Population Projections Workshop

Creating Scenarios in DAPPS

United States Census Bureau
U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
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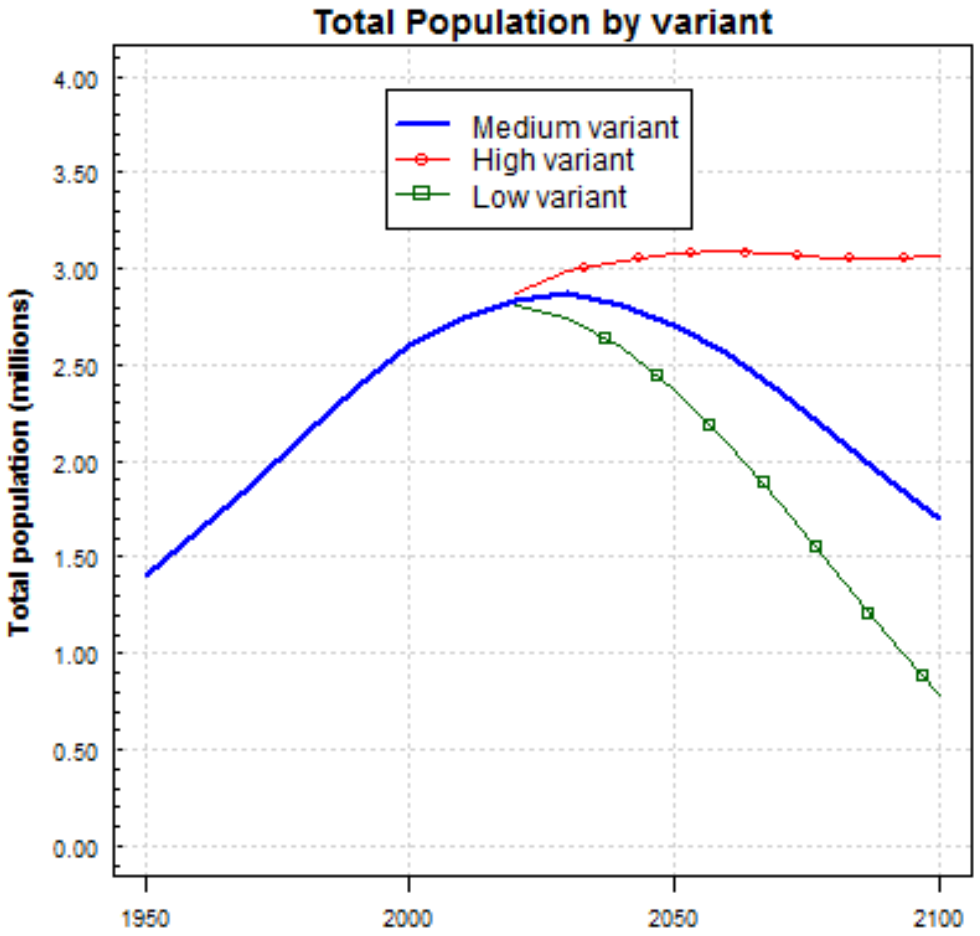
UN WPP: Projection Variants for Jamaica



http://esa.un.org/unpd/wpp/Graphs/DemographicProfiles/

UN WPP Projection Variants

TABLE II.3. PROJECTION VARIANTS IN TERMS OF ASSUMPTIONS FOR FERTILITY, MORTALITY AND INTERNATIONAL MIGRATION

	Assumptions		
Projection variant	*Fertility*	*Mortality*	*International migration*
Low fertility	Low	Normal	Normal
Medium fertility	Medium	Normal	Normal
High fertility	High	Normal	Normal
Constant-fertility	Constant as of 2010-2015	Normal	Normal
Instant-replacement-fertility	Instant-replacement as of 2015-2020	Normal	Normal
Constant-mortality	Medium	Constant as of 2010-2015	Normal
No change	Constant as of 2010-2015	Constant as of 2010-2015	Normal
Zero-migration	Medium	Normal	Zero as of 2015-2020

Creating Scenarios

1. Decide what components to have alternate scenarios
    1. Fertility
    2. Mortality
    3. Migration (what type?)
2. Develop alternative trajectories
    1. Use different inputs
    2. Vary some of the parameters (e.g. asymptotes)
    3. Have a target date for a value

