Population Change in Europe, the Middle-East and North Africa

Beyond the Demographic Divide

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Chapter 5

Who's Next?

Age Structure and the Prospects of Democracy and Conflict in North Africa and the Middle East

Richard Cincotta¹

Introduction

Much has been written describing how Middle East experts were blindsided by a pair of successful popular uprisings, first in Tunisia and then in Egypt. Writing in Foreign Affairs, political scientist Gregory Gause (2011) recounts how regional specialists, like himself, overestimated the strength and cohesiveness of North Africa's regimes and failed to grasp the limited depth of personal allegiances that either Zine El Abidine Ben Ali or Hosni Mubarak could secure from the military's highest ranks. Another article in the same journal, by Nassim Taleb and Mark Blyth (2011), draws a strikingly dissimilar conclusion, describing North Africa's dramatic political events as a 'black swan' – the unpredictable terminus of a build-up of tensions brought to a head by complexly interacting forces.

Little, if any mention has been made, however, of two articles (Cincotta 2008, 2009) describing the relationship between demography and rise and stability of liberal democracy that was printed in *Foreign Policy* in March of 2008 — more than two-and-a-half years before Tunisian demonstrators took to the streets of Sidi Bouzid. In that essay, I published the following conclusions:

The first (and perhaps most surprising) region that promises a shift to liberal democracy is a cluster along Africa's Mediterranean coast: Morocco, Algeria, Tunisia, Libya, and Egypt, none of which has experienced liberal democracy in the recent past. ... Interpreting [this forecast] conservatively, we can expect there will be one, maybe two, in [this] group that will become stable liberal democracies by 2020. (Cincotta 2008, 81–3)

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That forecast appeared again in print in 2009 in the Woodrow Wilson Center's Environmental Change and Security Report, and its underlying statistical analysis has been detailed in more recent publications (Cincotta and Doces 2011; Cincotta 2013a). Whereas, from 2008 to 2010, I presented these results at several venues, few analysts of politics in the North Africa-Middle East Region (NAME), or elsewhere, found the methods credible or the results plausible. When, in February 2008, I presented these forecasts as the luncheon speaker at a US State Department-sponsored meeting on the future of NAME, the group of academic experts – some of them native to the region itself – broke into laughter.

At the time, regional analysts considered the authoritarian regimes of North Africa to be highly stable. Demography was well outside these researchers' educational backgrounds or interests, and they seemed certain that political relationships between elites were the key to understanding the region's future, and tracking demographic trends could provide few insights.

Of course, the predicted outcome of 'one, maybe two', North African *liberal democracies* (in this research, states assigned FREE status in Freedom House's annual assessment)² has yet to be realized (Freedom House 2014), and despite the fact that Tunisia is poised on the doorstep of liberal democracy, and 2020 is still eight years away, such an outcome is by no means a certain finale for the Arab Spring. Nonetheless, Tunisia's 'Dignity Revolution' and the subsequent establishment of a constitution have transformed the distant hope for an open, competitive political system into a near-term possibility.

Was the forecast focused on North Africa a lucky guess? Or did it make use of data that were unavailable to regional specialists? The answer to both questions is 'no, not at all'. The forecast was a product of a 'schedule' that was generated by a simple model using publicly available demographic data. The model evolved from a modest, overtly reductionist, research program in political demography, initially supported by the (US) National Intelligence Council, which focused

² Freedom House has annually assessed each country and territory of the world since 1972. Freedom status is derived from the average of scores for political rights (PR) and civil liberties (CL) assessed in Freedom House's annual survey. Both PR and CL are scored from 1 to 7, the score of 1 representing the highest level of freedom. The averages of PR and CL scores, which range from 1.0 to 7.0, are divided into three categories: FREE (1.0 to 2.5); PARTLY FREE (3.0 to 5.0); and NOT FREE (5.5 to 7.0).

³ While most social sciences recoil at the work 'reductionism', it is a necessary and vital element of scientific research. Much of what political scientists study appears to be largely impenetrable by cause-and-effect models. Some of the greatest strides in the natural sciences have been made by producing computational models that abandon trying to capture the unmanageable complexity of the real world, for something workable (which itself can be deep and complex) – including statistical mechanics in physics, and evolutionary stable strategy (ESS) theory in evolutionary biology.

on identifying early-warning indicators of political change from public-access demographic data.⁴

In the following chapter I begin by briefly providing background on ongoing debates over the leading structural indications of democratization, and by outlining the age-structural maturity thesis – the theoretical relationship between age structure (a population's distribution, by age) and the state's probability of attaining and maintaining liberal democracy (high, unambiguous levels of political rights and civil liberties, which are indicated by Freedom House's Free category). Next, I review the functional form and characteristics of the logistic age-structural model of liberal democracy (referred to as the age-structural model). Then, in the latter portion of this chapter, I present a table of the model's updated forecasts for the states of the NAME region. And, in the conclusion, I provide my own perspective on these forecasts' implications for Europe.

What does the model's output suggest? The array of probabilities generated by the age-structural model suggest that, over the next 20 years (from 2015 to 2025) European leaders should expect conflict and tensions to persist in Iraq and in Syria, and on the Arabian-Peninsular state of Yemen. In terms of the region's possibilities for further political liberalization, the states of the Maghreb (the Arab west) – Tunisia now, and then Morocco, Algeria, and Libya around 2020 – are likely to remain the most promising. Which ones might rekindle the political and economic hopes of the Arab Spring? By itself, the age-structural model is unable to tell.

The model suggests that popular demand for political liberalization is likely to grow stronger in these states, and likewise in the age-structurally maturing states of Turkey, Lebanon and Iran. However, champions of political liberalization in these countries will contend with the ideological and organizational power of various forms of Islamism, which have, so far, demonstrated their ability to deter a rise to high levels of democracy. Thus, by 2025, the region is likely to have settled into a mix of regimes including a substantial proportion of partial democracies. These not-so-liberal states – often called anocracies – are likely to be deterred from further liberalization by the constraints on civil liberties imposed by political Islam, or by monarchs and other political elites who have cordoned off their political system from Islamist inroads and control.

⁴ The current program of research on the relationship between population age structure and state behavior entails three related components. The first focuses on the development of a simple worldwide univariate model – the *Logistic Age-structural Model of Liberal Democracy* – and its dissemination and use by analysts in intelligence and defense-related early-warning efforts. The second component is concerned with generating multivariate alternatives to the logistic model. These alternatives have been used to test and improve the model, and to better understand why and how it works. The third effort focuses on systematizing the process of early warning, on generating forecasts and testing them, and on expanding an age-structural theory and narrative that supports them.

Two notable (and somewhat surprising) political shifts in this region are suggested by this analysis. Between 2020 and 2025, Saudi Arabia's slowly but steadily maturing citizen-resident population is projected to attain an age-structural configuration that, for other monarchies that passed this milestone and survived it (such as Thailand, and before that, only a handful of European monarchies), has been associated with the commencement of the devolution of their monarchical powers to elected executives. Whether a Gulf Arab monarchy, awash in oil rents and wielding significant regional power, will follow suit, however, is uncertain.

The second notable shift is likely to occur in Israel. Changes in Israel's subnational demographic composition are driving its domestic political discourse and the field of political parties. The coming decade could further strain Israel's democracy, as its government will be pressured to reform policies and institutions that previously defined the relationship between the state and its most rapidly growing, high-fertility minorities — the ultra-Orthodox (Haredim), Israeli Arabs, and West Bank settlers.

The Demographic Divide

Three hundred years ago, the average fertility, age-related mortality, and age structure of the populations inhabiting Europe's collection of empires and states were probably very similar to those populations of the political entities that stretched across NAME. Today, the age structure of Europe's population is substantially older (a higher median age) than that of either North Africa or the Middle East. Under-30s now comprise less than 35 per cent of Europe's population, while more than 17 per cent of all European residents are 65 years of age and older (seniors). In contrast, in NAME, those under 30 make up about 58 per cent of all residents, while seniors, those over 65, comprise just 5 per cent. Why the divide?

The differences arose principally from the timing and pace of fertility decline. Europe's demographic transition began earlier, and proceeded more slowly than the ongoing declines in NAME. For example, it took Sweden – unaided by modern medicine and mass-produced contraceptives for much of its transition – about 90 years to decline from a birth rate above 35 births per 1,000 individuals in the population (ca. 1865), to a rate that settled under 15 per 1,000 (ca. 1955) (Chesnais 1992). It will likely take Tunisia about 40 years (1980 to 2020) to make the same decline, while Iran's transition is likely to cover that same ground in somewhat less time. Meanwhile the birth rates of the populations of Yemen and Iraq, now at 31 births per 1,000, have declined at a much slower pace than those of Turkey, Lebanon, Iran, or the Arab-majority states of the Maghreb (UNPD 2013).

