Women's Well-being Across Generations

An Index Approach

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Purpose: To look at long-term trends in women's empowerment and well-being.

Question: How are young women faring relative to their mothers and grandmothers when they were young adults?

Index Concept

- Single measure helps identify overall trend
- Index components show detail

- Age, period, and cohort all matter
- To focus on cohort, we select:
  - Age(s) to reflect life stage
  - Year(s) to represent cohort at age/stage

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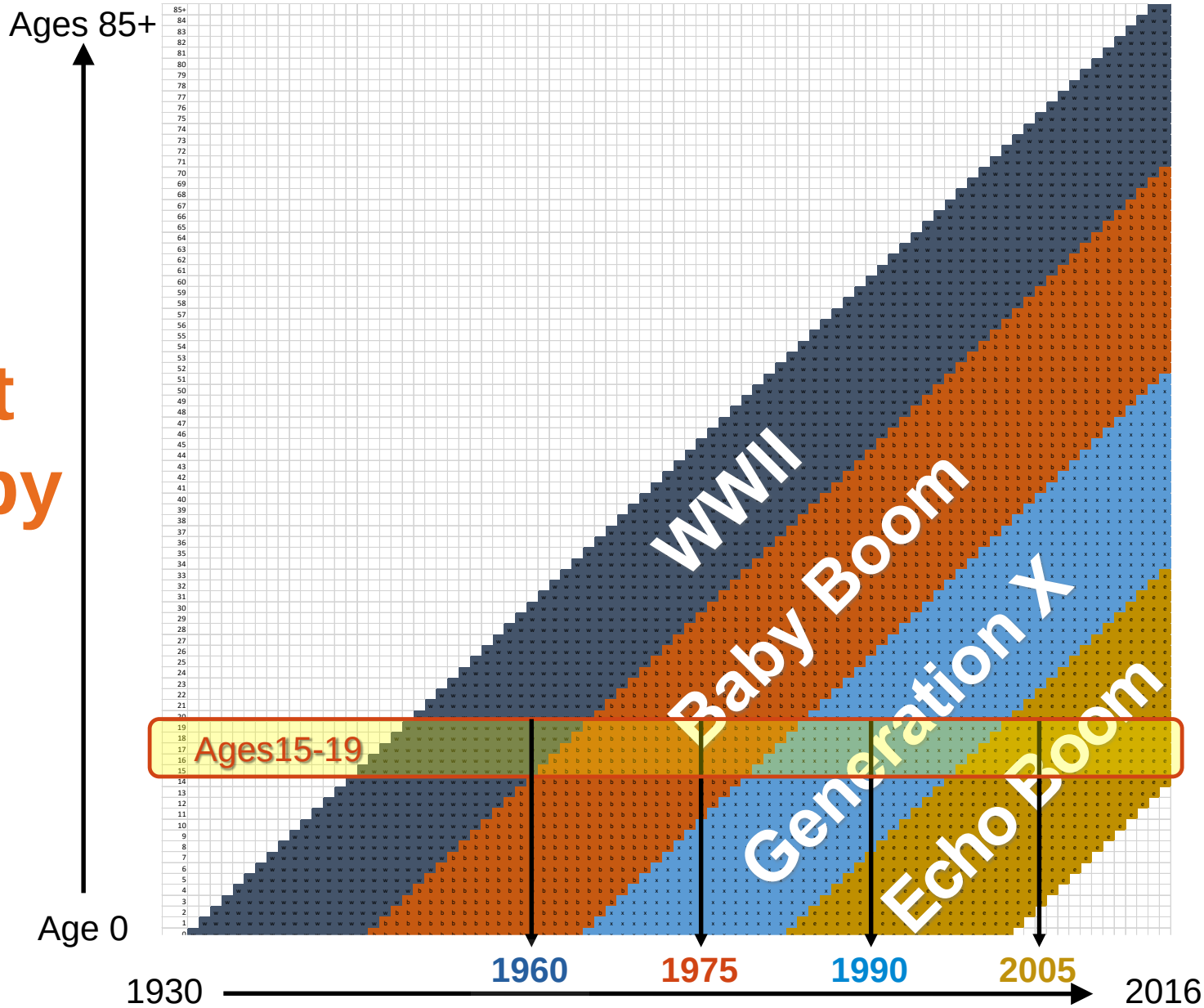
Defining the GENERATIONS

