

The Education Bulge: *The Road to Mass Protest*

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Abstract:

Why are nonviolent mass movements emerging in previously stable authoritarian regimes? This research proposes a new mechanism that addresses when and where both protest onset and success may be expected. The education bulge, a period of time characterized by sustained increases in university degree holders while the value of a university degree experiences sharp or sustained decreases, proposes that the simultaneous presence of these factors increases the likelihood of both protest onset and success within previously stable repressive regimes.

Introduction

The democratization movements across the authoritarian world in recent years were a shocking occurrence to many scholars of civil conflict. While democratization movements during the 1990s and early 2000s swept away dictatorial regimes in Latin America, Africa, and Eastern Europe, the seemingly intractability of the Middle East, North African, and some Asian authoritarian regimes led some scholars to brand them as “exceptional”, of being heavily resistant to democratization and prone to autocracy (Bellin 2004, Rubin 2002). Generations within these countries knew only a single ruler, with regimes buoyed and stabilized by entrenched military, elite and middle-class interests. Traditional explanations of movement emergence, such as exogenous economic shocks, severe domestic economic downturns, or spikes in political repression were largely absent prior to the Arab Spring, and thus unhelpful in explaining the phenomena. The sudden emergence and success of the protests that spread from Northern Africa and across the authoritarian world begs the question: why now? Why are these movements occurring in countries where they typically would not and why are some movements efficacious in obtaining their stated goals while others fail? I argue that the answer resides in changing educational attainment within established authoritarian regimes.

A strikingly consistent characteristic across these protest movements as they spread from 2010 to 2018, was the overwhelming presence of college graduates driving and swelling the ranks of participants. I argue that stable repressive regimes are more likely to experience mass nonviolent protests and protest success when an education bulge is present: an upwards trend in university education attainment that produces excess supplies of university graduates, exacerbating the global trend of education depreciation, and increasing the likelihood of **both** protest emergence and success. Education depreciation, due to labor polarization and skills downgrading, is hallmarked by flattening college wage premiums and changes in the composition of total unemployment reflecting increased underemployment and unemployment amongst university graduates. The education bulge posits that growing aggregates of unemployed and underemployed university graduates intensifies total competition for flattening or shrinking employment

pools, generating unusually elevated levels of grievance amongst both middle and working-class graduates against the regime. As pools of disillusioned graduates increase, even repressive regimes will be more vulnerable to protest emergence and consequences.

This research addresses the gap in the literature on the causal implication of higher education accumulation within societies. While “the three major paradigms of social movements research -resource mobilization, framing, and political process theory- are not of much help in identifying these pathways because they were all developed to explain the emergence and development of social movements rather than its outcomes”, the education bulge explains both the emergence and outcomes of movements since 2010 (Kolb 2007:3). While many theories in the field, such as the youth bulge theory, offer explanations for violent civil unrest in developing countries, they often fail to explain initiation or outcomes of nonviolent movements. The youth bulge theory brought us a dynamic theorem of determinants of regime destabilization within developing regimes and posits that increasing aggregates of unemployed youths may generate expanding recruitment pools for terrorism and extremism in developing countries where the majority of the population is under the age of 35. While the youth bulge has compelling explanatory power of violent civil conflict in developing countries with weak institutions, it has been less efficacious in explaining the recent emergence and spread of nonviolent mass demonstrations. Instead, I offer a complementary middle range theory that postulates the presence of large numbers of university educated participants increases the likelihood of vibrant and successful nonviolent movements emerge in authoritarian regimes. I argue age is a misspecification for *nonviolent* protest emergence and success within stable repressive regimes and propose an alternative theorem to capture the role of domestic and global trends of education and job markets in the initiation and outcomes of protests since 2010. If aggregating levels of disenfranchised youth exposes regimes with weak institutions to increased risk of violent conflict, aggregating supplies of university graduates, or the education bulge, might more fully explain both the emergence of nonviolent mass demonstrations as well as success variation in previously democratization-immune repressive states. The education bulge proposes two key factors in whether

protests emerge and succeed in authoritarian regimes: over-supplies of university graduates and education depreciation.

The proposed theory has both theoretical and practical contributions to the field of comparative politics. First, this theory offers a middle range theory of when stable, longtime authoritarian regimes can be displaced by nonviolent political demonstrations. Fragile regimes, those easily penetrated by third parties, economically dependent regimes, or regimes emerging from war are more likely to be destabilized due to global trends. However, in the case of the education bulge, it explains how even seemingly impervious regimes can be destabilized in the face of global market trends exogenous to regime control. Second, the education bulge theory allows a macro-micro exploration of how domestic private and public employment policies and practices, reflecting global market trends in employment and technology, become flashpoints of public grievance. Rather than institutional weaknesses driving regime vulnerability, it is stagnating public and private sector employment practices clashing with seemingly beneficial and innocuous domestic public goods, like expanded university education access, that leads to unintentional consequences for regimes. Expanded university access and increasing university graduates are a benefit to peace and economic growth, but when regimes fail to ensure sufficient levels of employment to absorb the graduates, regimes can then face enraged educated publics with advanced networking and technology skills that facilitate both mobilization efforts and success rates. Third, the education bulge theory integrates modern nondemocracies into the literature on political consequences of movements, which overwhelmingly focuses on democracies. By focusing my research on nonviolent movements that emerge within authoritarian regimes, the lack of a collection of empirical studies on movement emergence and outcomes in modern authoritarian regimes is augmented. The literature on security studies is particularly benefitted, as previous literatures posited that high opportunity costs and loss of potential benefits would makes regime challenges of low utility to university graduates, and so the education bulge clarifies under which circumstances protests have instrumental use to university graduates and thus are of high utility. Forth, from the education bulge theory, we may derive models that

cross the theoretical- empirical divide and this research allows for a better understanding of when and why we should see movement emerge, as well as when should succeed and when they might fail.