While Europe's total population is holding steady (~743 million, which includes Russia), that of the NAME region (~430 million) continues to grow at

⁵ The forecast of Iran's transition relies on the medium variant fertility projection published by the UN Population Division. *World Population Prospects*, 2009.

a significant pace —about 1.8 per cent per year. The principal sources of state-level population growth are the wide gaps between declining death rates and still-elevated birth rates that typically occur during the early and middle stages of the demographic transition. Today the birth-death gap is widest in sub-Saharan and in parts of South and Central Asia. In NAME, the gap is narrowing rapidly in most states. In 14 states, scattered across southern, central and eastern portions of Europe, death outpaces birth —although the rate of decline, in each, remains below one per cent per year (UNPD 2013). Europe's barely growing population — which seems to be edging toward its historical peak — represents the sum of offsetting trends between these declines, and slow growth in its northern and western sub-regions, plus immigration.

The Age-structural Transition

The focus of this essay is on only one aspect of this demographic divide: on population age structure and its association with dramatic political change. This relationship, which some political scientists find befuddling, is actually quite intuitive. When in youthful populations the frequency of childbearing is in decline, large cohorts of children and adolescents are gradually replaced by successively smaller cohorts, triggering an *age-structural transition* (Figure 5.1) – a fairly predictable progressive sequence of age distributions, each with an 'older' median age.

The result: dramatic slowing of growth in the number of children eligible for schooling, greater per-pupil educational investment and attainment (Lee and Mason 2011), and fewer inexperienced young adults vying to enter the workforce (Easterlin 1968, 1987). Moreover, the transition tends to precipitate a gradual shift in society's demographic centre of gravity – away from a social environment dominated by children, adolescents and young adults who have been raised in large families, to a milieu that is increasingly influenced by educated men who were raised in small families and educated women who participate in the trained workforce. In some states, this transformation has been associated with a sharp rise in household and government savings (Higgins and Williamson 1997).

Theoretically, the spread of a small family norm, subsequent age-structural maturation, and slowing workforce growth should be associated with the gradual deterioration of extended family and clan networks, challenging the maintenance of kin-based patronage and applying upward pressure to the costs of recruitment of young-adult males to organizations that perpetuate political violence (Urdal 2006; Weber 2012). Over the past half-century, states experiencing a more mature age structure have been less prone to the rise of intra-state political violence than those with youthful populations (Urdal 2006).

The pattern of increased individuation and decreased intra-state political violence remaining in the wake of the age-structural transition's progress through Europe, across East Asia, and then through the America's suggests that these may be

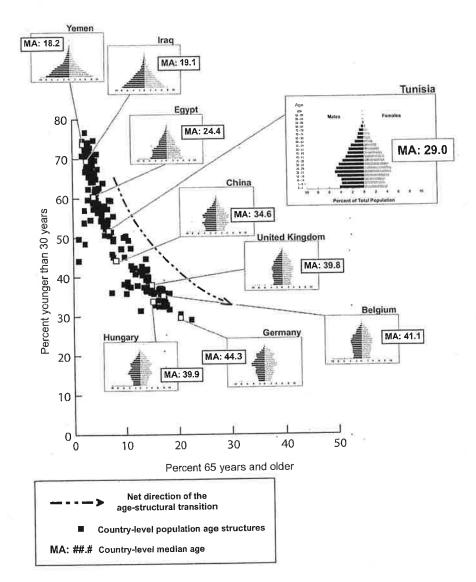


Figure 5.1 Country-level age structures along the path of the age-structural transition

Source: UNPD, 2013.

its most transformative social bi-products. Arguably, no transition, either political or economic in nature, can boast such extensive and largely irreversible effects.

Today's broad global range of fertility rates (from just above one child per woman in Taiwan to about seven in Niger) along with regional and within-region variation in the timing and pace of fertility declines, have given rise to an extraordinary diversity of population age structures. To characterize their position within the age-structural transition, I group country-level populations into four transitional phases: *youthful* (a population with a median age less than, or equal to, 25.0 years), *intermediate* (25.1 to 35.0), *mature* (35.1 to 45.0), and *post-mature* (greater than 45.0). I will refer to these phases throughout this article.

Because the populations of the six Gulf Cooperation Council (GCC) states (Bahrain, Saudi Arabia, Kuwait, Oman, Qatar, and United Arab Emirates) include relatively large proportions of temporary labourer migrants, these states are categorized using the median age of 'citizen residents', which were obtained from the US Census Bureau's International Program Centre (USCB, IPC 2012), rather than the aggregated country-level estimates and projections that are available in the public-access databases generated by the UN Population Division and the US Census Bureau.

Theory: The Age-structural Maturity Thesis

The relationship between population age structure and democracy – the age-structural maturity thesis – is a synthesis of two more firmly established theories: the youth bulge thesis, and the authoritarian bargain thesis. Proponents of the youth-bulge thesis have convincingly demonstrated that states with a youthful age structure face an elevated risk of experiencing armed intra-state conflict and other types of within-state political violence (Möller 1968; Goldstone 1991, 1999; Mesquida 1996; Urdal 2006; Cincotta and Leahy 2007; Leahy et al. 2007).

Proponents of this theory argue that the high frequency of civil and ethnic unrest reflects the ease with which idealistic, peer-sensitive, risk-seeking young adult males can be mobilized for political violence by both state and non-state actors in opportunity-poor societies. More recent research suggests that these risks often persist in states even when a vast majority of the population is in its intermediate or mature age-structural phase when a state's territorial boundary encompasses a significantly large, politically active, youthful minority – particularly a group segregated in a sub-national region, or a residentially segregated urban group (Cincotta 2011).

The authoritarian bargain thesis harkens to a 350-year-old observation of the English political philosopher Thomas Hobbes. Writing in the seventeenth century, Hobbes argued that states are born of a trade-off: when threatened by insecurities, the 'ruled' willingly trade their political rights and civil liberties to the 'ruler' for guarantees of security (Hobbes 1994, original published 1651/1658). In other words, commercial and military elites, as well as propertied citizens and other

vulnerable groups, can be expected to support an illiberal regime when they fear that a more open society would expose them, their family, and their property to violence.

Combining the two theories generates an expectation that is easily tested: countries with youthful age structures, when compared to those categorized as intermediate or mature, should be much less likely to establish and maintain *liberal democracy* – a regime assessed as 'Free' in Freedom House's annual survey (Freedom House 2014). In fact, since 1972, when the survey began, the mean proportion of youthful countries that have been assessed as Free has remained under one fifth (18.3±0.8 per cent)⁶ of the annual pool (Figure 5.2). Moreover, the vast majority of these youthful-but-liberal regimes have shown themselves to be extremely ephemeral (Figure 5.3) – while several liberalize each decade, just as many slip to Partly Free (a partial democracy) or Not Free (an autocracy), the victim of electoral violence, a crackdown on the opposition or the centralization of executive power, an insurgency, or a coup d'état (the collapse of Mali's liberal democracy in March 2012, being the most recent example). As expected, when median age increases, so does the proportion of states assessed as Free.

Getting beyond a median age of 25 years (MA-25) clearly appears as a milestone for a modern state – and arriving at a median age near 30 years seems even better, particularly in terms of attaining liberal democracy and maintaining that regime type. Over the four decades, about half (51.7±3.4 per cent) of all countries with intermediate-aged populations have been assessed as FREE. For countries that attain an intermediate age structure, approximately a third of the boost in liberal democracy can be credited to the 'age-structural timing' of their ascent to liberal democracy, the other two-thirds are due to the increased stability as a liberal democracy. For states in which the population has entered the mature phase of the age-structural transition (n≥15 from 1988 to 2012), more than 8 out of 10 states (83.8±1.6 per cent) have been assessed as FREE.

However, states can sometimes 'behave more youthfully' than they mathematically appear. The persistence of significantly large, politically organized, youthful minorities in states with intermediate or mature majority populations can be a harbinger of intra-state violence and inhibit the ascent and stability of liberal democracy. The driver of this inhibition can take the form of political restrictions and discrimination against youthful minorities, or on curtailed civil liberties and political processes that are associated with ongoing-conflict and post-conflict situations – as in the case of Sri Lanka during after the 1983–2009 civil war, and in post-civil-war Lebanon.

Instances of intra-state conflict that are associated with a youthful minority—one that is significantly more youthful than the politically dominant majority—are common. Nonetheless, they have not been studied or compared as an age-structural phenomenon. Examples include Turkey's prior conflict in the Kurdish

⁶ Estimates of the mean of these age-structural groups are reported only when $n \ge 15$. Each estimate of the mean is followed by its 0.95 confidence interval.

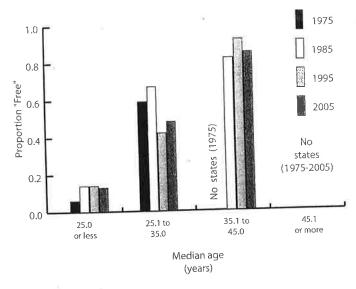


Figure 5.2 The proportion of states assessed as Free in Freedom House's annual survey, according to age-structural category, 1975 to 2005 (10-year intervals)

Source: Freedom House 2014, UNPD 2013.

southeast, the recent flare up of violence in Egypt's Sinai Peninsula, strife between the Aceh on Sumatra and the Indonesian state in the early 2000s, and violence associated with the Pattani Muslims in southern Thailand.