PRB
INFORM
EMPOWER
ADVANCE

Cohort Ages by Year



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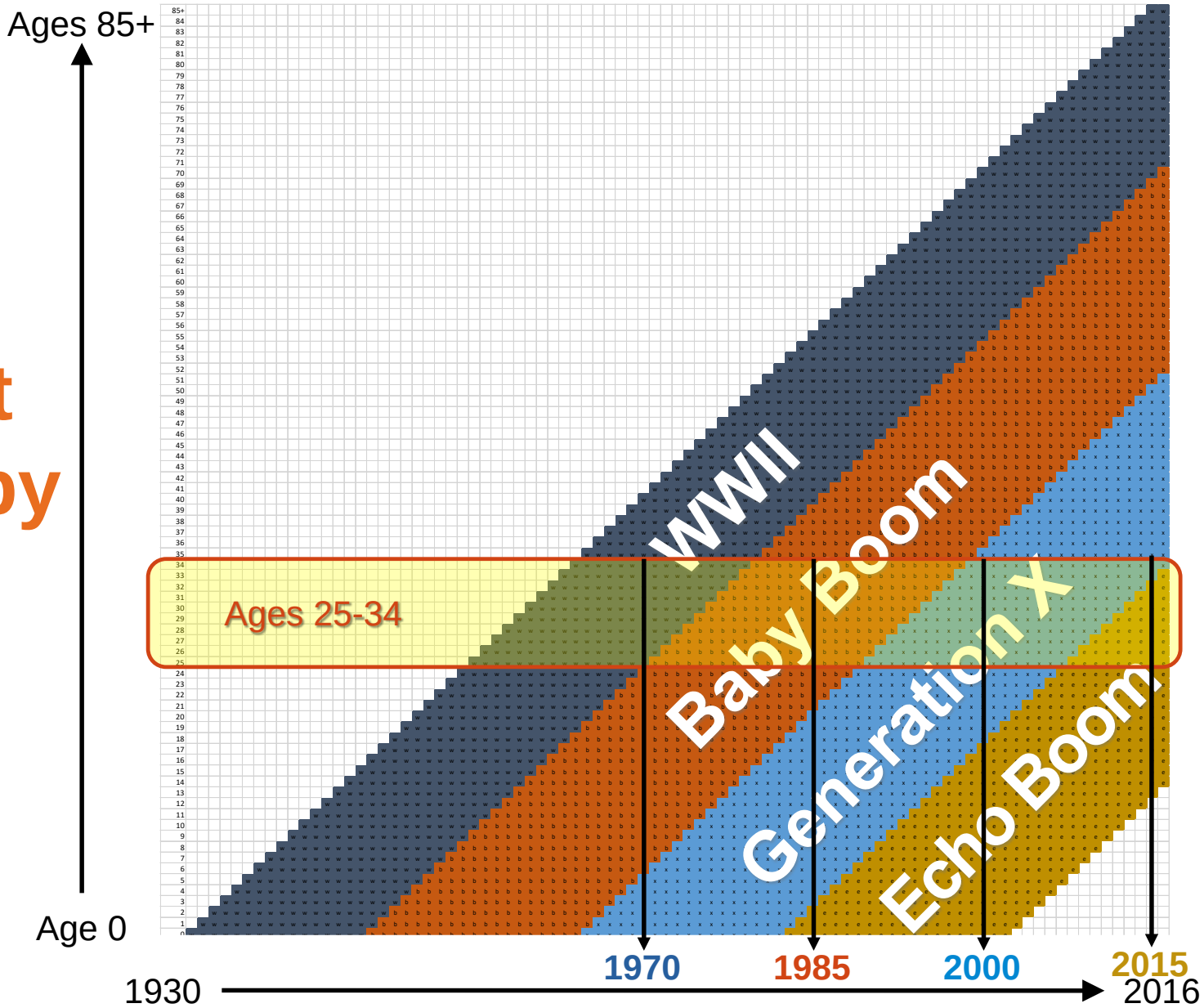
Cohort Ages by Year



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Defining the Generations

Cohort Name	Born	Selected Year for Teenage Indicators	Selected Year for Adulthood Indicators
WWII	1930-1945	1960	1970
Baby Boom	1946-1964	1975	1985
Generation X	1965-198X	1990	2000
Echo Boom	198X or later	2005	2014-16*

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Building the INDEX

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Indicator Selection Criteria

- Relevance
- Range of dimensions
  - Education, income, health, empowerment
- Comparable data available
  - For all years / across all cohorts
  - Source and method
  - Social context
- Stability of trend

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Indicators in the Index

Indicator	Ages	Direction Signaling Improvement
High School (Status) Dropout Rate	16-24	-
Bachelor's Degree or Higher (%)	25-34	+
Female/Male Wage Gap (Wage Ratio)	25-34	+
Poverty Rate	30-34*	-
Teen Birth Rate	15-19	-
Maternal Mortality Ratio	all	-
Smoking Rate	18+	-
Suicide / Self-inflicted Mortality Rate	25-34	-
Homicide / Assault Mortality Rate	25-34	-
Congressional Representation (%)	n.a.	+

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Creating the Index

- Data for each indicator for selected year representing the generation
- WWII Generation is “Index Point” (= 100)
- Each successive generation % increase (or decline) raises (lowers) index value for indicator
  - If improvement is a decline in rate, subtract from index instead of add
- Index is averaged across 10 indicators

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Interpreting the Index

Greater Than
100 = Better

Less Than
100 = Worse

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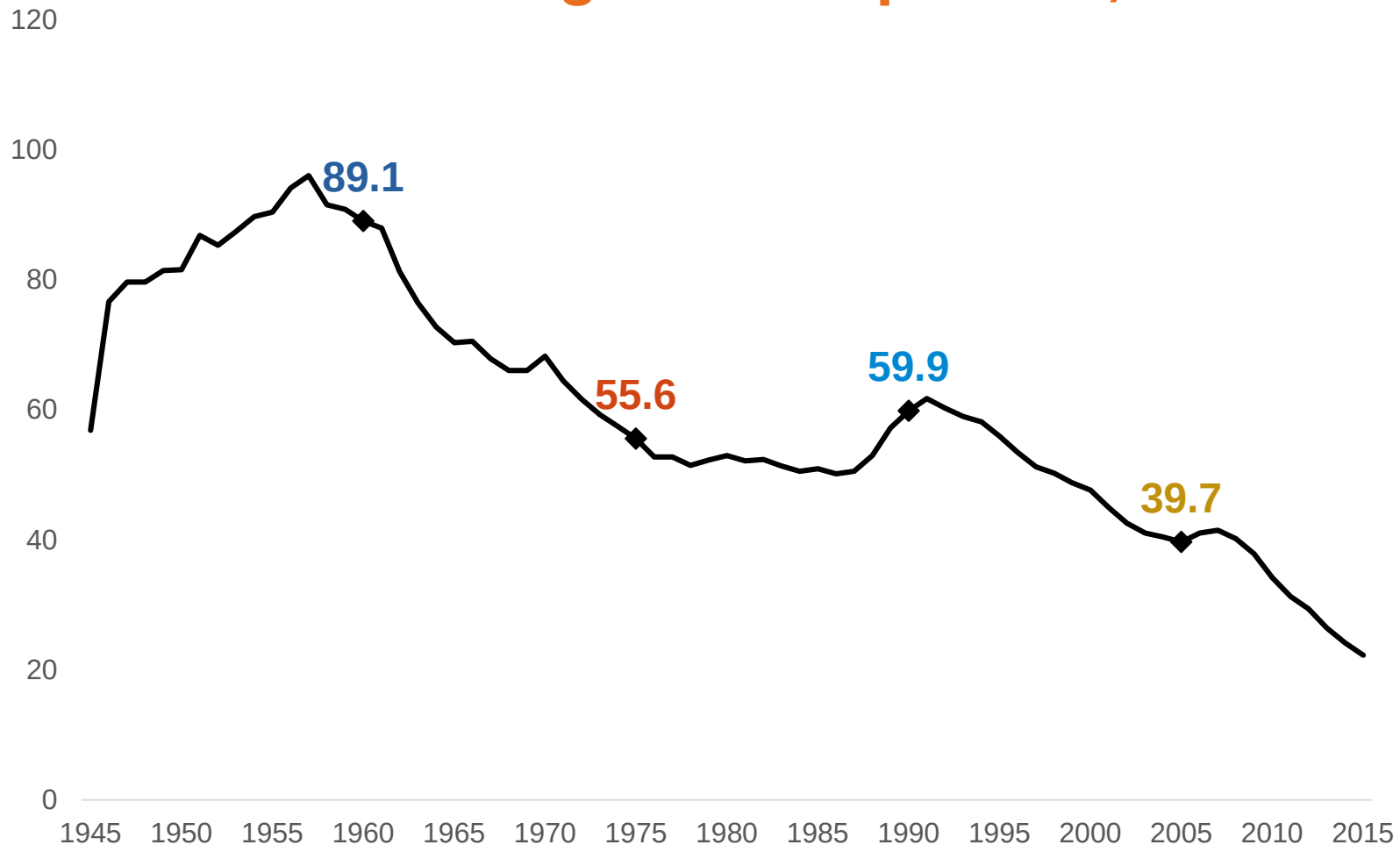
Example: Teen Birth Rate