Creating Scenarios: Fertility

- TFRLGST
  - Lower asymptote: 2 vs 2.1 vs 1.7?
  - Upper asymptote: high TFR + 0.5 or + 1.0 or something else?
  - Vary number of inputs
  - Enter only two values: Latest estimate and target date and value (e.g. hit 2.1 in 2025)

Creating Scenarios: Mortality

- E0PRJ
  - Fixed vs. fitted model
  - Increase or decrease the number of input points
  - Alter the asymptotes
  - Enter only two values: Latest estimate and target date and value (e.g. hit 80 for males in 2025)
  - Much more involved research on mortality by cause and projecting different changes over time

Creating Scenarios: Migration

- Fit various curves to the data (logistic, linear, …)
- Vary the number of points fitted (remember the example of projecting U.S. migration)
- Assume that migration will change from current levels to some new level in the future:
  - average of observed values for medium
  - maximum for high series
  - minimum for low series
  - The future time could be the end of the projection period or before that and remain constant to the end

Creating Scenarios

Creating alternative inputs in DAPPS

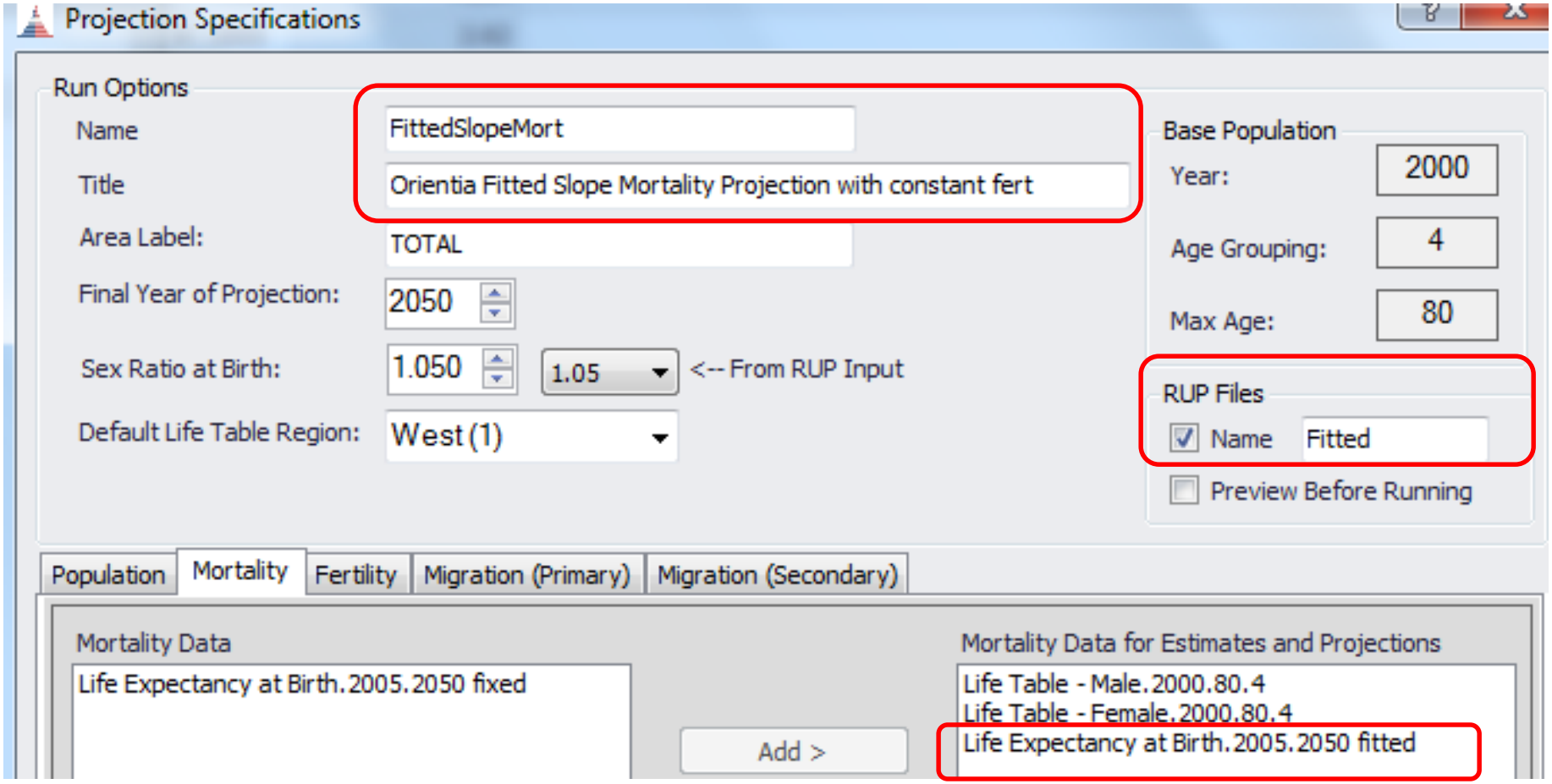
- New Input (e.g. TFRs or Life Expectancies)
- Right-click "Rename"
  - Life Expectancy at Birth.2005.2050 fixed
  - TFR.2005.2050 low
- For second scenario, just copy the first:
  - Right-click "Save A Copy"
  - Type in the modified scenario name on the end
  - Copy new data over old data