So far, getting 'demographically older' has decreased the likelihood of an onset of intra-state conflict and increased the statistical likelihood that states will, in general, reach high levels of democracy and remain there. It remains to be seen, however, whether this dictum will hold true for the European and East Asian states that are poised to advance, during the next two decades, into the post-mature phase of the age-structural transition (Cincotta 2012b). It would not be surprising if liberal democracies with post-mature populations were to experience difficulties maintaining their Free status. Advanced aging sets the stage for numerous plausible catalysts for such a retreat, including: rollbacks in the provision of vital services due to state indebtedness; social and political tensions between indigenous populations and more youthful migrants (where applicable); and ideological tensions over taxation and its allocation (Jackson and Howe 2008).

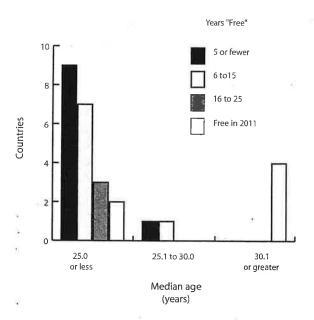


Figure 5.3 Outcomes (continuous years assessed as Free) for states that rose to Free in Freedom House's annual survey during the period from 1972 to 1989, by median age

Source: Freedom House 2014, UNPD 2013.

The Democracy Debate

The most widely recognized conceptualization of democratization is one that was elaborated first by Samuel Huntington (1991), who described the temporal pattern of emergence of democracies in empirical 'waves' – periodic surges of new democracies, separated by ebbs of authoritarian resurgence. The Third Wave, the principal focus of Huntington's research, began in southern Europe in the early 1970s with the democratization of Portugal, Greece and Spain, and then seemingly spread to states in Latin America and the Caribbean, to East Asia, and ultimately to Africa. However, not all of this liberalization took permanent hold. The greatest share of authoritarian reversals occurred in the 1970 and '80s in Latin America, and then in the following decades in sub-Saharan Africa.

Because of the geographic and temporal 'clumping' of democracies, regional and country analysts have been drawn to theories that envision democratization as a powerful process of ideational contagion (Whitehead 2001), or to inductive approaches that conceptualize democratization as a difficult-to-predict triumph of a liberalizing movement over a closed political culture controlled by entrenched elites (Hellman 1998). Acemoglu and colleagues (2006) have taken a more complex theoretical approach that they support with econometric modelling,

arguing that democratization is the product of incremental institutional change, during which elites, motivated by their desire to maintain order and safeguard their property, have quelled popular grievances by ceding portions of their power to redistributive institutions controlled by the populace.

Challenging these studies, are a set of reductionist models (including the age-structural maturity thesis) that have sought to predict the rise of democracy and attainment of democratic stability based on measurable state-level structural indicators. The most widely cited of this research is Przworski and colleagues' comprehensive statistical study of structural factors that have been hypothesized as contributors to democratization. The results of their large-n regression analysis led these authors to conclude that, from among the structural indicators studied, the most significant contributor to democracy was per-capita income (GDP per capita) adjusted for purchasing-power parity (PPP).

Studies by Richard Cincotta (2008, 2009, 2013), by Cincotta and John Doces (2011), and by Timothy Dyson (2013), and by Hannes Weber (2012) have shown that, when controlling for per-capita income and growth, however, various measures of population age structure continue to register highly significant statistical contributions to the attainment and maintenance of democracy. Cincotta and Doces (2011), and Weber (2013) have argued that the dissipation of the youthful component of the age structure influences the timing of the rise to high levels of democracy, and perhaps more significantly, its maintenance. Dyson (2013), as well as Cincotta and Doces (2011) and Cincotta (2013), acknowledge that this relationship is probably broader – that age structure and declines in average family size are complexly cross-linked to household and society-wide transformations in educational attainment, income growth, and the gendered structure of societies and institutions, which may also contribute to declines in political violence and

promote trends favouring stable liberal democracy.

The case for human capital's statistical contributions to democratization, which the aforementioned studies find to have a weaker effect than either income or age structure, is much less straightforward. In a study that builds its case on econometric modelling, economists Edward Glaeser, Giacomo Ponzetto and Andrei Shleifer (2006) have argued that the widely apparent correlations between education and democracy are indicative of a populace that is capable of mobilizing against the elite, and organizing to achieve democratic concessions and to defend them. In a study that takes account of age-structural patterns of educational development, Wolfgang Lutz, Jesús Crespo Cuaresma, and Mohammed Jalal Abassi-Shavazi (2010) use age and sex-related educational data to determine three synthetic age-structural components of educational attainment – total education, education among older cohorts, and female education – that statistically explain Freedom House's political rights scores.

So, which is it? To some extent, probably all of these; such seemingly irresolvable debates and irreconcilable statistical results appear with frustrating frequency in the social sciences. Typically, they suggest a system of complex feedbacks – dynamics in which the factors that are hypothesized to drive the

dependent variable can also be demonstrated to influence each other, and may be driven, as well, at some levels, by the so-called dependent variable, itself.

Numerous 'overlaps' in this literature suggest that these feedbacks may work powerfully across generations and at various levels of social organization – at the level of the state, community, family, and individual. For example, the complexity of feedback loops in the demography-democracy relationship are suggested by research documenting relationships between girls' education and fertility (Lutz and Gujon 2008), fertility and societal levels of educational spending (Lee and Mason 2011), the timing of fertility and women's own educational attainment (Klepinger et al. 1995), education, economic growth and democracy (Murtin and Wacziarg 2011), and family income and children's educational attainment (Copeland and Costello 2010) (among other relationships).

Food Prices and the Arab Spring

Just months after popular uprisings toppled Tunisia's and Egypt's authoritarian regimes, a trio of complex-system researchers — Marco Lagi, Karla Bertrand and Yaneer Bar-Yam — published a brief article (Lagi et al. 2011) linking these demonstrations with high levels of FAO's international food price index (FFPI). Their food price threshold model, which predicts outbreaks of deadly (fatality-associated) social conflict when the FFPI tops 210, has since become a popular explanation for the initiation of the Arab Spring. Unlike the other models, however, it is focused on conflict, not democratization.

Despite its popularity, not everyone is convinced of the connection by this coincidence of events – least of all, international food policy analysts. Several of these analysts have shown that in Tunisia – the political epicentre of the Arab Spring, the most successful pro-democracy movement, and the enabler of other anti-regime movements that soon followed (see Laipson et al. 2011) – government food-price controls held fast. Either before or during the demonstrations that ultimately toppled President Ben Ali, Tunisia's consumer food price index (Abderrahim and Castel 2012) shows few signs of being influenced by the rapid rise of the FFPI (Figure 5.4).

The first evidence suggesting that Tunisia's pro-democracy demonstrations erupted independently of the surge in international food price actually preceded the article by Lagi and his colleagues. On January 31, 2011, GIEWS – the onthe-ground early warning system of the United Nations Food and Agricultural Organization (FAO) – released a bulletin reporting 'relatively stable domestic prices despite high international food prices' in Tunisia's consumer food markets during the winter months of 2010 to 2011. The bulletin (GIEWS 2011) also stated that 'the hike in international food prices has not translated into high domestic prices. [And Tunisia's] consumer price index of food (CFPI) declined slightly from 131 to 129.9 between November and December 2010'.

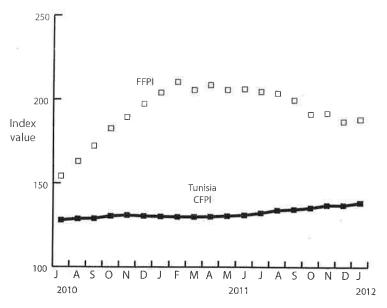


Figure 5.4 A comparison of Tunisia's consumer food-price index (CFPI) and the FAO's food price index (FFPI). Both indices use the January 2005 food-basket price as the index (100.0)

Source: Abderrahim and Castel 2012, FAO 2014.

An April 2012 review of Tunisia's pre- and post-revolution inflation trends by the African Development Bank's Chief Economist Complex (Abderrahim and Castel 2012) makes it similarly clear that the Tunisian government's food-price management, which includes tightly regulated prices on some staples (on about 30 per cent of common food items), and a compensation fund for subsidizing poor consumers and farmers, buffered Tunisia's food prices through 2010 and into July 2011. The authors note that the local index rose sharply (although below 4 per cent per year) only after the transition government relaxed some controls in mid-2011 in order to relieve fiscal pressure on the compensation fund and slow the accumulation of debt.