Births to women ages 15-19 per 100,000



Source: U.S. Centers for Disease Control and Prevention, National Vital Statistics Reports

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Example: Teen Birth Rate

Births to women ages 15-19 per 100,000

Generation	Year	Rate	Diff from WWII	% Diff from WWII	Index
WWII	1960	89.1			
Baby Boom	1975	55.6			
Generation X	1990	59.9			
Echo Boom	2005	39.7			

Source: U.S. Centers for Disease Control and Prevention, National Vital Statistics Reports

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Example: Teen Birth Rate

Births to women ages 15-19 per 100,000

Generation	Year	Rate	Diff from WWII	% Diff from WWII	Index
WWII	1960	89.1	--		
Baby Boom	1975	55.6	-33.5		
Generation X	1990	59.9	-29.2		
Echo Boom	2005	39.7	-49.4		

Source: U.S. Centers for Disease Control and Prevention, National Vital Statistics Reports

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Example: Teen Birth Rate

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Generation	Year	Rate	Diff from WWII	% Diff from WWII	Index
WWII	1960	89.1	--	--	
Baby Boom	1975	55.6	-33.5	-38	
Generation X	1990	59.9	-29.2	-33	
Echo Boom	2005	39.7	-49.4	-55	

Source: U.S. Centers for Disease Control and Prevention, National Vital Statistics Reports

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Example: Teen Birth Rate

Births to women ages 15-19 per 100,000

Generation	Year	Rate	Diff from WWII	% Diff from WWII	Index
WWII	1960	89.1	--	--	100
Baby Boom	1975	55.6	-33.5	-38	138
Generation X	1990	59.9	-29.2	-33	133
Echo Boom	2005	39.7	-49.4	-55	155

Source: U.S. Centers for Disease Control and Prevention, National Vital Statistics Reports

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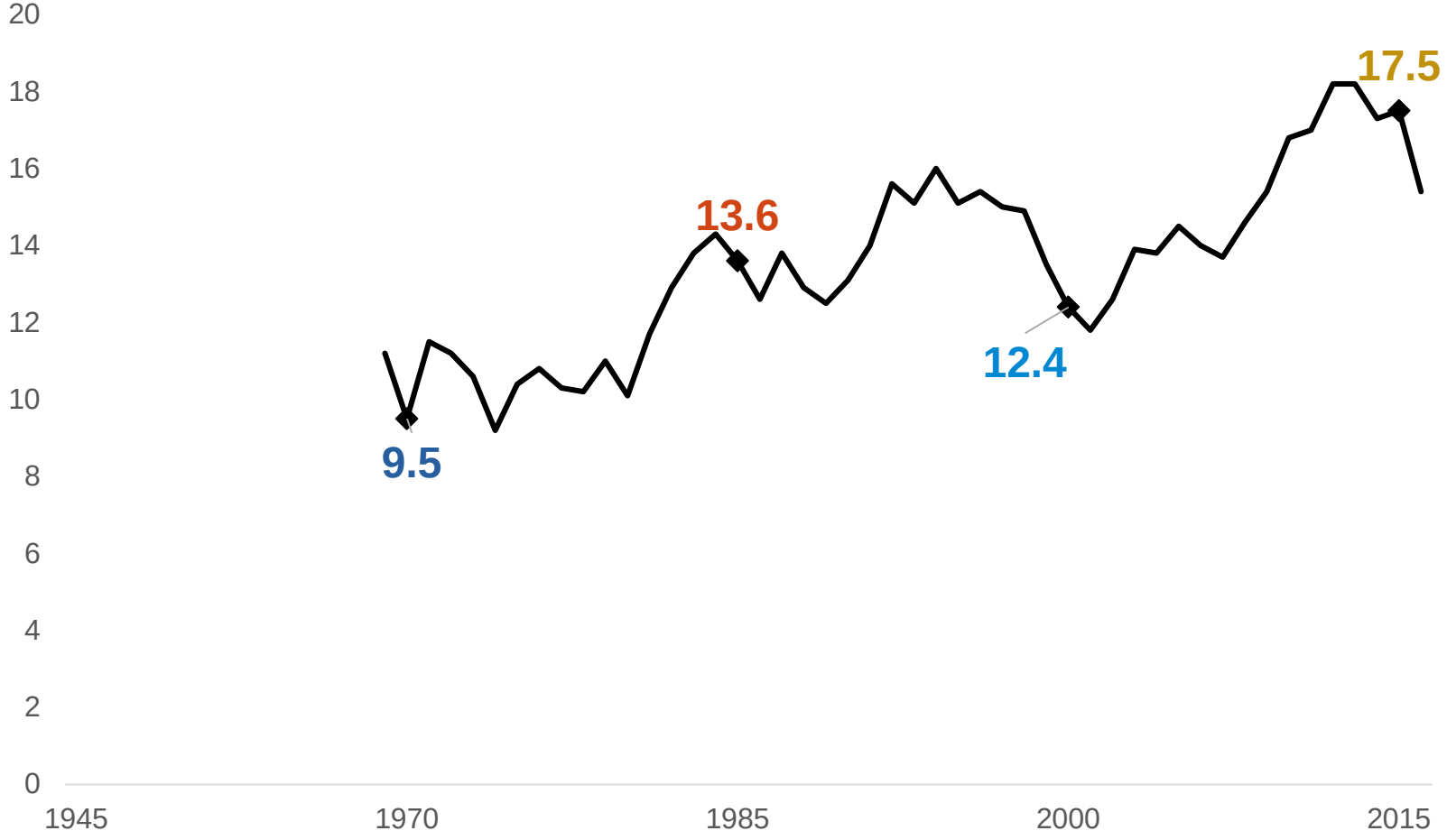
Example: Poverty Rate

