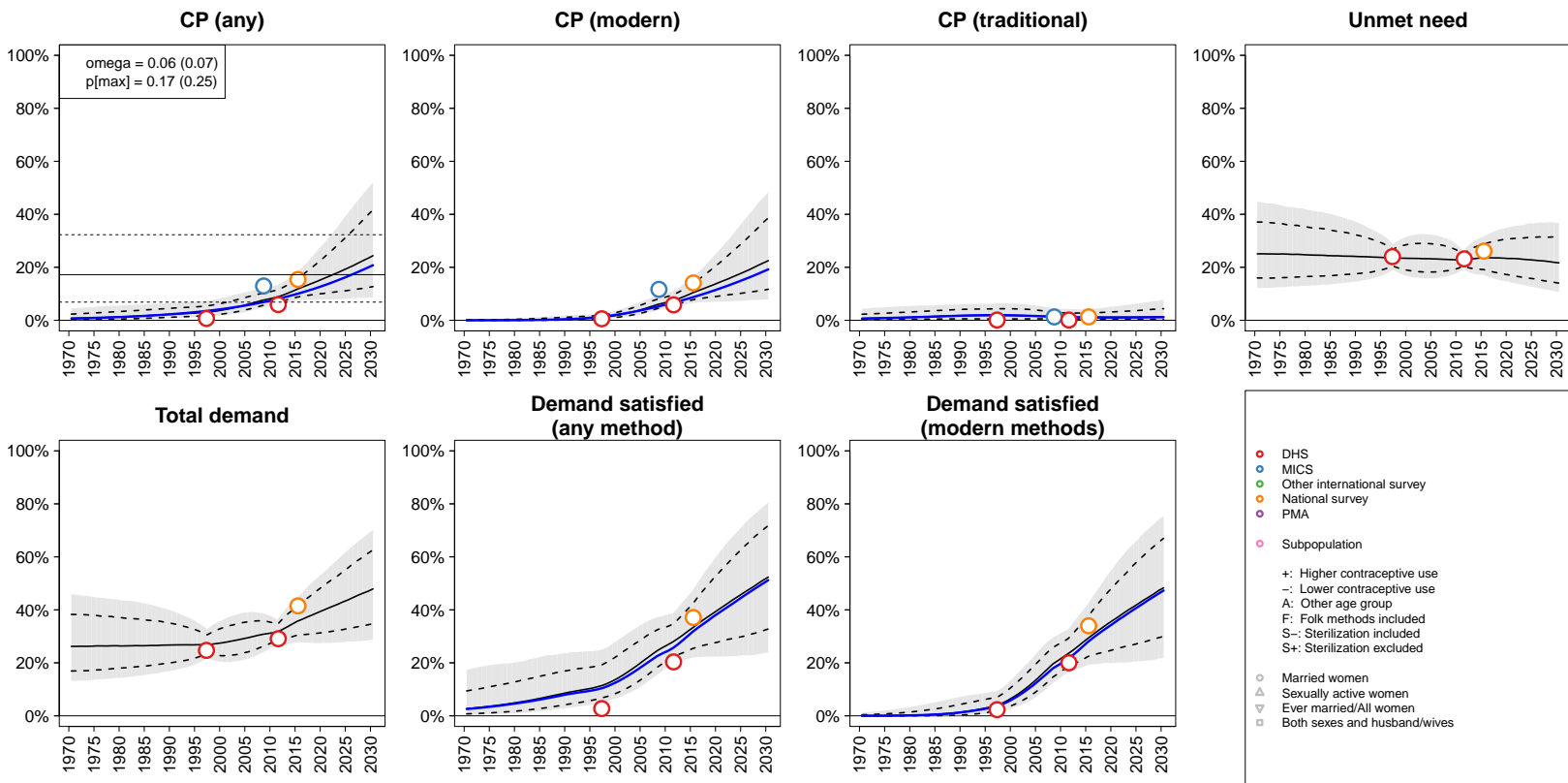
Mongolia (Eastern Asia) --- Married / In-Union



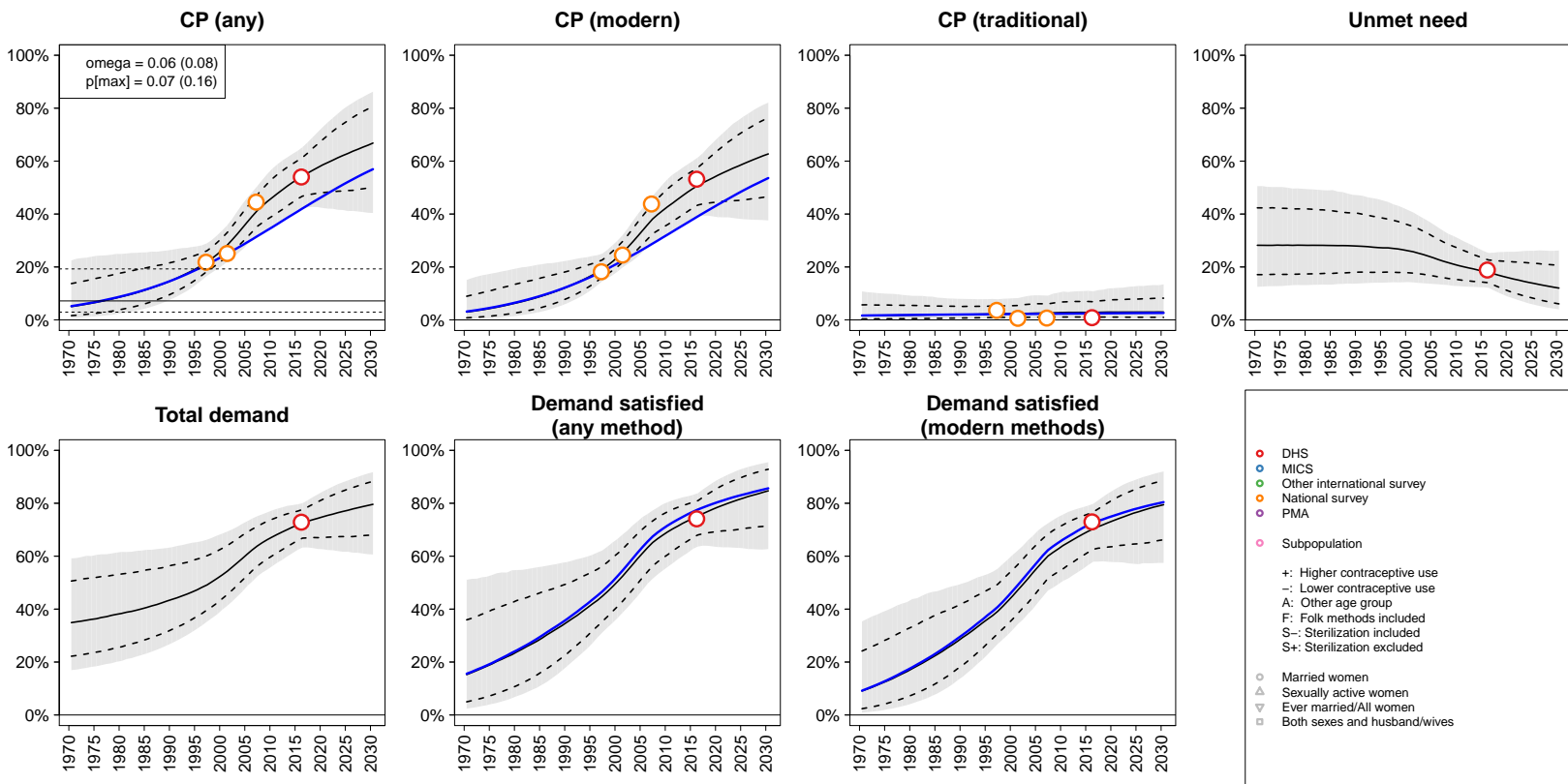
Morocco (Northern Africa) --- Married / In-Union



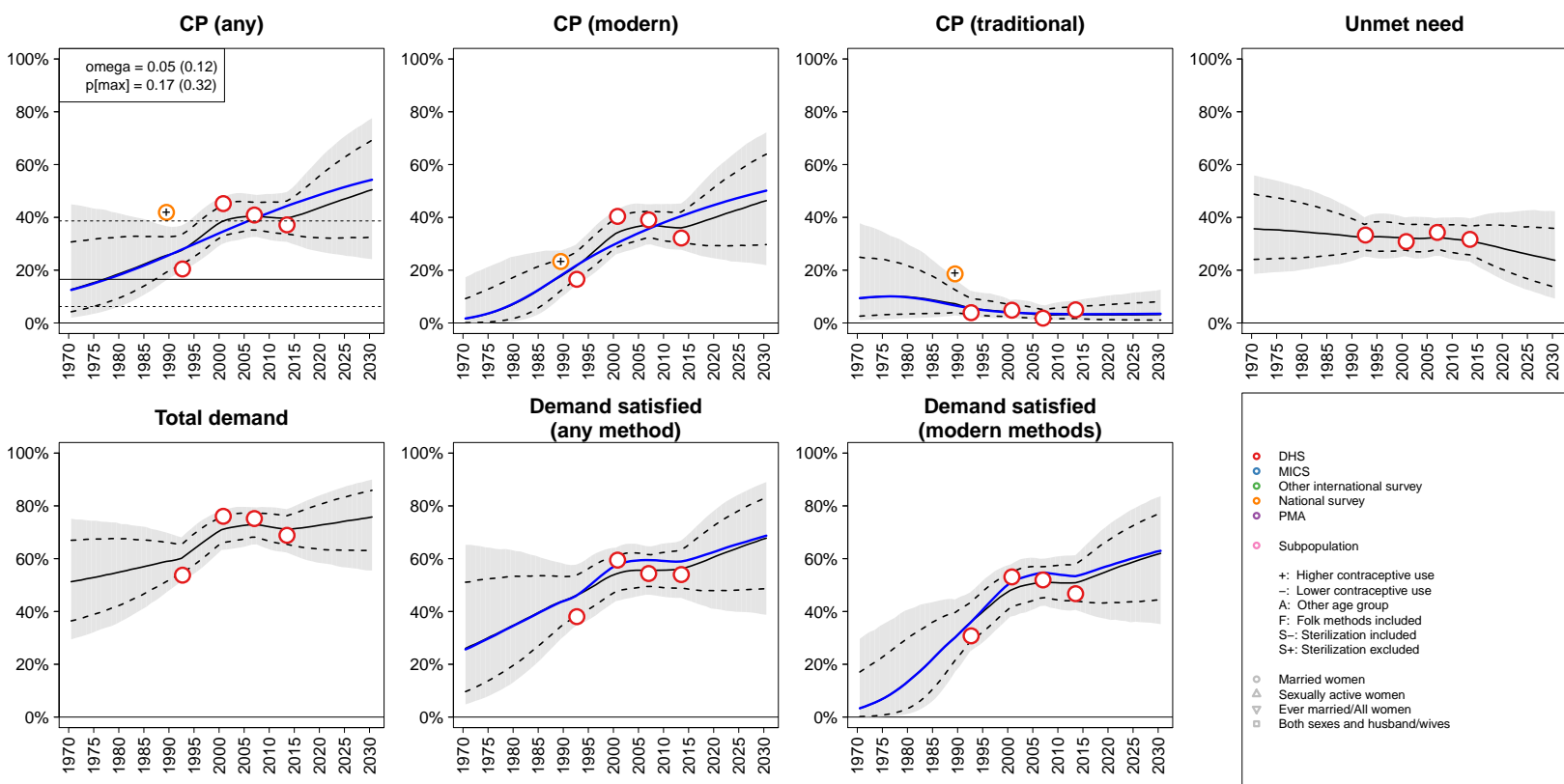
Mozambique (Eastern Africa) --- Married / In-Union



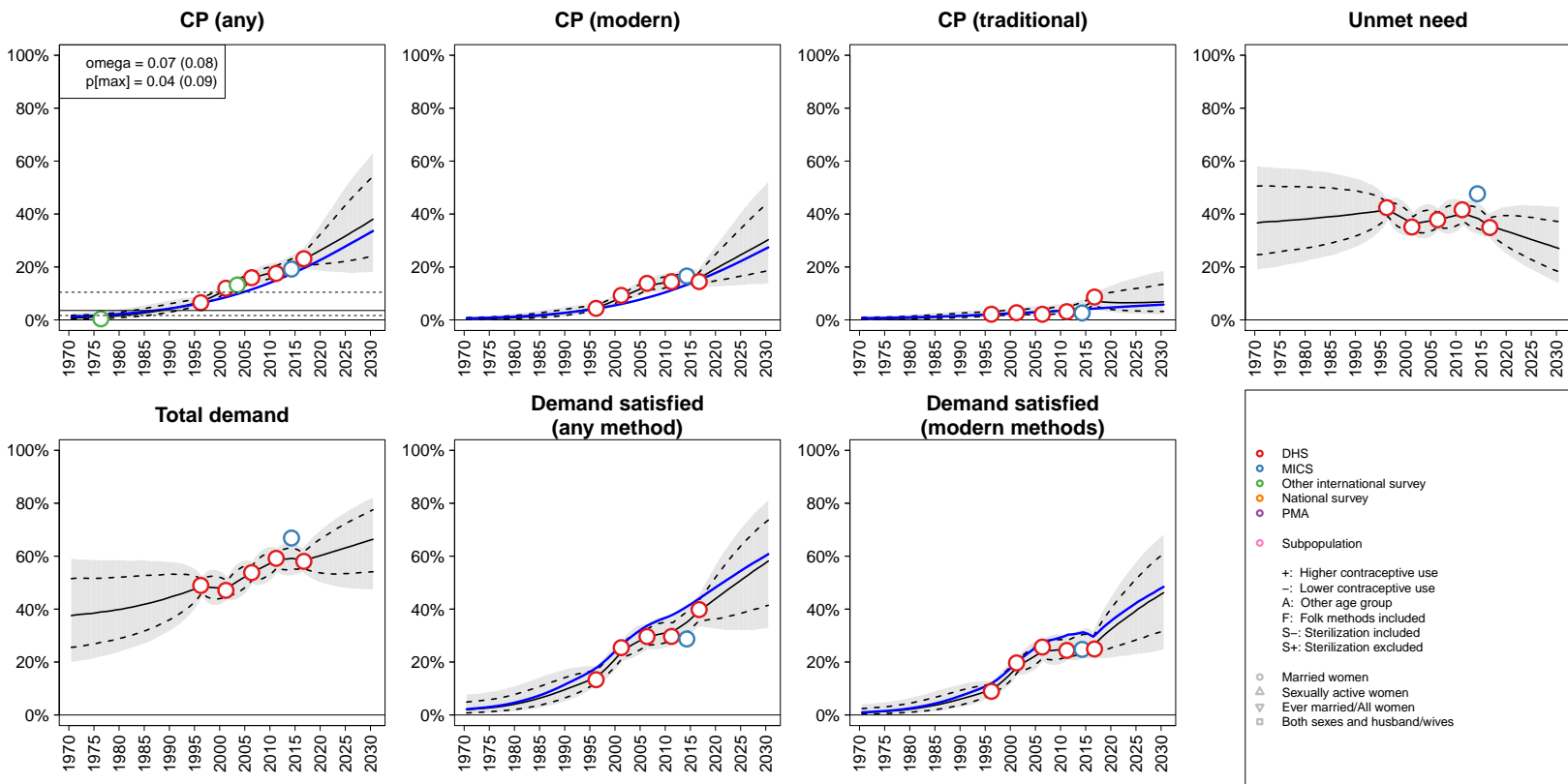
Myanmar (South-eastern Asia) --- Married / In-Union



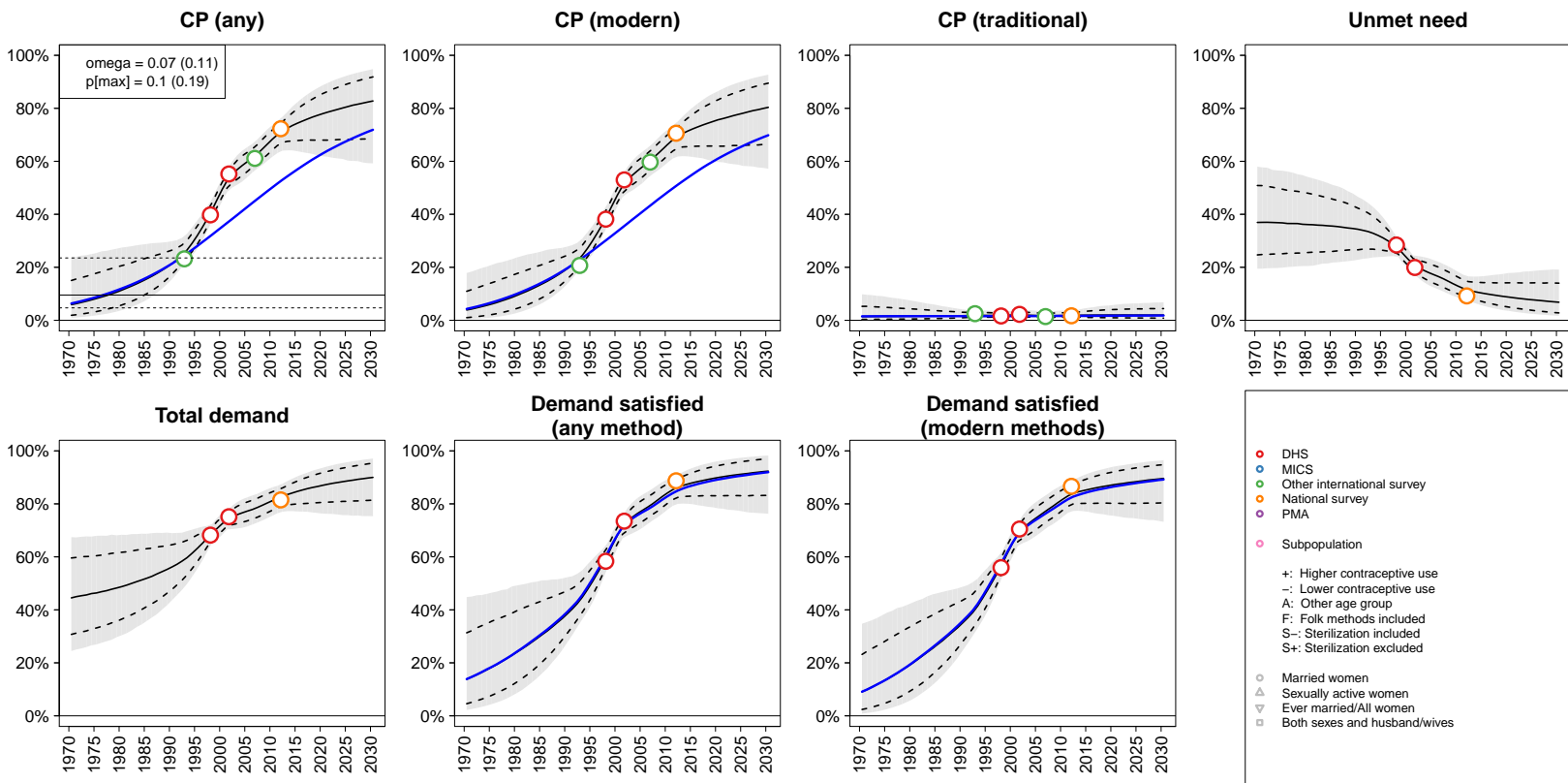
Namibia (Southern Africa) --- Married / In-Union



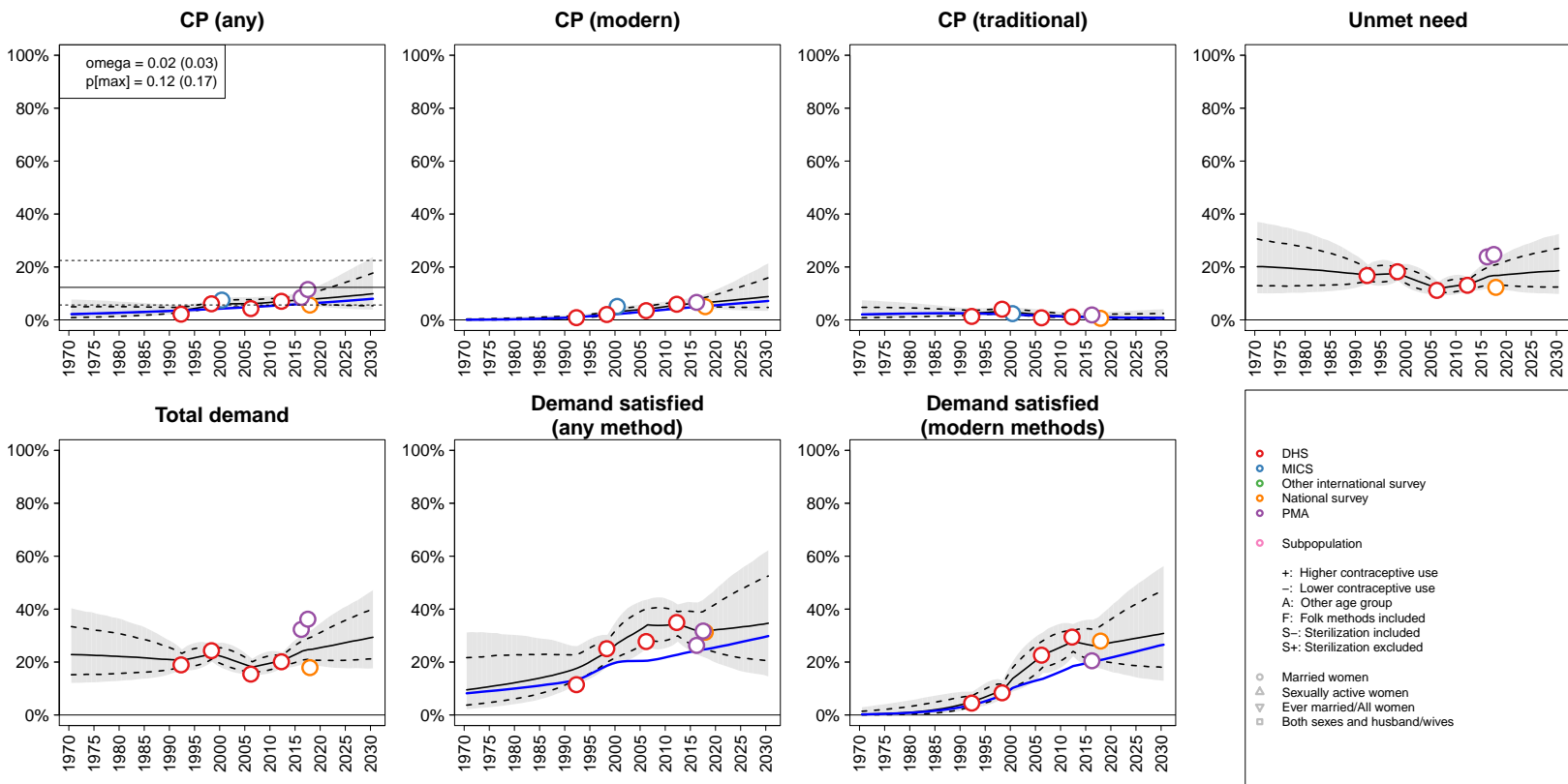
Nepal (Southern Asia) --- Married / In-Union



Nicaragua (Central America) --- Married / In-Union

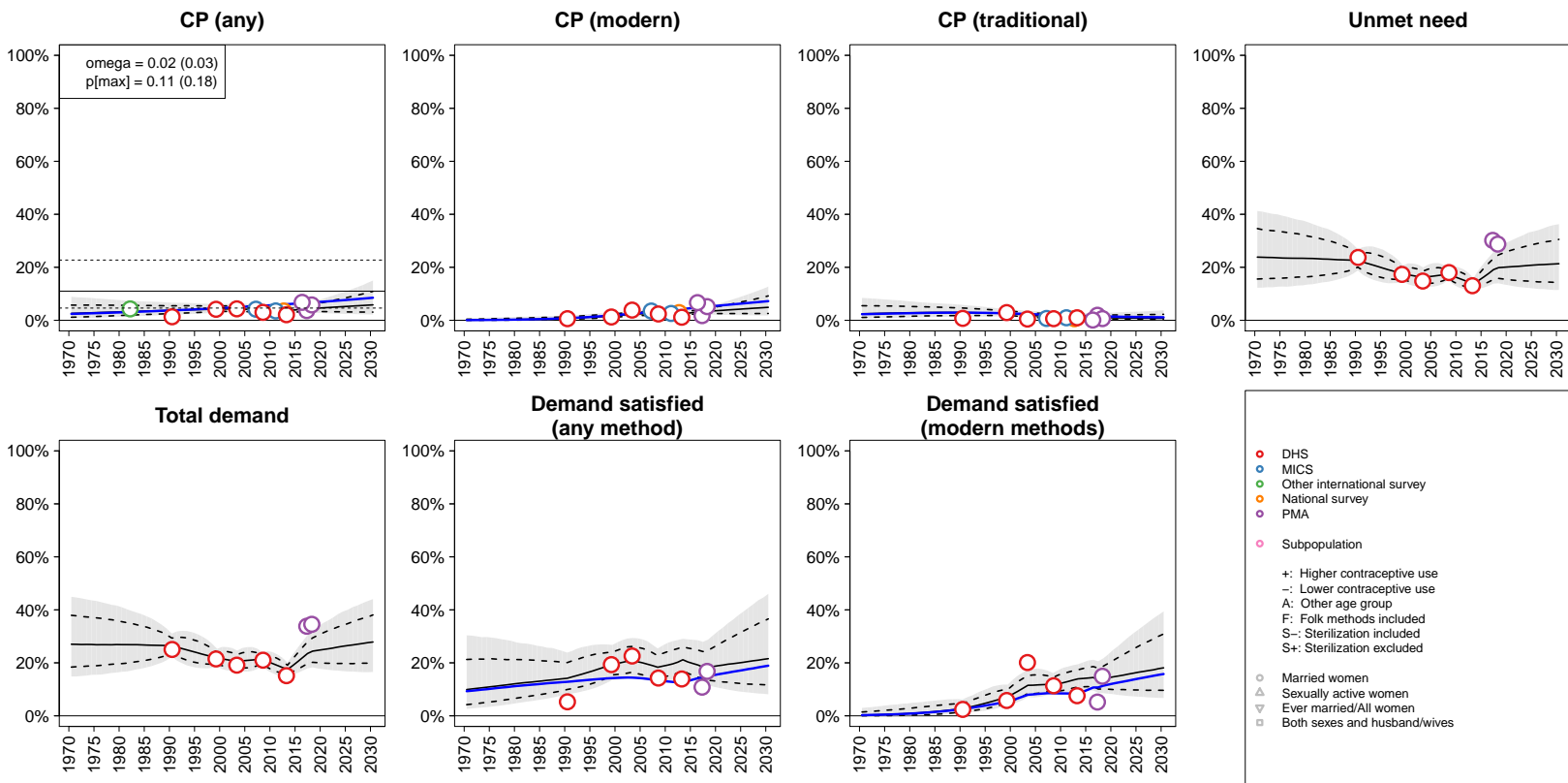


Niger (Western Africa) --- Married / In-Union

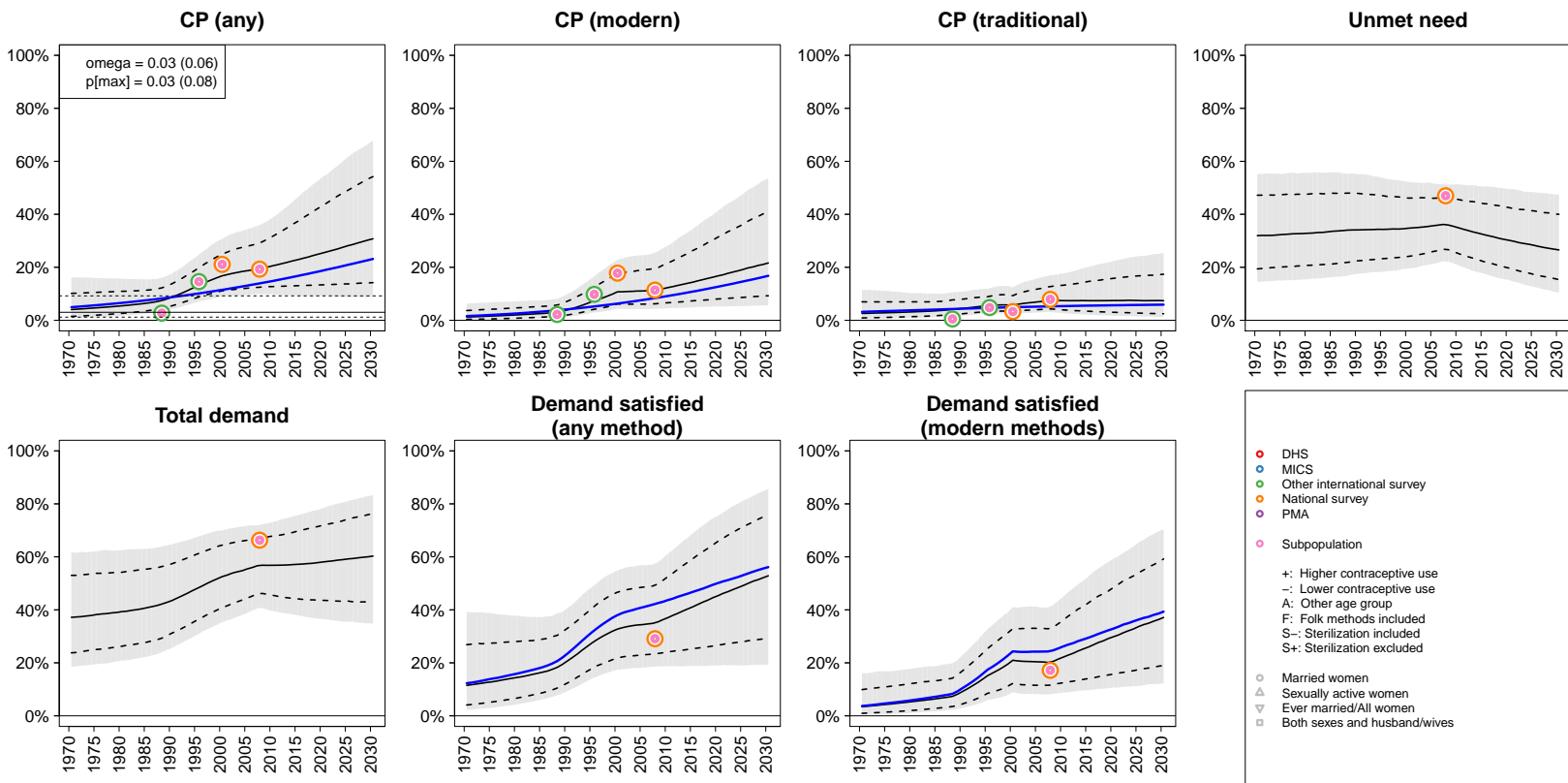




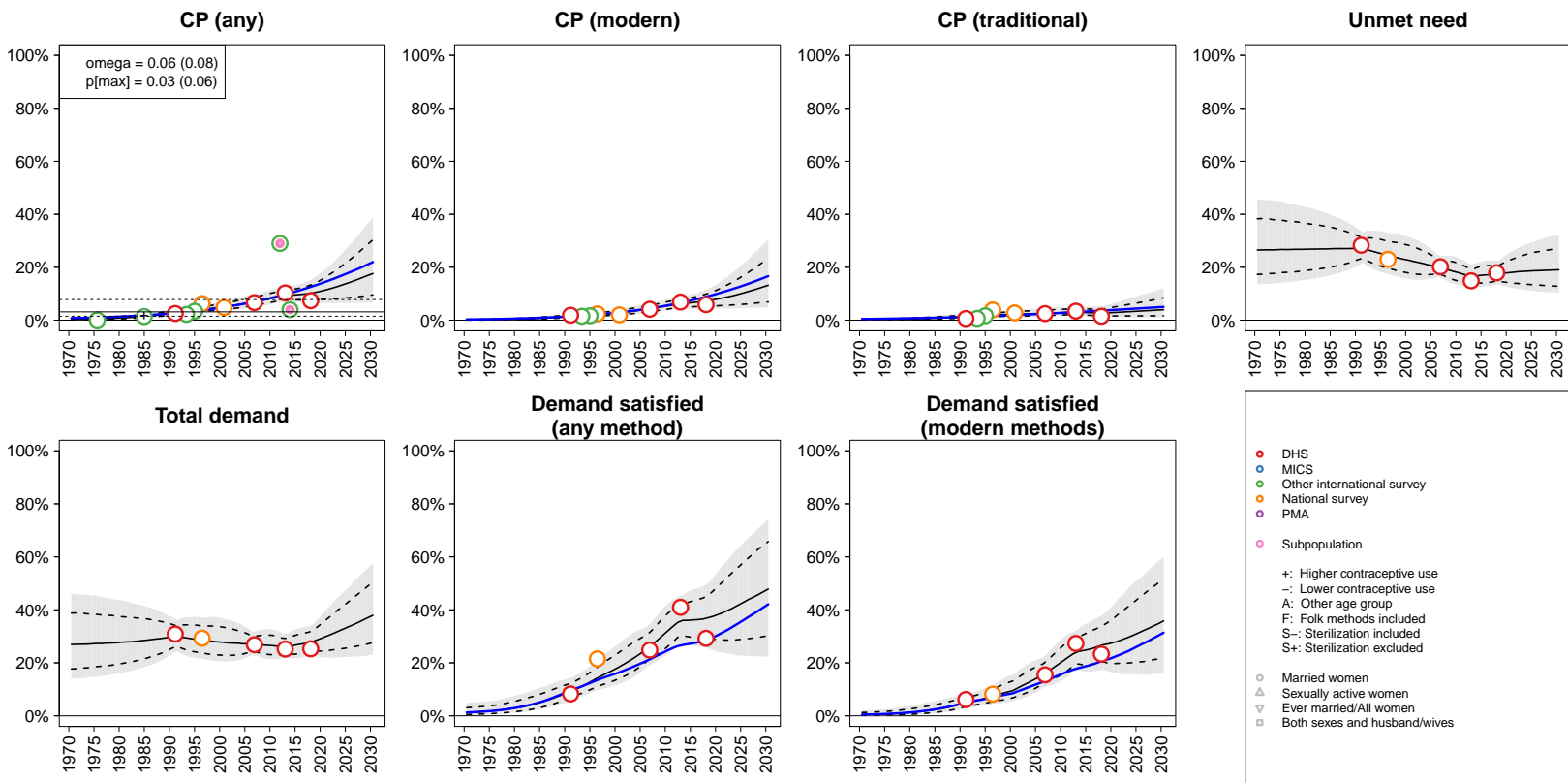
Nigeria (Western Africa) --- Married / In-Union



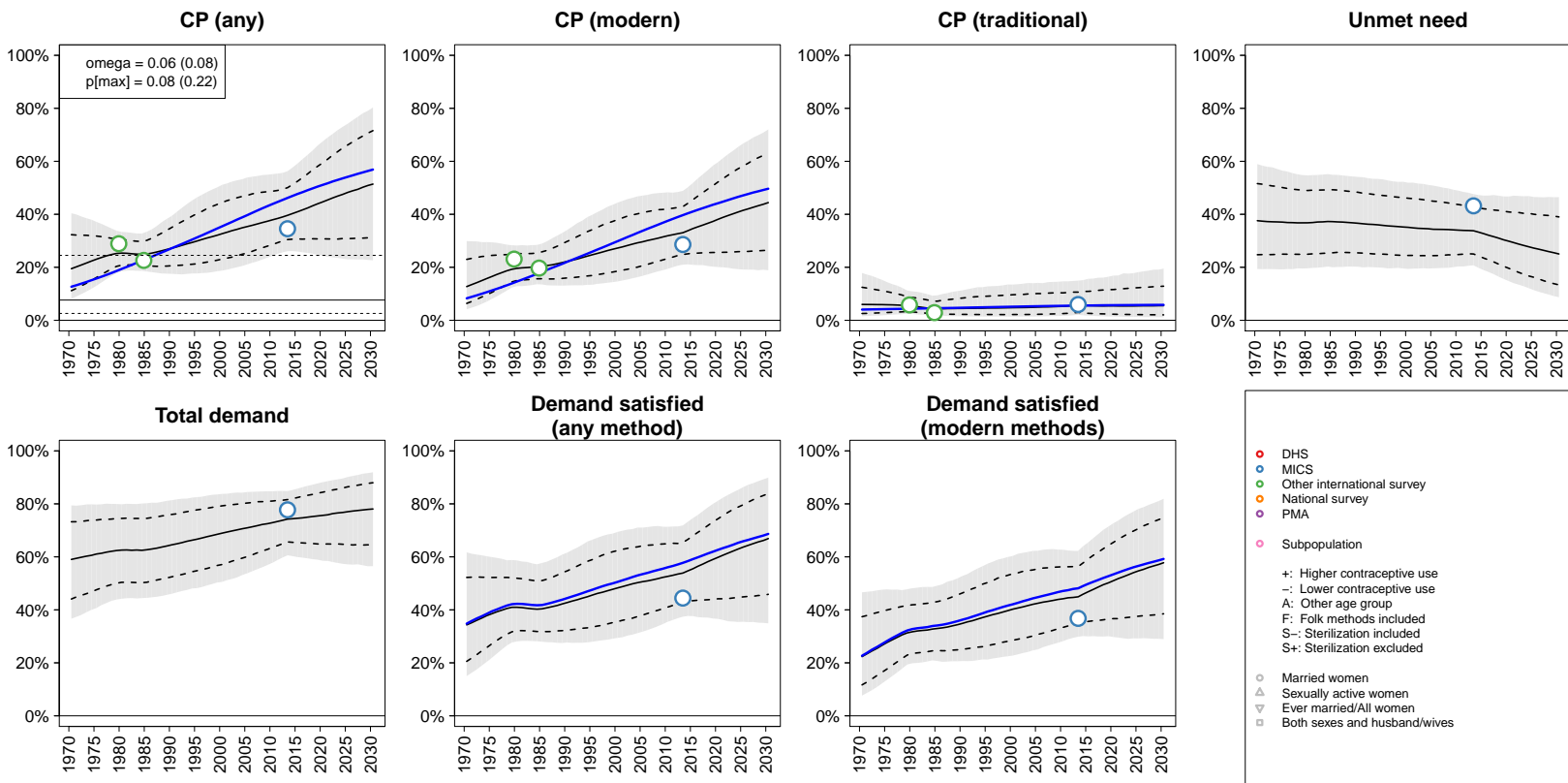
Oman (Western Asia) --- Married / In-Union



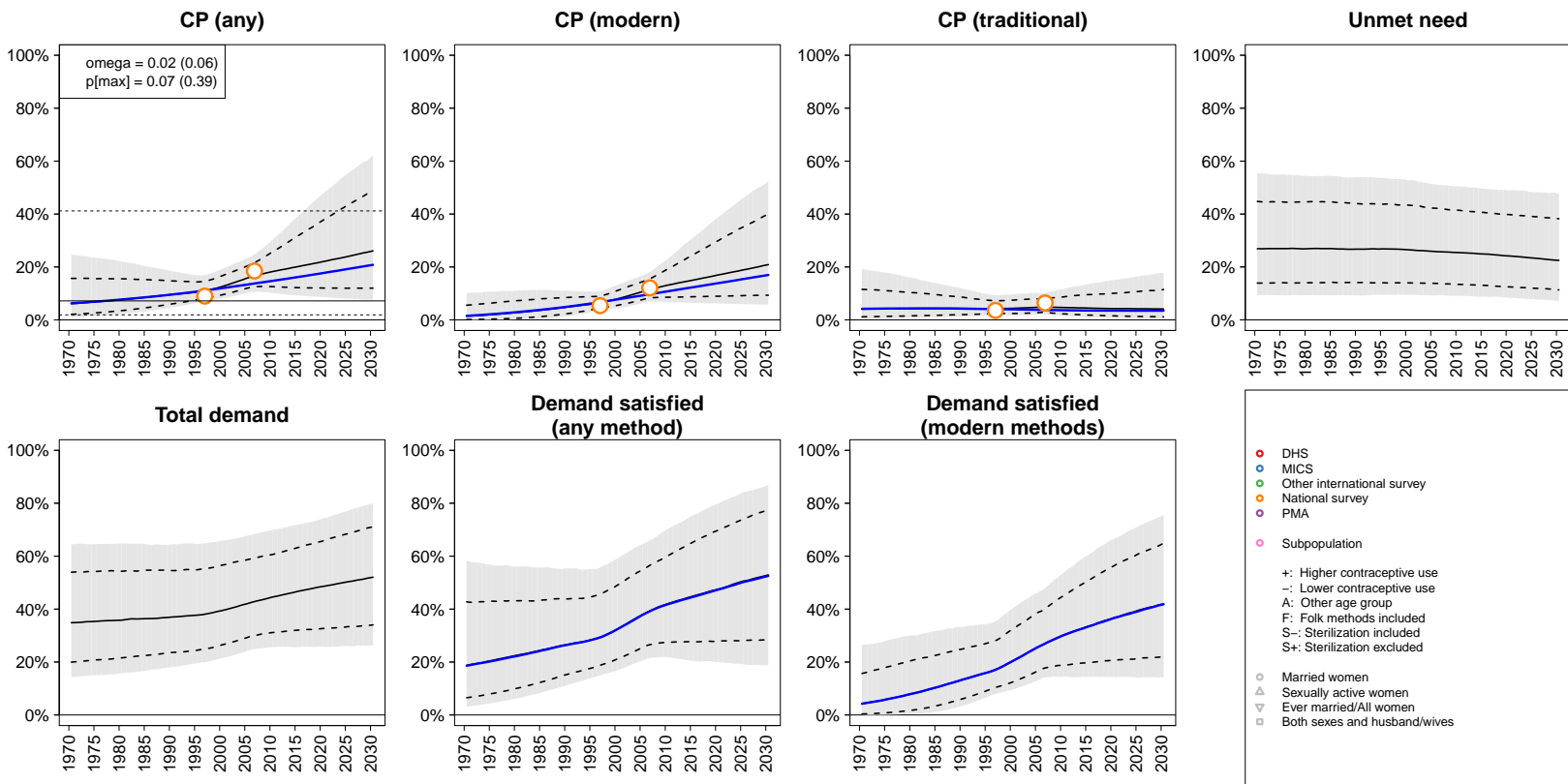
Pakistan (Southern Asia) --- Married / In-Union



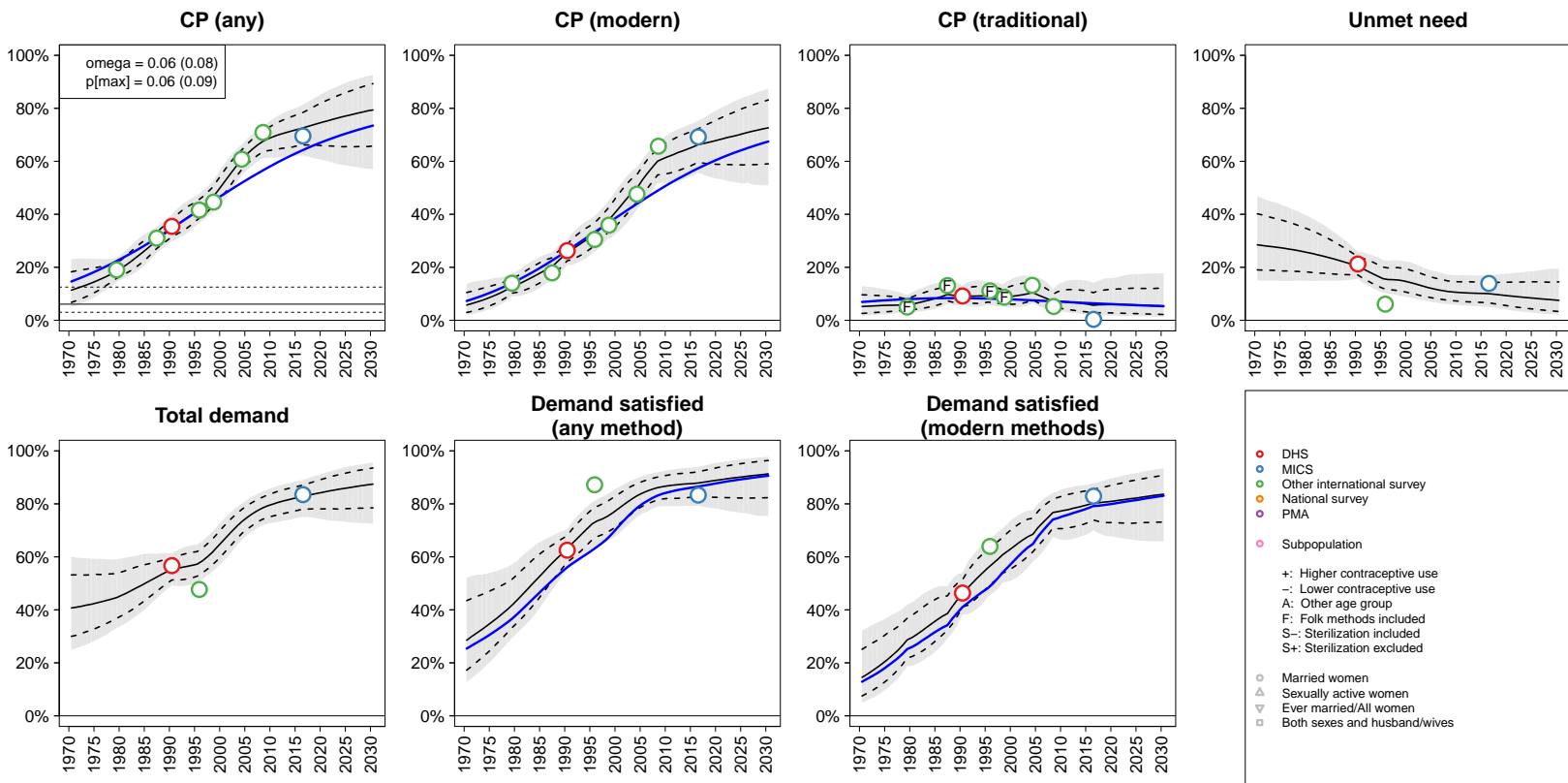
Panama (Central America) --- Married / In-Union



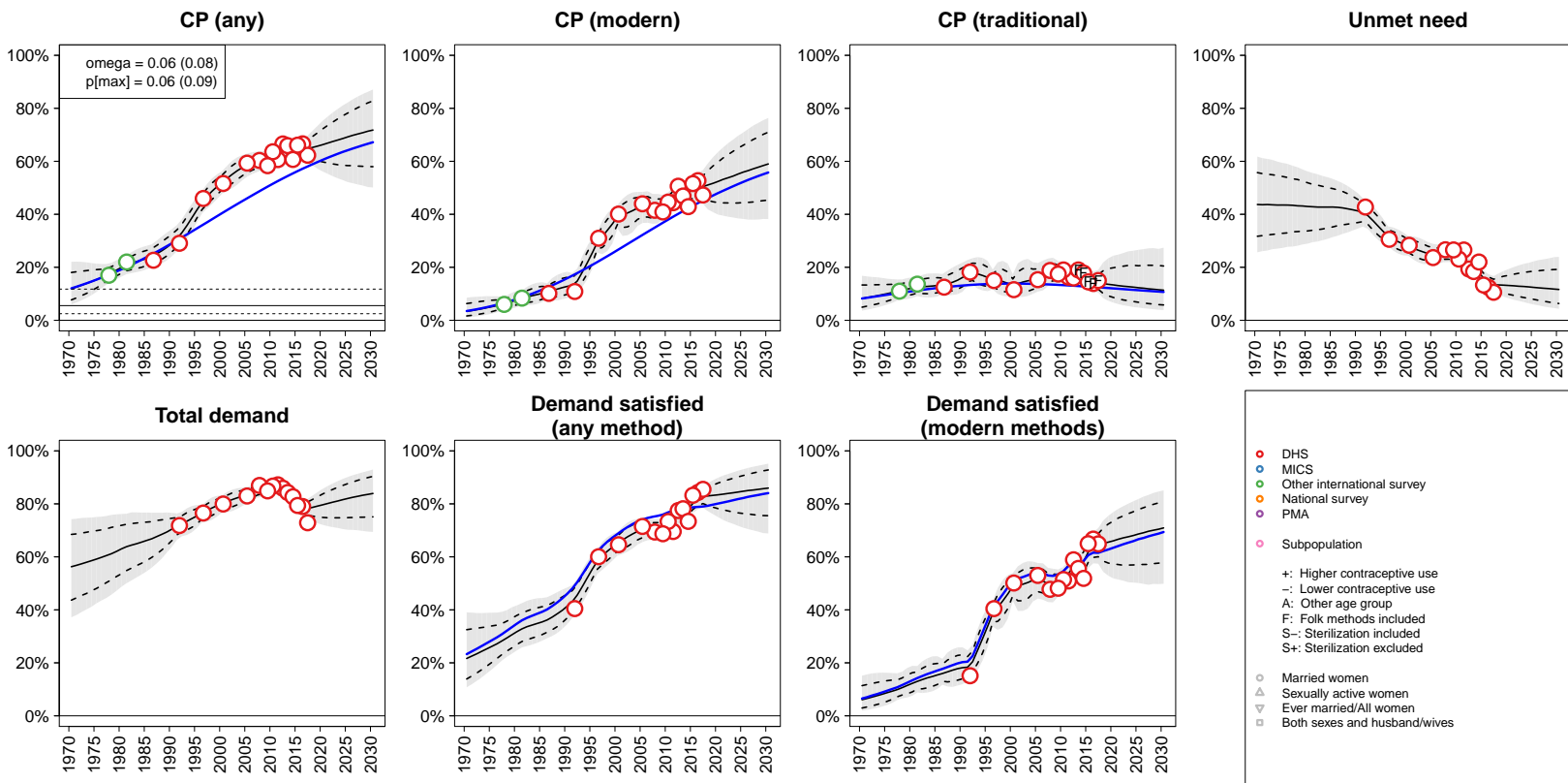
Papua New Guinea (Melanesia) --- Married / In-Union



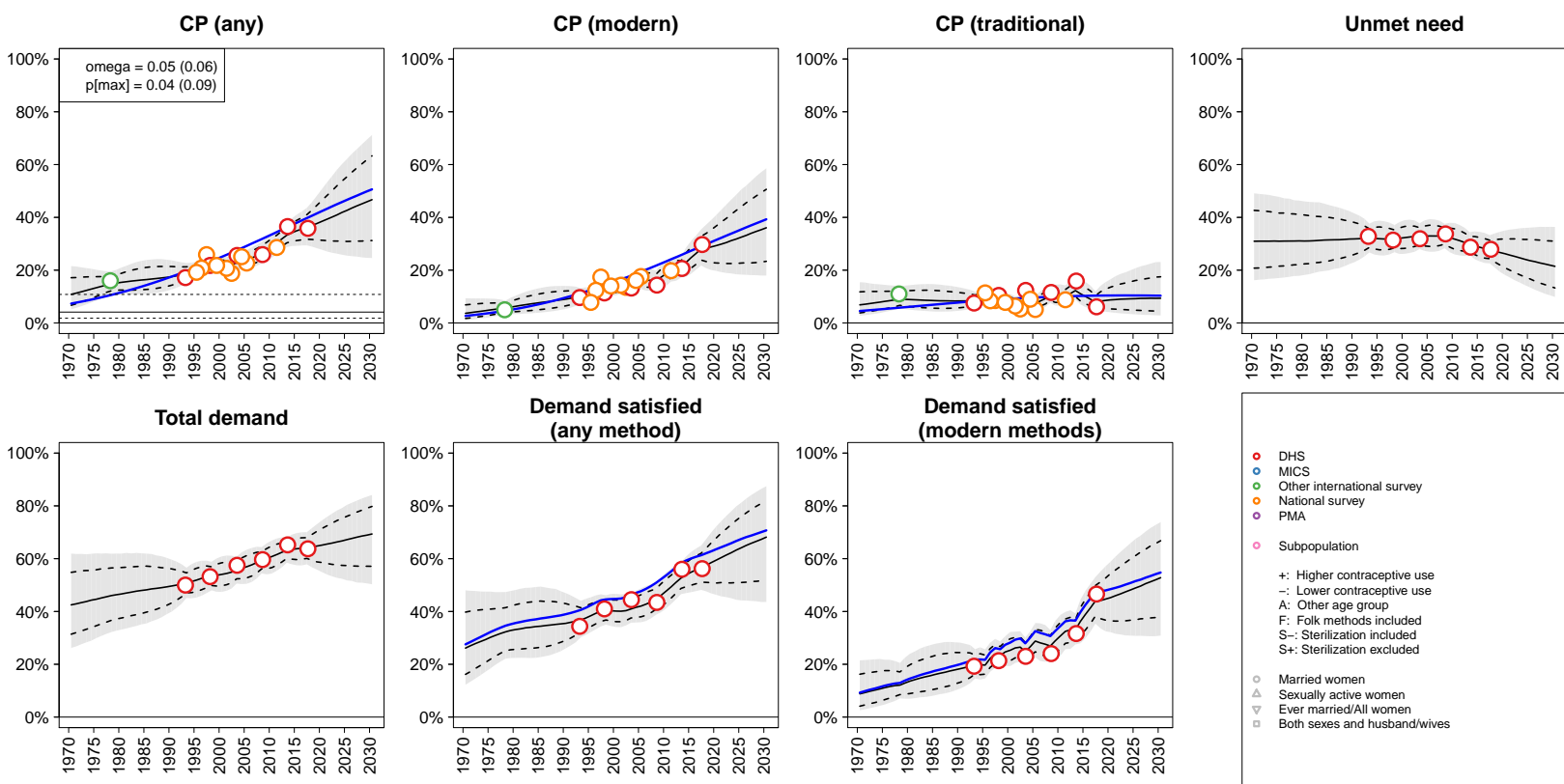
Paraguay (South America) --- Married / In-Union



Peru (South America) --- Married / In-Union

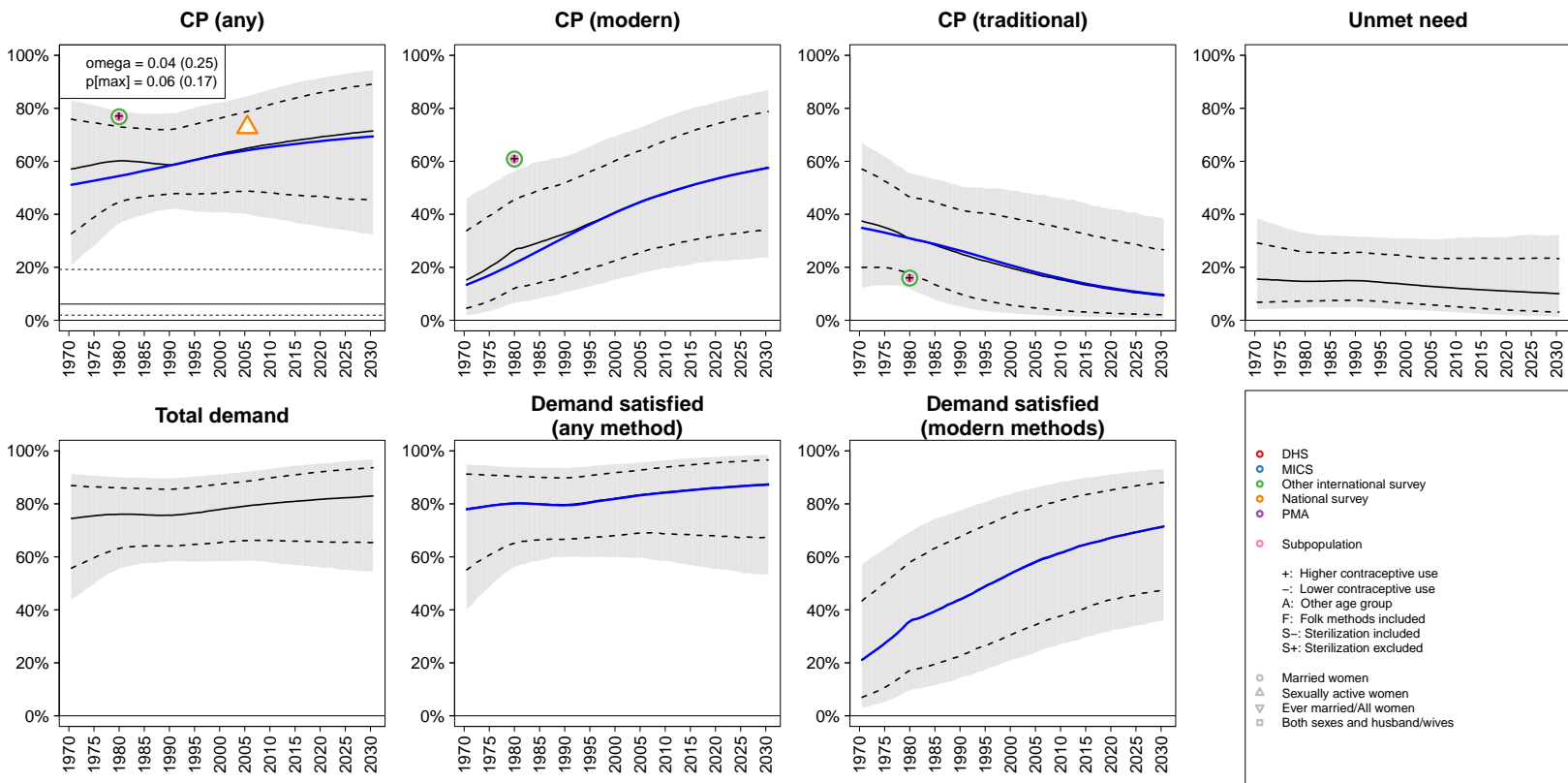


Philippines (South-eastern Asia) --- Married / In-Union

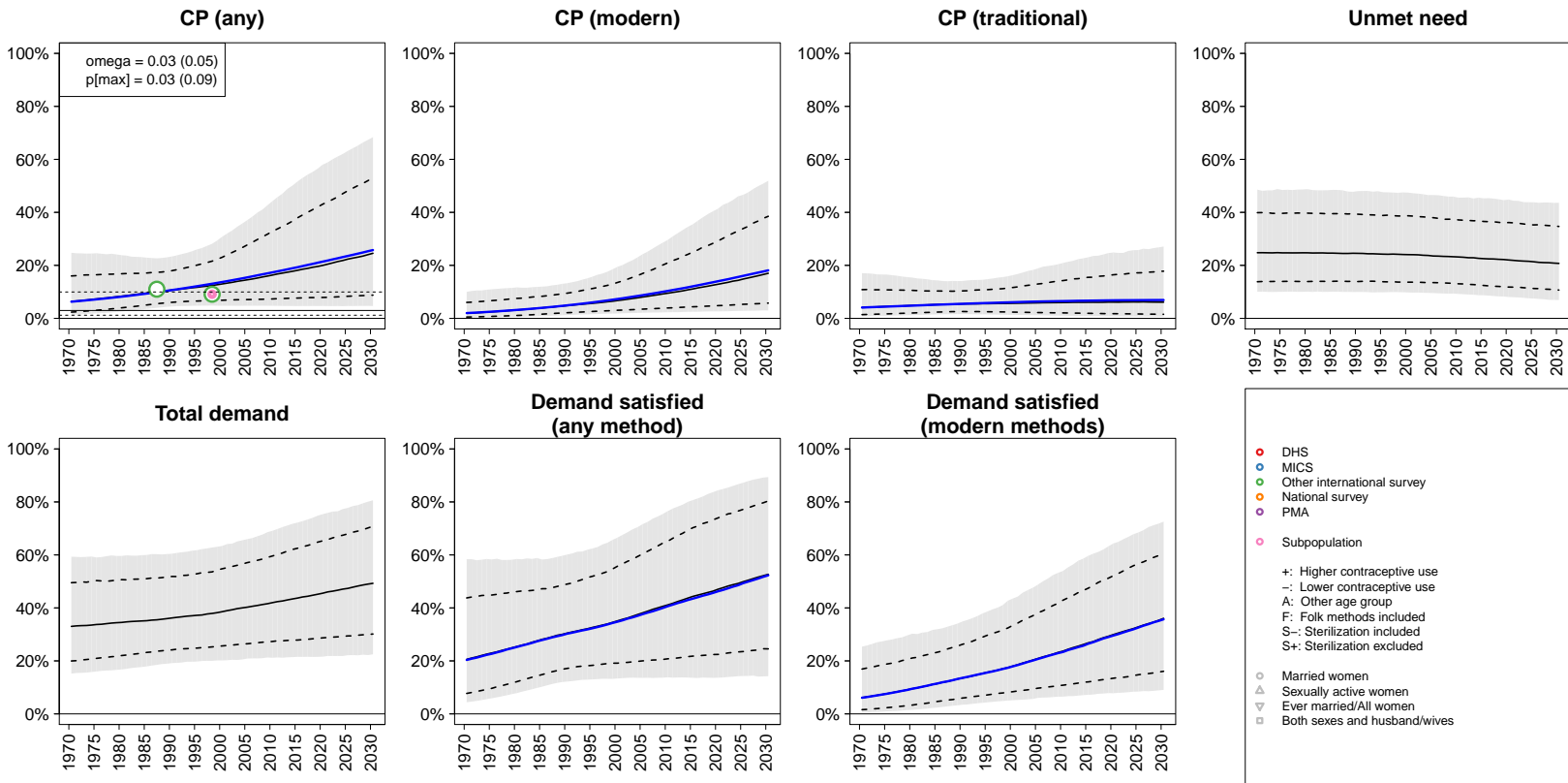




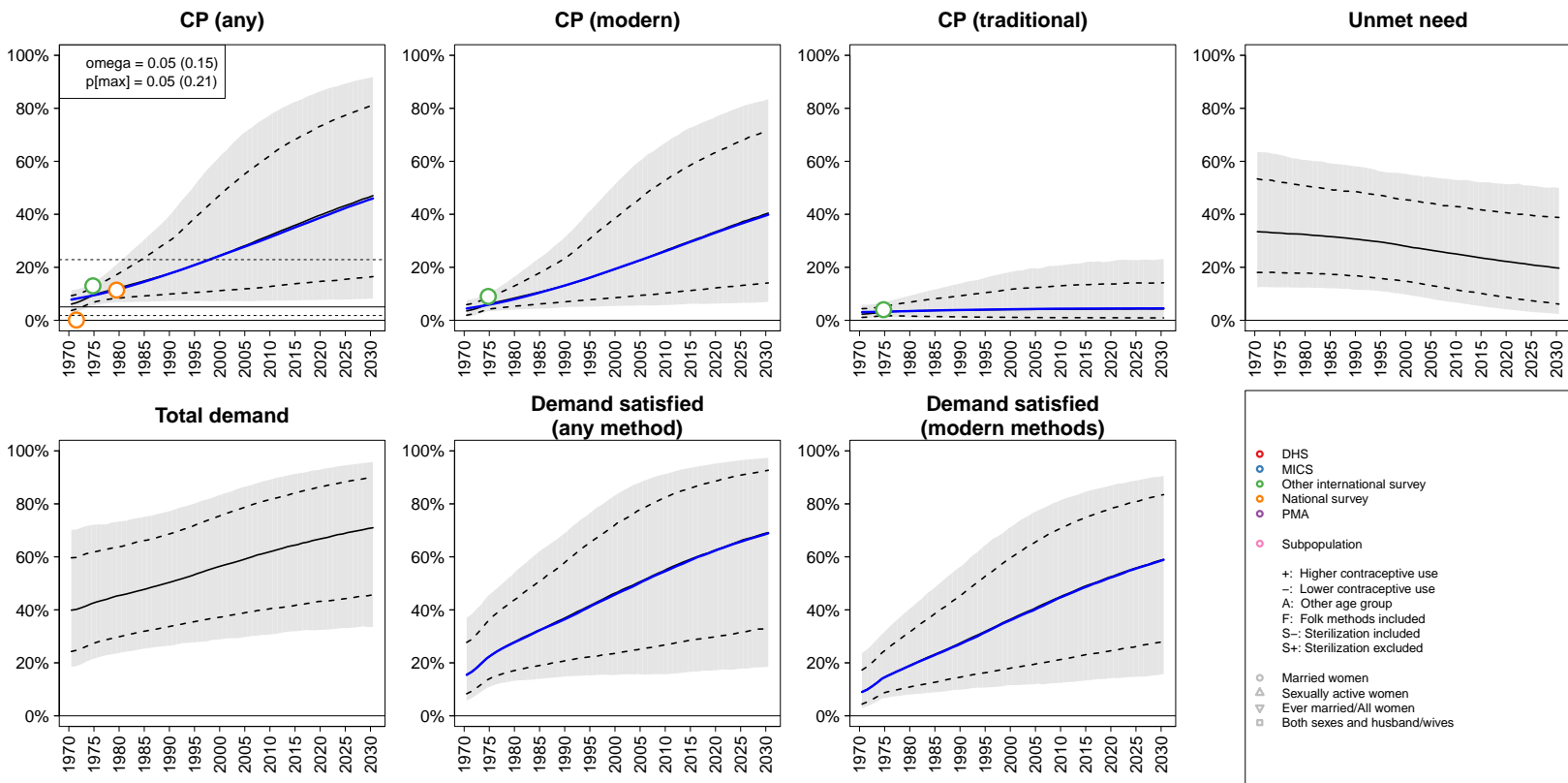
Portugal (Southern Europe) --- Married / In-Union



