Formal Education and Violent Political Protest under Authoritarianism: The Case of Ben-Ali's Tunisia



Rebecca Rae Bondy

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Abstract

Previous scholarship on political participation has shown that increased education reduces the likelihood of participation in political violence and increases conventional political participation[1]. However, in highly repressive states where institutionalized avenues of dissent are not present, the use of violence may become a more appealing option[2].

In this study, I examine the relationship between formal education and propensity to engage in violent protest under authoritarianism. I test my argument by utilizing an Instrumental Variable model to analyze cross-cohort change in access to secondary schooling arising from Tunisia's 1991 education reform and the resulting variation in use of and attitudes towards violence based on education level. I then build on the empirical evidence provided by the IV models and construct a cohesive theoretical framework that explores the mechanisms behind these statistical findings. I find strong evidence to support my argument that increased educational attainment increases the likelihood of engaging in violent political activities. The evidence also suggests that people with increased educational attainment are more likely to engage in nonviolent protest and view violence as an effective method of political expression and nonviolence as ineffective.

[1] See Brady et al., 1995; Lipset, 1959; Wolfinger & Rosenstone, 1980.
[2] See Bartusevičius et al., 2023; Regan & Henderson, 2002.

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Introduction

The relationship between education and political behavior is well established in political science. It has long been recognized as a significant factor in shaping personal beliefs, values, and behaviors. The literature suggests that people who are more educated are more likely to participate in politics in a variety of ways, including voting, volunteering, and contacting elected officials[3]. It also holds that educational attainment reduces engagement in political violence by encouraging conventional political participation and channeling conflicts of interest through institutional pathways rather than through the use of violence[4]. However, this relationship between education and political participation, both conventional and unconventional, may not always be this straightforward.

Political participation under authoritarianism is far different than it is in democracies. Even when there are formal institutions present that allow participation, citizens still have additional challenges to overcome to engage politically, such as barriers of access, information, and political risk. But more often than not, there are no channels of conventional participation present in these regimes, no opportunities for citizens to express their discontent and grievances. Education fosters political awareness and participation, in addition to providing political knowledge and social networks. It exposes individuals to new ideas and increases their political knowledge, leading to higher expectations of government. As people's political knowledge increases, they become more likely to desire involvement in political decision-making processes (Dahlum & Wig, 2019). When such opportunities do not exist through conventional, institutionalized channels, this can exacerbate citizens grievances, resulting in the use violence as a means of political expression as they have no other means of participation. Further, I argue that in authoritarian regimes, formal education increases the likelihood of engaging in violent political activities. I suspect four mechanisms to be at work here, that contribute to my hypothesized outcome:

1) Citizens will have higher expectations of government and economic prosperity as education level increases.

[3] See Brady et al., 1995; Ekman & Amnå, 2012; Inglehart & Catterberg, 2002; Nie et al., 1996; Verba et al., 1987.
[4] See Alesina & Perotti, 1996; Hegre, 2003; Hibbs, 1973; Huntington, 1968.

2) As these higher expectations are not met, feelings of relative deprivation and grievances are developed, as the wants and needs that people feel they ought to have or deserve (both economic and political) are not being met.
3) Authoritarian states are comprised of rigid institutions that do not offer formal avenues of political participation to express these grievances.
4) These institutional conditions exacerbate citizens grievances, resulting in the use violence as a means of political expression as they have no other means of participation.

I use existing survey data from the Middle Eastern Values Study that was conducted in 2013 and 2015. Specifically, I utilize data from the 'Comparative Panel Survey on the Dynamics of Change: Belief Formation and Political Engagement in Egypt, Tunisia, and Turkey.' I first test my argument by utilizing an Instrumental Variable model to analyze cross-cohort change in access to secondary schooling arising from Ben Ali's 1991 education reform and the resulting variation in use of and attitudes towards violence based on education level. After establishing a statistical relationship between my variables of interest, I then build on this empirical evidence and construct a cohesive theoretical framework that explores the four aforementioned causal mechanisms that I argue to be behind these findings, using Tunisia as my case study. I ultimately find strong evidence to support my argument that increased educational attainment increases the likelihood of engaging in both violent and nonviolent protest. My findings also suggests that people with increased educational attainment are more likely to view violence as an effective method of political expression and nonviolence as ineffective.

The literature has historically tested this relationship almost exclusively in democracies; comparatively less attention has been given to understanding the complex relationship between education and political violence in authoritarian regimes and studies that have attempted to study it have produced mixed results. More importantly, as explained by Desai et al. (2018), 'studies of conventional political participation typically do not investigate political violence, or vice versa; conflict studies rarely focus on how ordinary political activities lead to what has been referred to as "aggressive" participation[5]'. Furthermore, my intentions with this project are twofold: First, I wish to explore the effects of formal education in engaging in acts of violent protest. Second, I wish to

[5] 'Aggressive' political participation is a term coined by Muller (1979). Briefly, it refers to behaviors that are anti-regime, politically significant and disruptive, and involves group activity of the non-elites; it may or may not include violence. The full definition will be explored further in the literature review.

explore such behavior within the context of an authoritarian state, paying particular mind to the influence of the political institution and how that may shape attitudes and the actions taken.

These findings will contribute to both the fields of political behavior and conflict studies, as I wish to contribute to the growing literature that bridges this gap between the two subfields. I will begin by reviewing the relevant literature on political participation and political violence before explaining my methodology. I then provide a brief history of Tunisia and explain why I chose it as my case study, present the results of my analysis, and end with a discussion of the mechanisms I argue are behind my findings.

Literature Review

My study stems from my overarching interest to uncover why people choose to engage in violence, specifically why people choose or resort to violent acts of protest, and how political institutions may influence those decisions. Now, attempting to explain human behavior is never an easy task, as there are a multitude of factors, both on the macro and micro level, that influence the attitudes and decisions that people choose to make. As such, it is vital to understand that there is not one discipline, nor is there one singular theory that can solely explain these phenomena. Further, with respect to political behavior and theories of participation, collective action, and violence, I drew upon literature from other disciplines in informing my work and building my own theoretical framework, namely, from the studies of political violence, social movements, and political sociology.

I will begin by defining political participation before touching on the major theoretical frameworks used to explain the factors influencing political participation, social movements, and political violence. I will then discuss the key themes and findings of the existing literature and conclude with a critical evaluation of these findings, and the gaps I have identified in the literature that I aim to contribute to with my research.

I. Defining key concepts

Formal education refers to the structured education system that runs from primary school to university, and may also include specialized programs for vocational, technical and professional training (European Youth Foundation, 2024). These systems often include the assessment of the students' acquired knowledge or skills and is based on a program or curriculum that leads to some kind of formal recognition or certification.

Political participation falls under the larger scope of political behavior, which, simply put, is a subset of human behavior involving politics and power (Kourvetaris & Dobratz, 1982). Similarly, Scott & Marshall (2009) explain political behavior broadly as 'any form of (individual or collective) involvement in the political process, or any activity which has political consequences in relation to government and policy' (Scott & Marshall, 2009). This encompasses both legitimate forms of political participation and illegitimate political activities. Political scientists largely define political participation as 'the voluntary activities undertaken by the mass public to influence public policy, either directly or by affecting the selection of persons who make policies' (Uhlaner, 2015). In sociology, political participation is simply the means by which one gains power (Kourvetaris & Dobratz, 1982). Most definitions of political participation stress the influence of the citizen on the decision-making process at all levels of local, state, and national government (Kourvetaris & Dobratz, 1982). In sociology, conventional and unconventional politics are the modes by which power can be obtained (Kourvetaris & Dobratz, 1982). Political science also carries this distinction between the two. Inglehart (1977) explains that conventional participation consists of the institutional and bureaucratized mobilization of public support aimed at creating and maintaining legitimacy in democracies. He provides examples of such activities, including voting in elections, aiding political campaigns, donating, and writing to officials. These avenues of formal participation are intended to contain any kind of social conflict or grievances within the political system and ensure the stability of the state (Inglehart, 1977). However, opposition which cannot be channeled via existing political structures is likely to, not only pursue changes in policy, but also to challenge the political order itself (Scott & Marshall, 2009). This is where unconventional participation behaviors fall. These occur outside the institutional framework (Inglehart & Catterberg, 2002). These include a wide range of unauthorized, protest-oriented activities aimed at showing discontent and achieving social change (Ekman & Amnå, 2012). Further, examples of such activities include unauthorized demonstrations or strikes; acts of civil disobedience (i.e., sittings, roadblocks); seizing of public or private buildings; confronting with different actors, either the police or opposed civil groups; and any act of political violence against either people or private or public property (Finkel et al., 1989). Muller (1979) provides an even more precise definition of these kinds of behaviors, introducing what he calls 'aggressive' political participation. He explains that this type of participation 'possesses the following properties: (1) it must be anti-regime in the sense of deviating from legal or formal regime norms regarding political participation, that is, it must be political action that is illegal; (2) it must have political significance, that is, it must be an attempt to influence the

government that inconveniences it or disrupts its normal functioning; (3) it must involve group activity on the part of non-elites' (Muller, 1979). He very explicitly notes that any legal protest actions (e.g. boycotts, strikes lacking political objectives, individual boycotts) are not included in this type of participation. He also clarifies that any violence initiated by the government with the intention of repressing opposition groups does not usually fall into aggressive political participation, as it is normally sanctioned by the ruling elites.

Political violence is a broad and ill-defined term (Kalyvas, 2019). Violence as a concept is complex, one that can vary widely in approach. One could take a broad, yet distinct, macro-level approach, as Kalyvas (2019) does, or look at meso-level mechanisms and micro-level repertoires or patterns[6]. I am partial to the approach Kalyvas (2019) took, as he takes the existing literature and identifies eleven types of political violence, creating distinct categories on a wide spectrum that relate to one another. At one end of the spectrum, we have the highly organized phenomenon of interstate or international war; at the other end, we find disorganized, low-violence, contentious action, mass protest, and rebellion. So, although precise in definition and conceptually distinct from each other with the ability to be empirically observed in isolation, they are also dynamically interlinked (Kalyvas, 2019). This leads us to the eleven categories Kalyvas identifies in explaining political violence: Interstate war, Civil war, Terrorism, Political assassination, Military coup, Mass protest/Rebellion, Intercommunal violence, Organized crime/Cartels, Ethnic cleansing, Genocide, and State repression.

The type of political violence I am interested in falls within the category of mass protest and rebellion. Now, mass protest is a typically peaceful activity, associated with the expression of group claims and the activity of social movements in democratic settings (Kalyvas, 2019). Sometimes, however, mass protest escalates into low-intensity violence primarily directed against material objects (Kalyvas, 2019). And rarely, it may even escalate into an uprising or rebellion. This is the type of violence I intend to analyze, the violence that arises as a form of escalation of mass protest. To be clear, I do not conflate violent acts of protest with nonviolent forms of protest or civil resistance, such as strikes or sit-ins. However, it is important to recognize this relationship between mass uprisings, insurrections, rebellions, and revolutions, and acknowledge the connection these have to large-scale mass protests, either in its violent or nonviolent forms (Kalyvas, 2019). Peaceful actions can quickly transform into not-so-peaceful ones, and violence and nonviolence often go hand in

[6] See Gutiérrez-Sanín & Wood, 2017; Tilly, 2003.

hand with one another. It's this escalation, this conscious decision to engage in this type of violence, that I am most interested in.

By this type of violence, I am referring to riots and violent repertoires of contention that emerge during or following political protests. More specifically, I use ACLED's definitions of 'riots' and 'violent demonstrations.' ACLED defines 'riots' as 'violent events where demonstrators or mobs engage in violent or destructive acts, including but not limited to physical fights, rock throwing, property destruction, etc. Riots may begin as peaceful protests, or a mob may have the intention to engage in violence from the outset' (ACLED Codebook, 2019). Regardless, riots can be best characterized by the violence used against persons, property, police, or buildings, separately or in combination, for a political purpose. ACLED defines a 'violent demonstration' as a sub-event type of riots, when demonstrators engage in violence and/or destructive activity. Examples include physical clashes with other demonstrators or government forces; vandalism; and road-blocking using barricades, burning tires, or other material (ACLED Codebook, 2019). Furthermore, when I speak of violent acts of protest, violent political activities, or violence, the aforementioned activities are what I am referring to.

II. Key theoretical frameworks

Now that we have an understanding of the key concepts at hand, we can now get into the prominent theoretical frameworks used to understand these phenomena, and specifically, how these frameworks may help us understand the interplay between education, political participation, and violence. One of the most prominent frameworks used to explain the factors influencing political participation and political violence, is rational choice theory. The standard model of rational decision-making incorporates an expected utility-maximizing strategy (Clarke et al., 2004). This baseline model has been applied to a variety of models that have been advanced to explain political choice (Clarke et al., 2004). For example, when looking at voting behavior, a conventional method of political participation, Downs (1957) utilizes a spatial model of explaining vote choice, arguing that a rational voter chooses the party that provides the most benefits or 'streams of utility derived from government activity' (Downs, 1957). This model portrays electoral politics as taking place on a unidimensional, left-right continuum. Voters choose the party whose position is closest to them on this continuum (Clarke et al., 2004). Put simply, rational choice suggests that individuals weigh the

costs and benefits of political participation before deciding whether to participate. If the benefits outweigh the costs, the individual is more likely to participate.