Statement of the Problem

As mass protests have swelled in frequency and range since the 2009 Great Recession, analyzing the variation in protest initiation and outcomes presents important questions within the comparative field: why are nonviolent mass movements only recently emerging in formerly resilient authoritarian regimes and why are some movements efficacious in obtaining their stated goals while others fail? These movements seem most prevalent and successful in regimes experiencing sharp and rapid increases in higher education attainment. Stubbornly authoritarian parts of the world, such as the MENA region, were highly resistant to democratization movements and sufficiently repressive to ensure opportunity costs too high for normal democratization movement formation. The repressive nature of the state and entrenched interests of elites and the middle class helped drown out longstanding and widespread public anger. These regimes have shown unusual durability even in the face of changing socio-demographics, technology changes, and economic downturns. As such, the emergence and spread of nonviolent mass protests, much less their relative success is puzzling and worthy of extensive examination. This research posits that a combination of two forces: rapid increases in education attainments and depreciation in the value of a university degree produce sufficient widespread economic grievance to initiate political activity even within heavily repressive regimes. Each force independently may increase grievance to produce industry specific strikes or protests from certain groups. I argue that a specific mechanism, the education bulge, best explains the emergence of *mass nonviolent protests* within these stable repressive regimes: a period of time characterized by sustained increases in university degree holders while the value of a university degree experiences sharp or sustained decreases.

The education bulge posits that the interaction of sustained increases in university degree holders during a period where plummeting market values of a university degree spawns employment distortions severe and widespread enough to activate mass political activity even in heavily repressive regimes.

Sustained increases in the percentage of the population with a university degree may have a critical impact upon political participation, especially in authoritarian regimes. While it is well documented that increased education attainment is linked to increased political participation in advanced and consolidated democracies, it is also linked to increased disillusionment and rejection of traditional forms of participation in electoral authoritarian regimes, such as voting, as well as increased support for extra-legal methods of participation in nonconsolidated democracies (Croke et al 2016, Glaeser et al 2007, Urdal 2006). As higher education becomes more widely available, the changing education composition within a society may encourage political participation that exceed level and forms of repressiveness some authoritarian regimes are willing to utilize.

The Great Recession galvanized governments and industries worldwide to drastically slash budgets and restructure hiring and job creation practices, speeding up the dual forces of labor polarization and skills downgrading. The resultant depreciation in the value of a university degree has immediate and long-term consequences for regime stability. Borrowing from the human capital literature, we note that labor polarization reduces middle class jobs while skills downgrading reflects a “slowdown in IT investments that has undermined the demand for cognitive skills”, resulting in decrease in demand for highly educated skilled workers and their shift into lower-cognitive positions “undermining the demand for lesser skilled workers as well” (Valetta 2016:15). As demand for highly educated employees slows, the diminishment in the market value of a university degree is reflected in flattening or reduced wage premiums, as well as increased tertiary underemployment and unemployment. This “depreciation” in the market value of a university degree exacerbates already intense competition for skilled job positions, and as university degree holders compensate by moving into lower and semi-skilled positions typically staffed by employees with less education, thus, downstream job competition intensifies and wages stagnate. The employment displacement at the top of the occupation ladder has severe negative impacts for semi and nonskilled workers as they are replaced by skilled labor, moving them down and out of the job market. The displacement of skilled workers then spreads economic grievance throughout the workforce, with

devastating impacts during periods of economic recession, as well as periods of jobless recoveries. The education bulge is not confined to periods of economic shocks but may also be applicable in periods of changing job position replacement and creation practices. As full-time skilled positions are eliminated in preference for contingent, contractual, part-time, or temporary positions, competition would intensify for workers of all education levels. As such, even in recovering economies that trumpet increases in job creation, the replacement/creation of low-paying and temporary position in lieu of benefitted full-time skilled and semi-skilled positions produces low real wages and increasing underemployment for all workers, including university graduates. The education bulge proposes this causal mechanism is responsible for the spread of nonviolent mass protest onsets and success in heavily repressive regimes in the aftermath of the Great Recession.

University Education and Regime Stability

Education has traditionally been considered an important subset of a state's population and economic strength, and multiple political economic and security studies are dedicated to the crucial role an educated workforce plays in economic growth and regime stability. International organizations lauded education as a panacea to societal ills and economic stagnation: "the World Bank has long recommended extending access to public goods like health, education, and jobs to the poorest as a method of spurring economic growth"¹. Governments were encouraged to enact robust education public policies and increase governmental educational expenditures to increase the attractiveness of their labor pools and encourage corporate investment to their doorsteps. As a result, governments worldwide were expending unprecedented and historically high levels of national treasure on all levels of education, while failing to ensure concomitant public and private sector job creation. Governments were also encouraged by security scholars after 9/11 to spend heavily on expanding access to university education after multiple security studies advocated the positive security impact of university graduation expansion, positing that education raised opportunity costs and deterred recruitment and participation in extremist political activity. The

¹ World Bank. *World Development Report 2006: Equity and Development*. World Bank 2006.

2012 US Education Reform and National Security Report² argued for governments globally to spend more national treasure on basic and especially advanced schooling as a way to combat domestic terrorism. Peace and security studies grounded themselves on Montesquieu's assertion that the correction of societal defects and peace may both be achieved via education. Both the field and governmental policy assumed that at the individual level, university education would reduce the probability of extremist behavior, and align degree holders' interests towards the regime, providing regime stability. There is an implicit assumption in this scholarship though that degree holders would have low levels of economic or political grievance with the regime, failing to account weaknesses market and institutional capabilities to absorb and counter the effects of large increases in skilled workers in developing countries.

The positive relationship between higher education attainment and regime stability is contradicted by political socialization and civil conflict studies noting that additional education attainment encourages elevated participate in *all* forms of political activity, both legal and extra-legal. Much of the civil conflict literature notes that increased education attainment leads individuals to more direct action, often in the form of peaceful but extra-legal activity, where "highly educated people with low incomes find reasons to reject voting" (Emler and Frazier 1999: 252). Multiple studies, in the vein of relative deprivation, have noted the interaction of university education and economic grievance in driving violent civil unrest in developing countries (Parry et al 1992, Glaeser et al 2007, Freidman et al 2011). While the civil conflict and relative deprivation literature has a deep well of studies linking higher education attainment with the radicalization, organization, and leadership roles of the well-educated (Gurr 1985, Wickham-Crowley 1992, Verba et al 1995, Kam & Palmer 2008, Persson 2015), these studies predominately assume these traits are confined to a narrow subset of the population. However, as university education becomes more mainstream and widely available, it would be plausible to assume that overall societal political participation should increase, and yet even in advanced democracies this is not the case (Brody 1978, Berinsky & Lenz 2011). If there is a positive relationship between increased education attainment and

² *US Education Reform and National Security*. March 2012. Council on Foreign Relations Task Force Report no. 68

political participation in both traditional and non-tradition forms of participation, such as strikes and protests, why have there been so few mass protests in many authoritarian regimes despite their rapid increases in university degree holders over the last decade?