A World Bank report (Ianchovichina et al. 2012) compared consumer food prices among the countries of the region. Because food price controls insert a time lag between international food prices and the response in local consumer markets, food policy analysts use a lag indicator called the *pass-through coefficient* (PTC). The PTC estimates the proportion of the change in the FFPI that is transmitted to the *consumer* food-price index over a specified time (usually six months or a year). The lower the coefficient, the more protected local food markets are from international price spikes.

According to this report, Tunisia and Algeria maintained the lowest food price PTC during the 2010 to 2011 period. Six months after a one-unit rise in the FFPI, Tunisian and Algerian consumers could expect to experience an average food price increase of only about one-twentieth of a unit. In contrast, Egyptian consumers were much less sheltered – that country's PTC for the same six-month period was higher, allowing a rise of 0.33 units for every unit of FFPI. And in local markets in the some of the Gulf States, the coefficients were even larger.

Particularly for Tunisia, which kicked off the Arab Spring, there is virtually no suggestion, from any reliable data, that complaints about food prices were a root cause. In fact, at the height of popular demonstrations in Tunis, during the first week of January 2011, Ben Ali's government announced that food prices would be lowered (Daragahi and Hassaini, 7 January 2011). No one responded.

Models and Methods

In this research, my objective has been to provide analysts with probabilistic expectations of a state being assessed as FREE in Freedom House's annual survey during (1) the current year, and (2) within the relatively near-future. To generate these probabilities, I use the *logistic age-structural model of liberal democracy* (referred to as the 'age-structural model') – a previously published and tested function (see Cincotta 2013a; also, regression tables, Appendix 1 and 2 of this article) that replaces a univariate linear version that produced very similar output over most of its range (Cincotta 2009; Cincotta and Doces 2011).⁷

The Logistic Age-structural Model

The logistic age-structural model is also a univariate function. It uses, as input, only the country-level median age (M) in a specific year, y, to generate a probability, $p(M_y)$, of that state being assessed as Free in Freedom House's annual assessment (taken at the end of year y). Because the logistic age-structural model ignores factors other than age structure that could ultimately influence the assessment, its probabilistic output is referred to as 'naïve'—acknowledging that the consideration of other factors are likely to enhance final forecasts, or alter the level of certainty around that expectation.

The logistic age-structural model takes the form:

$$\pi(M\psi)=\epsilon\xi/1+\epsilon\xi, \quad \xi=\beta0+\beta1M\psi;$$

⁷ The linear form of the age-structural model is $p(\mathbf{M})*100=3.398\mathbf{M}-48.21$, where $p(\mathbf{M})$ is the probability of a state being assessed as Free and \mathbf{M} is the median age (in years).

where ξ is the logit, and β_0 and β_1 are parameters that were fit, using an iterative logistic-regression algorithm, to annual data indicating the presence or absence (1, 0) of Free. Maximum log-likelihood estimates for these parameters yielded:

$$\pi(M) = \underline{\epsilon(-5.230 + (0.1811M))}_{1 + \epsilon(-5.230 + (0.1811M))}$$

This output of this general model, continuously spanning the current range of country-level median ages (15.0<M<46.0), produces a symmetrical logistic curve (Figure 5.5) having an inflection point appearing very near to where the probability of Free, $\pi(M)$, equals 0.50 - a point that I refer to as Free₅₀ (or the 50–50 benchmark, in several prior publications). For the logistic age-structural model (and for prior linear versions of the model), states with a median age of 28.9 years have a probability of 0.50 ± 0.04) of being assessed as Free (Cincotta 2013a).

Twelve Addenda: Observations and Working Hypotheses

The statistical nature of the age-structural model's forecasts presents both challenges and opportunities to users. Since its 'expectations' are statistical, the model is unable predict with certainty (i.e., deterministically) that an individual state will be assessed as FREE, or not, at some future time. At best, the model can identify a collection of states among which one should expect a certain proportion to be FREE, or not, during a range of near-future years.

This seemingly modest analytical accomplishment is actually an enormous leap over alternative approaches. By ordering states based on these probabilistic expectations, researchers can focus on the low-probability cases at each end of the logistic curve — on the few states that achieved high levels of democracy age-structurally early, and the few that have retained authoritarian regimes age-structurally late — and ask, 'Why?'. Determining structural factors and regime qualities that explain low-probability behaviours and atypical patterns of democratization has become a rewarding part of the age-structural modelling effort and has added needed detail to the age-structural theory of liberal democracy.

Thus, armed with these expectations and more than 40 years of FH and UNPD data, factors that are hypothesized to either slow or speed the pace of political liberalization can be tested – statistically, for quantifiable factors, and by repeated observation for those that are difficult to quantify. Twelve factors that have withstood some degree of testing, and add nuance and detail to the age-structural theory, are listed, below. Each is tagged in one of three ways: as a product of repeated statistical observations [SO]; as a product of repeated qualitative observations [QO]; or as a working hypothesis derived from limited observations of any kind [WH].

Admittedly, most of these addenda are not unique to this analysis. These serve to corroborate other researchers' observations. However, a few appear to be wholly original observations or working hypotheses that may not have been

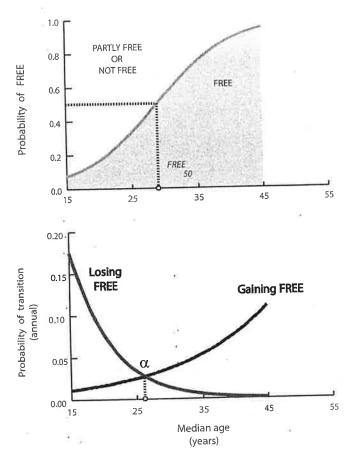


Figure 5.5 Two graphs: (a) logistic age-structural model of liberal democracy (existential model) and (b) the gain and loss models.

Source: Cincotta 2013a.

obvious, or even detectable, absent the expectations generated in age-structural time. Of course, none of these observations qualify as complete studies of a factor. All could benefit from testing and refinement, making them candidates for further research.

1. To remain Free when very youthful, it pays to be less populated [SO]. States with under 5 million residents — small-island states (including Mauritius, Sao Tome, Jamaica and Cape Verde) and the least populous terrestrial states (such as Belize, Botswana, and Costa Rica) — have frequently attained FH's Free status well before their MA-25. Notably, nearly all have managed to continuously retain that status beyond two decades (see Weber 2012).

2. Among more populous states, 'demographically early' transitions to liberal democracy entail risks [SO]. From 1972 to 1992, half of all precociously Free regimes (Free with a population at MA-25 or younger) were downgraded to either Not Free, or to low levels of Partly Free, within a decade after initially attaining Free status (Figure 3) (examples include Ghana (1980–82), Nigeria (1983–84), and Chile (1972–73)).8 Nonetheless, among those that fell less dramatically, several reclaimed Free status within five years of its loss (for example, Senegal (2007–2012), India (1976–1979), and Trinidad and Tobago (2000–05)).

3. Revolutions at youthful age structures rarely, if ever, end in stable liberal democracy [QO]. The vast majority of political uprisings against authoritarian regimes in youthful country-level populations (i.e., at MA-25.0 or younger) ultimately morph into violent conflict – either instigated by elements of the populous, or by reacting security forces. Where violent, youth-led revolutions effect regime change, autocracy (Not Free) is typically replaced by another autocratic regime or by a partial democracy

(PARTLY FREE) (see Stephan and Chenoweth 2011).

4. Military rulers and their descendant-regimes rarely survive beyond medianage-35 [QO]. Neither military 'care-taker regimes' (such as Argentina's el Proceso, or the State Peace and Development Council in Myanmar) nor military-descendent neo-patrimonial authoritarians (such as Pinochet in Chile, Ben Ali in Tunisia, Mubarak in Egypt) are likely to remain in power past MA-35 (Cincotta 2009, 2008). Historically, military regimes have

sought means to exit politics around FREE, o.

5. Ideological political monopolies and charismatic founding figures often persist beyond median-age-35 [QO]. The small proportion of states that have successfully resisted transitioning to Free status beyond MA-35 are controlled either by a regime that is organized by a single, ideological party, which is synonymous with the state (China, Cuba, North Korea), or by a regime in a multi-party system, that is led by a charismatic founder or founder-like figure (Singapore, Russia) (Cincotta 2008, 2009; Cincotta and Doces 2011).

6. Regimes controlling rentier states or high-growth economies often persist beyond median-age-35 [SO]. Regimes profiting from substantial oil and mineral rents or exceptionally high rates of economic growth (Crespo Cuaresma et al. 2012; Cincotta 2013) typically lag behind the model's agestructural expectations for political liberalization.

7. Democratic transitions have also been constrained by the intimidation and political manipulations of militarily superior neighbours [QO]. Militarily

⁸ In this analysis, a low level of PARTLY FREE status is identified by a freedom score of 4.5 or 5.0 (this category ranges from 3.0 to 5.0). Freedom scores for NOT FREE range from 5.5 to 7.0. See note 1 for an explanation of the relationship between freedom scores and freedom status.