Resource mobilization theory emphasizes the importance of resources, including both tangible resources, such as time, money and facilities, and intangible resources, such as the solidarities, cultural commitments, and identity networks of groups that facilitate their pooling of resources (Jenkins, 2001). The concept of a 'resource' here is taken broadly to mean any social, political, or economic asset or capacity that can contribute to collective action (Jenkins, 2001). Thus, any kind of network or connection that enables collective action, in addition to individual and organizational resources, are relevant. This theory contends that the central factor shaping the rise, development, and outcome of social movements is resources (Jenkins, 2001).

In authoritarian states, social networks and political connections are of particular importance, as citizens of authoritarian states have additional challenges to overcome to engage in political behaviors, such as barriers of access, information, and political risk[7]. For example, educational institutions provide social networks for students and connect them to each other. These networks increase trust and facilitate information exchange and help the formation of associations on the basis of shared beliefs, such as anti-regime organizations (Asadzade, 2021). The commonly accepted resources such as income and education can certainly enable individuals to take political action in a variety of contexts. But in incidents where there is limited government transparency or political risk present, these networks are an invaluable participatory resource that can significantly influence if and how citizens choose to mobilize and participate (Tsai & Xu, 2018). Other literature also suggests that political violence is also more likely to occur when groups have access to resources, such as money, weapons, and recruits, resources used to organize and carry out violence protect group members from retaliation (Gurr, 1970; Tilly, 1978).

There are also prominent psychological frameworks used to understand political participation and political violence. These include, but are not limited to: Relative deprivation, rising expectations, and frustration-aggression (Lupsha, 1971). Relative deprivation theory suggests that engagement in political violence can arise from a perceived gap between individuals' expectations and their actual conditions, particularly in comparison to others. Gurr (1970) defines relative deprivation as citizens' perception of discrepancy between their value expectations and their values capabilities. He explains that 'value expectations are the goods and conditions of life to which

[7] See Guo, 2007; Tsai & Xu, 2018.

people believe they are rightfully entitled, while value capabilities are the goods and conditions, they think they are capable of getting and keeping' (Gurr, 1970). When individuals or groups feel unjustly deprived of resources, opportunities, or rights, they may resort to political violence as a means of rectifying it (Gurr, 1970). This theory emphasizes the role of unfavorable economic and political conditions often associated with experienced inequalities and discrimination, leading to the development of grievances and motivation for individuals to take violent action (Gurr, 1970). Furthermore, relative deprivation is based on the wants and needs that people feel they ought to have or deserve (Gurr, 1970). Similarly, rising expectations, or when people feel that their expectations are not being met, can also lead to frustration and anger, and subsequently, to engagement in political violence. For example, when people gain access to new information and ideas that make them aware of the possibility of a better life, this causes a rise in expectations. When these expectations are not met, people may become frustrated and angry, and they may be more likely to resort to violence to express their frustration and to achieve their goals (Gurr, 1970; Lupsha, 1971).

These theoretical approaches are not singular nor are they all-encompassing, often engaging and interrelating with one another in attempting to explain why people may choose to engage in conventional methods of participation or in violence. Integrating these differing perspectives has helped me in developing my own theoretical framework for my research question and identifying the mechanisms I believe to be responsible for the relationship I suspect lies between education and engagement in violent political protest.

III. The relationship between education and political participation

Education has long since been one of the most dependable indicators of political participation, often considered as the most important factor pertaining to shaping political behaviors and attitudes. Previous literature[8] suggests that education significantly increases conventional political participation and political engagement, in addition to economic well-being, political awareness, and support for democracy, making it a significant facilitator of engagement in forms of conventional political participation (Croke et al., 2016). Subsequently, education has also been found to have a pacifying effect on civil conflict and violence, decreasing the likelihood that one will engage in unconventional politics (Asadzade, 2021). There are many reasons behind this effect; education can create economic,

[8] See Brady et al., 1995; Campbell, 2006; Nie et al., 1996; Putnam, 1995.

political, and social stability by giving people tools to resolve disputes peacefully, making them less likely to risk involvement in violence (Thyne, 2006). These findings are known to be among the most reliable results in empirical social science (Croke et al., 2016). However, this literature has historically been largely focused on the United States and Western Europe, only investigating this causal link between education and political participation in a select set of wealthy democracies. This is highly problematic because citizens of hybrid and authoritarian regimes are faced with different institutional conditions that affect how and why they may choose to or not to participate. Opportunities for conventional political participation are also limited or virtually nonexistent, and when there are channels through which they are able to partake, there are additional challenges citizens must overcome in order to participate, such as barriers of access, information, mobilization resources, and overall political risk (Tsai & Xu, 2018). Ultimately, citizens of authoritarian states behave for fundamentally different reasons, thus, any findings that come from studies conducted in the United States or other democracies, such as the findings above, may not be fully applicable in authoritarian contexts.

Political participation under authoritarianism is limited and heavily controlled by the state. The government normally exercises significant control over political activities, and oftentimes, the conventional participation methods that are allowed, are allowed with the sole purpose of minimizing the potential for protest or collective action (Tsai & Xu, 2018). If elections do, in fact, occur, they are often heavily manipulated to ensure the regime's desired outcome. Participation in elections is concurrently coerced and an instrument of coercion (Morgenbesser & Coma, 2020). So much so that many choose not to engage, even when they possess the resources to. Many non-democratic and hybrid regimes, however, do allow some measure of conventional participation, implementing formal channels to allow citizens to voice their criticisms, providing authorities with feedback to help them address problems of governmental performance, manage citizen dissatisfaction, and minimize the potential for protest (Tsai & Xu, 2018). Citizens' public communications enable the government to change policies that incite widespread discontent. It also informs citizens about the conflicting interests among themselves, thereby discouraging them from coordinating with one another and limiting collective action (Chen & Xu, 2017). Furthermore, there is some evidence to suggest that an authoritarian regime can actually strengthen its rule by allowing citizens to communicate with one another publicly (Chen & Xu, 2017).

However, if citizens were to attempt to circumvent this institutional framework and express dissenting opinions, criticize the government, or engage in any activity deemed threatening to the regime, they may face severe consequences. Forms of such repression could include surveillance, harassment, arbitrary arrests, and false imprisonment (Honwana, 2013). However, even despite these constraints, political participation can exist even under the harshest of conditions that authoritarianism imposes. Though this participation does not come without risk; citizens of these regimes have additional challenges to overcome such as barriers of access, information, and political risk (Tsai & Xu, 2018).

The vast majority of existing literature is focused on democracies, leaving a noticeable gap in the literature on political participation in authoritarian regimes. More specifically, there is a need for more research on the effect of education on engagement in contentious and other unconventional forms of political participation. Studies that do look at participation under authoritarianism largely look at the role of education in engagement in conventional political acts. For example, Croke et. al (2016) examined the impact of formal education on political participation, using Zimbabwe, an electoral authoritarian regime, as their case study. Their findings suggest that formal education can actually reduce levels of political participation and other forms of non-contentious participation, such as voting, contacting one's local councilor, and attending community meetings (Croke et al., 2016). Educated voters were deliberately disengaging, choosing to withdraw from the political sphere under electoral authoritarianism (Croke et al., 2016).

In explaining this inverse relationship, they contend that education makes citizens more critical of the government and more likely to support opposition parties. They also argue that education can make citizens more aware of the risks of political participation in authoritarian regimes. They refer to their primary two mechanisms as what they call a 'resource' mechanism and a 'value change' mechanism. By 'resource' mechanism, they mean to show that educational attainment leads to greater socioeconomic status (SES), which is often seen as a key factor contributing to increased participation among the more educated in liberal democracies (Brady et al., 1995). Subsequently, the 'value change' mechanism refers to findings from advanced democracies[9], that better educated citizens express greater support for democracy. In contrast to what has been previously found in democracies, their findings indicate that formal education can actually reduce levels of political

[9] See Milligan et al., 2004.

participation and other forms of non-contentious participation, suggesting that educated voters were deliberately disengaging, choosing to completely withdraw from the political sphere (Croke et al., 2016). There could be many reasons behind this phenomenon. The authors explain that under the conditions that electoral authoritarian states impose, political participation may lose both its normative and instrumental appeals for many voters (Croke et al., 2016). Elections within these contexts are not fair and free, but rather, performative, with the sole purpose of legitimizing incumbents and appeasing the international community (Levitsky & Way, 2002). Furthermore, when citizens are aware that their participation does not provide genuine input into the political process, refraining from participation may result from the notion that more costly political action is futile and disengagement can serve as an alternative form of dissent (Hermet, 1978; Posner & Simon, 2002). Moreover, considering the vastly different institutional conditions imposed by authoritarianism, there have been findings to suggest that typical predictors of political participation, such as education, function differently in authoritarian states as compared to when observed in democracies.

IV. The relationship between education and political violence

Broadly speaking, the literature on political violence and education generally concludes that education reduces the likelihood of political violence[10]. Zohar (2022) delves a bit deeper into this, stressing the true paradox of education and how this long-held assumption may not always be the case. In particular, he questions one of the frequently used arguments that is used as evidence of the pacifying effect of that education; that education can foster some attitudes, such as tolerance and democratic perspective, and therefore reduce the likelihood of a wide range of conflicts and violations against others. He points out that the effect of education, under certain circumstances, seems to reinforce political violence because education can serve as an empowering tool, which individuals may or may not use, to challenge authority and the status quo[11], especially in countries where there are high levels of social inequalities in place. Education fosters political awareness and participation, in addition to providing political knowledge and social networks. As such, the values that these universities and other higher education institutions instill may serve to legitimize narratives that justify political violence and increase its legitimacy (Zohar et al., 2022).

[10] See Barakat & Urdal, 2009; Collier & Hoeffler, 2004; Østby et al., 2019; Thyne, 2006.
[11] See Friedman et al., 2016; Lange & Dawson, 2010.

Because opportunities for political participation are often limited or non-existent and institutionalized and peaceful paths for political engagement are blocked, violent acts against the government becomes an appealing choice in these states (Asadzade, 2021). This may seem counterintuitive; it would be more logical to presume that educated citizens are more aware of the high opportunity costs that unconventional action may present. However, I would argue that there are conditions under which the opportunity cost for unconventional, aggressive political action is lowered.

For example, some scholars have argued[12] that weak labor market conditions lower the opportunity cost of political activity more for the highly educated than the less educated and more for effort-intensive activities than for less intensive ones (Campante & Chor, 2012). Campante and Chor (2014) found that more-educated individuals are more likely to engage in unconventional political acts, such as demonstrations, boycotts, and strikes; they found this link between education and political protest to be even stronger among those who were facing challenges in the labor market. Though not directly analyzing engagement in violence here, this study, for example, demonstrates that education increases the likelihood of engaging in unconventional modes of political participation, a result that is at odds with much of the existing literature. All this to say, these mixed results are indicative of the complexity of this relationship and reaffirm the notion that previous findings from democratic states do not always hold outside of that context.

V. The intersection between education, participation, and violence

Studies of conventional political participation typically do not investigate political violence, nor do traditional conflict studies tend to focus on how ordinary political activities escalate to political violence or more 'aggressive' forms of participation. As Desai et al. (2018) so aptly puts it, micro-analyses of political violence—with few exceptions—tend to focus disproportionately on those who actually commit or engage in extreme violent action, while ignoring the far larger group of individuals who simply lend their wordless support to such violent movements. It is this in-between, this gradation between nonviolence and violence that requires more attention, not only of the processes that radicalize some individuals into terrorists and insurrectionaries, but how non-violent citizens come to lend this support, or even come to engage in violence themselves. I am of the belief that violence and nonviolence are not mutually exclusive, nor should they be studied as such. I am in

[12] See Campante & Chor, 2012; Campante & Chor, 2014.

strong agreement with Desai et al. (2018), who contends that different acts of political participation and political violence should be analyzed together as part of a cohesive continuum, ranging from non-violent to violent activities, 'where the chief purpose of political action is to signal discontent' (Desai et al., 2018). The studies that have emerged, looking specifically at this relationship between formal education and more aggressive forms of political participation (such as rioting and violent demonstrations), find education to be a rather robust, statistically significant predictor of political protest intensity (Sawyer & Korotayev, 2022). Though, it is important to note that the literature on the role of education in the propensity to engage in violent protest is extremely limited, in authoritarian regimes, even more so.