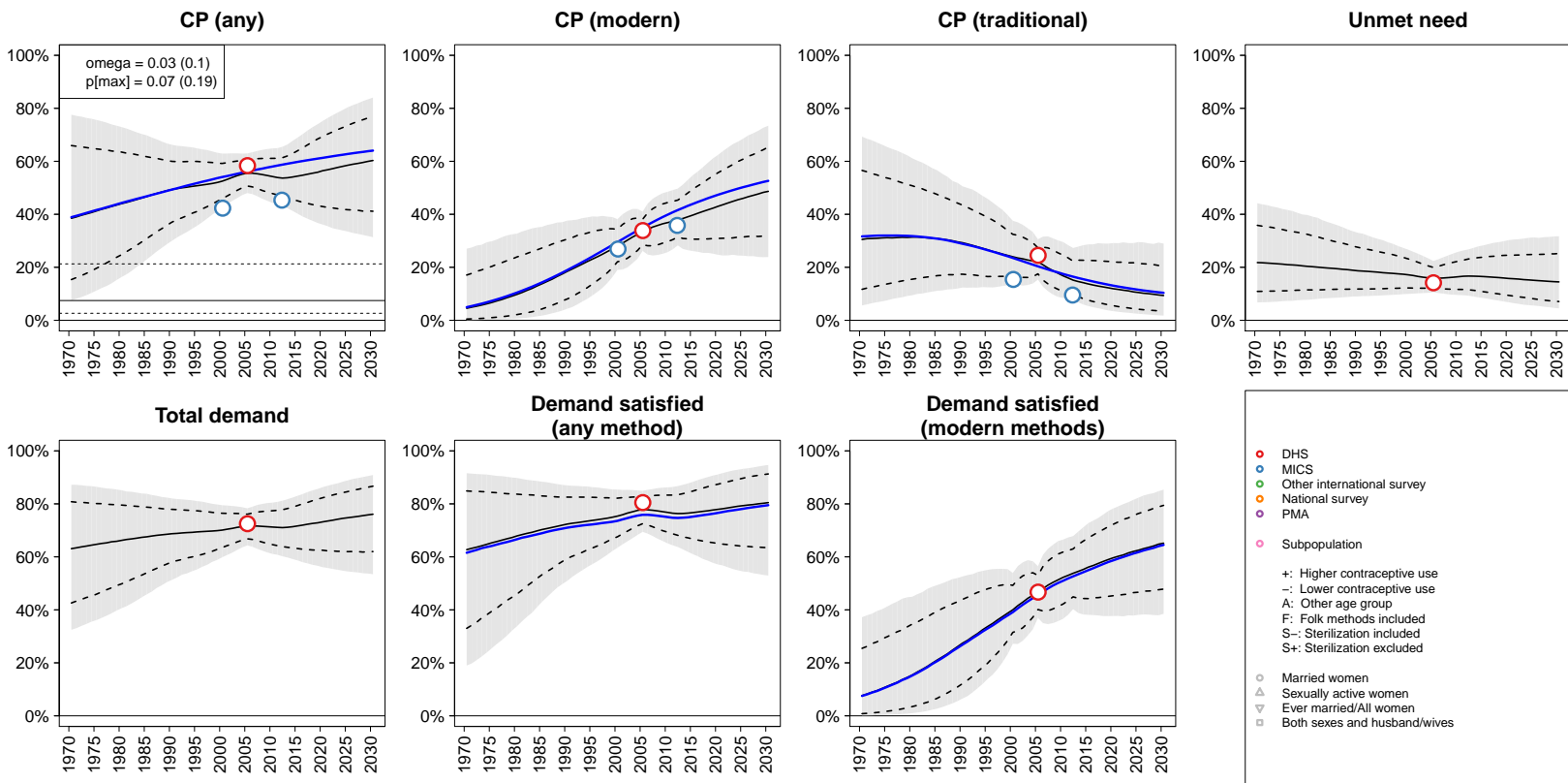
Qatar (Western Asia) --- Married / In-Union



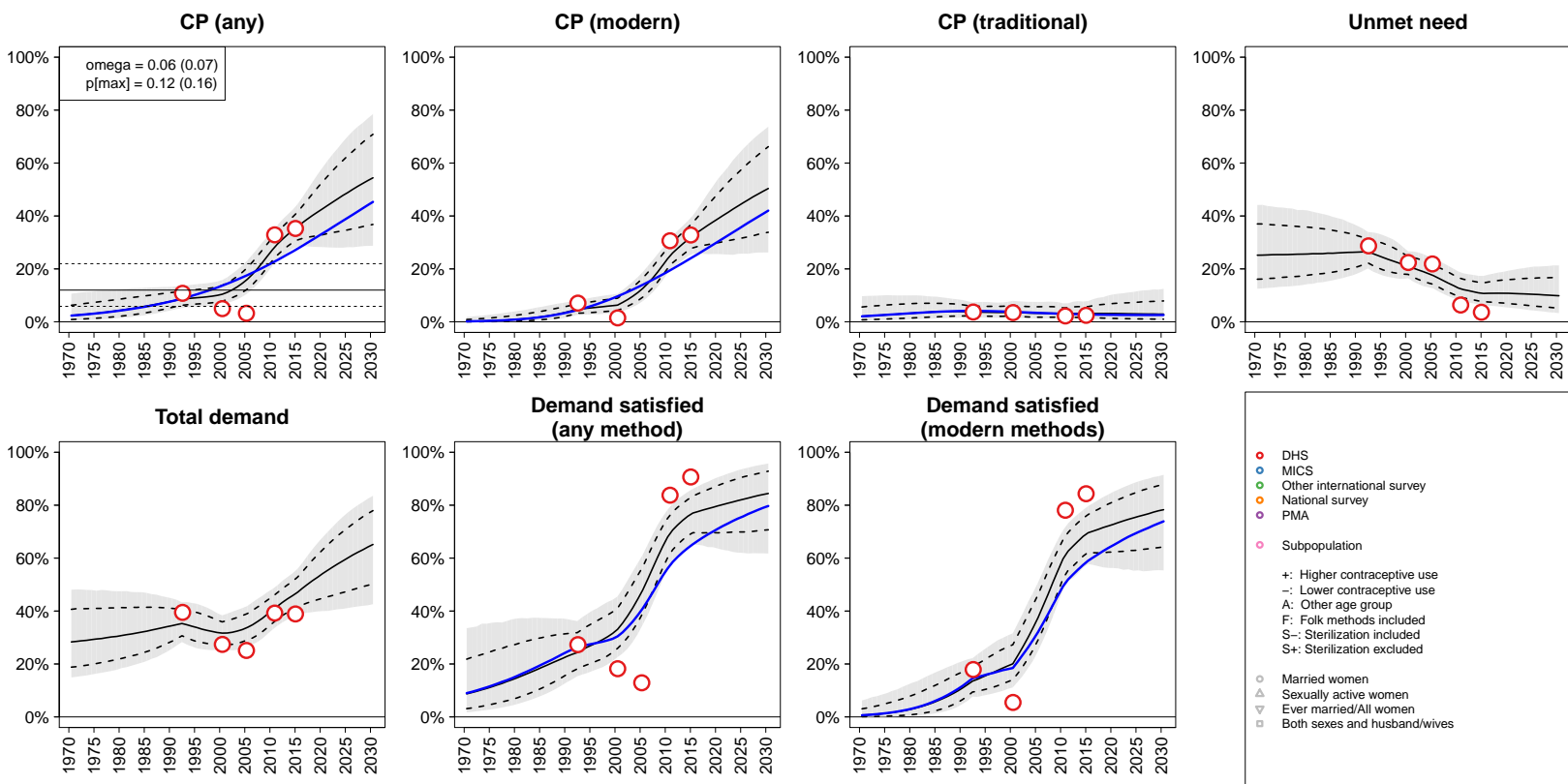
Republic of Korea (Eastern Asia) --- Married / In-Union



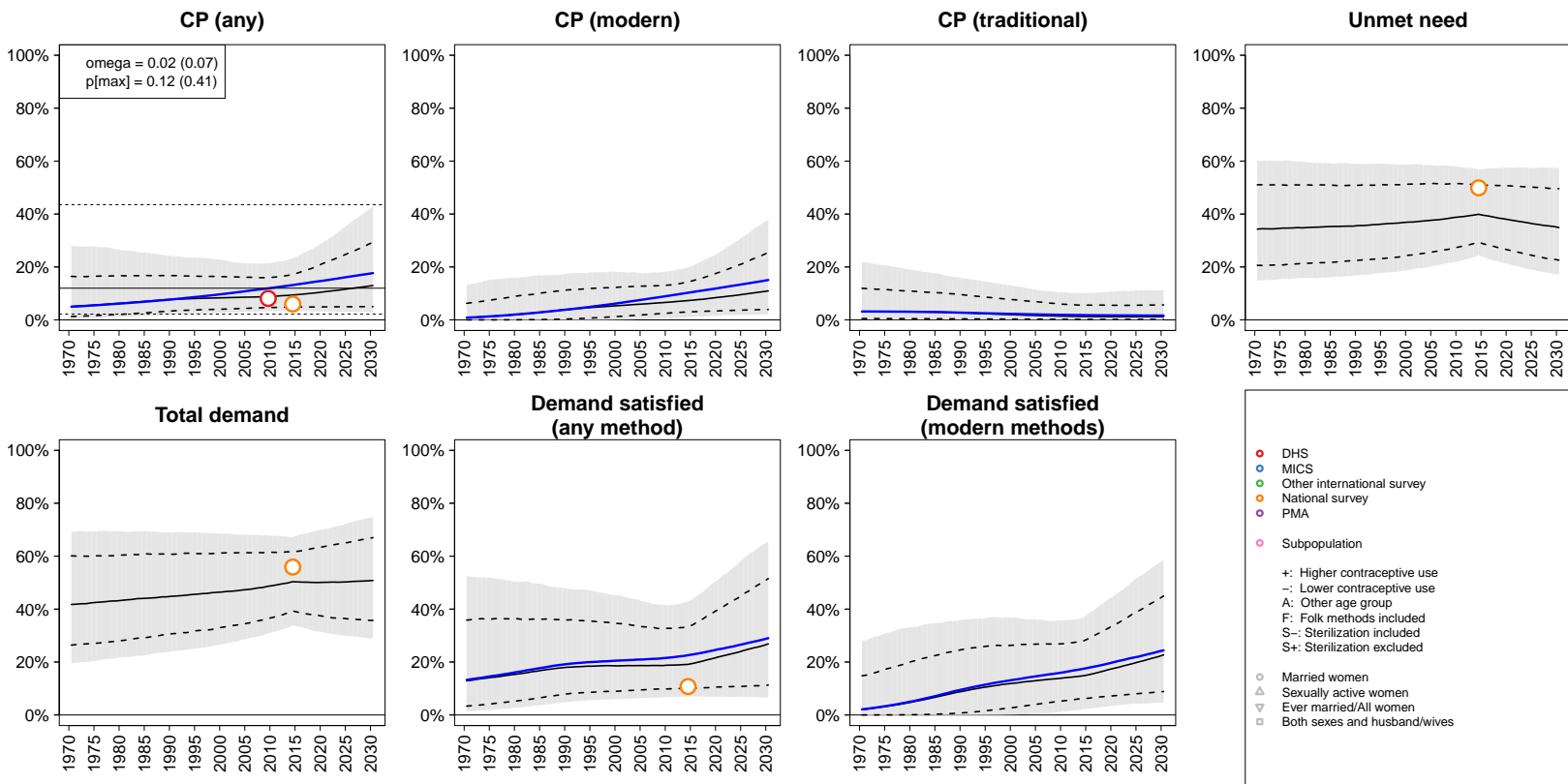
Republic of Moldova (Eastern Europe) --- Married / In-Union



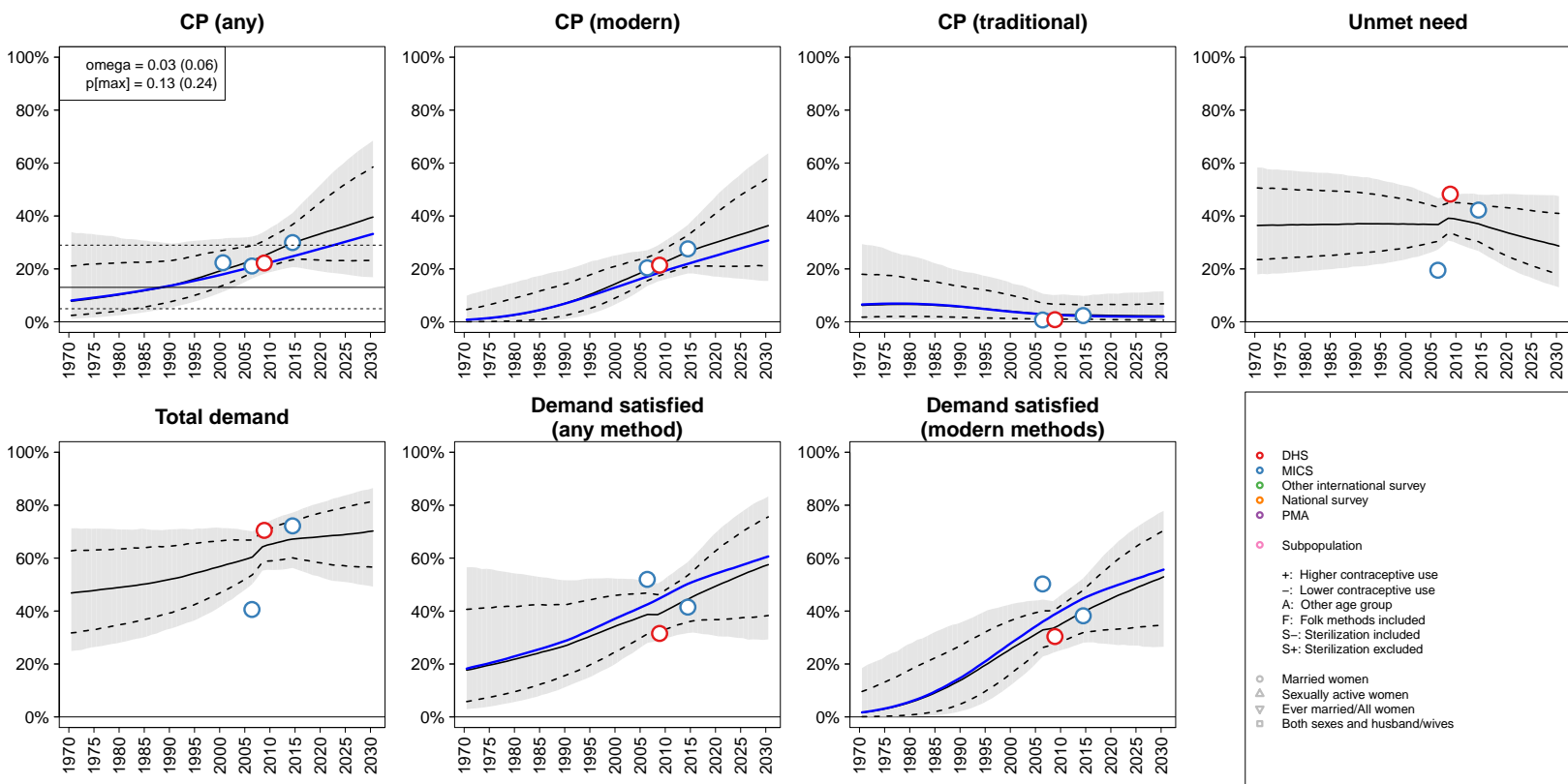
Rwanda (Eastern Africa) --- Married / In-Union



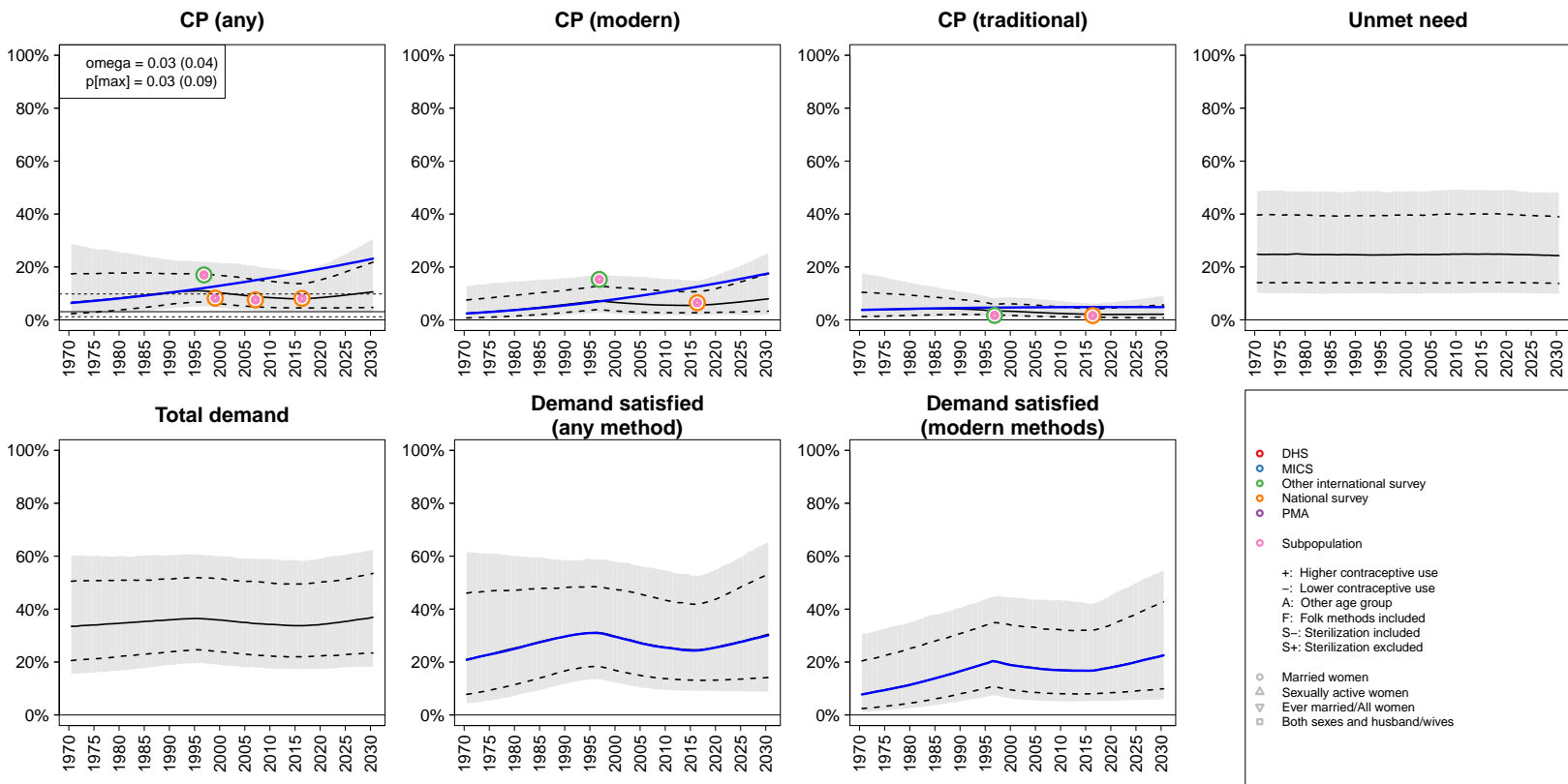
Samoa (Polynesia) --- Married / In-Union



Sao Tome and Principe (Middle Africa) --- Married / In-Union

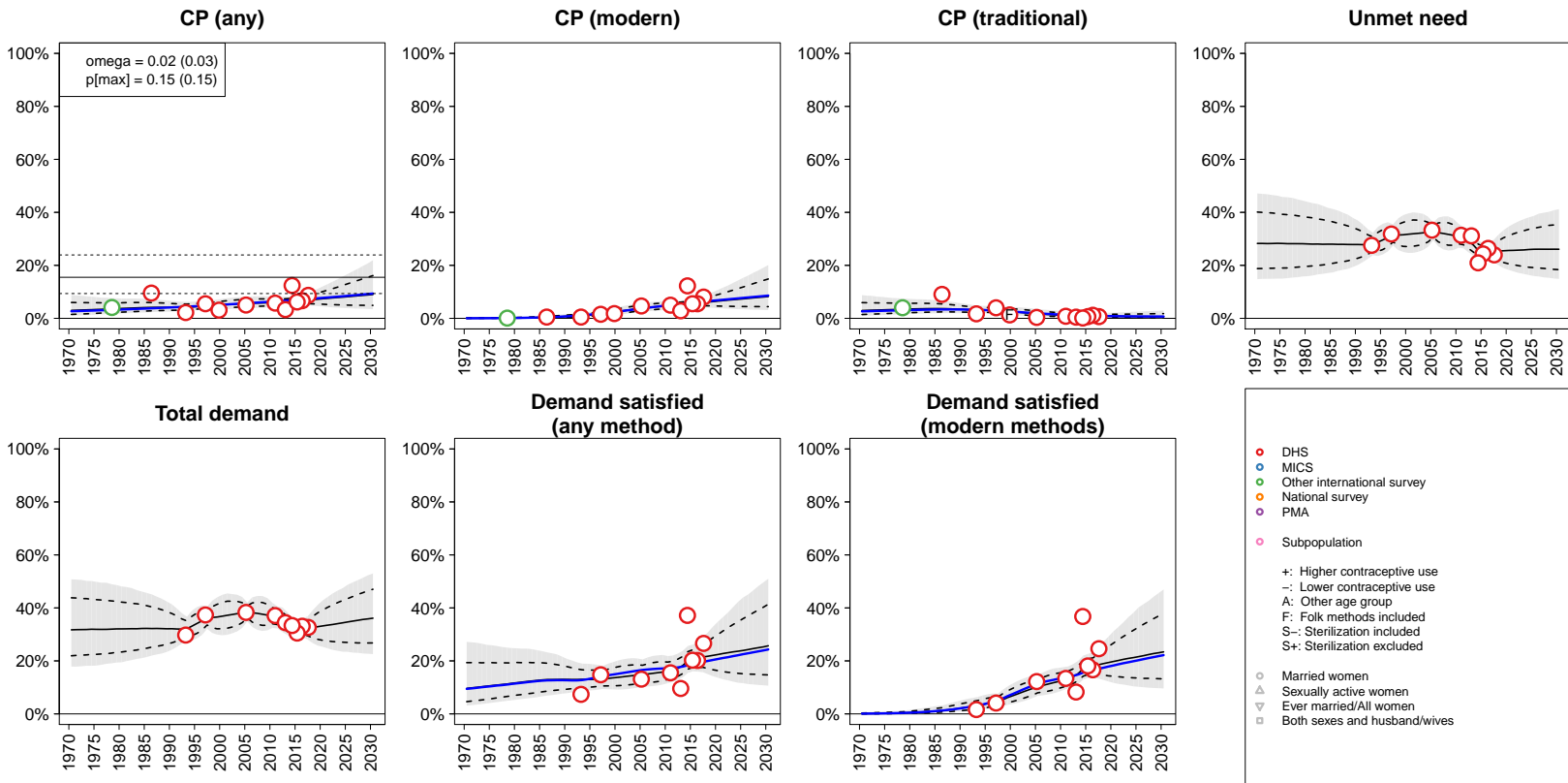


Saudi Arabia (Western Asia) --- Married / In-Union

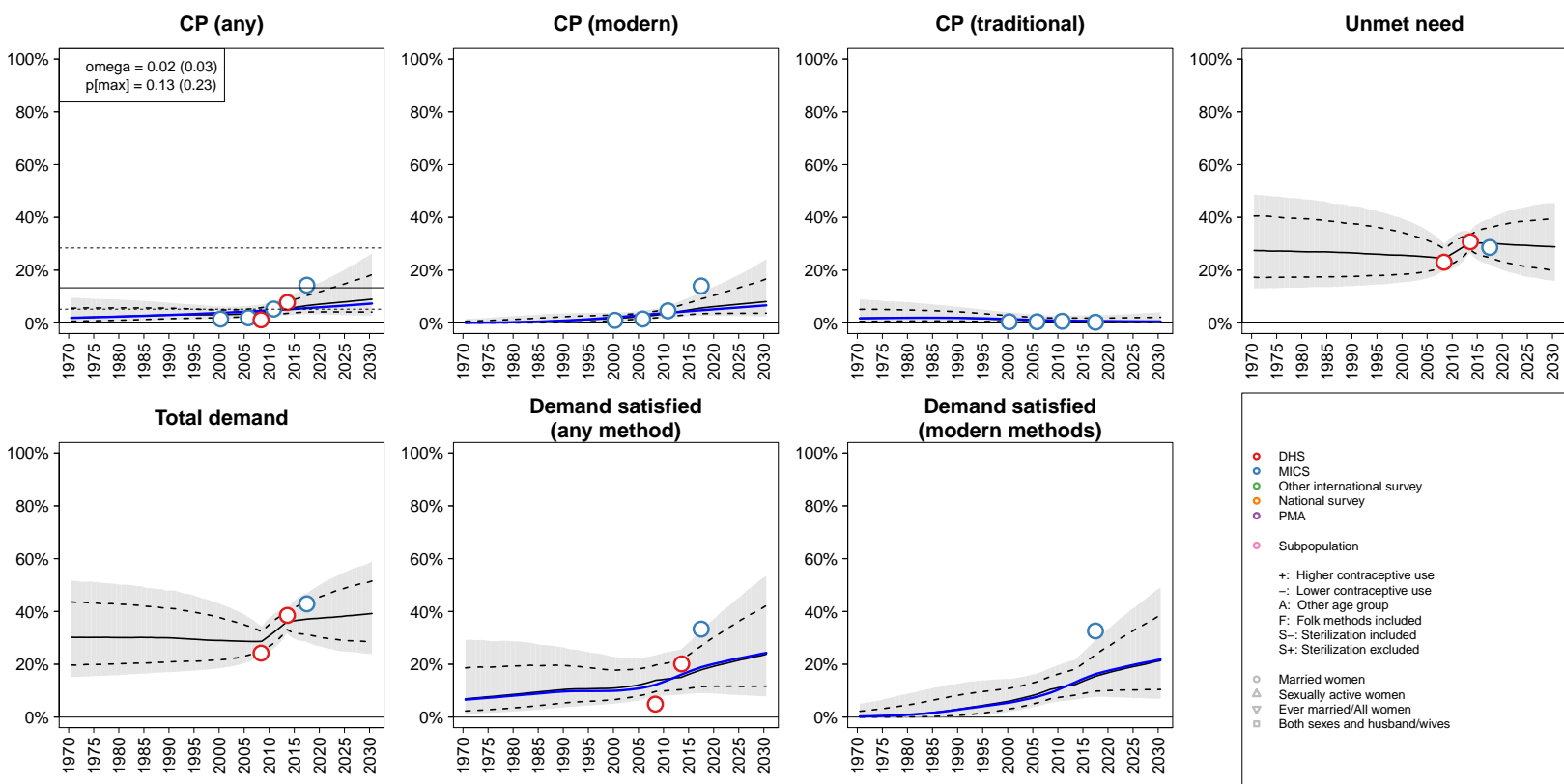




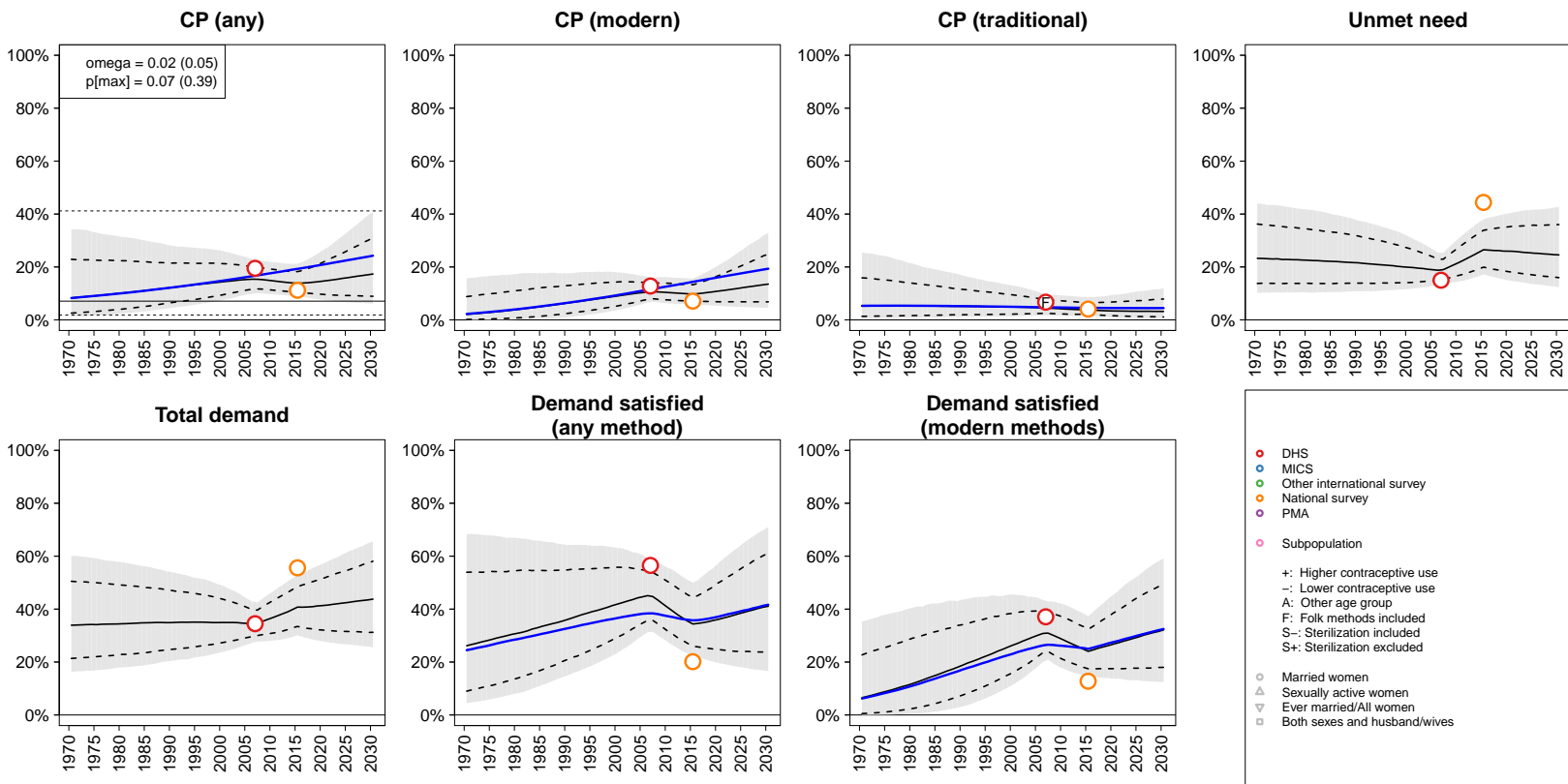
Senegal (Western Africa) --- Married / In-Union



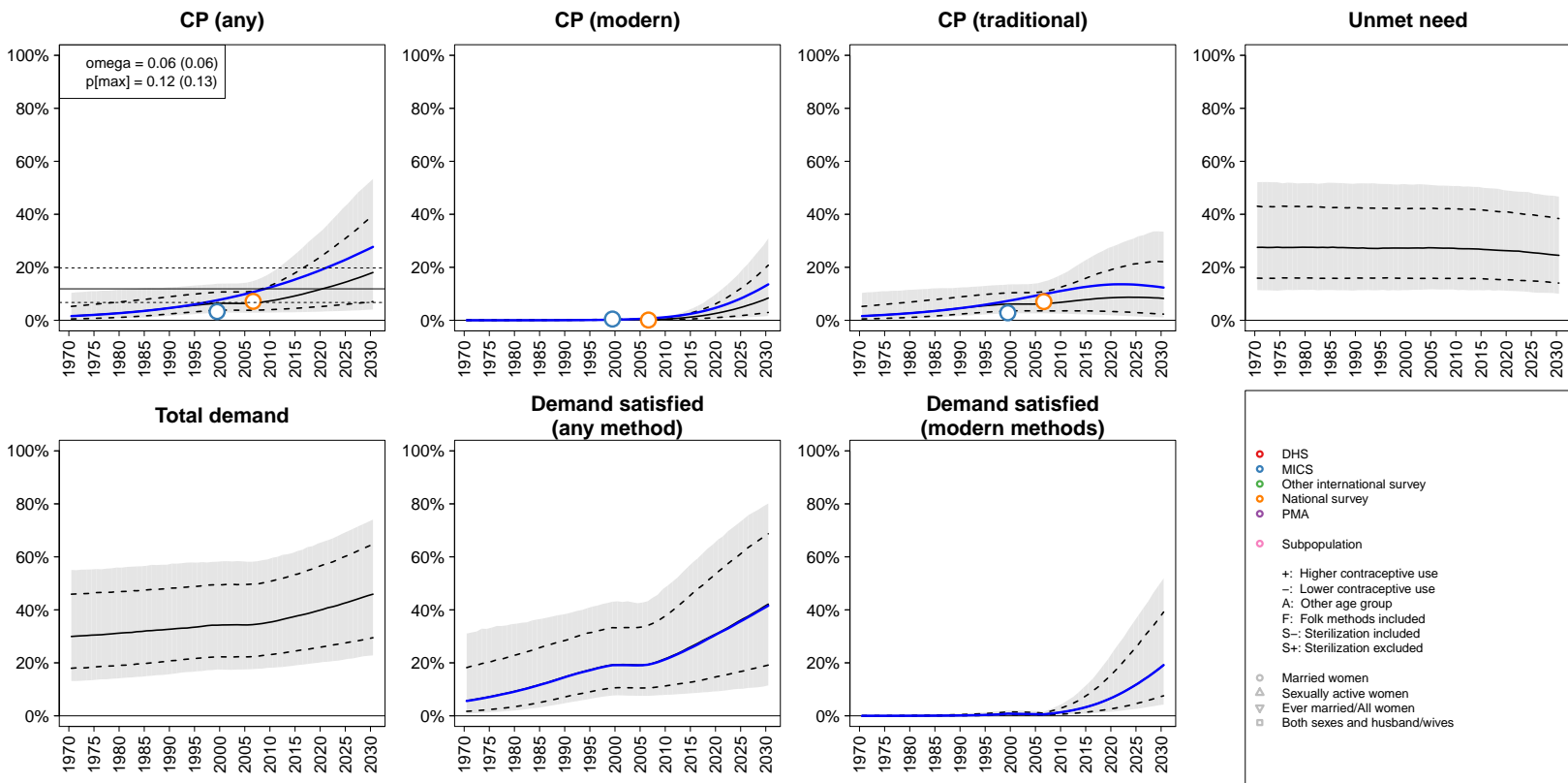
Sierra Leone (Western Africa) — Married / In-Union



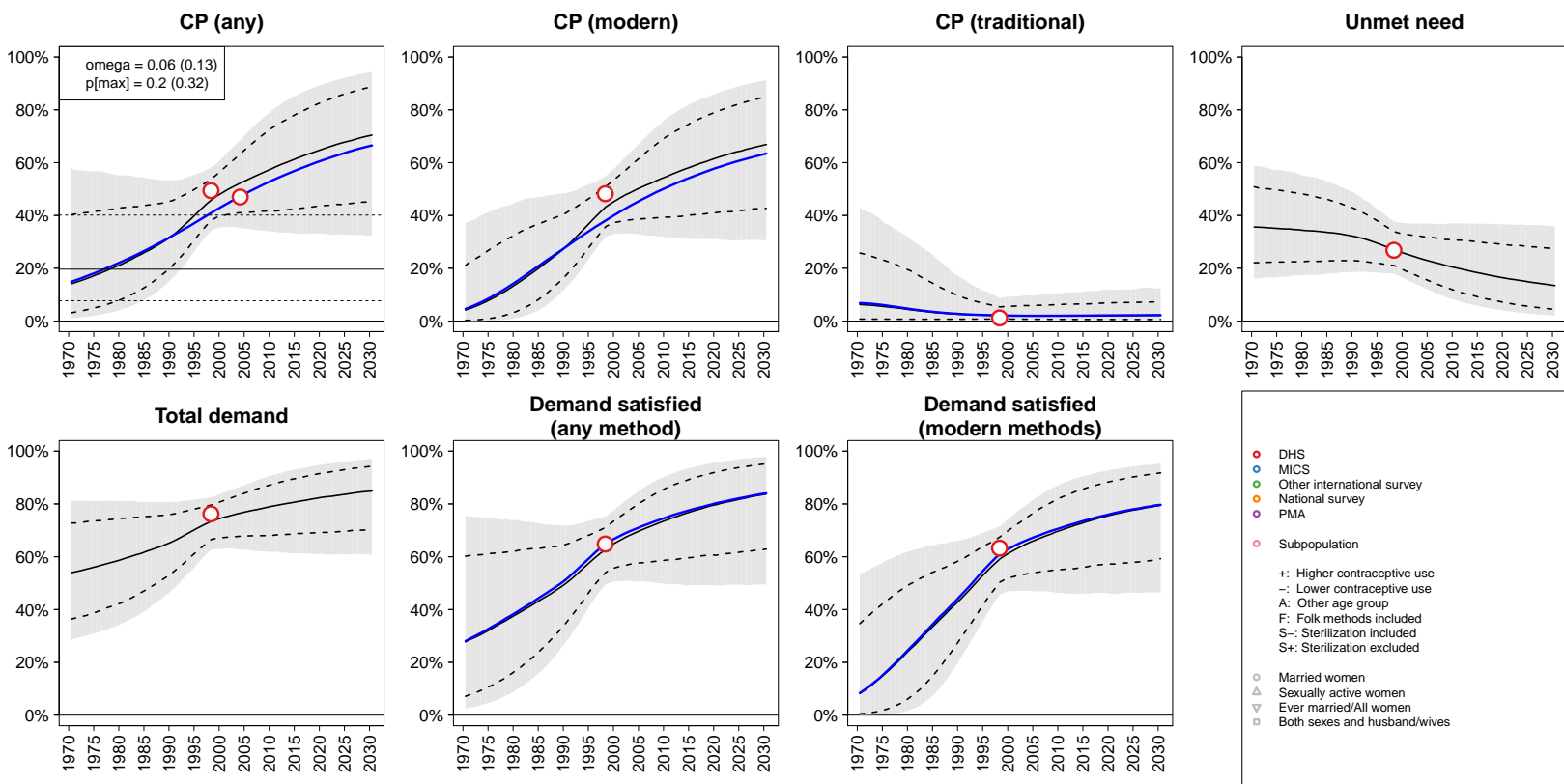
Solomon Islands (Melanesia) --- Married / In-Union



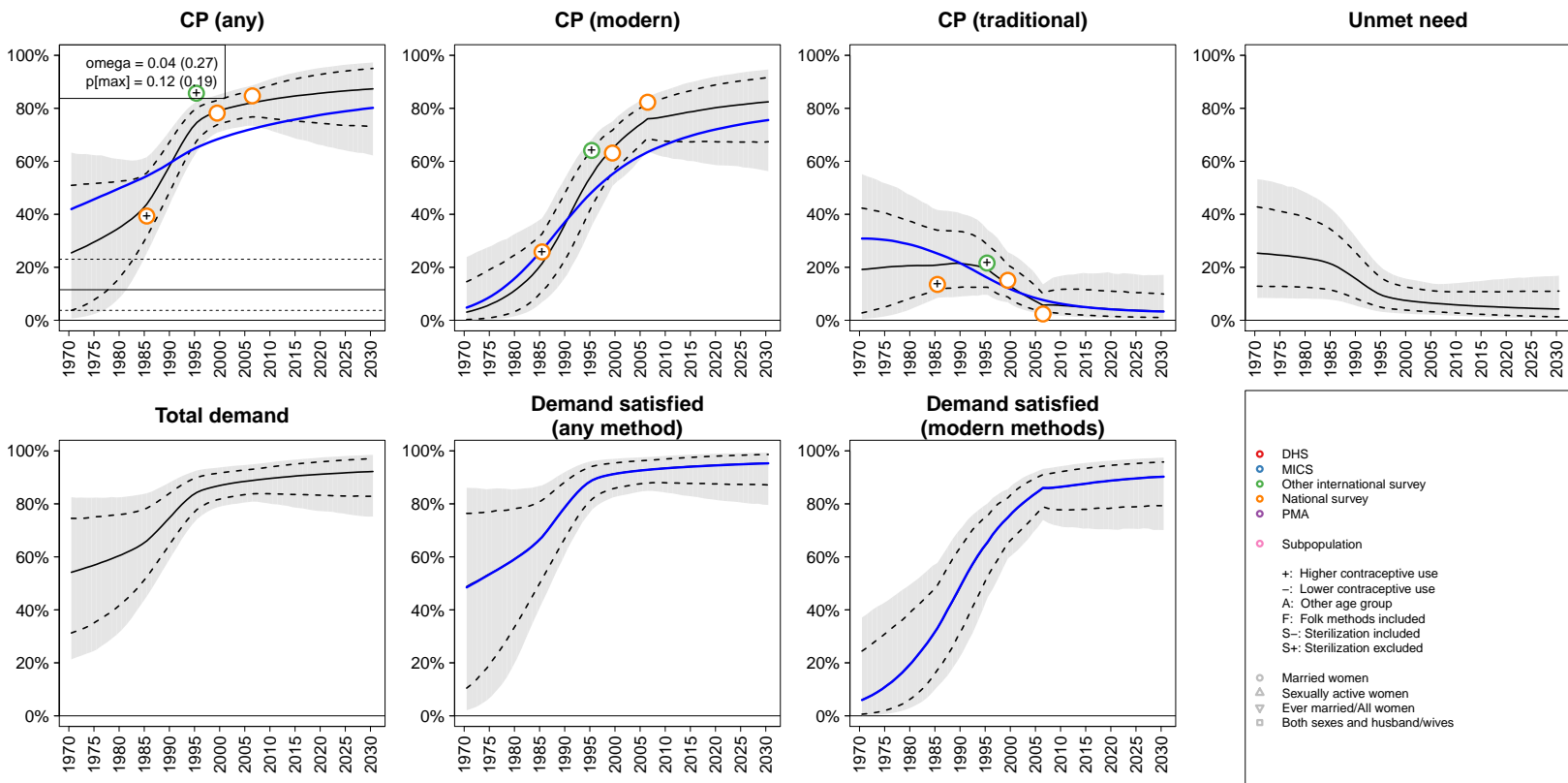
Somalia (Eastern Africa) — Married / In-Union



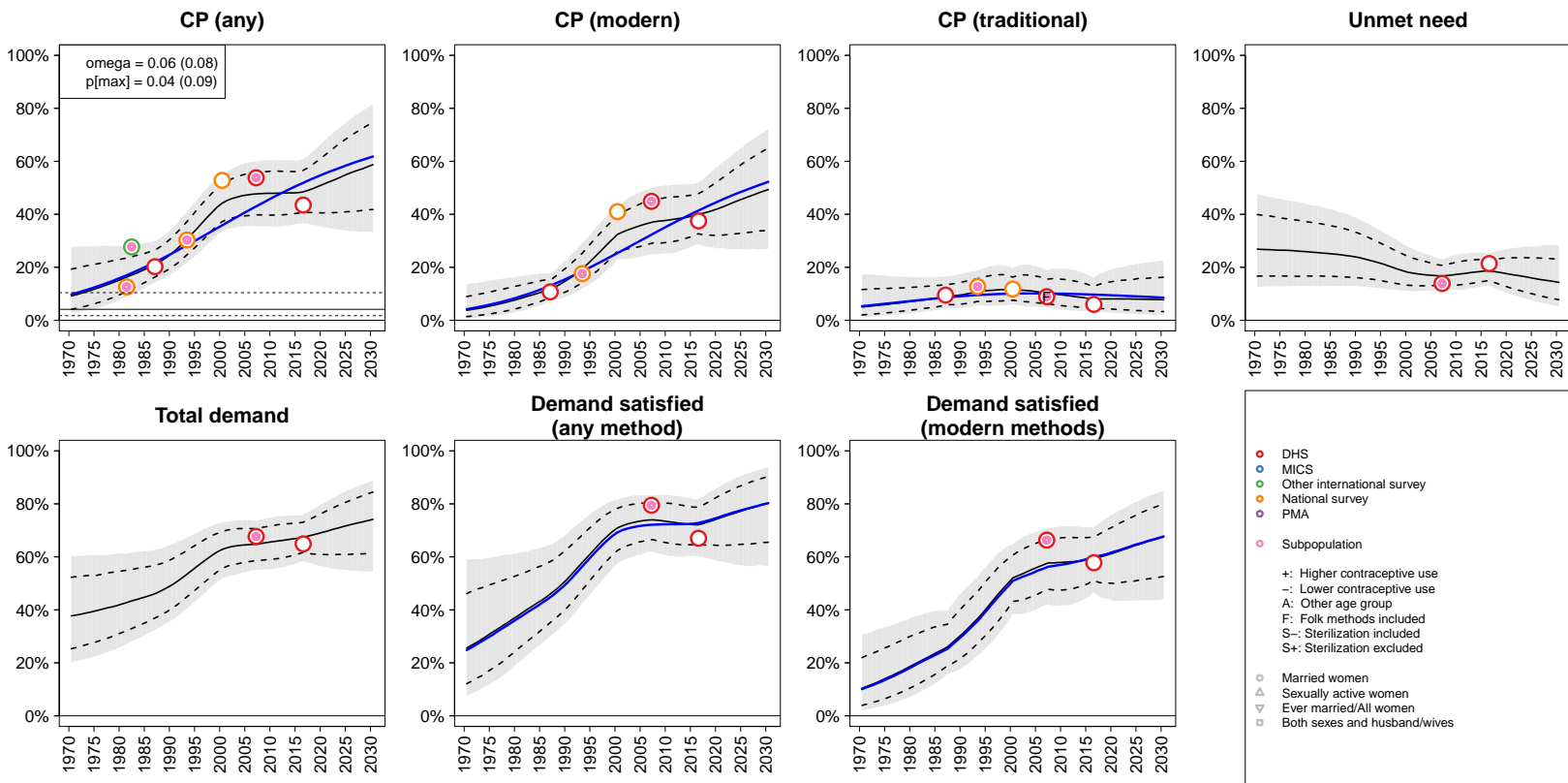
South Africa (Southern Africa) --- Married / In-Union



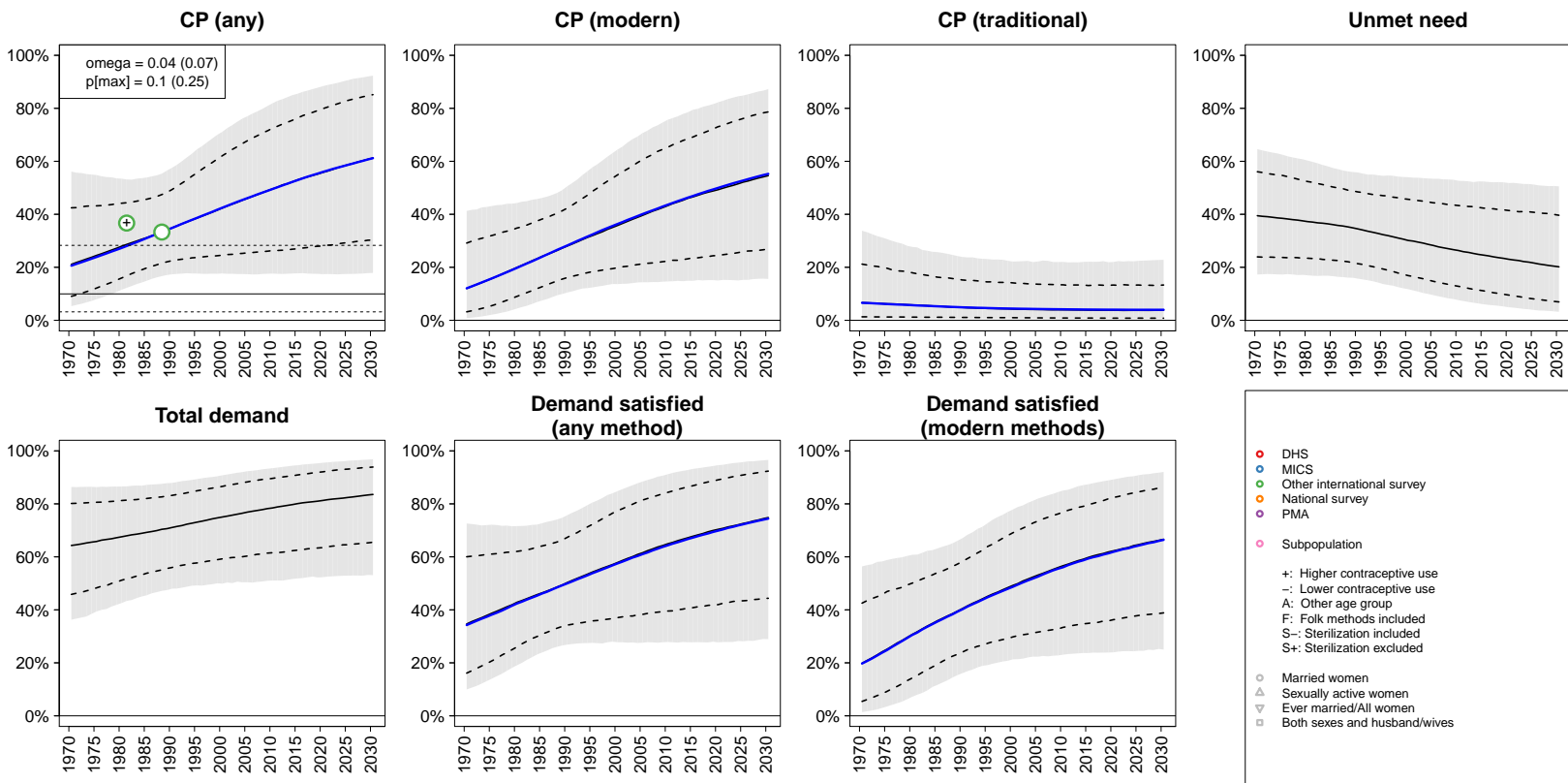
Spain (Southern Europe) --- Married / In-Union



Sri Lanka (Southern Asia) --- Married / In-Union

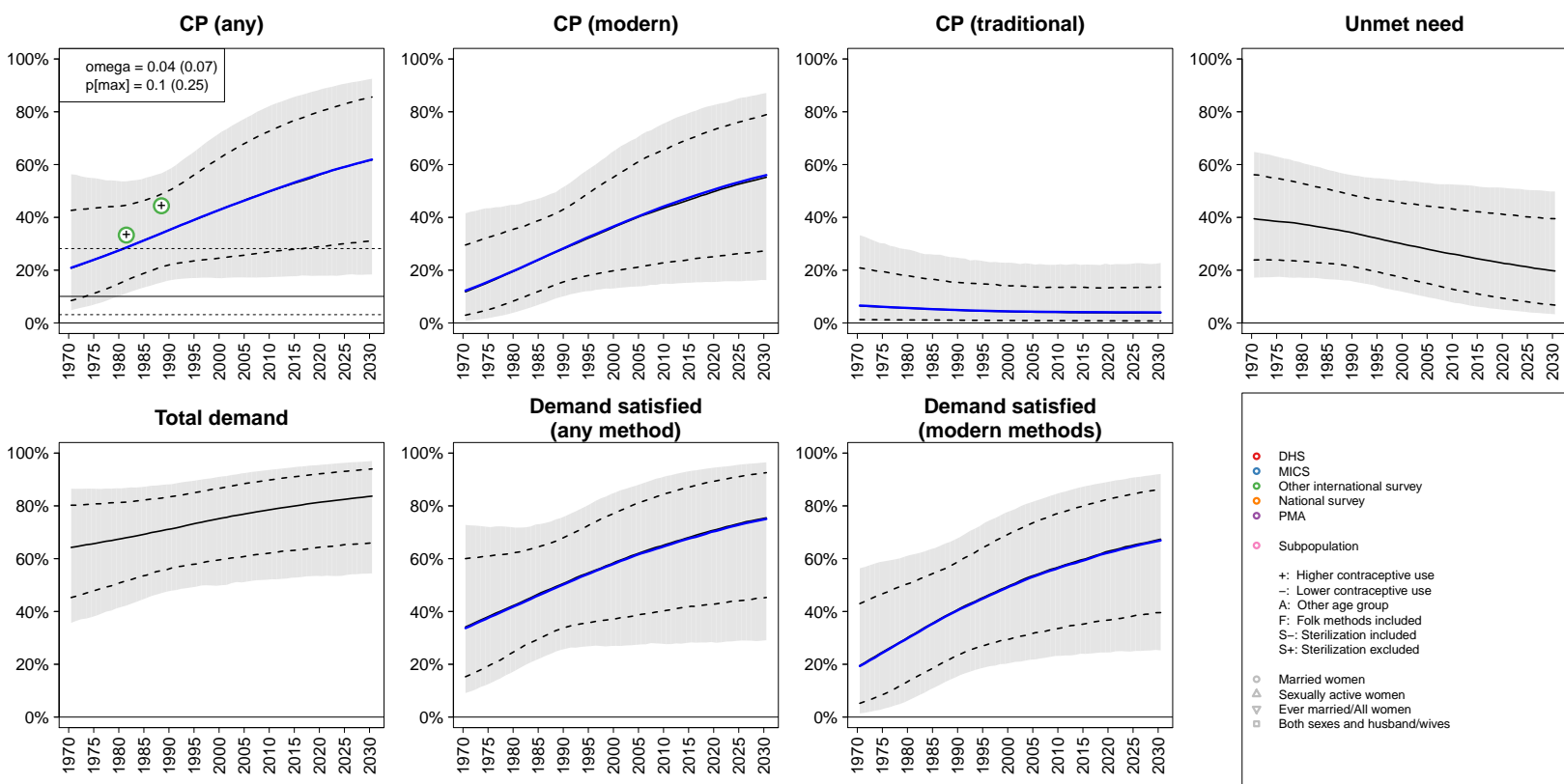


St. Lucia (Caribbean) --- Married / In-Union

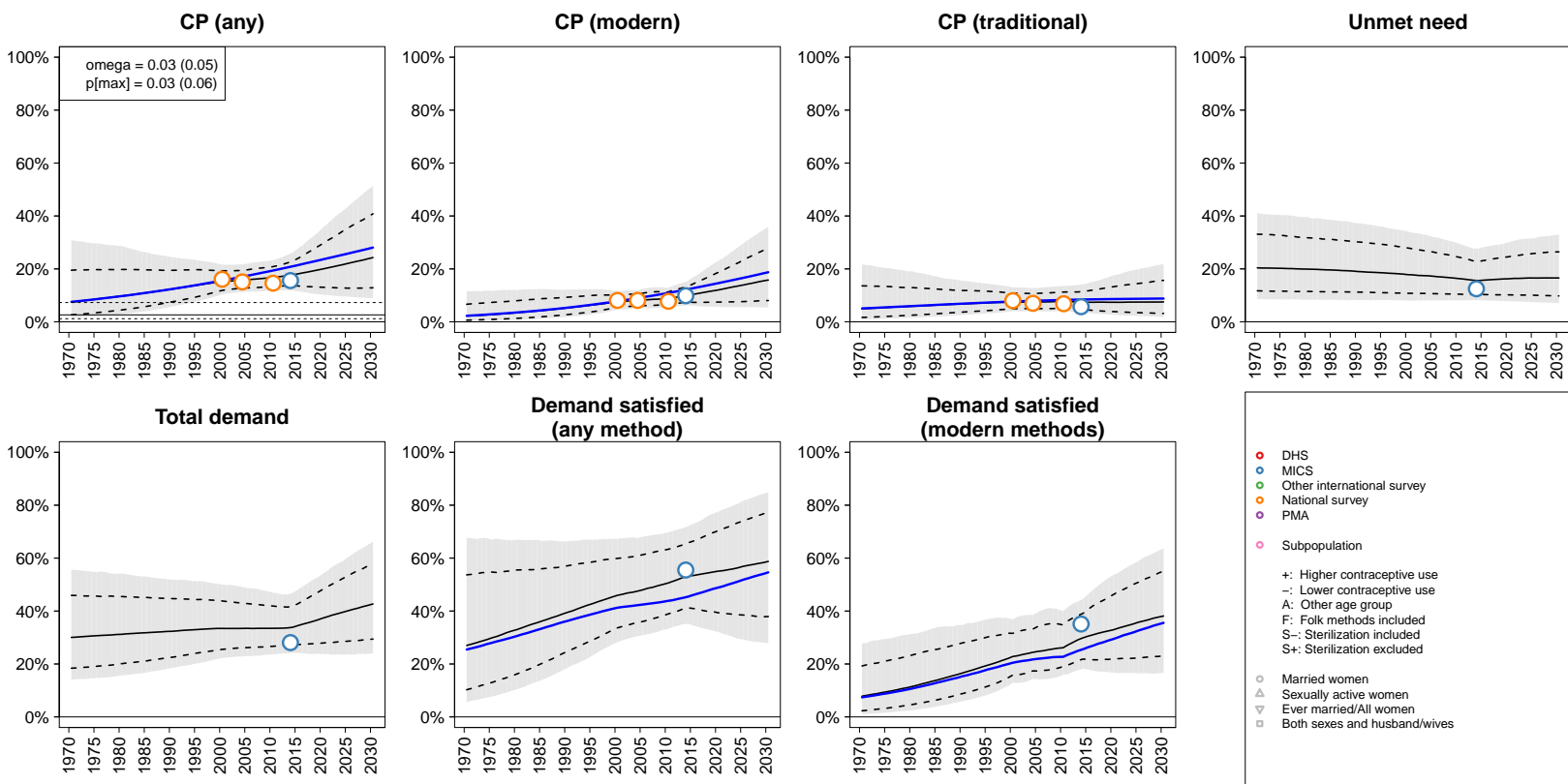




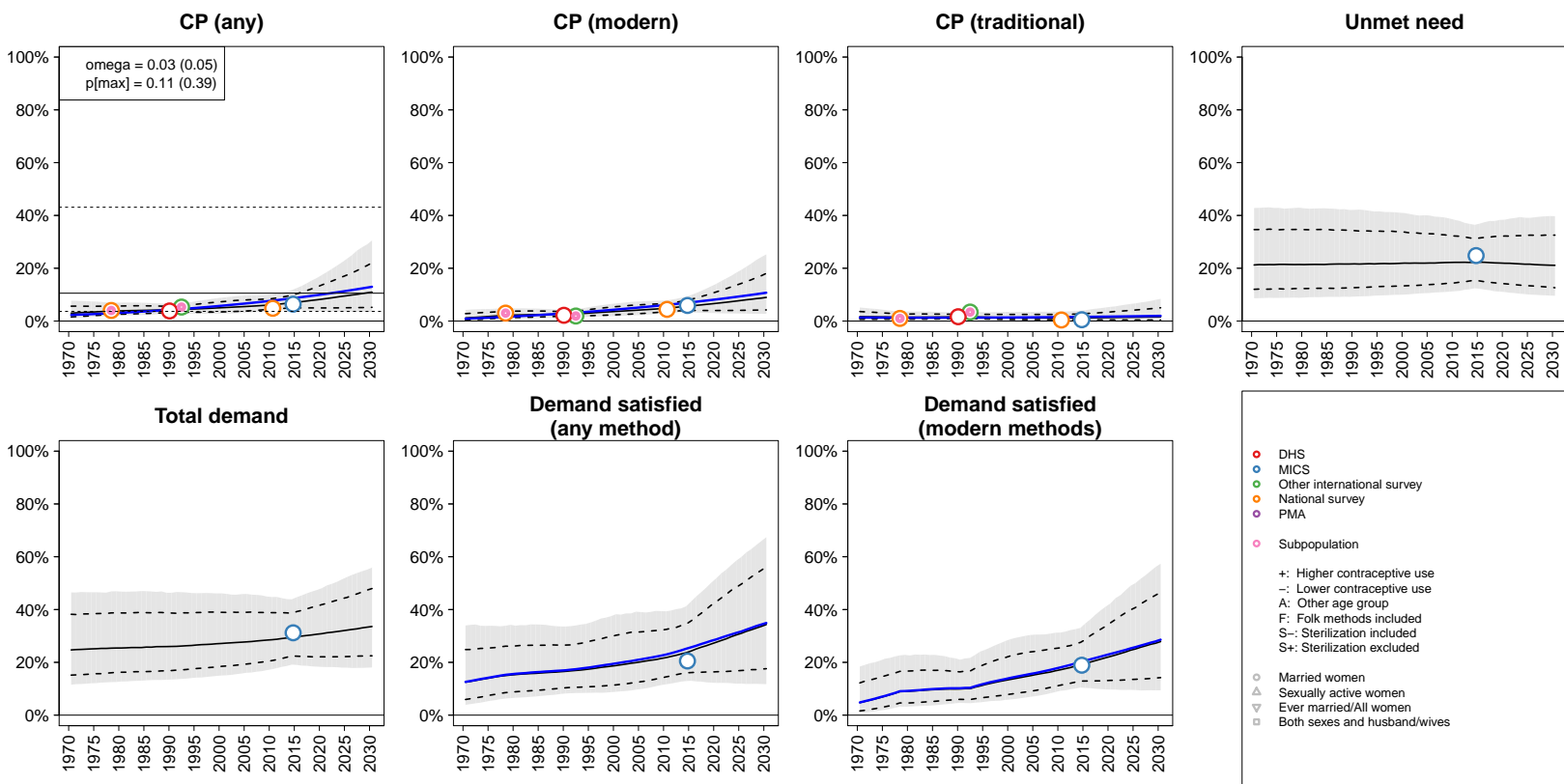
St. Vincent and the Grenadines (Caribbean) --- Married / In-Union