Some of the literature in political socialization provides an excellent base for explaining why mass protest movements are only now emerging. Multiple studies have noted that the more education an individual accrues, the more an individual will have to lose in the case of revolution (Almond et al 2004, Collier and Hoeffler 2004). Such scholarship assumes that university graduates benefit sufficiently from the current system that any threats to regime stability, either peaceful or violent, shifts individual ideal points even closer to regimes. As noted above, education often increases the likelihood of political participation of all forms, both legal and extra-legal, as well as moves individual ideal points closer to the regime. These two factors are conflictual in an authoritarian regime, where participation in extra-legal political activity directly threatens the stability of the regime; as such university graduates have the potential to both stabilize and destabilize a repressive regime. In an attempt to reduce the potential radicalization of students, prior to the Great Recession regimes like Egypt had preferential hiring policies to co-opt university students. “In most ministries, offices are overstaffed, mainly because tradition obliges the government to hire every Egyptian college graduate who can't find a job in the private sector. Egyptian universities graduate about 50,000 students a year”³. Thus, the entrenchment of university graduates' interests with the regime, undergirds an implicit social contract between university graduates and the regime, in exchange for wage premiums, preferential hiring practices, and middle-class lifestyles, degree holders forgo political activism. This vein of scholarship assigns a pacifying or chilling effect upon the well-educated by increasing the opportunity costs associated with challenging the regime.

Following this literature, I argue that while sustained increases in university degree holders does not automatically convert into large scale political participation, sustained increases in the number of degree holders does pose additional stresses upon the political and economic capabilities of authoritarian

³ Baligh, Dalia. “Egypt, Birthplace of Bureaucracy, Launches New Attack on Red Tape”. Los Angeles Times. November 08, 1987. Associated Press

regimes. The ability of repressive regime to maintain control over political activism is challenged during education bulge periods, where regimes become increasingly incapable of absorbing new cohorts of university degree holders into the public or private employment market, lowering opportunity costs and incentivizing political activism. University graduates in authoritarian regimes, facing limited and restricted channels of political participation, use nonviolent mass protests instrumentally to garner material and political concessions from leaders and industries. As such, university graduates behave instrumentally with the regime: complacent in times of plenty and using protests in times of lean. Authoritarian regimes facing education bulges, where oversupplies of university graduates overwhelm the private and public sector during a period of depreciation in the market of a university degree, lowering opportunity costs and upending the equilibrium of the implicit social contract.

Depreciation in the Value of a University Degree: Labor Polarization and Skills Downgrading

While sustained increases in the number of university degree holders in developing countries strains political and economic capabilities of authoritarian regimes, changing trends in occupational patterns, hiring practices, and job creation practices have deleterious results for even university educated workers across the globe. Labor polarization and skills downgrading displace domestic employment markets as demand preferences for nonroutine routine instead of routine positions reduce the need for semi-skilled labor while the maturation and slowdown in IT investments reduce the demand for skilled workers, resulting in a total negative effect upon workers of all education levels increasingly vulnerable to underemployment and unemployment. Labor polarization is characterized by “an increased concentration of employment in either high-paying cognitive occupations or in lower-paying manual-service jobs”, reducing demand for semi-skilled workers (Beaudry et al 2016: 200). Middle class jobs are vulnerable to substitution due to advances in computerization and technology, as “routine tasks [that] are common among many jobs toward the middle of the wage distribution, polarization will tend to erode or “hollow out” middle-class jobs and wages” (Valetta 2016:16). While labor polarization protects higher cognitive skills positions complementary to technology trends (Acemoglu and Autor 2011, Autor 2015, Goos,

Manning, and Salomons 2014), low-wage service workers are also more invulnerable as they are neither complements nor substitutes. Thus, labor polarization can spark severe economic grievance amongst the lower middle and upper working classes, semi-skilled workers with education attainment less than a terminal university degree.

While unaffected by labor polarization, skilled workers and unskilled are threatened by skills downgrading, which leads to leads to increased competition for shrinking pools of full-time positions and a cascading effect downstream the occupational ladder. Beaudry et al (2016) proposed a boom-bust-cycle in the demand for cognitive skills, where booming expansion in the IT field previous to 2000 was followed by a “bust” as “the demand for cognitive tasks declines as their use is shifted from expanding organizational capital to maintaining it by offsetting depreciation” (Valetta 2016:17). As less employees are needed for maintenance rather than innovation and expansion, hiring slows down, as the market value of a university degree flattens and declines due to diminishing demand. This downturn in demand for university graduates redirects them towards middle class and low-paying positions due to increases in (tertiary) underemployment and unemployment. Skilled workers squeezed out of suitable employment and seeking positions typically occupied by semi-skilled workers distorts the top of the occupational ladder, and as new cohorts of university degree holders enter the job market, competition is intensified overall for all skill levels of employment. This “cascading” pattern, in which the most educated will move into lower-paying routine and manual jobs after 2000, pushing the less educated to even lower paying jobs and/or out of the labor market” (Beaudry et al 2016:227). So if a university degree no longer provides suitable market value, why are university entrances and graduations continuing?