Percent of women ages 30-34 in poverty



Source: Integrated Public Use Microdata Series (IPUMS), Current Population Survey: Version 4.0

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Example: Poverty Rate

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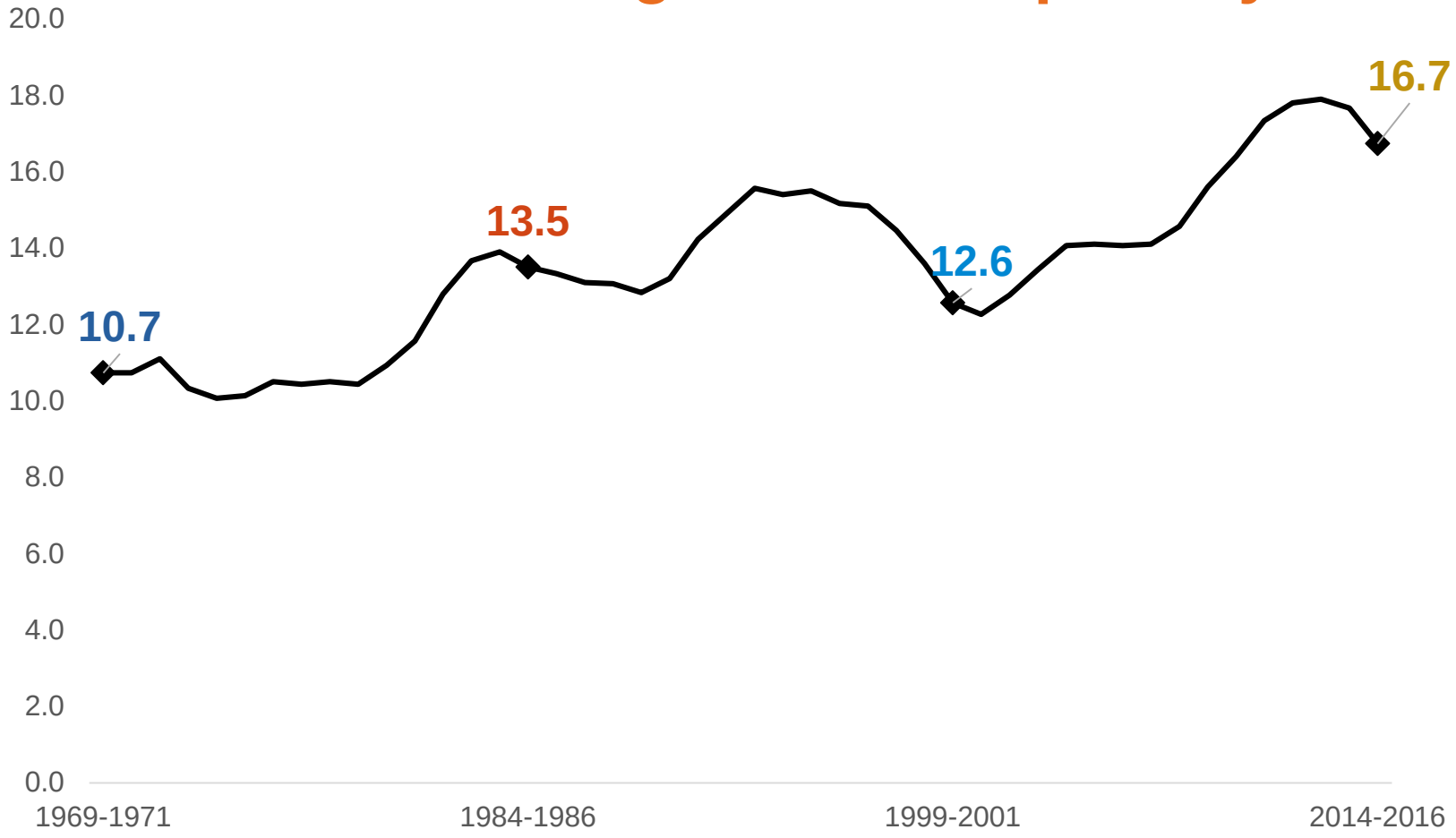

Source: Integrated Public Use Microdata Series (IPUMS), Current Population Survey: Version 4.0

