The Age-structural Theory of State Behavior

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The Anticipatory Fields of Intelligence
(Estimative, Early Warning, Foresight)

J.M. Schmidt, 2015
The Age-structural Transition

2015

Data: UN Population Division, 2015 Rev.

Updated from Cincotta, 2012
The Age-structural Transition

2015

Data: UN Population Division, 2017 Rev.

Updated from Cincotta, 2012

Tunisia

1965

Median age, 17.1
Pop: 4.5 million

1990

Median age, 20.9
Pop.: 8.2 million

2010

Median age, 29.0
Pop.: 10.6 million

2025

Median age, 35.6
Pop.: 12.3 million

Median age, 20.9
Pop.: 8.2 million

Median age, 29.0
Pop.: 10.6 million

Median age, 35.6
Pop.: 12.3 million
4 Phases of the Age-structural Transition

- Youthful \( \leq 25.5 \)
- Intermediate 25.6 to 35.5 (Dem. Window)
- Mature 35.6 to 45.5
- Post-mature \( \geq 45.6 \)

Median age (in years)

Age-structural Timeline
NIC’s Four Age-Structural Phases

- **Youthful (YTH):** rapid growth among children, adolescents, young adults; low levels of human capital and institutional capacity (typically low legitimacy). Difficult to generate legitimacy from institutions (because of the large load on them, and low levels of human capital).

- **Intermediate (INT):** The demographic window; low levels of dependency; rapidly increasing human capital and institutional capacity (typically gains in legitimacy).

- **Mature (MAT):** fading of the demographic advantages; society and economy directed by the institution and capacity generated during the window. Need to be preparing institutions/society for the next phase.

- **Post-mature (PMT):** challenges from large proportion of seniors in adult population; declining workforce size (maybe); unprepared institutions (?); ethnic shifts due to immigration (?).
Sub-Saharan Africa and the Demographic Window

TFR, 2010-15 vs. Median Age, 2015

Age-structural Transition
Building Cumulative Distribution Functions

Child Survival: Upper-middle category (<25 deaths per 1000 births)

Proportion of countries vs Median Age (in years)

Age-structural Transition
Age Structure & Development

Transitions in:

Child survival  (UN Pop. Div./WHO)

Late-secondary educational attainment  (IIASA/VID)

Per-capita income  (World Bank, WDI)

Under-age-5 Survival
(surviving children per 1000 births)

Survival Categories:
- Low: Fewer than 900
- Lower-middle: 900 - 949
- Middle: 950 - 974
- Upper-middle: 975 - 989
- High: 990 or more

Late-secondary School Attainment
(proportion with late-secondary or tertiary schooling, ages 20-29)

Attainment Categories:
- Low: Less than 0.20
- Lower-middle: 0.20 - 0.39
- Middle: 0.40 - 0.59
- Upper-middle: 0.60 - 0.79
- High: 0.80 or greater

World Bank Income Classes

Per-capita Income Categories:
- Low: Less than 1005
- Lower-middle: 1006 - 3955
- Upper-middle: 3956 - 12,235
- High: 12,236 or more
World Bank Income Classes

YTH  INT  MAT  PMT

![Image of World Bank Income Classes graph]

- AFG
- PAK
- BNG
- TUN
- CHI
- GER

Probability (stacked)

Median Age (years)

Income Transition

L

LMP

UM

M
Political Liberalization Transition

Freedom House freedom status categories, published annually by Freedom House, based on the average of their political rights (PR) and civil liberties (CL) scores (average is called the freedom score).

- **FREE**: Freedom Scores 2.5 to 1.0
- **PARTLY FREE**: Freedom Scores 5.0 to 3.0
- **NOT FREE**: Freedom Scores 7.0 to 5.5

Political Stability Transition

UCDP/PRIO Armed Conflict Database, intra-state, government-focused conflicts (>25 battle-related deaths per year, where the state is one of the armed parties)

Note: Not a separatist (territorial) conflict.