For example, in Østby et al. (2019)'s thorough review of 42 quantitative studies involving education and political violence, there were only three that tested the relationship between education and rioting, all of which demonstrated a negative relationship. Urdal (2006) tested youth bulges as a predictor of political violence, finding that while higher educational attainment increases the risk of terrorism, it effectively neutralized the impact on proclivity to riot. Sawyer and Korotayev (2022) also found that the relationship between education and riots was significantly negative, that the proliferation of formal education tends to be accompanied by a decrease in the intensity of riots. Though interesting and useful studies, I would be hesitant to establish causality so confidently from these findings without further investigation. These studies look at the country's average level of educational attainment and utilize event data to determine the scale and frequency of violent protest events. I would argue that two fundamental issues arise from this approach. First, as Clarke (2023) emphasizes, many conflict event datasets fall victim to a multitude of coverage biases, including but not limited to:

- Urban bias: are urban events covered more than rural ones?
- Location bias: are certain cities or governorates covered more than others?
- Event type bias: are certain types of events covered more than others?
- Size bias: are larger events covered more than smaller ones?
- Violence bias: are more violent or repressive events covered more than less violent ones?

Consequently, results from quantitative analyses using such datasets are likely to differ in meaningful ways depending on the event coding of these datasets. For example, Clarke (2023) examined five of

the most widely used off-the-shelf protest and conflict event datasets, ACLED, SCAD, GDELT, NAVCO, and MMAD[13], and compared their coverage of events to other locally sourced event datasets. Put briefly, Clarke found that the locally sourced datasets include more events than the off-the-shelf datasets, sometimes by a significant magnitude. Though the locally sourced datasets absolutely have their own sets of limitations, this analysis demonstrates that even the most thorough of event datasets will always have limitations, ones that could largely impact a statistical analysis. I am aware that there is a long-standing tradition in the social sciences of collecting and analyzing data on contentious 'events' using reporting in newspapers and other media sources (Clarke, 2023). However, it is important to be mindful and take into consideration the above questions when evaluating a dataset and determining its usefulness. Notwithstanding the coverage biases that may plague a dataset, it is also vital to properly understand how events are coded and what those criteria are. I understand that establishing these thresholds is tricky, a line needs to be drawn somewhere in order to efficiently and effectively conduct any kind of analysis. However, the question still needs to be asked, what if an event had 99 participants but was only coded as a riot if there were 100 or more? Do we completely discount this as a riot then? Even if 99 people were engaging in violent actions?

There also is the issue of how education is measured. I would argue that using solely literacy rate, which is the percentage of the population that can read and write, as a measure of education is wholly inadequate; high literacy rates do not necessarily equate a high quality of education. For example, Zua (2021) stresses that a country with a high literacy rate may have a low quality of education, and beyond a basic literacy level, there are so many further levels of education, all of which can be lumped in together if solely looking at literacy rate, completely ignoring the knowledge and value changes that may result from each successive year of formal education. Thus, basing education level solely off literacy risks overlooking the nuances that the progression of formal education brings. Completing primary education is far different than the completion of secondary, just as secondary is far different than higher education. Literacy level can be a great indicator of development, but when looking at the effect of education level on behavior and attitudes, I agree with Zua (2021); this distinction between literacy rate and education level is vital. Especially when

[13] ACLED - *Armed Conflict Location and Event Data Project*; SCAD - *Social Conflict Analysis Database*; GDLET - *Global Database of Events, Language, and Tone*; NAVCO - *Nonviolent and Violent Campaigns and Outcomes*; MMAD - *Mass Mobilization in Autocracies Database.*

estimating political attitudes, knowledge of political issues cannot necessarily be related to literacy rate, and as such, should be conceptualized beyond one's ability to read and write (Asadzade, 2021).

In contrast to the above-mentioned studies, Asadzade (2021) contends that education increases the likelihood of violent revolutionary activism in authoritarian states by providing students with the skills and knowledge necessary to organize and carry out protests and other forms of activism. In particular, he argues that higher education can expose students to alternative ideologies and worldviews, which can make them more critical of the government and more likely to support revolutionary change. Asadzade attributes this relationship to the presence of two concurrent mechanisms: First, educational institutions provide social networks for students and connect them to one another. Second, higher education exposes individuals to new ideas and increases their political knowledge, leading to higher expectations of government. As people's political knowledge increases, they become more likely to desire involvement in political decision-making processes (Dahlum & Wig, 2019). When avenues for sanctioned forms of political participation do not exist, as they often don't in authoritarian states, this may subsequently lead to unconventional political action, and further escalating to political violence (Asadzade, 2021).

Methodologically, Asadzade uses a mixed-methods approach, using a combination of county and individual data on education (literacy rate, high school, college education) and participation in political violence for his statistical analysis, in addition to archival evidence and interviews with former revolutionary activists. Qualitative and quantitative findings from his study suggest that higher education is strongly related to participation in violent activism under authoritarianism, underscoring the impact of specific institutional settings. Asadzade emphasizes that archival documents show that before starting armed activity, revolutionary activists were willing to engage in peaceful activism. However, because non-violent activism was not possible due to the 'stifling atmosphere in Iran's political environment,' those activists turned to violence (Asadzade, 2021). Asadzade's findings highlight the significance of political institutions in shaping political behavior and the need for more studies that analyze such behavior with this distinction in mind.

When analyzed under authoritarianism, this relationship between education and propensity towards violent protest has retuned had mixed results, much of the existing literature supporting the notion that educational attainment has a pacifying effect and can generally be expected to increase the opportunity cost of rebellion.[14] While there is evidence to suggest that people with higher levels

[14] See Barakat & Urdal, 2009; Collier & Hoeffler, 2004; Østby et al., 2019.

of education levels peacefully protest more than those without[15], some studies have found that the relationship between education and riots is significantly negative, that the proliferation of formal education tends to be accompanied by a decrease in the intensity of riots (Sawyer & Korotayev, 2022). These mixed findings are indicative of the complexity of this relationship between education and engagement in different types of violence, and that some of this variation could be attributed to the institutional context in which one is evaluating this association. Moreover, this niche is the gap to which I wish to contribute to.

Higher levels of education are generally associated with increased conventional political participation. As such, education has been found to lead to greater political knowledge, which can encourage participation in the political process. However, the relationship between education and political violence is far more complex and context dependent. Although education is often associated with lower levels of engagement in political violence, there are instances where education may actually serve to facilitate, not mitigate, engagement in violence. Now, there are many potential reasons for this, one of which, I would argue, being the institutional context in which this behavior is being studied. Thus, further interdisciplinary research is needed to deepen our understanding of the mechanisms through which education influences political participation, and in particular, the conditions under which increased education may increase the likelihood of turning to violence as a means of political expression.

My theoretical approach

In this study, I wish to examine the relationship between formal education and propensity to engage in violent political activities under authoritarianism. Specifically, I have chosen Tunisia under the rule of former President Zine El Abidine Ben Ali as my case study and will utilize existing survey data from 2013 and 2015 to quantitatively test my argument. I will then use the Tunisian case to analyze my proposed mechanisms that I argue are behind the results of the statistical analysis. I argue that in authoritarian states, higher educational attainment increases the likelihood of engaging in both violent and nonviolent forms of political protest. I also theorize that higher educational attainment increases the likelihood of positive attitudes towards the use of violence and towards other unconventional means of participation. Thus, I have three primary hypotheses that I will focus on:

[15] See Kostelka & Rovny, 2019; Moseley, 2015.

H1: As educational attainment increases, propensity to engage in unconventional forms of political participation and nonviolent protest increases.

H2: As educational attainment increases, propensity to engage in violent political protest activities increases.

H3: As educational attainment increases, positive attitudes towards violent political protest activities increase.

Methods & Data Analysis

Many of the studies that have previously looked at the effect of education on engagement in violence, have largely done so by utilizing negative binomial regressions models and looking at the country's average level of educational attainment and utilizing event data to determine the scale and frequency of violent protest events. Negative binomial regression models are primarily used to analyze count data, when the dependent variable represents the number of occurrences of an event or outcome. So, in the context of this research question, this approach could be used to model the number of violent protest events with average education level being the main predictor. However, my outcome variable of interest is not a count of violent protests. On a base level, I am interested in how an individuals' education level influences their propensity to engage in acts of violent protest. Further, taking into consideration the above literature, theoretical arguments, and methods, I will be approaching my research question by instead using an Instrumental Variable model and utilizing survey data that focuses on values and political engagement.

The Instrumental Variable (IV) model

In this study, I examine the relationship between formal education and propensity to engage in violent protest under an authoritarian regime. In order to best analyze the relationship between education and violent protest, I utilize an Instrumental Variable (IV) model, as Croke et al. (2016) did in Zimbabwe. Human behavior is a tricky thing to analyze; we social scientists are not privy to the thought processes that occur when forming opinions or choosing how to engage and express political opinions. When attempting to establish causality, randomized control trials are often considered the gold standard. However, in many policy-relevant situations these trials are not possible. Utilizing an IV model allows us to analyze an outcome only via a specific treatment; as such, these models allow for the estimation of a causal effect (Becker, 2016).

An Instrumental Variable model is used to determine variation that is exogenous in treatment and to estimate causal inferences (Pokropek, 2016). Although controlled, randomized experiments are considered by many to be the best way to establish causality, under some conditions, there are other ways, such as an IV model, in which causal effects can be estimated from non-experimental observable data (Pokropek, 2016). For example, IV models are often used in analyzing the implementation of policy reforms and education interventions. Orosz et al. (2020) explains that when looking specifically at education interventions, observational data is typically more readily available than experimental data. There is also the issue of endogeneity that may arise because of this, as there is an inherent inability to observe or measure theoretically important variables, which introduces a significant source of bias into impact estimates (Orosz et al., 2020). Using an IV model can mitigate the issue of endogeneity, as this model type identifies an instrument that is correlated with the endogenous explanatory variable of interest, but only affects this outcome variable through its influence on the endogenous variable. So, in the context of this project, an IV model would identify an instrument that affects education but is unrelated to the individual's propensity to engage in violent protest, except through its impact on education. Further, the instrument I have chosen for this case is access to secondary education, as allowed for by the education reform.

Education reforms often produce conditions that are suitable for natural experiments; they generate exogenous variations in education levels across cohorts. Consequently, these reforms can lead to changes in educational attainment that are plausibly unrelated to other factors influencing engagement in violent protest. By leveraging these exogenous sources of variation through an IV approach, we may take advantage of this quasi-random assignment and strengthen the causal claims about the relationship between education and violent protest participation. Further, I chose this particular technique so that I may examine the cross-cohort variation, between those who benefitted from the education reforms and those who did not, in propensity to engage in violent political protest, leveraging Tunisia's 1991 education reform that widely expanded access to formal education.

A threat to this model is the exclusion restriction. Or, that the instrument must affect the outcome solely through its effect on treatment assignment. For example, I am arguing that the education reforms affected certain age cohorts that were either already in, or about to be enrolled in secondary school at the time of these reforms' institutionalization. Thus, I then argue that those with higher levels of education are more likely to engage in acts of violent protest than those with less. By

comparing the treated and control age cohorts and analyzing this variation between them, it allows me to better identify education as a causal factor. But what if the reform did not just affect education level? What if it greatly influenced something else that could have resulted in the outcome I am trying to explain? This is certainly a valid concern.

So let us entertain this for a moment. Say that the implementation of the education reforms completely tanked the economy, leading to soaring unemployment rates, which consequently created grievances amongst the more highly educated as they graduated into a broken economy. Now, this would be a plausible possibility if Tunisia's economy hadn't already been in crisis at the time these reforms were introduced. Most regions of Tunisia, not including the wealthier northern and eastern coastal regions, were greatly marginalized and suffering high unemployment rates, and although nationally the poverty rate was low, less than 10 percent, in the central and western regions the poverty rate neared 30 percent (Honwana, 2013). Further, high unemployment rates, growing poverty rates, and declining wages plagued Tunisia long before the education reforms took place. I have reviewed this and other possible ways in which the reforms could have affected my outcome of interest aside from through education level and could not identify any that I seriously thought could threaten the exclusion restriction here.

Data

I use existing survey data from the Middle Eastern Values Survey. Specifically, I utilize survey data from the 'Comparative Panel Survey on the Dynamics of Change: Belief Formation and Political Engagement in Egypt, Tunisia, and Turkey' conducted by the Middle Eastern Values Study. After a thorough search, there were no survey datasets that I could find that were conducted during Ben-Ali's tenure that asked questions pertaining to political attitudes and behaviors. This did not necessarily come as a surprise, as this kind of data can be particularly tricky to come by when analyzing authoritarian states. I had three initial datasets that I looked at using, the Afrobarometer, the Arab Baraometer, and the Middle Eastern Values Survey (MEVS), all of which did not start collecting data in Tunisia until 2011 at the earliest. Though all these surveys did ask questions pertaining to the Tunisian Revolution, after reviewing the questionnaires of each survey, I found that the questions used by the Arab Barometer and the Afrobarometer were not specific enough for me to be able to accurately measure engagement in violence. For example, all three datasets ask the interviewee if they had engaged in anti-regime demonstrations, or just broadly in the Tunisian

Revolution[16]. Though helpful in gauging participation in the event as a whole, using these kinds of questions risks conflation between violent and nonviolent activities. MEVS was the only survey that explicitly asked specific questions about engagement and attitudes towards violent political activities within the context of protest demonstrations that were specific enough for my analysis.