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Example: Poverty Rate

Percent of women ages 30-34 in poverty

Generation	Year	Rate	Diff from WWII	% Diff from WWII	Index
WWII	1960	10.7	--	--	100
Baby Boom	1975	13.5	2.8	26	74
Generation X	1990	12.6	1.9	18	82
Echo Boom	2005	16.7	6.0	56	44

Source: Integrated Public Use Microdata Series (IPUMS), Current Population Survey: Version 4.0

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The Index: Data

Indicator	Ages	WWII	BB	GX	EB
High School (Status) Dropout	16-24	26.7	14.5	11.8	8.0
Bachelor's Degree or Higher	25-34	11.9	21.6	29.3	37.5
Female/Male Wage Gap	25-34	65.0	75.1	82.4	89.6
Poverty	30-34*	10.7	13.5	12.6	16.7
Teen Birth	15-19	89.1	55.6	59.9	39.7
Maternal Mortality	--	20.9	7.6	10.2	28.6
Smoking	18+	31.5	27.9	21.0	13.6
Suicide / Self-inflicted Mortality	25-34	8.3	6.1	4.4	6.3
Homicide / Assault Mortality	25-34	6.3	6.5	4.2	3.3
Congressional Representation	--	2.1	4.7	12.1	19.6

Sources: National Center for Education Statistics, Digest of Education Statistics; Integrated Public Use Microdata Series (IPUMS), Current Population Survey: Version 4.0; Bureau of Labor Statistics, Current Population Survey; U.S. Centers for Disease Control and Prevention, National Center for Health Statistics and WONDER online database; American Lung Association, Tobacco Trend Report; U.S. House of Representatives, Women Representatives and Senators by Congress, 1917–Present

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The Index

Indicator	WWII	BB	GX	EB
High School (Status) Dropout	100	146	156	170
Bachelor's Degree or Higher	100	181	245	314
Female/Male Wage Gap	100	116	127	138
Poverty	100	74	82	44
Teen Birth	100	138	133	155
Maternal Mortality	100	164	151	63
Smoking	100	111	133	157
Suicide / Self-inflicted Mortality	100	128	147	124
Homicide / Assault Mortality	100	98	132	148
Congressional Representation	100	224	576	933
INDEX (avg. of 10 measures)	**100**	**138**	**188**	**225**

Note: Values shown are rounded. Index is calculated on un-rounded values.

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Progress Not Uniform

Indicator	Ages	WWII	BB	GX	EB
High School (Status) Dropout	16-24	26.7	14.5	11.8	8.0
Bachelor's Degree or Higher	25-34	11.9	21.6	29.3	37.5
Female/Male Wage Gap	25-34	65.0	75.1	82.4	89.6
Poverty	30-34*	10.7	13.5	12.6	16.7
Teen Birth	15-19	89.1	55.6	59.9	39.7
Maternal Mortality	All	20.9	7.6	10.2	28.6
Smoking	18+	31.5	27.9	21.0	13.6
Suicide / Self-inflicted Mortality	25-34	8.3	6.1	4.4	6.3
Homicide / Assault Mortality	25-34	6.3	6.5	4.2	3.3
Congressional Representation	n.a.	2.1	4.7	12.1	19.6

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Sequential Indices

WWII as Base (=100)

Indicator	WWII	BB	GX	EB
High School (Status) Dropout	100	146	156	170
Bachelor's Degree or Higher	100	181	245	314
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Congressional Representation	100	224	576	933
INDEX	**100**	**138**	**188**	**225**

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Sequential Indices

Baby Boom as Base (=100)

Indicator	BB	GX	EB
High School (Status) Dropout	100	119	145
Bachelor's Degree or Higher	100	136	174
Female/Male Wage Gap	100	110	119
Poverty	100	107	76
Teen Birth	100	92	129
Maternal Mortality	100	66	-176
Smoking	100	125	151
Suicide / Self-inflicted Mortality	100	127	95
Homicide / Assault Mortality	100	133	148
Congressional Representation	100	257	417
INDEX	**100**	**127**	**128**

Note: Values shown are rounded. Index is calculated on un-rounded values.

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Sequential Indices

Generation X as Base (=100)

Indicator	GX	EB
High School (Status) Dropout	100	132
Bachelor's Degree or Higher	100	128
Female/Male Wage Gap	100	109
Poverty	100	68
Teen Birth	100	134
Maternal Mortality	100	-80
Smoking	100	135
Suicide / Self-inflicted Mortality	100	57
Homicide / Assault Mortality	100	123
Congressional Representation	100	162
INDEX	**100**	**97**

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Sequential Indices

Prior Generation is Base (=100)

Indicator	BB	GX	EB
High School (Status) Dropout	146	119	132
Bachelor's Degree or Higher	182	136	128
Female/Male Wage Gap	116	110	109
Poverty	74	107	68
Teen Birth	138	92	134
Maternal Mortality	164	66	-80
Smoking	111	125	135
Suicide / Self-inflicted Mortality	128	127	57
Homicide / Assault Mortality	98	133	123
Congressional Representation	224	257	162
INDEX	**138**	**127**	**97**

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Limitations

- May exclude some important indicators of women's well-being
- Does not account for intersectionality
  - Historical race/ethnic data (when avail.) not comparable over time
- Year selected may influence results
  - Mitigation strategies:
    - Select indicators with steady trend
    - Multi-year average
- Percent change sensitive to starting value

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The Index

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High School (Status) Dropout	100	146	156	170
Bachelor's Degree or Higher	100	181	245	314
Female/Male Wage Gap	100	116	127	138
Poverty	100	74	82	44
Teen Birth	100	138	133	155
Maternal Mortality	100	164	151	63
Smoking	100	111	133	157
Suicide / Self-inflicted Mortality	100	128	147	124
Homicide / Assault Mortality	100	98	132	148
Congressional Representation	100	224	576	933
INDEX	**100**	**138**	**188**	**225**

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Teen Birth	100	138	133	155
Maternal Mortality	100	164	151	63
Smoking	100	111	133	157
Suicide / Self-inflicted Mortality	100	128	147	124
Homicide / Assault Mortality	100	98	132	148
~~Congressional Representation~~				
INDEX	**100**	**128**	**145**	**146**

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The Index

Point change alternative

Indicator	WWII	BB	GX	EB
High School (Status) Dropout	100	112	115	119
Bachelor's Degree or Higher	100	110	117	126
Female/Male Wage Gap	100	110	117	125
Poverty	100	97	98	94
Teen Birth	100	134	129	149
Maternal Mortality	100	113	111	92
Smoking	100	104	111	118
Suicide / Self-inflicted Mortality	100	102	104	102
Homicide / Assault Mortality	100	100	102	103
Congressional Representation	100	103	110	118
INDEX	**100**	**108**	**111**	**114**

Note: Values shown are rounded. Index is calculated on un-rounded values.