Human capital, like education attainment, is subject to appreciation and depreciation just as any other capital. During the 1990s, university education entrances boomed globally as demand for highly skilled workers in the IT industry blossomed and workers of all education attainment levels entered cognitive-tasks occupations during that period (Beaudry et al 2016). While companies invested in higher education for their employees to boost productivity, individuals increasingly invested in higher education

for anticipated wage and job placement returns. After 2000, graduation rates continued at sustained levels despite flattening and decreasing demand for highly educated employees due to slowdown and maturation in the IT field. According to the supply and demand, university entrances and graduations should have slowed when demand dropped off and yet they continued unabated. The sustained positive trend in the higher education attainment in the general population despite dropping demand can be easily explained: “The decision to go to college depends in part on what proportion of one’s cohort does so... because a large attendance in one’s cohort raises the general level of credentials in the labor market, making it more difficult to find suitable employment without a college degree” (Granovetter 1978: 1424). As such, university attendance may continue to run counter to the demand for skilled workers as university credentials become the new norm for entrance into the job market. However, a university degree does not equate automatically into middle class employment. Beaudry et al note the phenomenon of shifting occupation patterns that lowers wages for highly educated workers due to saturation in the IT fields: “... having a college degree is only partly about obtaining access to high-paying managerial and technology jobs—it is also about beating out less educated workers for barista and clerical-type jobs” (2016:202). The rate and intensity of depreciation in the market value of a university degree are vulnerable to exogenous economic shocks as well global technological changes. The duality of decreases in IT investments leading to labor polarization and post- Great Recession budget tightening leading to skills downgrading, encouraging individuals to investment in university education to avoid the vulnerability of labor polarization, even as the value of a university degree diminishes due to skills downgrading. Countries where the middle class and university graduate sectors heavily rely upon governmental and bureaucratic employment due to underdevelopment of the private sector would be especially vulnerable to the effects of an education bulge, as regimes tightened their belts and private sectors are unable or unwilling to absorb excess skilled labor. Education bulge periods, which spreads the long-standing economic grievance of semi-skilled workers and spreads it amongst all occupational classes, may increase the likelihood of even heavily repressive regimes experiencing nonviolent mass protest onset.

The Education Bulge

The goal of the education bulge is to specify the conditions under which authoritarian regimes may experience *both* protest initiation and success (however this paper will focus solely on protest onset). The theory proposed is a middle range theory, temporally limited to post-2000 and primarily impacting authoritarian regimes. In the education bulge, developing countries with sustained increases in education attainment are vulnerable to nonviolent protest emergence and success in periods where an education bulge is present. While it is well established that increases in education attainment increases both political awareness and activity, many authoritarian regimes have experienced very few nonviolent mass protests since the 1990s, despite rising university attendance. The education bulge ascribes to Emler and Frazier's position that education increases the likelihood of individual direct action, and argues that the "potential" for societal-wide political activism is magnified as the percentage of the population with a university degree rises. Building on revolution and civil war studies, the education bulge also supports the idea that increased higher education attainment has dual effects: it may radicalize individuals towards extra -legal activity against the regime, as well as raise opportunity costs for degree holders who may benefit from regime employment. So as the number of university graduates increases in a society, the "revolutionary" potential within society grows, as does the potential for nonviolent suppression of political activism. The education bulge posits that as long as university graduates and the middle class continue to perceive their interests best served by the regime, suppression of mass political activity will be maintained. However, education bulge periods upset that delicate equilibrium, alienating the critical middle-class portion of the regime's support base, and lowering opportunity costs for the middle and lower classes into actualized nonviolent mass demonstrations.

The education bulge argues that university graduates, behaving as rational actors, engage instrumentally, rather than expressively, with their repressive regime. In times of rising market values of university degrees, middle class university graduates willingly exchange their political activity potential for wage and job placement premiums, hobbling the potential for mass demonstration even in the midst of

heightened lower-class economic grievance. However, periods of declining market values in a university degree moves university graduates ideal points away from the regime and towards activism, incentivizing nonviolent challenges of the regimes to obtain tangible material benefits, despite certain repression. A declining demand for skilled workers has severely negative and pervasive downstream costs to secondary and primary degree holders, the sustained and aggravated grievance that already exists in the middle due to labor polarization, and the new increases in tertiary and primary unemployment helps consolidate grievance across the economic classes. Thus, due to widespread, pervasive grievance and limited channels of policy influence, mass protests may have increased likelihood of onset. University graduates, politically awareness and fully cognizant of potential costs in challenging the regime, may perceive lower opportunity costs in nonviolent mass protests rather than violent ones during an education bulge.

Civil uprisings, both violent and non-violent, are often portrayed as arising from a combination of frustration, opportunity, and common identity (Sorli et al 2005, Ellington 2000, Gurr 1970). The socialization effect of education generates common expectations, and thus frustrations, for university graduates and the middle class experiencing education bulges, making regimes vulnerable to even small triggering events such as the self-immolation of Bouazizi in Tunisia. As the frustrated expectation of the middle class and university graduates are central to my theory, the education bulge should be positioned alongside the Davies J curve theory (1968), which argues that “Revolutions are most likely to occur when a prolonged period of objective economic and social development is followed by a short period of sharp reversal” (Davies 1962:5). The lack of clarification of what constitutes Davies’ “sharp reversal”, and which groups are most impacted by the sharp reversal is omitted in the J-Curve theory, and the education bulge provides those missing elements. The education bulge specifies that the sharp reversal is not just an economic shock, whose lagged effects are difficult to capture over time, but rather is an identifiable cascade of negative consequences of devaluation in university degrees and sustained increases in the number of university degree holders.

While the youth bulge and the education bulge both start from demographic features potentially destabilizing to developing countries, they diverge on the specifications, scope conditions, and outcomes. The youth bulge argument that large-scale accumulations of young people as the result of fertility booms in developing countries lacking proper institutional protections and provisions, presenting a structural argument of political violence. As such, it is limited to developing countries where the majority of the population is under 35, while the education bulge is capable of encapsulating countries with and without youth bulges. As the education bulge relaxes the age axiom of the youth bulge and alternatively specifies education attainment as the critical demographic feature, it proposes a dynamic argument for spontaneous, nonviolent protest movements in countries previously immune to such political activity. The youth bulge's preconditions of fertility booms and institutional weakness limits its spatial applicability to only developing countries with weak institutions, while the education bulge extends this space to include any regime that suffers from either underdeveloped private sectors or regimes with maturing IT sectors. This the education bulge's explanatory power stretches to include all regime types that suffer from under or overdeveloped private sectors as well as account for exogenous forces that shape domestic business and governmental hiring practices. However, the education bulge is intended to only examine authoritarian regime lacking previous mass demonstration experience. The education bulge looks at regime and individual education investments that fail to reflect trends in technology investments, similar to the housing bubble in the United States. People and regimes continued to invest in higher education despite slowing IT investment and growing market saturation and thus were caught behind the demand curve. Technology trends and business hiring practices, exogenous to regime controls, were more detrimental to non-rentier governments that *behaved* like rentier governments. Such regimes, failing to expand government investment into private sector growth and lacking redistributive taxing policies, were often the first line of employment for university graduates. However, in the aftermath of the global recession, governments worldwide rushed to tighten their belts, and reduce bloated bureaucracies. The resultant governmental reductions displaced middle aged university graduates, and new university graduations overwhelmed slowing private and public-sector hiring. The education bulge has three major

claims that girds the causal mechanism: (1) education is subject to depreciation just as any other capital; (2) employment competition occur with and between groups and in exacerbated and intensified by labor polarization and skills downgrading; (3) those with a university degree have increased expectations regarding their financial futures and lifestyles due to expected returns on investments $E(ROI)$ in education.