The panel survey conducted by the Middle Eastern Values Study (MEVS) in Tunisia contains a nationally representative sample of 3,070 adult respondents interviewed in 2013, 2,391 respondents were contacted and re-interviewed in 2015, a response rate of 78% (Moaddel, 2013). The survey instrument consisted of more than 250 items about major aspects of human life and replicated key batteries from the values surveys carried out by several members of this research in 2011-2013 (Moaddel, 2013). It also includes items used in the World Values Surveys, making possible the systematic comparison of Tunisia with these countries and the rest of the world on some of the issues related to religion, politics, and gender (Moaddel, 2013). The sample population was selected using a multi-stage probability sampling design based on data from the National Institute of Statistics (NIS) of Tunisia (Moaddel, 2013). This data comes from 2004 census data from Tunisia, which was updated in 2009 via a large household survey. The questionnaire used face-to-face interviews, of approximately one hour in duration, that were conducted at a location of the respondent's choosing by a Tunisian survey research firm (Moaddel, 2013). For my primary analysis, I will only be using the first round of the MEVS survey data, which was collected in 2013. I will utilize the 2015 round to conduct one of my robustness checks on my findings.

Tunisia as my case study

Tunisia is one of the few states in the Arab world whose boundaries have historical legitimacy that predate the colonial era (Masri, 2017). Its population is small, and its religious and ethnic demographics are largely homogeneous (Masri, 2017). With nearly 99 percent of Tunisia's population of 11 million being Sunni Muslim and ethnically Arab, there is a distinct Tunisian identity, one that is not defined by religion, but rather, has been largely formed around Tunisia's remarkable culture to reform (Masri, 2017). Reformism is so deeply embedded in Tunisia's history, a progressive tradition dating all the way back to the nineteenth century (Masri, 2017). Tunisia has emerged as a nation characterized by a progressive and tolerant society, which has, in turn, led to

[16] Please see *Afrobarometer Data, Tunisia, Round 5, 2013*; *Arab Barometer Wave II – Arab Barometer*, 2011; *Comparative Panel Survey on the Dynamics of Change: Belief Formation and Political Engagement in Egypt, Tunisia, and Turkey | Middle Eastern Values Study*, *2020;* for full questionnaires regarding these questions.

what Masri (2017) describes as a 'distinctly Tunisian sense of modernity, one that combines Western modernity with a unique national identity and shared heritage with the Arab and Muslim worlds' (Masri, 2017).

I. The Bourguiba era

Tunisia gained independence from France in 1956 and was led for three decades by Habib Bourguiba before he was later ousted in a bloodless coup by Zine al-Abidine Ben Ali in 1987. Tunisia's modern history of progressive reforms was introduced by Bourguiba, an autocrat who was hailed as the father of Tunisia (Masri, 2017). Despite the human rights abuses and suppressions of freedoms that plagued Bourguiba's rule, Bourguiba was also responsible for the emancipation of women, the creation of a more secular and moderate Tunisian society, and massive education reforms that impacted generations of Tunisians. Masri (2017) explains that Bourguiba's reforms effectively equipped generations of Tunisians with the skills of critical and analytical thinking that had been so deliberately absent in the rest of the Arab world, where students were, and continue to be, 'victims of regimes' acquiescence with political Islam.' As he so aptly puts it, 'Tunisia measures its progress against Western, not Arab, yardsticks' (Masri, 2017). Thus emerged this sense of Tunisian exceptionalism that was characterized by its tradition of reformism and of progressive and secular education.

II. Ben Ali's Tunisia

Shortly after coming to power in 1987, Ben Ali began to introduce market-oriented policies and implement structural adjustment programs that transformed the Tunisian economic model into a neoliberal one (Görmüş & Akçalı, 2021). Ben Ali's Tunisia thus became a state where neoliberalism functioned hand in hand with authoritarianism (Görmüş & Akçalı, 2021). As explained by Görmüş & Akçalı (2021), in democratic settings, the combination of neoliberalism and welfare creates an effigy of a social state, whereas in semi-democratic or authoritarian settings, it enables state-building or state consolidation. In consequence, the top-down way in which structural adjustment programs were implemented enabled the strengthening of Ben Ali's state domination (Görmüş & Akçalı, 2021). Although these economic reforms lifted the country out of the economic crisis of the 1980s and stimulated economic growth, this market-led growth created serious regional imbalances, with any economic benefits being siphoned off by the powerful, who mainly inhabited the northern and eastern coastal regions (Honwana, 2013; Masri, 2017). Economic development was

centralized in these areas; 80% of Tunisia's GDP was coming from the coast (Görmüş & Akçalı, 2021). Central, western, and southern desert regions were marginalized and had very few jobs due to lack of public and private investment in those areas. Although nationally the poverty rate was low, less than 10 percent, in the central and western regions the poverty rate neared 30 percent (Honwana, 2013). Ben Ali's structural adjustment policies required a further opening of Tunisia's economy to foreign goods, investment, and finance, thus creating greater levels of economic stratification and a proliferation of low-skilled jobs (Honwana, 2013). While macroeconomic indicators may have been moving in a positive direction, there were high unemployment rates and declining real wages in all sectors. These optimistic figures were masking high unemployment rates, income inequalities, and low wages suffered by the average Tunisian (Masri, 2017).

III. The education reforms

In an attempt to help address employment challenges, Ben Ali expanded access to education, making it free and compulsory through lower secondary school. These reforms also stipulated that the state would guarantee free higher education to anyone passing the baccalaureate or high school diploma (Honwana, 2013). These reforms bought the regime time, as would-be job seekers were staying in school longer and out of the job market (Masri, 2017). In 1989, prior to Ben Ali's reforms, 37.2% of the population had not received any kind of formal education. 40.1% had reached primary level, 20.3% had reached secondary, and 2.4% had reached higher education (Campante & Chor, 2012). As a result of these reforms, the number of Tunisians graduating from college tripled within a single decade (Honwana, 2013).

So, while attempting to stave off an unemployment crisis, Ben Ali inadvertently created a newly educated class primarily comprised of unemployed graduates with skills and experience in communication and the organization of collective action (Honwana, 2013). He created a class with high expectations of economic prosperity; a class taught to oppose authoritarianism and uphold democratic values (Masri, 2017). Ironically enough, Ben Ali's demise would be of his own creation. The number of educated people substantially increased due to Ben Ali's free university education policy; between 1990 and 2010, the share of population with a tertiary population increased from 3.7 to 12.3% (Görmüş & Akçalı, 2021). However, the economy did not grow quickly enough to accommodate these new entrants to the job market, thus worsening the unemployment crisis. In January 2008, protests in Gafsa constituted one of the first open demonstrations against Ben Ali's

regime, led by unemployed non-union workers and students who were unable to get jobs in the phosphate mines (Honwana, 2013). Later that same year, unemployed youths staged protests in Skhira in the southeast, and in Ben Gardane (Honwana, 2013).

IV. The Tunisian Revolution and the aftermath

Then, on 17 December 2010, a young man by the name of Mohamed Bouazizi set himself on fire as a protest against unemployment, difficult economic conditions, and mistreatment by police, sparking youth protests that would soon transform beyond anything Ben-Ali could have ever imagined (Honwana, 2013). Only 26 years old at the time of his passing, Bouazizi's self-immolation and subsequent death struck a chord with thousands of young men and women, and in solidarity with Bouazizi, took to the streets of Sidi Bouzid to protest the rampant unemployment and poor living conditions they had been subjected to for far too long. Looking back, Bouazizi's self-immolation was truly the straw that broke the camel's back, as a number of factors, such as the rising youth unemployment and increasingly high levels of economic hardship, coupled with the intense political repression and government corruption, culminated in this moment (Honwana, 2013). The demonstrations quickly spread throughout the central region and protestors were quickly met with violence from the national police, who use tear gas and fired upon them, causing a multitude of deaths and injuries (Honwana, 2013). The regime's violent response to the protestors helped create a connection between the socioeconomic and political demands and contributed to the transformation of what was a largely spontaneous and localized youth protest centered around poor living conditions, police abuse, and lack of jobs, to a determined national revolt (Honwana, 2013). This social movement initiated by young Tunisians quickly grew into a national coalition of forces from all sectors of Tunisian society, spanning age, gender, and ethnicity, and socioeconomic, political, and religious ideologies (Honwana, 2013). Just 29 days of intense protesting later, on 14 January 2011, Ben Ali fled the country, marking the success of the Tunisian revolution and the beginning of Tunisia's steps towards democracy.

In the immediate aftermath of the ousting of Ben Ali, a transitional government was quickly put in place by Prime Minister Mohammed Ghannouchi who initially over as acting president (Al Jazeera, 2021). However, this "new" administration included figures from the previous government, and in consequence, protests continued well into the early months of 2011 (Al Jazeera, 2021). Prime Minister Ghannouchi eventually resigned, and the Tunisian court ruled that the party of former

President Ben Ali be dissolved. People took to the streets once again, but this time to celebrate their victory. The first free elections in decades were held later that year in October, and the formerly banned Islamist-led party, Ennahda, won the majority (Al Jazeera, 2022). They vowed to work with the other secular parties to form a joint coalition and plan a new constitution. However, this comradery did not last for long. By March 2012, polarization between the Islamists and secularists continued to grow, particularly over women's rights (Al Jazeera, 2022). Though a conservative Islamist group, Ennahdha vowed to keep Islamic law out of the new constitution and maintain the secularization that was such a hallmark of this Tunisian exceptionalism. This polarization continued to escalate throughout 2012 and reached a tipping point in February 2013, when secular opposition leader Chokri Belaid was assassinated, prompting mass demonstrations and street protests until Prime Minister Hamadi Jebali resigned (Al Jazeera, 2022). He also promised to dissolve the present government, a sentiment that was quickly rejected by the governing Islamists. Not long after, in July 2013, large scale demonstrations and protests erupted once again in response to the assassination of Tunisian politician Mohamed Brahmi, aimed at the Islamist ruling party, demanding its resignation once again (Al Jazeera, 2022). Under mounting pressure, Ennahda finally agreed to cede power in December 2013. A new constitution, a successful compromise that emphasized human rights and democratic principles, was adopted in January 2014 and democratic elections for a new parliament took place, marking a crucial step towards a more democratic government (Zeidan, 2024). In October–November 2019, Tunisia completed its first peaceful transfer of power from one democratically elected government to another when it inaugurated the second president and second parliament under the new constitution (Zeidan, 2024).

Tunisia was somehow able to avoid a complete collapse of its fledgling democracy, but the tumultuous few years following the revolution exposed the true challenges of democratic transition and the long, arduous process it can really be. And yet, despite all odds, it managed to be done, and Tunisia managed to hold onto that democracy until the late 2010's. It is now classed as a hybrid regime by the Freedom House Index[17] with a score of 51[18], down three points from the previous year. Freedom House attributes this classification to the endemic corruption, economic challenges, security threats, and unresolved problems related to gender equality and transitional justice, citing

[17] The Freedom House Index is a measure of a country's political rights and civil liberties in an annual report, from 'Not Free,' to 'Free,' which is calculated on a weighted scale.
[18] As of March 2024.

these as obstacles to full democratic consolidation (Freedom House, 2024). Most recently of note, is current President Kaïs Saïed's transformation of the political system to expand his own executive power; Since 2021, Saïed has unilaterally replaced the prime minister, formally dissolved the old legislature, issued a new constitution and electoral law, and continued campaigns of legal harassment against his political opponents (Freedom House, 2024). It's hard to say what will happen next. The Arab Spring took the world by surprise, as has the democratic backsliding that Tunisia has increasingly encountered over the past few years. However, as the Arab Spring's first and only success story, there remains hope that they will be able to once again defy the odds and preserve the democracy they fought so hard for.

Case Selection

There are certain scope conditions that I should make clear, as well as my reasoning for choosing Tunisia as my case study. This project broadly focuses on political behavior (specifically, unconventional, aggressive, political participation) in authoritarian states. As such, I would expect my findings to apply most to regime types that lack formal institutions for formal political expression, or where such political expression is not fully free and fair; these could include, hybrid regimes, semi-consolidated authoritarian regimes, or fully consolidated authoritarian regimes.

Tunisia affords certain conditions needed to conduct a quantitative study that could identify a causal relationship between education and engaging in violent political acts. These conditions are:

1. The implementation of an education reform that is conducive to the modelling techniques I wish to use (an Instrumental Variable model) in order to establish a causal relationship between my explanatory and outcome variables.
2. Classification and long-standing history as an authoritarian state.
3. Recorded episodes of violence; specifically, violent protests and riots.
4. The availability of political attitude and behavior survey data that, at the time of data collection, allows for a wide enough temporal scope to capture changes in behavior between age cohorts, contains a nationally representative sample population, and asks specific questions about engagement in violent political activities.