- strong authoritarian neighbours, particularly those with the economic capacity to maintain or expand an extended sphere of strategic influence (for example, Soviet dominance over Eastern Europe, Syrian and Iranian support for Hezbollah in Lebanon, and Saudi Arabia's incursion into Bahrain) have often deterred political liberalization or destabilized liberal regimes in states with an age-structurally mature population states that the Existential Model assigns a high probability of FREE status (Cincotta 2013).
- 8. Armed conflict can delay or destabilize transitions to liberal democracy [SO]. The presence of a major conflict (greater than 1,000 battle-related deaths per year) also delays transitions to Free status or can prompt its decay (Cincotta 2013; also see Urdal 2006). Since the majority of major intrastate conflicts occur among states with youthful age structures (Urdal 2006; Goldstone 2002, 1990; Mesquida and Weiner 1991; Möller 1960), this effect explains much of the fragility of youthful liberal democracies and the reluctance of elites in youthful states to pursue high levels of democracy.
- 9. Ethnic tensions, particularly those involving a youthful, politically organized minority, tend to delay transition to liberal democracy [QO]. In countries that seem demographically on schedule to transition to high levels of democracy, stalling can occur in the wake of sporadic outbreaks of low-level violence (as in Myanmar in 2013) or against a background of residual ethnic tensions following coups d'état and conflicts (as in Fiji and Sri Lanka).
- 10. Muslim-majority states, as a group, appear delayed in their transition to stable liberal democracy [SO]. Currently, the number of Muslim-majority states that are assessed as Free (in FH's assessment of 2013, only Senegal) is far fewer than the age-structural model predicts (Cincotta 2013). Some of the gap can be credited to the narrowly youthful range of the 47 Muslim-majority states in this analysis from Niger (MA-15.0 years) to Albania (MA-32.9), with Pakistan (MA-22.5) at the centre of the distribution. Among the nine states above MA-28.0, the rise of Islamism in its varied political forms, along with the resistive effects of oil and mineral wealth (see rule 4 in this list), in a few cases, may have deterred further liberalization. And, while FH's 2013 analysis recognized Tunisia's progress nearly (but not quite) to Free status, the organization's analysts also downgraded Indonesia to Partly Free, following eight continuous years as Free (2004–12)).
- 11. Monarchs manage political transitions up to a point [WH]. Historically, monarchies that have survived in a state where the population has surpassed MA-35 did so by managing, a slow and minimally volatile political transition. Before entering the mature phase of the age-structural transition (MA-35 to 45 years), these monarchs have typically cultivated a loyalist

⁹ The data used in this analysis was obtained from the Uppsala Conflict Data Program/PRIO Armed Conflict Dataset, which can be accessed at: http://www.pcr.uu.se/research/ucdp/datasets/ucdp_prio_armed_conflict_dataset/.

- political party, transferred much of their assets to the private sector, and ceded nearly all of their executive powers to civilian government. Forms of instability tend to prevail when the throne has failed to initiate this transition (as in Bahrain) during the intermediate period (MA-25 to 35), or withheld some of its executive powers past MA-35 (as in Thailand).
- 12. Advanced population aging can affect the liberalness of democracies [WH]. It is still too early to draw firm conclusions about the political prospects of the handful of liberal democracies with rapidly aging populations that are near MA-45. However, political dynamics are already in play in a few states, including Greece and Hungary, which could be interpreted as warning signs of contradictions between a post-mature population (an MA greater than 45.0 years) and stable liberal democracy. In these states, declines in freedom scores (the average of political rights and civil liberty scores, from which freedom status categories are determined) including mounting public debt, popular protest against public-sector layoffs and pension reforms, and tensions over apparent shifts in ethno-religious composition. The next two decades will surely test the stability and durability of liberal democracy in post-mature age structures.

Summarizing Expectations

In the following analysis, a regional summary table (Table 5.1) is used to provide the user with the model's expectations for each independent North African and Middle Eastern state. To provide indications of each state's political condition and trend, the table provides (by column): (1) the current median age (in Table 1, values for 2013); (2) the model's estimation of the current probability of that political entity being assessed as FREE; (3) the current Freedom House status (FREE, PARTLY FREE, or NOT FREE); (4) the projected median age in 2030 (using the UN Population Division's medium fertility variant); (5) the year in which the population is projected (or was estimated) to reach FREE₅₀ (median age of 28.9 years); and (6) inhibiting and facilitating factors (from the model addenda) that could help forecast its political dynamics. In this table, the region's states are ordered by the year that they reach FREE₅₀, starting with the earliest FREE₅₀ at the top of the table, to the latest at the bottom.

The Regional Summary Table

Before discussing the age-structural model's expectations for the region's states (summarized in Table 5.1), I will make several observations about the overall arrangement of states in regional the summary table. In fact, when ordered by their Free values (the year that they attain MA-28.9 years), regional summary tables show similar general properties: states assessed as Free typically cluster at the top; those assessed as Not Free are typically found primarily at the bottom; states

with resilient forms of authoritarian regimes appear 'out of place' among Free and Partly Free states; and the most unstable liberal democracies appear out of place in the bottom half of the list, juxtaposed to states assessed as Not Free. The distribution of Partly Free states typically provides an indication of the quality of political development and ideological tensions in the region.

For NAME, nearly all of the states that are currently assessed as FREE or PARTLY FREE are clustered near the top of the list, where current median ages and probabilities of FREE are highest. The states categorized as Not Free, are mostly situated near the bottom. Low on the list, however, are two states categorized as Partly Free in January 2013: Egypt and Kuwait. Both have freedom scores (averaged political rights and civil liberties scores) that put them on the lower margin of this freedom status category (Freedom House 2014). Egypt, and perhaps Kuwait, will likely be re-categorized as Not Free in January 2014 due to declines in political rights and civil liberties during 2013.

The range of age structural conditions across the Middle East and North Africa is extraordinary – from Cyprus, with MA-35, and Tunisia and Israel at MA-30, to the UAE (citizen residents, only) and Yemen at about MA-19. While Tunisia reached its Free, point in 2010, the year during which its revolution began, current projections suggest that six of the region's states – including Iraq, Yemen and Kuwait – are unlikely to achieve a similar age-structural configuration until after 2040.

Perhaps the most striking characteristic of the region is the absence of a state with a rating of Free amongst the four states that have recently attained, or nearly attained, Free, Tunisia (rated Partly Free in 2012), Lebanon (Partly Free), Turkey (Partly Free), and Iran (Not Free). According to Freedom House's freedom scores, since 2010, only Tunisia has liberalized – and then, even that relatively small and ethnically homogeneous state, progress stalled. Clearly, the impediment to further liberalization in each case has been the political influence of some form of Islamism, even in its moderate forms in Tunisia (when the Ennahda Party dominated the interim government) and Turkey (under the AKP). In contrast, another Muslim-majority state near its Free, point, Indonesia, was assessed as Free continuously from 2005 to 2012 (downgraded in Freedom House's analysis of 2013). In that Southeast Asian state, political Islam has had much less political impact.

The current lag in political liberalization in NAME is evident in comparisons with other regions (Figure 5.6). Nonetheless, there is a positive side to this delay – the region lacks the youthful, short-lived liberal democracies that punctuated Latin America's political landscape in the 1970s and '80s, and are currently a feature of West African regional politics. Several of Latin America's youthful liberal democracies were lost abruptly to coups d'état, and succeeded by violently repressive regimes – including Pinochet's regime in Chile (1973–90), and a succession of military-dominated regimes in Argentina (1976–80).