One of the most important contributions of the education bulge is its explanation of the initiation of *nonviolent* movements. While many theories, such as the youth bulge, have explored the causes and correlations for violent destabilization of developing countries, there is less consensus in the research exploration on the recent emergence of nonviolent movements in regimes well known for their repressive natures. On the surface, the youth bulge and the education bulge theorems have similar moderating factors, but their axioms and scope conditions are dramatically different. The youth bulge theory proposes that developing countries have a greater likelihood of political violence when large aggregates of youth are present, providing both motive and opportunity for violent extremism and recruitment. Frustrated expectations, institutional crowding, and lowered opportunity costs make regimes, whether pure autocracies or liberalized anocracies, more likely to experience both high and low-intensity political violence (Urdal 2006:608). While the youth bulge desires to explain how institutional weakness in the face of demographic age changes makes regimes more vulnerable to violence, the education bulge desires to explain how institutional weakness in the face of changing demographic education attainment changes make regimes more vulnerable to *nonviolent* challenges. It is the normalization of higher education that makes a regime challenge less likely to be violent than nonviolent. The education bulge assumes that all individual with a university degree (excepting those with advanced degrees), regardless of age, experience some form of employment shift (either in wage premiums or employability) due to depreciation in the value of a university degree. However, under the education bulge, middle age (Gen Xers) may face even more vulnerability due to skills downgrading and labor polarization due to tech industries notorious hiring preferences for youths over the aged. Middle aged university graduates may

also be more vulnerable to downward shifts in occupation patterns as they are more likely to have established families and lifestyles, and as such a downshift from a bookkeeper to a barista is more deleterious than it would be for a young person. The youth bulge's axiom that the young disproportionately bear the costs of shifting labor distributions and declining wage fails to account for the sharp increase in education depreciation for the middle class (for all age groups) in the aftermath of the Great Recession.

The education bulge posits that demonstrations with large contingencies of skilled labor are more likely to engage in nonviolent, rather than violent demonstrations. As the civil conflict literature (Almond et al 2004, Collier and Hoeffler 2004) notes, increased education increases opportunity costs of revolutions for individuals, and violence reduces middle class benefits. However, nonviolent action does not reduce middle class benefits, and may signal to regimes non-irreconcilable crowd ideal points. The instrumental purpose of the protest to garner economic concessions is undermined in the presence of violent crowd behavior. The large presence of middle aged individuals also undercuts the "revolutionary" attributes of large crowds of youths and provides a diversity of crowd makeup that reduces the efficacy of violent behavior. This was exemplified in Tahir Square during the early days of the Egyptian protests where: "The atmosphere was as carnival-like: Plenty of families; a phalanx of marching, fist-waving women in hijab, some carrying babies; young men in fashionable Western clothes, arm-in-arm; ranks of conservative men with prayer calluses on their foreheads"⁴. University graduates of all ages, less interested in "burning it all down" due to their entrenched interests, signal to regimes their economic frustrations when they join protest demonstrations. As education depreciation diminishes college premiums, the opportunity costs for strategically using nonviolent protest demonstrations to obtain material and political concessions are lessened for all workers, but especially for university graduates. The education bulge, by relaxing the youth bulge's age axiom, posits that increased education attainment

⁴ Wendell Steavenson. February 1, 2011. "The Crowds of Cairo". The New Yorker.

sparks both *nonviolent* direct action of crowds and resultant increased likelihood of regime concessions in times of sharp education depreciation.

The education bulge augments the literature on the effect of education upon political participation. As well established in the studies of Almond and Verba (1963), Putnam (1995), La Due lake and Huckfeldt (1998), & Hillygus (2005), education is considered a primary driver of increased likelihood of both political participation and direct action due to increased critical capacities and political awareness. As such, it is accorded a main role in forcing regimes to open political space (Lerner 1958) as well as a primary causal factor for modernization studies in autocratic transition to democracy (Huntington 1991, Acemoglu et al 2005). However, the causal relationship between education and political participation, both contentious and non-contentious, is far from decided. Studies such as Croke et al (2016) have found that education in fact decreases non-contentious political participation in electoral authoritarian regimes as university graduates deliberately disengage or vote spoil to signal disgust with the current regime. If educated populaces feel that normal non-contentious channels of participation, such as voting, are ineffective in signaling and obtaining their interests, they may be more willing to engage in nonviolent contentious political participation. The education bulge begins from this assumption, arguing that the potential for nonviolent contentious political participation grows as the society increasingly become educated, as exemplified by increases in the percentage of the population with a university degree. This direct relationship between the supply of university graduates (across age and social classes) and the protest onset in an authoritarian regime is the heart of the education bulge theory. The theory, however, posits that this relationship is weakened due to state repressiveness and heightened opportunity costs for university graduates and the middle class in periods of where the market value of a university degree appreciates. It is the depreciation in the value of a university degree than moderates the relationship between the supply of university graduates and protest onset, by lowering opportunity costs and strengthening the impact of university graduate supply. While depreciation in the value of a degree has a moderating role for protest initiation, I argue that it, like education attainment, has a direct

relationship to the strength of protest intensity, and it is the interaction between education attainment and depreciation in the value of a university degree magnifying protest intensity which influences the likelihood of regime concessions. To empirically test the education bulge's explanatory power of protest onset and success, I propose separate models of protest onset, protest intensity, and protest success, which are discussed in my future dissertation.