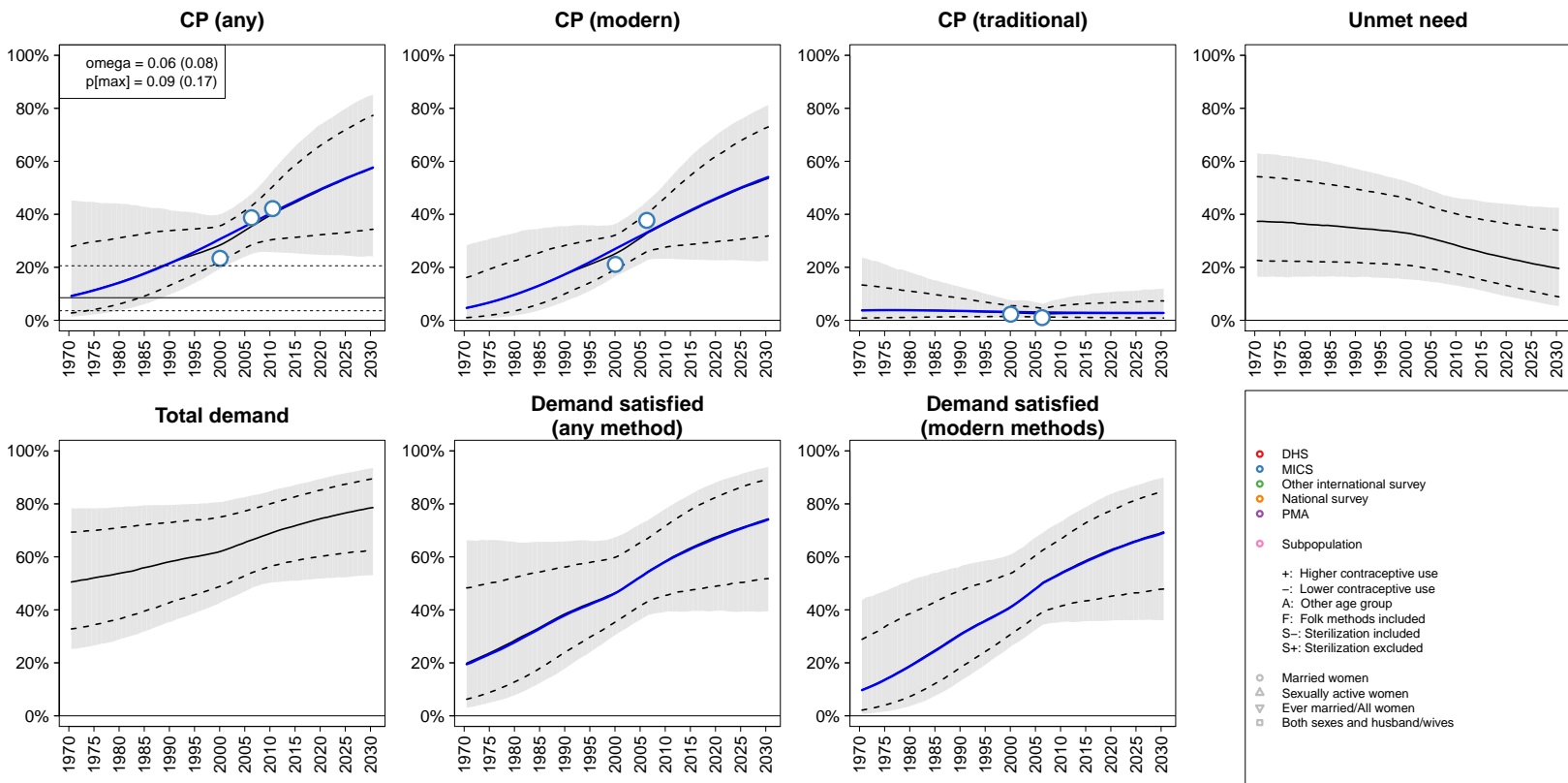
State of Palestine (Western Asia) --- Married / In-Union



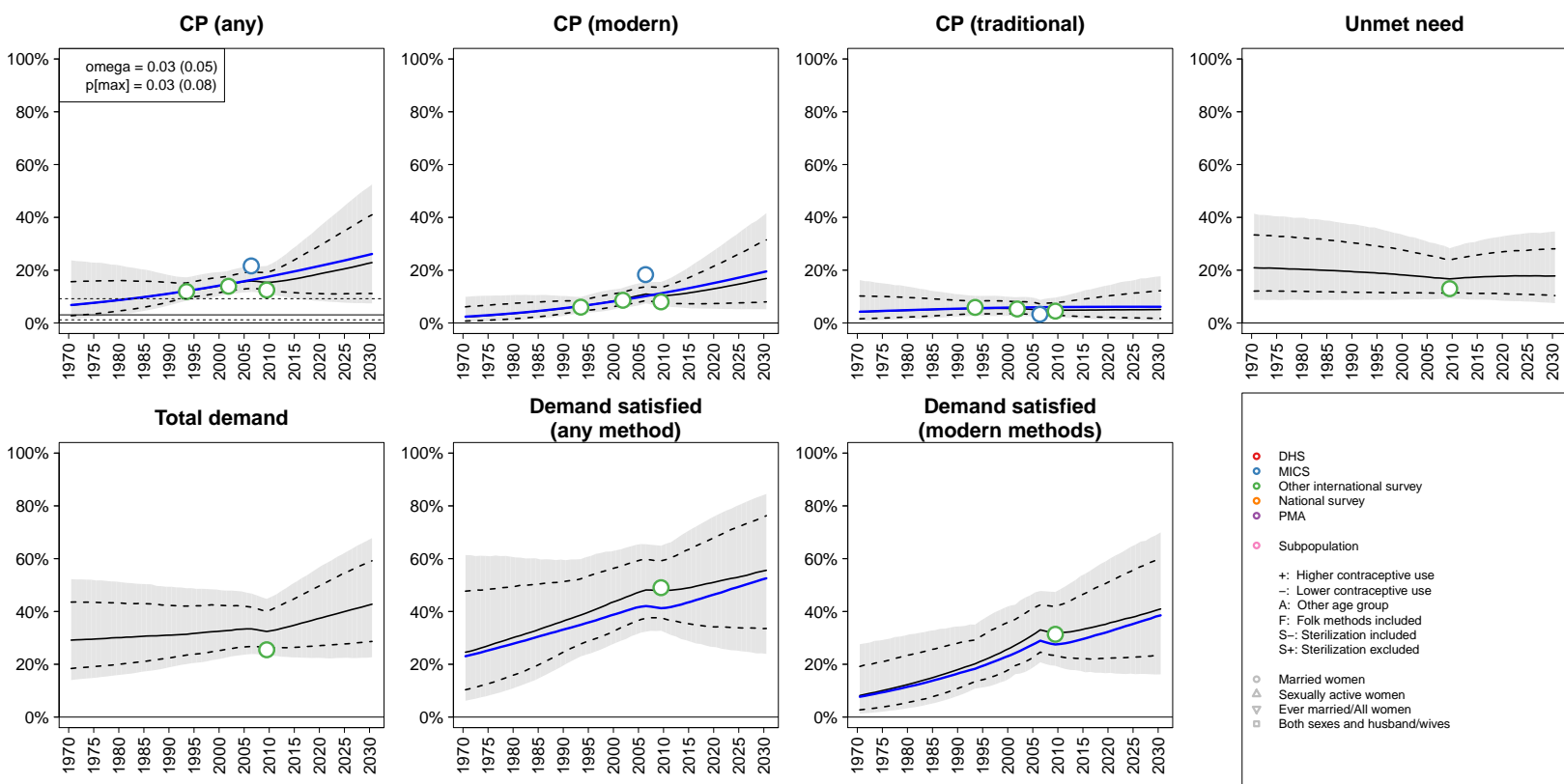
Sudan (Northern Africa) --- Married / In-Union



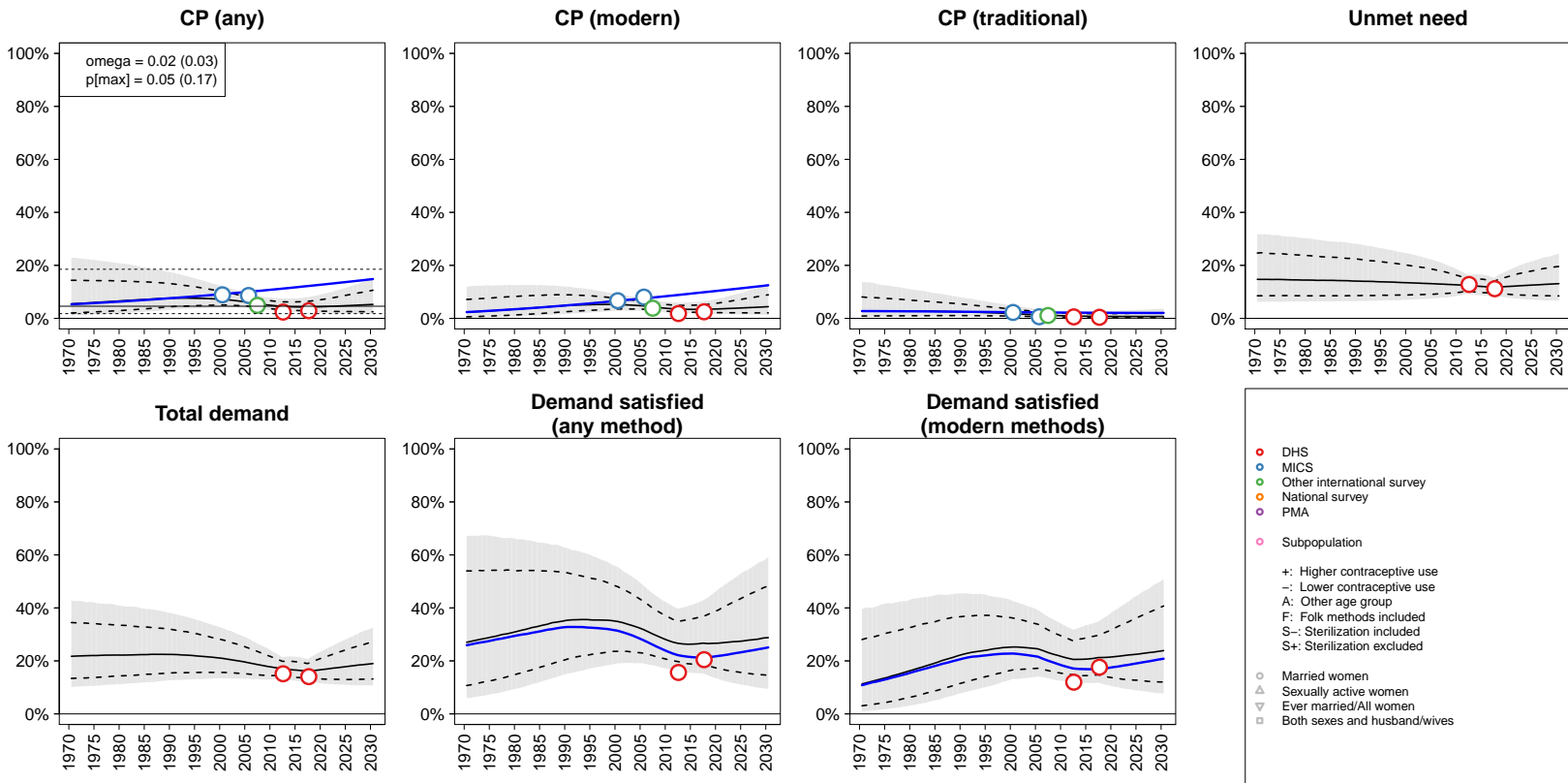
Suriname (South America) --- Married / In-Union



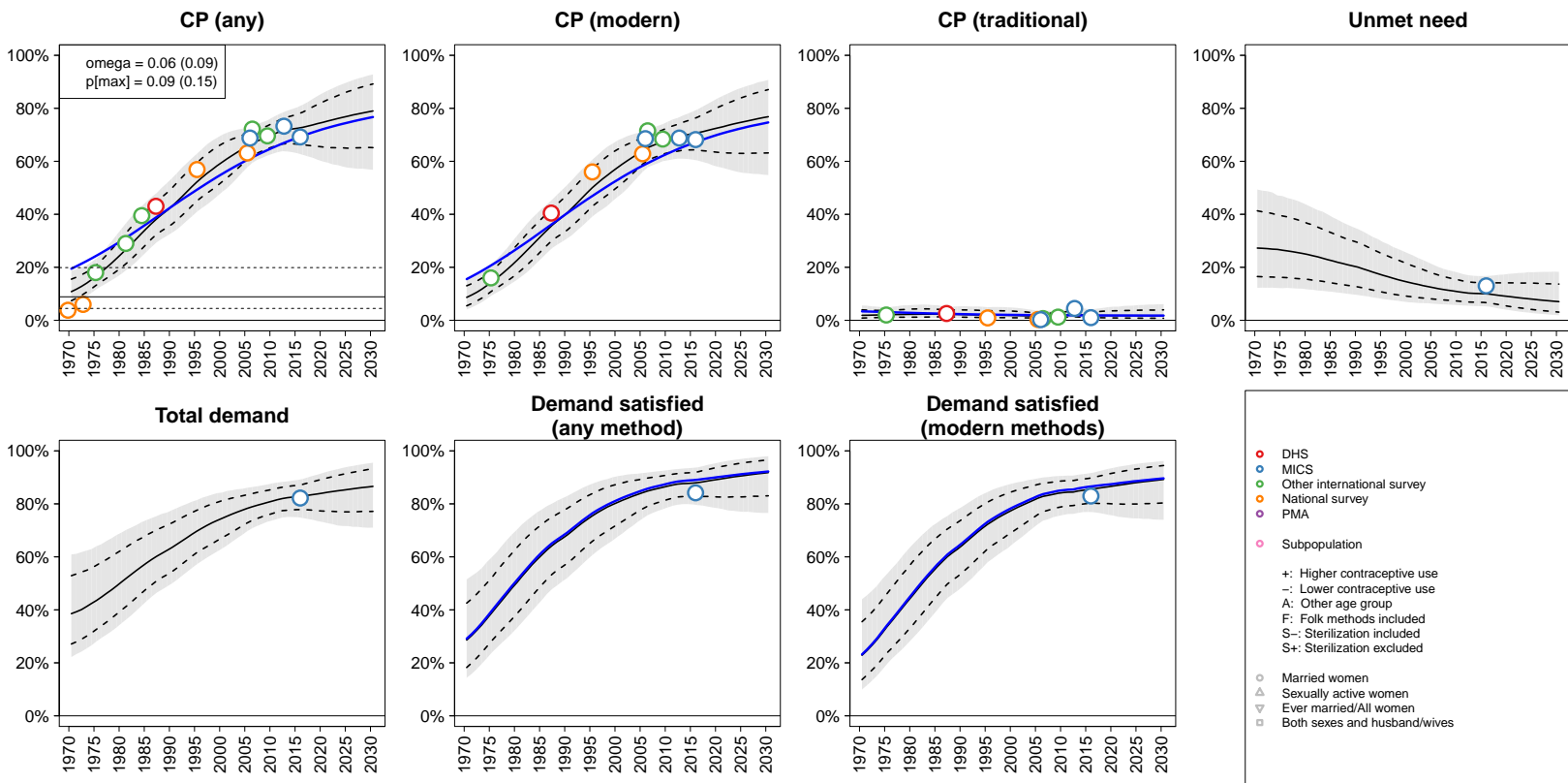
Syrian Arab Republic (Western Asia) --- Married / In-Union



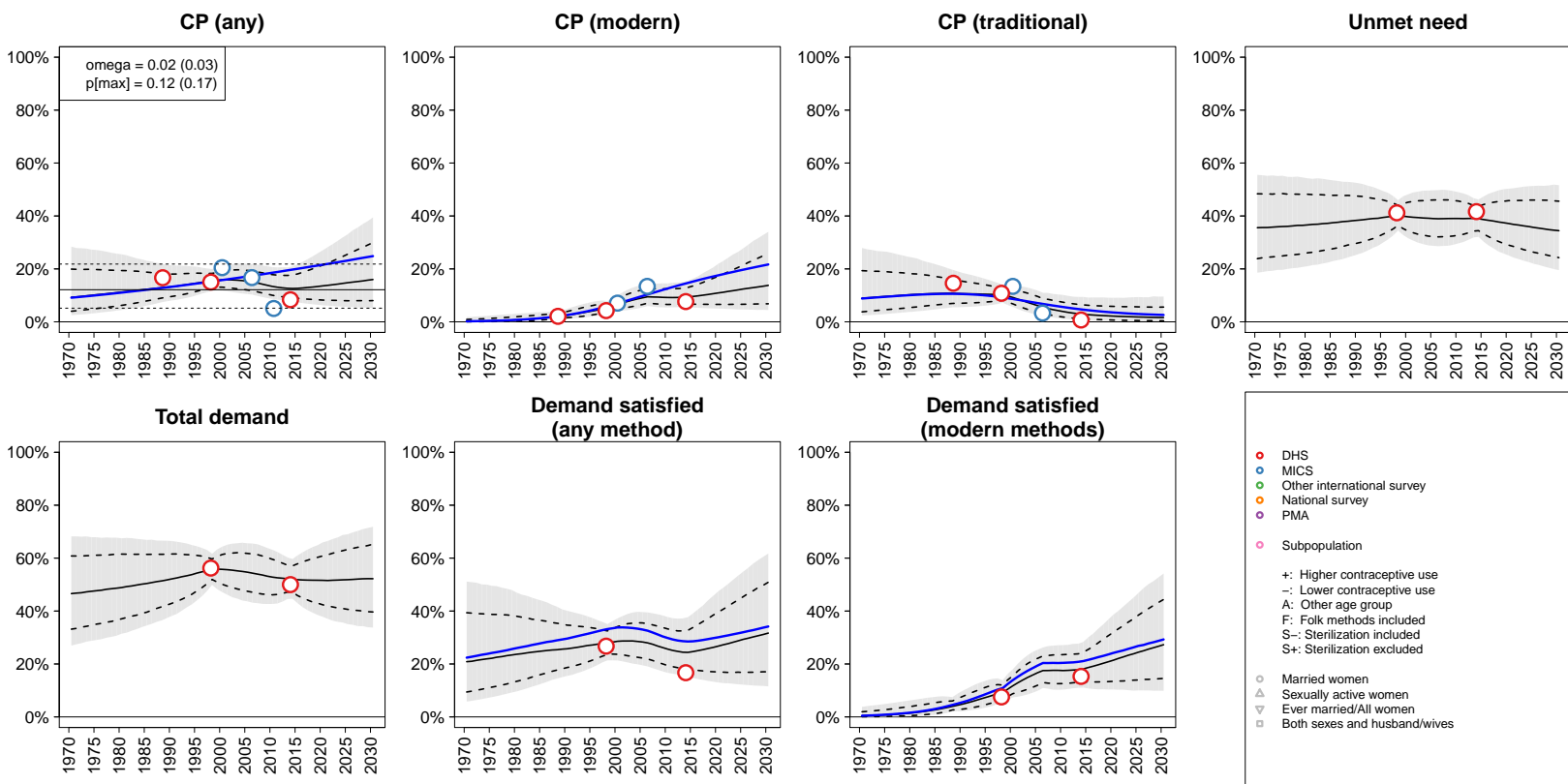
Tajikistan (Central Asia) --- Married / In-Union



Thailand (South-eastern Asia) --- Married / In-Union

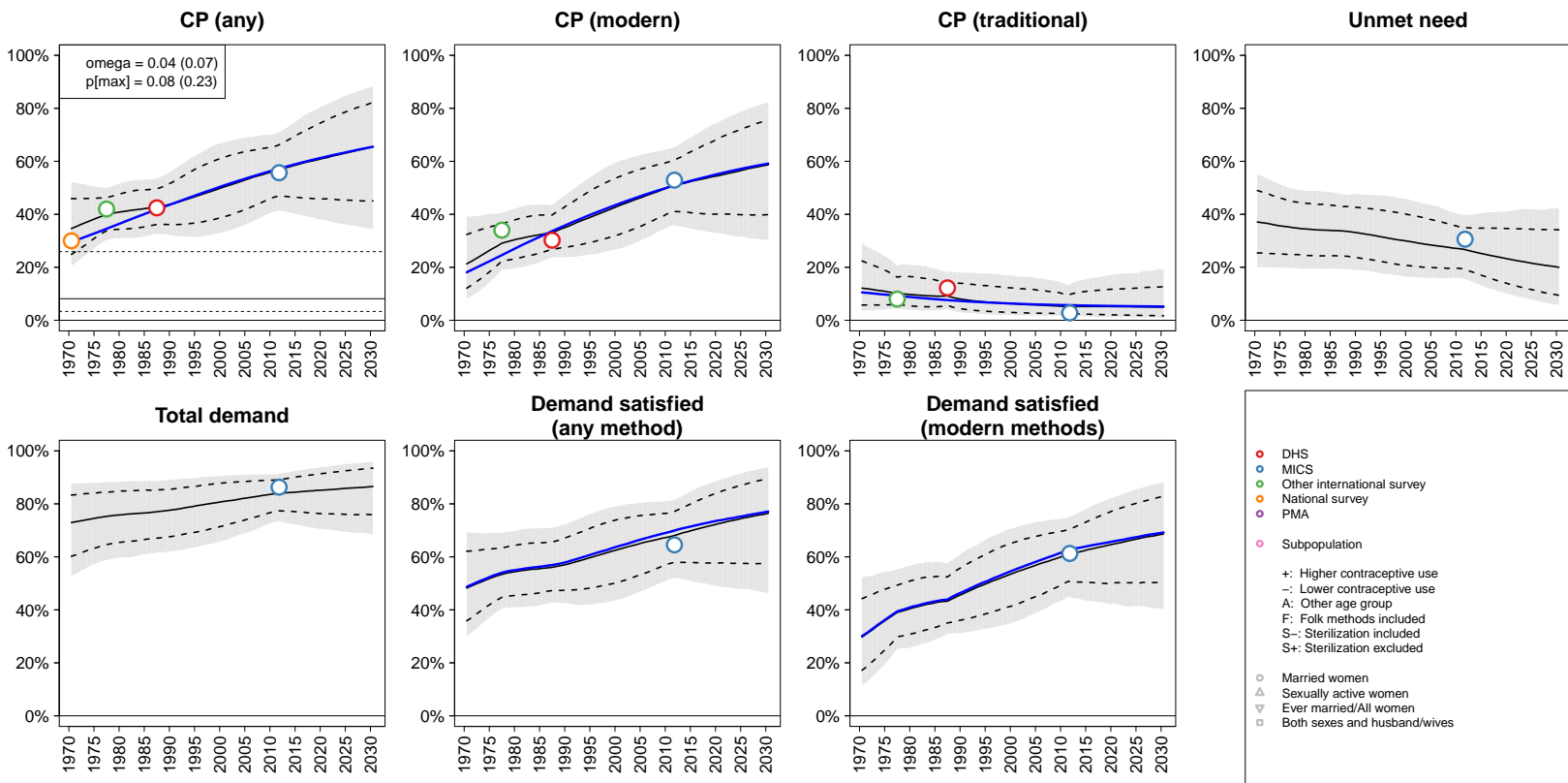


Togo (Western Africa) — Married / In-Union

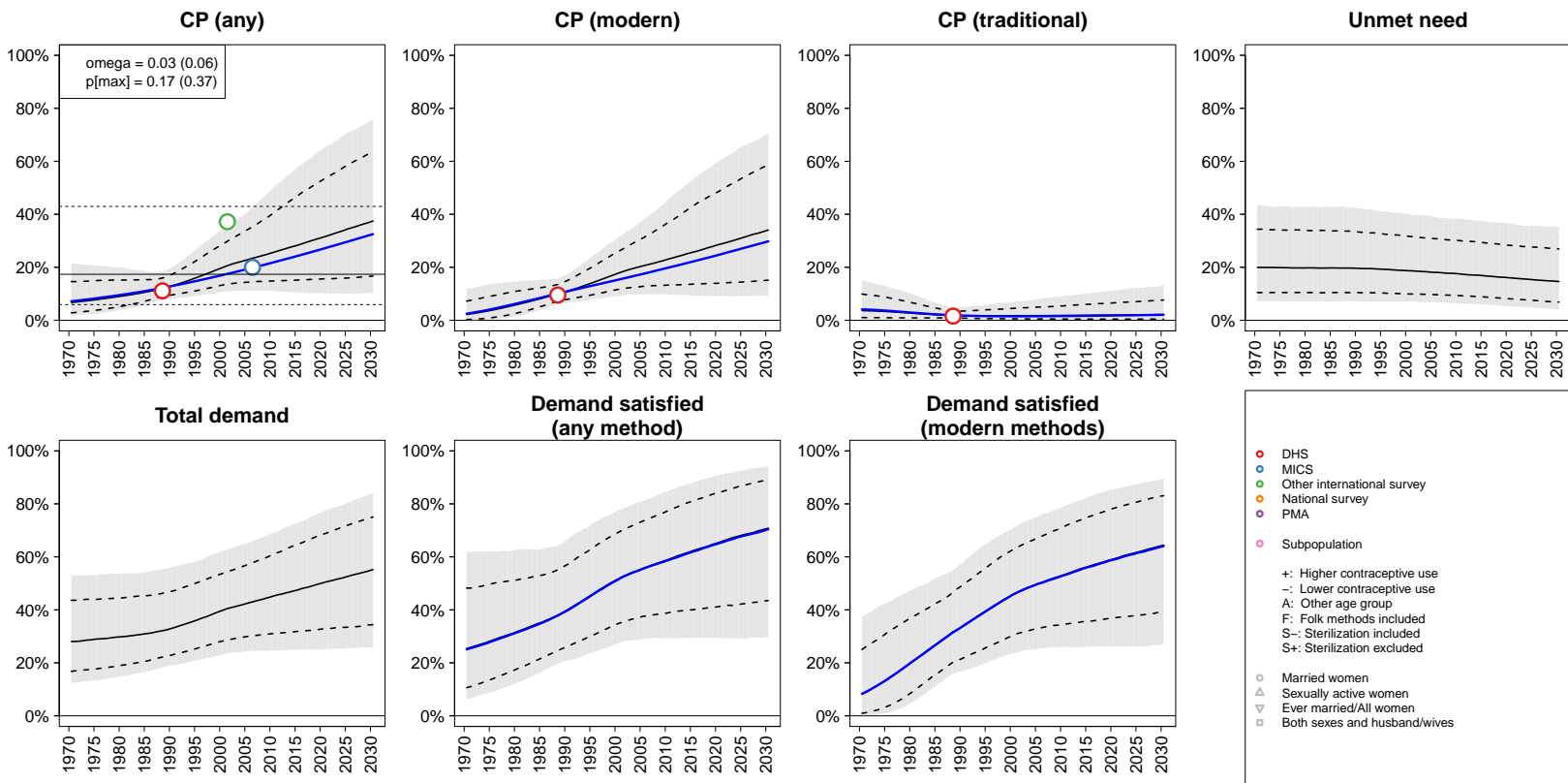




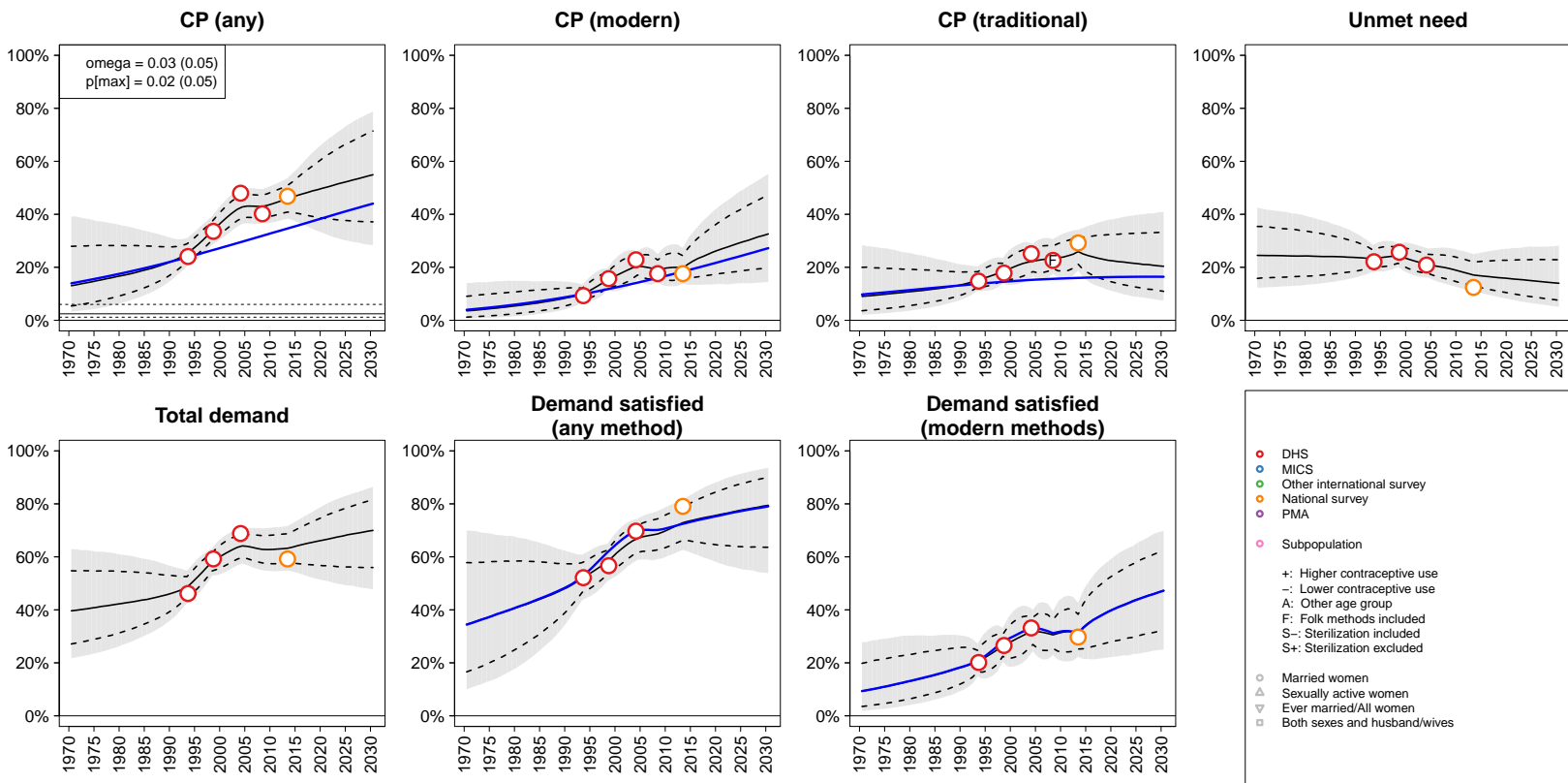
Trinidad and Tobago (Caribbean) --- Married / In-Union



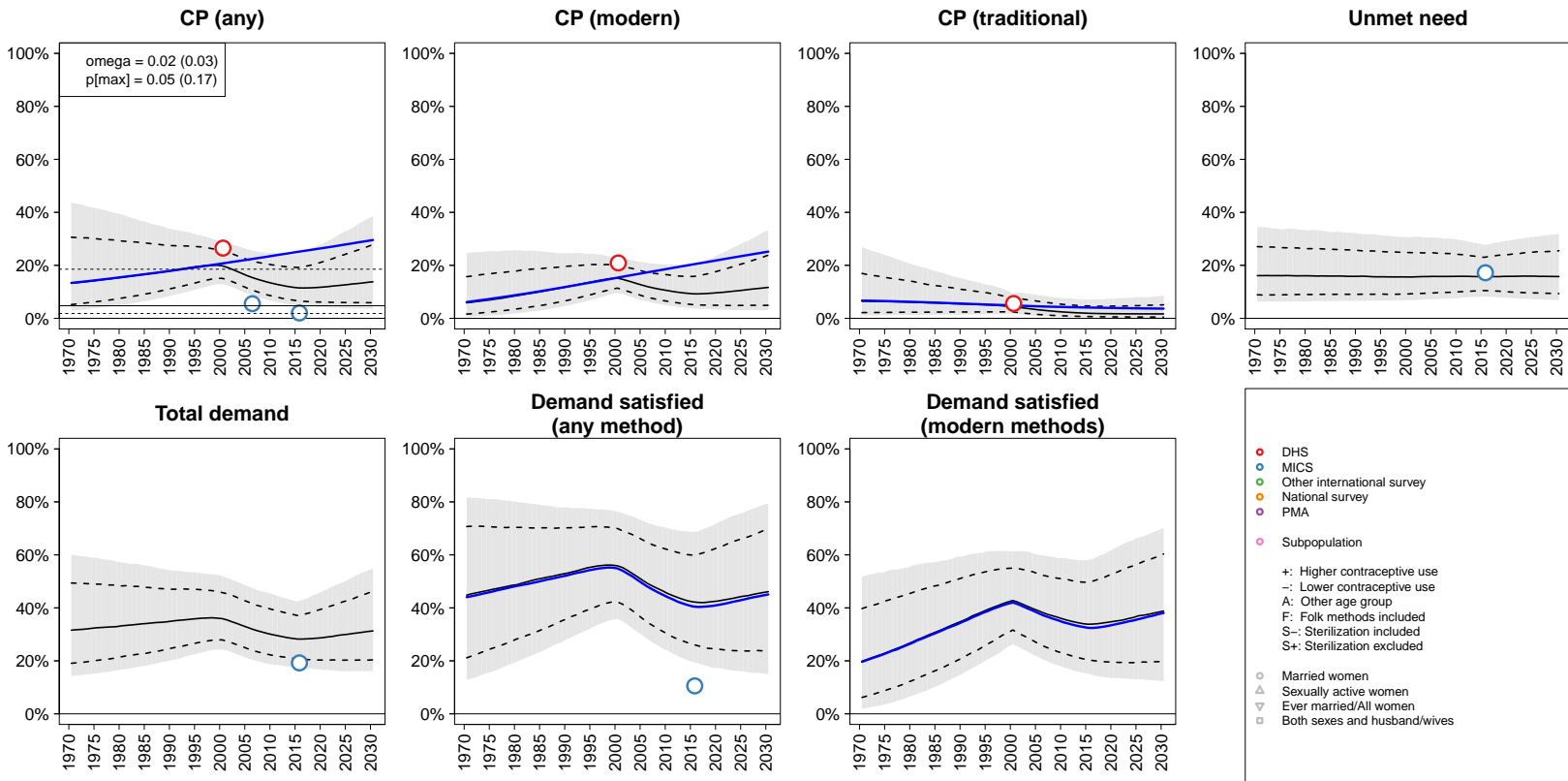
Tunisia (Northern Africa) — Married / In-Union



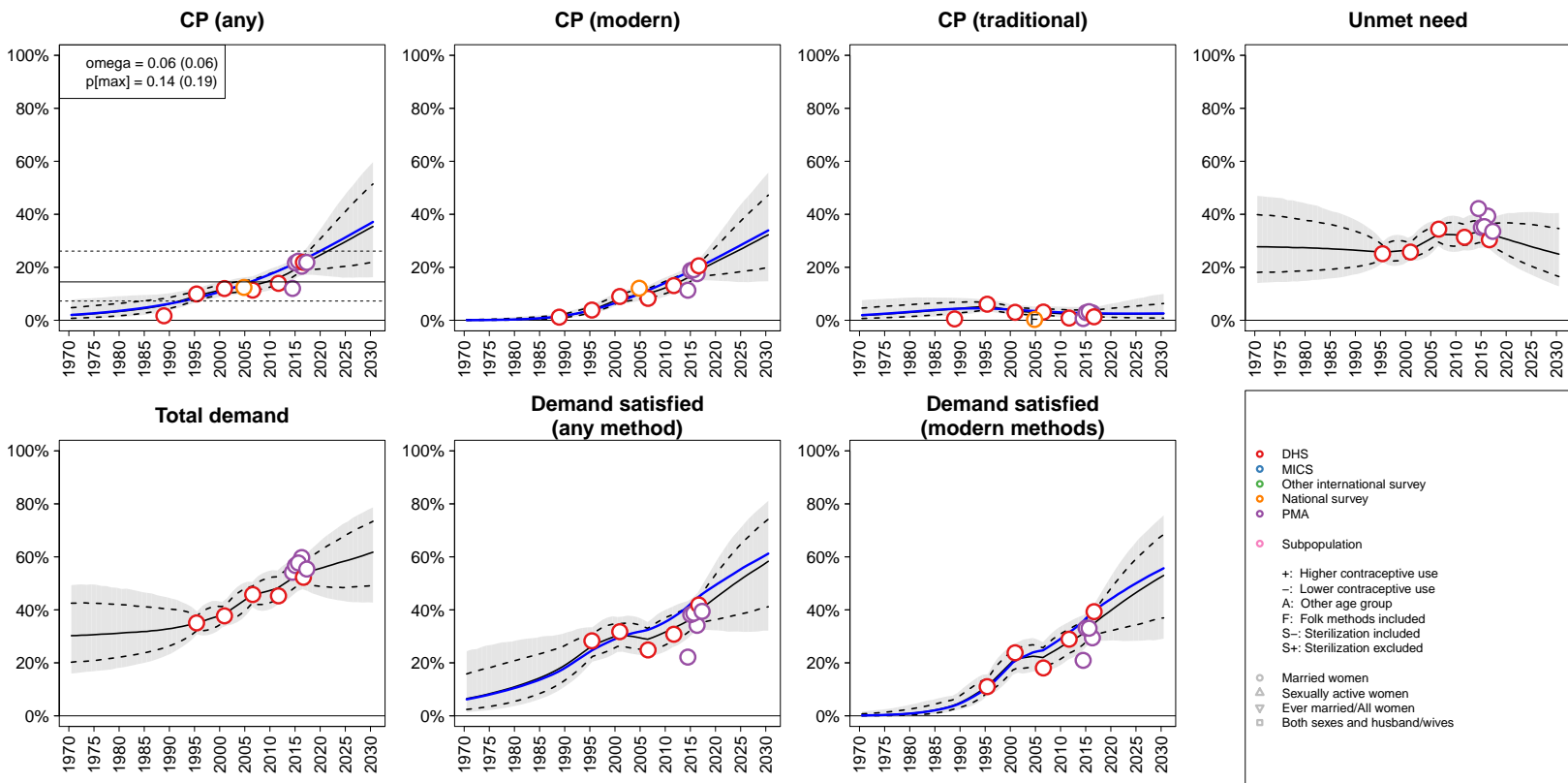
Turkey (Western Asia) --- Married / In-Union



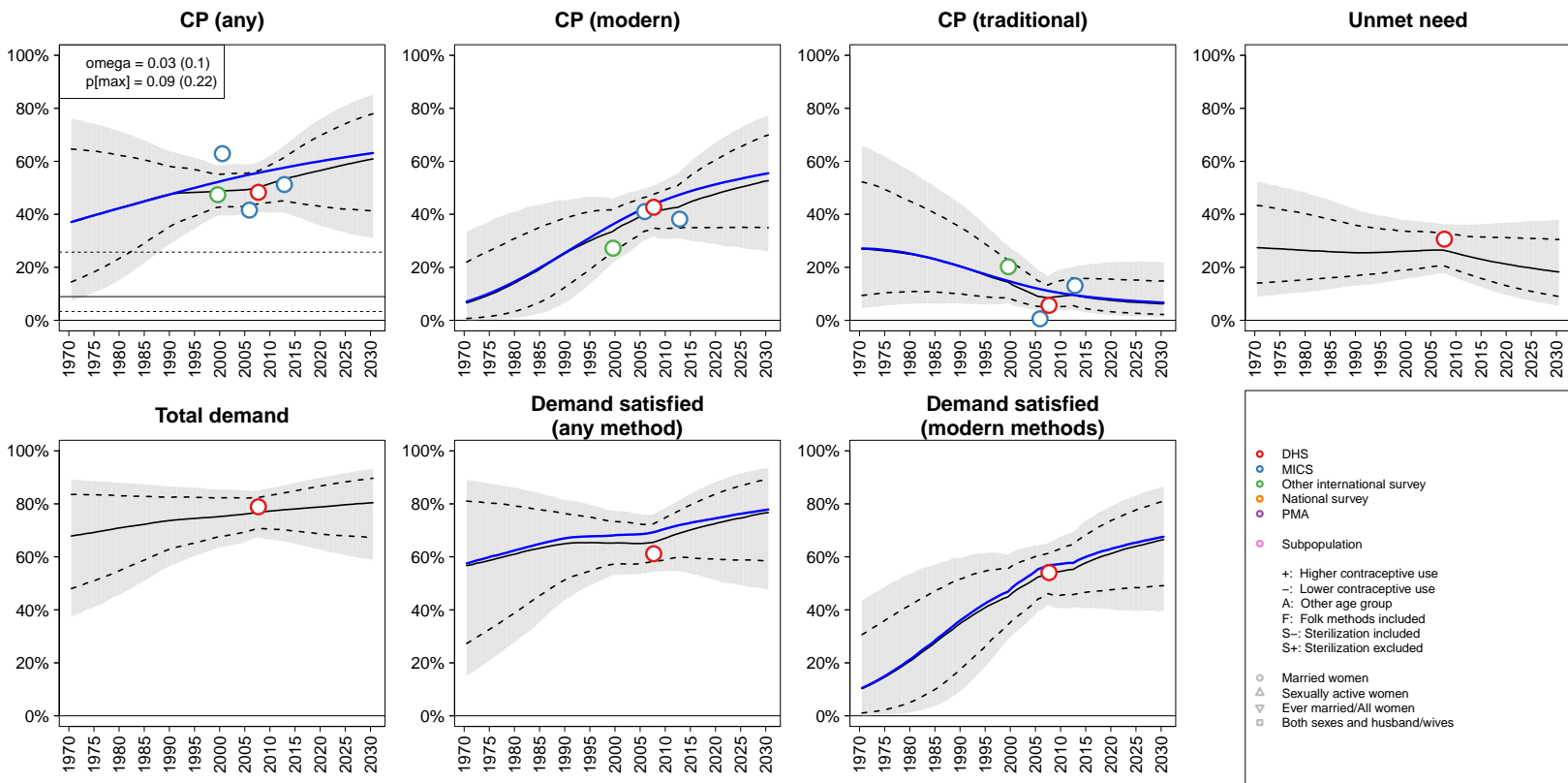
Turkmenistan (Central Asia) --- Married / In-Union



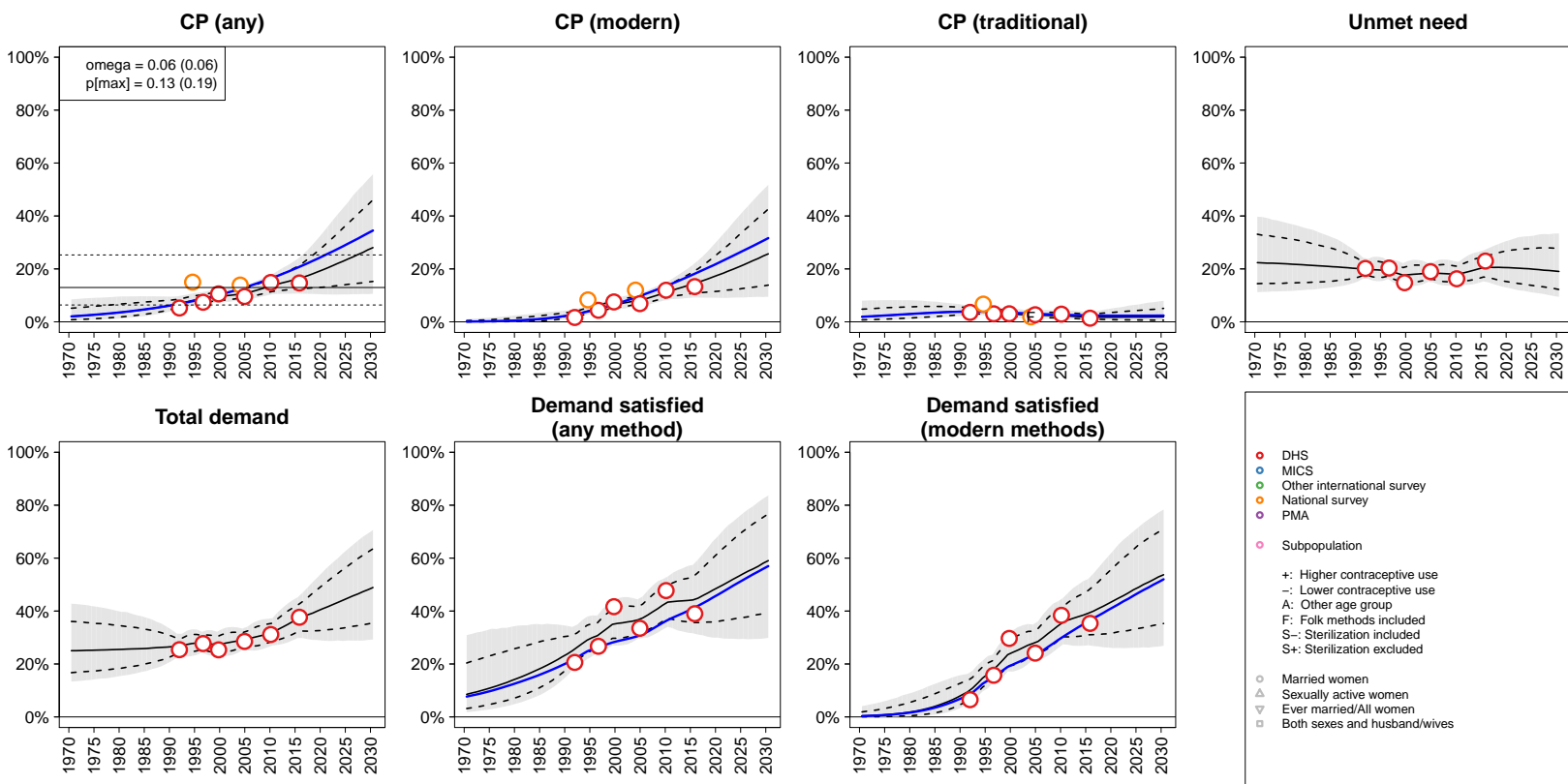
Uganda (Eastern Africa) --- Married / In-Union



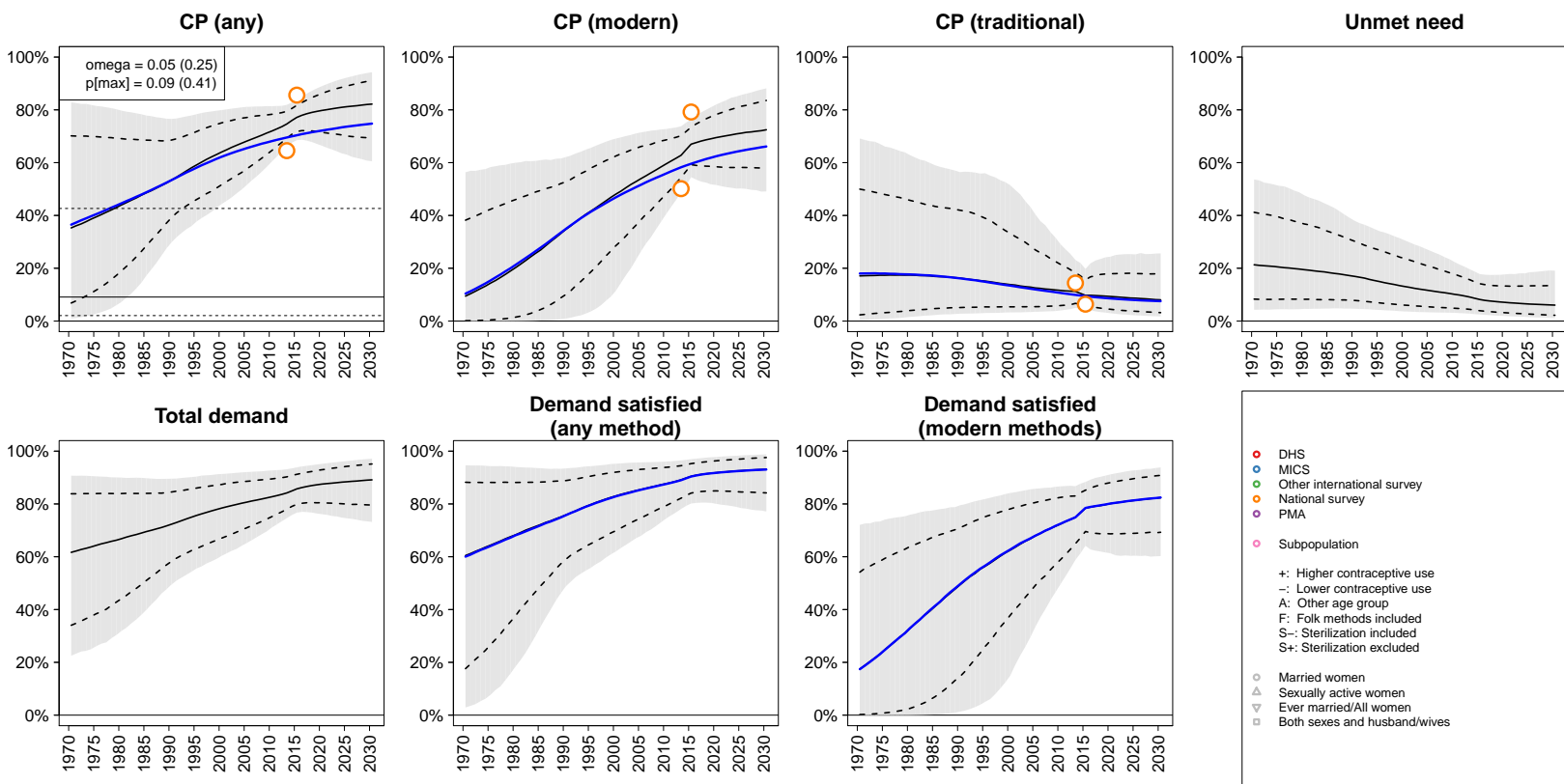
Ukraine (Eastern Europe) --- Married / In-Union



United Rep. of Tanzania (Eastern Africa) — Married / In-Union

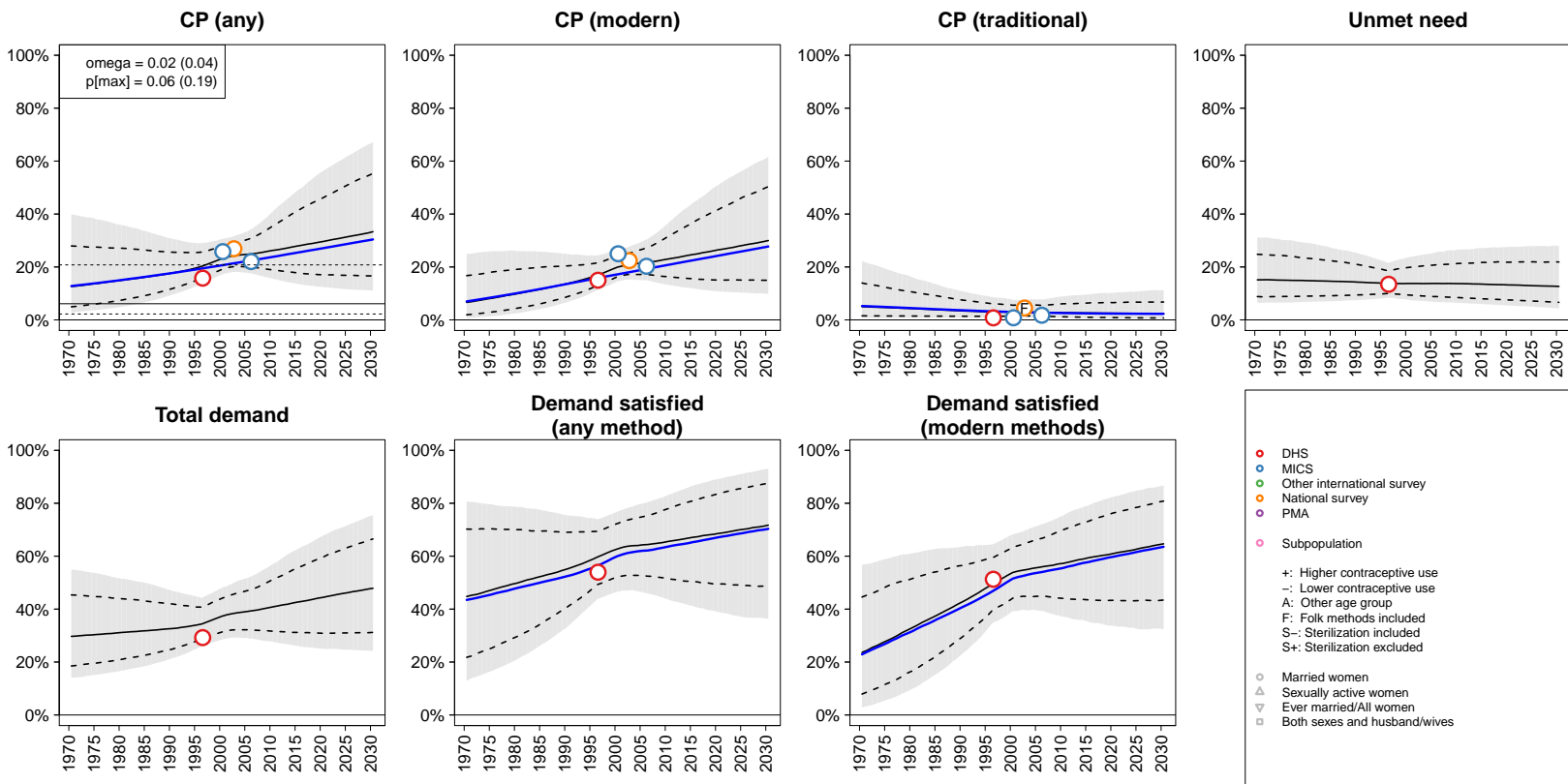


United States of America (Northern America) --- Married / In-Union

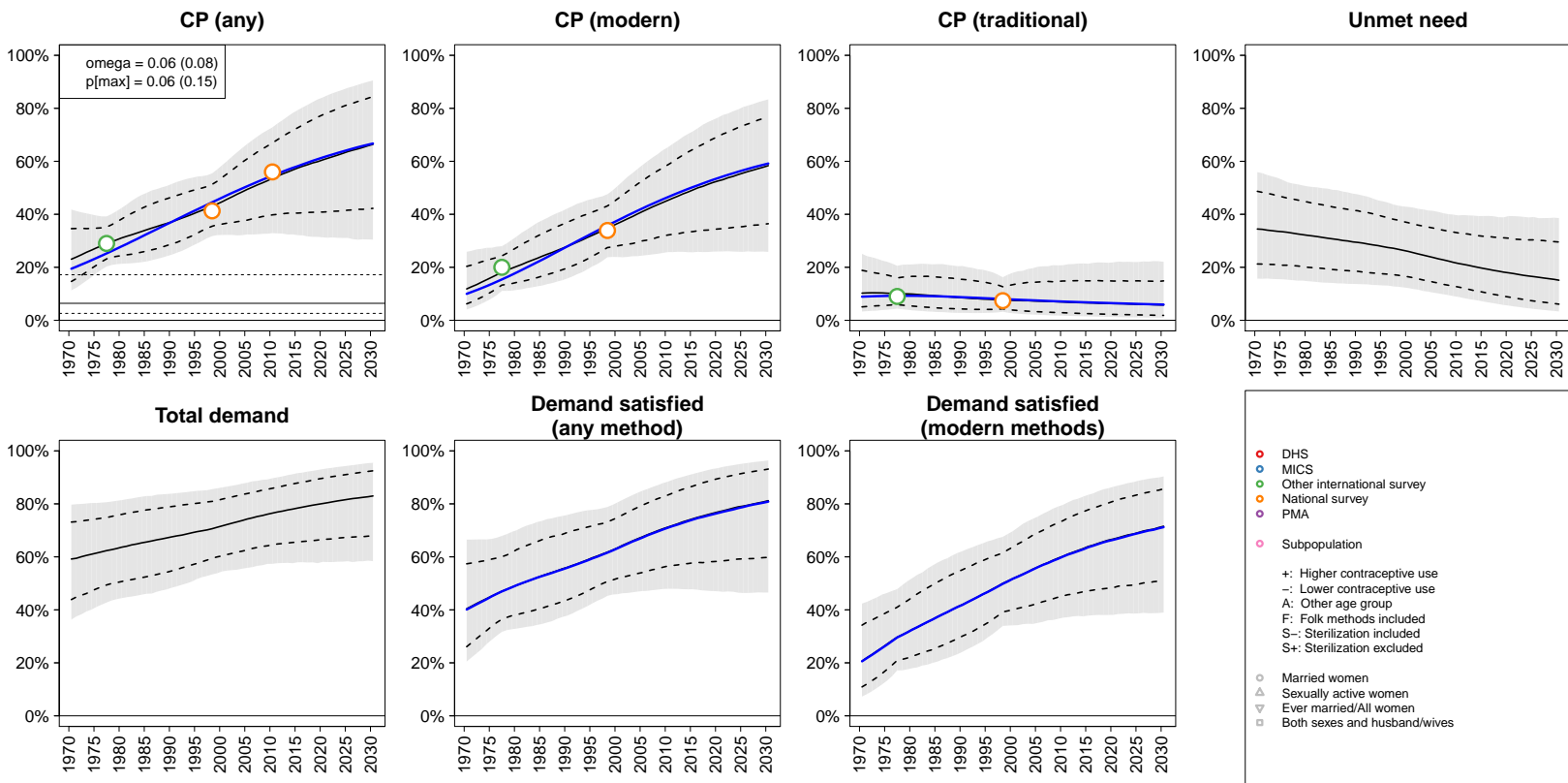




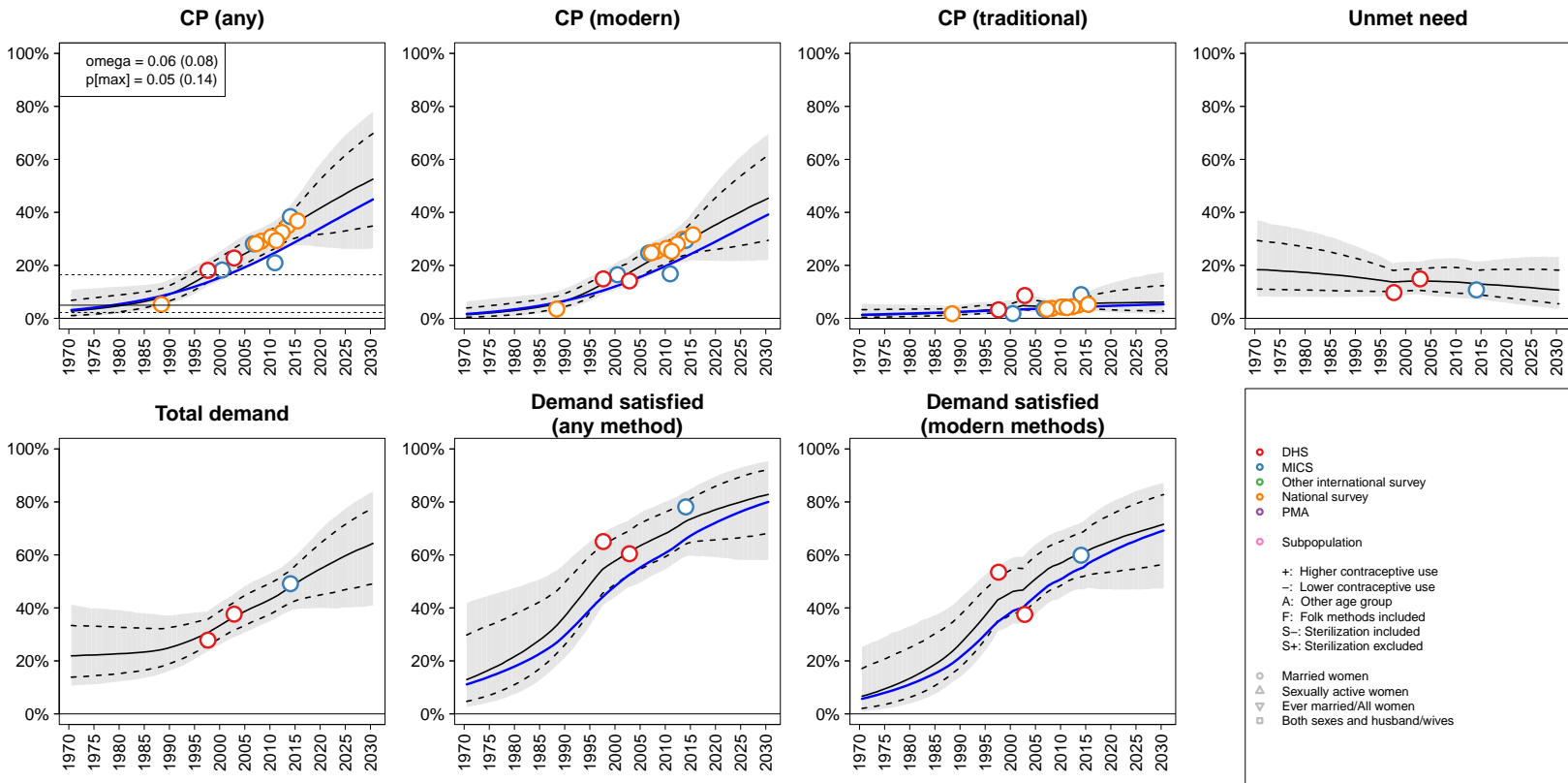
Uzbekistan (Central Asia) --- Married / In-Union



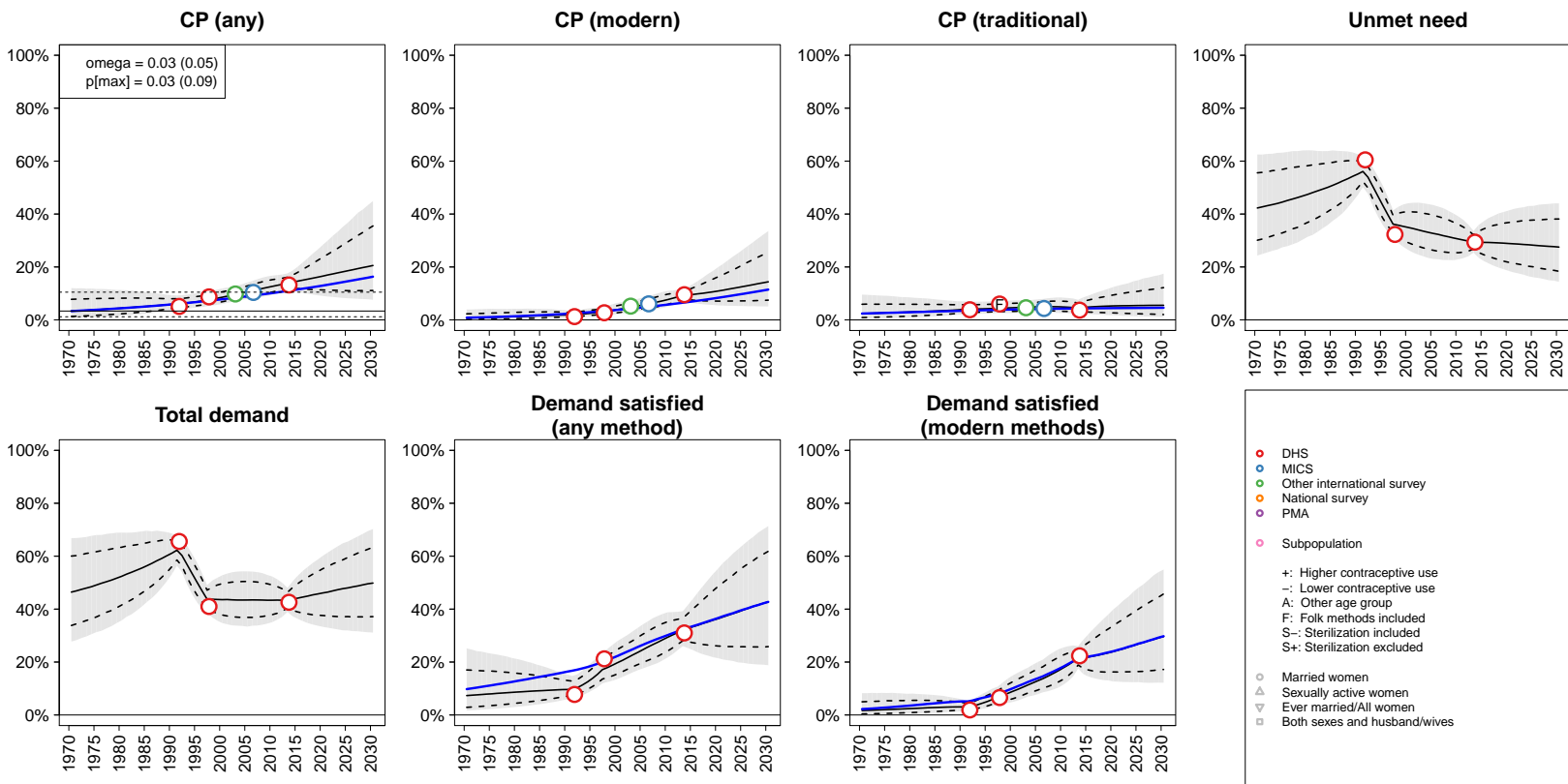
Venezuela, Bolivarian Republic of (South America) --- Married / In-Union