Table 5.1 Regional summary table

Source: Data (FH) (UNPD). (2014) Model (UNPD). (2013) Model (UNPD). (UNPD) 2013 Data (UNPD) 2013 State-specific factors Actors inhibiting democratization factors Partical properties Specific factors Partical properties Specif								
Ca Ca Ca Ca Ca Ca Ca Ca	Source:	Data (FH, 2014)	Data (UNPD, 2013)	Model Output	Model Output⁺	Data ^{††} (UNPD, 2013)	State-specific factors	State-specific factors
Indent State Freedom status Median age 2013 Probability of Free 2025 Probability age = 28.9 years) Frees, (median age = 28.9 years) Freetors inhibiting democratization age = 28.9 or destabilizing democratization age = 28.9 or destabilizing democracies* Writea ddle East Dec. 2013 (years) (probability) (year) 2013 Free 35.2 0.76 0.88 1984 (Free partition* per 1986) Partition* per 1972) Youthful minorities* (Haredim, Israeli per 1972) Youthful minority (Free partity per 2013) Partity per 20.3 0.56 0.77 2010 Islamists (moderates, Ennahda) Youthful minority (Shines), Islamists, Ethnic tensions, spillover from Syrian per 2014 Youthful minority and Armed conflict (Kurds), Ruling Islamists (moderates, Enraelian), Recurring conflict (Kurds), Ruling Islamists (moderates, Enraelian) Youthful minority (Shines), Islamists, Ethnic tensions, spillover from Syrian per 2012 Youthful minority (Shines), Islamists, Ethnic tensions, spillover from Syrian per 2012 Youthful minority (Shines), Islamists (moderates, Ethnic tensions), spillover from Syrian per 2012 Youthful minority (Shines), Islamists, Independent per 2012 Youthful minority	(I)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mrica ddle East Dec. 2013 (years) (probability) (probability) (year) 2013 FREE 35.2 0.76 0.88 1984 (Free Since 1986) Partition* Partly Free 30.1 0.56 0.61 2006 (Free Since 1972) Youthful minorities* (Haredim, Israeli Arabs, Settlers), Recurring conflict (Hamas, Hezbollah)* Partly Free 29.8 0.54 0.81 2011 Islamists (moderates, Ennahda) Partly Free 29.4 0.52 0.71 2012 Youthful minority and Armed conflict (Kurds), Ruling Islamists (moderates, AKP) Nor Free 28.5 0.48 0.74 2014 Political monopoly, Ruling Islamists (moderates, conservatives)	Independent State		Median age 2013	Probability of Free 2013	Probability of Free 2025	FREE ₅₀ (median age = 28.9 years)	Factors inhibiting democratization or destabilizing democracies*	Influential Internal and External Actors
FREE 35.2 0.76 0.88 1984 (FREE since 1986) Partition* FREE 30.1 0.56 0.61 2006 (FREE before 1972) Youthful minorities* (Haredim, Israeli Arabs, Settlers), Recurring conflict (Hamas, Hezbollah)* Partly Free 29.8 0.54 0.81 2011 Islamists (moderates, Ennahda) Partly Free 29.8 0.54 0.81 2011 Youthful minority (Shiites), Islamists, Ethnic tensions, spillover from Syrian Civil War Partly Free 29.4 0.52 0.71 2012 Youthful minority and Armed conflict (Kurds), Ruling Islamists (moderates, AKP) Nor Free 28.5 0.48 0.74 2014 Political monopoly, Ruling Islamists (conservatives)	North Africa and Middle East	Dec. 2013	(years)	(probability)	(probability)	(year)	2013	2013
Partly isia Partly 29.8 Partly 29.4 Partly 29.4 Nor Free 28.5 Partly 20.56 Partly 20.8 Partly 29.8 Nor Free 28.5 Partly 20.8 Partly 20.8	Cyprus	FREE	35.2	0.76	0.88	1984 (FREE since 1986)	Partition*	UN Peacekeeping Mission (UNFICYP)
isia Partly Free Partly anon Partly Free Partly Political monopoly, Ruling Islamists (moderates, Ennahda) Political minority and Armed conflict (Kurds), Ruling Islamists (moderates, AKP) Political monopoly, Ruling Islamists (conservatives)	Israel	FREE	30.1	0.56	0.61	2006 (Free before 1972)	Youthful minorities* (Haredim, Israeli Arabs, Settlers), Recurring conflict (Hamas, Hezbollah)*	f
Annon Partly 29.8 0.54 0.81 2011 Ethnic tensions, spillover from Syrian Civil War Partly Partly Free Partly Partly Free 29.4 0.52 0.71 2012 (Kurds), Ruling Islamists (moderates, AKP) Political monopoly, Ruling Islamists (conservatives)	Tunisia	Partly Free	30.3	0.56	0.77	2010	Islamists (moderates, Ennahda)	ì
Partly Partly 29.4 0.52 0.71 2012 (<i>Kurds</i>), Ruling Islamists (moderates, <i>AKP</i>) Nor Free 28.5 0.48 0.74 2014 (conservatives)	Lebanon	Partly Free	29.8	0.54	0.81	2011	Youthful minority (<i>Shiites</i>), Islamists, Ethnic tensions, spillover from Syrian Civil War	Hezbollah (supported by Iran and Syria)
Not Free 28.5 0.48 0.74 2014 Political monopoly, Ruling Islamists (conservatives)	Turkey	Partly Free	29.4	0.52	0.71	2012	ful minority and Armed conflict s), Ruling Islamists (moderates,	I
	Iran		28.5	0.48	0.74	2014	Political monopoly, Ruling Islamists (conservatives)	Clerical Elite

Table 5.1 continued Regional summary table

Source:	Data (FH, 2014)	Data (UNPD, 2013)	Model Output [†]	Model Output [†]	Data ^{††} (UNPD, 2013)	State-specific factors	State-specific factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Independent State	Freedom status	Median age 2013	Probability of Free 2013	Probability of Free 2025	Free $_{50}$ (median age = 28.9 years)	Factors inhibiting democratization or destabilizing democracies*	Influential Internal and External Actors
North Africa and Middle East	Dec. 2013	(years)	(probability)	(probability)	(year)	2013	2013
Morocco	PARTLY FREE	27.0	0.42	0.58	2020	Sporadic intra-state conflict (Polisario)	Monarchy
Algeria	NOT FREE	26.9	0.41	0.58	2020	Armed conflict (AQM), Oil and mineral rents	Military
Libya	PARTLY FREE	26.6	0.40	0.58	2020	Sporadic intra-state conflict, Oil and mineral rents	1
Bahrain [a]	Not Free	26.1	0.38	0.55	2022	Ethnic tensions, Oil and mineral rents	Monarchy, Saudi Arabia
Saudi Arabia [a]	NOT FREE	23.3	0.27	0.47	2026	Oil and mineral rents	Monarchy
Egypt	NOT FREE	25.2	0.34	0.46	2029	Youthful minority (Sinai Bedouin) and Military Armed conflict	Military
Syria	NOT FREE	22.4	0.24	0.39	2030-35	Ethnic tensions, Armed conflict (civil war)	Iran
Jordan	Not Free	23.4	0.27	0.36	2035-40	Ethnic tensions	Monarchy
Oman [a]	Not Free	21.5	0.21	0.31	>2040	Oil and mineral rents	Monarchy
Kuwait [a]	PARTLY FREE	20.0	0.17	0.26	>2040	Oil and mineral rents	Monarchy
Qatar [a]	Not Free	20.4	0.18	0.25	>2040	Oil and mineral rents	Monarchy

ì	Data					
	(UNPD, 2013)	Model Output [†]	Model Output [†]	Data ^{††} (UNPD, 2013)	State-specific factors	State-specific factors
(2)	(3)	(4)	(5)	(6)	(7)	(8)
				F (1:		(8)
Freedom Status	Median age 2013	Probability of Free 2013	Probability of Free 2025	$\text{MREE}_{50} \text{ (median age} = 28.9$	Factors inhibiting democratization or destabilizing democracies*	Influential Internal and
ec. 2013	(years)	(probability)	(nrohahility)	(voca)		External Actors
ec. 2013	(s.	(probability)	(probability)	(year)	2013	2013
OT FREE		0.14	0.24	>2040	Ethnic tensions and Armed conflict	
Not Free			0.23	>2040	Ethnic tensions and Armed conflict	Iran, Turkey, Saudi
NOT FREE	18.5	0.13	0.18	>2040	Oil and mineral rents	Arabia
	μ, μ,	μ, μ,	μ, μ,	μ, μ,	Data Model Model Data**	Data

generates an output of 0.50 when the input, M, is a median age of 28.9 years.

The estimated median age of states in the Middle East and North Africa Region in 2013 (column 2) and the corresponding probability (col. 3) of the year that $p(\mathbf{M})$ is estimated or projected to surpass a probability of 0.50 (± 0.04) using the previously described model. This version of the model state is assessed as Free in Freedom House's annual survey, and M is the country-level population's median age in years. ** Free 50 corresponds to Note: † These probabilities were generated using the model: $\pi(\mathbf{M}) = \varepsilon \xi/(1 + \varepsilon \xi \xi)$; $\xi = -5.230 + (0.1811 \text{ M})$; where $p(\mathbf{M})$ is the probability that a

citizen-resident population was used to generate probabilities (excluding labor migrants) (col. 7), and those that influence the pace of democratization (col. 8). For the states of the Gulf Cooperation Council [a], the median age of the Free50 (median age of 28.9 years). The following columns suggest factors that could deter a rise toward Free status or make its maintenance difficult being categorized as Free by Freedom House. Political entities (col. 1) are sorted by year (col. 6) that they are estimated or projected to surpass

Reflections on the Future

The proximity of Europe to NAME, coupled with the facts that perhaps as many as 20 million North African Arabs, Turks, Kurds and Iranians now make Western Europe their home (my extrapolations, see Savage 2004; Grim and Karim 2011), and that Europe remains a primary target destination for refugees from the region, provides sufficient reasons for EU member states to seek a larger role in the development of NAME. The age-structural model's expectations provide analysts and policymakers with some valuable hints to the region's near-term future.