I chose Tunisia because it possesses all the above characteristics that I could not find in other options I explored. Finding survey data, especially survey data that pertains to political

attitudes and behavior, is extremely difficult to come by in authoritarian states. Under these regimes, dissenting opinions may be punished harshly, thus threatening the reliability and validity of any politically sensitive public surveys (Horn, 2011). Only rarely have independent surveys dealing with politically sensitive questions under genuinely repressive conditions been conducted (Horn, 2011). And even in the unlikely event that this can be done, response bias remains to be a large concern. However, when these politically sensitive surveys are asked under conditions of rapid liberalization, perhaps during a transitionary time where the democratization process has just begun, citizens are more likely to be less fearful of criticizing the government and its positions (Horn, 2011), and hence, less likely to self-censor out of fear of political retribution or societal ostracization. The survey data I am utilizing was collected in 2013 and 2015, not long after the fall of Ben-Ali's autocratic regime in early 2011. Because these surveys were conducted shortly after Tunisia began its democratic transition, politically sensitive questions were permitted to be asked and the fear of political retribution was largely eliminated. Yet, these surveys still allow for behaviors and attitudes under authoritarianism to be studied, as the interviewees would have spent the majority of their lives growing up and living in an autocratic regime.

I would also like to clarify that this research examines the effect of formal education level on general propensity of individuals to engage in acts of violent protest, without specific focus on a singular protest event. I define 'violent protest' or 'acts of violent protest' as the destruction of property and/or physical violence against individuals or the state. I do not conflate these actions with other acts of civil disobedience, such as strikes, sit-ins, or other unconventional methods of participation. As such, in gathering my data I ensured that any survey questions utilized were clear in this distinction. It is also important to note that I selected Tunisia due to the aforementioned conditions it offers that I can leverage to explore this relationship between education and violent protest behavior, not necessarily because of the events of the Arab Spring. I am aware that the Tunisian Revolution was the result of a multitude of factors and cannot be attributed to one singular cause. Hence why my focus is a bit narrower; I am not trying to argue that education caused the Arab Spring. Rather, I argue that education makes it more likely for people to firstly, engage in unconventional forms of political participation, and consequently, more likely to escalate to the use of violence. So perhaps when put in a situation where the opportunity may arise to use violence as a means of political expression, that those with more education are more likely to take it.

In particular, Tunisia under Ben-Ali's regime provides an opportunity to analyze such behavior under an authoritarian state, which is one of the key components of interest here. There may also be concern that participation in such violence was conditioned by the broader dynamics of revolutionary mobilization occurring during this particular point in time. I acknowledge this possibility; human behavior cannot be singularly attributed to one factor, and I am not attempting to argue that it is. However, even if this is the case, even if the actions people chose to take were within the context of a large-scale revolution, there may still remain variability in propensity to engage in violent protest that can be explained by education level. This is why I am conducting my analysis on both rounds of the MEVS data; I am using the 2013 for my primary analysis and the 2015 data as a robustness check. If a statistically significant relationship between education level and engagement in violent acts of protest remains even five years after the revolution, can we really still say that this behavior was conditioned solely by the conditions of the revolution? All this being said, I believe the methodological approach I chose for this study, utilizing survey data that includes self-reports of behaviors and attitudes as opposed to analyzing the occurrence of large-scale events, will offer valuable insight and compliment other research that has been done on this topic.

Episodes of violence in Tunisia

Now, without getting into the nonviolence versus violence can of worms, I need to emphasize that violence was absolutely used as a means of political expression in Tunisia, both before, during, and after the revolution, and that such violence was not only a later consequence suffered by other Arab nations. I understand that it is largely held that the Tunisian Revolution was primarily nonviolent,[19] especially when viewed comparatively to the events in Egypt, Libya, and Syria. However, the revolution in Tunisia was far more violent than it has often been assumed; it is the comparison to the other more violent events in other parts of the Arab World that set Tunisia apart, and perhaps proliferate this categorization of its events as completely nonviolent (Nassar, 2016). It is also important to note that the Tunisian Revolution was not the first instance of violent protest events to arise under Ben-Ali, as there had been protests and riots just a few years prior in Gafsa.

Direct physical confrontation with security forces was an important element in the 2011 Tunisian Revolution (Brown, 2021). Rioters destroyed and raided police stations, ruling party infrastructure and government offices. As touched on previously, government corruption was a

[19] See Chenoweth, 2021; Gaaloul, 2017.

particular point of contention, as Craig Brown reports in his interview with a Tunisian political organizer in Gafsa, who explained, 'We set fire in all the police stations. We take the government there. The palace of finance. We find drugs. We find gold, we find a lot of money from when you pay tax there. It's the money of the people and it goes back to the people' (Brown, 2021). Interviews conducted by Asef Bayat echo this sentiment. He recounts that in the immediate aftermath of Mohammed Bouazizi's self-immolation, news of the initial protests that broke out in Sidi Bouzid spread quickly, 'the youth of these subaltern households communicating plans for mobilization and protesting online or through phones and friends' (Bayat, 2021). While sporadic protests and clashes with the police continued in Sidi Bouzid, online activists organized events and disseminated information to organizers across the country. Student activists began thinking of ways to escalate the protests already happening, some of which returned to their hometowns to aide in doing so, clashing with police and defending their neighborhoods from their repressive actions (Bayat, 2021). Some residents would face the police violence by throwing rocks and gravel, others would go further and attack police stations and other government buildings, burning them down and driving police out (Bayat, 2021). Civil unrest continued to spread, mass riots and battles with security forces intensified; the people were refusing to back down.

48% of Tunisians said that they participated in the revolutionary movement against President Zein al-Abedin Ben Ali (Moaddel, 2013). 6% indicated that they were likely to 'participate in a violent political activity that might lead to property damage or injury to others.' Moaddel (2013) explains that though seemingly low, when translated into absolute numbers, these figures are actually quite high. He puts it this way: Given that about 8.2 million of the country's estimated population in 2012 who were age 15 or older, six percent of this population is 495,402 individuals. For a country of about 11 million (at the time of the survey), that is quite a significant number of people who reported that they are likely to get involved in a violent political activity. It is for this combination of characteristics, the education reforms, the presence of the authoritarian institutions, the episodes of violent political protest, and the availability of survey data, that I chose Tunisia as my case study.

Coding my variables

Engagement in violent protest is my key dependent variable. I am also interested in the perceived effectiveness of this particular use of violence, as well as in engagement in nonviolent protest, and test these as secondary outcome variables. I will be operationalizing them in the same manner as my main dependent variable. I utilize a binary coding structure in creating my variables,

and have six variables of interest, including: Engagement in violence; Engagement in nonviolence; Future engagement in violence; Future engagement in nonviolence; Attitudes towards effectiveness of violence; and attitudes towards effectiveness of nonviolence[20].

There were four possible responses for these survey questions, ranging on a scale of 1 to 4. The following survey questions were asked regarding engagement in violent and nonviolent protest activities; these responses were used in coding for the variables, 'Engagement in violence' and 'Engagement in Nonviolence.' The interviewer asked the participants the frequency of their engagement in the following activities since December 2010:

- Participate in a violent political activity that might lead to property damage or injury of others? (v57_t1)
- Attend a non-violent protest, march, or sit-in? (v53_t1)

These were the response options:

1. A Lot
2. Sometimes
3. Rarely
4. Not at all

For responses of 1 and 2, 'A Lot' and 'Sometimes,' I coded this as 1. For responses of 3 and 4, 'Rarely' and 'Not at all,' I coded this as 0. I chose to break it down this way because responding 1 or 2 implies that the interviewee has partaken in the activities in question at least on multiple occasions. Whereas I took a bit more of a conservative approach grouping together responses of 3 and 4, as I took this to possibly indicate either there was no sort of action taken or only rare, sporadic action that was not significant enough to warrant reporting a 1 or 2.

I want to be clear about the way the question is worded and the assumptions I made about what kinds of activities the questions were referring to. In particular, for 'Engagement in violence,' the question asks broadly about whether the individual had participated in a violent political activity that might lead to property damage or injury of others. There may be concern that this terminology is not narrow enough to know for sure that when answering, that the interviewee would be

[20] See Appendix A for all referenced survey questions used to operationalize these variables.

indicating their participation in violent acts of political protest or riots. However, I am comfortable inferring that these are the acts to which this question was referring to, as it was asked within the context of other modes of political participation, such as 'signing a petition', 'attending a demonstration in support of a political figure', or 'attending a nonviolent march demonstration, or sit-in'. Also, there were later questions that asked about the use of violence within the context of 'using violence against the enemies of Islam in Tunisia' and attacking on different groups of people (such as, US military personnel or civilians). Engagement in these types of violence would more fall along the lines of terrorism and violent extremism, thus distinguishing them from the types of violence that the previous survey question was referring to. Furthermore, I feel that using these questions is appropriate in measuring my outcomes of interest.

The following survey questions were asked regarding future engagement in violent and nonviolent protest activities; these responses were used in coding for the variables, 'Future engagement in violence' and 'Future engagement in nonviolence.' The interviewer asked the participants how likely it was that they would participate in these activities in the next 12 months:

- Participate in a violent political activity that might lead to property damage or injury of others? (t1_v88)
- Attend a non-violent protest, march, or sit-in? (t1_v84)

These were the response options:

1. Extremely unlikely
2. Somewhat unlikely
3. Somewhat likely
4. Extremely likely

For responses of 1 and 2, 'Extremely unlikely' and 'Somewhat unlikely,' I coded this as 0. For responses of 3 and 4, 'Somewhat likely' and 'Extremely likely,' I coded this as 1. I used the same logic as above and chose to break it down this way because responding 3 or 4 implies that the interviewee is quite receptive to the possibility of engaging in violent or nonviolent activities in the future. Whereas responses of 1 and 2, indicate it is extremely unlikely that there will ever be engagement in such action and that any potential interest in such action was not significant enough to warrant reporting a 3 or 4.

Lastly, the following survey questions were asked regarding future engagement in violent and nonviolent protest activities; these responses were used in coding for the variables of 'Attitudes towards effectiveness of violence,' and 'Attitudes towards effectiveness of nonviolence.' The interviewer asked participants how effective they thought the following types of political action were:

- Engage in a violent political activity that might lead to property damage or injury of others (v61_t1)
- Attend a non-violent protest, march, or sit-in (v59_t1)

These were the response options:

1. Not at all effective
2. Somewhat effective
3. Effective
4. Extremely effective

For a response of 1, 'Not at all effective,' I coded this as 0. For responses of 2, 3, and 4, 'Somewhat effective,' 'Effective,' and 'Extremely effective,' I coded this as 1. Responding 2, 3, or 4 implies that the interviewee is of the opinion that engaging in violent or nonviolent activities has some level of effectiveness. Whereas a response of 1 indicates that the interviewee does not believe that these activities are at all effective.

Education is my key explanatory variable, operationalized by level of educational attainment (i.e. primary, lower secondary, upper secondary, or higher education). There were originally nine categories for education level. I assigned and recoded these nine categories into four, to show more even increments of increase.

The original nine levels were:

1. No formal education
2. Incomplete primary school
3. Complete primary school
4. Incomplete secondary school: technical/vocational type
5. Complete secondary school: technical/vocational type
6. Incomplete secondary: university-preparatory type

7. Complete secondary: university-preparatory type
8. Some university-level education, without a degree
9. University-level education, with degree (include post-graduate education)

I regrouped and recoded them as: No formal education and incomplete primary school (1, 2) = 0, Complete primary school (3) = 1, Incomplete secondary school technical/vocational type & university-preparatory type (4, 6) = 2, Complete secondary school: technical/vocational type & university-preparatory type (5, 7) = 3, and Some university-level education, without a degree and university-level education, with degree (8, 9) = 4.

Secondary access is my instrumental variable. I operationalize it by the creation of cohorts based on birth year in order to analyze the variation in these outcome variables between cohorts that were young enough to be affected by the 1991 education reform to citizens from cohorts that were too old to benefit from the educational expansion.

The bounds of my cohorts are as follows:

> 1) Those who were 12 or younger when the reform was implemented will be considered **'fully treated.'** They receive the full benefits of the reform, including the extra year of secondary schooling and the free tuition.
>
> 2) Those aged 13–18 will be considered **'partially treated,'** as they receive some benefit from the reform. These students were already in secondary school when the reform was instituted but received some benefit in the year of extra schooling and part of their overall secondary schooling being tuition free.
>
> 3) Those aged 19 or older in 1991, will be my **control** group, as they were unaffected by the reform.