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Next Steps

- State-level analysis (for available indicators)
- Race/ethnic comparison (for available indicators)
- Population Bulletin (Spring 2017)
  - Will include GSS data and other contextual information

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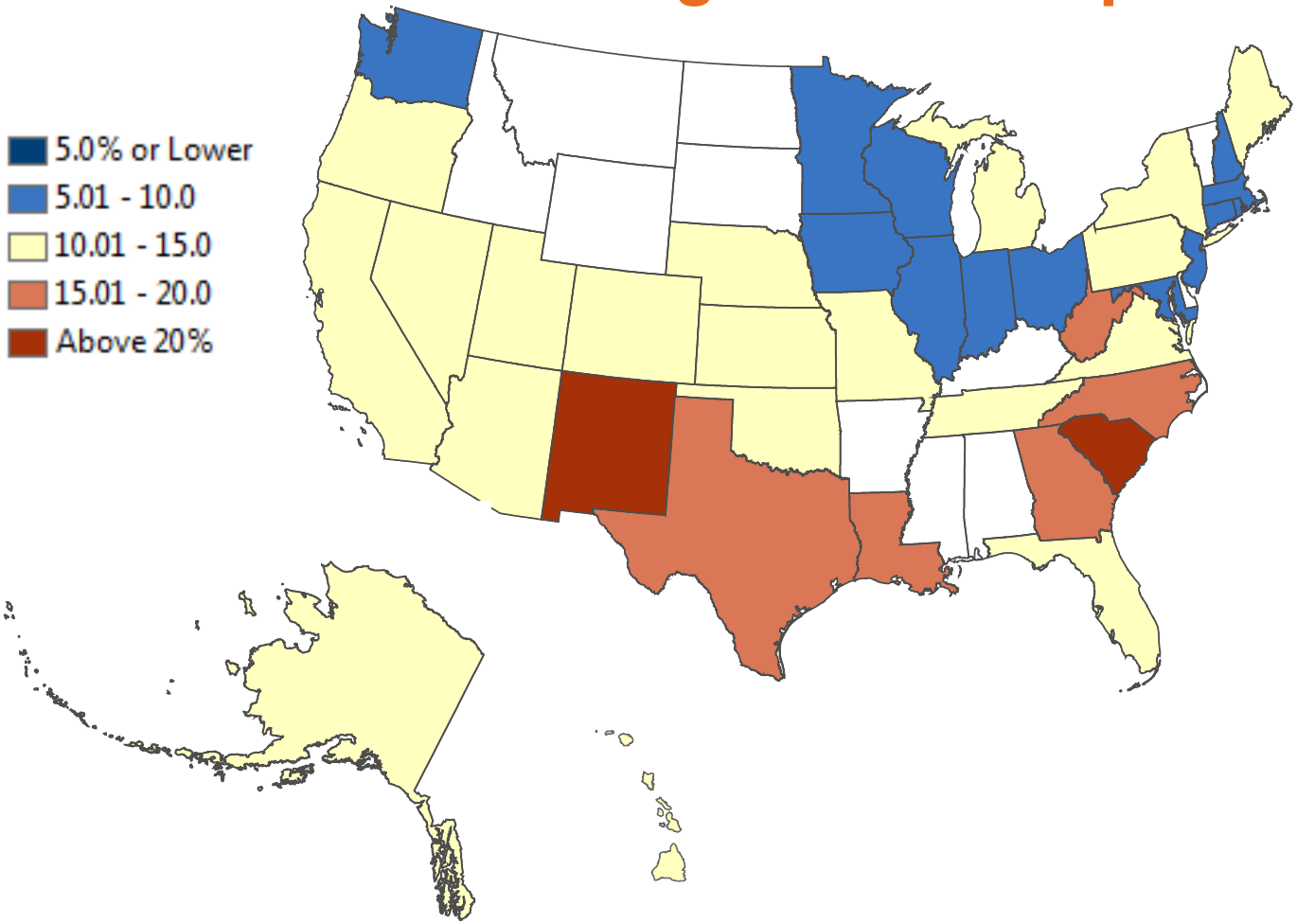
Poverty Rate 1969