In this final section, I use the summary table (and supporting quantitative and non-quantitative data) to address three questions.

- First, which states, among those in NAME, appear as the most promising candidates for transitioning to stable, high levels of democracy, and when should that political transition occur?
- Almost as importantly, which states appear to be the least promising for making a transition to liberal democracy, and why?
- And finally, which states could surprise analysts, and how? In other words, which are undergoing significant age-structural changes for which this limited analysis has difficulty making assessments?

The Most Promising

As of this writing (in 2013), the 2008 forecast of 'one, maybe two' liberal democracies in North Africa remains plausible. The states of interest in this forecast have been, from the outset, those of the Maghreb – Tunisia, Morocco, Algeria and Libya; each very different than the other in terms of resources, regimes and history. Because of Habib Bourguiba's post-independence reforms – his initiatives to guarantee women's rights and promote girls' education, to outlaw polygamy and give women the right to initiate divorce, and his insistence on the availability of modern contraceptive services – Tunisia's age-structural transition, which reached Free, (median age 28.9 years) in 2010 is about a decade ahead of its neighbours in the Maghreb (Morocco, Algeria and Libya), and 18 years ahead of (a much more youthful) Egypt.

A review of Freedom House data suggests that an 'age-structurally timely' transition to liberal democracy rarely happens in the course of a year. A timely political transition – where a state assessed as Not Free, with a country-level population near its Free₅₀ point, began a political transition that concluded in a Free assessment that remained stable thereafter – has usually taken anywhere from three years (Portugal, 1973–76; Chile, 1987–90) to eight years (Indonesia, 1997 to 2005). And while the grievances of Tunisia's youth may have contributed to the relentless quality of the revolution, the country's age structure is poised to give its leaders some respite. In the coming decade, Tunisia's labour force growth rate will slow dramatically – as relatively smaller cohorts of young adults graduate from

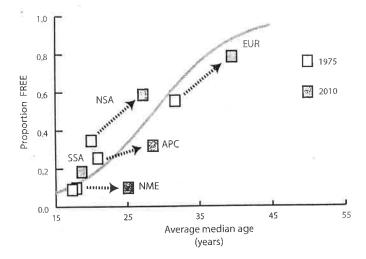


Figure 5.6 Regional paths of age-structural progress

Note: While advancing in median age, the proportion assessed as Free in North Africa and the Middle East (NME) has remained the same. The other regions are sub-Saharan Africa (SSA), Asia-Pacific (APC), North and South America (NSA), and Europe (EUR). *Source:* Freedom House 2014, UNPD 2013a.

high schools and take their place among the working ages (Figure 5.7). Thus, if Tunisian secular politicians are, at all, capable of overcoming Islamist objections to constitutionally guaranteed civil liberties, then analysts should expect the final stretch of their political transition to occur between 2014 and 2019.

Morocco, Algeria and Libya are each currently projected to reach Free 10 10 20 20. Despite their demographic, ethnic (Arab-Berber mix), religious, and 11 geographic affinities, the present regimes of these states differ substantially. Morocco's monarchy has done what monarchies do best as they approach Free 10 (MA-28.9 years) – closely manage the forces of political transition as it slowly and 11 carefully devolves legislative functions to elected officials, while strengthening the 12 judiciary and retaining key executive powers and tight control over the military. If political liberalization continues at its current slow pace, it is (in my opinion) likely to produce a constitution that would preserve a place for the Moroccan 12 crown and 13 make it difficult for Islamists to unravel democratic institutions and 13 guarantees of press freedoms and women's rights.

Few political scientists recognize that Algeria's population passed through a period of fairly rapid fertility decline, starting from a TFR well over six children per woman in the early 1980s, to a level around 2.9 today. Surveys suggest that fertility may have declined to slightly lower levels and then increased again — an unusual dynamic, if indeed that is the case. For most analysts of this region, political liberalization in the near future in Algeria seems utterly implausible.

Yet, countries like Algeria – states headed by a military-backed non-ideological regime with populations that are shedding their youthful age structure – have often experienced the rise of a vocal democracy movement as they approach Free, and have been exceptionally vulnerable to regime change and political liberalization. Nonetheless, the country's vast oil wealth, an economic feature that appears to statistically slow the pace of democratization (Crespo Cuaresma et al. 2011; Cincotta 2013a), as well as occasional activity by AQM-affiliated insurgents in the country's southern reaches, adds uncertainty to its forecast.

Libya's future is even cloudier. Besides its substantial oil reserves, residual intra-state conflict between pro-government forces, jihadists and tribal militias continue to thwart the consolidation of government rule. Yet analysts should recognize that the model – although it disregards those important factors – places Libya's naïve probabilities for liberalization higher than Egypt's. Recent UN Population Division projections (2012) situate Egypt's attainment of Free, in 2029. That projection could retreat further. Egypt's rural areas remain youthful and its fertility decline, though significant, has proceeded at a significantly slower rate than states of the Maghreb, to the west.

In the Middle East, the most age-structurally promising states remain Lebanon, Turkey and Iran. Each has attained a level of fertility that is near replacement (just above the two-child per woman level), or slightly below, and each has substantially raised the average level of educational attainment and income over the past two decades. Despite Lebanon and Turkey's proximity to Free₅₀ and the fact that Freedom House has previously assessed both as Free (Lebanon, 1972–74; Turkey, 1974–79), their freedom scores have recently declined. For Lebanon, the greatest impediment to liberalization lies in the unchecked power of Hezbollah, whose Shi'ite militia controls significant portions of the country's south, while the party's political wing maintains a near-strangle hold on its political system.

Turkey's recent downward trend in freedom scores suggests that a ruling Islamist political party, even the country's centre-right Justice and Development Party (AKP) which proudly displays its democratic credentials, might be incapable of leading a democracy through further liberalization — enough to qualify for the assessment of Free in Freedom House's annual survey. The AKP government has adeptly managed Turkey's economy, the state's conflict with the Kurdish minority, and its foreign affairs. Nonetheless, by periodically jailing reporters and harassing the secular press (Filkis 2012), and by backtracking on women's rights, the AKP flaunts its disinterest in achieving a depth of democracy that would provide Turkey with Freedom House's annual assessment of Free — and, arguably, defining an Islamic democracy that contrasts dramatically with notions of liberal democracy that emerged first in the West.

Despite Iran's dramatic demographic changes since the mid-1980s – declining from 6 children per woman to around two in about 20 years – the possibilities for liberalization over the coming decade are, according to this analysis, significantly less hopeful than for either Lebanon or Turkey. Iran's authoritarian theocratic political monopoly and strict ideological political elite demonstrate qualities that

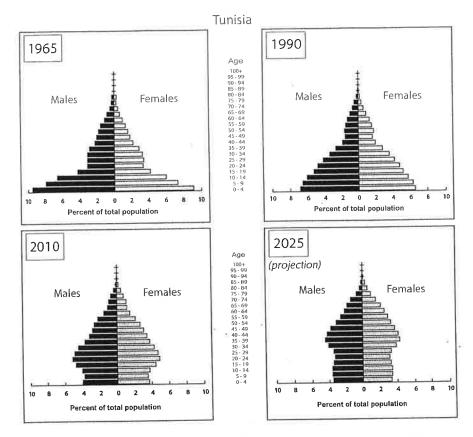


Figure 5.7 Estimates of the population age structure of Tunisia in 1965, 1990, and 2010, and the medium fertility variant projection for 2025

Source: UNPD 2013.

are reminiscent of regimes that successfully resisted democratization as they approached and surpassed Free on the late 1990s after dismantling a democracy movement (Cincotta 2009b). Whereas the Chinese regime employed the People's Liberation Army (PLA) to crush the Tiananmen demonstrations, Iran's clerical regime recruited young men to the Basij, a religious paramilitary organization that was instrumental in suppressing student riots in 1999 and pro-democracy protests that followed Iran's 2009 presidential elections.

The Least Promising

Eight of the region's 20 states (40 per cent) are projected to reach the Free₅₀ point after 2030, six of which are likely to reach that point beyond 2040, including Iraq and Yemen – and perhaps decades beyond then. All are located in the Mashreq (the Arabic-speaking eastern portion of the region) or on the Arabian Peninsula. Four are sparsely populated Gulf-Arab monarchies in which the population count includes a significant proportion of labour immigrants: Kuwait, Qatar, UAE and (to a lesser extent) Oman. The citizen-resident portions of these rentier states are still very youthful – all under MA-22 years, and aging very slowly. Most analysts would suggest that these small, wealthy Gulf monarchical regimes are likely to continue unchallenged into the foreseeable future. Bahrain is an exceptional case; now at MA-26, the population of the tiny kingdom has advanced into the intermediate portion of its age-structural transition, where some movement toward political liberalization might have been expected without the intervention of the Saudi Arabia's army.