Terms and Definitions

Before delving into the models and methodology of the education bulge, several definitions are necessary. Nonviolent mass protest movements are a “type of political activity that deliberately or necessarily circumvents normal political channels and employs noninstitutional (and often illegal) forms of action against an opponent” (Chenoweth and Stephens 2011: 12). Protest movements campaigns are composed of multiple individual protest events, and protest onset movement is considered the first instance of a mass gathering against the regime (1000+ protestors), and is considered concluded upon the cessation of gatherings due to government concessions or repression, or the devolution of the protests into civil war. While there is an energetic debate within the field on whether the protests following the Jasmine Uprising of Tunisia constitute true social movements, this research argues that wading into that debate here is unnecessary. While a deliberation could be conducted of whether these mass demonstrations meet Tilly and Wood's (2013) three-prong test of resemblance, combination, and availability to determine if a campaign is in fact a social movement, as this research focuses on *all* protest movement activity, not just that considered to fulfill the criteria of a social movements, it is pointless to parse out which individual event activities meet the Tilly and Wood test. Authoritarian regimes are characterized as all forms of authoritarian regimes with Polity scores of -10 to 5 (thus including both autocracies and anocracies).

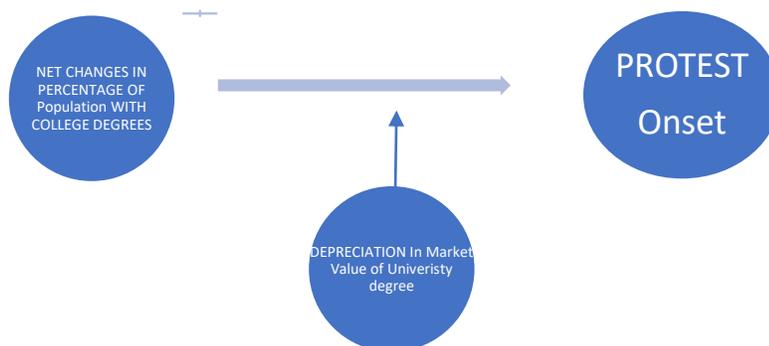
Protest Initiation

This research posits that there is a direct relationship between accumulating supplies of an educated populace and protest initiation. Increases in public higher education attainment do not have instantaneous impact, rather it is argued here both economic frustrations may limp along for an indeterminate amount of time and never provoke nonviolent mass protests. Rather, onset is theorized as the result of a threshold being crossed, where the interaction effects of devaluation of university degree and sustained increases in degree holders trigger societal wide frustration that severe enough to cross-cutting cleavages-provoking nonviolent mass protests as opposed to other forms of political activity. The working assumption is that autocratic societies, especially non-rentier states, with less control over the private sector, will face incentivized and mobilized masses during periods of education bulges.

Question 1: Do Education bulges increase the likelihood of protest onset in stable authoritarian regimes?

H1: Regimes with an education bulge have an increased likelihood of experiencing protest onset than regimes without an education bulge

Education is considered a primary factor in socio-economic status, as well as individual lifestyle expectations. It is of interest that the regimes that experienced mass protests were also regimes subject to rising expectations due to economic liberalization policies. “Between 1960 and 1985, GDP/capita grew by almost 4% in the countries in the MENA region, a performance higher than every other region except East Asia” (Heynemann 1997: 449). Thus, generations of college graduates had expectations of financial security, which conflict with the post-recession education depreciation reality. Cohorts of students entered



university to obtain these anticipated benefits, leading to sharp increases in the percentage of the population with university degrees. Regimes also spent national treasure to meet the huge demand for employee in the fields of IT. The normalization of university graduation prior to the 2007-2009 recession is captured via graduation rates, changes in the percentage of the population with a university degree, and annual governmental education expenditures, which are all available via the World Bank database. I plan to evaluate the difference in employment share, gap in real wages, and changes in real wages for all education attainment groups the 2000-2009 period, and then in the 2009-2015 era to illuminate what were the economic frustrations university graduates and the middle class were facing. In addition, the change in the composition of underemployment and unemployment, key indicators for depreciation in market value of a university degree, will clarify how sharp and how pervasive the impact of education depreciation is between and within countries across time and space. These variables are all available via the World Bank and International Labour Organization (ILO) databases. The dependent variable in this part of the research, protest onset, is studied at the regime level and the unit of analysis is the protest campaign, rather than individual protest events as multiple protest events may occur within a single year or over the course of the campaign. A campaign is included in the dataset once it has 1000+ participants and is considered complete upon either the dissolution of the protest into armed conflict, opponents declare the campaign at an end, or campaign demands are realized. As the study examines nonviolent protests movements, country movements were included until the point where conflict dissolved into civil war, such as in the cases of Syria and Yemen. If a protest movement immediately collapsed into armed conflict, it was dropped from the study, such as in the case of Libya.

Additional economic controls cited in the human capital, modernization, and contentious politics literatures will also be included in the analysis. As exogenous economic shocks are may be an important pre-condition to devaluation in a university degree, I plan to potentially include measures such as GDP growth, inflation, costs of living, and FDI. With these variables, I hope to capture the economic conditions within which feeling of relative deprivation (as captured via Barometer surveyresponses)

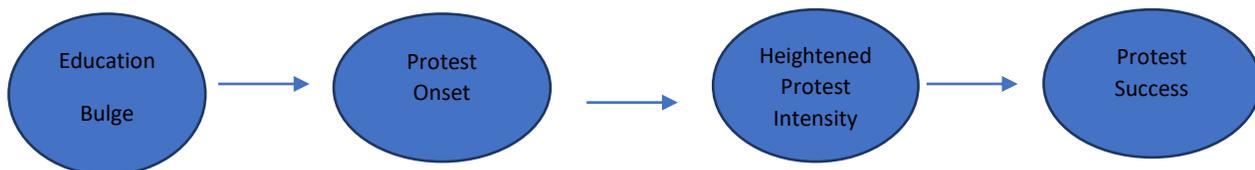
fester. Inequality and corruption are popular alternative explanations for contentious politics and will also be controlled for in subsequent regressions. Inequality as captured by the Gini coefficient only tells part of the story, stagnating wages and price indexes also capture how the middle class and university graduates increasingly are in a race to the bottom. Corruption is often portrayed as a source of public frustration and grievance but has been a poor indicator of nonviolent contentious political participation. Nevertheless, a corruption indicator will be included in some regression to account for this potential alternative explanation. I then turn to analyzing the role of the education bulge in success outcomes of protest movements within authoritarian regimes.