Percent of women ages 30-34 in poverty



Source: Integrated Public Use Microdata Series (IPUMS), 1970 Decennial Census

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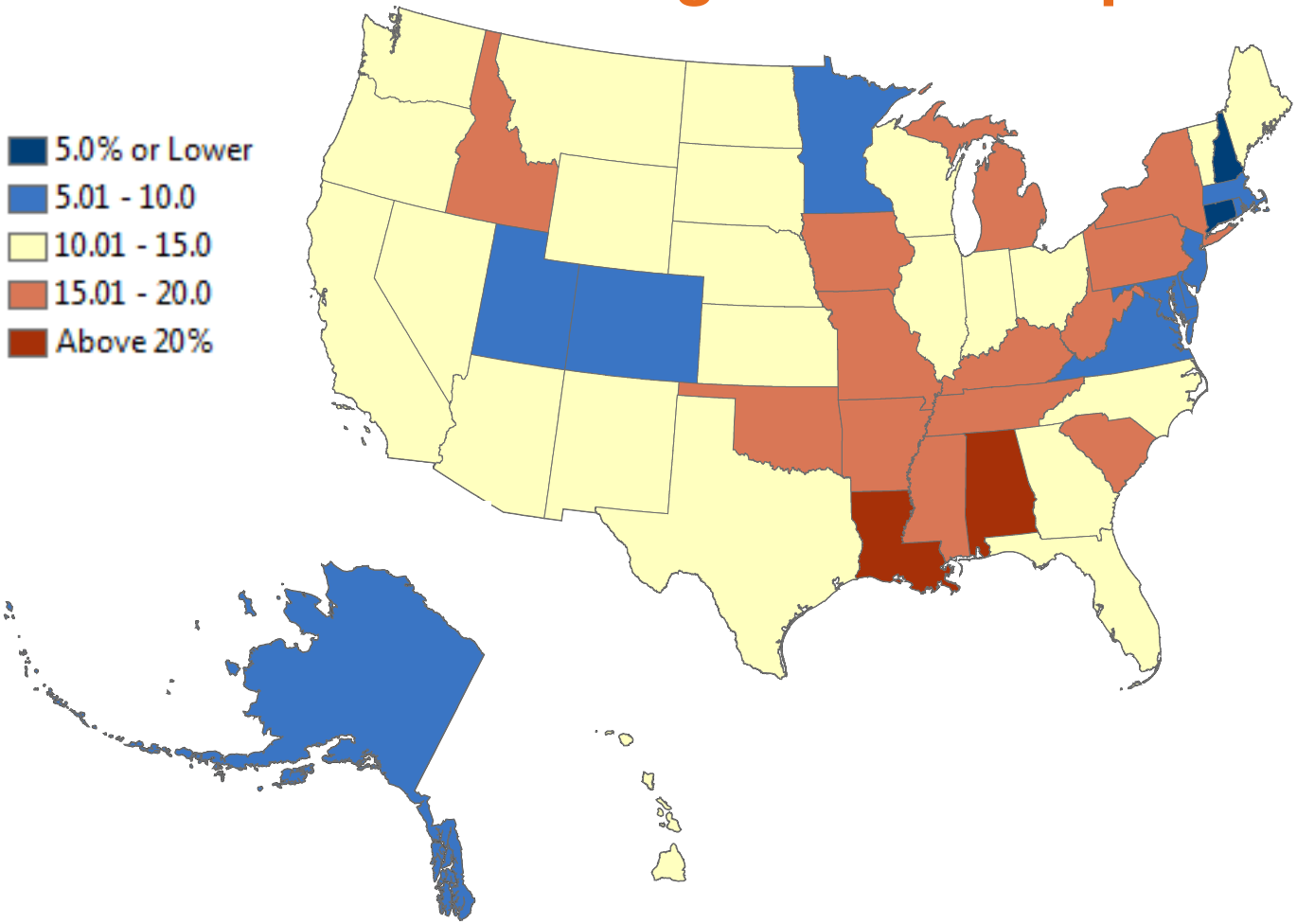
Poverty Rate 1984-1986

Percent of women ages 30-34 in poverty



Source: Integrated Public Use Microdata Series (IPUMS), Current Population Survey: Version 4.0

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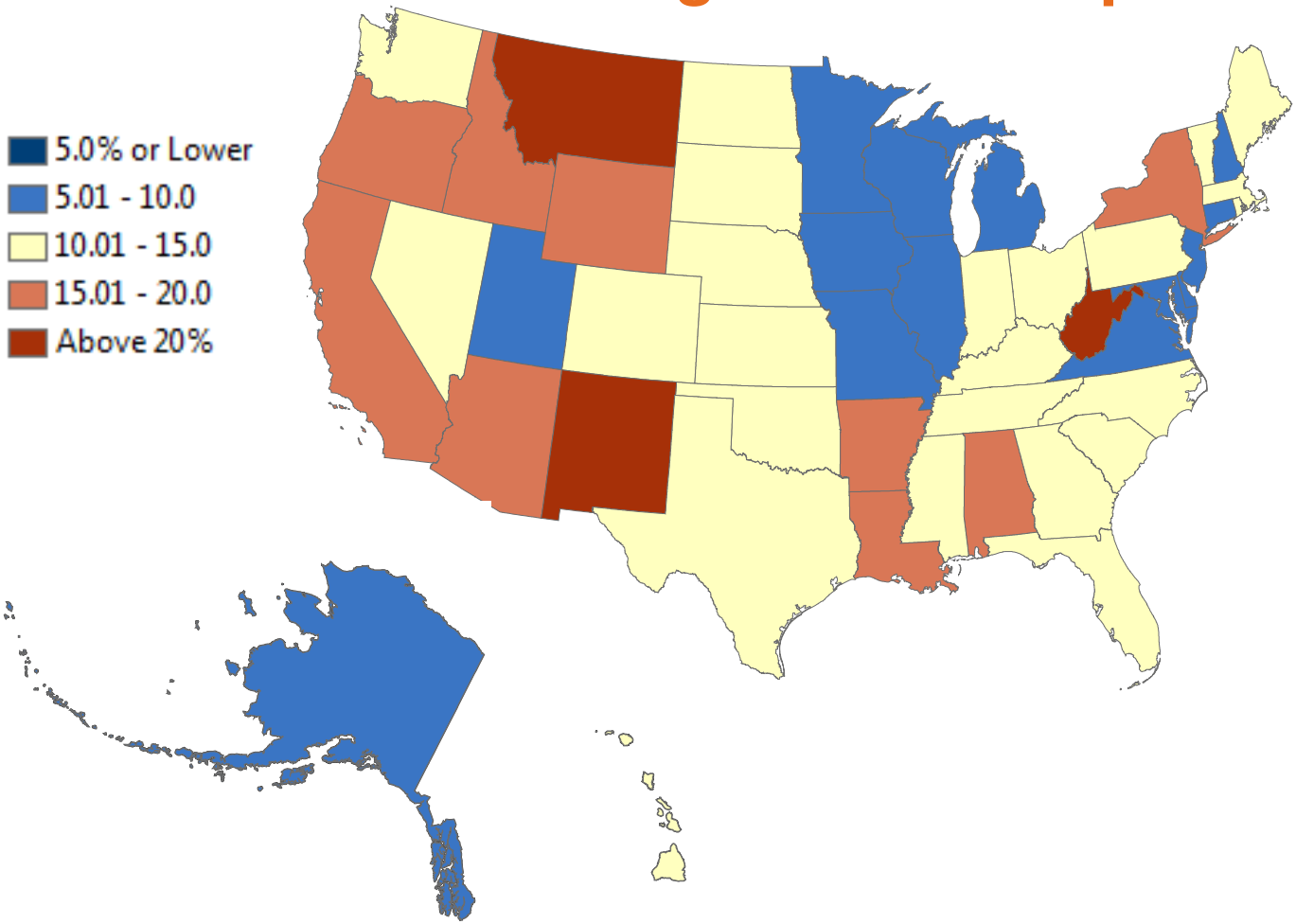
Poverty Rate 1999-2001