Tunisia's education system is divided into three basic levels, including primary education, lower and upper secondary education, and higher education. Students are generally aged 6-11 during primary education, 12-18 for lower and upper secondary education, and 19-23 for higher education (NCES, 1996). Primary school was already mandatory and free, due to policies implemented by

former President Habib Bourguiba (Clark, 2006). Under Ben-Ali, Act No. 91-65 of 29 of July 1991[21], or the New Education Act, made changes to the educational system in the following ways:

Article 4 of the New Education Act states that '… the State guarantees, free of charge, to all those of school-attendance age, the right to schooling and offers to all the pupils, so long as they are able to pursue their studies regularly in accordance with the regulations in force, the maximum equality of chances to benefit from this right.' Article 7 adds, for the first time, the principle that basic education - the duration of which is fixed at nine years by article 4, 'is compulsory from the age of six onwards for every pupil able to pursue regularly his or her studies.' The length of instruction at the primary and secondary levels increased from 12 to a total of 13 years and basic was education made compulsory up to the 9th grade for all students between ages 6–16 and guaranteed to be completely free of charge (Clark, 2006). Individuals in the 'fully treated' cohort are coded as 1. Those in the control cohort are coded as 0. Individuals in the 'partially treated' cohort are coded according to the number of additional years of schooling available to them, receiving a 'dosage[22]' of the treatment. This coding scheme outlines my instrumental variable, 'Secondary access', which is my source of exogenous variation.

[21] As reported in the United Nations (1994) Convention on the Right of the Child.
[22] I modelled the coding of my cohorts based on the design utilized by Croke et al. (2016), who labelled their cohorts in the same way and employed such 'dosages' to their partially treated age groups. They were able to increase treatment amount in increments of 0.25 for their 'partially treated' cohorts, whereas I utilized smaller increments (0.143) as I had more age groups fall into my 'partially treated' cohort.

Findings

I created seven models total for my analysis, controlling for gender, age, and ethnicity in each model. IV modelling requires a strong relationship between the instrument (*secondary access*) and the endogenous variable (*education level*). I first tested the relationship between educational attainment (*education level*) and access to secondary education (*secondary access*) to identify whether the reform increased average educational attainment across cohorts. I did so using two models, one that did not include my control variables and one that did. The results of these models,

Table 1: Effect of Secondary Access on Educational Attainment

	Dependent variable:	
	Education Level (1)	Education Level (2)
Secondary_Access	1.307*** (0.053)	0.353*** (0.091)
Sex		-0.102*** (0.012)
Age		-0.031*** (0.002)
Ethnicity		0.0002 (0.0002)
Constant	1.463*** (0.031)	3.526*** (0.149)
Observations	3,064	3,064
R2	0.167	0.226
Adjusted R2	0.167	0.225
Residual Std. Error	1.345 (df = 3062)	1.297 (df = 3059)
F Statistic	613.657*** (df = 1; 3062).	223.302*** (df = 4; 3059)

Note: * p<0.1; ** p<0.05; *** p<0.01

shown in Table 1, indicate that there is a significant positive association between *secondary_access* and *education level* both with and without the controls, suggesting that individuals with greater access to secondary education tend to have higher levels of educational attainment. Or, that cohorts fully treated by the reform have substantially higher levels of educational attainment as opposed to those in the control group. In the second model, there were significant negative associations between gender and age with education level, which was to be expected. On average, being female and of

older age is associated with lower levels of educational attainment. The F statistics of both models were high and indicitave of a strong instrument, 613.657 and 223.302, respectively. Further, given the high F statistics and the significant positive relationship between the education reform and educational attainment demonstrated in both models, that allowed me to move forward with the IV model, with *secondary access* as my instrumental variable and *education level* as my independent variable.

Engagement in violence and nonviolence

My first IV model, shown in Table 2a, analyzes the effect of education on engagement in violent protest. The findings from this IV model indicate that there is a statistically significant, positive relationship between education level and engagement in violent political activities. The coefficient estimate for education level is 0.006. This suggests that for each unit increase in education level (e.g., from 0 to 1, or from 1 to 2, and so on), the likelihood of engaging in acts of violent political activities increases by 0.006%.

Table 2a: Engagement in Violent and Nonviolent Political Activities

	Dependent variable:	
	Engagement in violence	Engagement in nonviolence
Education Level	0.006**	0.107***
	(0.003)	(0.009)
Constant	-0.001	-0.068***
	(0.006)	(0.019)
Observations	3,016	3,039
R2	-0.0003	0.027
Adjusted R2	-0.001	0.027
Residual Std. Error	0.106 (df = 3014)	0.345 (df = 3037)

Note: * p<0.1; ** p<0.05; *** p<0.01

As a reminder, I have four categories of education level, each representing a different level of educational attainment. These range from no education, completed primary education, completed secondary education, and partial or completed higher education. This model suggests that individuals who have either fully or partially completed any amount of higher education (coded as 4) compared to those with no or incomplete primary education (coded as 0), are more likely to engage in violent acts of protests. The estimated increase in the likelihood of violence between those with

higher education and those with none, is approximately 2.44%. Similarly, for individuals who have completed secondary school (coded as 3) compared to those with no or incomplete primary education (coded as 0), the estimated increase in the likelihood of engaging in violent acts of protest is approximately 1.83%. Though seemingly small, this is still a significant finding that contrasts with what many studies have previously found.

The pre-treatment mean for engaging in violence, or the average likelihood of engaging in violence for those in the control group who were not subjected to the education reform, is 0.00952381. As mentioned previously, I am utilizing a binary coding scale where any indication of engagement in violence is coded as 1, whereas no indication is coded as 0. So, when looking at the above resulting coefficient of 0.006, the proportion of the effect of education on engaging in violence relative to the pre-treatment mean is approximately 0.63, which is a substantial effect size. This means that the treatment (access to secondary education) has increased the outcome variable (engaging in violent political activities) to a level that is approximately 63% of what it was before the treatment, thus, suggesting that increased education has a significant impact on one's likelihood of engaging in violence.

My second IV model, also shown in Table 2a, analyzes the effect of education on engagement in nonviolent activities. The results reveal a significant positive relationship between education level and engagement in non-violent protest activities; the coefficient estimate for education level is 0.1072 and is statistically significant. For each unit increase in education level, the likelihood of engaging in acts of nonviolent protest increases by 10.72%, suggesting that individuals with higher levels of educational attainment are more likely to participate in non-violent forms of protest. This model suggests that individuals who have either fully or partially completed any amount of higher education compared to those with no or incomplete primary education have an estimated increase in the likelihood of engaging in nonviolent acts of protest of approximately 42.88%. Similarly, for individuals who have completed secondary school, the estimated increase in the likelihood of engaging in nonviolent political activities is approximately 32.16%, compared to those with no or incomplete primary education.

The pre-treatment mean for engaging in nonviolent political activities, or the average likelihood of engaging in nonviolence for those in the control group who were not subjected to the education reform, is 0.1094675. As I did above with the violence variable, I also utilize a binary

coding scale here, where any indication of engagement in nonviolence is coded as 1, whereas no indication is coded as 0. So, when looking at the above resulting coefficient of 0.107, the proportion of the effect of education on engaging in violence relative to the pre-treatment mean is approximately 0.98, which is also a substantial effect size. The treatment (access to secondary education) increased the outcome variable (engaging in nonviolent political activities) to a level that is approximately 98% of what it was before the treatment, suggesting that increased education has a significant impact on one's likelihood of engaging in acts of nonviolent protest.

Future engagement in violence and nonviolence

Table 2b: Future Engagement in Violent and Nonviolent Political Activities

	Dependent variable:	
	F. engagement in violence	F. engagement in nonviolence
Education Level	0.001	0.151***
	(0.006)	(0.012)
Constant	0.057***	0.020
	(0.013)	(0.025)
Observations	3,014	3,018
R2	0.0003	0.016
Adjusted R2	-0.0001	0.016
Residual Std. Error	0.235 (df = 3012)	0.462 (df = 3016)

Note: * p<0.1; ** p<0.05; *** p<0.01

While the third IV model analyzing future engagement in violence was not statistically significant, there was a significant relationship shown in my fourth model, that looked at education level and future engagement in nonviolent forms of protest. Shown in Table 2b, this fourth IV model finds a statistically significant positive association between Education Level and indication of future engagement in nonviolent protest activities. The coefficient estimate for education level is 0.151, meaning for each unit increase in education level, the likelihood of engaging in acts of nonviolent protest increases by 15.05%. This suggests that individuals with higher levels of educational attainment are more likely to report plans to engage in non-violent forms of protest in

the future; those with higher education are 60.2% more likely to engage in nonviolent forms of protest in the future and those with completed secondary education are 45.15% more likely.

Attitudes towards effectiveness of violence and nonviolence

Table 2c: Attitudes Towards the Effectiveness of Violent and Non-violent Political Activities

	Dependent variable:	
	Att. towards e. of violence	Att. towards e. of nonviolence
Education Level	0.047***	-0.025*
	(0.009)	(0.014)
Constant	0.021	0.637***
	(0.020)	(0.031)
Observations	2,728	2,762
R2	-0.038	0.008
Adjusted R2	-0.038	0.008
Residual Std. Error	0.329 (df = 2726)	0.491 (df = 2760)

Note: * p<0.1; ** p<0.05; *** p<0.01

My last two models, shown in Table 2c, tested for the relationship between education level and attitudes towards the overall effectiveness of violence versus nonviolence. They both indicated statistically significant relationships, with coefficients of 0.047 and -0.025, respectively. Beginning with the effectiveness of violence model, which returned a significant coefficient estimate of 0.047, for each unit increase in education level, the likelihood of viewing violent protest as effective increases by 4.7%. This indicates that individuals with higher levels of educational attainment are more likely to view violent acts of protest as effective means of achieving political goals. More specifically, those with higher education are 18.8% more likely to believe violence is effective, and those with completed secondary education are 14.1% more likely. Contrastingly, the latter model testing for the relationship between education and attitudes towards the effectiveness of nonviolence returned a negative coefficient of -0.025, meaning that for each unit increase of education level, the likelihood of viewing nonviolent protests as effective decreases by 2.5%. So, someone who has completed any amount of higher education is 10% less likely to believe nonviolence is effective than

someone with no or incomplete primary education. Those who completed secondary education are 7.5% less likely.

Choosing my controls

In creating my IV models, I only controlled for the variables of ethnicity, gender, and age, because any other potentially influential variables, like employment or governorate, could be affected by the implementation of the treatment, and consequently, introduce bias to the models. For example, higher educational attainment could result in an increased likelihood of being employed in a well-paying job. This could consequently affect one's socioeconomic status, or even ability to move to a wealthier, more populace governorate. Or maybe they moved to a city specifically for university, that they would not have otherwise moved to. These variables (e.g. employment status, socioeconomic status, governorate, etc.) could thus be considered post-treatment variables, as they are susceptible to the effects of the educational attainment caused by the reform, and as such, potential confounders for the treatment effect. Further, I made the decision to control only for variables that would have been present prior the treatment, such as one's ethnicity, gender, or age.

Robustness Tests

I conducted three robustness checks. For my first robustness check, I replicated my original analysis using the second round of MEVS data. In 2015, the original interviewees from the first round in 2013 were re-contacted and re-interviewed, at a high response rate of over 70%. I used the same IV models that I created for my initial analysis that used the 2013 data, and conducted the same analysis on the same variables from the second round of MEVS data that was collected in 2015. The 2015 data is useful because it can help me demonstrate temporal consistency in attitudes and behaviors. If a statistically significant relationship between education level and engagement in violent acts of protest remains even five years after the revolution, this consistency across different time periods reinforces the robustness of my primary analysis.

Replicating my analysis using second round data

The results from my IV models using the 2015 dataset were interesting, closely resembling those from the 2013 dataset, returning the same, if not higher, statistically significant relationships for all but one of my variables. However, I should note that the second round did not re-ask the

questions pertaining to future engagement in violence and nonviolence (which makes sense given they were conducting the second round in the future that these questions initially asked about), so I was only able to recreate my analysis on the remaining four models.

Table 3a: Engagement in Violent and Nonviolent Political Activities - *(2015 data)*

	Dependent variable:	
	Engagement in violence	Engagement in nonviolence
Education Level	0.008**	0.057***
	(0.004)	(0.007)
Constant	0.005	-0.030**
	(0.008)	(0.015)
Observations	2,324	2,327
R2	-0.006	0.045
Adjusted R2	-0.007	0.044
Residual Std. Error	0.144 (df = 2322)	0.268 (df = 2325)

Note: * p<0.1; ** p<0.05; *** p<0.01

My first IV model, shown in Table 3a, analyzes the effect of education on engagement in violent political activities. It was statistically significant, indicating a strong, positive relationship between education level and engagement in violent protest. The coefficient estimate for education level increased from 0.006 in the first-round data, to 0.008 in the second, meaning that not only did my initial findings maintain their significance, but actually increased over time. Interestingly enough, the coefficient for education level in my second IV model, also shown in Table 3a, which analyzes engagement in nonviolent political activities, decreased over time. Though still statistically significant, indicating a strong, positive relationship, the coefficient decreased from 0.107 in the first-round data, to 0.057 in the second round. So, two years after the initial survey, these findings suggest that more highly educated people were increasingly likely to engage in violent political activities, and less likely to engage in nonviolent political activities, as opposed to what was previously reported two years prior.