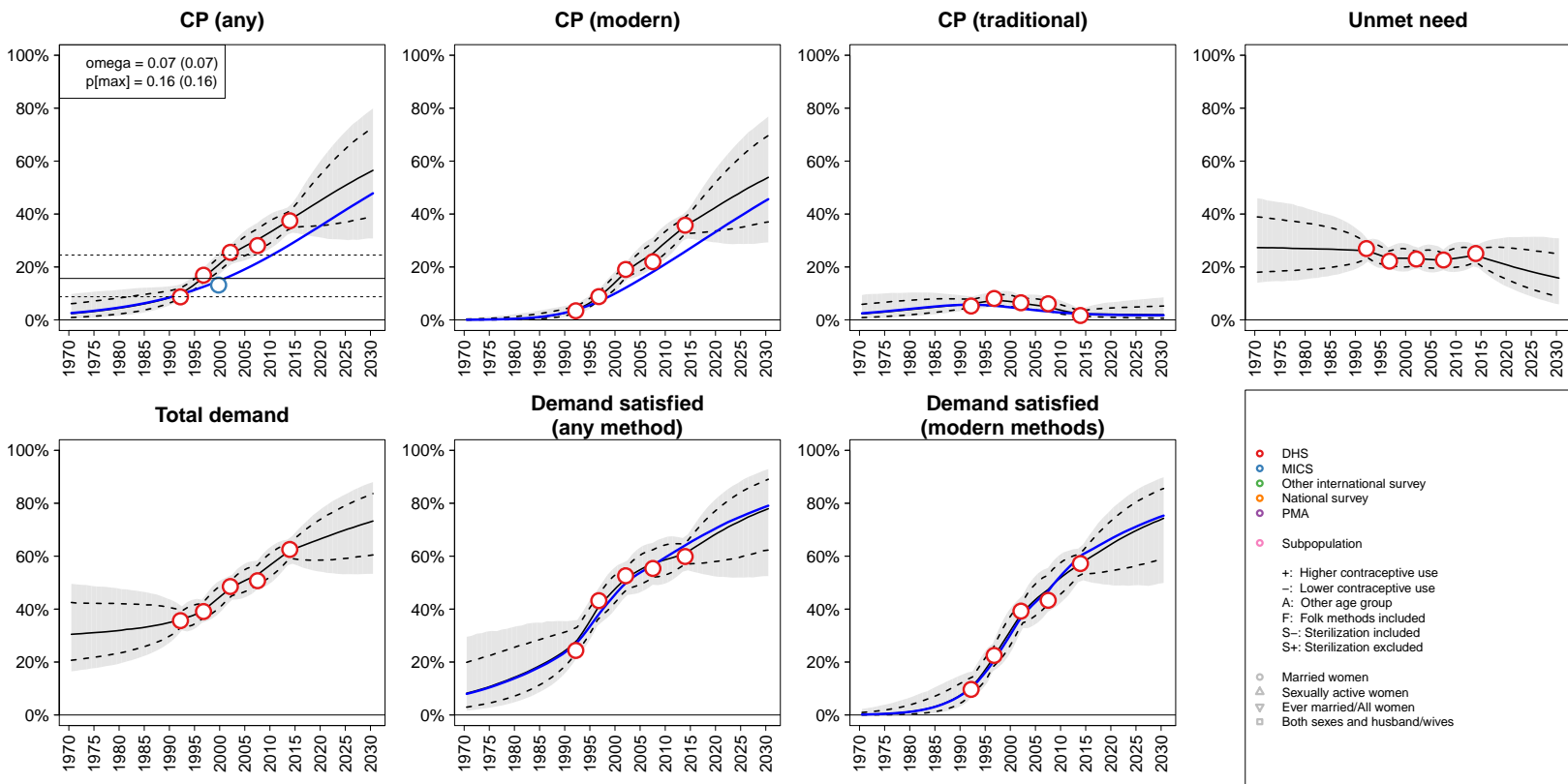
Viet Nam (South-eastern Asia) --- Married / In-Union



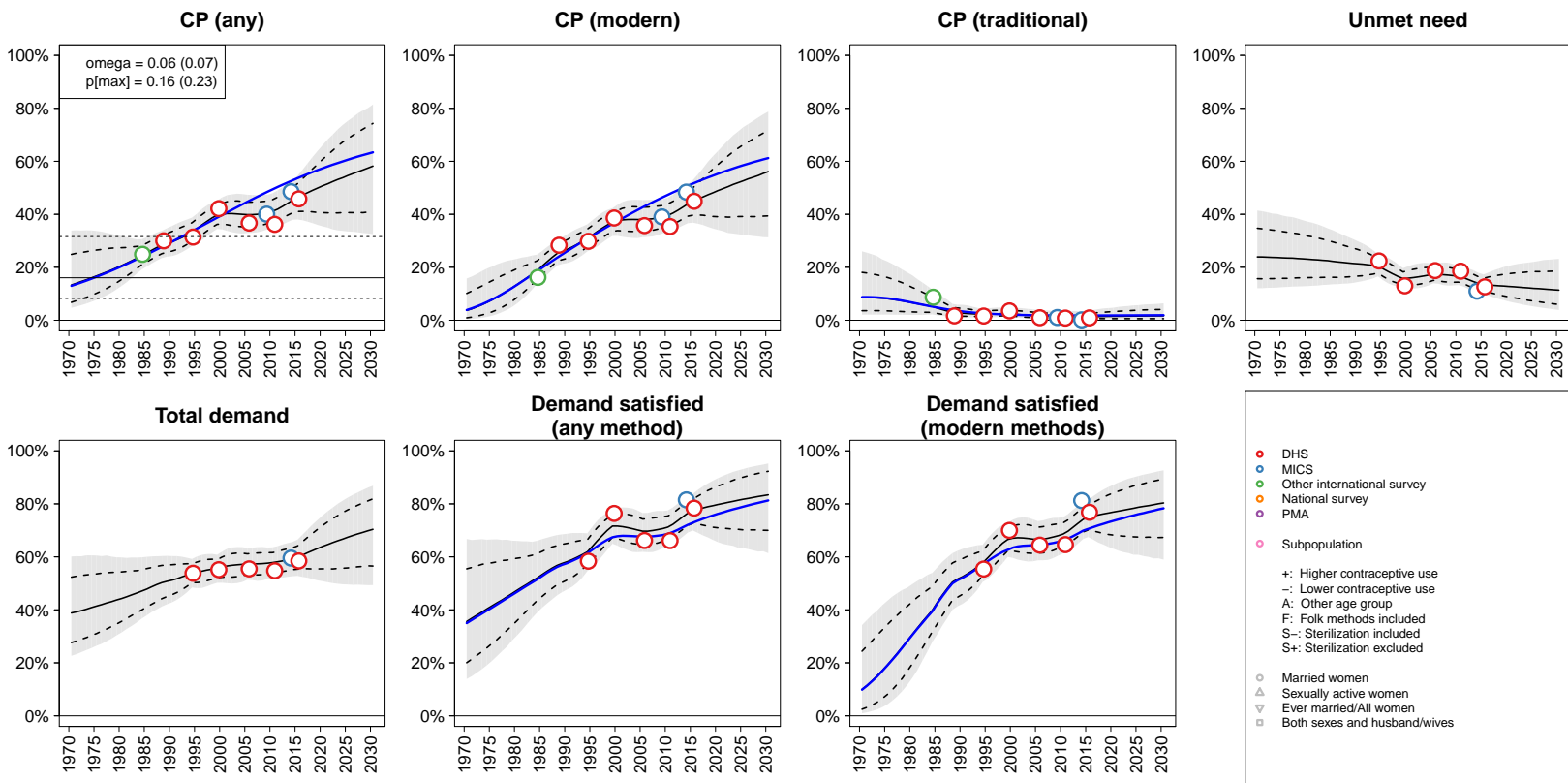
Yemen (Western Asia) --- Married / In-Union



Zambia (Eastern Africa) --- Married / In-Union

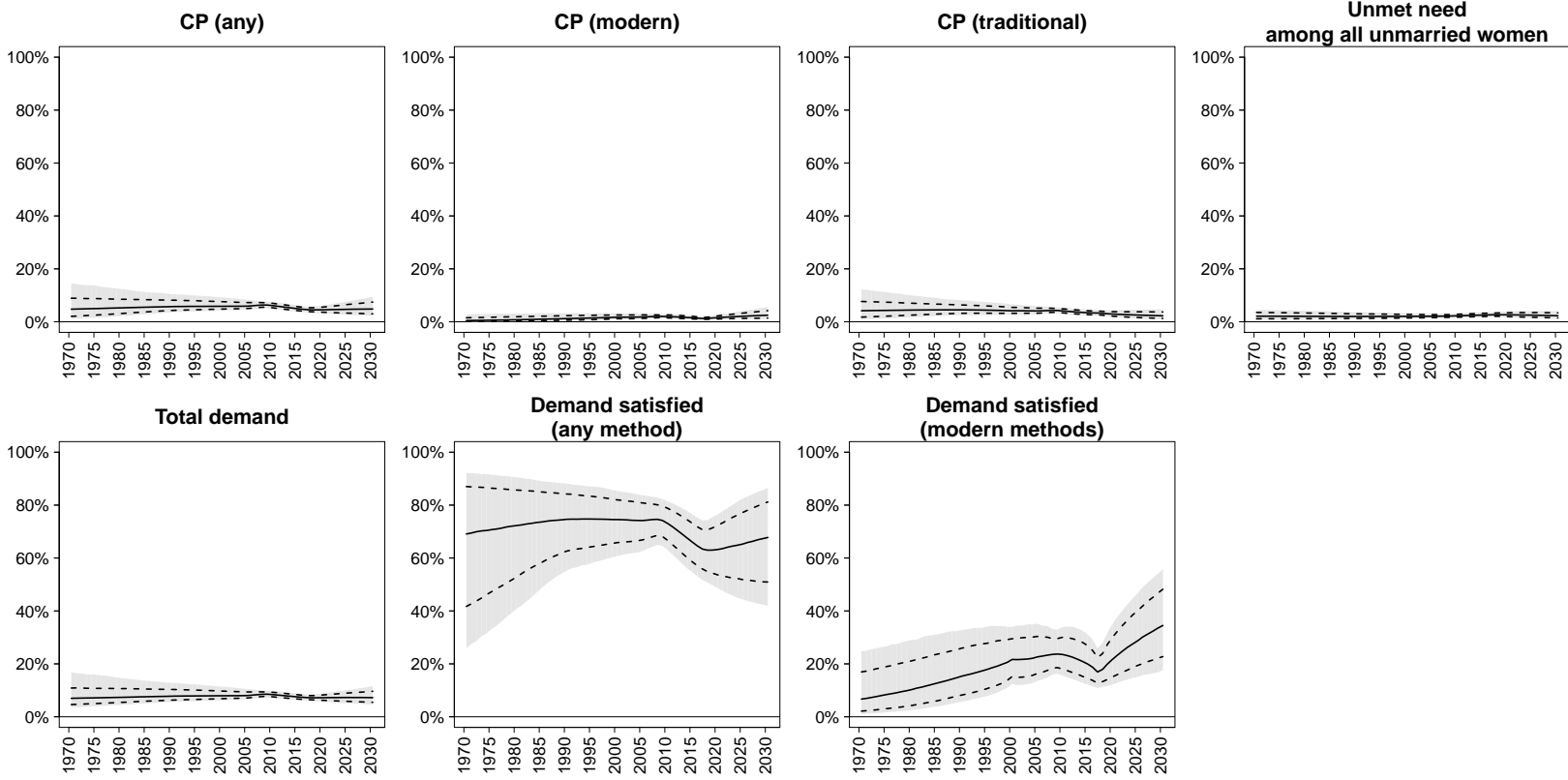


Zimbabwe (Eastern Africa) --- Married / In-Union



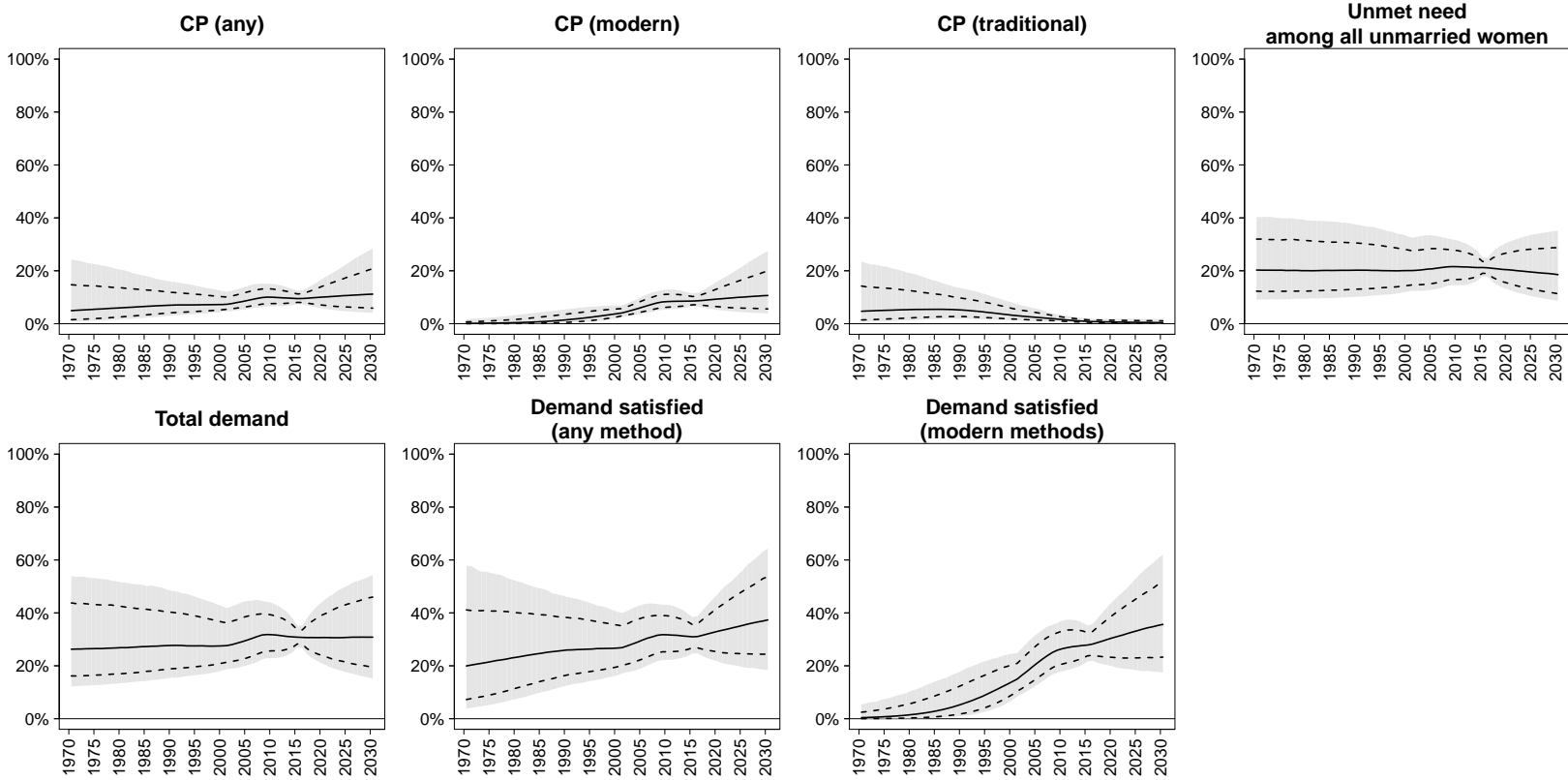
### 4.3 All Adolescent Women

Albania ---- All women

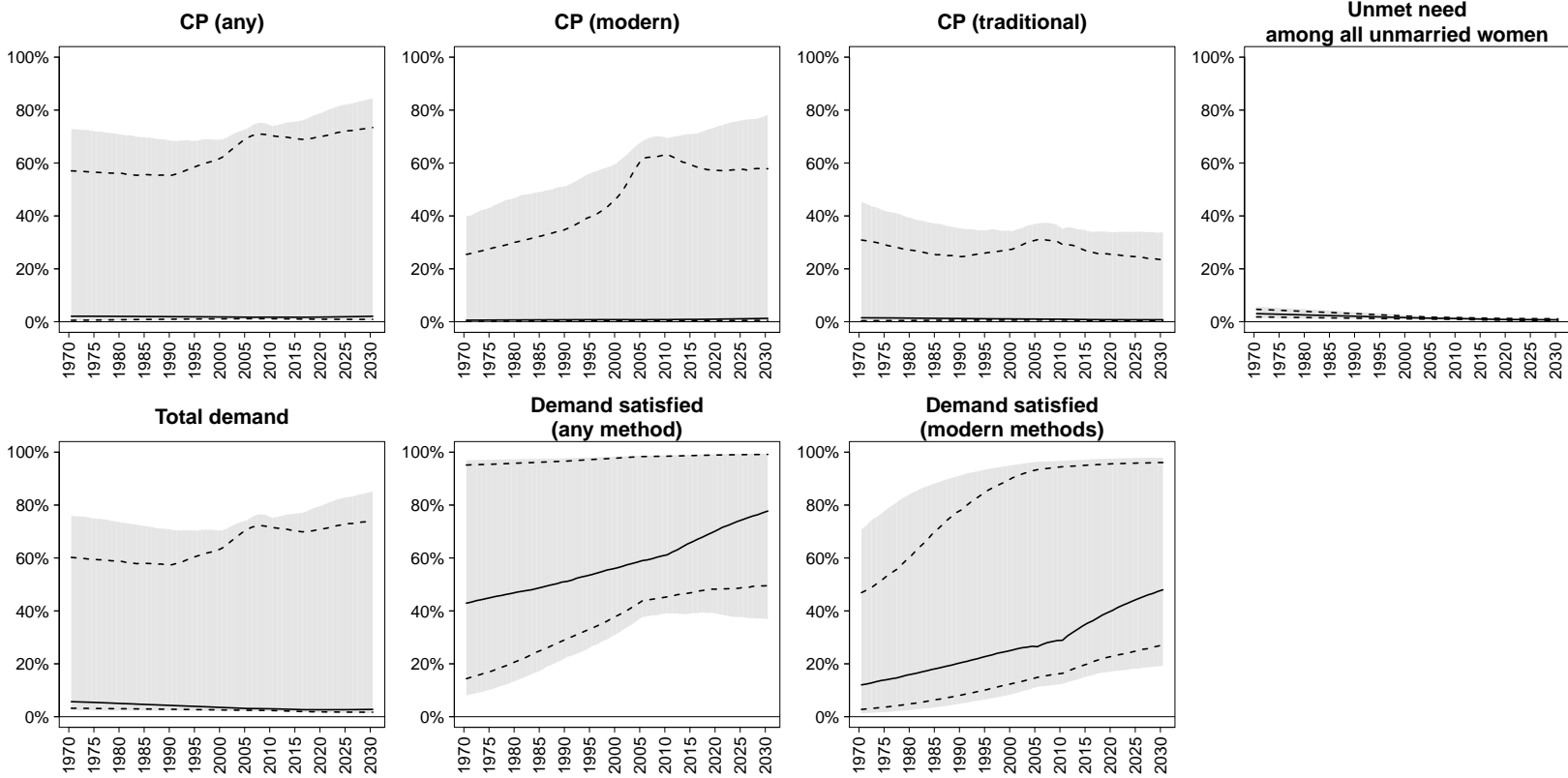




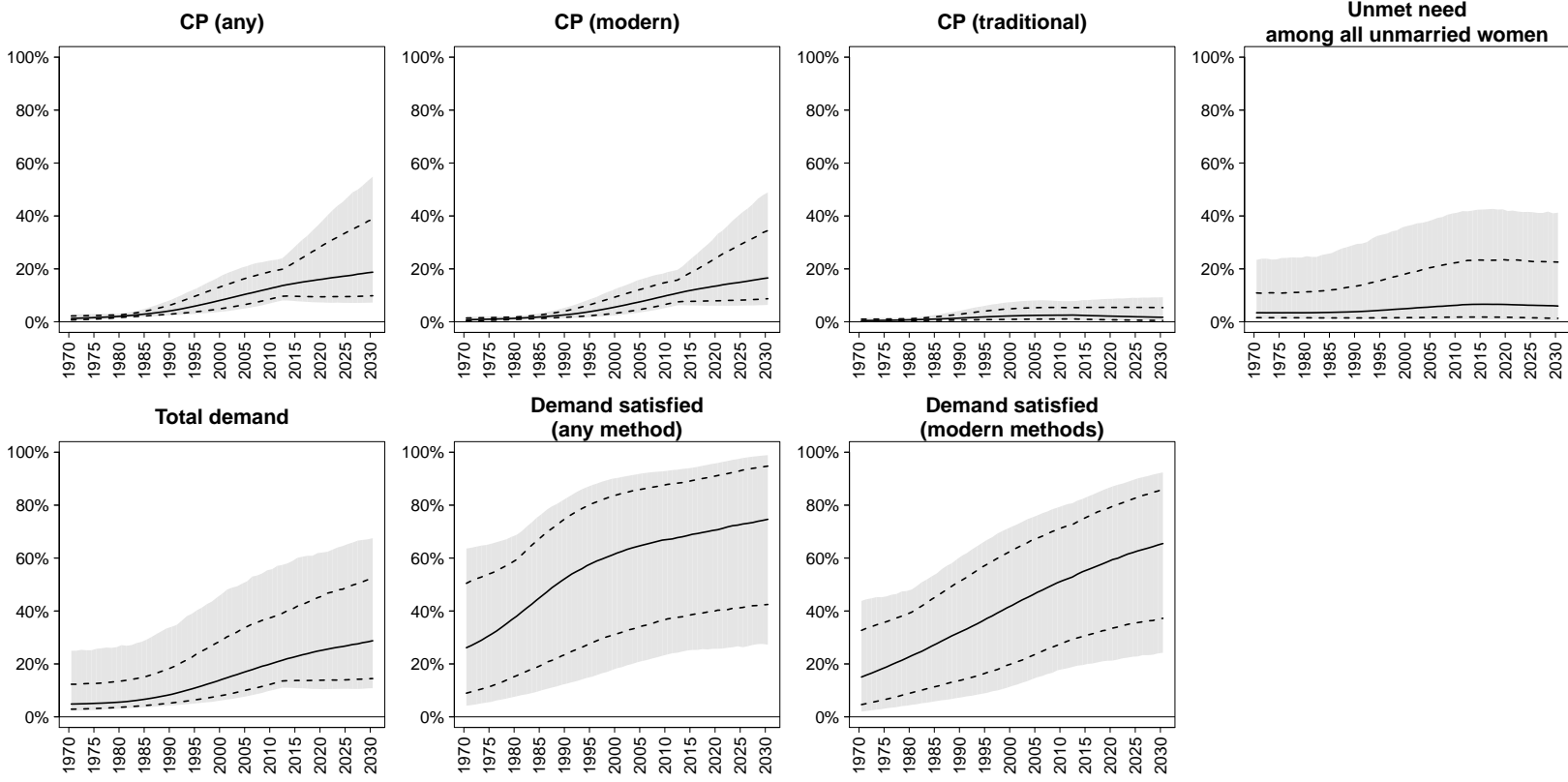
Angola --- All women



Armenia --- All women

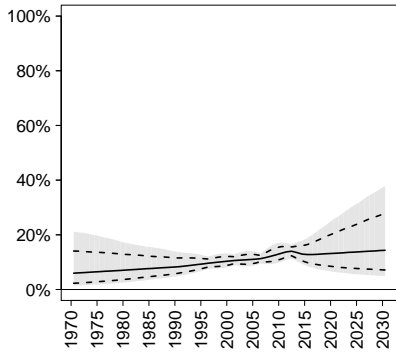


Barbados --- All women

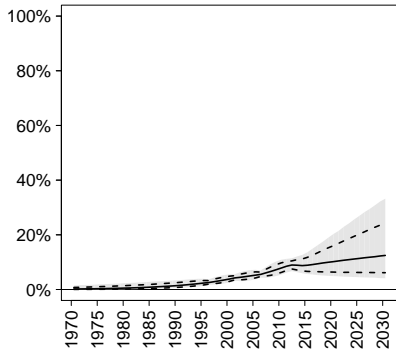


Benin --- All women

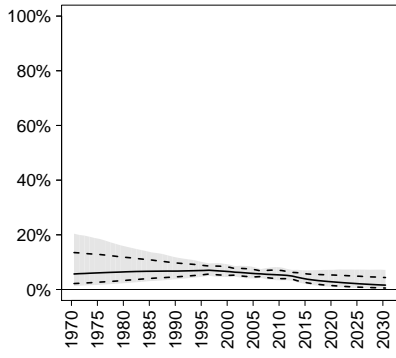
CP (any)



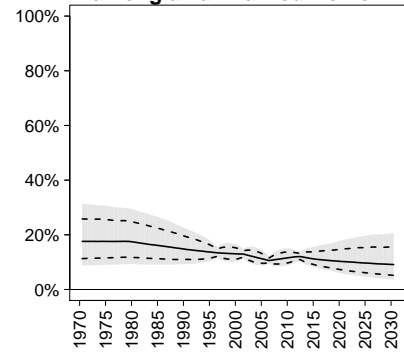
CP (modern)



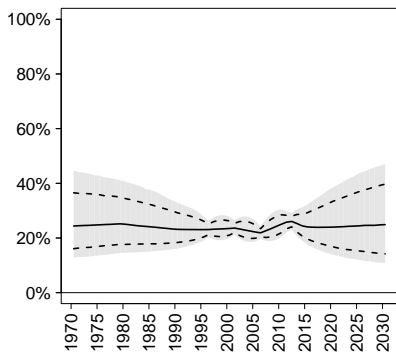
CP (traditional)



Unmet need among all unmarried women



Total demand



Bolivia (Plurinational State of) — All women

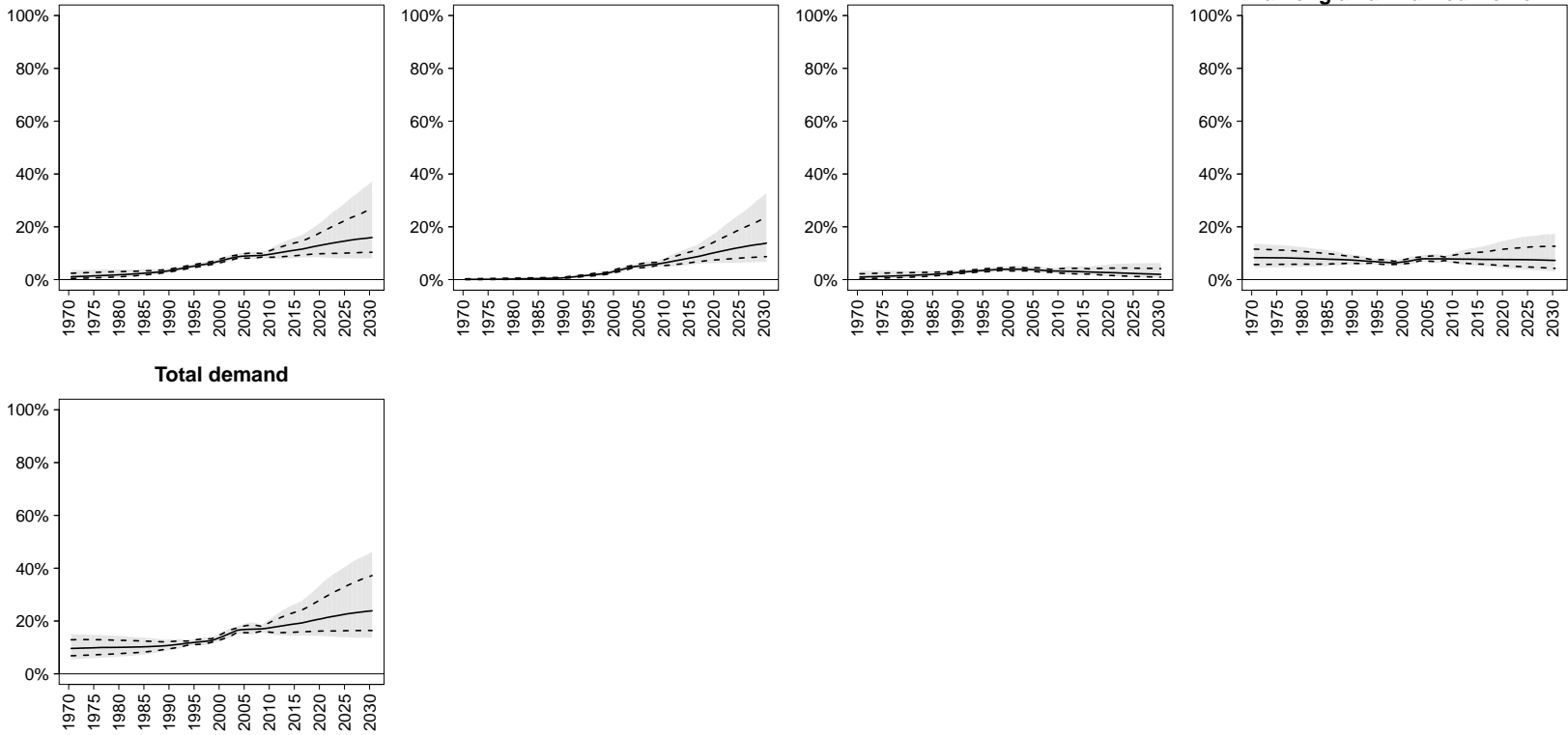
CP (any)

CP (modern)

CP (traditional)

Unmet need among all unmarried women

Total demand



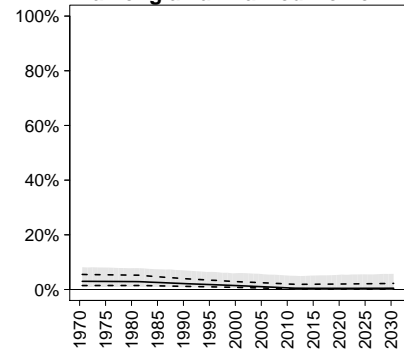
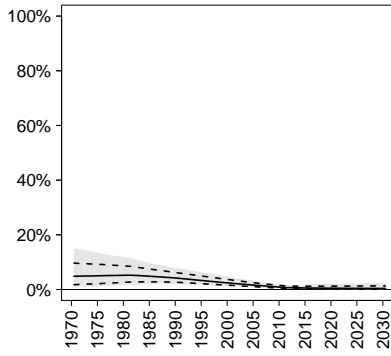
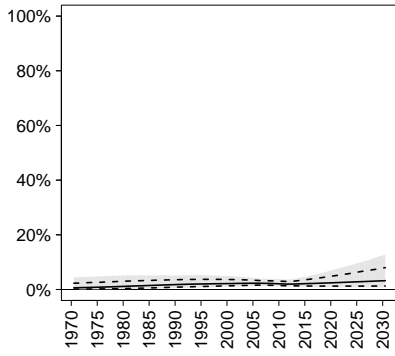
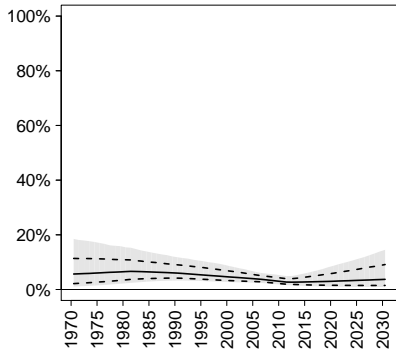
Bosnia and Herzegovina ---- All women

CP (any)

CP (modern)

CP (traditional)

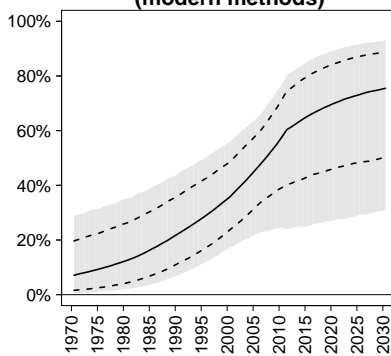
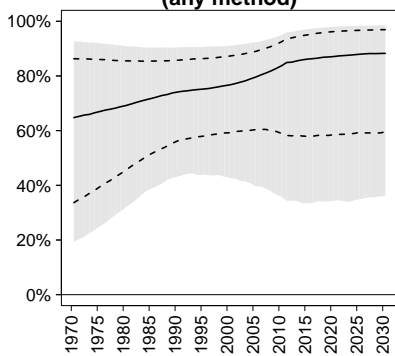
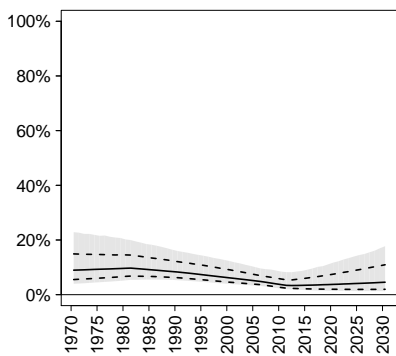
Unmet need among all unmarried women



Total demand

Demand satisfied (any method)

Demand satisfied (modern methods)



Brazil --- All women

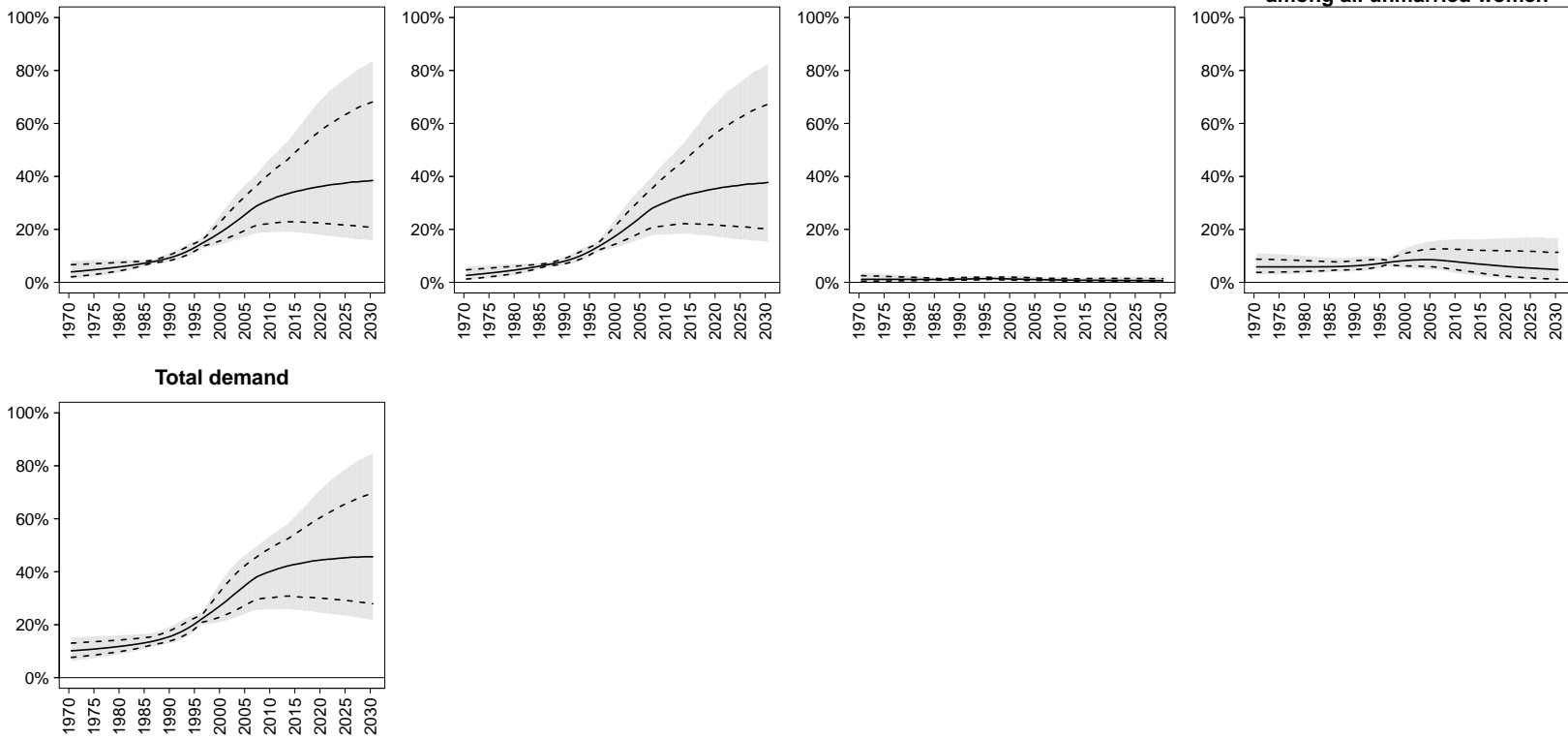
CP (any)

CP (modern)

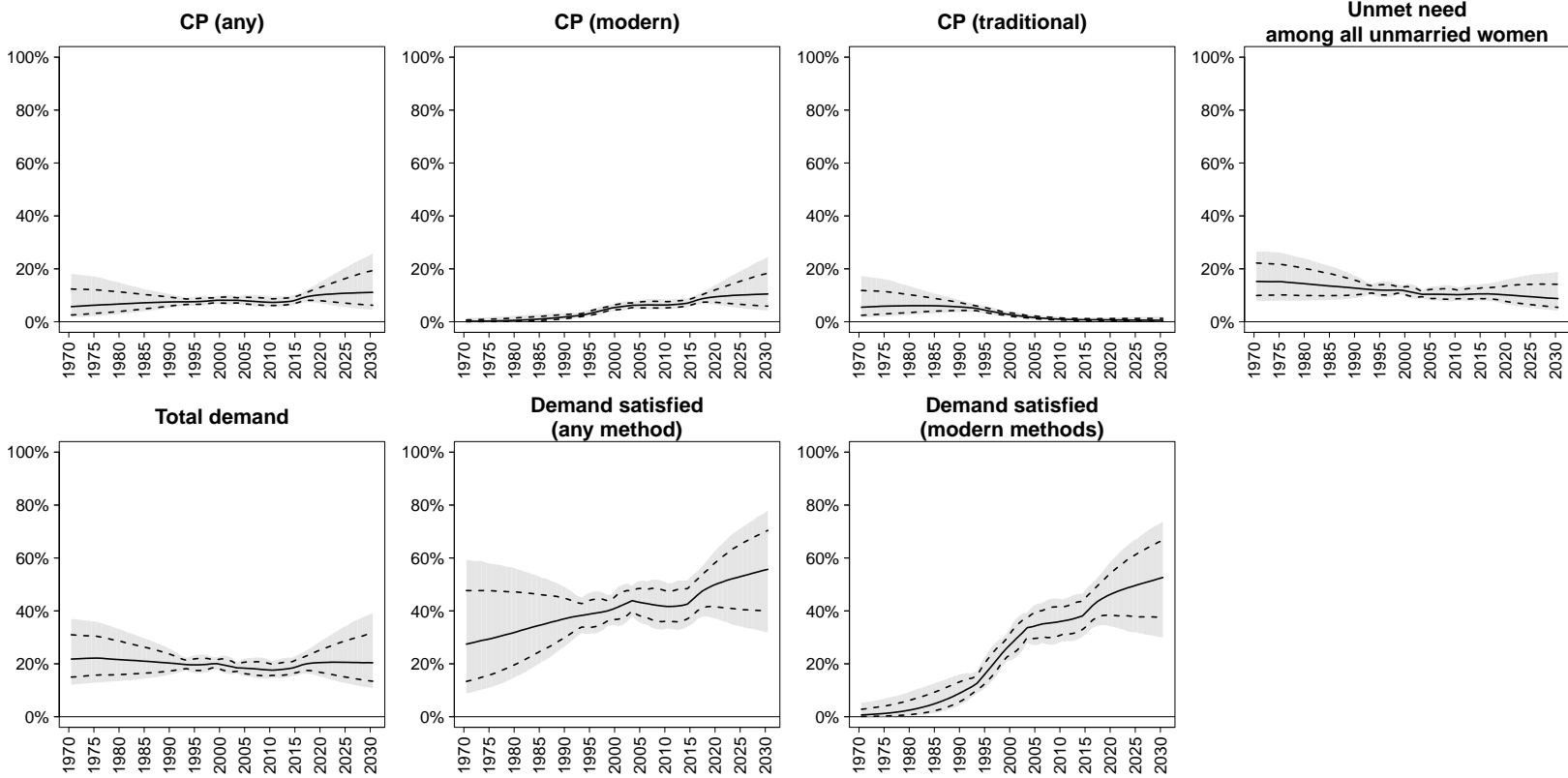
CP (traditional)

Unmet need among all unmarried women

Total demand

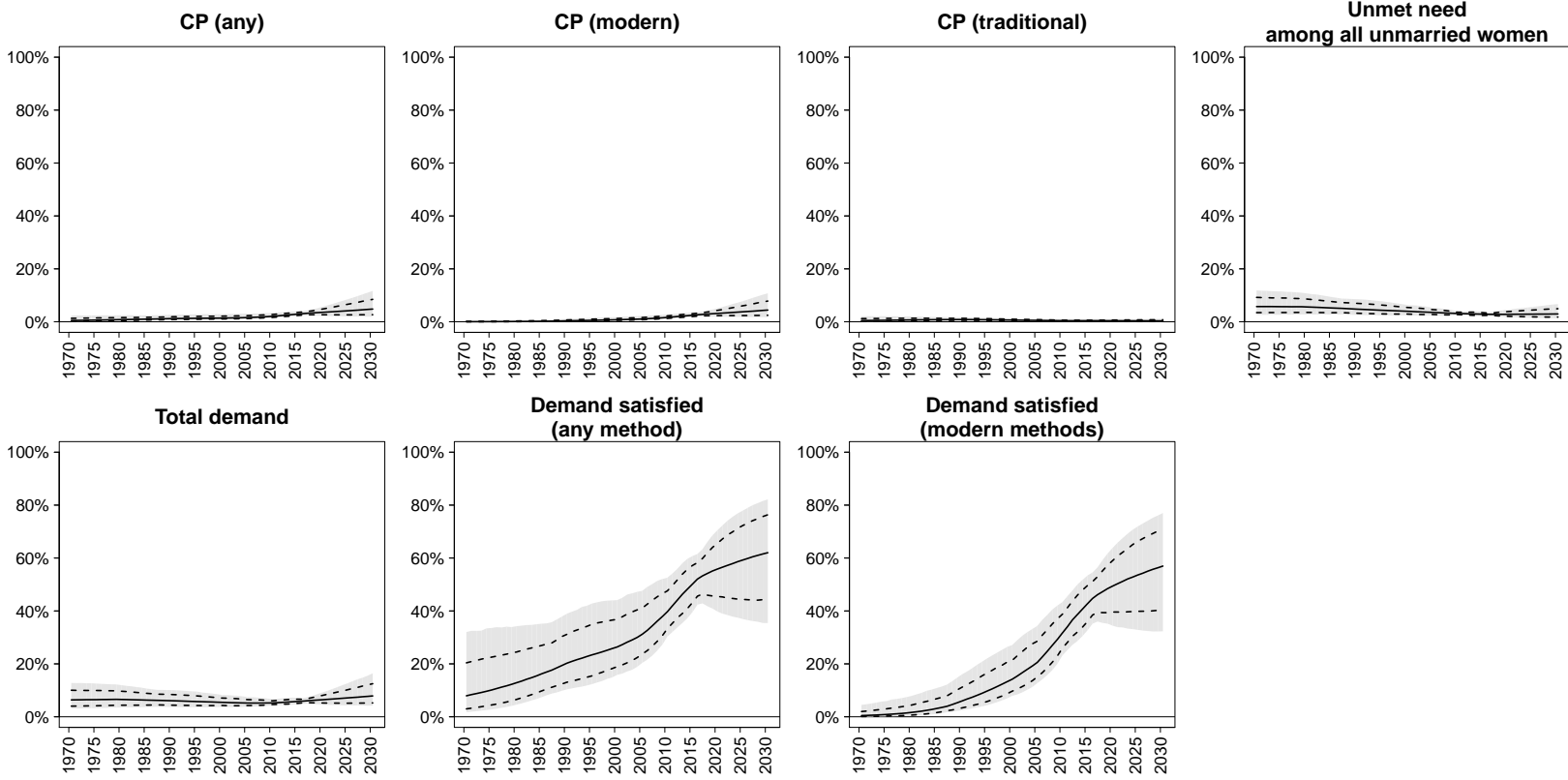


Burkina Faso ---- All women

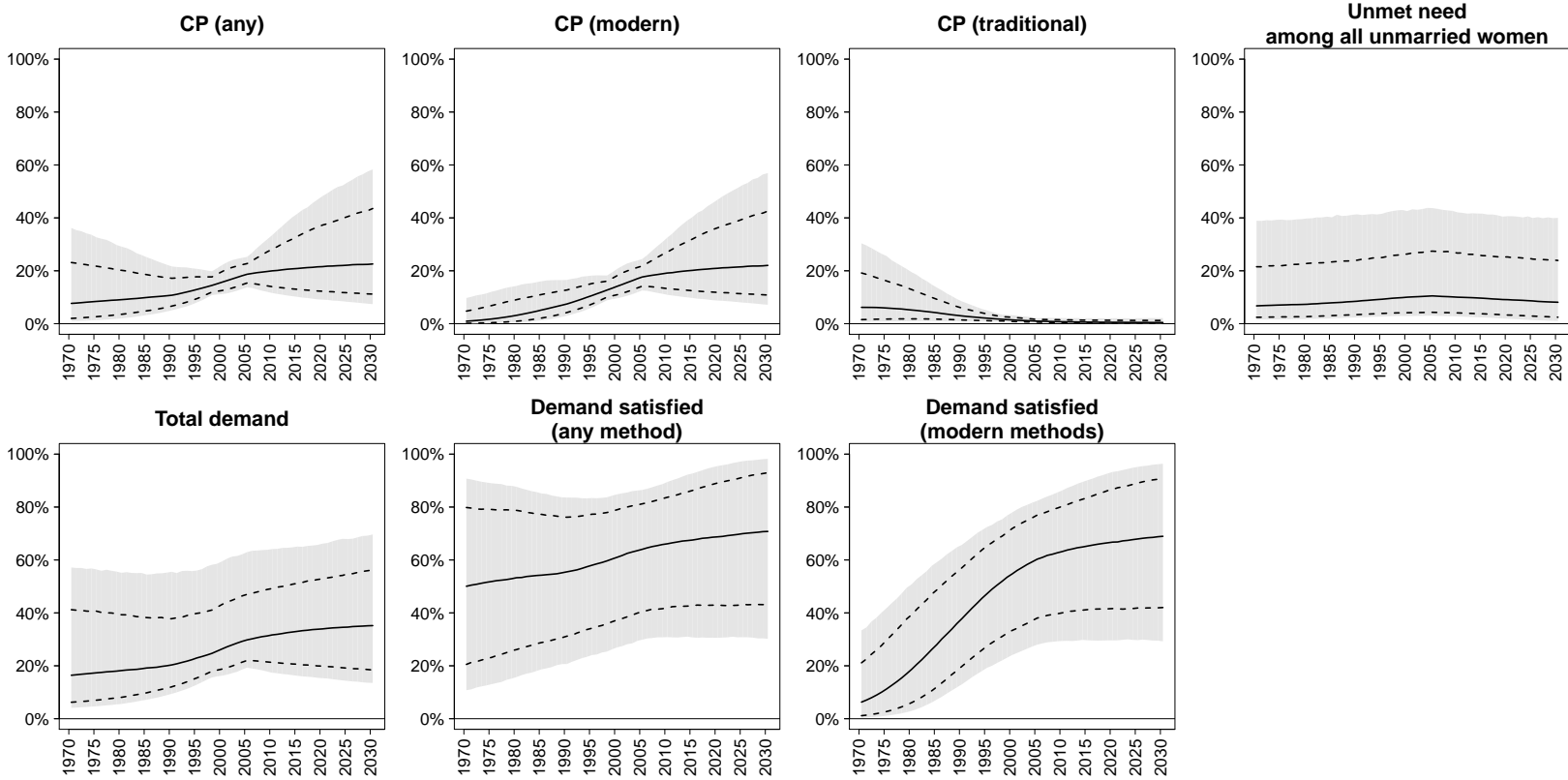




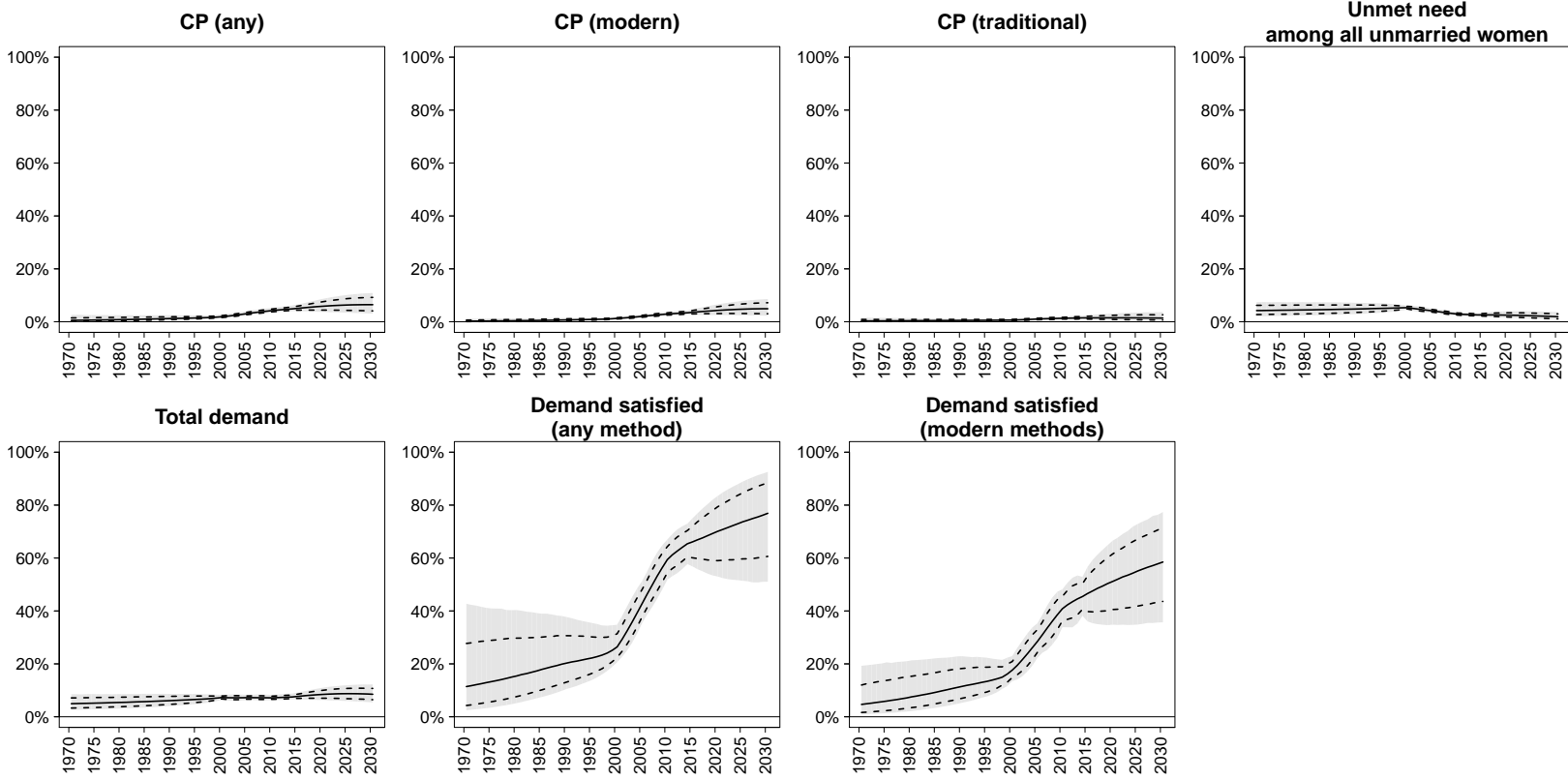
Burundi ---- All women



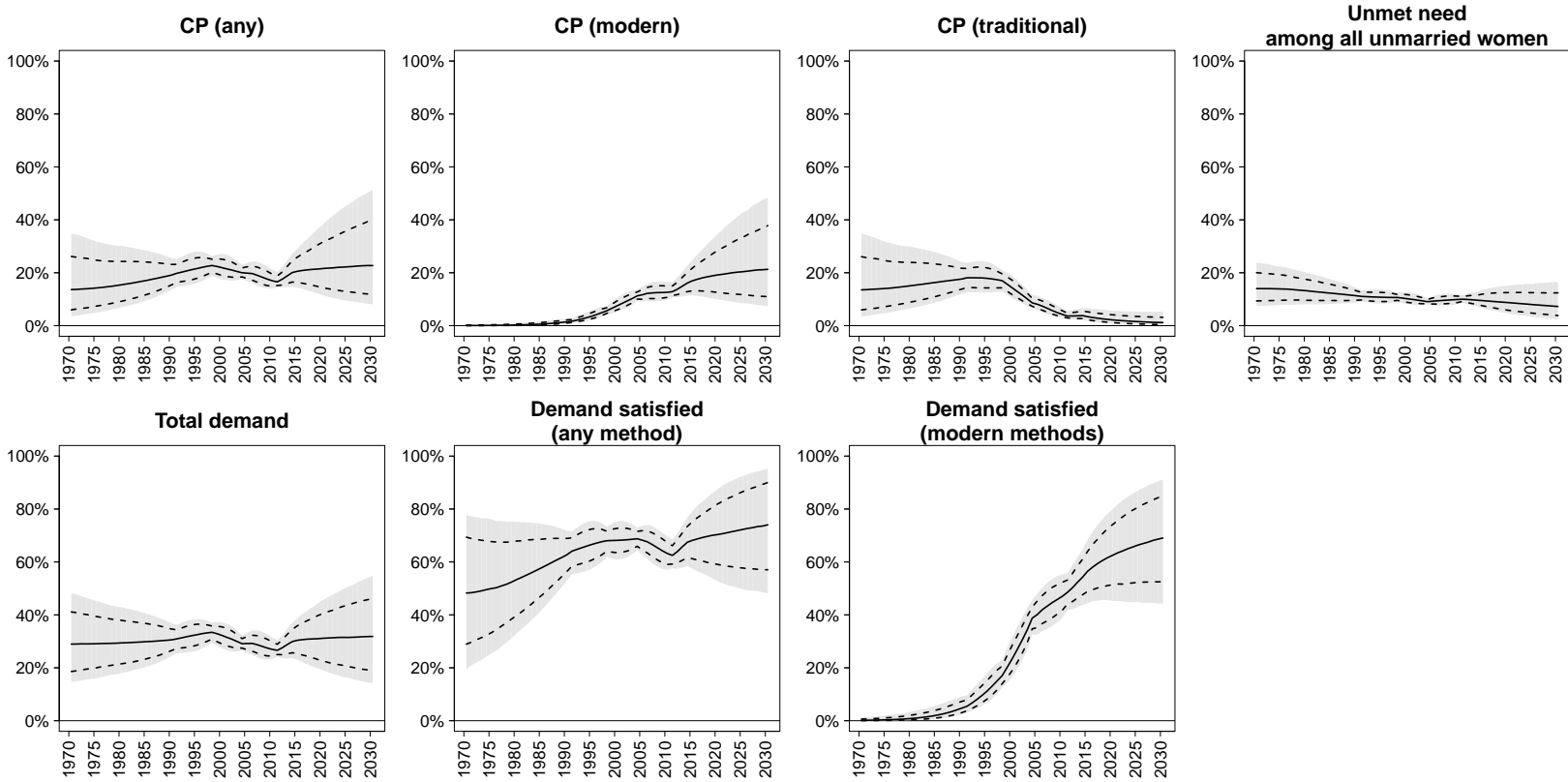
Cabo Verde --- All women



Cambodia --- All women



Cameroon --- All women



Central African Republic — All women

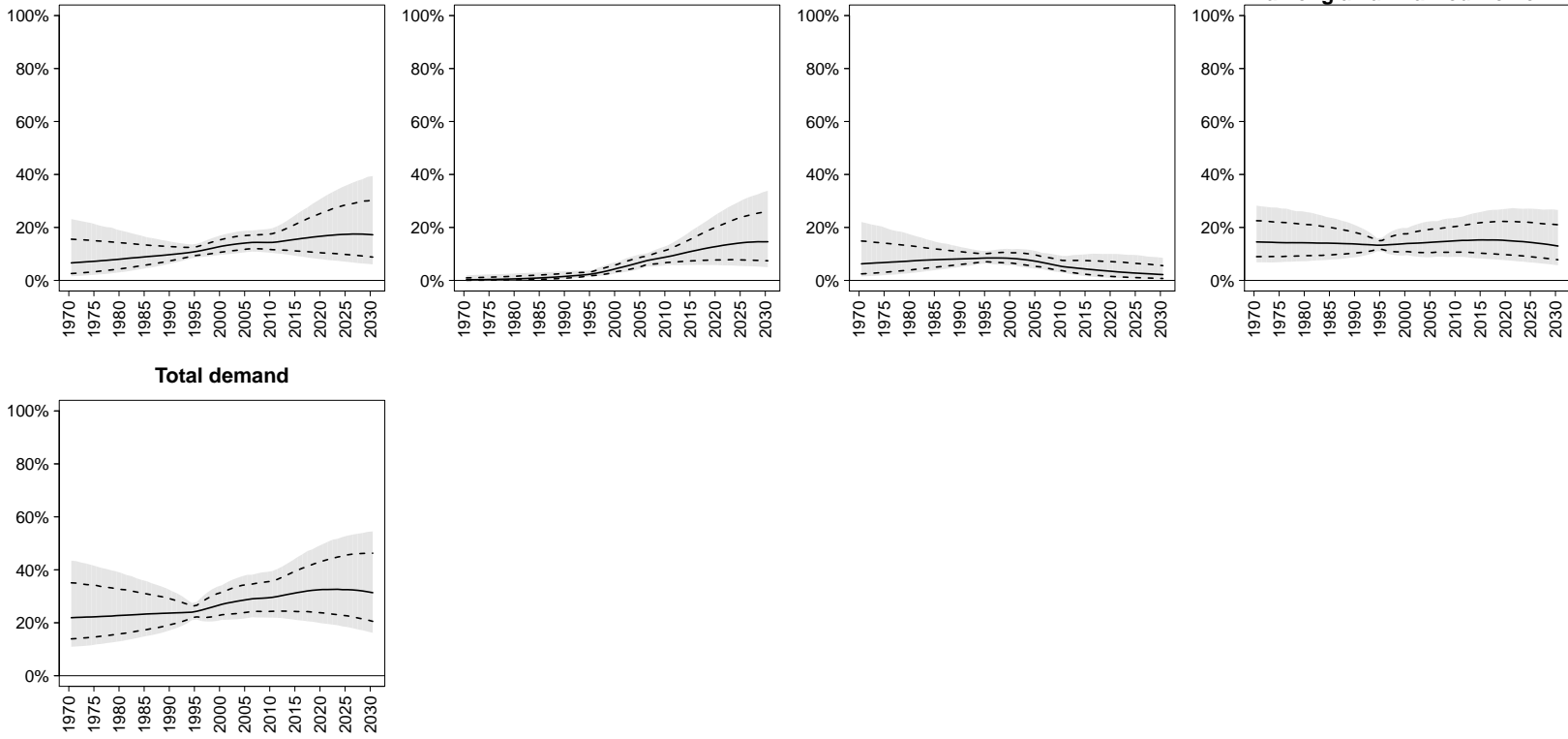
CP (any)

CP (modern)

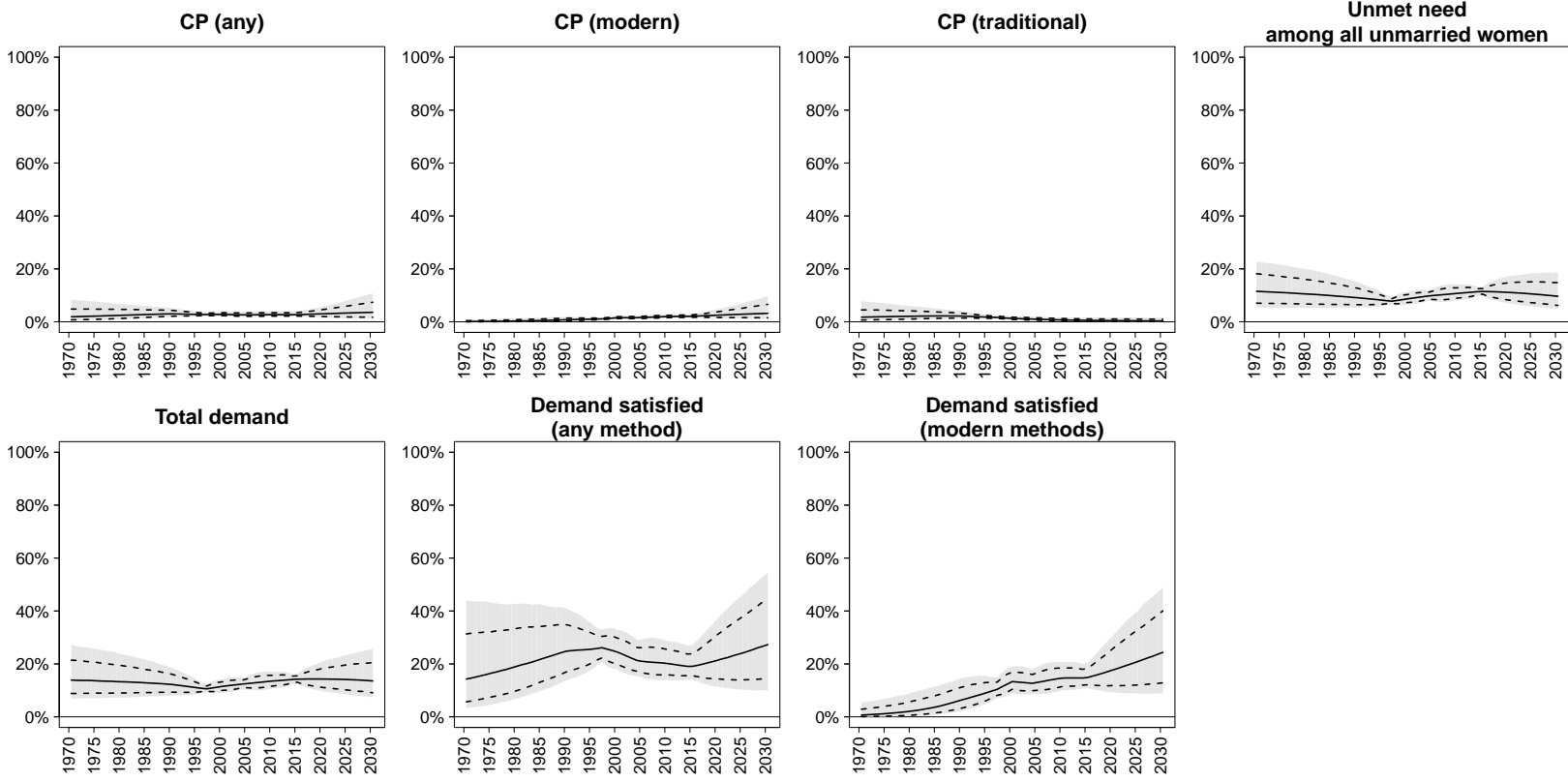
CP (traditional)