Percent of women ages 30-34 in poverty



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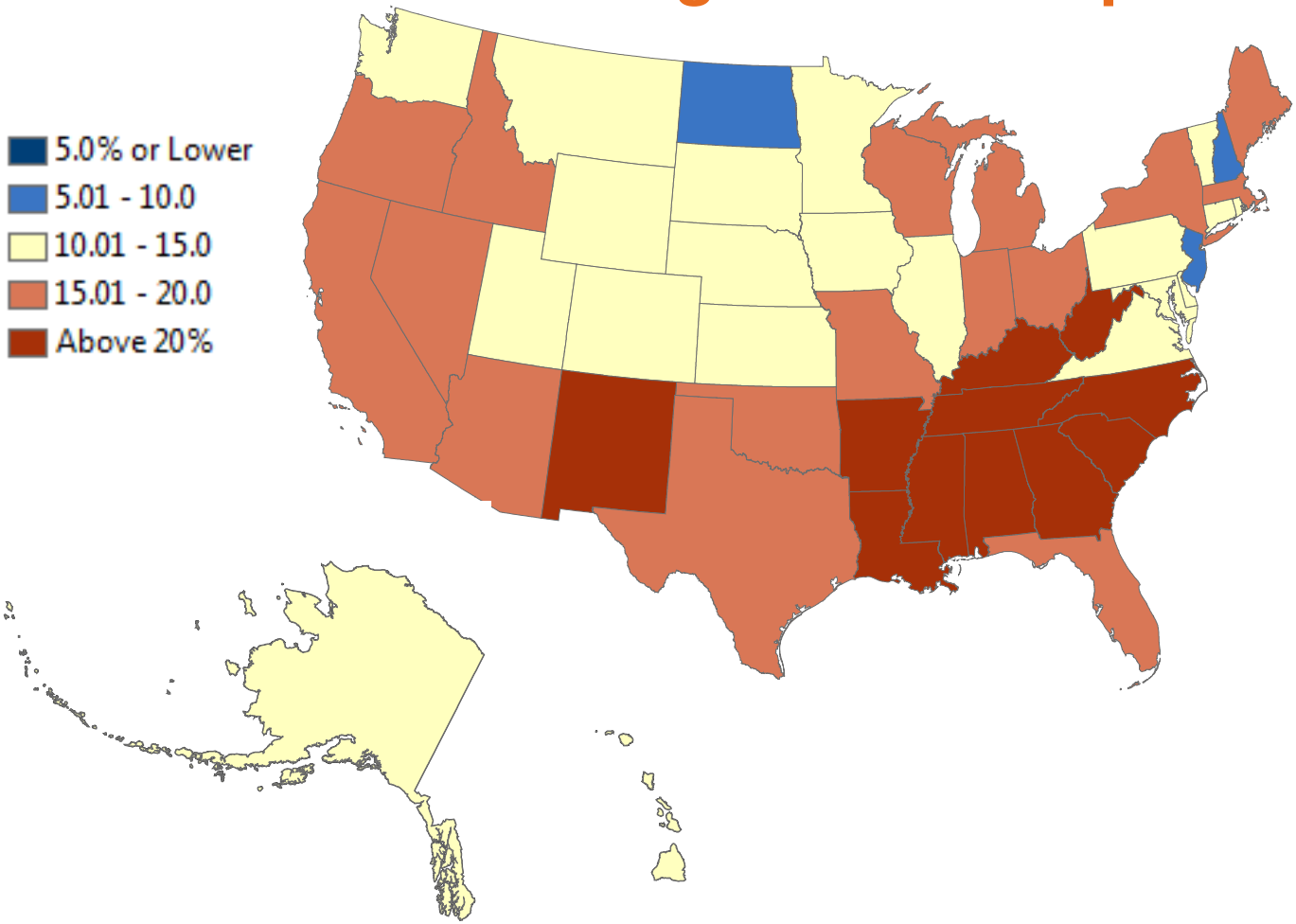
Poverty Rate 2014-2016

Percent of women ages 30-34 in poverty



Source: Integrated Public Use Microdata Series (IPUMS), Current Population Survey: Version 4.0

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The Index

Year(s) used for each indicator

Indicator	WWII	BB	GX	EB
High School (Status) Dropout	1960	1975	1990	2005
Bachelor's Degree or Higher	1970	1985	2000	2015
Female/Male Wage Gap	1970	1985	2000	2015
Poverty	1969-71	1984-86	1999-01	2014-16
Teen Birth	1960	1975	1990	2005
Maternal Mortality	1969-71	1984-86	1999-01	2013-15
Smoking	1970	1985	2000	2015
Suicide / Self-inflicted Mortality	1969-71	1984-86	1999-01	2013-15
Homicide / Assault Mortality	1969-71	1984-86	1999-01	2013-15
Congressional Representation	1970	1985	2000	2015

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