My third IV model examining attitudes towards the effectiveness of violence, shown in Table 3b, resulted in an insignificant relationship, contrary to the strong significance it returned when

using the first-round data. My last model, which looked at attitudes towards the effectiveness of nonviolence, returned a negative coefficient of -0.038, similar to that of the first round, which was -0.025.

Table 3b: Attitudes Towards the Effectiveness of Violent and Nonviolent Political Activities - *(2015 data)*

	Dependent variable:	
	Att. towards e. of violence	Att. towards e. of nonviolence
Education Level	0.003	-0.038**
	(0.010)	(0.016)
Constant	0.120***	0.608***
	(0.023)	(0.035)
Observations	2,006	2,017
R2	-0.00002	0.019
Adjusted R2	-0.001	0.018
Residual Std. Error	0.333 (df = 2004)	0.495 (df = 2015)

Note: * p<0.1; ** p<0.05; *** p<0.01

When looking comparatively between the results of the two rounds of data, it is interesting to see temporally how behaviors and attitudes changed (or didn't change) over the two-year period, and how some of the initial results informed what would happen later. For example, the enduring negative relationship between education and perceived efficacy of nonviolence is rather intriguing. Those with higher education indicate participation in nonviolent, unconventional political activities at much higher rates. However, from the first round to the second, likelihood of engagement in nonviolence dropped by nearly half. This is a logical outcome, as responses from the first round indicated that those with higher education were less likely to view nonviolence as effective means of achieving political goals, so it makes sense why engagement in nonviolent activities subsequently drops. This could also potentially explain the increase in engagement in violence. According to the first-round data, the more highly educated were more likely to view violence as an effective means to achieve a political goal. Fast forward two years later, the results demonstrate an even higher indication of engagement in violent political activities amongst the more highly educated, but their

attitudes towards violence's effectiveness plummeted, no longer showing a significant difference to their less educated counterparts.

Although the more highly educated did not indicate an increased likelihood in engaging in violence in the future in the first-round data, this could be in instance of social desirability bias where the interviewee tried to answer the question in a way that was more ethically acceptable (which, if this were the case, could mean even more people engaged in violence than demonstrated by the data). Needless to say, when looking at these numbers contextually, they make sense. Protests and street demonstrations did not simply end when Ben-Ali stepped down. The early days of democratization were full of uncertainty, and political instability in Tunisia persisted until January 2014 when Ennahda stepped down and democratic elections for a new parliament took place. Perhaps educated individuals who took part in peaceful protests and demonstrations during the revolution grew disillusioned with the efficacy of their previous actions when conditions failed to improve. This would explain the higher likelihood of engagement in nonviolence in the first-round data and the subsequent decrease in likelihood of nonviolent engagement in the second-round data. This could also explain the increased likelihood of perceiving violence as an effective means of achieving political goals and nonviolence as less effective. Further, when put in a situation where the opportunity may arise to utilize violence as a means of political expression, those with more education were more likely to escalate and engage in acts of violence.

Removing the 'partially treated'

My second and third robustness tests were completely removing the partially treated group from my IV models, for both the first and second rounds of surveys. This allows us to focus instead on a sharp change in the treatment by excluding the coding grade of the partially treated group. Though removing part of my sample, I am confident that the remaining sample size is still large enough to be able to run these tests. For both the first and second rounds of data[23], these checks returned the same statistically significant relationships, further reinforcing my original analysis. I will discuss here the 2013 data, as this is my original dataset used for my primary analyses[24]. My first IV model, shown in Table 4a, analyzes the effect of education on engagement in violent political activities. Once again, it was statistically significant, indicating a strong, positive relationship between education level and

[23] For the 2015 data robustness check, please see Appendix B.
[24] Please see Appendix B. Findings from every model I tested will be included there.

engagement in violent protest. The coefficient estimate for education level increased from 0.006 (from my initial analysis that includes the partially treated), to 0.007 in the second. The coefficient for education level in my second IV model, also shown in Table 4a, which analyzes engagement in

Table 4a: Engagement in Violent and Nonviolent Political Activities - *(Removal of partially treated, 2013 data)*

	Dependent variable:	
	Engagement in violence	Engagement in nonviolence
Education Level	0.007**	0.111***
	(0.003)	(0.009)
Constant	-0.002	-0.069***
	(0.006)	(0.019)
Observations	2,649	2,667
R2	0.001	0.025
Adjusted R2	0.003	0.025
Residual Std. Error	0.109 (df = 2647)	0.348 (df = 2665)

Note: * p<0.1; ** p<0.05; *** p<0.01

Table 4b: Future Engagement in Violent and Nonviolent Political Activities - *(Removal of partially treated, 2013 data)*

	Dependent variable:	
	F. engagement in violence	F. engagement in nonviolence
Education Level	0.002	0.153***
	(0.006)	(0.012)
Constant	0.057***	0.021
	(0.013)	(0.025)
Observations	2,647	2,648
R2	0.0001	0.027
Adjusted R2	0.0002	0.027
Residual Std. Error	0.238 (df = 2645)	0.459 (df = 2646)

Note: * p<0.1; ** p<0.05; *** p<0.01

nonviolent political activities, also experienced a slight increase, going from 0.107 to 0.111. Thus, strong, positive relationships, maintained even with the removal of the partially treated group.

My third and fourth IV models, shown in Table 4b, also returned similar results as the original dataset. Once again, the third IV model, that looks at future engagement in violence, was not statistically significant. And once again, there was a significant, positive relationship shown in my fourth model, which looked at education level and future engagement in nonviolent forms of protest. With the removal of the partially treated, the fourth model returned a coefficient of 0.111, a slight decrease from the original dataset, which had a coefficient estimate of 0.151. My last two models, shown in Table 4c, unsurprisingly also mirrored closely the numbers of the original dataset.

Table 4c: Attitudes Towards the Effectiveness of Violent and Non-violent Political Activities - *(Removal of partially treated, 2013 data)*

	Dependent variable:	
	Att. towards e. of violence	Att. towards e. of nonviolence
Education Level	0.049***	-0.025**
	(0.010)	(0.014)
Constant	0.021	0.645***
	(0.020)	(0.030)
Observations	2,389	2,418
R2	-0.038	0.006
Adjusted R2	-0.038	0.006
Residual Std. Error	0.331 (df = 2387)	0.490 (df = 2416)

Note: * p<0.1; ** p<0.05; *** p<0.01

The last model, looking at future engagement in nonviolence, actually returned the exact same coefficient as the original.

Discussion

These are significant findings, in the sense that they are largely contrary to previous studies on the topic, offering support to all three of my hypotheses. As a reminder, I hypothesized the following:

H1: As educational attainment increases, propensity to engage in unconventional forms of political participation and nonviolent protest increases.

H2: As educational attainment increases, propensity to engage in violent political activities increases.

H3: As educational attainment increases, positive attitudes towards violent political activities increases.

Although my main variable of interest, *Engagement in violence,* only demonstrated what may be considered a small percentage increase between cohorts, it is still a statistically significant increase that, in it of itself, is contrary to previous findings. *Engagement in nonviolence* was also largely significant, suggesting that completing any amount of higher education compared to those with no or incomplete primary education can increase the likelihood of engaging in nonviolent political activities by over 40%. However, the findings I was most surprised to see were the attitudes towards the effectiveness of violence and nonviolence. These two models showed that more highly educated individuals were more likely to view violence as effective and less likely to view nonviolence as effective. While I did expect the former result, it was the negative coefficient for the nonviolence model that was most unexpected. Altogether, these results serve as strong evidence to support my hypothesis that higher education increases the likelihood of engaging in violent political activities under authoritarianism. However, there are many questions that arise in consequence to such results. Why does it appear that better educated Tunisians are more likely to engage in both violent and nonviolent protests? Why do these better educated individuals view violent political activities as more effective than nonviolent ones? And why are the more highly educated more likely to engage in nonviolent protests than violent ones, despite viewing them as less effective?

Exploring the mechanisms

The IV models produced interesting results, providing evidence that is demonstrative of increased educational attainment increasing the likelihood of engaging in violent political activities. But right now, this model simply indicates a relationship between the variables I chose to test, suggesting that education has an effect on one's engagement in violent or nonviolent political activities. I want to understand *why* this phenomenon is happening and unpack the underlying mechanisms present, especially since these findings are contrary to much of the previous literature. Building on the empirical evidence provided by my IV models, I propose four mechanisms that I

suspect to be behind these findings that suggest that the more highly educated have an increased likelihood of engaging in violent acts of political protest.

When educational attainment increases:

1. Citizens will have higher expectations of government and economic prosperity as education level increases.
2. As these higher expectations are not met, feelings of relative deprivation and grievances are developed, as the wants and needs that people feel they ought to have or deserve (both economic and political) are not being met.
3. Authoritarian states are comprised of rigid institutions that do not offer formal avenues of political participation to express these grievances.
4. These institutional conditions exacerbate citizens grievances, resulting in the use violence as a means of political expression as they have no other means of participation.

In my literature review, I provided an overview of the major findings and theories behind the role of education in political participation and political violence. I drew from all of these works in developing the above four mechanisms and will now attempt to apply them to the case of Tunisia under Ben Ali. By synthesizing insights from these theoretical perspectives alongside empirical evidence from Tunisia, I aim to construct a cohesive theoretical framework that connects an increase in formal education to an increased propensity to engage in violent political activities in authoritarian states. Put shortly, the IV estimates show an effect, and this secondary analysis will explore the mechanisms and causal chain behind the empirical findings.

What happened after the education reform?

In 1991, then-President Ben Ali instituted a major education reform that increased access to secondary and higher education, allowing more and more people the chance to continue with their education for free. In 1989, prior to the reforms, 37.2% of the population had not received any kind of formal education. 40.1% had reached primary level, 20.3% had reached secondary, and 2.4% had reached higher education (Campante & Chor, 2012). In direct consequence of these reforms, the number of Tunisians graduating from college tripled within a single decade (Honwana, 2013).

Further, in direct consequence of the education reform, educational attainment in Tunisia greatly increased.

I. Rising Expectations

My first mechanism is the higher expectations that emerged amongst the more highly educated. Higher expectations has been defined by Oberschall (1969) as 'the process by which people of a lower standard of living become acquainted with the benefits of a higher standard, and in consequence of this… come to desire or demand the goods of the higher level' (Oberschall, 1969). One of the processes by which rising expectations are produced is the expansion of the education system. As the education system produces a growing number of graduates and degree-holders who no longer consider 'lower-skilled' forms of work appropriate, but who cannot be absorbed into the clerical and civil service sectors of the economy, this leads to the growth of an educated unemployed or under-employed class whose goals and ambitions remain unfulfilled (Oberschall, 1969).

Higher expectations don't only include material goods. As education increases, expectations of the government also increase (Asadzade, 2021). For example, individuals with secondary education will have higher expectations than those with just primary education. Similarly, those with college education will have greater expectations than those with a high school degree (Asadzade, 2021). Education exposes individuals to new ideas and increases their political knowledge. Exposure to new ideas can improve individuals' knowledge of politics, change individuals' beliefs, or enable them to critically evaluate the government's performance (Kulachai et al., 2023). Furthermore, rising political knowledge encourages political agency and increases expectations for political participation. Along a similar line of thought, Lerner (1958) argues for the importance of education's impact on self-assessment and self-confidence. As education increases, people begin to develop thoughts and opinions about public issues, which consequently leads them to believe that they have the ability, and the right, to provide input on matters of importance that affect them (Croke et al., 2016). We can expect this effect to be particularly strong in authoritarian states; autocracies often happen to be developing countries as well, and higher education has been found to be significantly associated with greater expectations in these states (Asadzade, 2021). Rising political knowledge in higher education also increases individuals' interest in political activity (Asadzade, 2021). As one's educational attainment increased, those who benefitted from having an increased education began to also have higher expectations of the opportunities they would have access to once completing their education, such as stable employment, financial prosperity, and the ability to participate in the political process.

This rang true in Tunisia. A shift in attitudes can be observed as young people viewed this expansion of the education system as a positive development. Upon completion of their education, Tunisian youth had expectations of stable careers and tremendous opportunity for upward mobility that were subsequently shattered by the challenging economic situation and lack of employment (Honwana, 2013). De Tocqueville (1856) wrote that revolution results from the realization of alternatives and possibilities. Increased access to resources, particularly to education and information, will raise a person's awareness of oppression and cultivate their unwillingness to tolerate it (De Tocqueville, 1856). The 1990s' and 2000's were an age where information and news began to flow freely around the world in a way that had never been experienced before, thanks to the proliferation of the internet, consequently allowing people to compare their standard of living and freedoms with those of others. Tunisians' increased access to education and information made them more aware of their comparative lack of opportunity and expression.