Creating Scenarios

Creating alternative scenario Projections

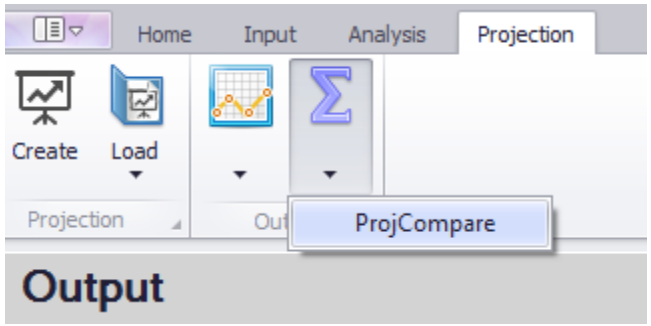
- Projection>Create Projection...
- Enter descriptive Projection name
- Enter fuller description for the title

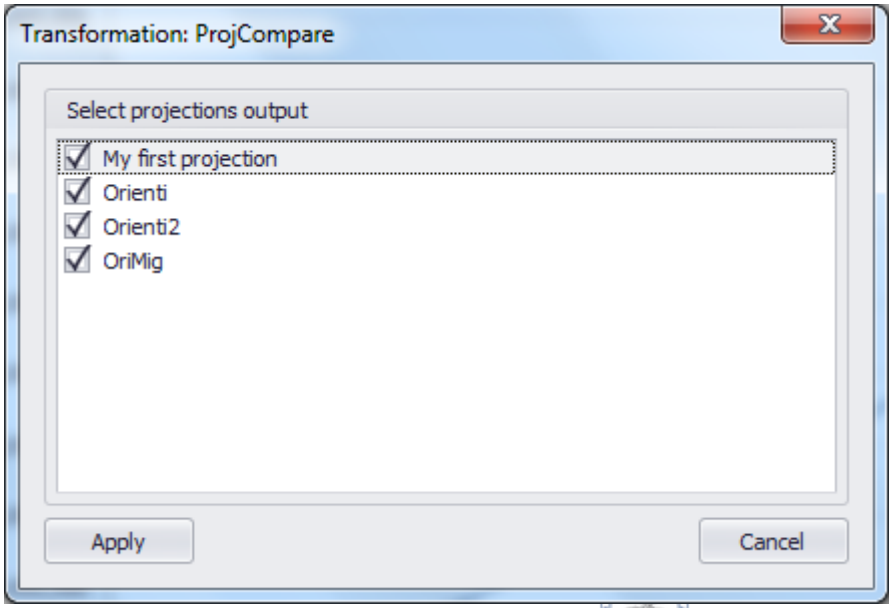
Creating Scenarios



Comparing Scenarios: DAPPS

We can use the ProjCompare Analysis part of DAPPS. From the Projection Tab click on the summation sign and click on “ProjCompare.”