Political consequences

What are the conditions that encourage protest success for repressive regimes? I argue that protests preceded by education bulges, where devaluation of university degrees and the supply of university graduates have sharply increased, are more likely to experience success than protest movements without an education bulge. The literature on political consequences studies explores which movements succeed or fail, evaluating the role of institutional constraints, intra-organizational factors, regime fragility, and socio-political preconditions contextualizing each movement (Jenkins & Perrow 1977, Piven and Cloward 1979, Kitschelt 1986, Burnstein et al 1995, Diani 1997). However, the literature has failed to systematically address macroeconomic factors or demographical factors which may impact success outcomes of protest movements. The shortage of comprehensive cross-country comparisons of movement success outcomes within authoritarian regimes is exacerbated by the lack of consensus on what should be deemed a “successful” movement, as well as appropriate theoretical models answering when and why movements achieve certain outcomes. As such, my research fulfills an important gap in the literature by postulating under what conditions movements succeed and the types of success expected from protest movements within authoritarian regimes. Borrowing from the human capital literature, I argue that the interaction of higher education and education depreciation provides higher levels of protest intensity, thus increasing the likelihood of success in authoritarian regimes and then empirically test my

hypothesis utilizing my success outcomes taxonomy, which broadens and improves upon the scope of the major taxonomies in the literature.

I plan to conduct a cross-country comparison of protest movement outcomes in authoritarian regimes between 2010-2016 to empirically test the causal role of the education in success outcomes. The variation in outcomes that potentially fall under the umbrella of “success” is exemplified in the divergent outcomes of the 2010-2011 Jasmine “revolution” in Tunisia and the 2014 Umbrella movement of Hong Kong. The eruption of street protests in Tunisia demanding changes to the systemic and entrenched employment disparities were a model for the 2014 street protests of Hong Kong, where protestors demanded “open candidacy” for legislative candidates. While Tunisia is often considered a success due to the ousting Ben Ali, holding of new elections, election of a constitutional assembly, and scourging of the remnants of Ben Ali’s old political party and reigning in Ennahda; forgotten was the *raison d’être* of the protests: lack of job opportunity. While Hong Kong’s 2014 Umbrella movement might be considered a failure in obtaining their stated demands for open legislator candidacy and subsequent political and judicial repression, the movement birthed new political parties resulting in parliamentary victories and maintained a durability of mobilization exemplified in renewed protests in 2017. Of interest then is which conditions shape a movement’s outcomes that may be categorized as “successful”? I argue that the education bulge, where increasingly educated populaces suffer devaluation of their degrees, produces protests that have sharp and widespread protest intensity, encouraging regime, even from highly repressive states.



High Protest Intensity Levels	Executive removal Power sharing Legislative seats Policy implementation Political party development Stated demand obtained
Mid-Range Protest Intensity	Low or no governmental repression after t1 Simple Recognition Non-optimal concession (ex. food or energy subsidies)
Low Protest Intensity	No governmental concession Governmental repression

Question 2. Are protests in countries with sharper education bulges successful more often than countries with marginal or nonexistent education bulges?

H2. Protests that emerge from education bulges have higher intensities than non-education bulge protests

H3. Education bulge protests have a greater likelihood of success

This section of the research tackles several questions: Why do some states fail in obtaining success outcomes even when conditions seem conducive for success, while other movements succeed even within heavily repressive conditions? What are the effects of higher education and education depreciation upon a movement's ability to garner long-term substantive indicators of success such as legislative seats, power sharing, and durability of the movement? To address these questions, I theorize that higher education and degree devaluation act as a mediating mechanism of opportunity costs, where accumulating national higher education attendance raises the opportunity costs for authoritarian regimes seeking to sanction movements and lowering opportunity costs for movements rejection of non-optimal regime concessions, encouraging remobilization in the case of regime repression, sanctions, or renegeing.

Methods and data

As my study focuses on authoritarian regimes, the entire universe of authoritarian regimes, exempting those experiencing foreign occupation or penetration, are included in the dataset for the period of 2010-2017. I plan to use two different methods to test my propositions: a threshold model for protest

onset and difference in difference method for protest success outcomes. For protest initiation, I argue that threshold models best capture the similarities of expected returns on education investment by university graduates and accounts for the spontaneous nature of the 2010-2017 protests. A threshold model can account for the role of higher education's ability to converge interest points within and between cohorts of university graduates. The similarity in expectations and degree valuation interests allows for common grievance concerns during periods of degree devaluation, and thus similar demands amongst crowds. However, I am still uncertain as to whether a threshold model or cascade model is a best fit for this research. As I wish to accommodate spontaneous mobilization, a cascade model may be useful and as Rubin (2014) noted "Cascade models differ significantly from the neo-classical view of collective action" and in cascade models "large-scale collective action can occur even in the absence of supporting organization" (341). Previous experimental work on the nature of cascades has suffered from a lack of consensus on what type of population a cascade was possible in. Kubler and Weizsacker (2004) found that predicted cascades failed to emerge are due to poor reasoning ability in societies, while Watt and Dodds (2007) found that cascades occur due to easily persuaded individuals (Rubin 2014: 341). The education bulge rectifies this confusion specifying that university graduates, possessing high cognitive and critical capabilities, initiate nonviolent protest movements instrumentally to obtain common material and economic interests.

Higher education accumulation in the number of university graduates is operationalized along several dimensions of education: from high school, some university education, associates/technical certificate (or national equivalency), university education, and graduate education. Higher education will be derived from the World Bank national education attainment variable. Cohorts of graduates are assumed to be independent of one another and thus not autoregressive in nature. Thus, the forces that drive individuals to invest in education at t_0 are not the same forces that drive individuals to invest in higher education at t_1 . In addition, cohorts who experience degree devaluation at t_1 may be less impacted by long-term underemployment and unemployment that cohorts as t_3 . While the supply of university

graduates may not be autoregressive, it is uncertain if demand for university graduates is autoregressive. Employment and wage information for education depreciation is obtained from the World Bank and ILOSTAT databases.