Unmet need among all unmarried women

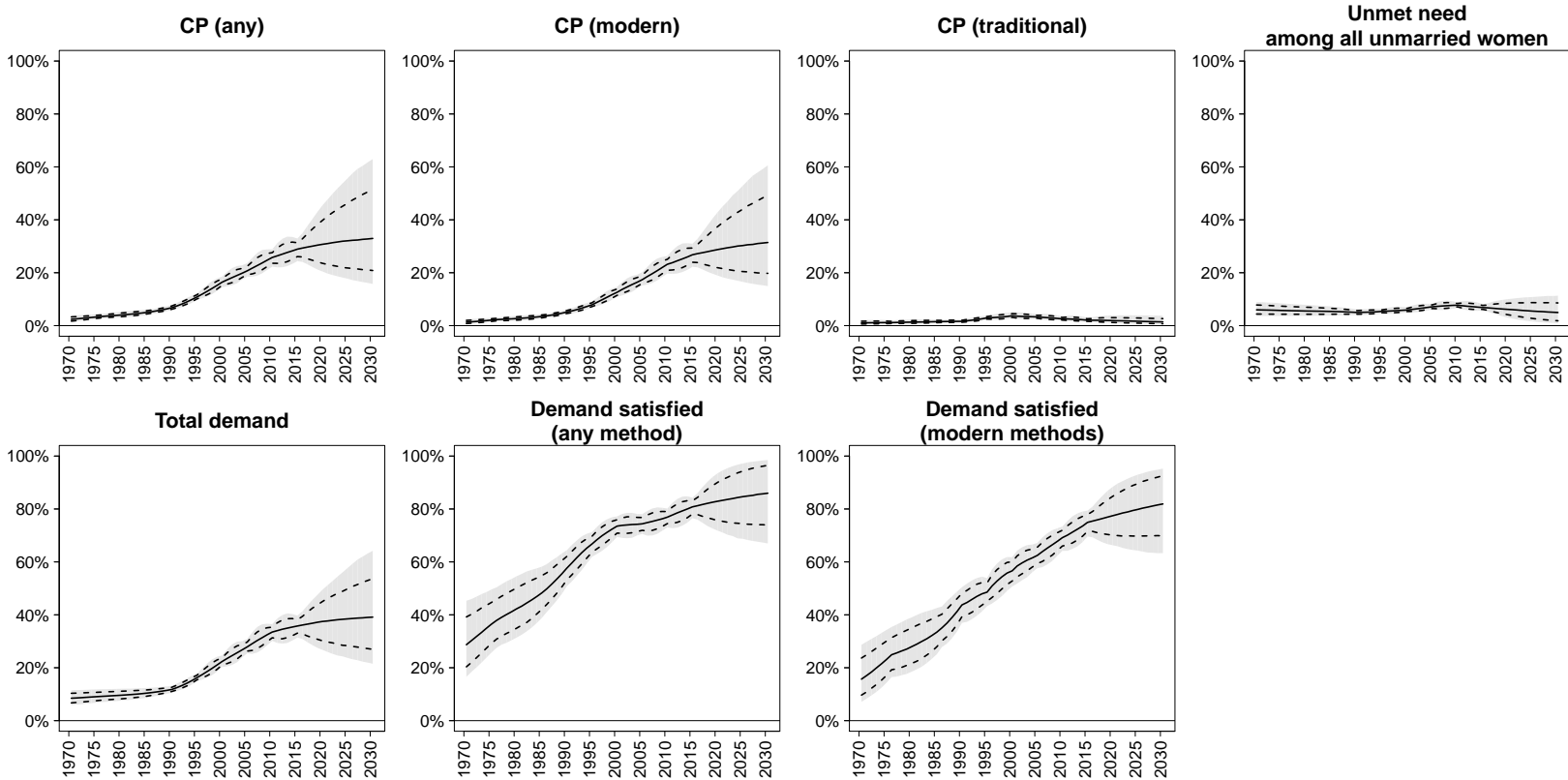
Total demand



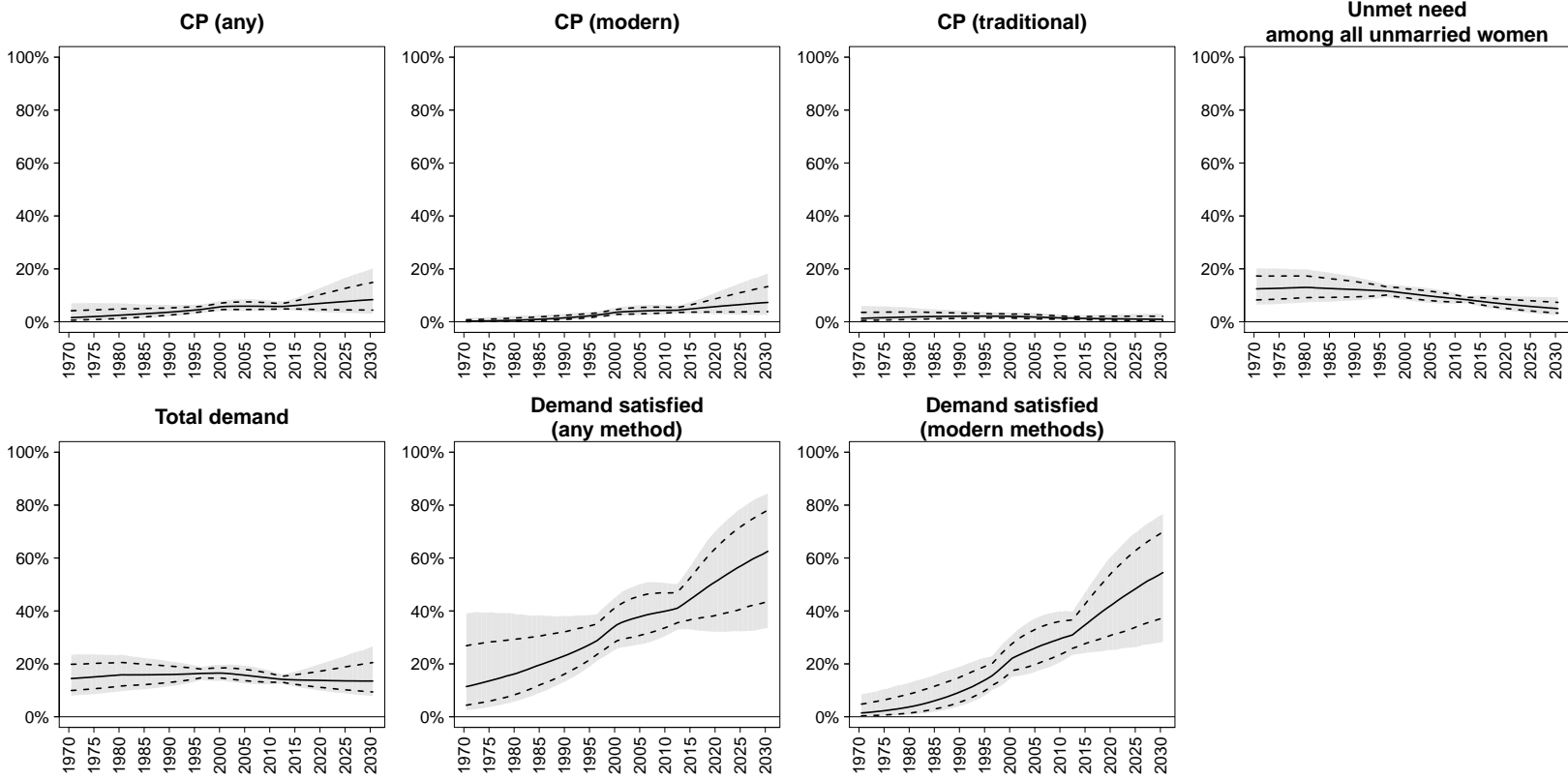
Chad ---- All women



Colombia --- All women



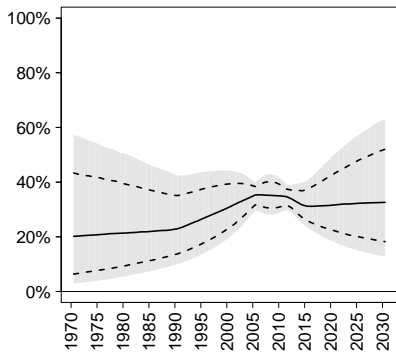
Comoros --- All women



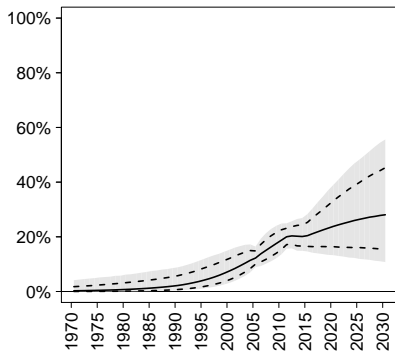


Congo --- All women

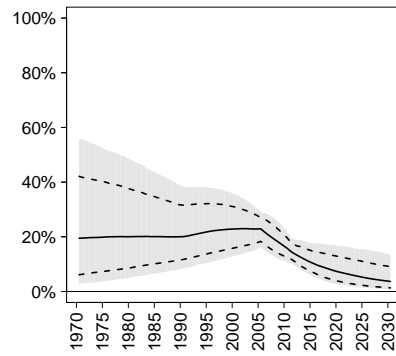
CP (any)



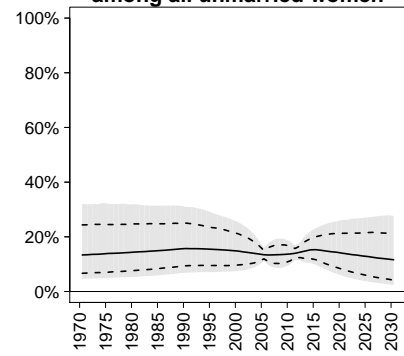
CP (modern)



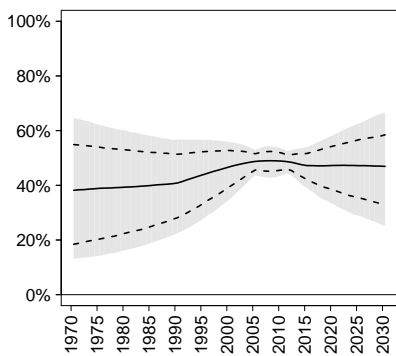
CP (traditional)



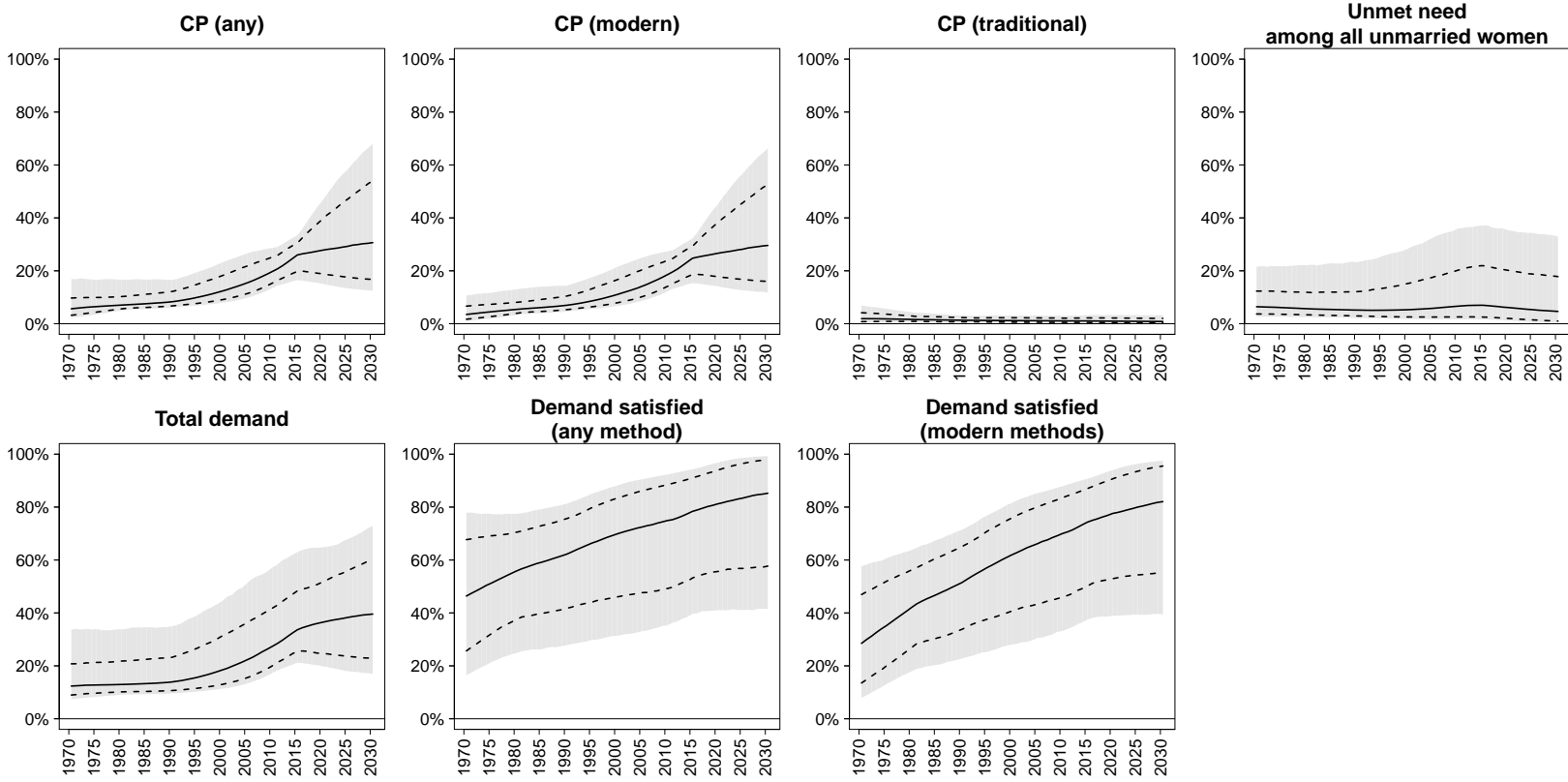
Unmet need among all unmarried women



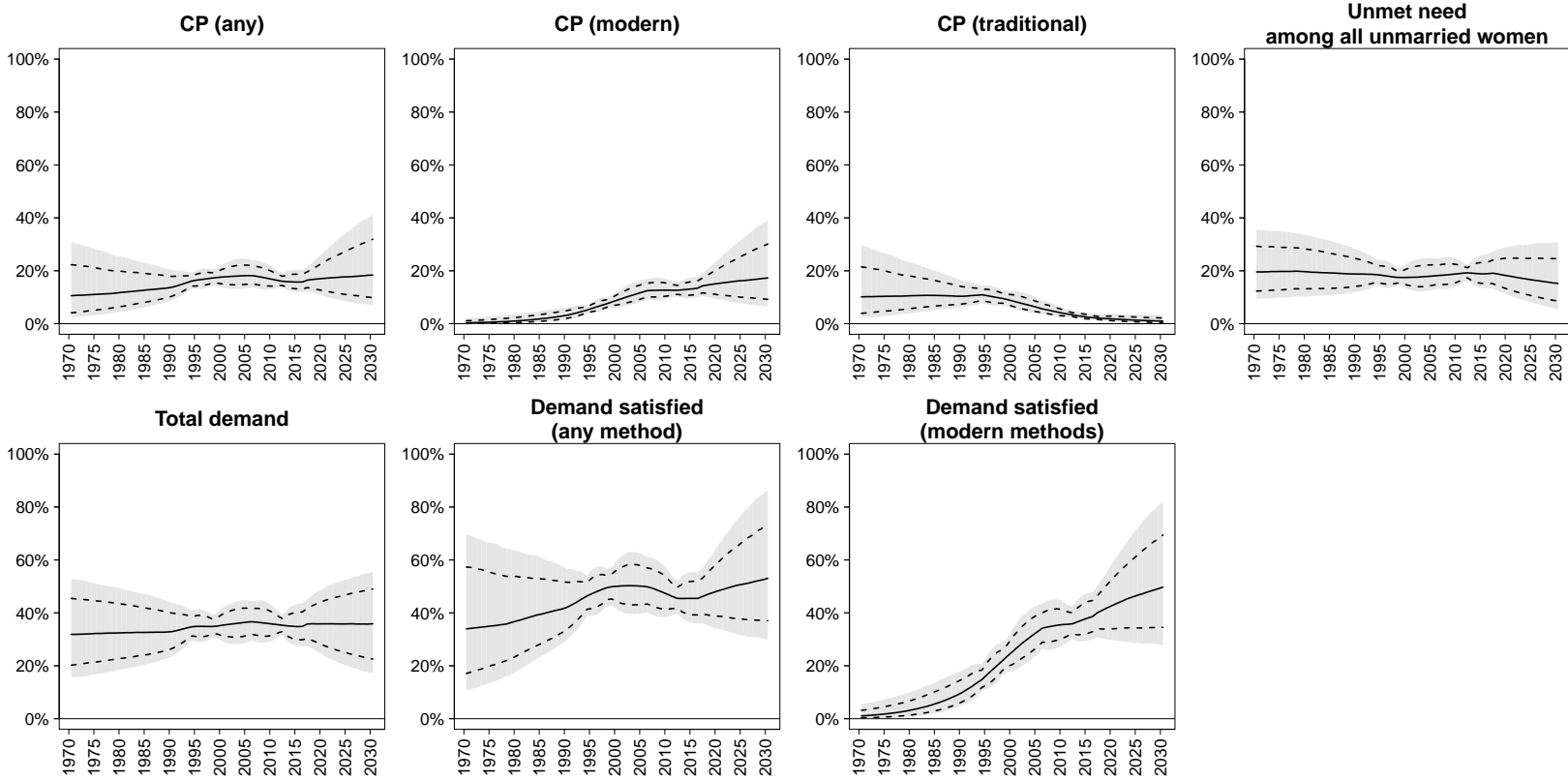
Total demand



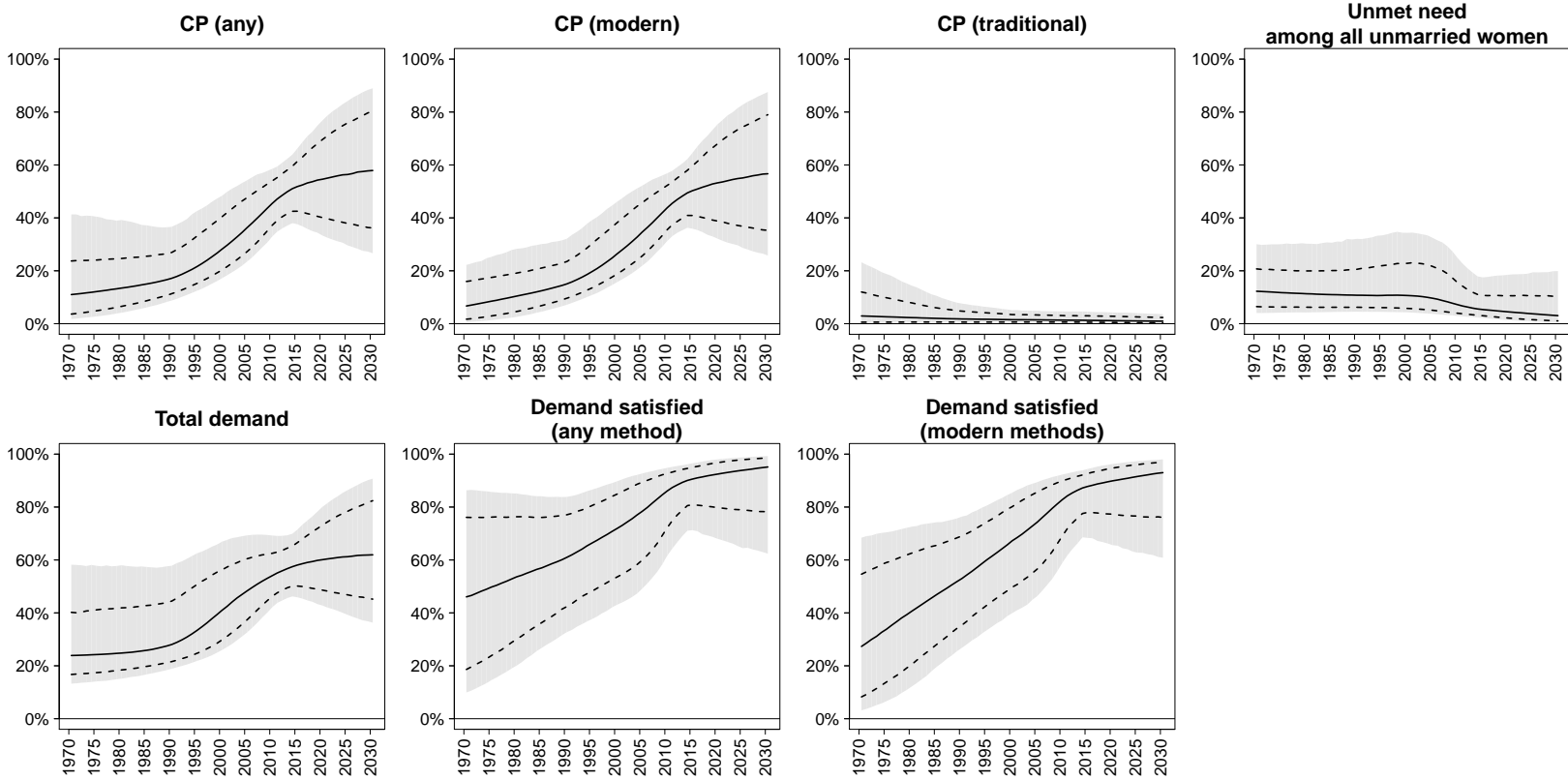
Costa Rica --- All women



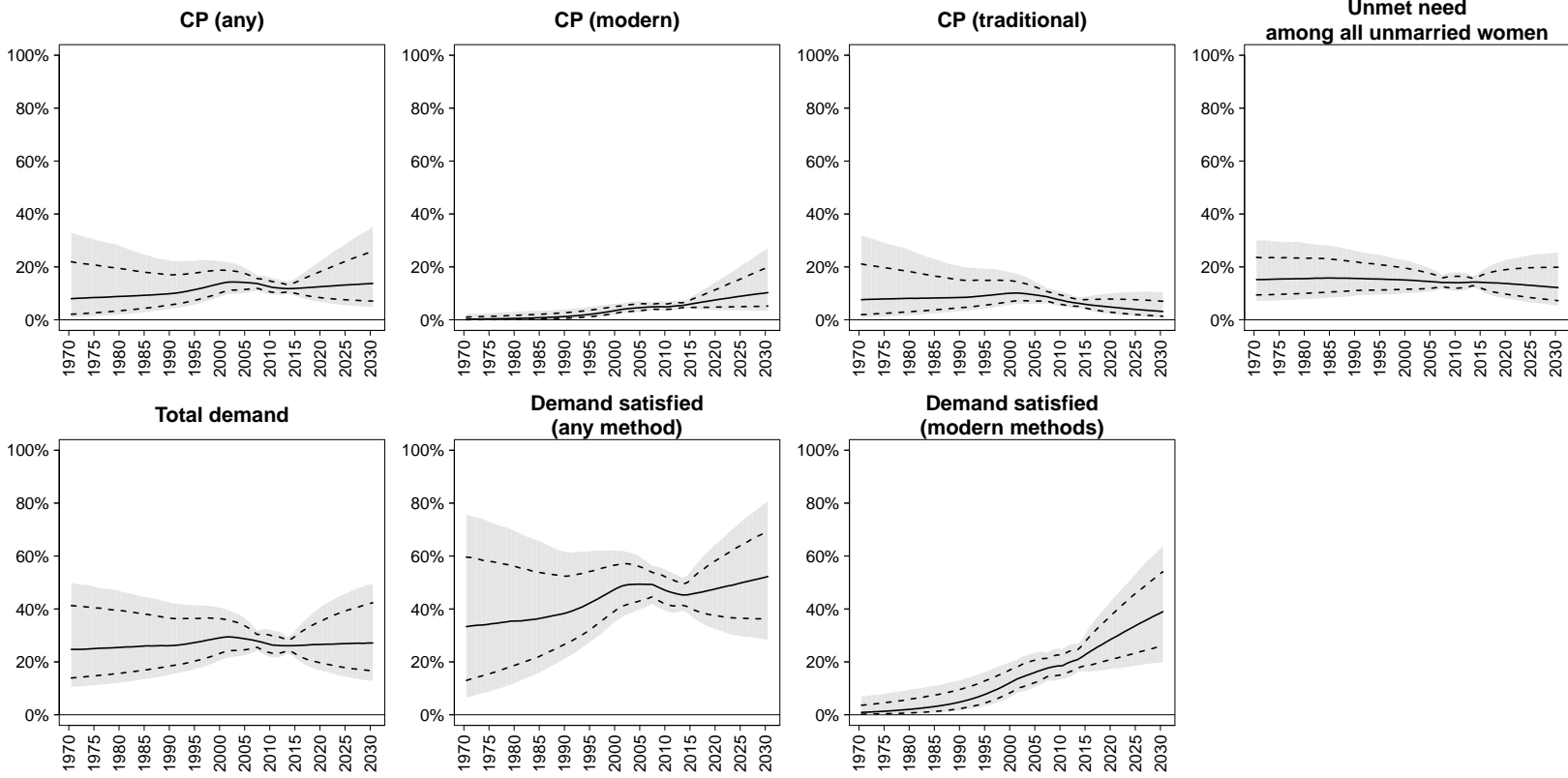
Côte d'Ivoire ---- All women



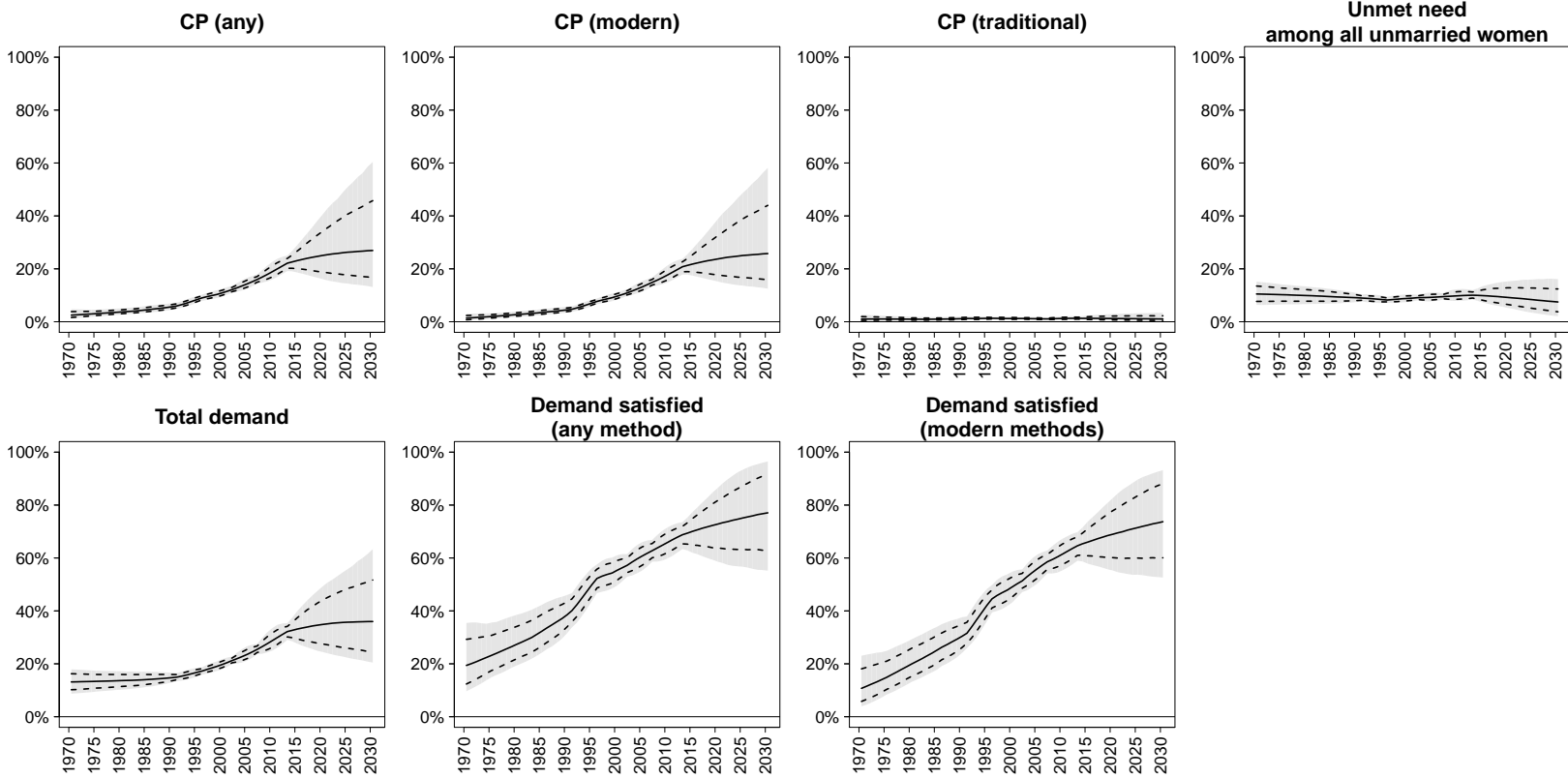
Cuba --- All women



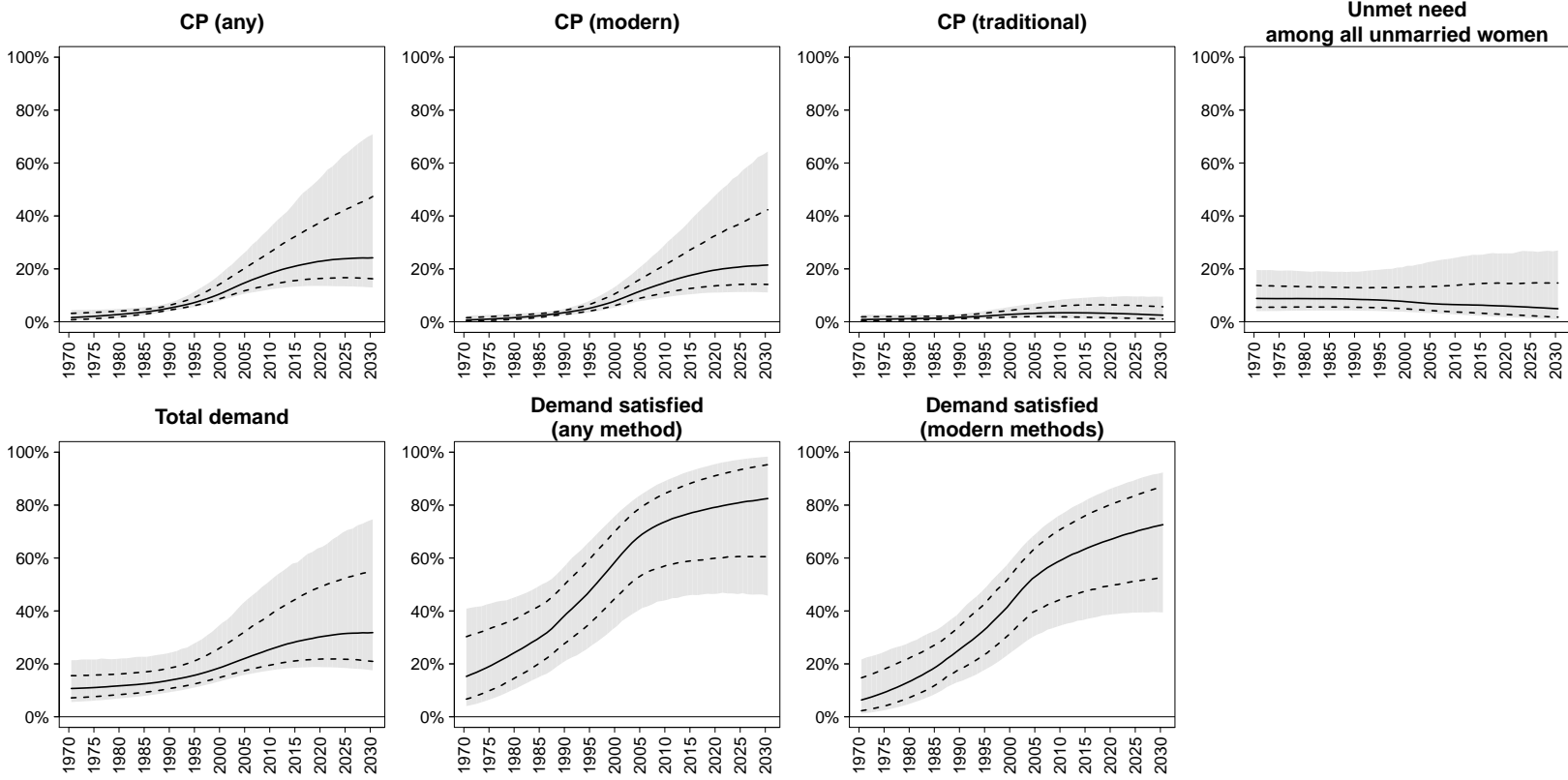
Democratic Republic of the Congo ---- All women



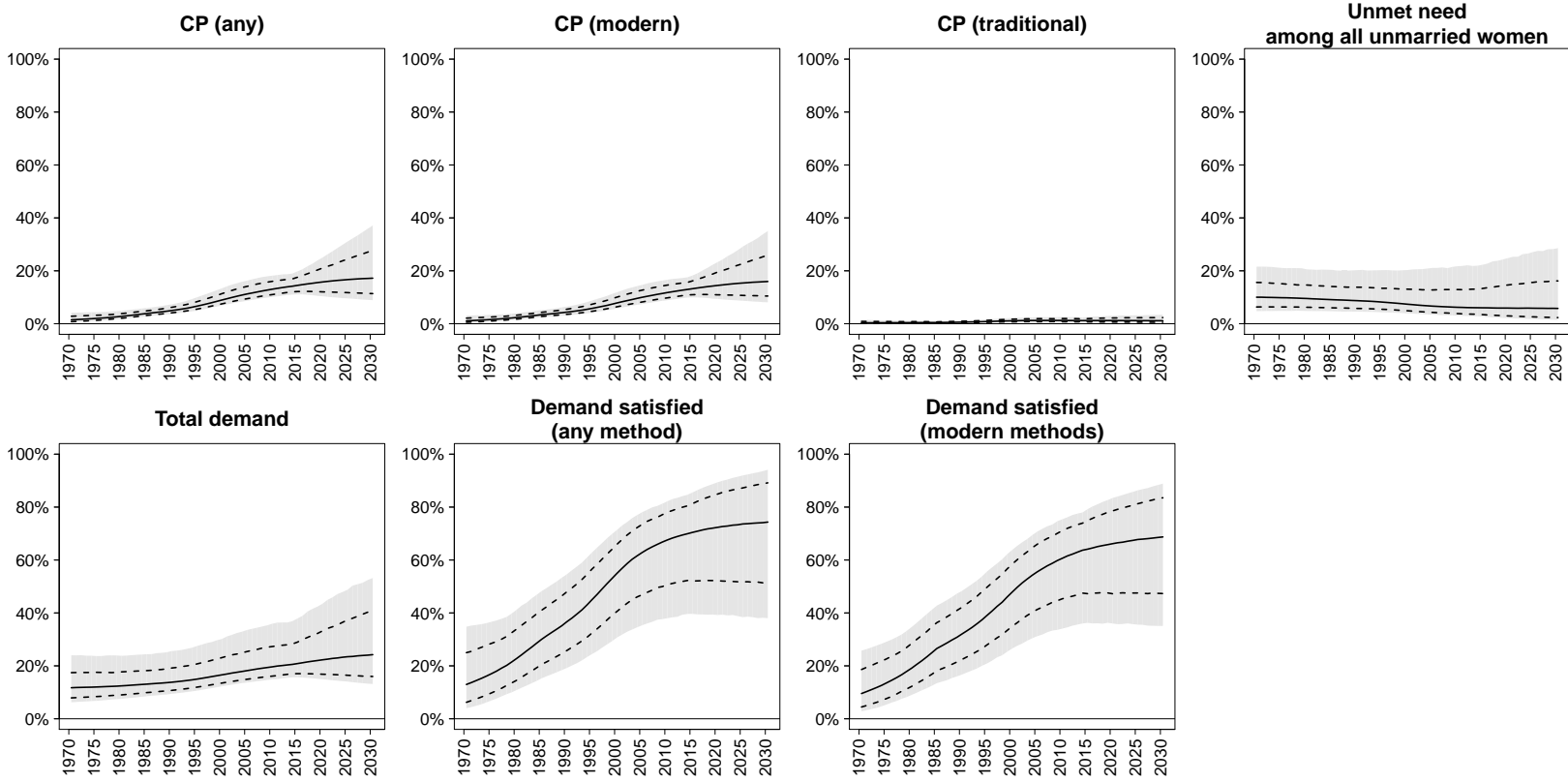
Dominican Republic --- All women



Ecuador ---- All women

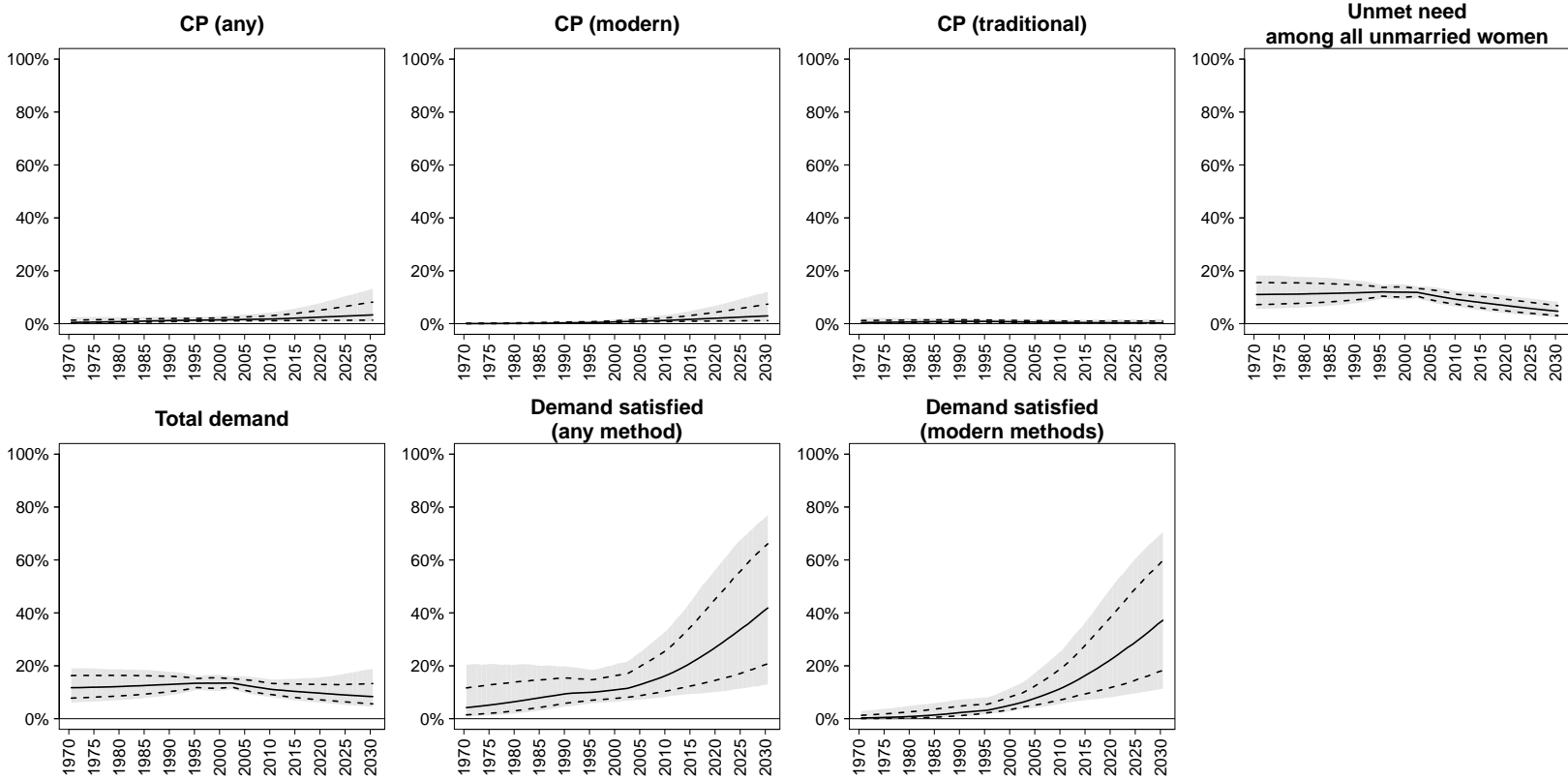


El Salvador --- All women

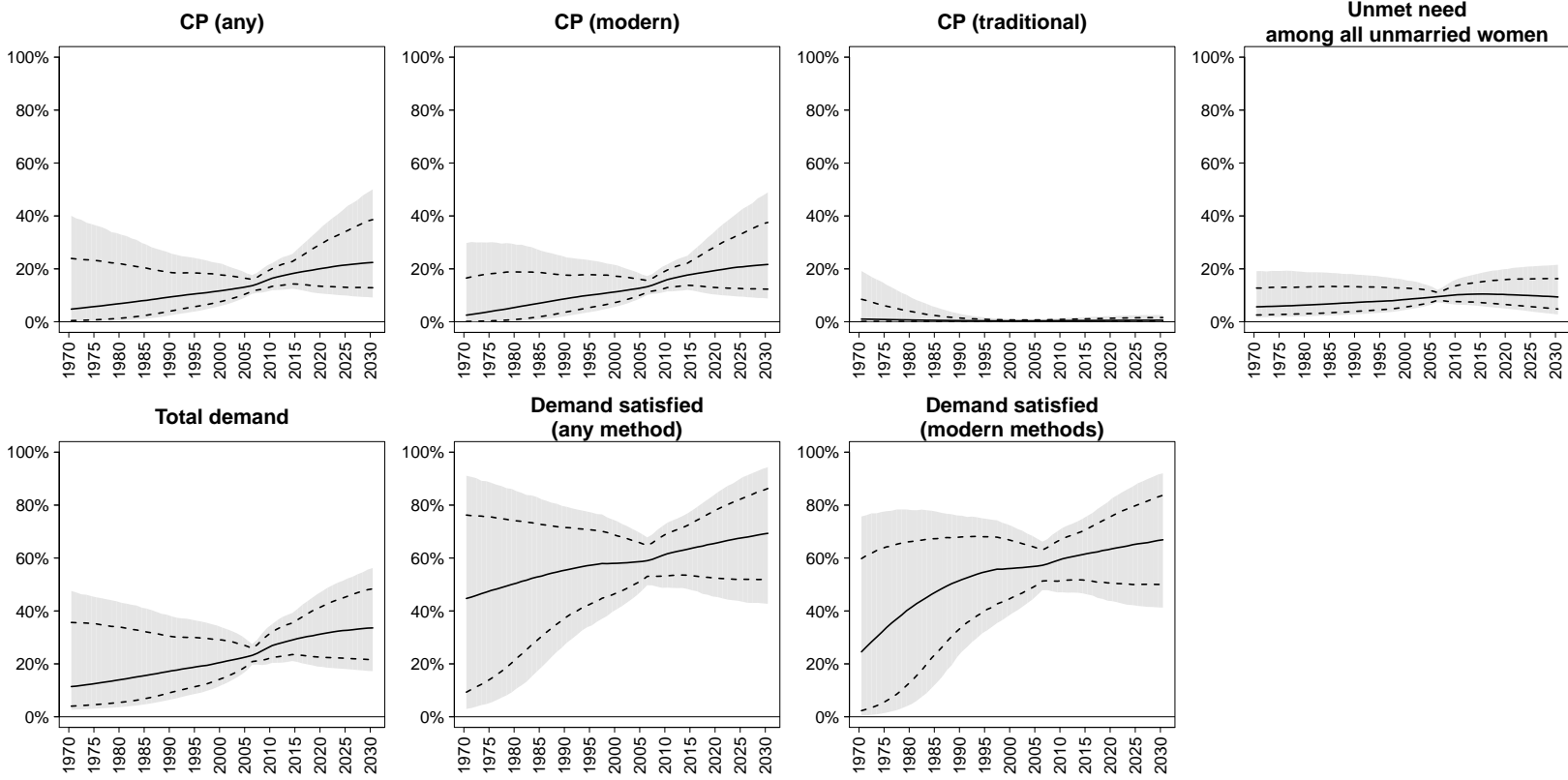




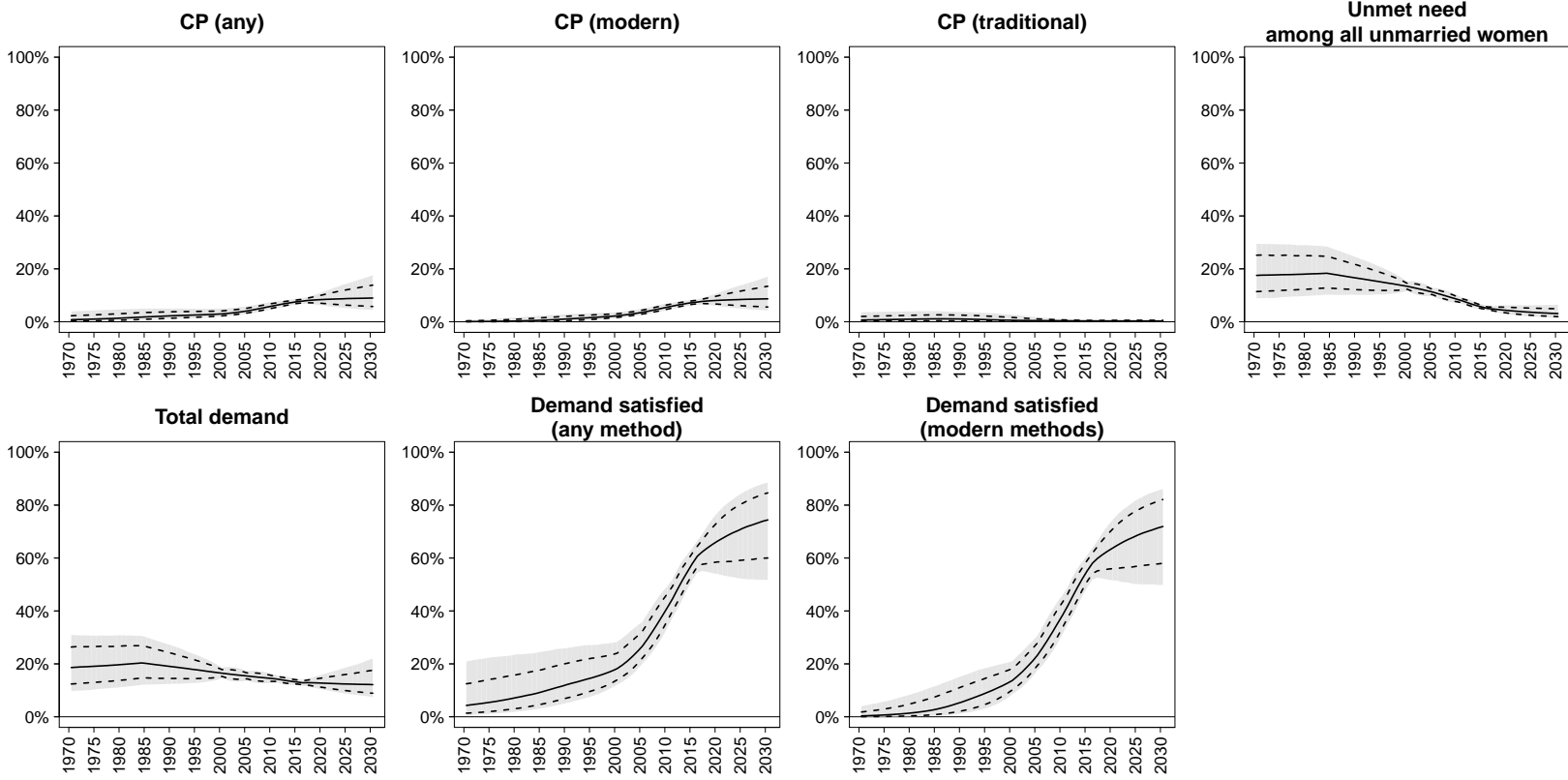
Eritrea --- All women



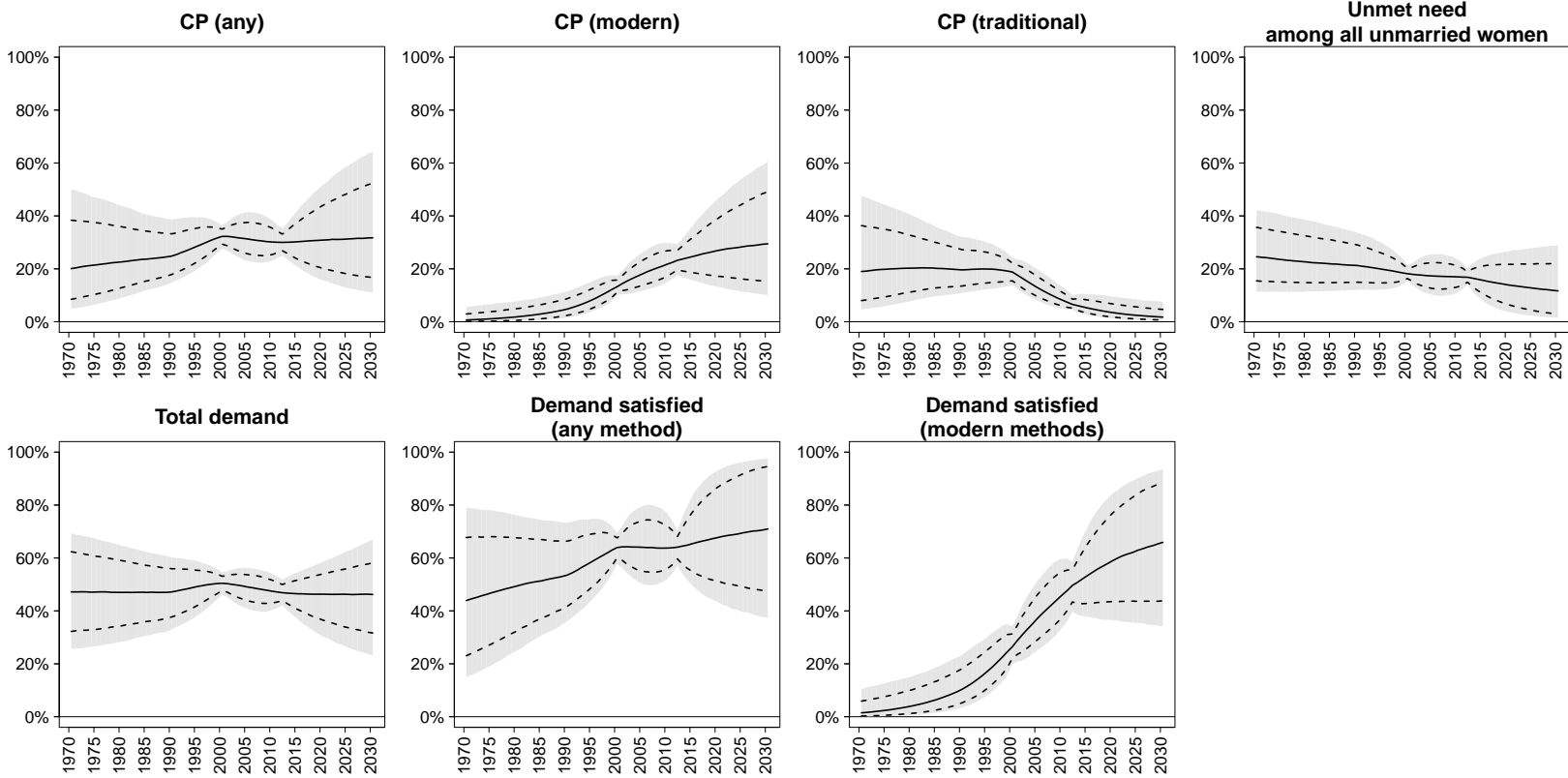
Eswatini --- All women



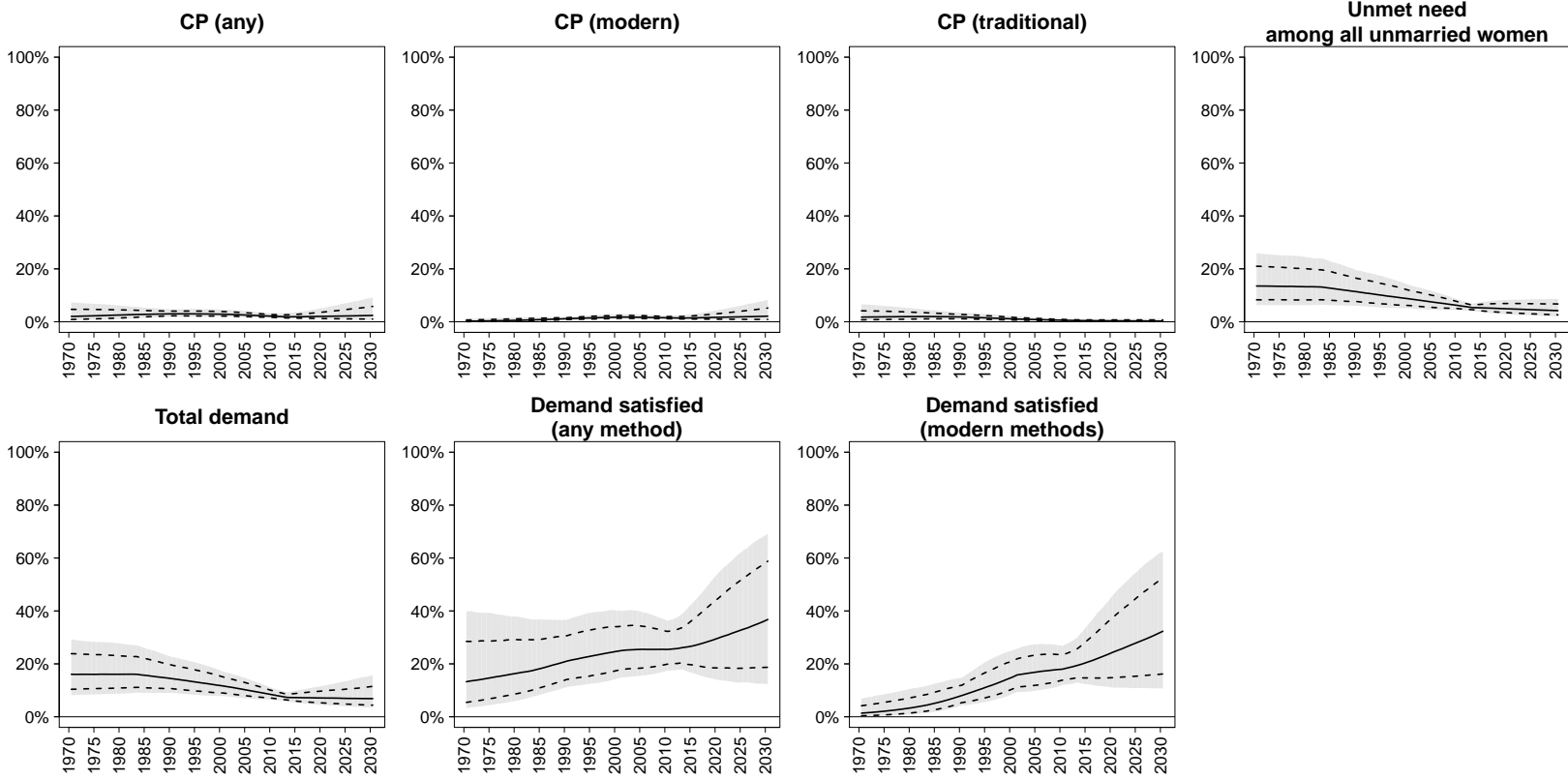
Ethiopia --- All women



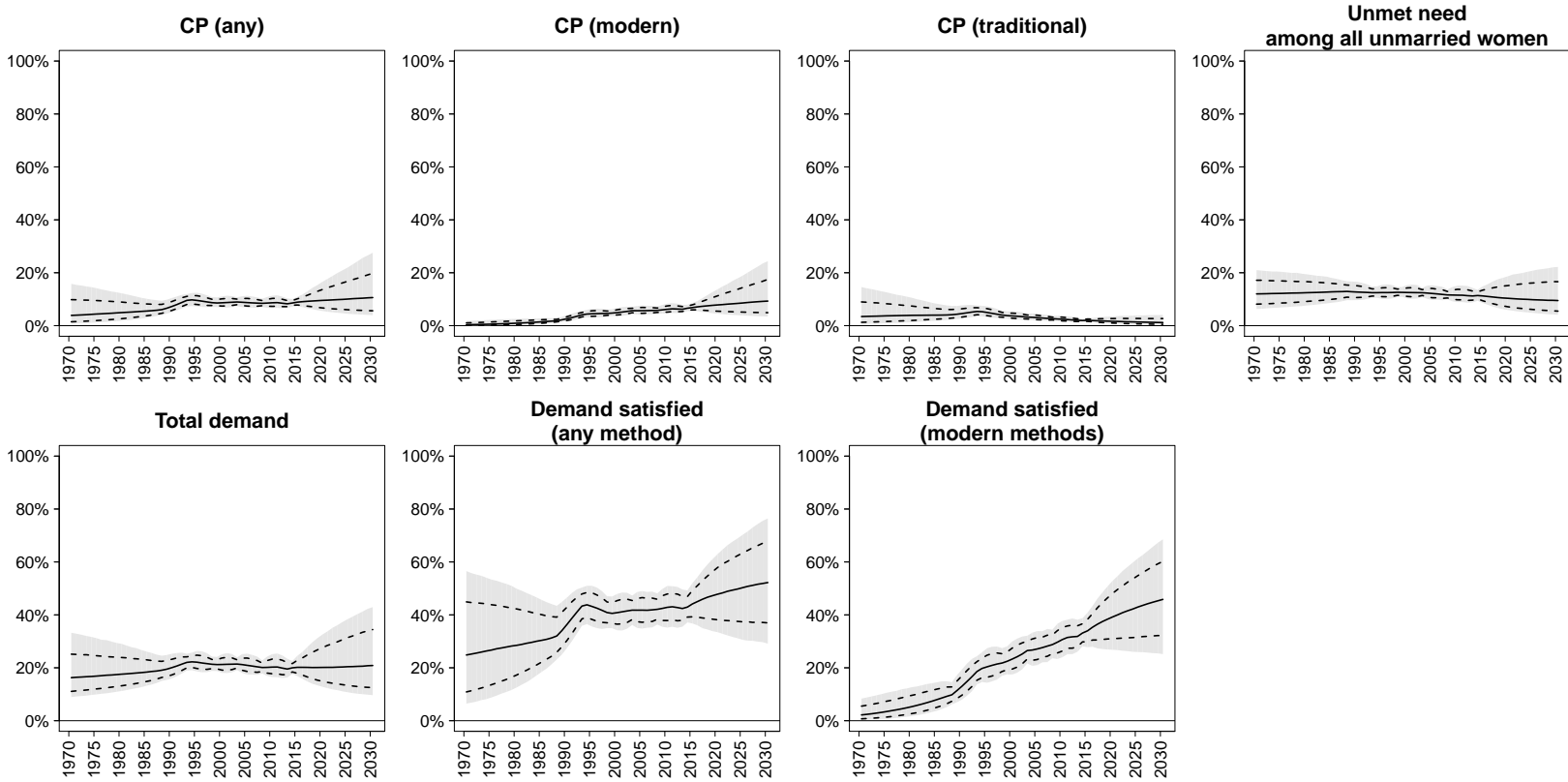
Gabon --- All women



Gambia ---- All women



Ghana --- All women



Guatemala --- All women

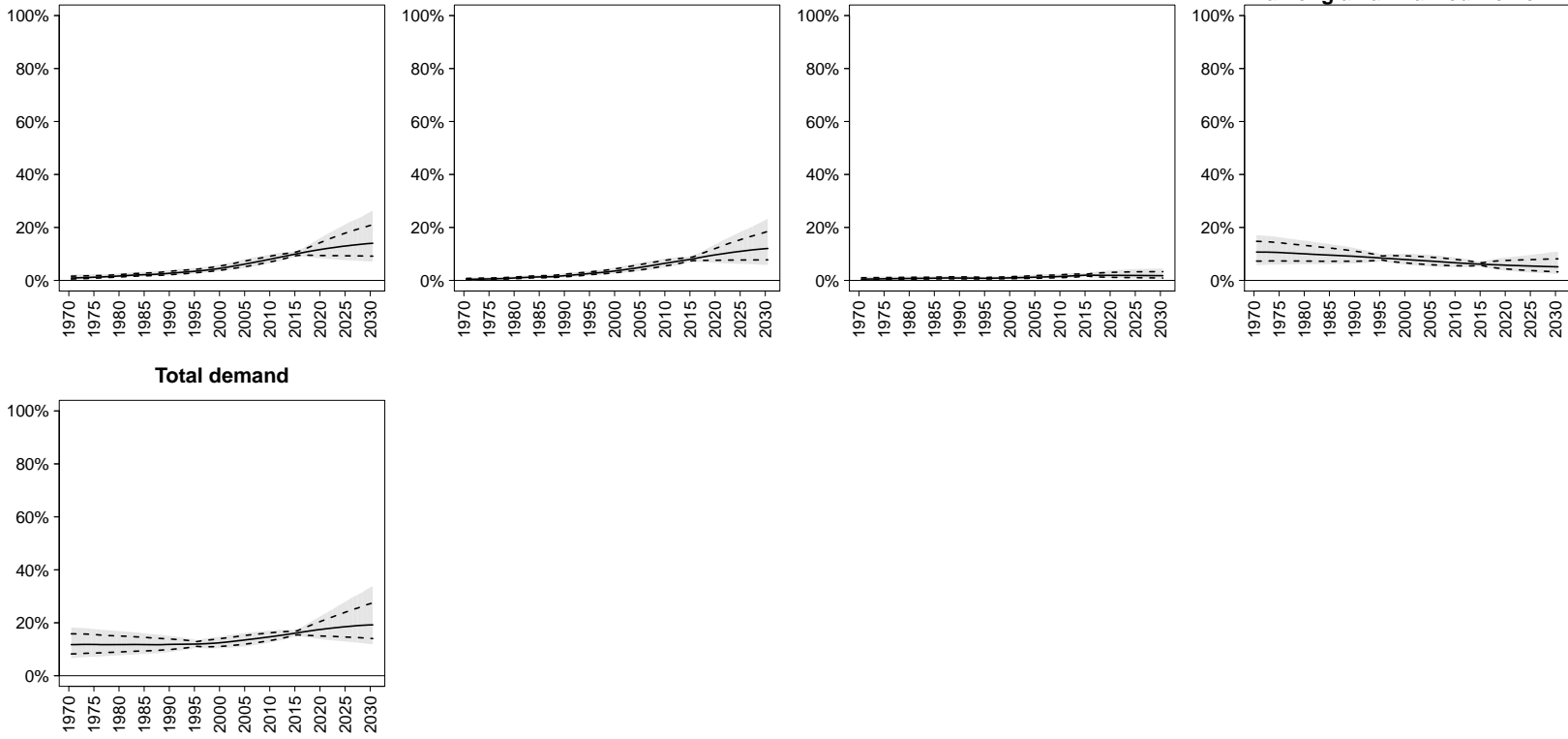
CP (any)