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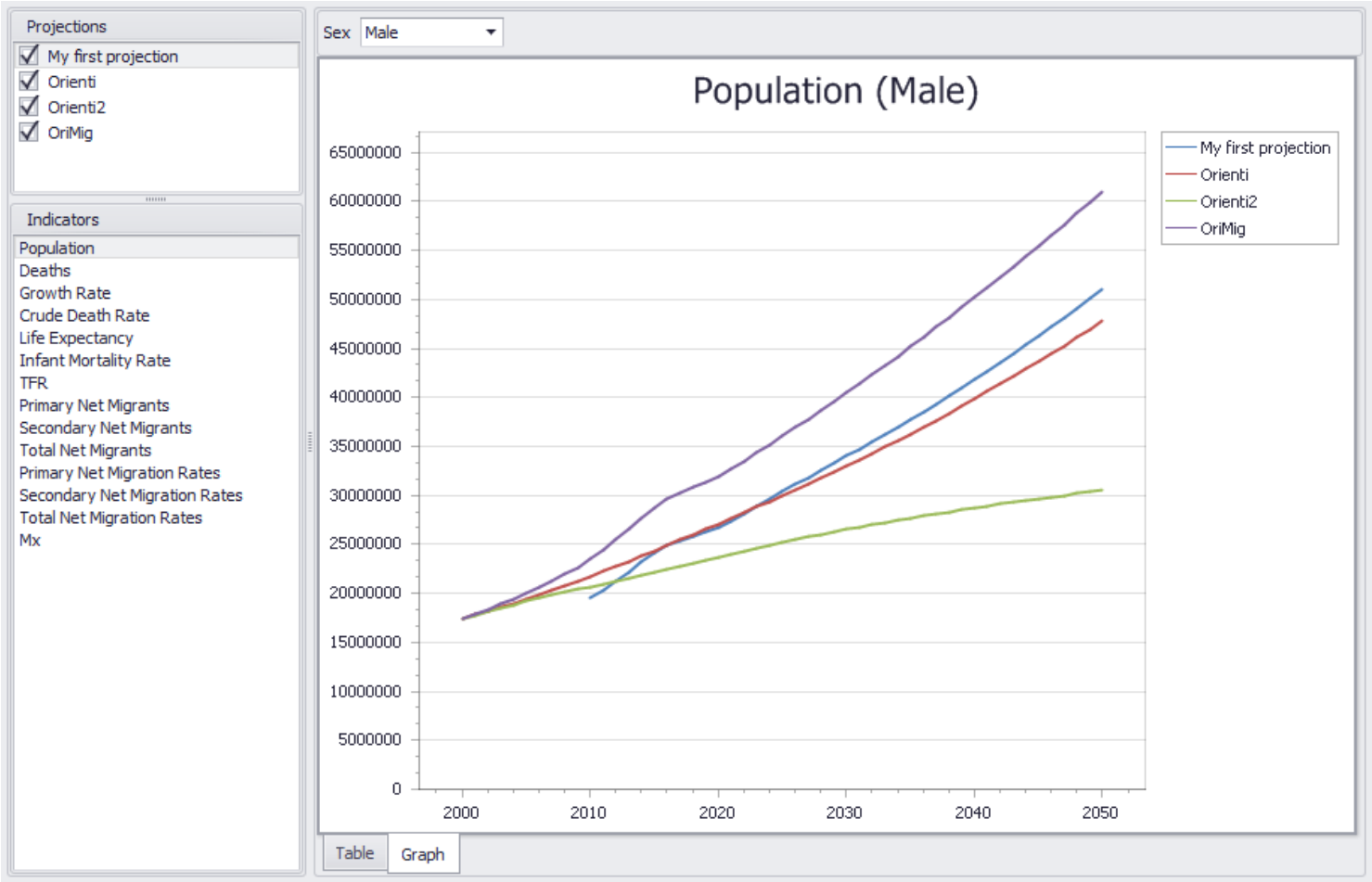
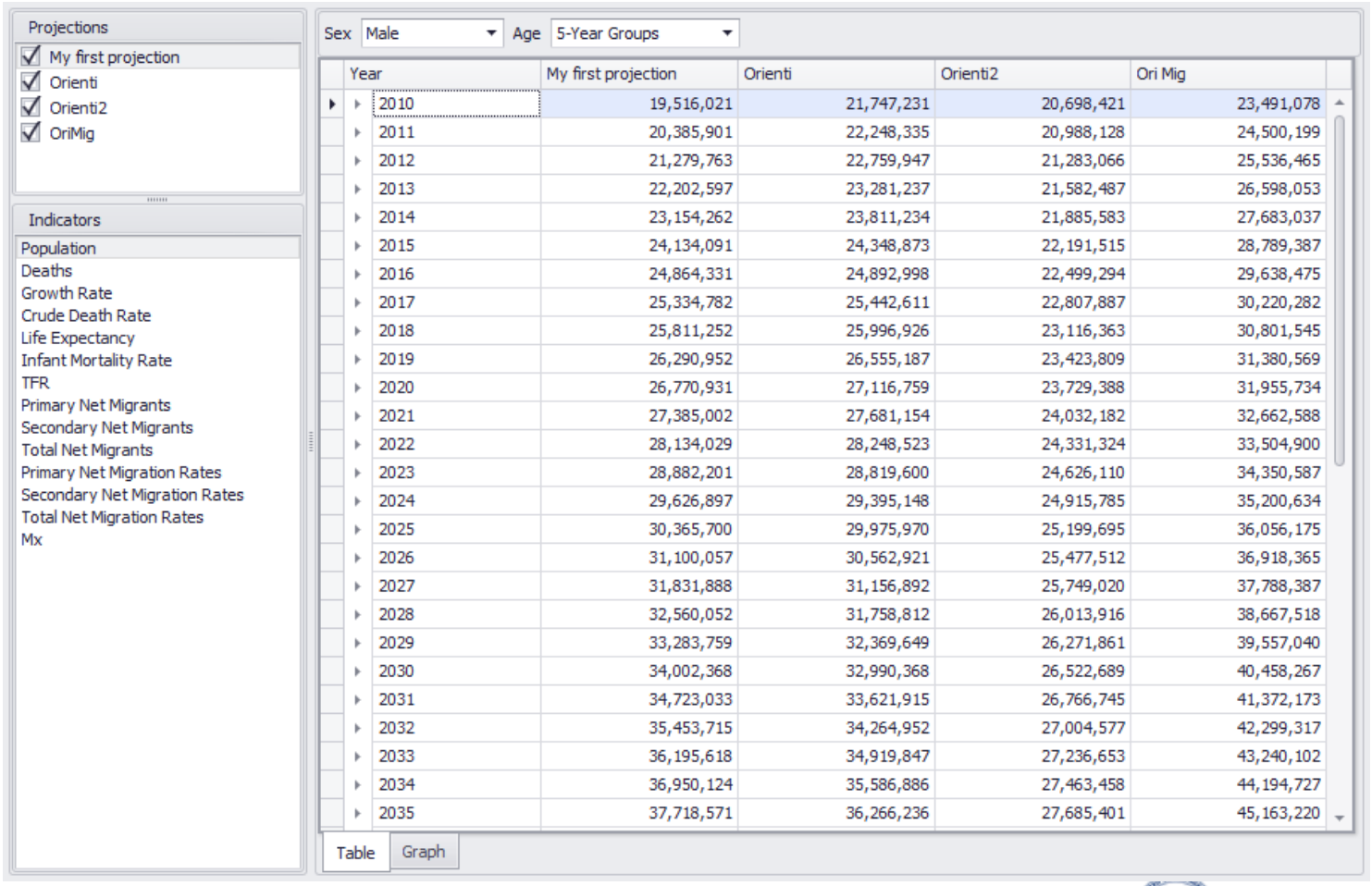