Conflict History Classes (same type of conflict during prior 4-year)

- $R_{\text{Abs}}$: 0 years of conflict (absence)
- $R_{\text{Int}}$: 1 or 2 years of conflict (intermittence)
- $R_{\text{Per}}$: 3 or 4 years of conflict (persistence)

Revolutionary Conflict: empirical evidence
Territorial (ethnic separatist) Conflicts: Theory

4-year conflict history types

Onset: 0 conflict yrs.  
Intermittent: 1 or 2 conflict yrs.  
Persistent: 3 or 4 conflict yrs.

Cincotta, in press
Territorial Conflict: empirical evidence

![Bar chart showing the proportion in territorial conflict over different years, with categories specified in the legend: Youthful, Youthful - SP (<5 million population), Intermediate, Mature. The x-axis represents years from 1976 to 2011 in intervals of 5 years, and the y-axis represents the proportion in territorial conflict ranging from 0.0 to 0.5.]
Age-structural Change
1995 to 2010

![Map showing age-structural change from 1995 to 2010.](image)

<table>
<thead>
<tr>
<th>Category</th>
<th>Median Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youthful</td>
<td>25 or younger</td>
</tr>
<tr>
<td>Intermediate</td>
<td>26 to 35</td>
</tr>
<tr>
<td>Mature</td>
<td>55 to 65</td>
</tr>
<tr>
<td>Post-mature</td>
<td>65 or older</td>
</tr>
</tbody>
</table>
Age-structural Change
2015 to 2035

Data: UN Population Div., 2015
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SUMMARY: Ten Rules of Political Demography (1 through 5)

1. Expect youthful states to reside in the lower and lower-middle development categories of child survival, educational attainment, and income. Exceptions are states with small populations (<5 million population), and those with oil/mineral wealth (>15% GDP).

2. Expect states in the intermediate and mature phases (the most age-structurally mature), to experience the best chance of being a liberal democracy – that is, to be assessed as FREE in Freedom House’s annual Freedom in the World global survey (most analysts consider FREE status to be synonymous with liberal democracy).

3. Expect states that have a youthful age structure (below a median age of 25.5 years) to be the least likely to be assessed as FREE and the most likely to be engaged in revolutionary conflict (non-separatist conflict) of either low or high intensity, as measured by the Uppsala Conflict Data Program.

4. Where a revolution occurs in a state with a youthful population, expect either the authoritarian regime to remain in power or to be replaced by another authoritarian regime (typically NOT FREE or low-level PARTLY FREE, as measured by Freedom House).

5. Expect states that achieve FREE while youthful to lose this rating within a decade. There is a long history of this effect; Mali is a recent example.
Ten Rules of Political Demography (6 through 10)

6. Expect states with a population of less than 5 million to be the most likely to break rules 1, 2, 3, 4, and 5 (see the UN Population Division for population data).

7. Expect revolutionary conflicts to end or de-escalate when countries move into the intermediate phase. However, this trend is much less pronounced among ethnic separatist conflicts, where it is often responsive to sub-state demography.

8. Expect states that are ruled by an ideological single-party regime or another type of ideological political monopoly – for example, Iran’s theocracy – to mature without liberalization. China and North Korea are other prominent examples, and so far, have had no successional issues.

9. Expect states led by a revolutionary leader (Cuba under Castro, Venezuela under Chavez) or a charismatic reformer (Russia under Putin, Turkey under Erdogan, Singapore under Lee Kwan Yu) to resist attaining FREE. Expect these regimes to have successional problems.

10. Expect a state ruled by a military junta/ruler or absolute monarch to yield to a more democratic regime before the population attains a mature age-structure (before a median age of 35.5 years).
Why does median age predict development?
Median age: 23 yrs.
Youthful
Median age: 38 yrs.  

Median age: 37 yrs.

Median age: 39 yrs.  

Projected Median age: 49 yrs.

Youthful

Median age: 24 yrs.

Intermediate

Projected Median age: 35 yrs.
Population: 32.5 million

40.2 million

(UN medium projection)
Nigeria

Population: 182 million

233 million
(UN medium projection)
The Predictive Value of Population Age Structure

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