CP (modern)

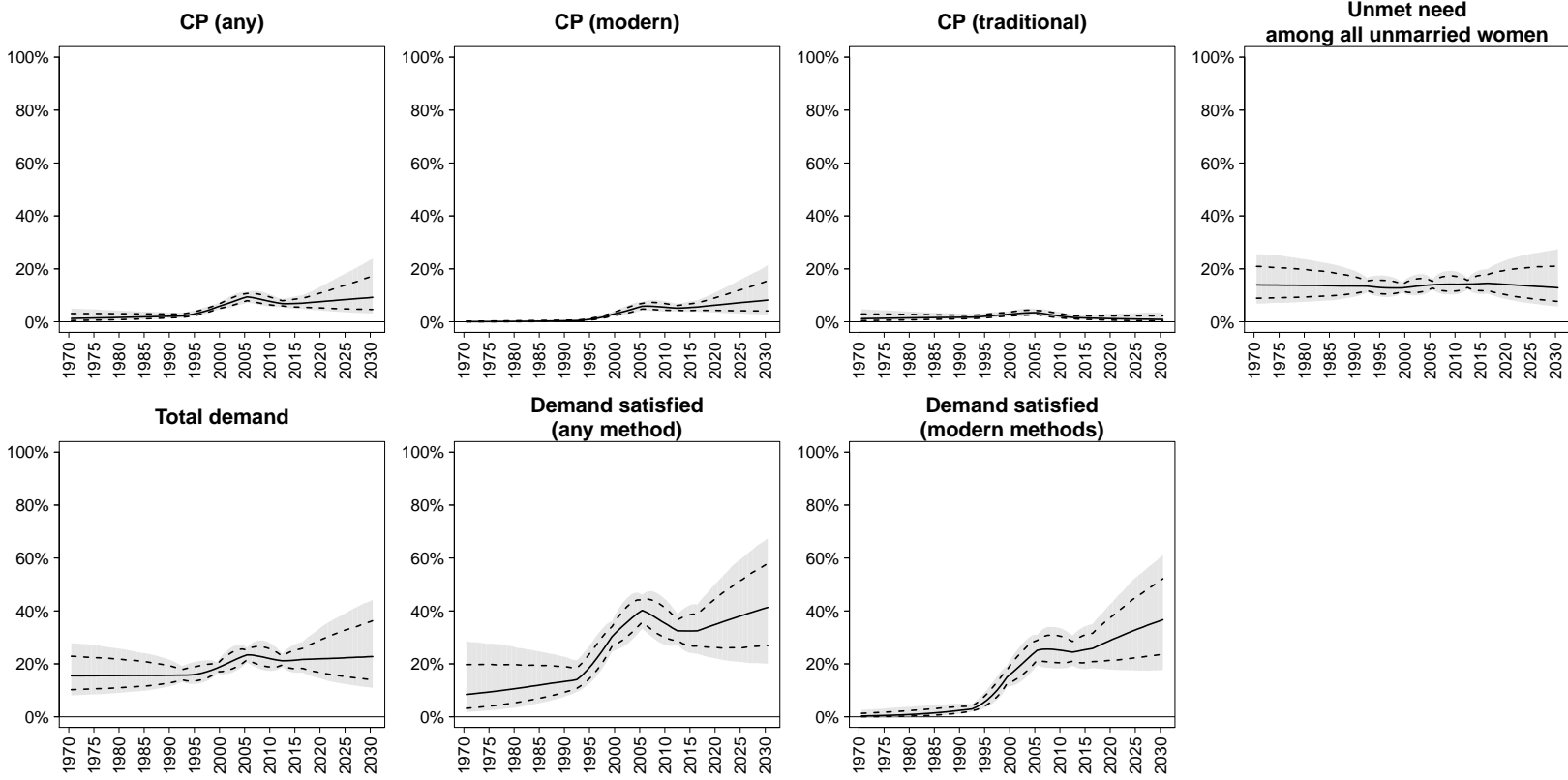
CP (traditional)