Comparing Scenarios: DAPPS



Year	My first projection	Orienti	Orienti2	Ori Mig
2010	19,516,021	21,747,231	20,698,421	23,491,078
2011	20,385,901	22,248,335	20,988,128	24,500,199
2012	21,279,763	22,759,947	21,283,066	25,536,465
2013	22,202,597	23,281,237	21,582,487	26,598,053
2014	23,154,262	23,811,234	21,885,583	27,683,037
2015	24,134,091	24,348,873	22,191,515	28,789,387
2016	24,864,331	24,892,998	22,499,294	29,638,475
2017	25,334,782	25,442,611	22,807,887	30,220,282
2018	25,811,252	25,996,926	23,116,363	30,801,545
2019	26,290,952	26,555,187	23,423,809	31,380,569
2020	26,770,931	27,116,759	23,729,388	31,955,734
2021	27,385,002	27,681,154	24,032,182	32,662,588
2022	28,134,029	28,248,523	24,331,324	33,504,900
2023	28,882,201	28,819,600	24,626,110	34,350,587
2024	29,626,897	29,395,148	24,915,785	35,200,634
2025	30,365,700	29,975,970	25,199,695	36,056,175
2026	31,100,057	30,562,921	25,477,512	36,918,365
2027	31,831,888	31,156,892	25,749,020	37,788,387
2028	32,560,052	31,758,812	26,013,916	38,667,518
2029	33,283,759	32,369,649	26,271,861	39,557,040
2030	34,002,368	32,990,368	26,522,689	40,458,267
2031	34,723,033	33,621,915	26,766,745	41,372,173
2032	35,453,715	34,264,952	27,004,577	42,299,317
2033	36,195,618	34,919,847	27,236,653	43,240,102
2034	36,950,124	35,586,886	27,463,458	44,194,727
2035	37,718,571	36,266,236	27,685,401	45,163,220