Syria and Jordan, both states with youthful populations experiencing relatively slow fertility declines, are projected to reach FREE₅₀ between 2030 and 2040. Accordingly, the end of Syria's civil war is unlikely to bring substantial liberalization to the state. The analysis also suggests that Jordan's monarchy is still nearly a decade from reaching an age structure that might produce sufficient stability to induce the monarchy to exchange some of its executive powers for a role in a constitutional monarchy.

The Most Difficult to Discern

In the mid-2020s, two states in the region are likely to undergo significant demographic shifts, the political outcomes of which are very difficult to envision. The first, Israel, is a nearly unique demographic case. Despite the longevity of Israel's liberal democracy, the resilience of its democratic institutions could be tested over the coming decade by parliamentary confrontations and political manoeuvring that respond to the proportional rise of several youthful and politically active minorities: Israeli Arabs, ultra-Orthodox Jews (Haredim), and West Bank settlers.

At play are special relationships between the state and each of Israel's minorities, to which significant numbers of Israeli voters now object. The ultra-Orthodox, who now comprise about 10 per cent of Israel's eight-million-plus population, have lived a largely conscription-exempt, state-subsidized life style, and their religious leadership controls the institutions of Israeli Jewish life. While the Israeli-Arab population growth rate is slower than either the ultra-Orthodox or settler populations, Arab citizens now comprise 21 per cent of the population, yet Israeli-Arab Muslims and Christians (but not Druze citizens) remain exempt from conscription and other national service. West Bank settlers, a diverse group who

now comprise about 6 per cent of Israel's citizens, have been the beneficiaries of generous housing subsidies and costly security arrangements.

Parties representing these (mutually antagonistic) groups now comprise nearly a third of the Knesset, Israel's national legislature. In the January 2013 election, a newly organized centrist party, Yesh Atid, rode popular sentiments for reform to a prominent position in the Likud-led government (Cincotta 2013b). Whereas the pace and momentum of minority population growth guarantee that Yesh Atid's reform agenda will remain at the frontline of Israeli politics, the trajectory of the reform movement's political future is very difficult to predict.

The other state of demographic interest is Saudi Arabia. Current projections of Saudi Arabia's citizen-resident population suggest its arrival at FREE₅₀ around 2026 (US Census Bureau, International Program Center, 2012). While few would expect the Saudi monarchy to initiate a full transition to democracy, it would not be out of the question for the royal family to seek to establish greater political participation and representation from an urbanized and increasingly educated public.

As examples, only a handful of late twentieth-century examples of 'managed' monarchical transitions toward higher levels of democracy are on the record – including Spain, 1975–77; Thailand's beleaguered transition; and the beginnings of liberalization in Morocco's and Malaysia's regimes. Nonetheless, the agestructural timing of their changes is similar to the situation that Saudi Arabia will encounter during around 2026, and perhaps in Jordan in the mid-2030s.

The degree of future political change in Saudi Arabia could depend upon the outcome of political liberalization in neighbouring Egypt, which seems to hold little promise at this time. Jordan's monarchy is likely to look to the end-product of Syria's precarious youth-led revolution, the outcome of which still remains in doubt. No doubt, because of rising tensions among states in the region, the Saudi and Jordanian monarchy will be reluctant to cede control of their military, and other core executive powers with foreign-affairs implications, to civilians. The ability to bargain with reformers and, in some cases, distance themselves from other sources of state power, has allowed Arab monarchies to moderate the pace of political change.

Recommendations

Three recommendations follow and attempt to meld the age-structural model's projections and theoretical perspective to the current realities of the North Africa and Middle East region. Briefly stated, my concluding points are:

• Tunisia remains the state that is statistically most likely to attain liberal democracy, and to maintain it, in the region's near future.

The importance of an Arab-majority liberal democracy cannot be overstated. For that reason, Tunisia should remain a high priority for the EU and other donors in

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 Although a decade behind Tunisia, the states of the Maghreb – Morocco, Algeria and Libya – stand out as the region's second tier of potential political transition.

The age-structural model suggests that by 2020, Tunisia's neighbours in the Maghreb are likely to attain conditions indicating – statistically, at least – that one or more is due to further liberalize. To 'catch up' to Tunisia in these larger, more ethnically diverse and geographically expansive states, governments expand rural services, increase student retention, and improve women's status.

Among age-structurally youthful states of the Middle East, the EU and other
donors would do best to support efforts that build political and economic
stability, and strengthen state legitimacy and human security, rather than
concern themselves over the lack of progress toward democracy.

Perhaps no conclusion of this research program has been stronger than the one indicating that, under some circumstances, states can ascend to liberal democracy 'age-structurally too early'. States that achieve liberal democracy before attaining MA-25 years have a low chance of maintaining that regime type — while getting nearer to 30 years helps. Historically, a 'precocious transition' tends to leave a state vulnerable to episodic declines in political rights or civil liberties, or to abrupt regime change and a return to low levels of partial democracy or autocratic rule.

From a theoretical standpoint – that of political demography – foreign-directed economic assistance in NAME, or elsewhere, is likely to produce its most meaningful and lasting effects within those states in which population age structure is working for, rather than against economic, social and political development. Today, within this age-structurally diverse region, demography is most supportive of economic and political development in the Maghreb – states that are experiencing the first stages of their 'demographic bonus' period.

The near-term stability of states in NAME appears to teeter upon their abilities to put the most politically vibrant and rapidly growing segment of their adult population – their young adults – to work at a decent wage. Yet, there has been no recent shortage of national plans and state-financed microeconomic schemes to employ youth, nor a dearth of assistance from abroad seeking the same end – and all with nearly negligible success.

With but a few exceptions, national economic planning in NAME has generally failed to explicitly acknowledge what was made clear in the much-noted UNDP-sponsored *Arab Development Report* (UNDP 2006) – that youthful age structures,

a product of sustained high fertility, pose an impediment to state-financed efforts to reduce youth unemployment, to increase educational attainment and boost savings. Ultimately, the answer to this economic and social conundrum gripping the region lies not among the men who demand jobs, or among those who can create jobs, but among the women who today can lay claim to only a secondary role in their societies.

Appendices

Appendix 5.1 Comparison of logistic regression models

Global data set, 1972-2011	Model 1A	Model 2A	Model 3A	Model 4A	Model 5A	Model 6A	Model 7A
Variable list							
Explanatory Variables							
Median Age [MA] (years)	0.181*** (0.004)	0.136*** (0.007)	0.158*** (0.012)	0.198*** (0.009)	-	-	
PPP-adjusted Income [INC] (LN(2005 international dollars/capita))	S 555 2	0.658*** (0.044)	0.872*** (0.069)		1,210*** (0.038)	1.299*** (0.061)	
Young-adult (15-29 years) Educational Attainment [YA-EDUC] (proportion with some secondary or tertiary education)			-1.172*** (0.280)	0.487* (0.235)		1.032*** (0.243)	4.644*** (0.159)
Constant	-5.230 (0.125)	-9,633 (0.341)	-11.052 (0.202)	-5.791 (0.166)	-10.991 (0.336)	-12,124 (0.463)	-3.323 (0.113)
,,,					40004		-
FREE ₅₀ (0.50 probability of FREE)	28.9 (± 4) years				\$8824 (± ~\$570) (PPP, 2005)		71% (± 2%)
				1	4007	3269	3945
Ν .	5790	4321	3266	3942	4326 0,27	0.36	0.23
Pseudo-r ²	0.27	0.35	0.40	0.34	0.27	1 0.30	1 0,20

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Appendix 5.2 Comparison of logistic regression models

Global data set,	Model 1B	Model 2B	Model 3B	Model 4B
1972-2011				
Variable List				
Explanatory Variables				
Median Age [MA] (years)	0.148*** (0.005)	0.036*** (0.011)	0.151*** (0.013)	0.153*** (0.010)
PPF-adjusted Income [INC] (LN(2005 international dollars/capita))	(***)	1.210*** (0.062)	1.302*** (0.087)	a inter
Young-adult (15-29 years) Educational Attainment [YA-EDUC] (proportion with some secondary or tertiary education)		; ***)	-1.302*** (0.035)	1.188*** (0.263)
Dichotomous controls				
Major conflict ensuing (>1000 deaths)	1.296*** (0,261)	1.309*** (0.264)	1.915*** (0.251)	1.391*** (0,690)
Muslim majority state (>50% of citizen- resident population)	2.165*** (0.148)	3.167*** (0.203)	2.571*** (0.227)	2.072*** (0.196)
Resource rentier state (mineral & oil rents >15% of GDP)	0.067 (0.136)	1.288*** (0.176)	1.915*** (0.251)	0.690** (0.233)
Growth economy (>7% GDP growth/year)	0.648*** (0.121)	0.431** (0.145)	0,077 (0.178)	0.767*** (0.150)
Constant	-8.346 (0.323)	-17.346 (0.629)	-17.900 (0.765)	-9.576 (0.430)
N	5790	4321	3266	3942
Pseudo-r ²	0.33	0.47	0.40	0.34

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