Unmet need among all unmarried women

Total demand

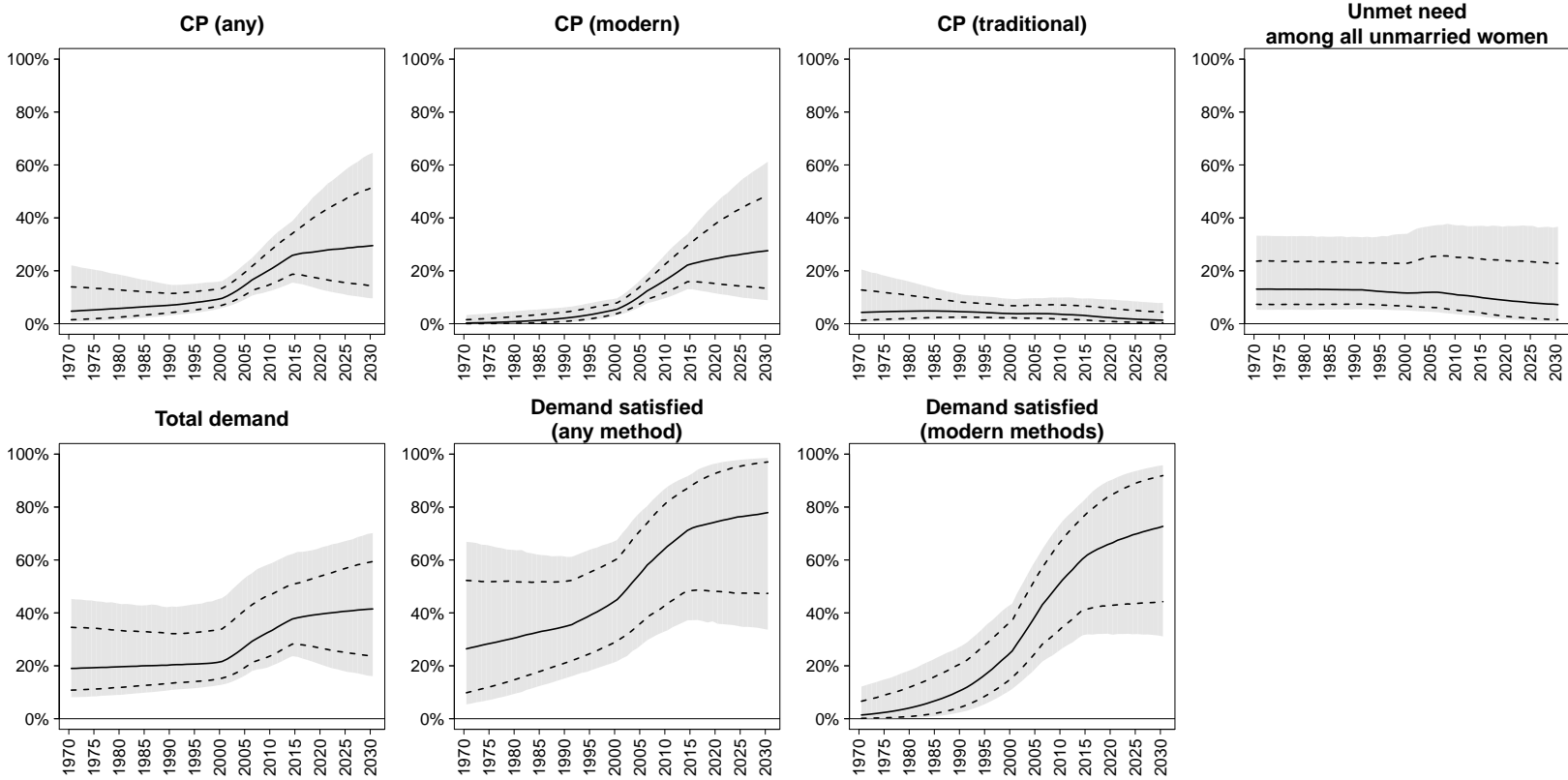


Guinea ---- All women

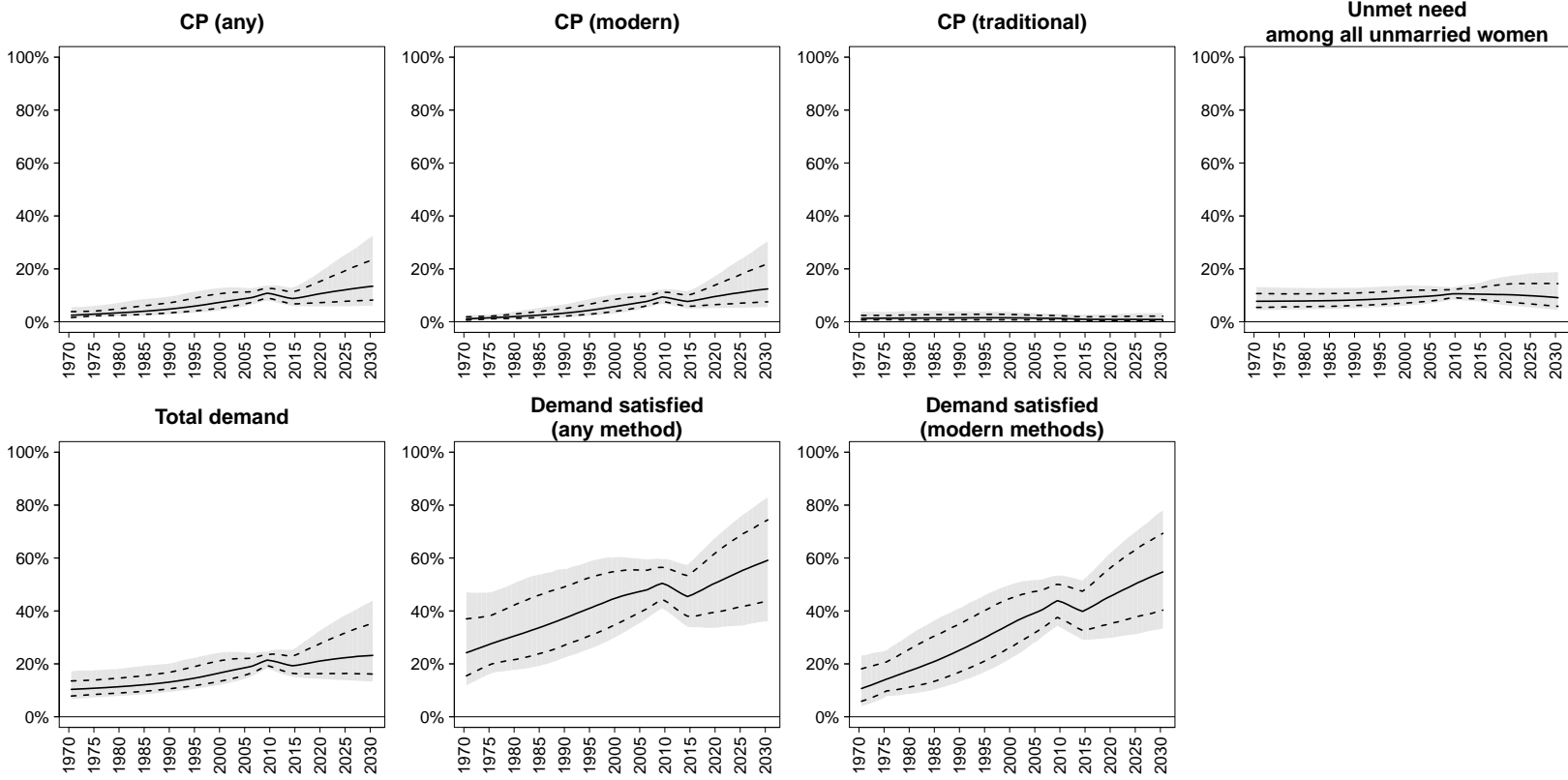




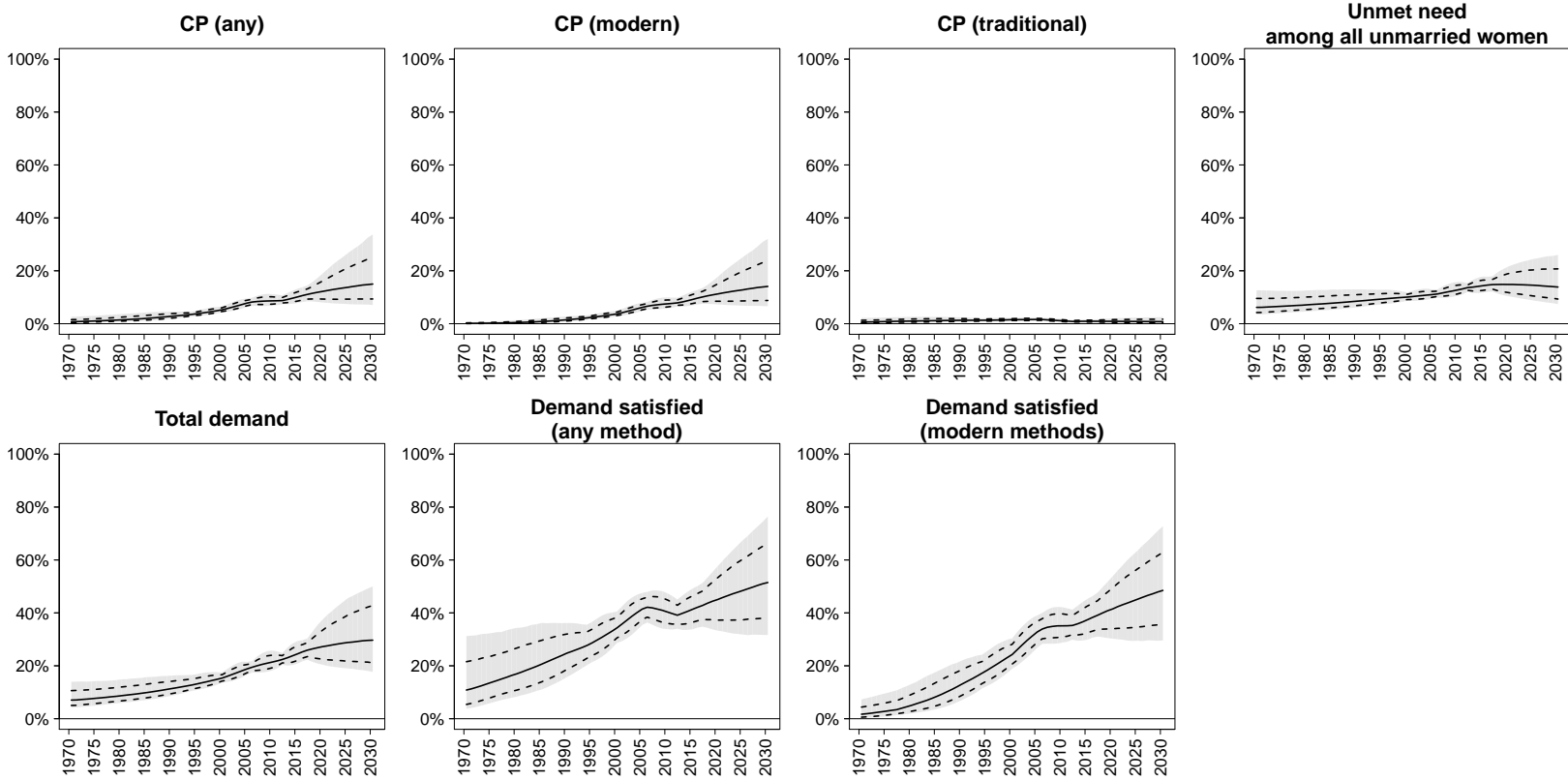
Guinea-Bissau --- All women



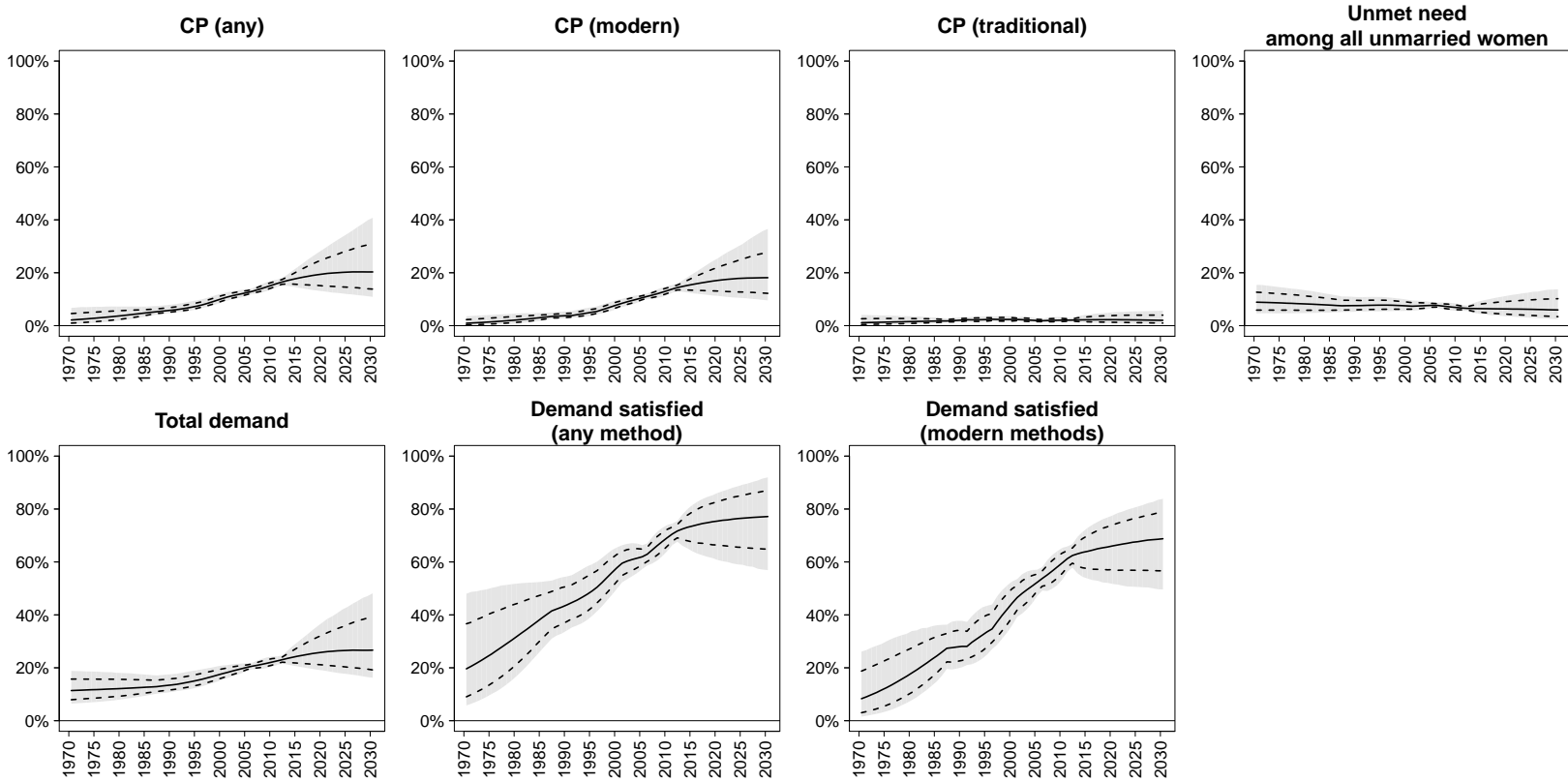
Guyana --- All women



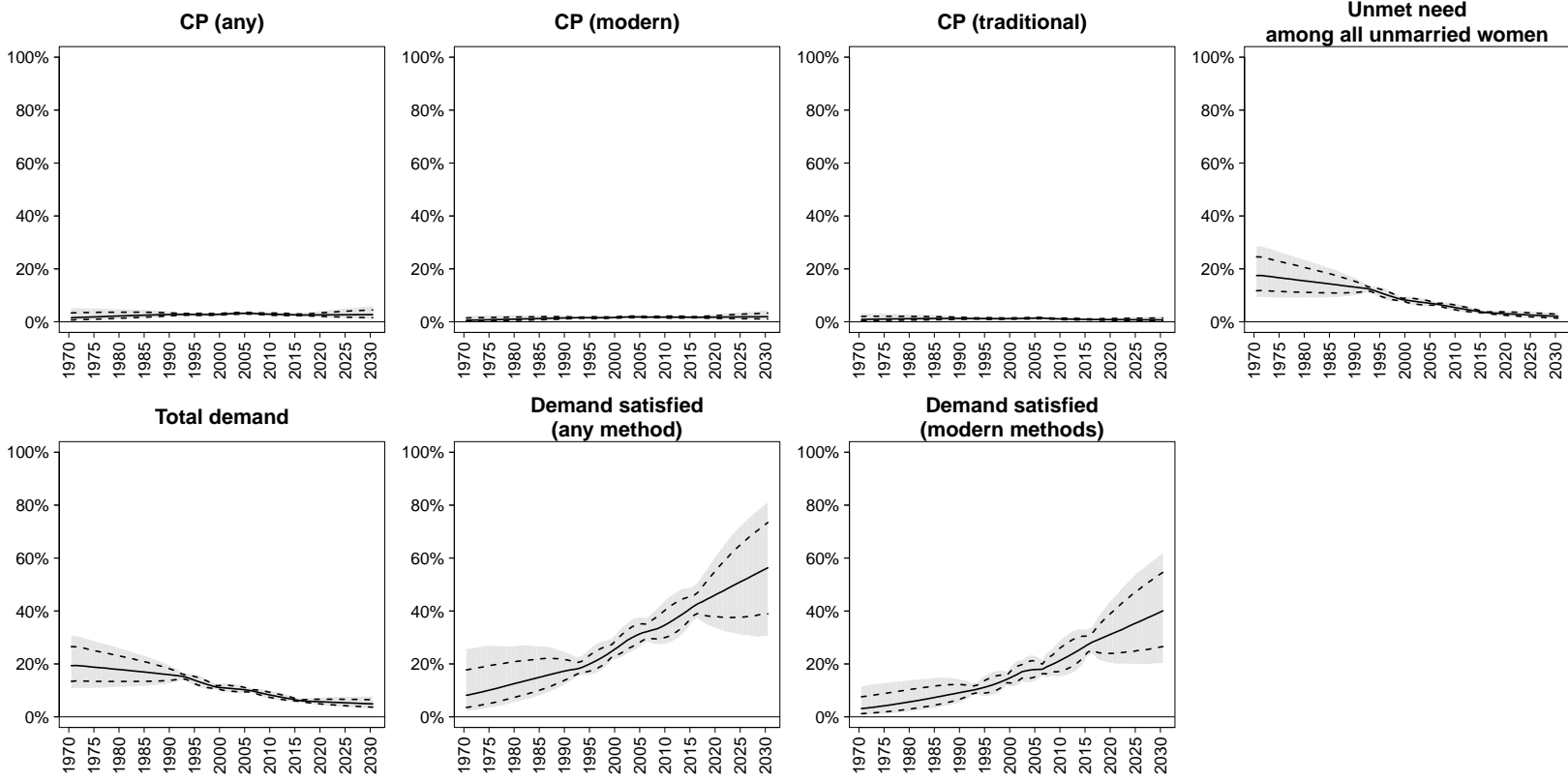
Haiti --- All women



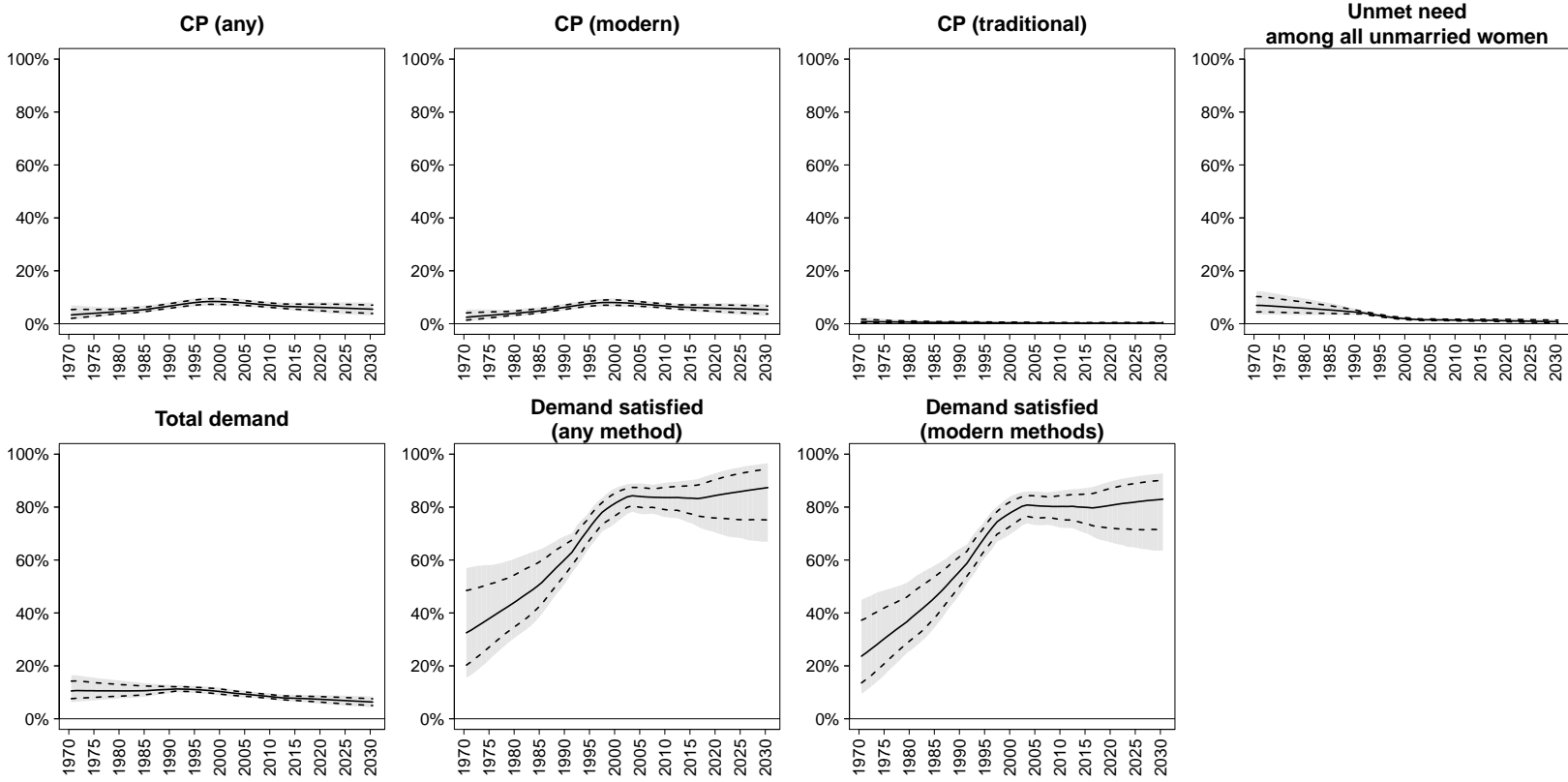
Honduras --- All women



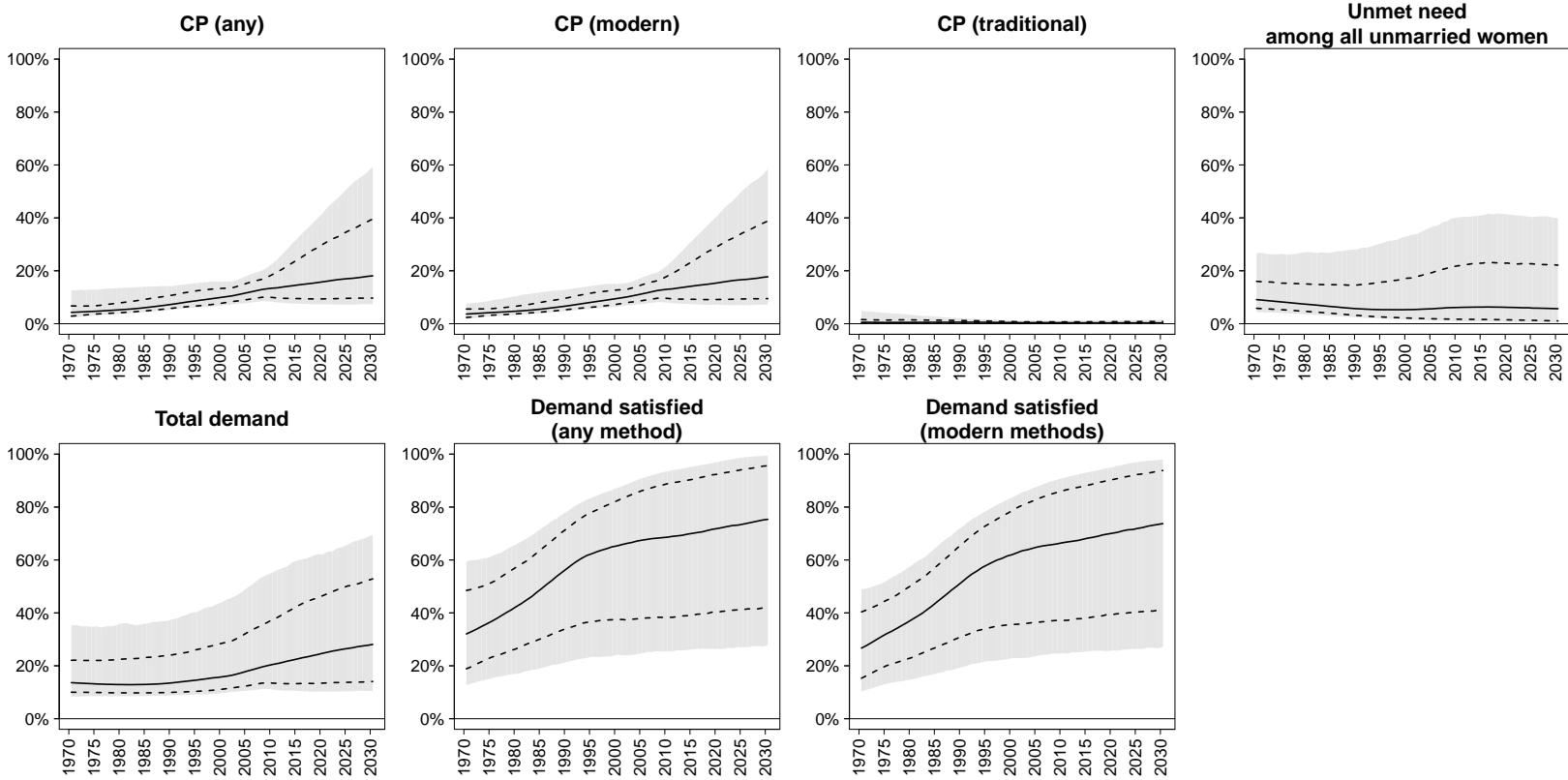
India --- All women



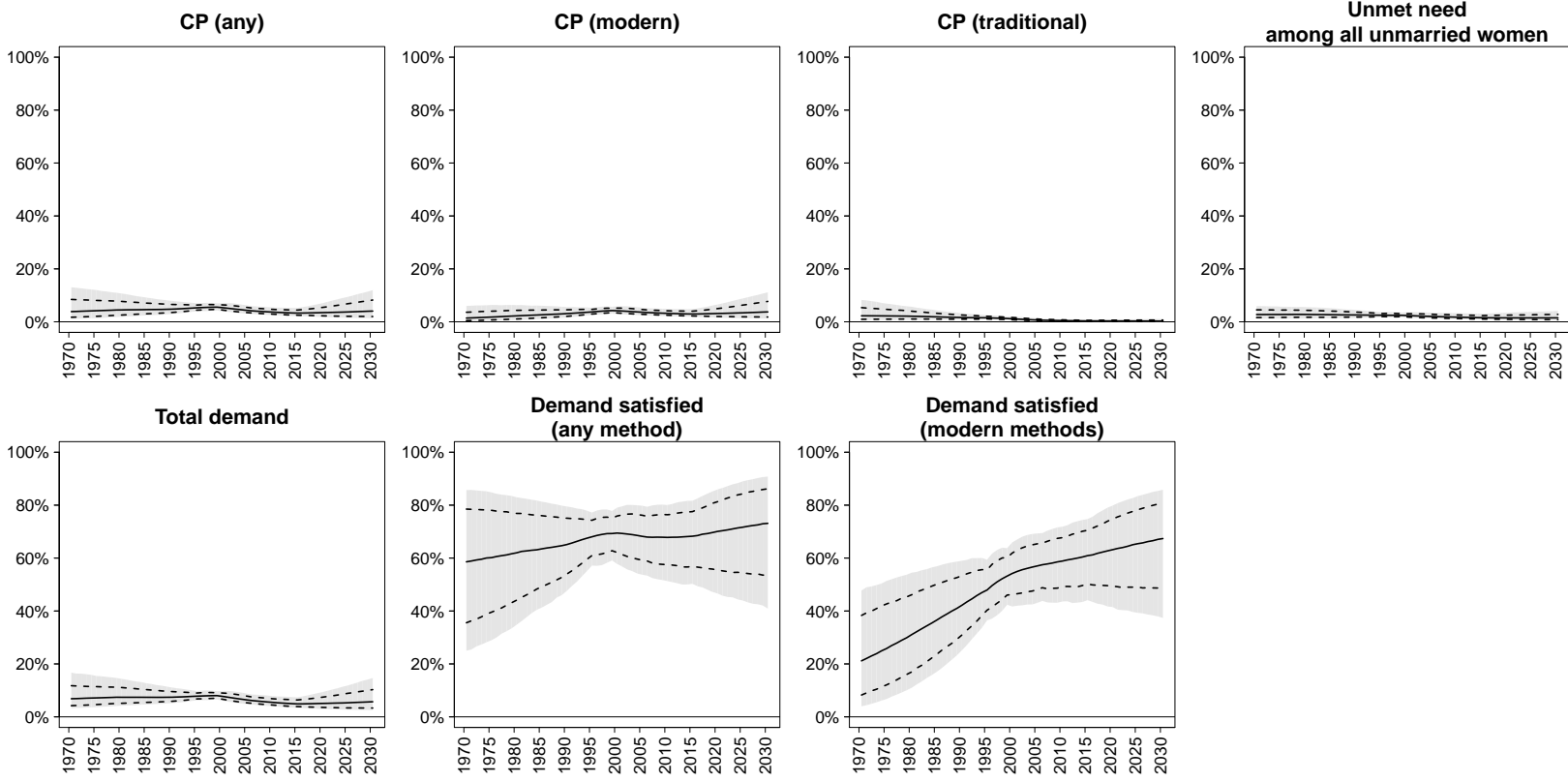
Indonesia --- All women



Jamaica --- All women

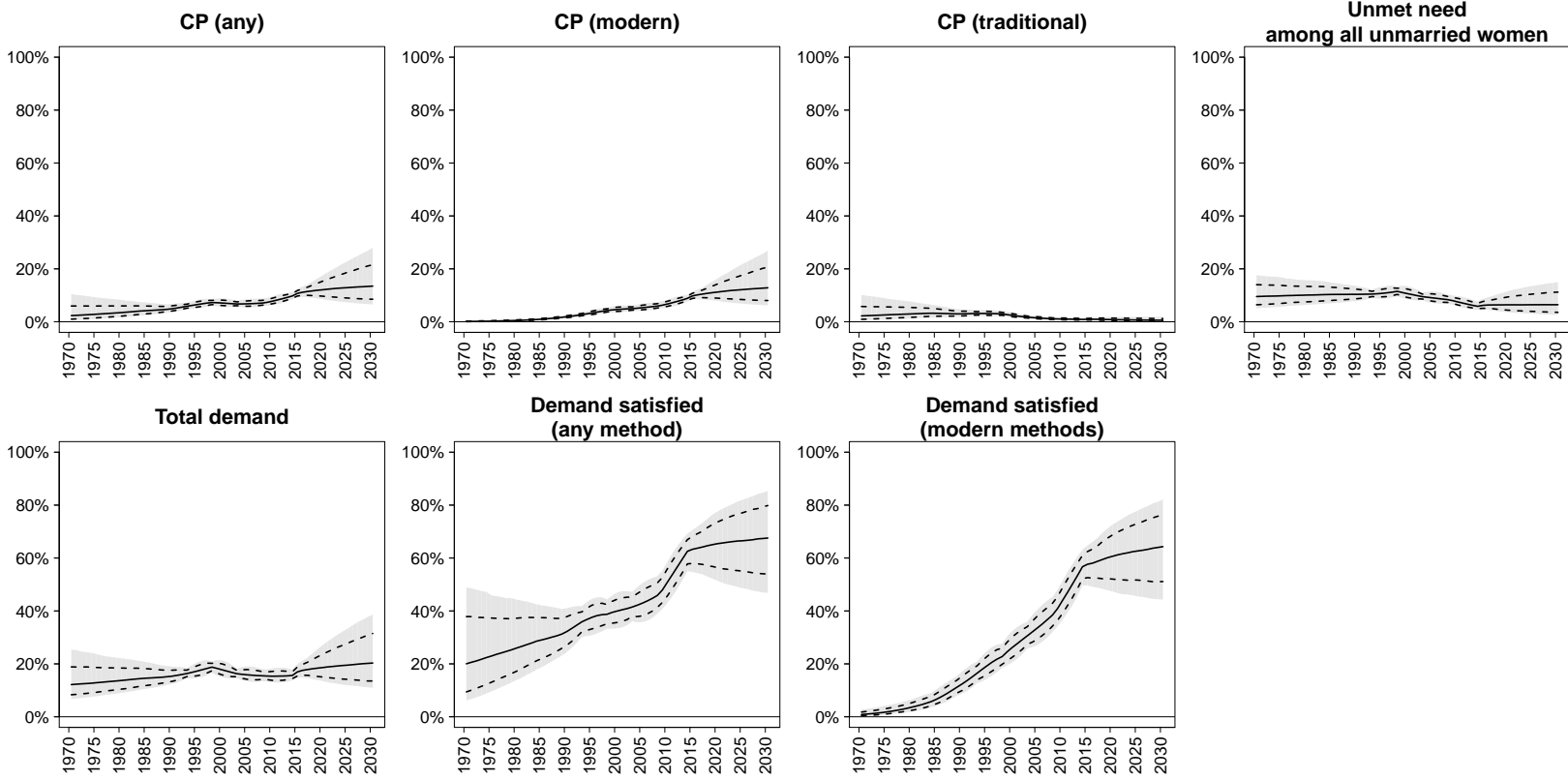


Kazakhstan --- All women

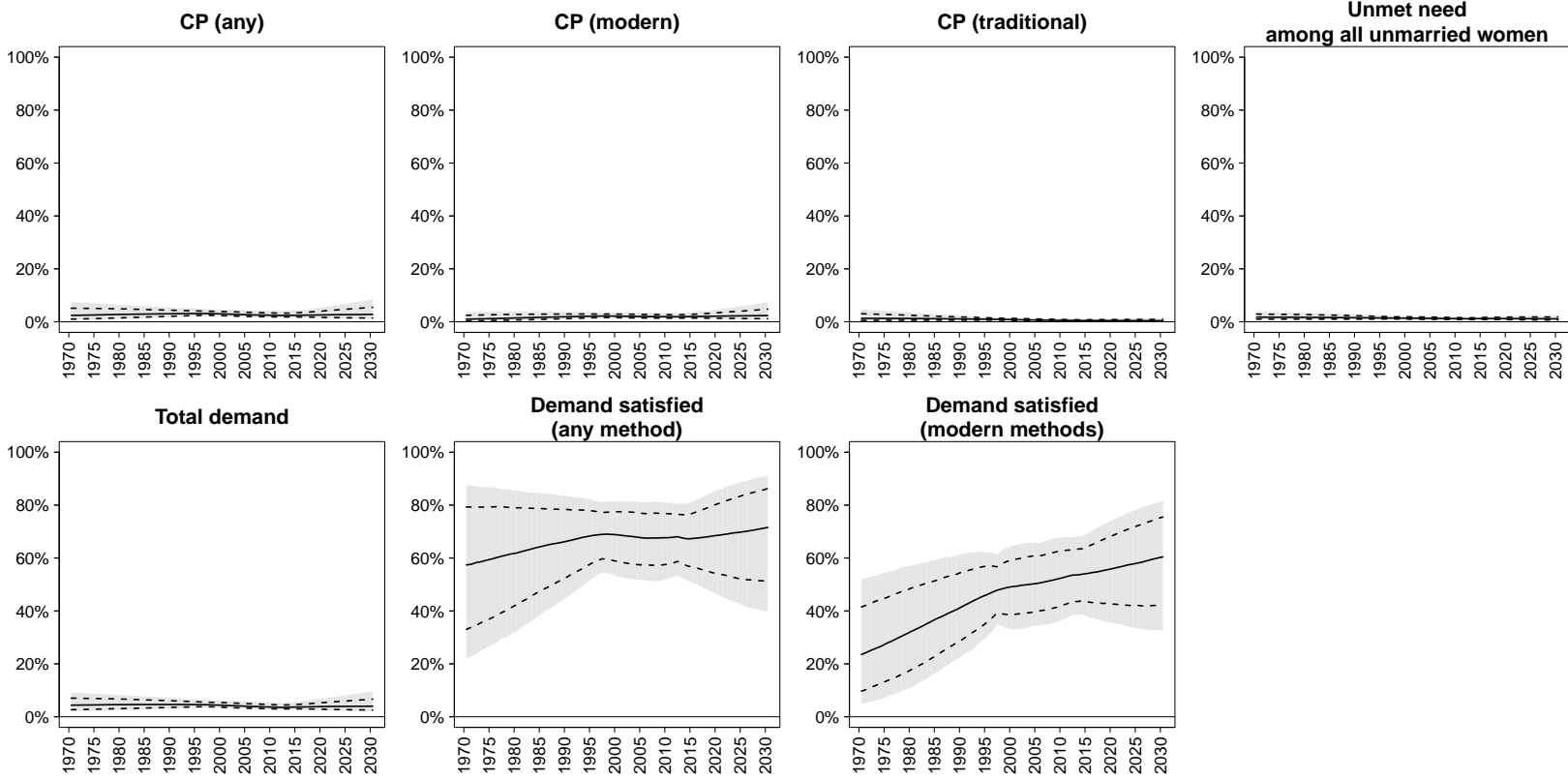




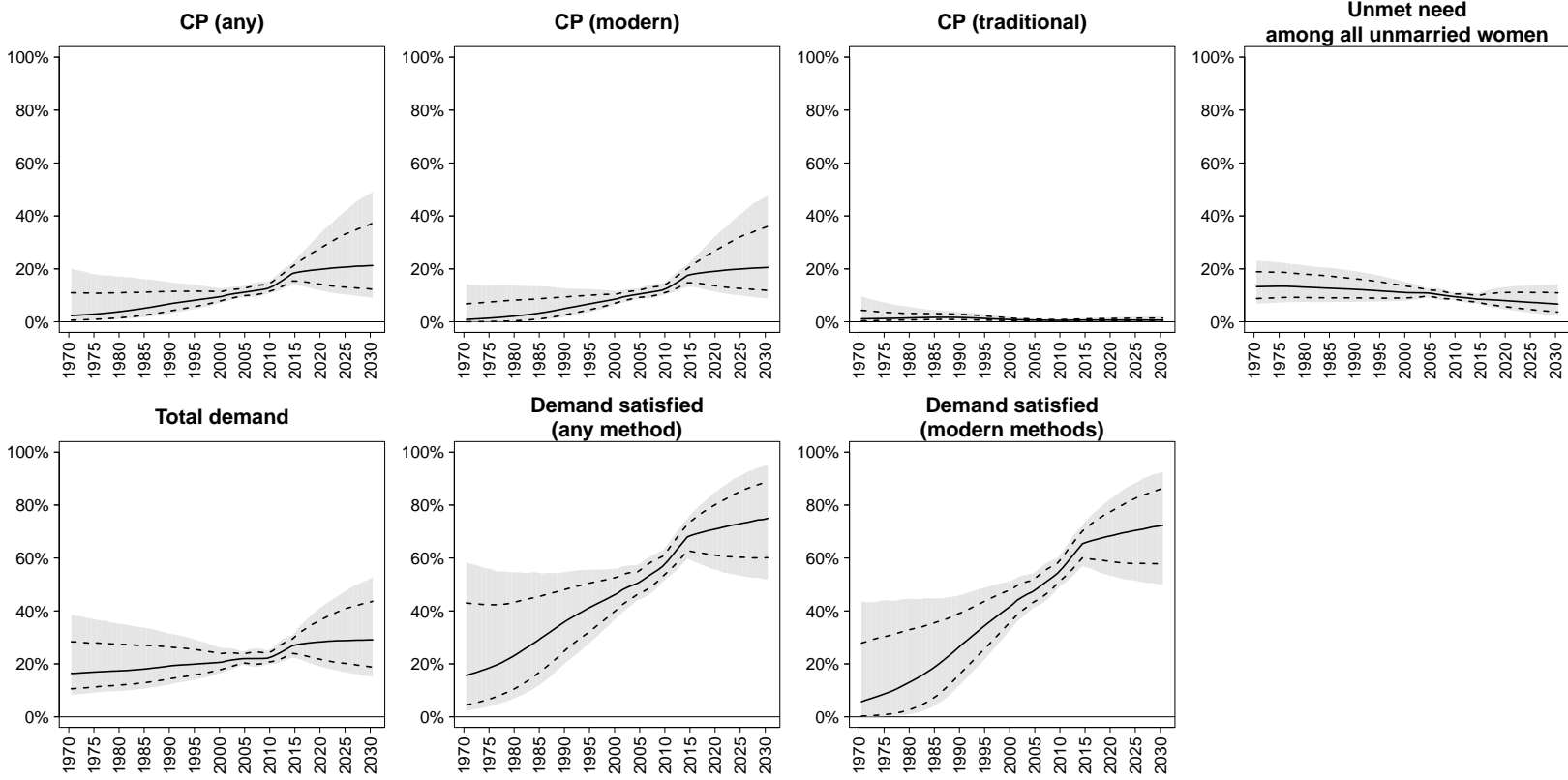
Kenya --- All women



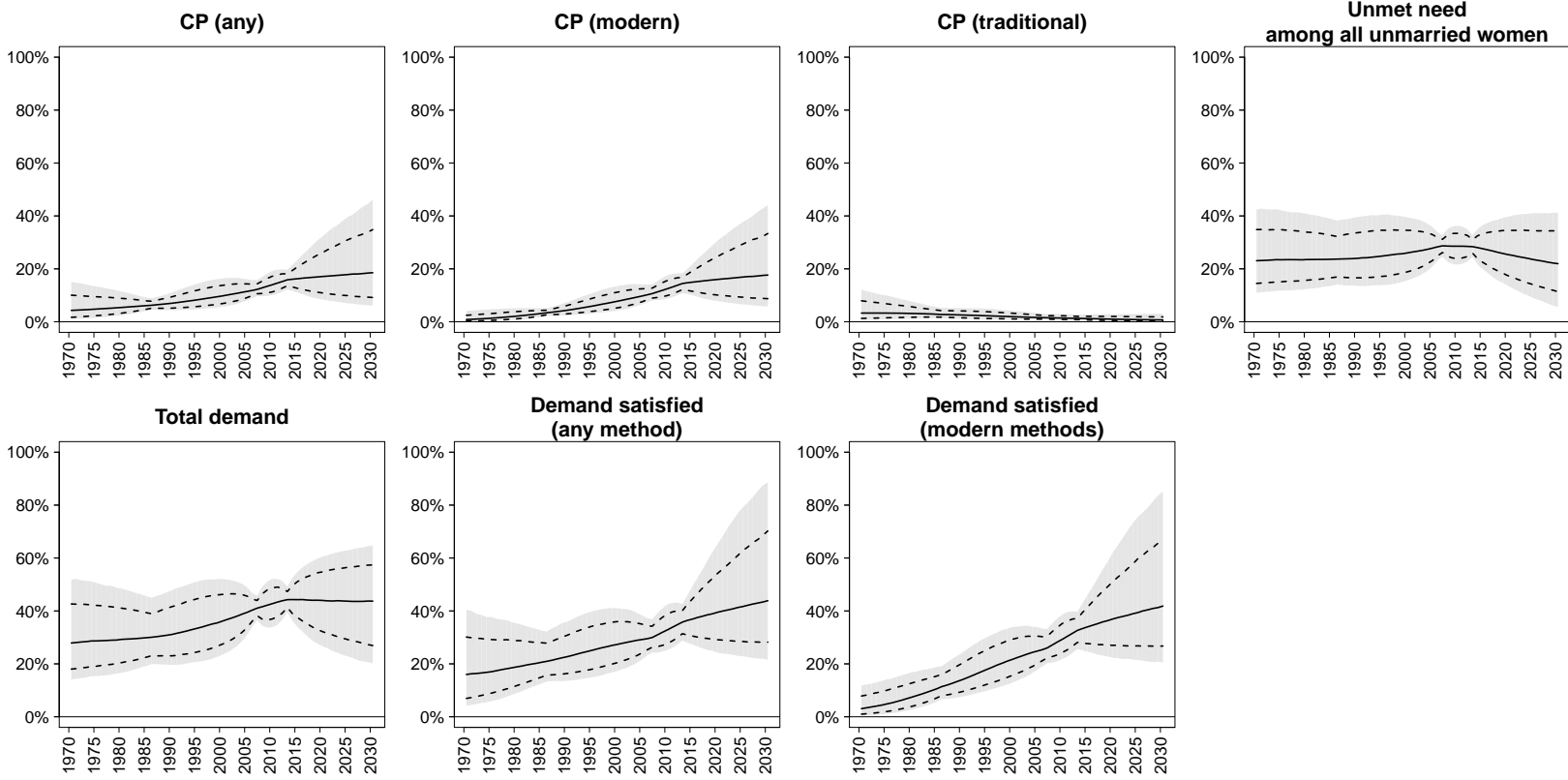
Kyrgyzstan --- All women



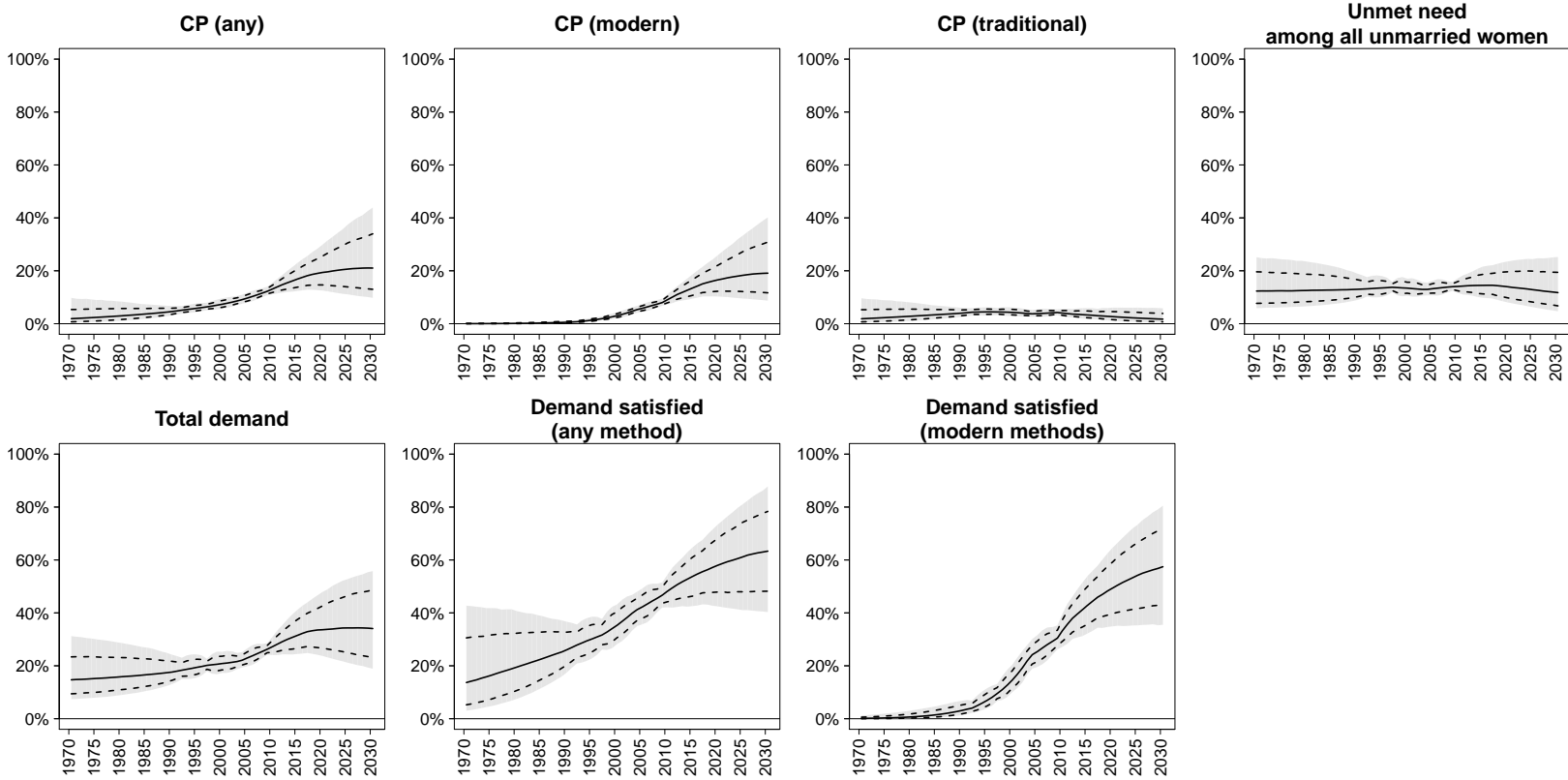
Lesotho ---- All women



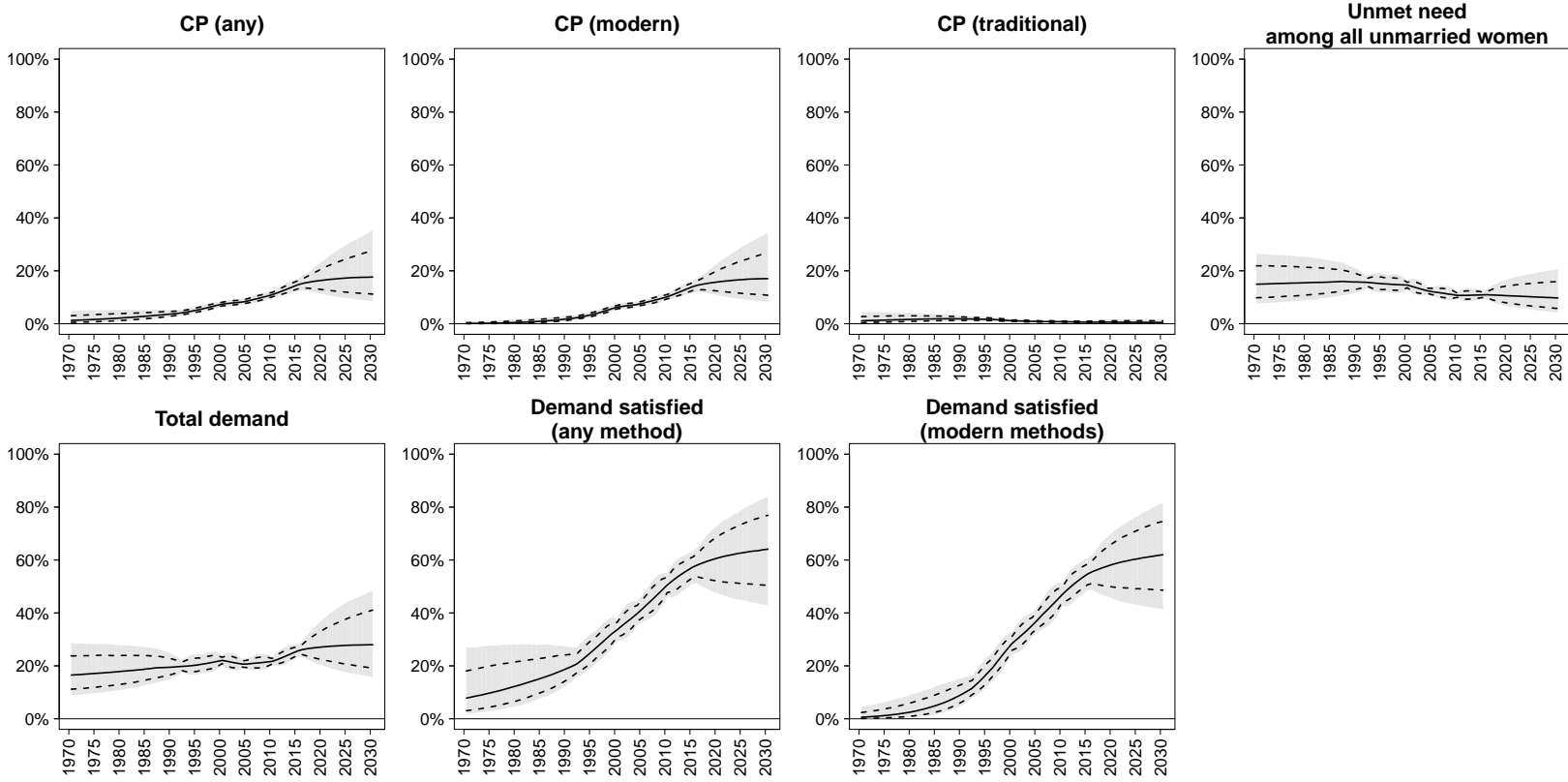
Liberia --- All women



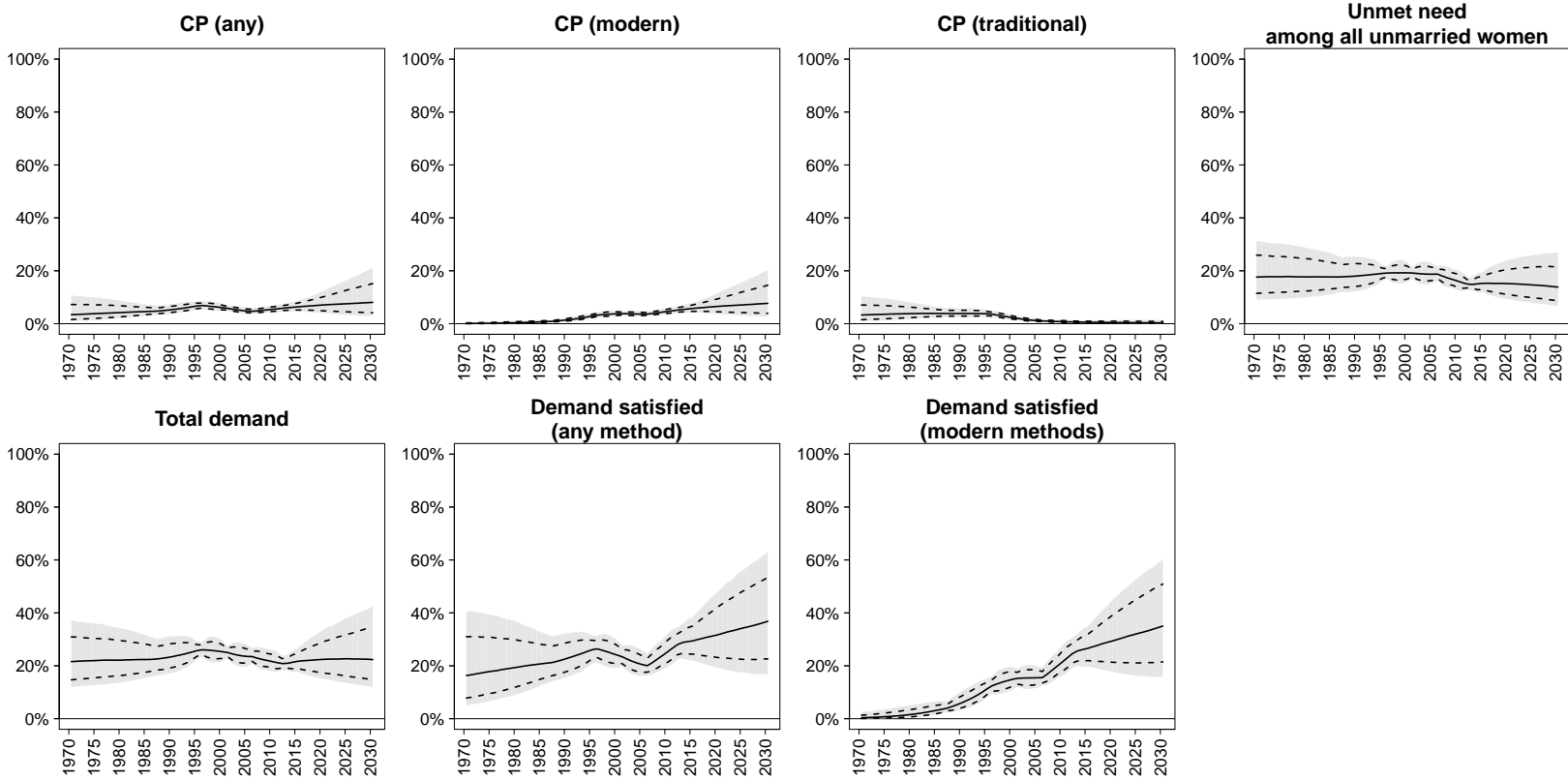
Madagascar --- All women



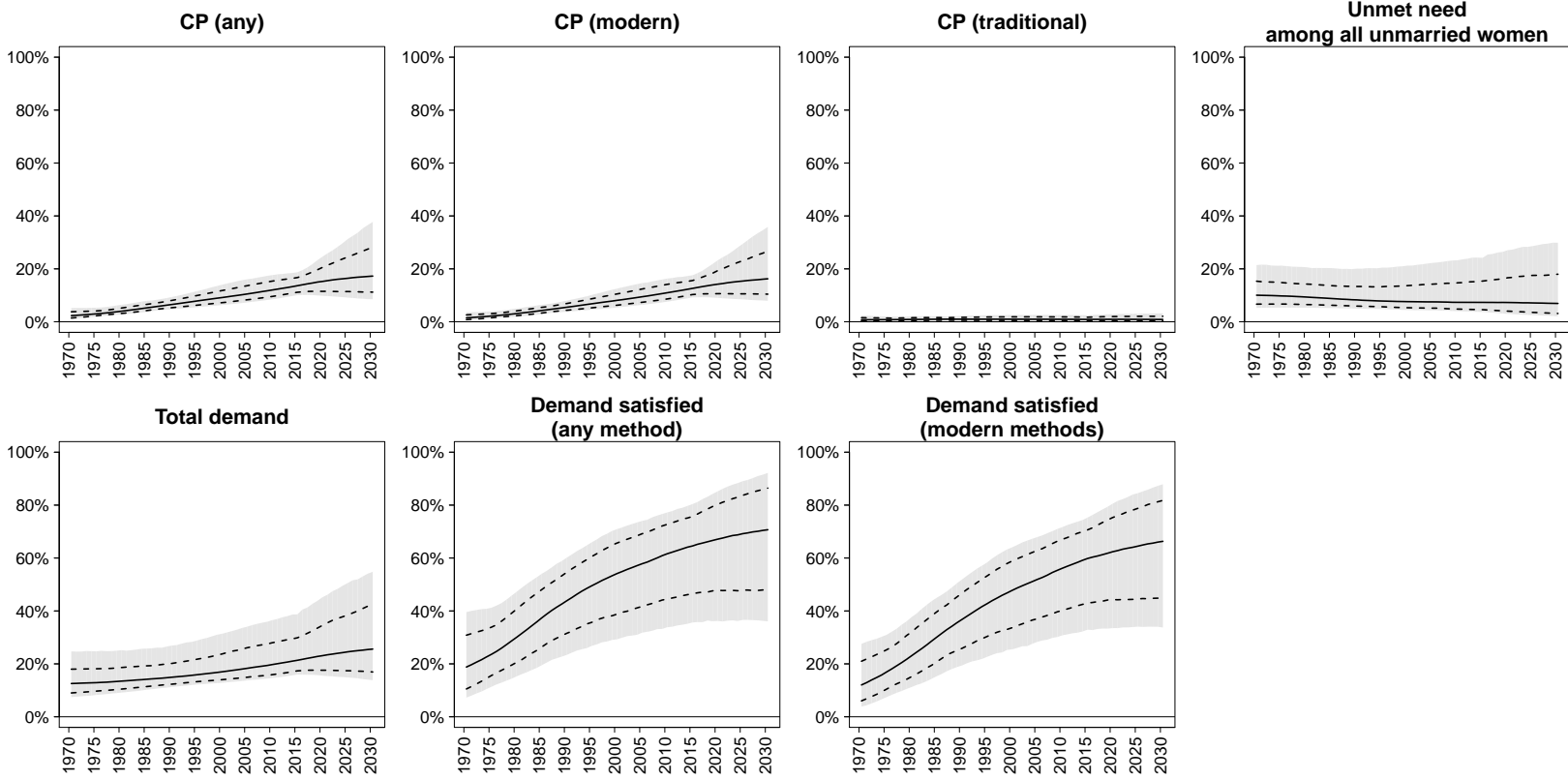
Malawi --- All women



Mali --- All women

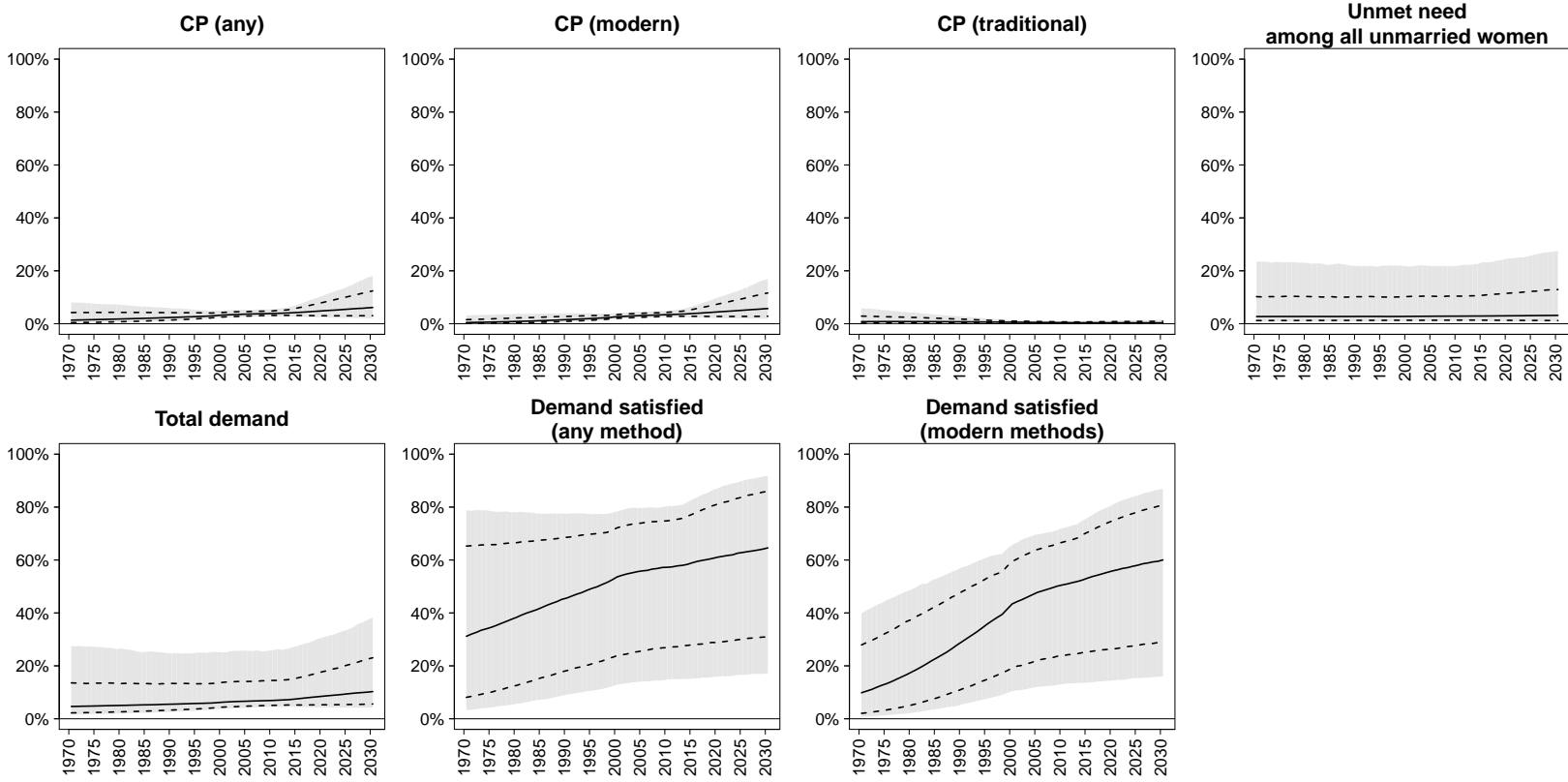


Mexico --- All women

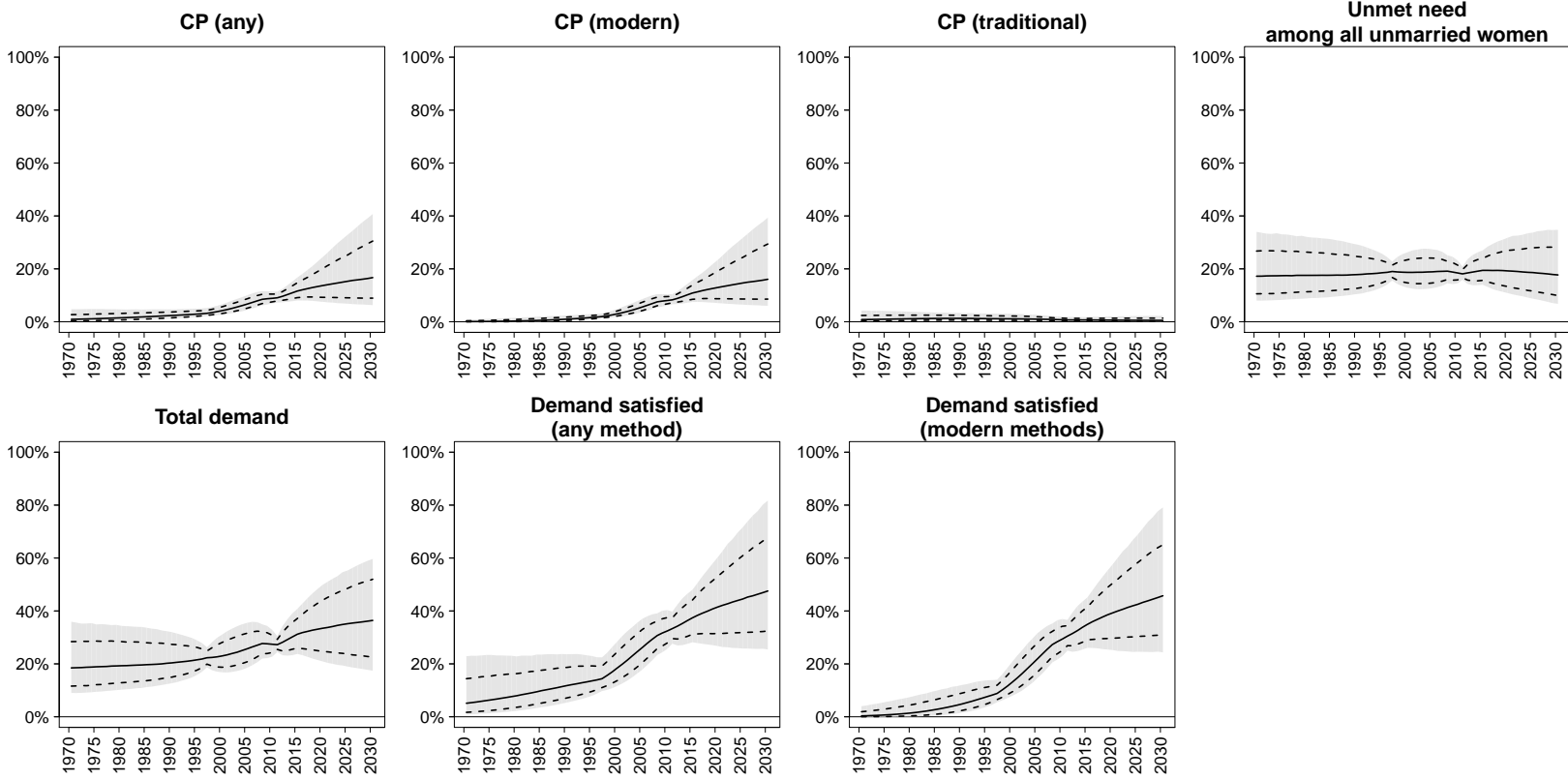




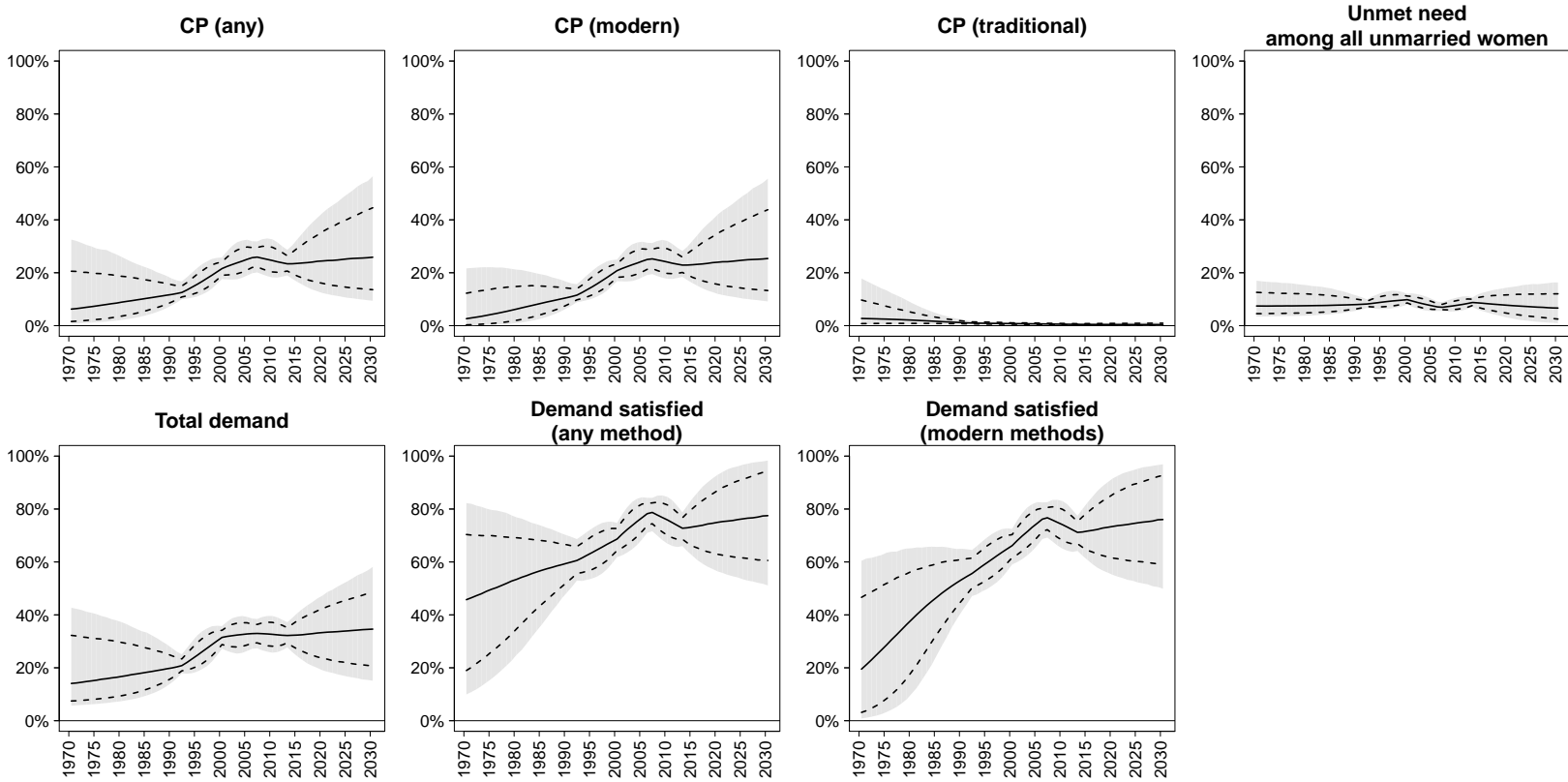
Mongolia --- All women



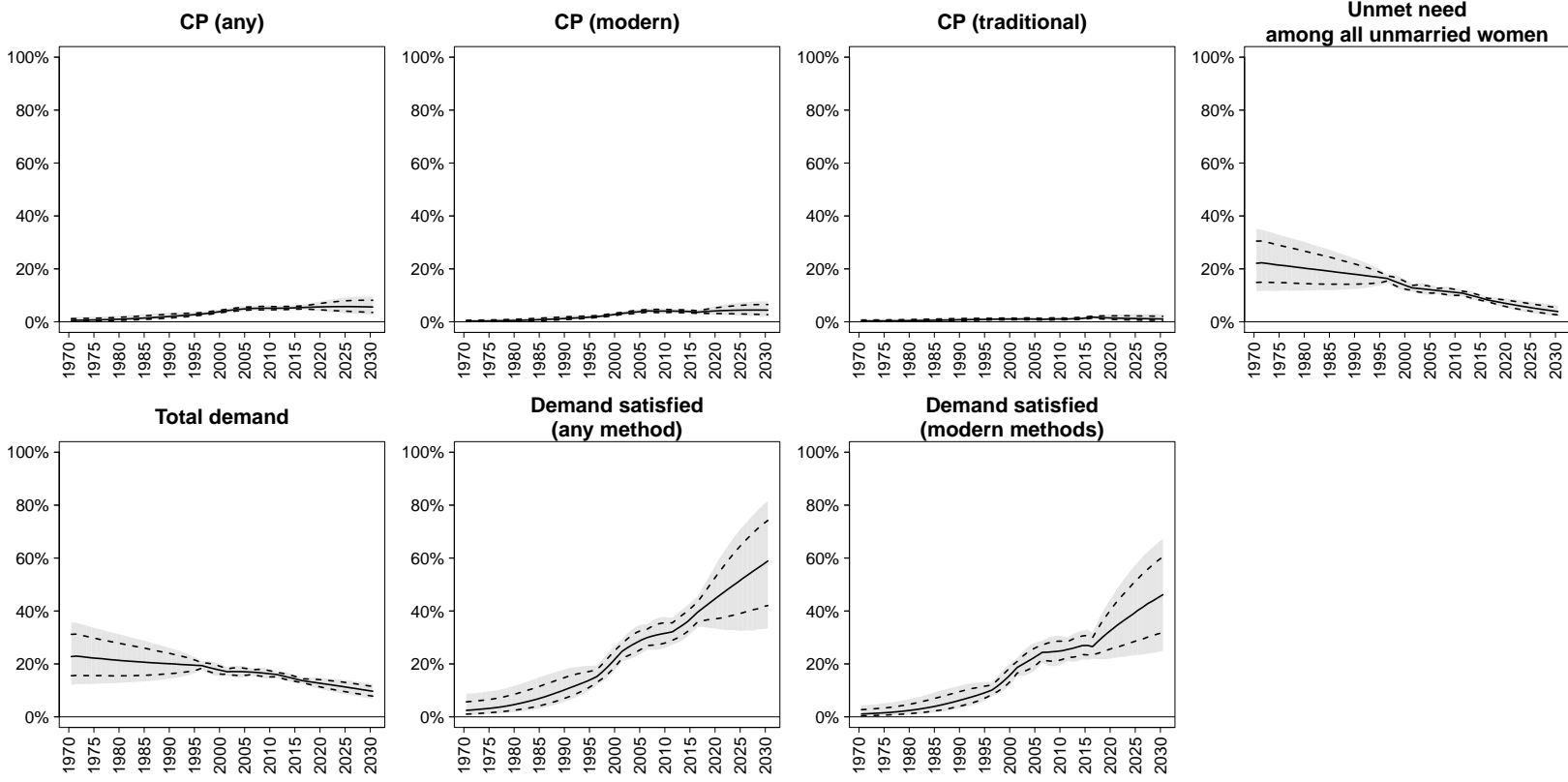
Mozambique --- All women



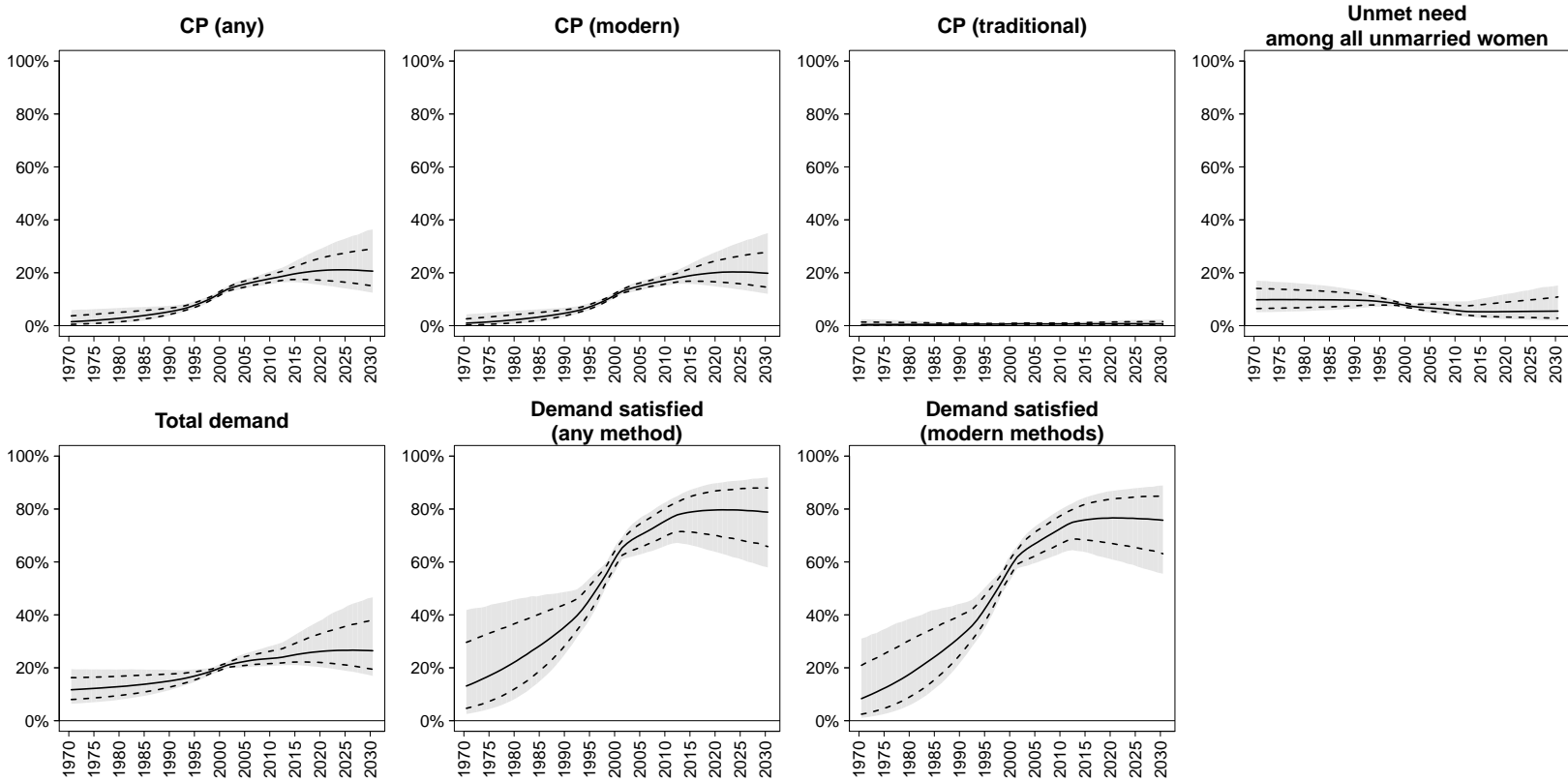
Namibia --- All women



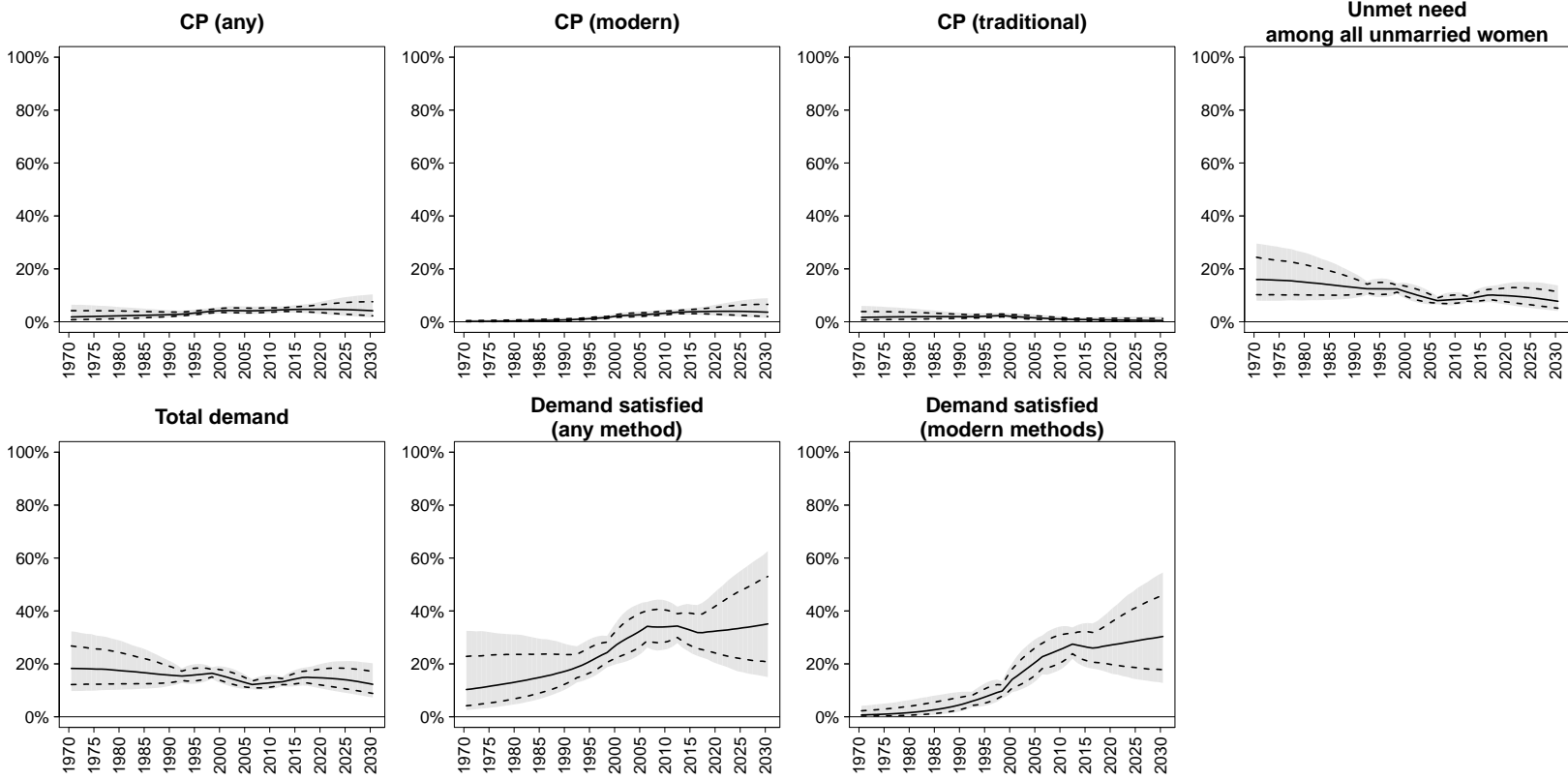
Nepal --- All women



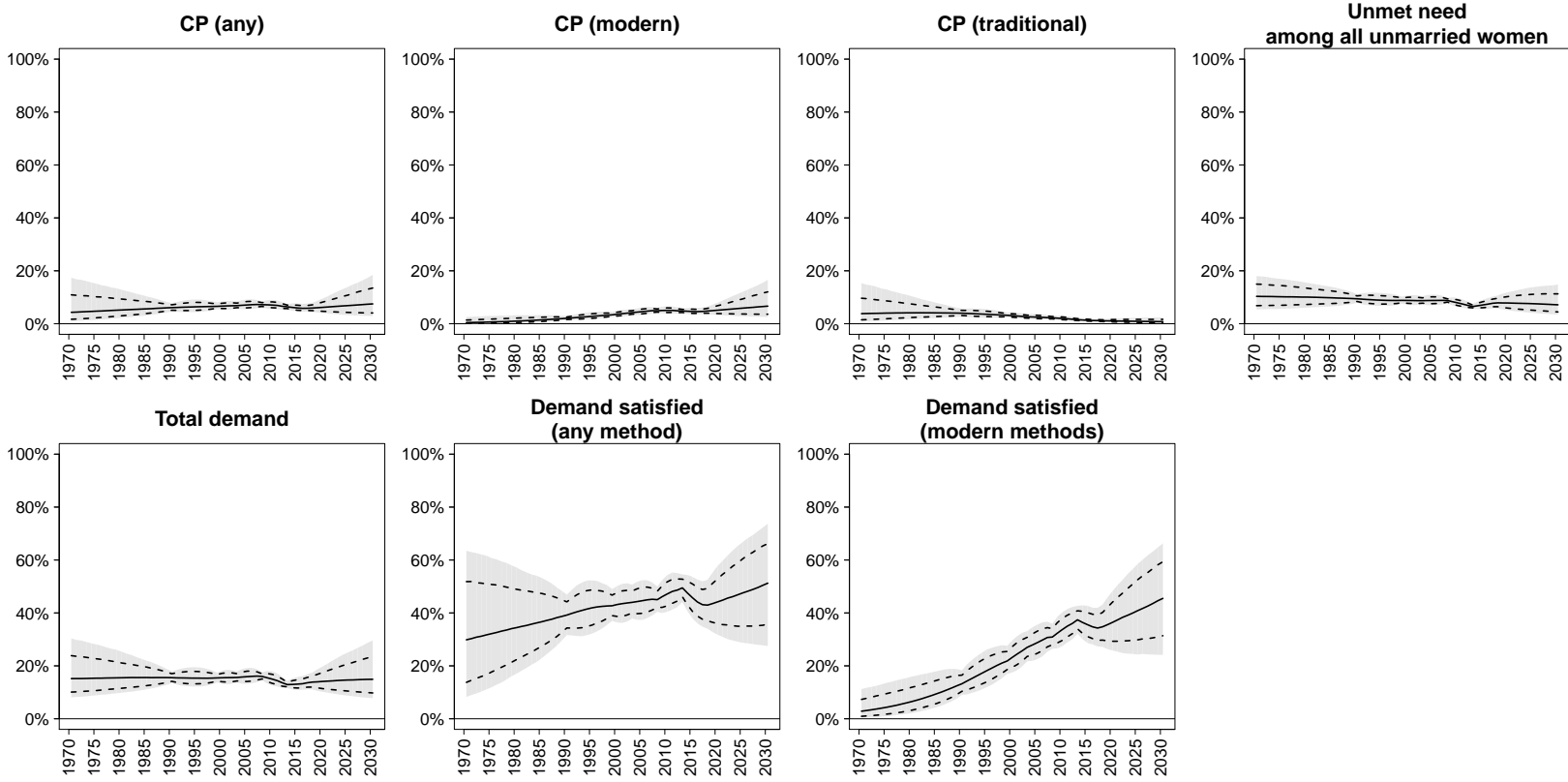
Nicaragua --- All women



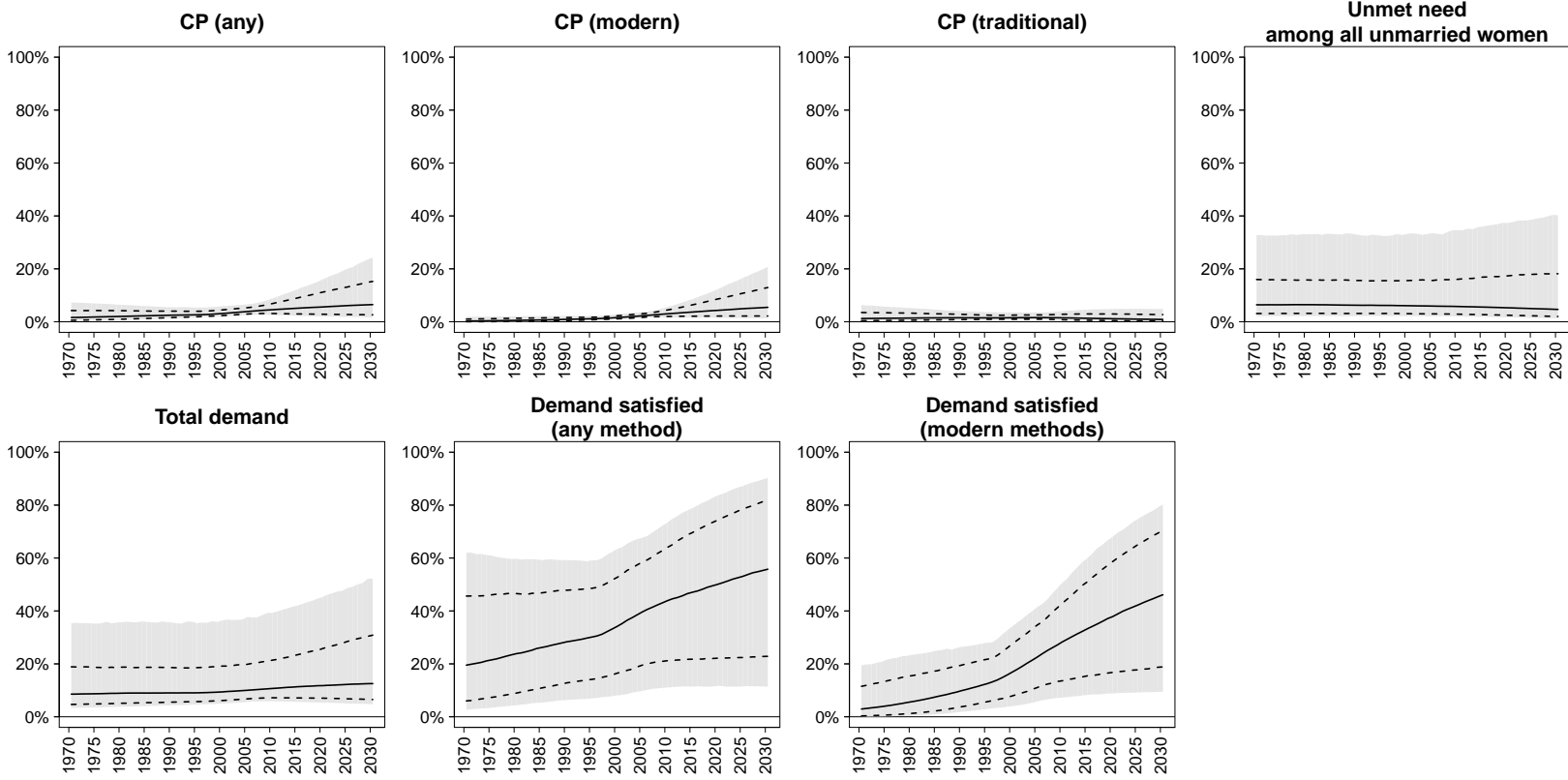
Niger --- All women



Nigeria ---- All women

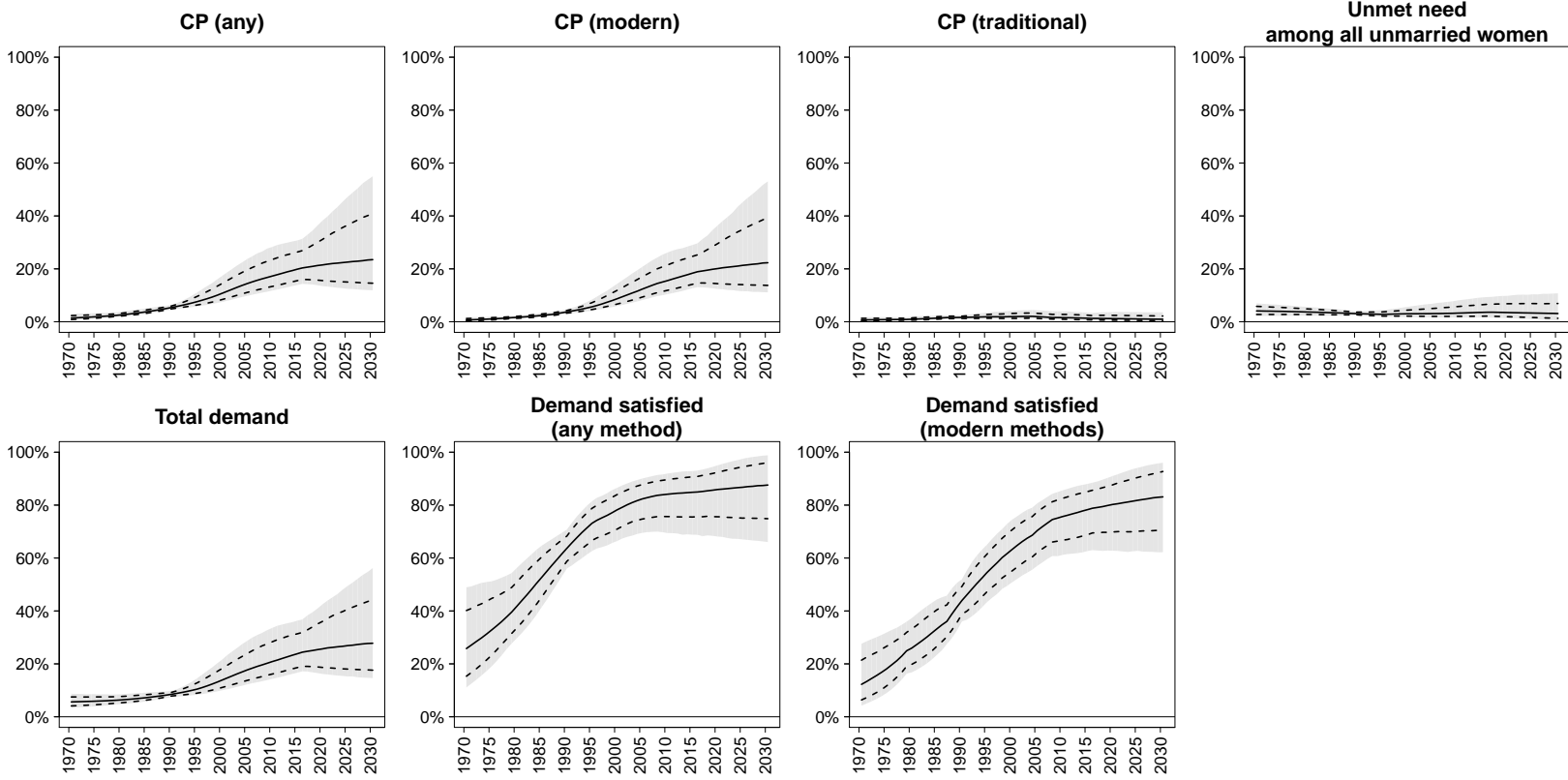


Papua New Guinea --- All women





Paraguay --- All women



Peru --- All women

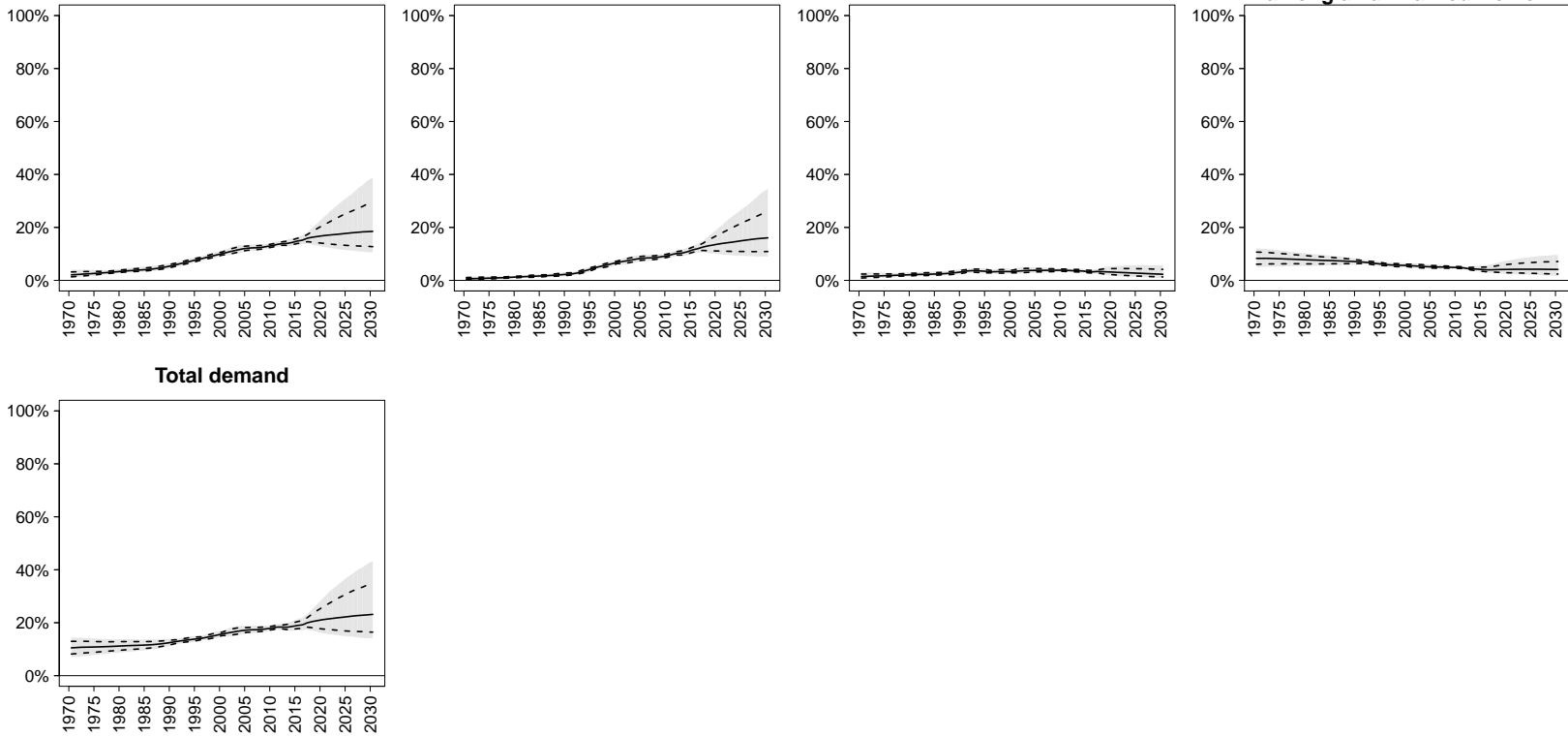
CP (any)

CP (modern)

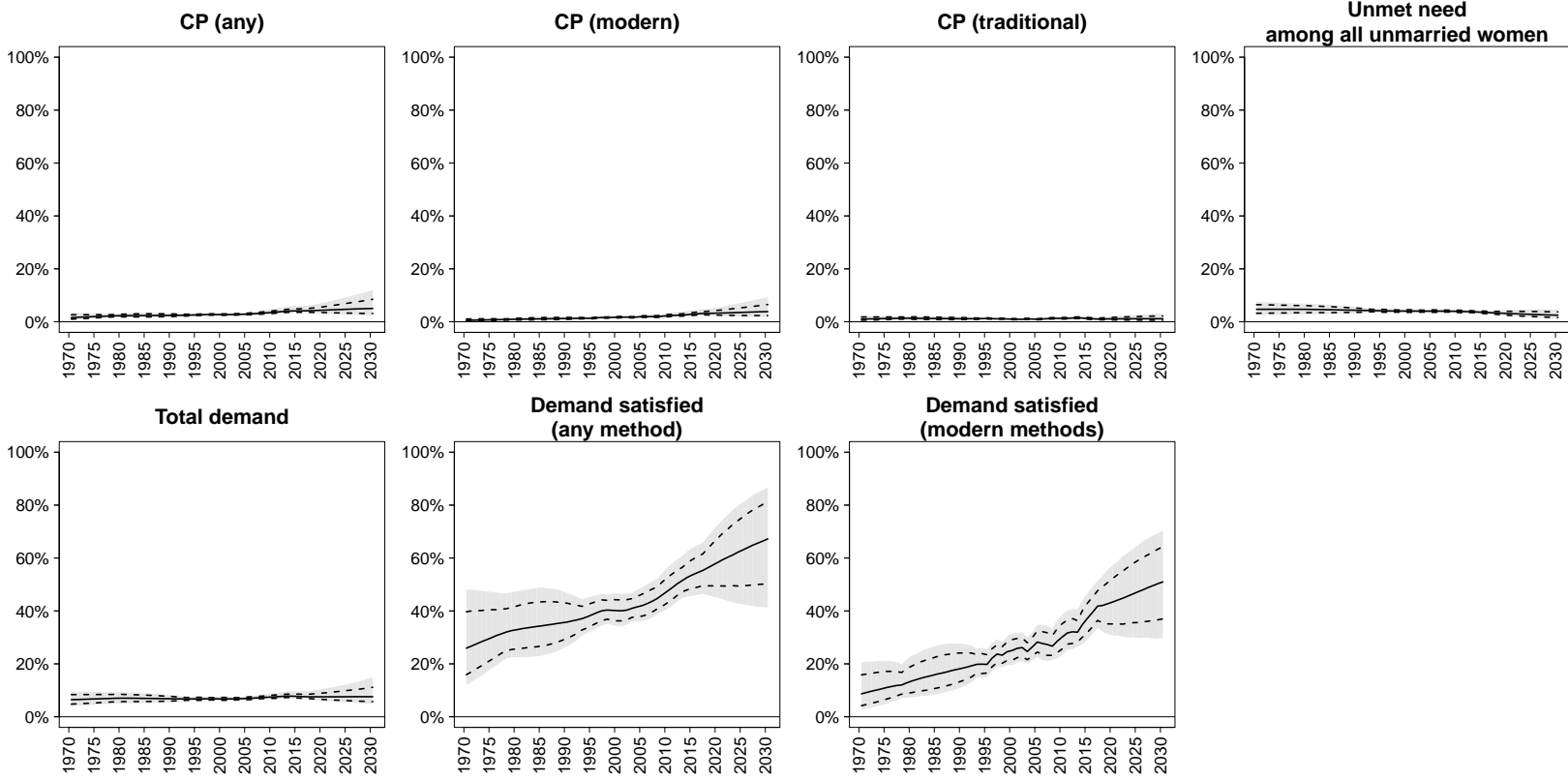
CP (traditional)

Unmet need among all unmarried women

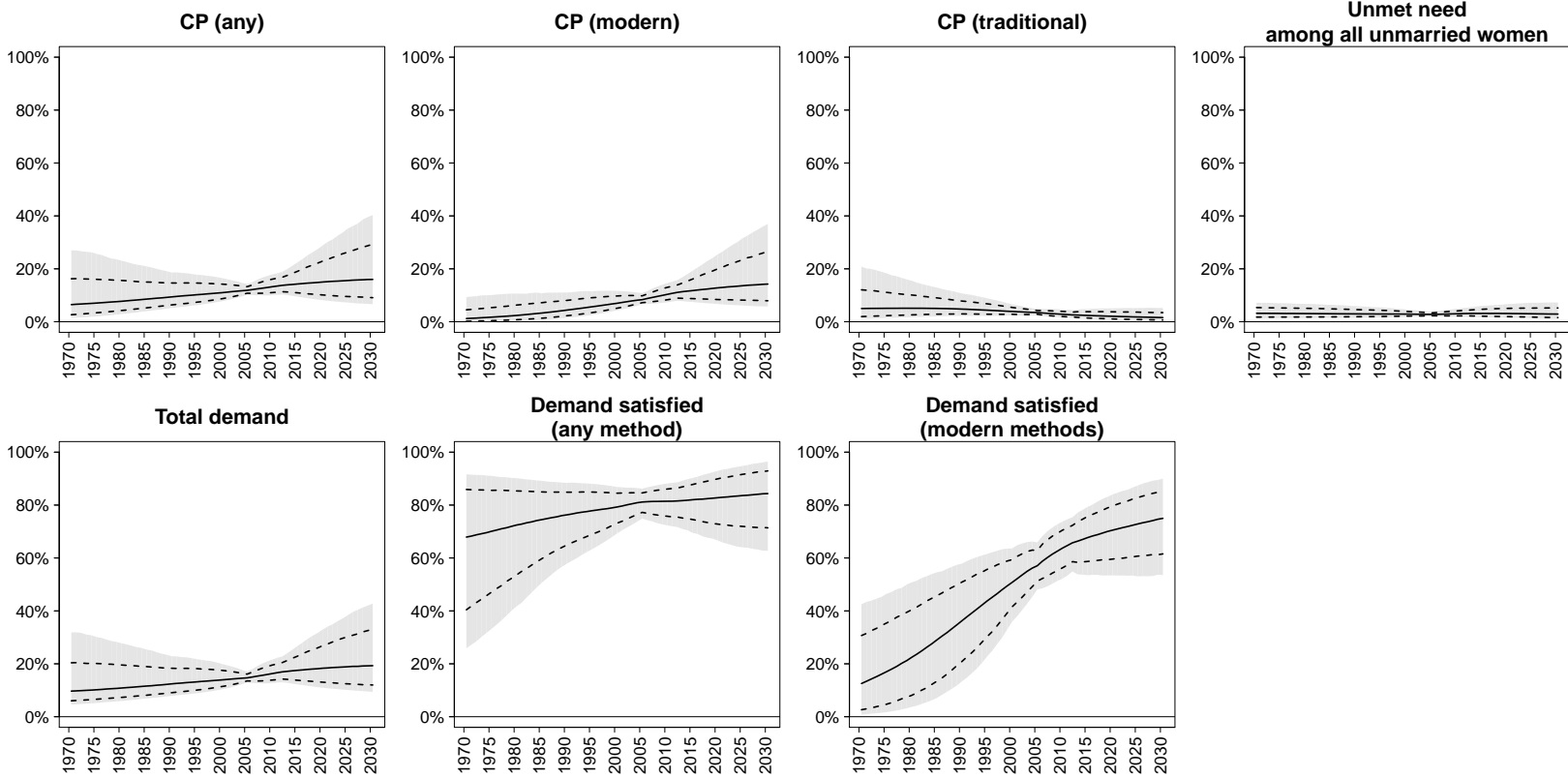
Total demand



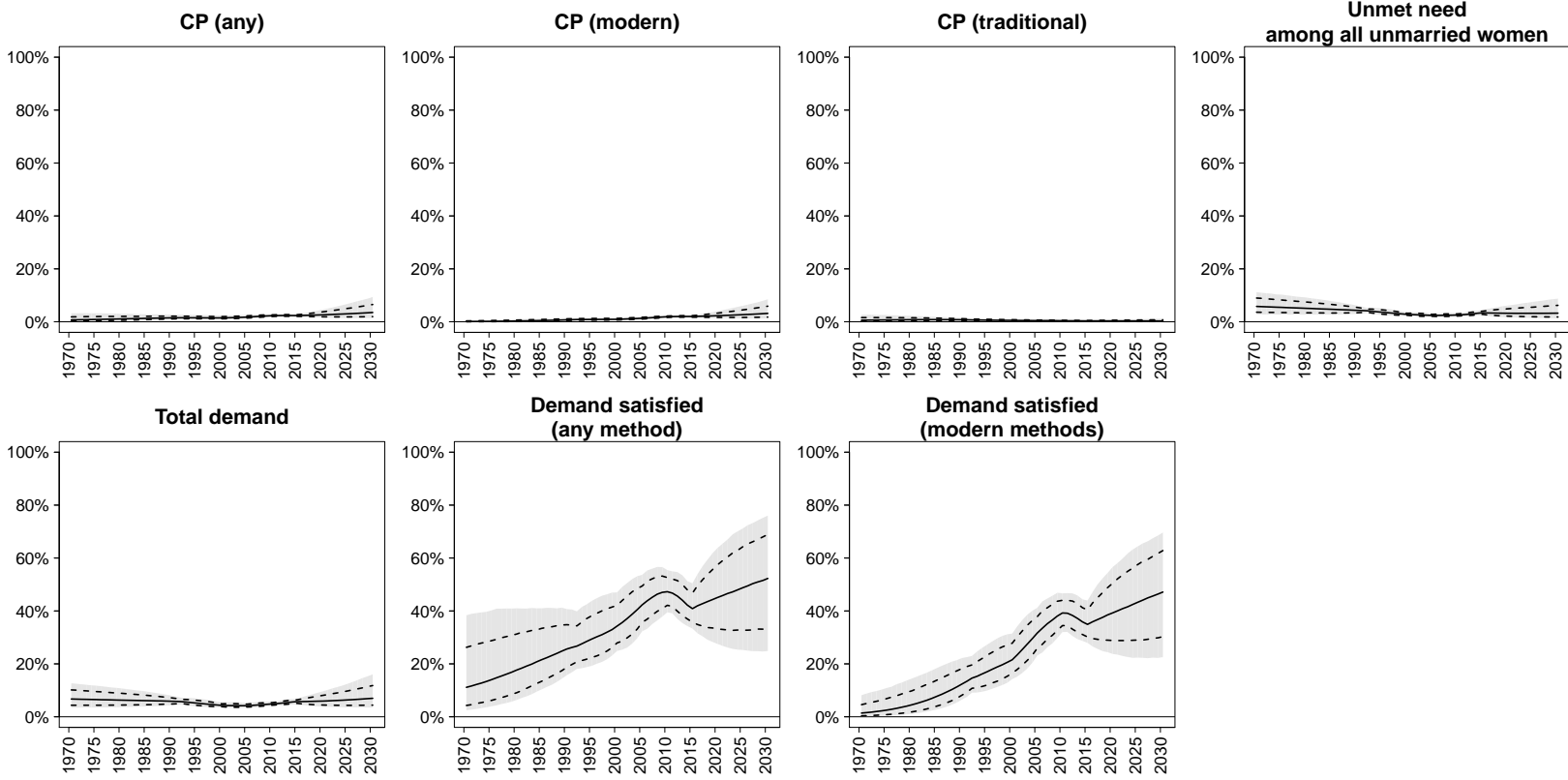
Philippines --- All women



Republic of Moldova --- All women



Rwanda --- All women



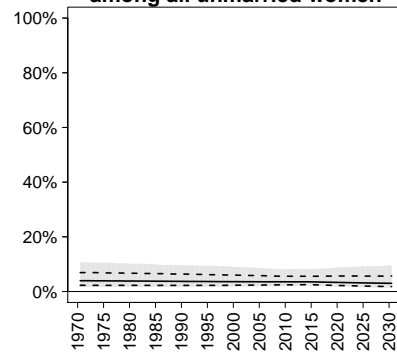
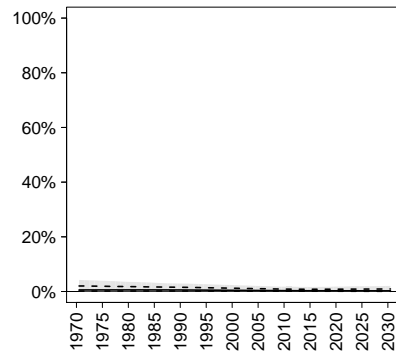
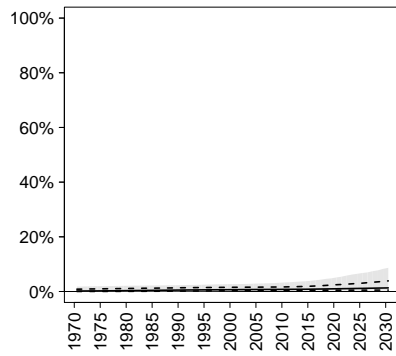
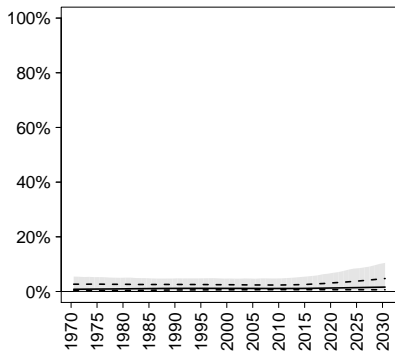
Samoa --- All women

CP (any)

CP (modern)

CP (traditional)

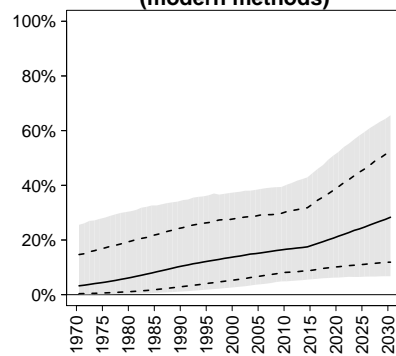
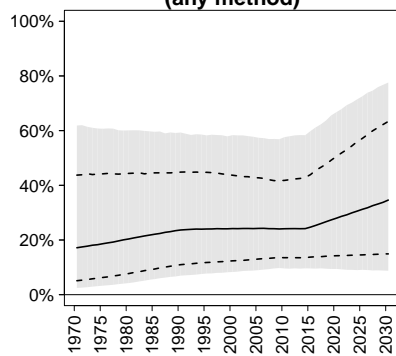
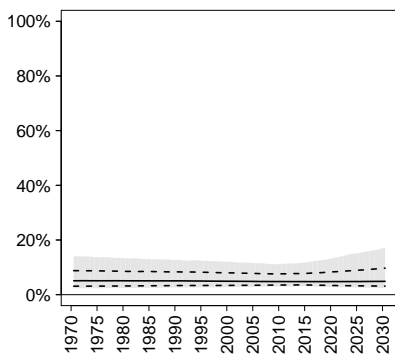
Unmet need among all unmarried women



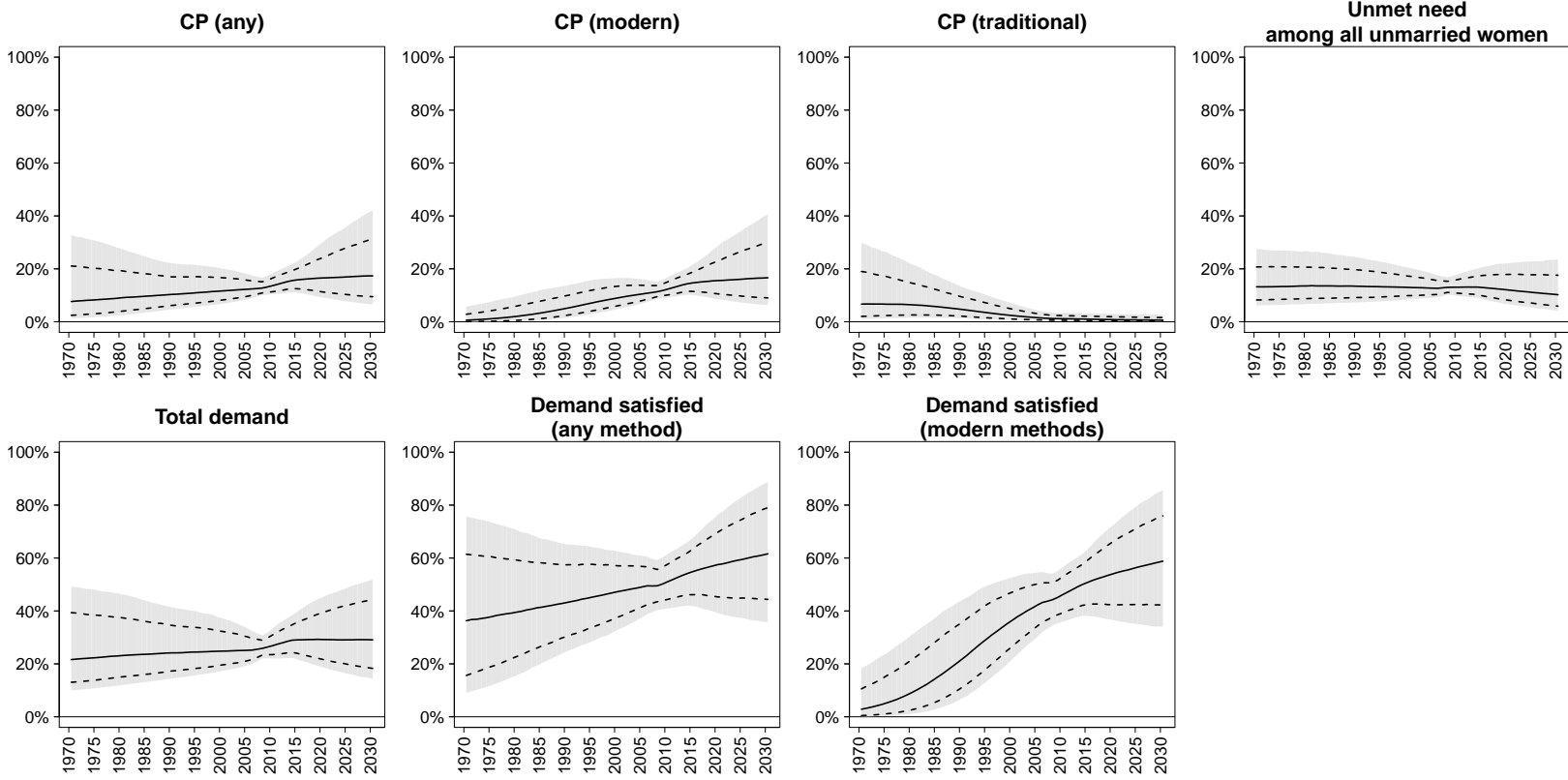
Total demand

Demand satisfied (any method)

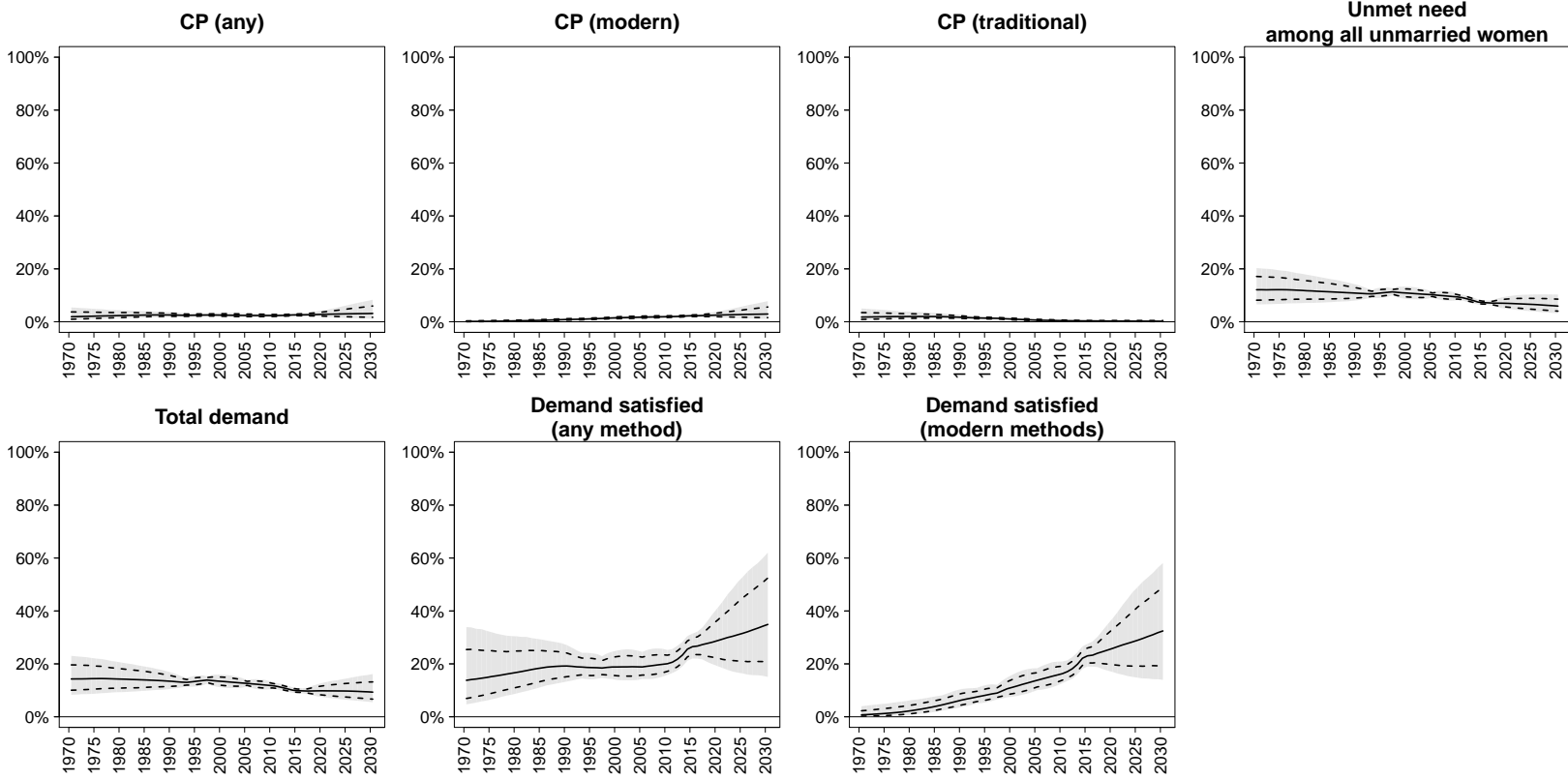
Demand satisfied (modern methods)