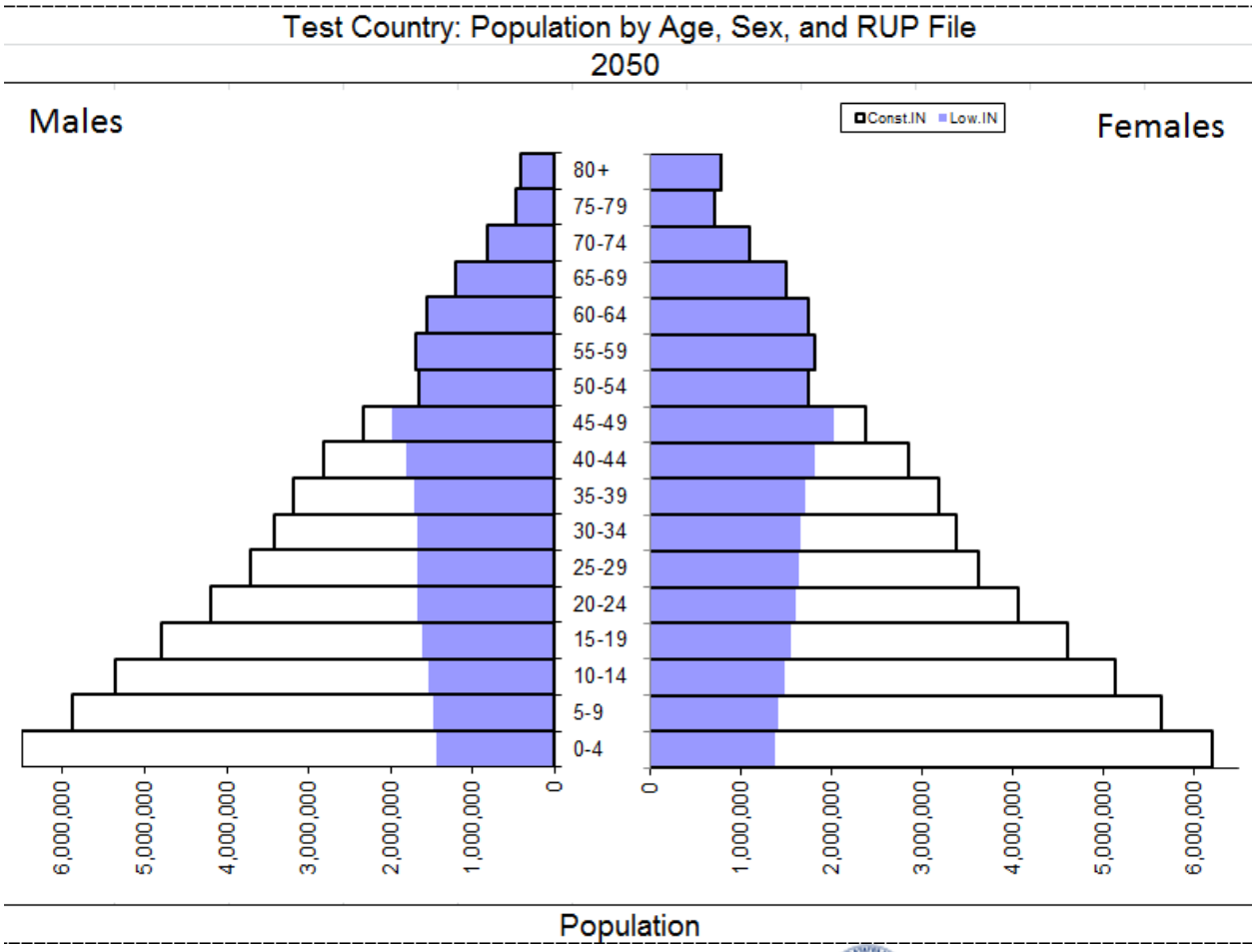
Comparing Scenarios: RUP

Comparing scenarios currently requires creating RUP files. We can use the following templates from the SUBNATIONAL subdirectory:

- RUPCOMPARE.xls: Compare two projections in great detail.
- RUPSTCOMPARE.xls: Compare several projections, but only summary measures.

Creating Scenarios: RUP

RUPCOMPARE



Creating Scenarios: RUP

RUPSTCOMPARE