For protest success, I use a difference-in-difference method to account for variation in success outcomes amongst regimes that did experience mass protest onset. The unit of analysis is the protest campaign and protest events are coded for individual demands made over the course of the campaign. If a single campaign had several demands that emerged over the course of the demonstrations, each demand is individually coded for each component of success. As success outcomes are the main dependent variable, a broad typology that clearly incorporates outcomes of all regime types is necessary. However, there is dearth of standardization in political outcome conceptualization according to Kolb (2007) and the lack of consensus on the theories, determinants, and models that best address movement outcomes has led to studies of such limited empirical scope that their “findings can hardly be generalized beyond the case studied or must even be considered inconclusive” (Kolb 2007:9). Hyper-focus in the field on democracies has resulted in few, if any, comprehensive evaluations of movement success outcomes for authoritarian regimes. The domination of democracy studies, where movements are often automatically deigned with the mantle of legitimacy, resulted in scholars moving “away from addressing whether movements of organizations are successful in gaining new benefits or acceptance (Gramson 1990) and have turned to examining the causal influence of movements on political outcomes and processes drawn from political sociology literature” (Amenta et al 2010: 289). However, this leaves largely unanswered the question of success for movements within authoritarian regimes, severely truncating the literature’s generalizability. Simple recognition by the authoritarian regime might be considered a major success, especially if previous resistance movements have all been repressed without acknowledgement of their legitimacy by the regime. The failure of the literature to address how a movement’s ability to garner simple recognition within non-democracies as a dimension of success is problematic. Recognition confers upon a movement legitimacy, and the legitimization of resistance campaigns within an authoritarian regime certainly should

be considered a success, even if the movement fails to garner any additional regime concessions. Widespread rejection by scholars of the “acceptance” success as unnecessary reduces our ability to properly quantify success within repressive regimes and thus generalize across regime types.

I offer instead an expanded taxonomy, reincorporating the acceptance category, for my difference-in-difference model to address gaps in the field of success outcomes for movements that occur within authoritarian regimes. My success outcomes typology incorporates the full spectrum of “success” across all regime types: (1) simpler recognition by the regime, (2) obtaining one or more of the movement’s stated goals, (3) the development of a populist political party derived from the movement, (4) winning legislative seats, (5) power sharing, and (6) removal of executive and/or legislative leaders. Durability is considered an important component of success but may also be tested on its own. A campaign’s ability to withstand brutal repression is not only a success outcome, but a phenomena worthy of study on its own, as such a (7) durability category has been added. The durability category is collapsed into three sub-categories: (1) unwillingness of the public to accept sub-optimal lessor regime concessions, (2) continued mobilization even in the face of heavy physical repression, and (3) re-mobilization over the lack of governmental implementation of promises or legislative/judicial repression the government may extend against protest leaders and members. Success outcomes are treated as ordered categorical variables.

Protest durability is characterized as crowd size and duration after the first instance of governmental reprisal. Protest crowd sizes and duration are derived from event data information from the NAVCO 3.0 database and categorized utilizing Dawn Brancati’s ordered crowd size index (2016). Success outcome coding is derived from the University of Denver’s NAVCO 3.0 database, which provides important event data on protest initiation dates, conclusions, duration, durability of movement, as well as stated demands and goals of the movement are derived from international, national, and local newspaper article searches. The NAVCO database codes by individual events within a protest campaign, allowing for discrete coding of various campaign demands as they evolve over the course of the protest

movement. The NAVCO database however does not include every governmental concession or concession dates, nor every official governmental policy adopted in response to campaigns. As such, I will compile that data via searches of official media announcements, policy announcements and newspaper articles searches. The availability of the data from NAVCO 3.0 is limited as it concludes in 2011 while my temporal period extends to 2017. As such, I will compile the missing data via searches of official media announcements, policy announcements, and newspaper article searches.

Success outcomes will be analyzed utilizing a difference-in-difference regression.

Underemployment data gathered from the International Labour Organization (ILOSTAT) database will be bootstrapped to address issues of missingness. Success components are treated as dichotomous variables. Governmental recognition is coded yes when the regime leaders agree to meet/negotiate with protest leaders, when protest are authorized, when governments declare the protests the voice of the people/streets. Governmental concessions are coded for either explicit acquiescence to the stated demands of the protesters or a lesser concession, such as in the case that unemployment policy is demanded but the regime concedes only by providing job hires instead of the desired national policy. Governmental concessions are also coded as political or economic in nature. Governmental policy success is considered when a policy that is being challenged or requested is declared by the regime in a manner favorable to the stated demands of the challengers. The success of the protestors gaining legislative seats is characterized by the legislative acquisition of seats by a political party that arises directly from the protestors. Big tent political parties that arise from already established opposition parties are not considered a legislative victory unless the opposition party initiated and drove the mobilization of the mass demonstrations. Oppositional parties that were able to co-opt the agenda and the narrative but do not reflect the grassroots leadership of the protestors or their core demands are not considered a legislative victory. This augmented taxonomy of success outcomes will allow for a careful and systemic examination of the education bulge's role in influencing whether protest movements are successful and which success outcomes they are capable of obtaining.

Conclusion

There is a significant gap in the literature under which conditions a protest movement is capable of both emerging and succeeding in repressive regimes. When the educated publics, mobilized by the pain of education depreciation, march in the street, whether these mass protests are successful in autocratic societies has important security and policy implications. My research adds to the field of civil unrest by the education bulge as a direct contributor to mass protest onset and success. In the field of political consequences, macroeconomic factors and education have largely been ignored as determinants of movement outcomes. The lack of systematic studies that examine success outcomes of movements within authoritarian regimes is rectified here, and an expanded taxonomy of movement outcomes will be thoroughly tested in light of the education bulge in shaping the types of outcomes movements may achieve. The magnitude and role of education have typically been muted by prevalence of small N studies, as well as by the use of aggregate measures that fail to capture the role of national tertiary education attainment in protest onset. The need for a robust theoretical model is addressed in this research, and I utilize models (undecided as to threshold or cascade) as well as difference in difference methods to empirically test the relationship between the education bulge and protest initiation, as well as protest success outcomes. I hope to establish the role of the education bulge within both the contentious politics and the political consequences field as an important determinant of movement outcomes by providing a taxonomy the firmly includes the political limitation endemic to authoritarian regimes. The empirical testing of national education attainment's role in determining which type of outcome a movement might obtain is unique to the field. This area of research is a rich vein of analysis. From the Arab Spring, to Hong Kong, to the January 2018 Iranian protests, mass protests in autocratic societies are not disappearing. Thus far, most predictive models have failed to pinpoint when publics will rise up against autocratic leaders, and better predictive as well as explanatory models are needed.

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