Sao Tome and Principe ---- All women

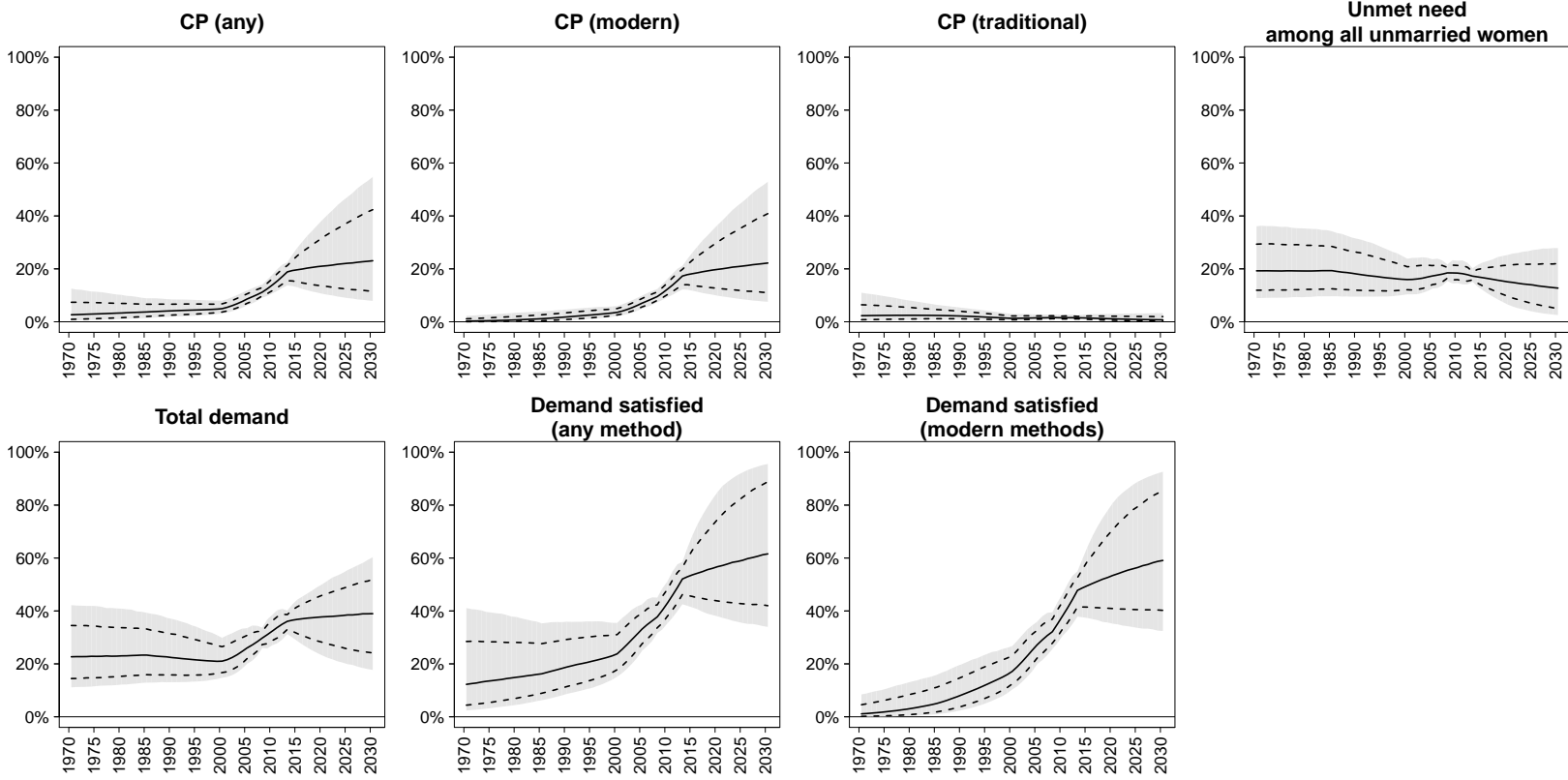


Senegal --- All women



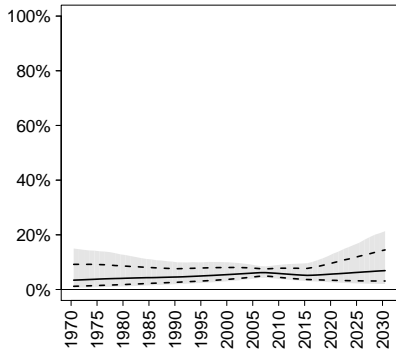


Sierra Leone --- All women

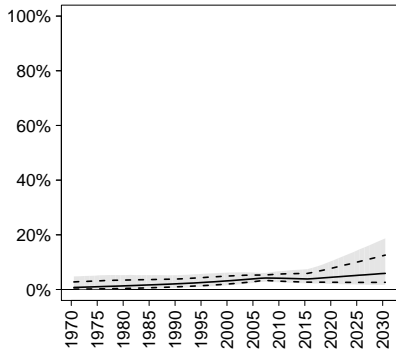


Solomon Islands --- All women

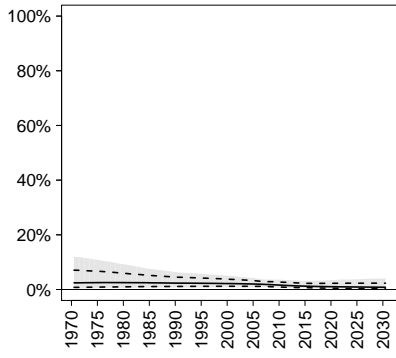
CP (any)



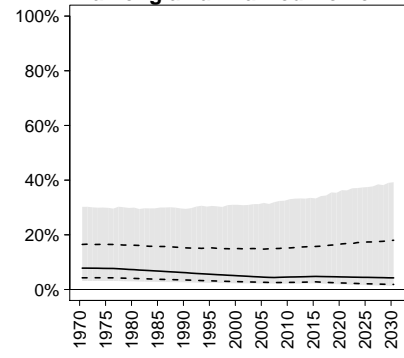
CP (modern)



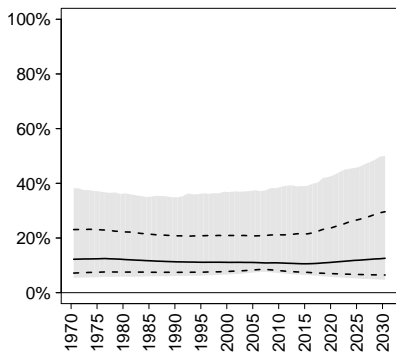
CP (traditional)



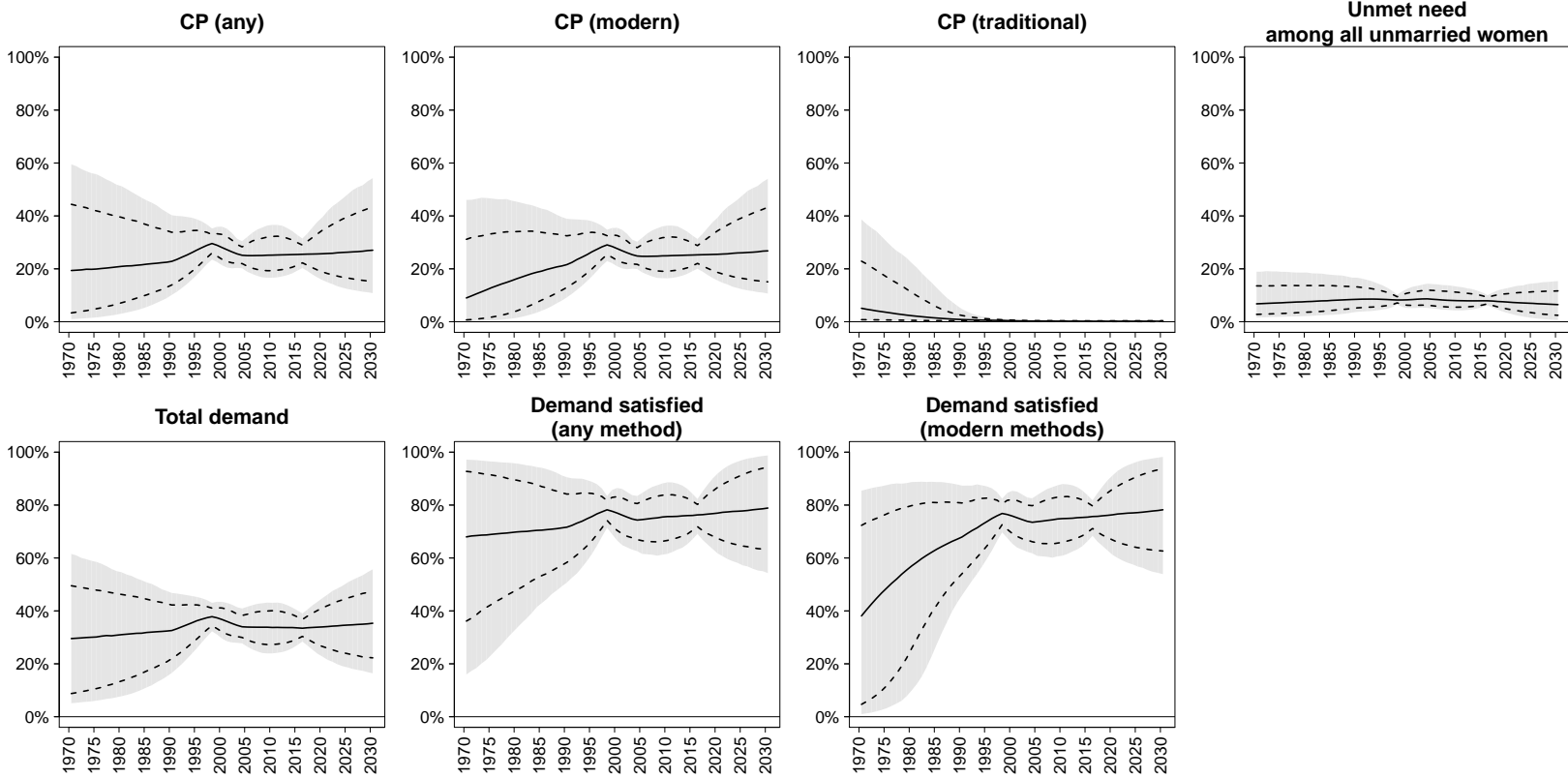
Unmet need among all unmarried women



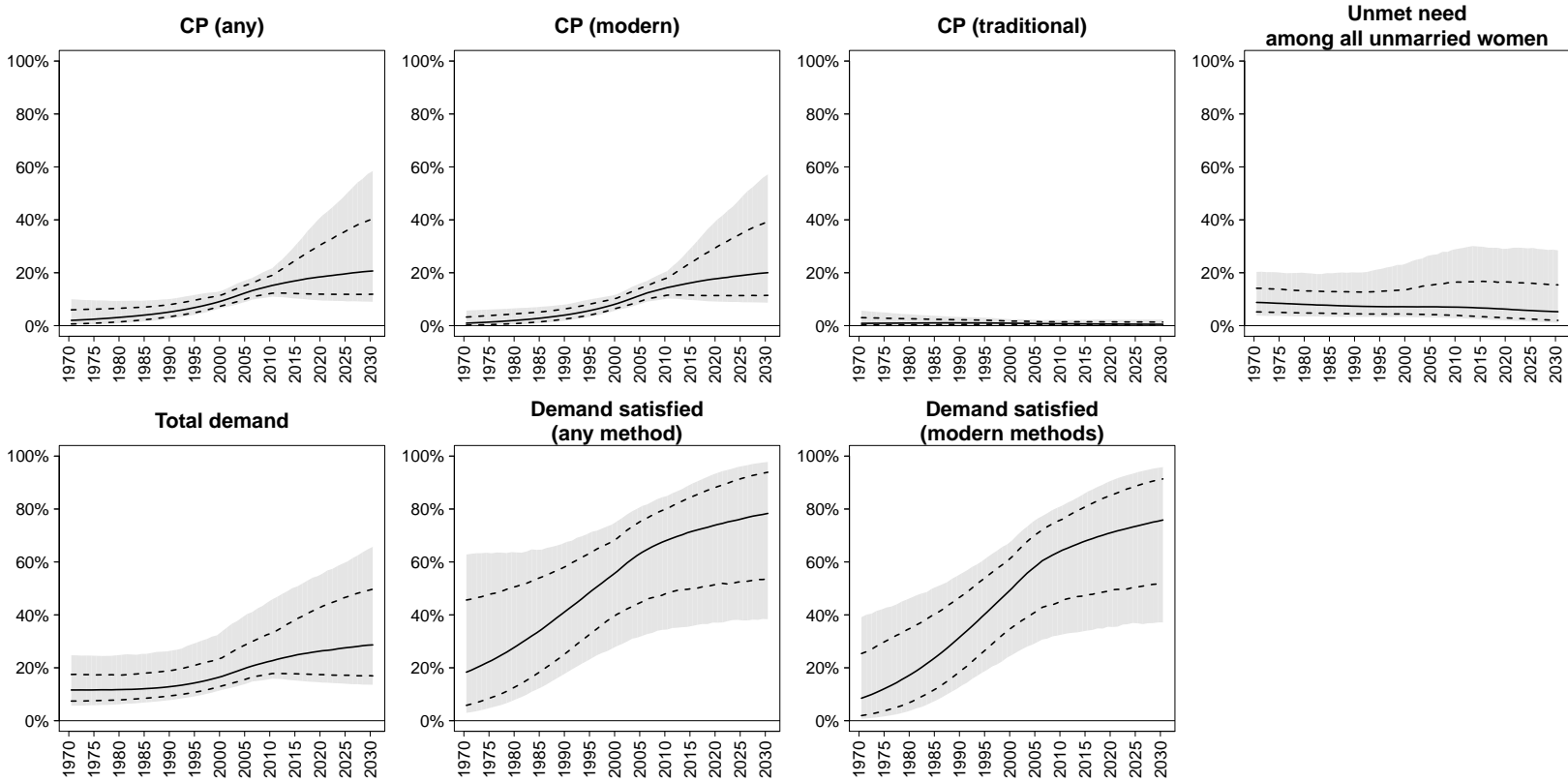
Total demand



South Africa --- All women



Suriname --- All women



Tajikistan --- All women

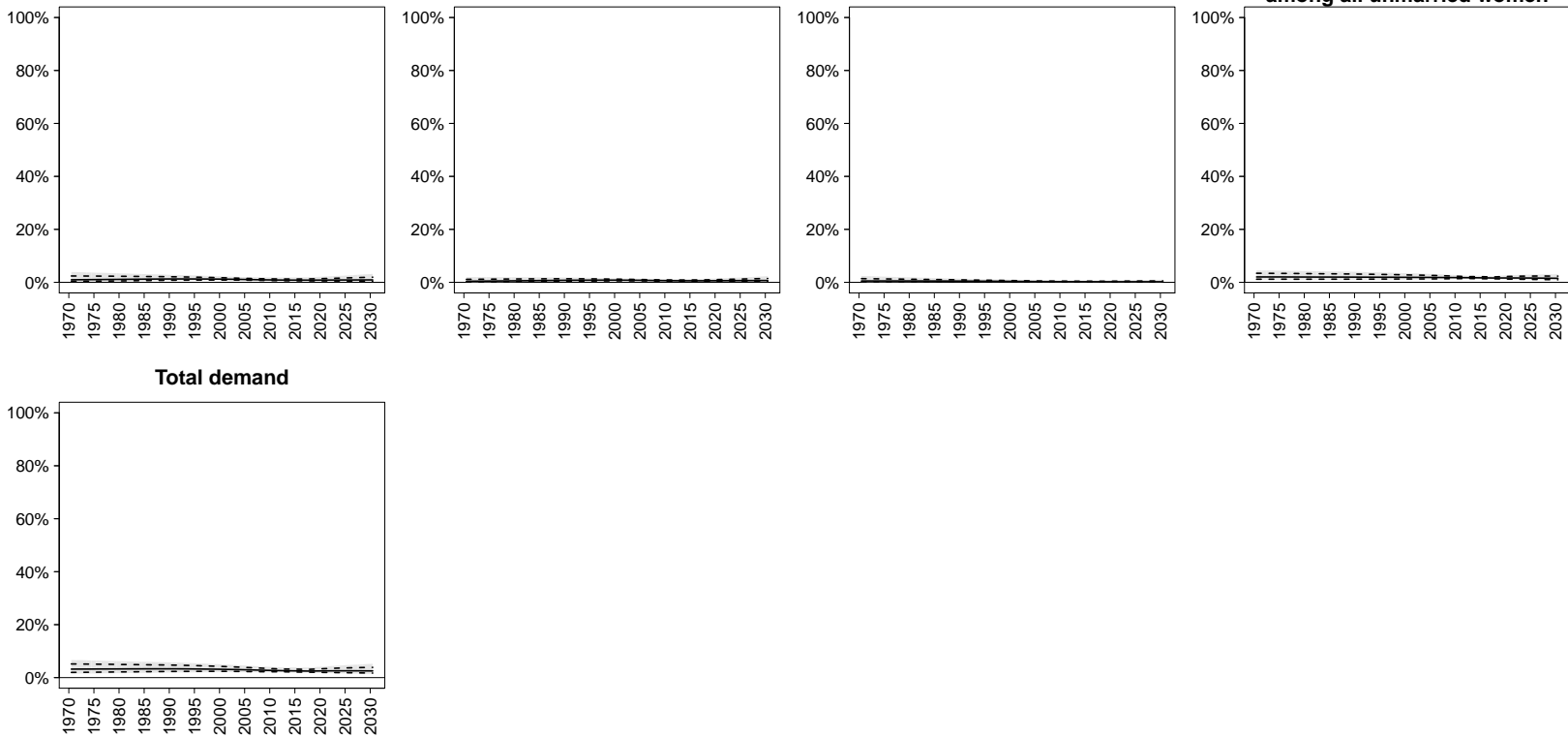
CP (any)

CP (modern)

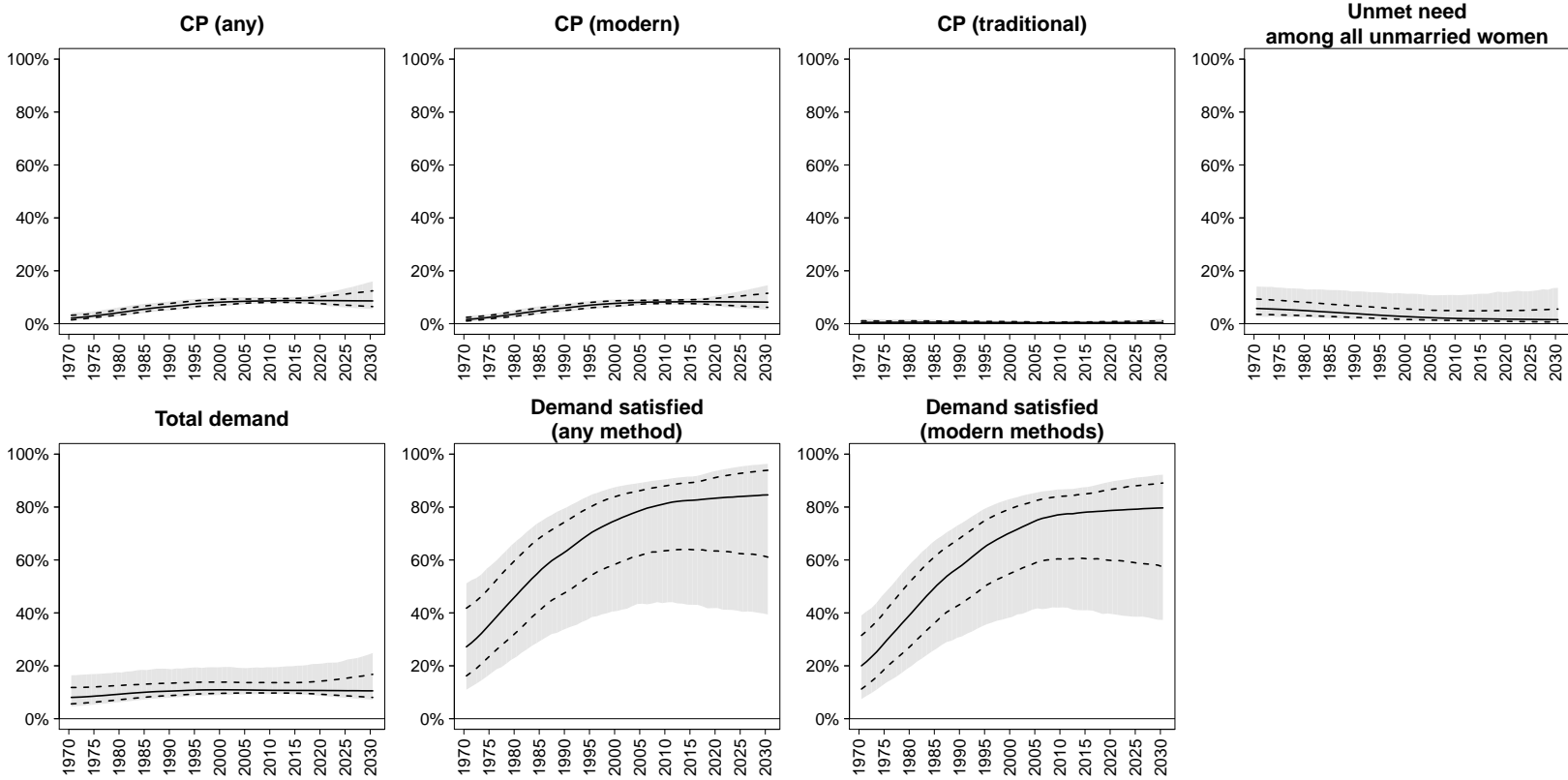
CP (traditional)

Unmet need among all unmarried women

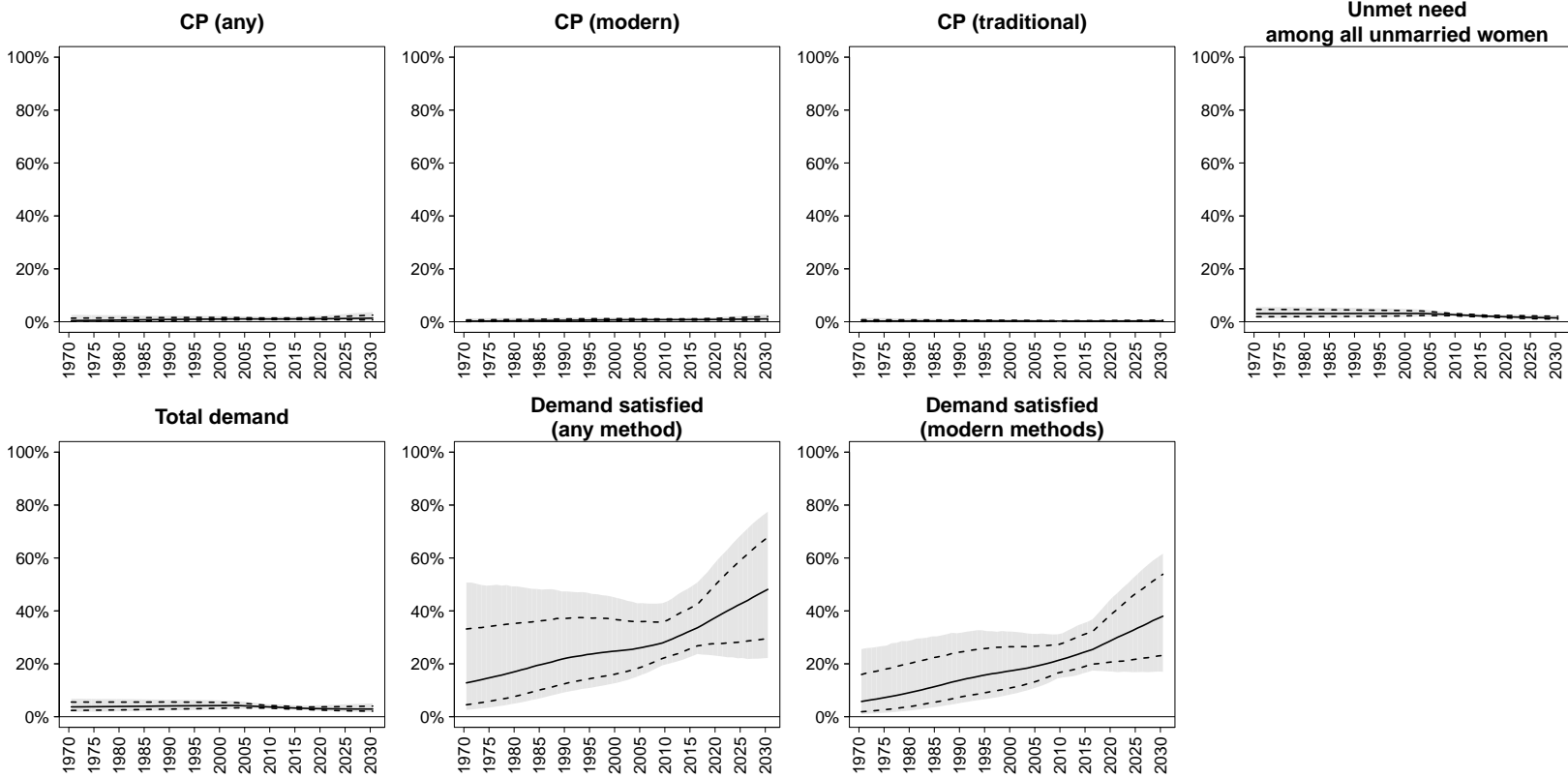
Total demand



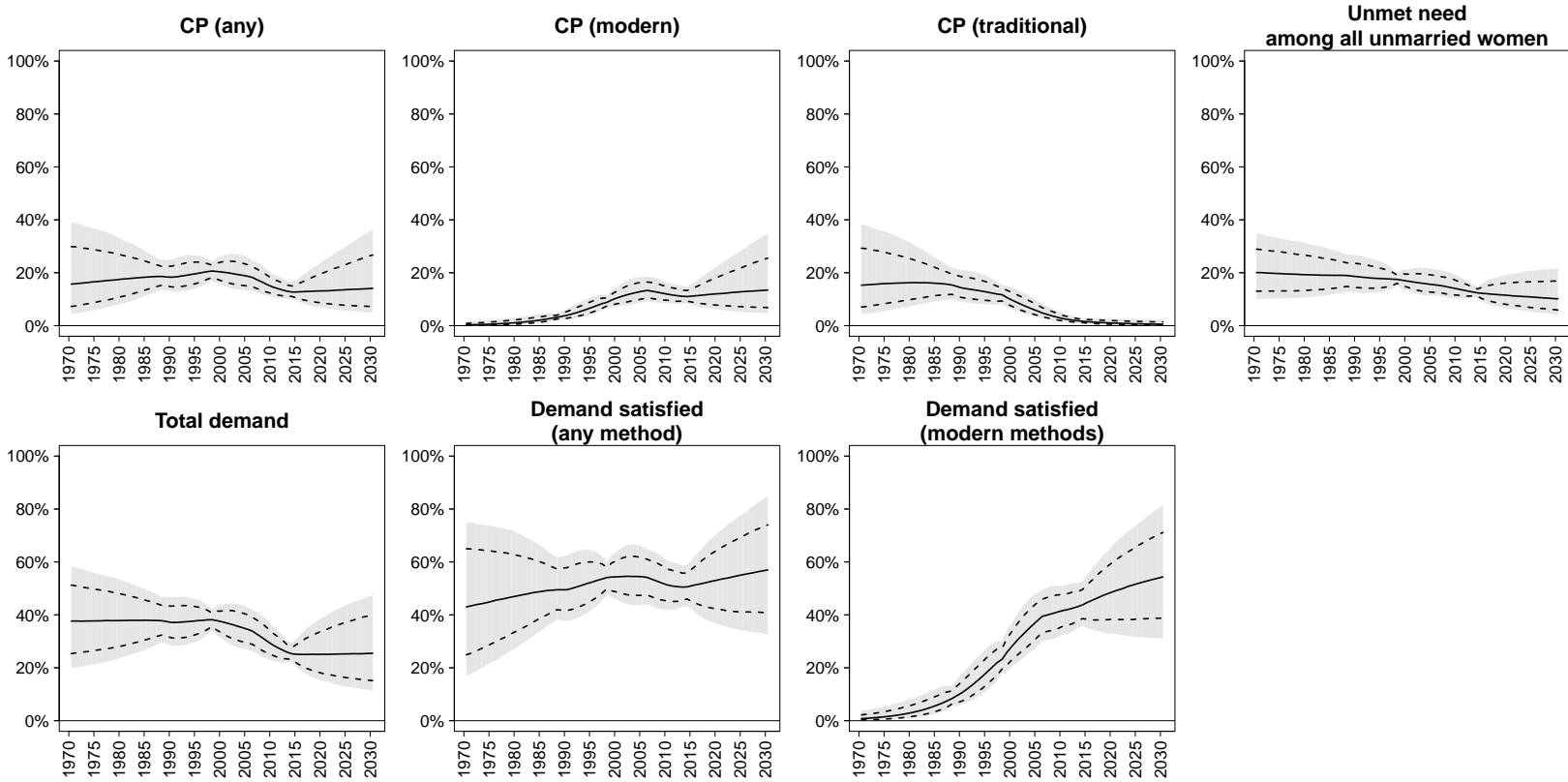
Thailand --- All women



Timor-Leste ---- All women

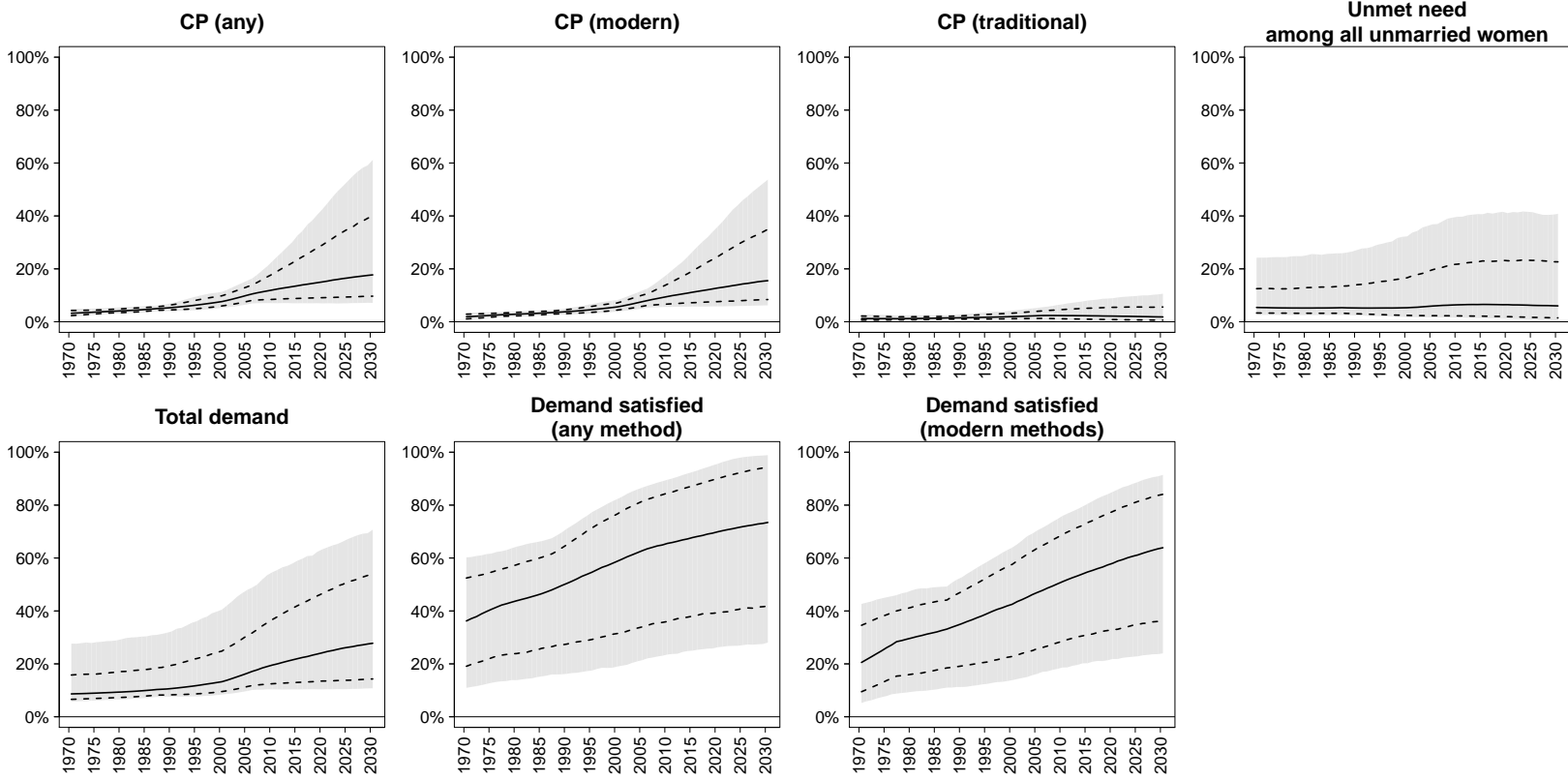


Togo --- All women

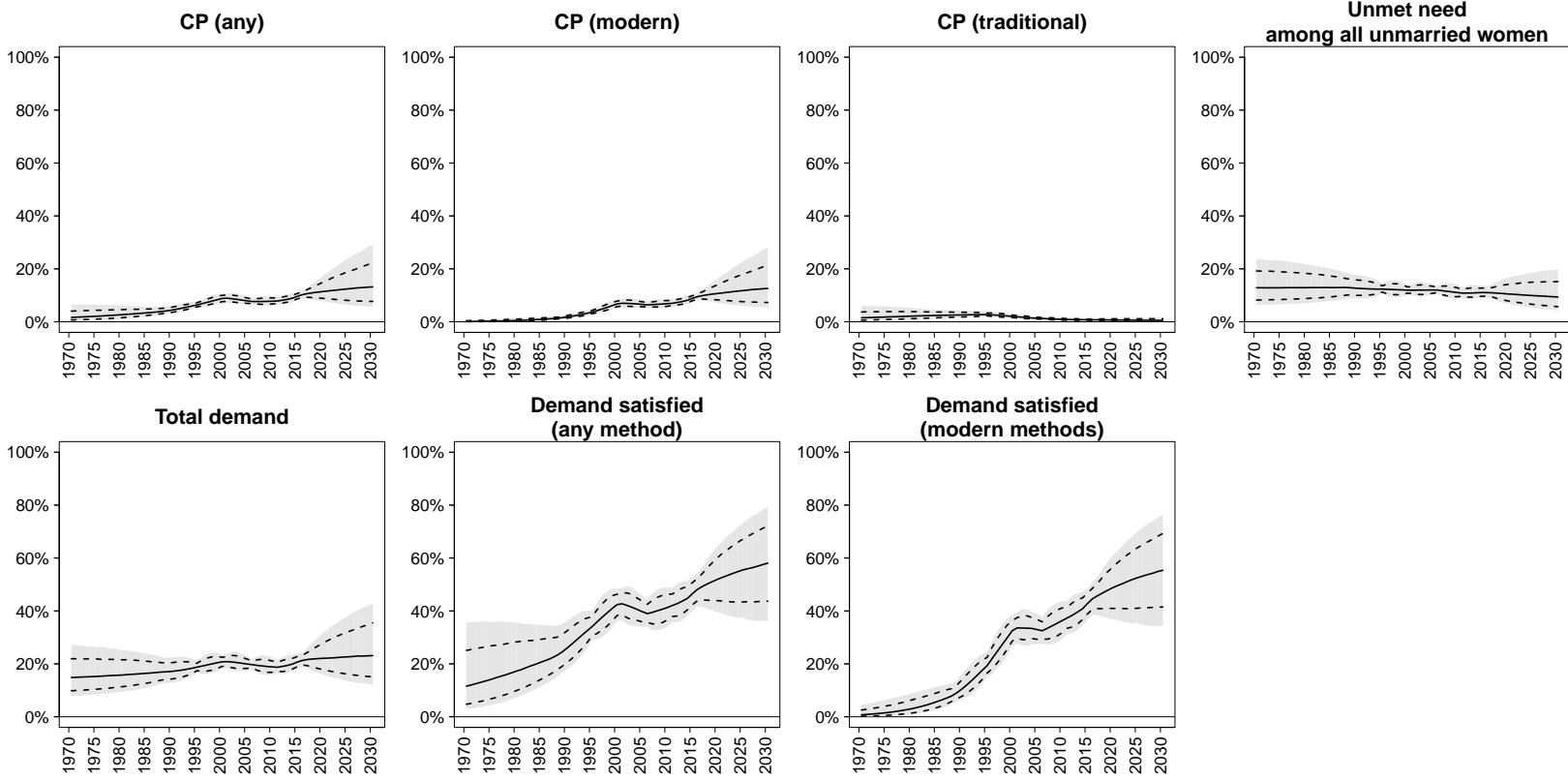




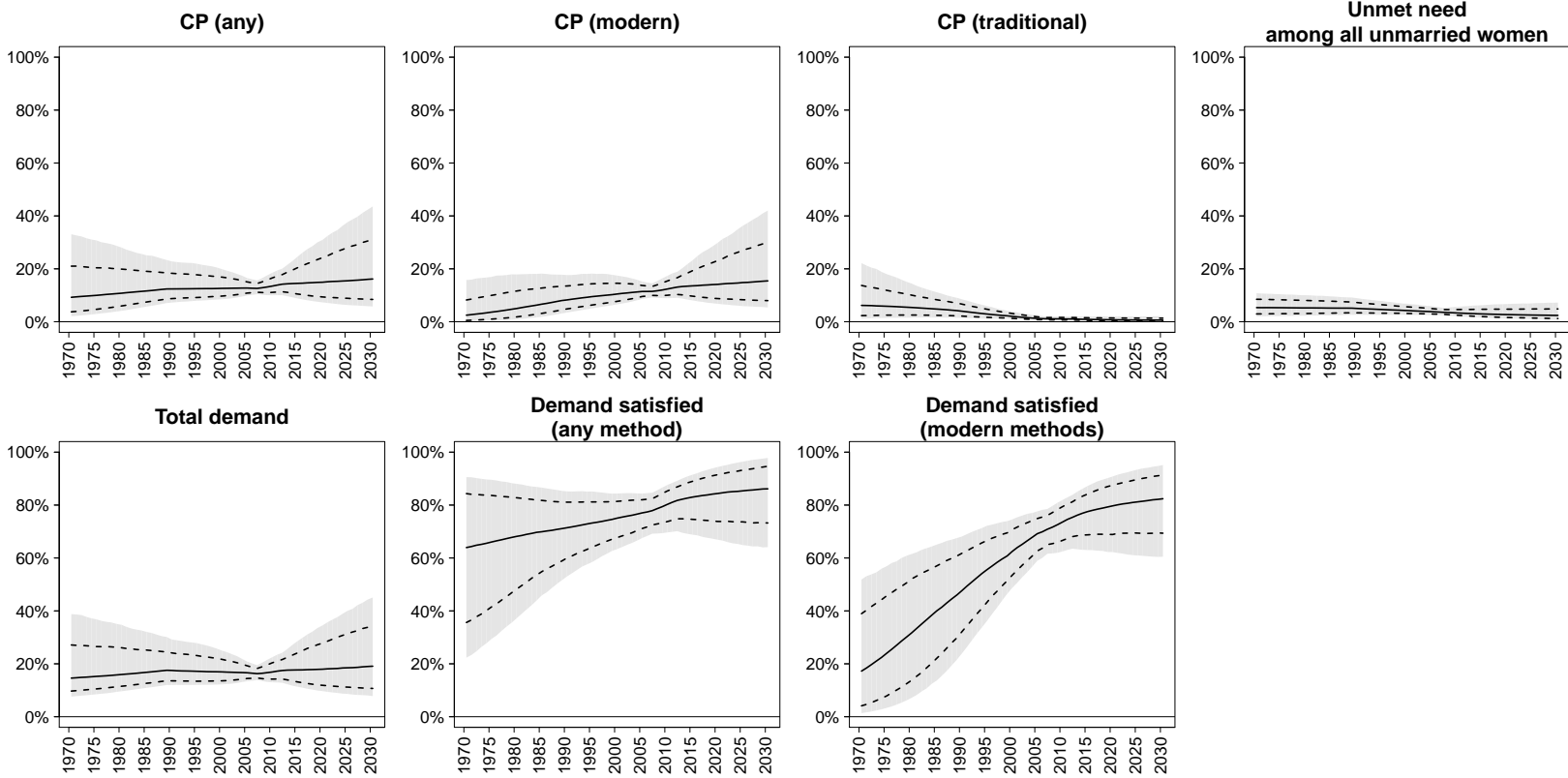
Trinidad and Tobago --- All women



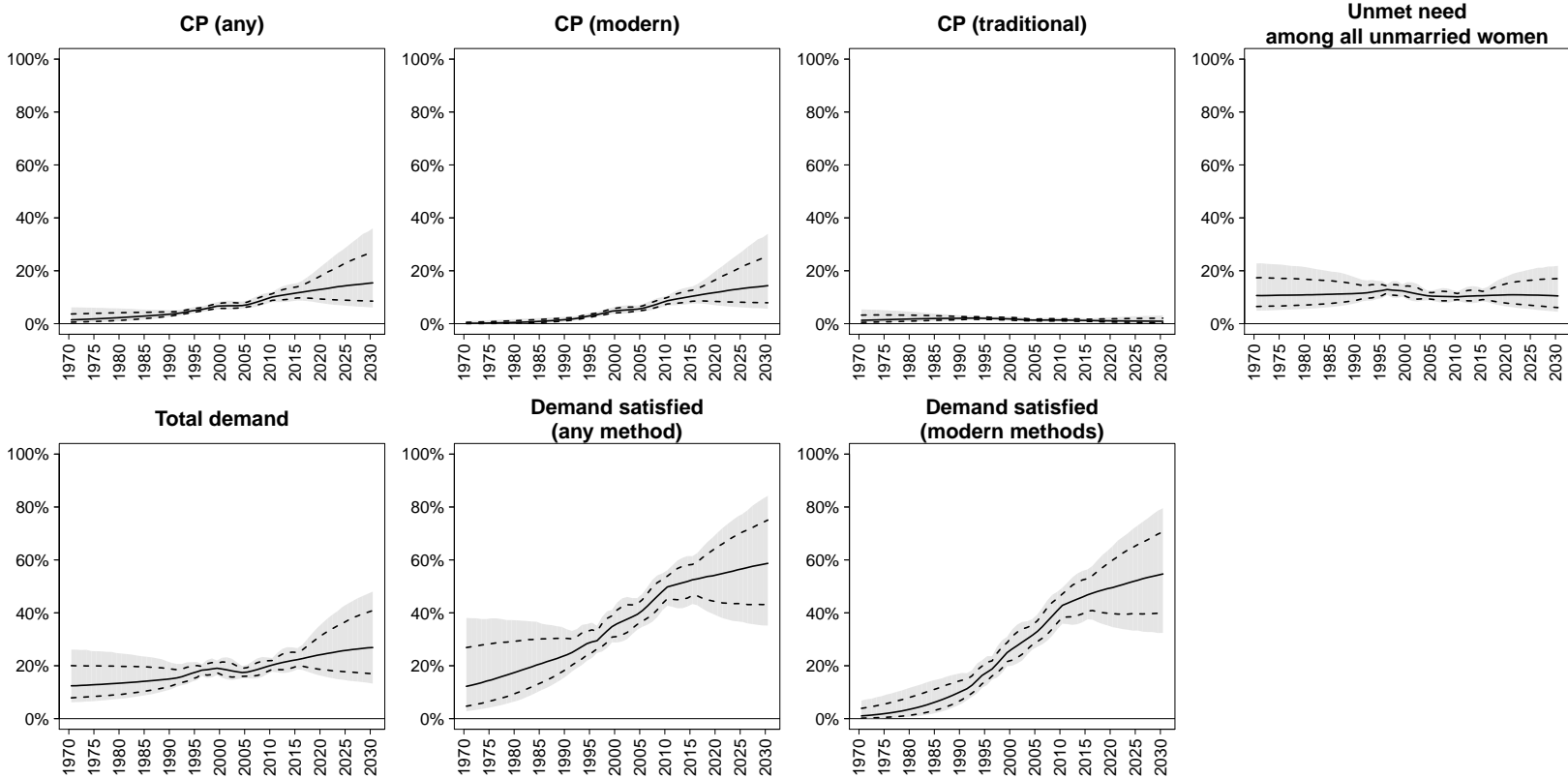
Uganda ---- All women



Ukraine ---- All women



United Republic of Tanzania --- All women



United States of America --- All women

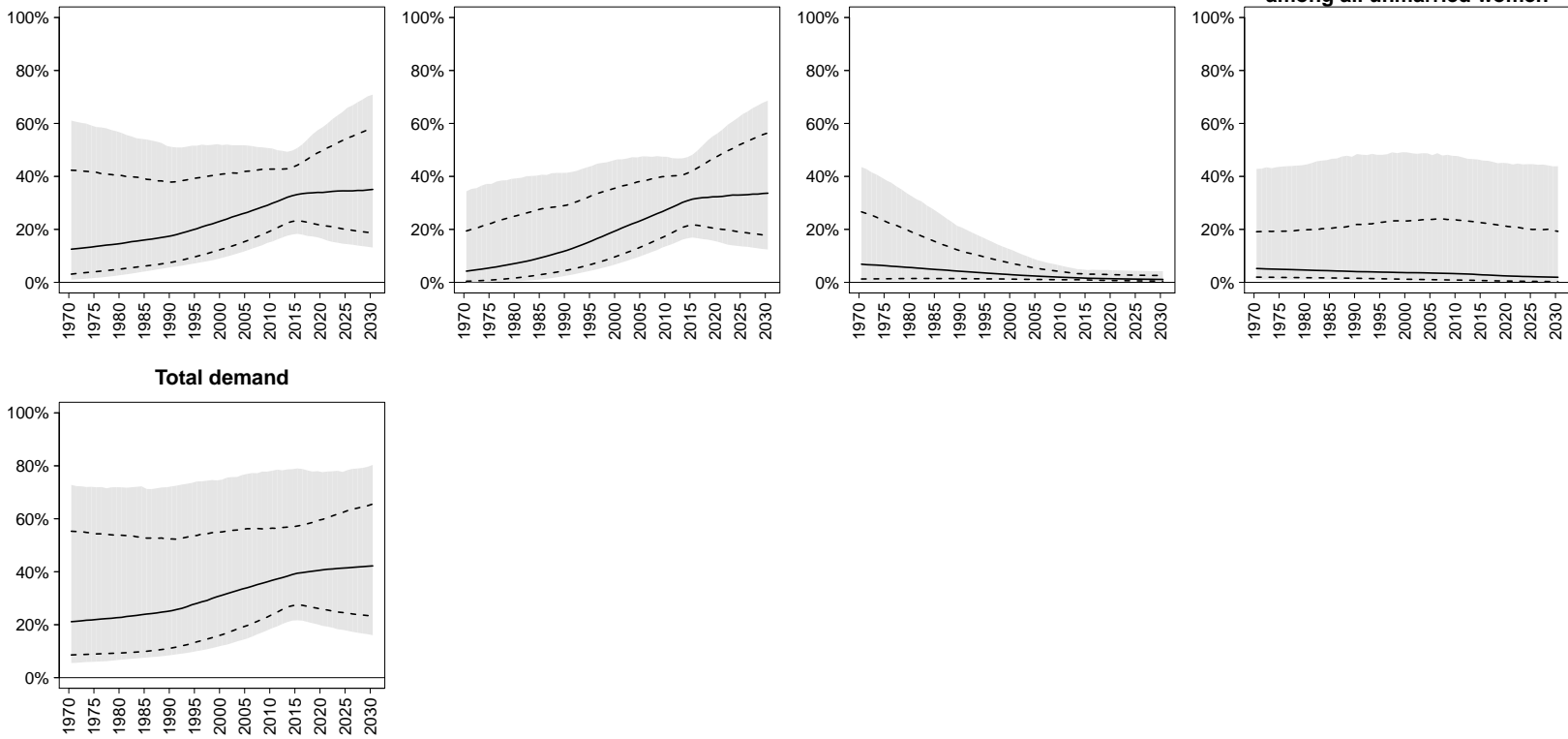
CP (any)

CP (modern)

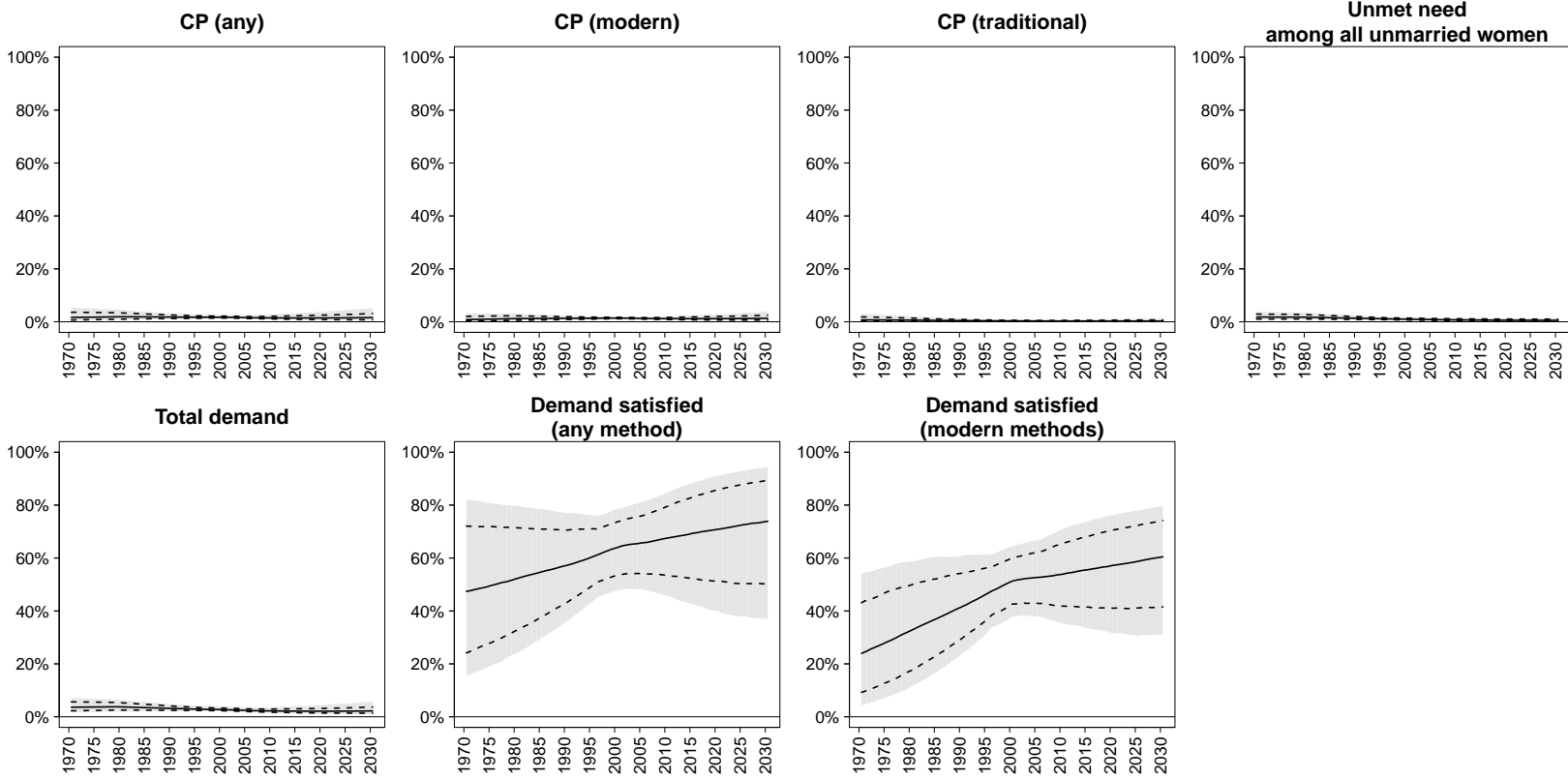
CP (traditional)

Unmet need among all unmarried women

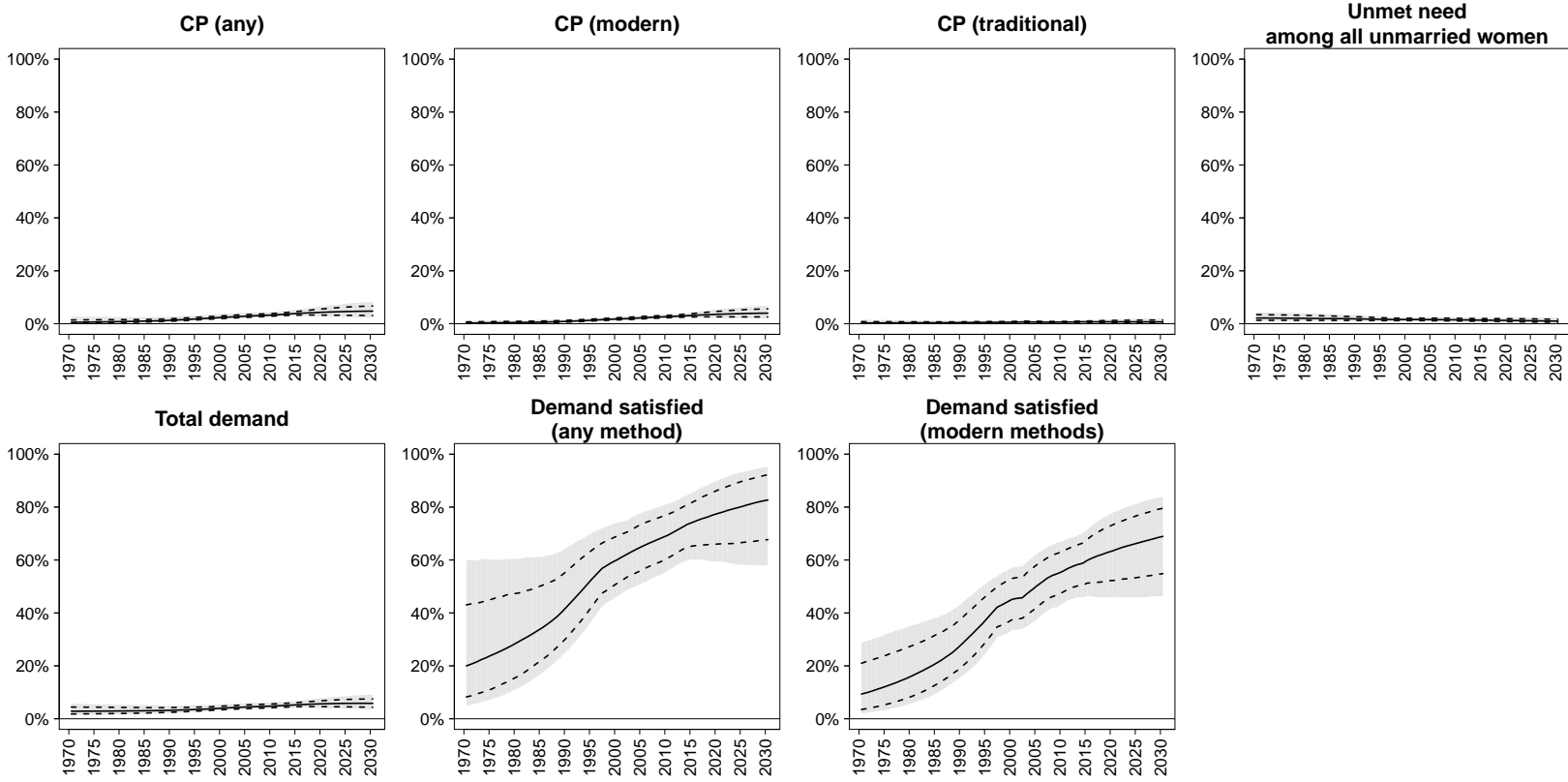
Total demand



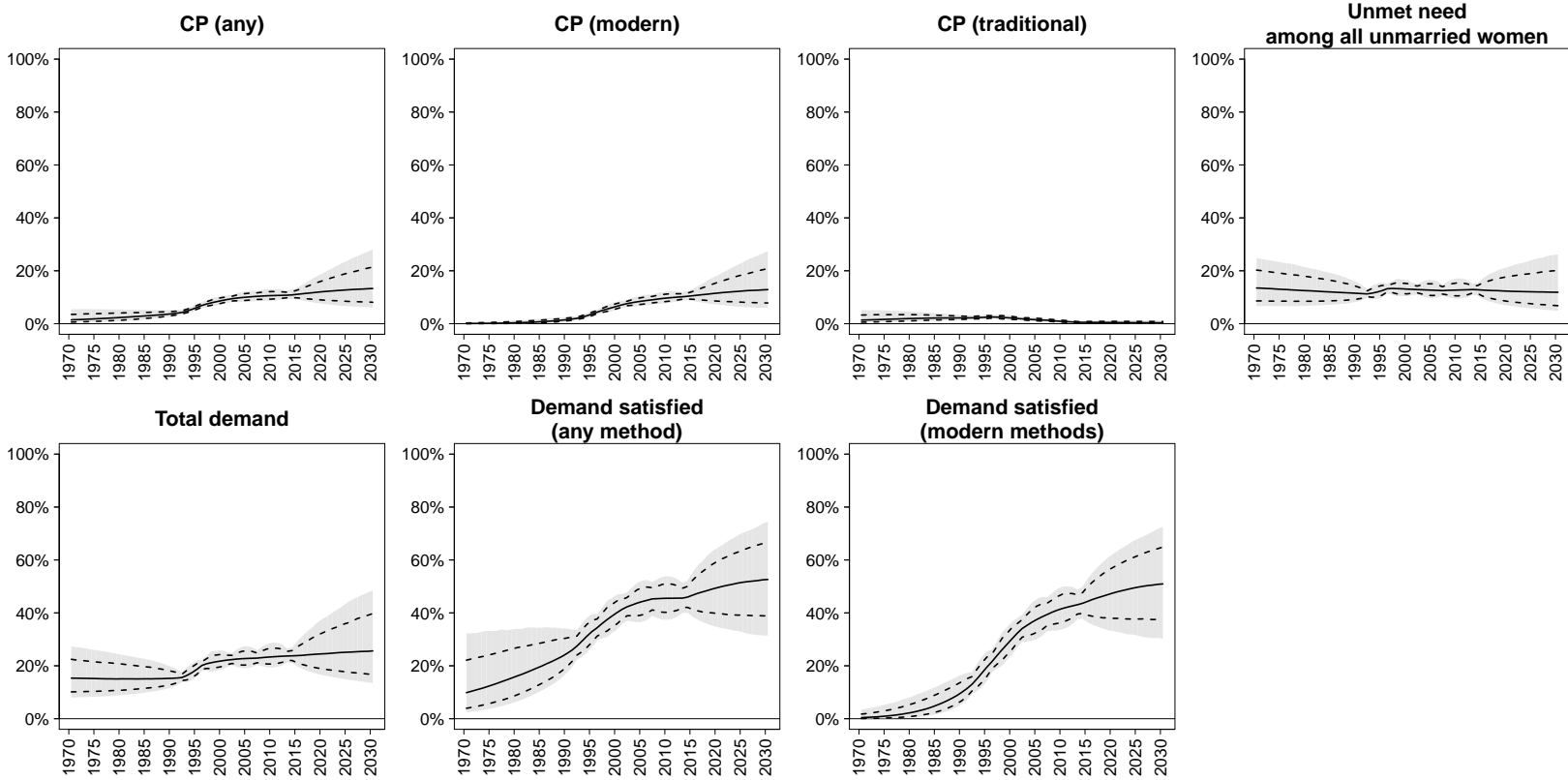
Uzbekistan --- All women



Viet Nam --- All women



Zambia ---- All women





Zimbabwe --- All women

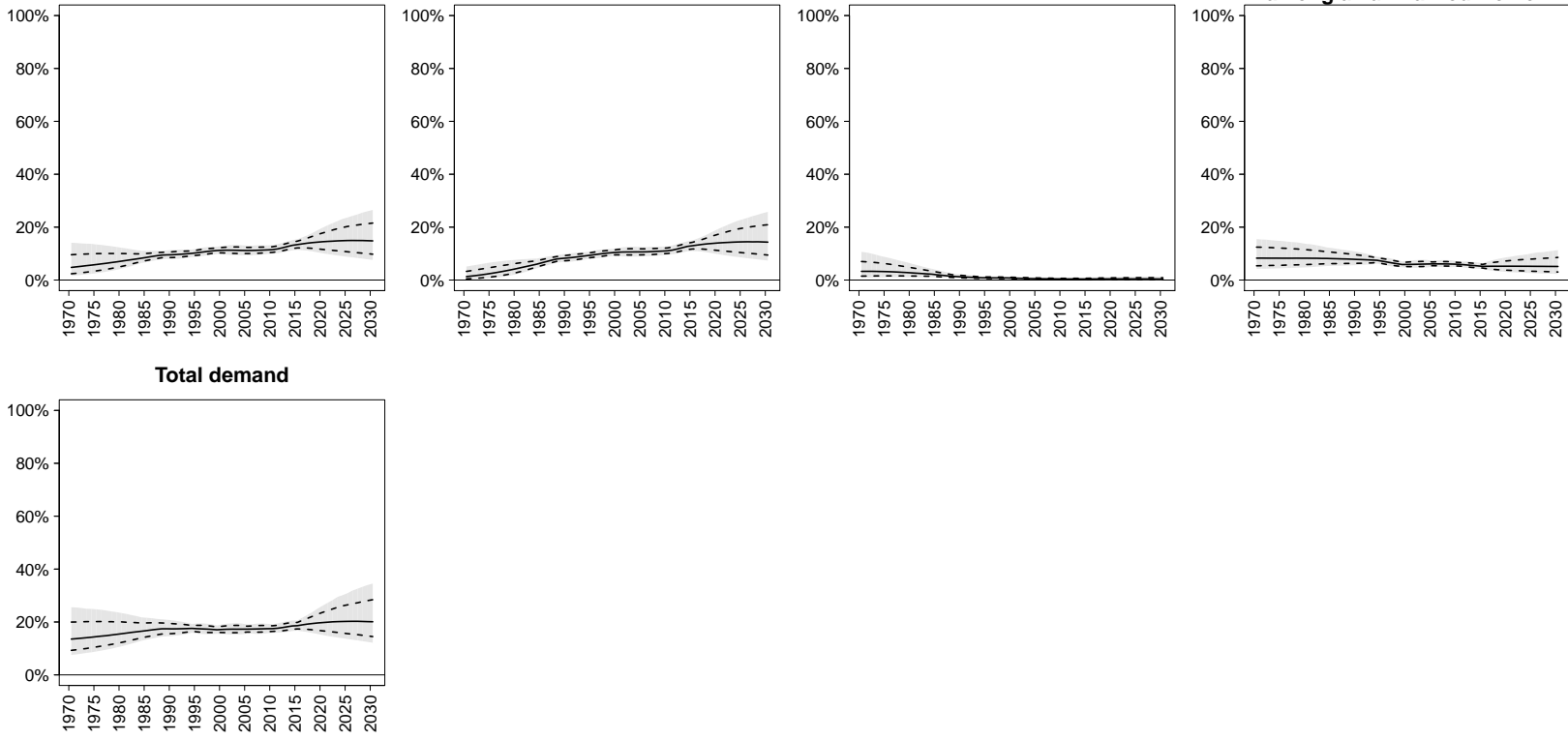
CP (any)

CP (modern)

CP (traditional)

Unmet need among all unmarried women

Total demand



## References

Pawlowsky-Glahn, V., J. J. Egozcue and R. Tolosana-Delgado (2015). *Modeling and Analysis of Compositional Data: Modeling and Analysis of Compositional Data*. New York, NY: John Wiley & Sons, Incorporated.