II. The emergence of relative deprivation and grievances

These higher expectations then led to feelings of relative deprivation and the development of grievances among this newly, increasingly educated class. This is the second mechanism at work. Relative deprivation is based on the wants and needs that people feel they ought to have or deserve (Gurr, 1970). When individuals or groups feel unjustly deprived of resources, opportunities, or rights, this may lead to the development of grievances and frustration (Gurr, 1970). As explained by Bernstein & Crosby (1980), these perceptions of deprivation can become even more prevalent when 'an individual who lacks a desired outcome (X); (a) compares with another who does possess X, (b) feels entitled to X, (c) feels it was once feasible to attain X, and (d) feels it is not feasible to attain X in the future' (Bernstein & Crosby, 1980).

Although young people saw the expansion of the education system as a positive development that created tremendous opportunities, massive unemployment and underemployment foreclosed those opportunities. As these young Tunisians grew more and more educated, their desire for stable employment and economic prosperity proliferated. However, because of the poor economic conditions in Tunisia during the 1990's and 2000's, there quickly became a significant discrepancy between educated Tunisians' value expectations and their value capabilities (or actual conditions). Gurr (1970) defines value expectations as 'the goods and conditions of life to which people believe they are rightful entitled, while value capabilities are the goods and conditions, they

think they are actually capable of getting and keeping' (Gurr, 1970). After being told and promised for years and years that a higher degree would open the door to limitless opportunity, there simultaneously grew an expectation of prosperity that was expected to happen post-graduation. But that did not happen. The number of educated people substantially increased due to Ben Ali's free university education policy, the number of Tunisians graduating from college tripling within a single decade (Honwana, 2013). However, the economy did not grow quickly enough to accommodate the growing number of graduates who were joining the labor market, worsening the preexisting unemployment crisis. Many people pursued higher education with the belief that it would help them to find better employment opportunities. The achievement of a higher degree raised expectations among a generation that is more closely connected to the global world through television, cellular telephony, and the internet (Honwana, 2013). Tunisian citizens started to compare their opportunities (or lack thereof) to those of others and felt deprived. All of these factors, coupled with the very public luxurious lifestyle of Ben Ali and his family, fueled the frustrations and anger of the people.

In July 2009, US ambassador Robert Godec wrote in a secret dispatch released by WikiLeaks, that, 'corruption in the inner circle is growing. Even average Tunisians are now keenly aware of it, and the chorus of complaints is rising. Tunisians intensely dislike, even hate, first lady Leila Trabelsi and her family. In private, regime opponents mock her, even those close to the government express dismay at her reported behavior. Meanwhile, anger is growing at Tunisia's high unemployment and regional inequities. As a consequence, the risks to the regime's long-term stability are increasing…. He [Ben-Ali] and his regime have lost touch with the Tunisian people. They tolerate no advice or criticism, whether domestic or international. Increasingly, they rely on the police for control and focus on preserving power' (Al Jazeera, 2021). The economy was worsening every day, unemployment rates were soaring, all while their leader's family publicly flaunted their exuberant wealth. The Tunisian people were fed up, and yet, there were no institutionalized ways by which they could make these grievances known.

III. Rigid institutions of the authoritarian state

In a democratic context, dissatisfaction with government and desire to mobilize politically would most likely manifest through institutionalized channels, such as voting, contacting an elected official, supporting campaigns that better align with their interests, etc. One could even make the argument

that even if these grievances were to result in peaceful/nonviolent protests and demonstrations, although unconventional, these forms of participation have increasingly become institutionalized channels of political expression, as many democratic nations allow protests, but regulate them to ensure they do not break laws or disrupt civil order. However, authoritarian regimes impose certain institutional conditions that can exacerbate citizens' grievances, resulting in the use violence as a means of political expression. This leads us to the third mechanism at work, the rigid institutions of authoritarian states that do not offer formal avenues of political participation to express these grievances. Revolutions are shaped by the broader set of political constraints and opportunities unique to the national context in which they are embedded (McAdam et al., 1996). A political system's structural characteristics can heavily define the framework within which political actors can express their grievances, whether in a violent or non-violent manner (Skrede Gleditsch & Ruggeri, 2010). Authoritarian governments are normally comprised of simple and rigid institutions; thus, they are generally unable to adapt themselves as new conditions emerge after structural changes (Asadzade, 2021). In the case of Tunisia, a new condition for which the regime must now account for was the significant increase in the educated class.

As Tunisia expanded access to education, the economy was unable to advance beyond low-skill, low-wage activities (World Bank Group, 2014). Most of the jobs created by the economy were in low value sectors that offered low wages and no job security, which did not meet the aspirations of the increasingly large number of university graduates (World Bank Group, 2014). According to the National Statistical Data, in 2009, 97% of Tunisian private firms provided fewer than five jobs. In the public sector, the civil service and state-owned enterprises, the main source of employment in Tunisia, were no longer able to guarantee employment for high-skilled graduates (Görmüş & Akçalı, 2021). Further, opportunities that should have been made possible by one's increase in education level no longer existed. As explained by Görmüş & Akçalı (2021), the educational system's output did not match the labor market's needs, and a sharp rise in youth unemployment among graduates can be observed, jumping from 8.6% in 1999 to 19.0% in 2007. However, new data that became available after the Tunisian uprisings revealed that graduate unemployment was as high as 44.3% in 2010 (Görmüş & Akçalı, 2021). Put simply, when education levels rise and the state fails to expand opportunities accordingly, this creates tension between the increasingly educated population and the regime.

Tunisia under Ben-Ali was best classified as a single-party regime. Tunisia did hold elections during this period, however, these elections were not free and fair, as there were overwhelming reports of authorities censoring opposition candidates, journalists, and dissidents. There were also a multitude of laws that prevented candidates from some of the stronger opposition parties from running, and instituted severe constraints on freedoms of expression, the press, and assembly, thus depriving challengers from making their case to the public (Human Rights Watch, 2009). To even further depoliticize the increasingly frustrated population, the regime completely closed the political space (Honwana, 2013). No public dissent was tolerated. Freedom of association was almost non-existent. Nearly all civil society organizations that worked on political issues were denied legal registration (Honwana, 2013). Freedom of assembly was heavily restricted and all demonstrations by student groups were banned. Public criticism of the regime was not tolerated, and no meetings of human rights groups or other political parties were allowed (Honwana, 2013). Because of the proliferation of the internet and social media, Tunisians were able to comparatively see the rights and freedoms that were entitled to citizens of other countries, while they had no rights of speech, expression, or press.

The existing explanations on the pacifying effects of education implicitly assume that countries have an institutional environment conducive to peaceful activism and political participation (Croke et al., 2016). However, effective institutions for political engagement are absent in many authoritarian states (Asadzade, 2021). Autocracies tightly control the political space, monopolizing power within a small ruling elite or a single leader. Such regimes completely lack political competition, thus reducing opportunities for citizens to engage meaningfully in the political process, as there are limited avenues for any kind of political expression. Though some authoritarian states may hold elections or allow for limited forms of participation, these are often staged events to create a facade of legitimacy, and do not serve as genuine avenues for engagement. Deutsch (1961) explains that inability of the government to sanction avenues of political participation could have destabilizing effects. Further, educated individuals will turn to non-institutionalized forms of involvement in politics if their increasing political expectations are not met. When these political expectations are not met and all institutionalized forms of political participation are blocked, violent anti-regime activism may become appealing, and radicalization becomes a possibility (Asadzade, 2021). In short, when authoritarian rulers fail to effectively integrate the educated population into

the political system or provide institutionalized forms of participation in politics, the likelihood of violence greatly increases (Asadzade, 2021).

Realistically speaking, it is unlikely that Ben-Ali could have expanded these institutions whilst maintaining his authoritarian rule. While he did implement structural socioeconomic reforms, such as the broad economic forms and expansion of access to free education, it failed to truly modernize its political institutions to integrate the newly educated middle class into the political system.

IV. Regime repression & the exacerbation of grievances

Ben Ali's regime was far more repressive than his predecessor's, and civil liberties were severely restricted. Torture, arbitrary arrest, and restrictions on freedom of speech and assembly were prevalent (Honwana, 2013). Long aware of state repression and increasingly conscious of the disproportionate power and influence wielded by a tiny elite concentrated on Tunisia's first family this lack of civil liberties became an important source of popular resentment against the regime (Honwana, 2013). Repression by authorities can become a transformative event either by significantly increasing the costs of additional mobilizing and organizing work or backfire by leading to greater mobilization (Hess & Martin, 2006; McAdam et al., 2001). Simply put, increased repression can either backfire or completely diffuse mobilization. Some acts of repression are effective, other repressions can hurt the state (Lichbach, 1987). Inconsistent repression has been found to encourage protest and increase in a government's repression of nonviolence will often reduce the nonviolent activities of an opposition group but increase its violent activities (Lichbach, 1987). This occurs because the relative costs of nonviolent activities to the opposition group have been raised, closing off such methods for expressing grievances. And when these peaceful avenues for dissent are blocked, some groups may turn to violence as a means of political expression to achieve their objectives. Further, the repression of peaceful or nonviolent demonstrations may sometimes lead to greater movement mobilization. Repression by the state that is perceived as unjust has the potential to generate enormous public outrage against those seen as responsible and radicalize moderate activists, pushing them towards more extreme measures in response to these perceived injustices or abuses by the state (Bartusevičius et al., 2023). Though extreme repression may temporarily dampen protests, ultimately, it increases dissident activity over time (Chenoweth et al., 2017). Thus, excessive repression can result in demobilization in the short-term but remobilization in the long term, while also increasing the probability that nonviolent dissent becomes violent (Chenoweth et al., 2017).

The conditions under which education may lead to violence

To put this all together, Tunisia's education reform was instituted in 1991, making it free and compulsory through lower secondary school and guaranteeing free higher education to anyone passing the baccalaureate or high school diploma (Honwana, 2013). In consequence, the educational attainment of the affected age cohorts increased quickly and substantially, so much so that the graduates began to exceed the available opportunities. This lack of opportunity was far to the contrary of what these new graduates expected; these young Tunisians had higher expectations of their government, as they had been promised economic prosperity and upward mobility. When these higher expectations were not met, they began to feel deprived of the success that they had been told they deserved. Tunisia's economy had not grown quickly enough to accommodate this new class of highly educated graduates which, in turn, worsened the preexisting unemployment crisis. Opportunities failed to materialize, feelings of disenchantment and deprivation began to take root, and frustration grew amongst this growing group of educated youth.

The increase in educational attainment amongst the Tunisian population created a new condition for which the regime needed to account for, one that they failed to properly address. These institutional conditions, further exacerbated by intensifying regime repression, continued to amplify citizens' grievances. Ben-Ali's authoritarian state was comprised of rigid institutions that did not offer legitimate, formal avenues of political participation to express these grievances, nor was it able to adapt to the new conditions that emerged after the education reforms. The structural characteristics of a regime can heavily define the framework by which political actors can express their grievances, whether in a violent or non-violent manner (Gleditsch & Ruggeri, 2010). And it's important to note that the Tunisian Revolution was not the first instance of violent action to arise in Ben-Ali's troubled regime.

In January 2008, protests in Gafsa constituted one of the first open demonstrations against Ben Ali's regime, led by unemployed non-union workers and students who were unable to get jobs in the phosphate mines (Honwana, 2013). Thus, these unemployed graduates became a driving force behind the movement's demands of permanent, stable employment. Protagonists of the movement utilized a large number of repertoires of contention, including large demonstrations or sit-ins at various public locations. Some were quite long-lasting, as protestors would set up tents at certain strategic sites, in order to slow and stop economic activity in the phosphate extraction areas (Gobe, 2010). These protest movements did, however, sometimes transform into riots, as some groups of

high school students and young people would gather in their neighborhoods and collectively attack the police and representatives of the authorities. They also blocked the main roads in the towns, by setting tires on fire (Gobe, 2010). Real change ceased to result from these events, as massive police and military repression put a strong halt to this particular movement, but not for too long. Later that same year, unemployed youths staged protests in Skhira in the southeast, and in Ben Gardane (Honwana, 2013). And just a few short years later, when young Mohamed Bouazizi set himself on fire in protest of unemployment, difficult economic conditions, and mistreatment by police, this proved to be the straw that broke the camel's back, a desperate cry that resonated across all different sectors of society, sparking protests that would soon transform beyond anything the world could have ever anticipated.

Limitations

As with any study, there are limitations to my findings. It could be argued that my choosing to do a singular case study, as opposed to a comparative analysis, may make generalizability and applicability of my findings in other contexts difficult. Case studies are often not be easily generalizable to other contexts or populations due to the specificity of the case being studied, thus making replicability difficult in another context. But the causal mechanisms I propose behind my findings are broad, created with the intention of being applicable to other such authoritarian states. However, I would contend that a case study serves as a useful, thorough test of methodological mechanisms. By identifying the specificities of this context, we could derive major implications of the conditions under which education may lead to violent political protest. Given the comparative lack of literature on this topic in authoritarian states, any contribution is a valuable one, and may speak to other similar authoritarian contexts. There are commonalities amongst autocratic states that could allow for applicability, at least, within the bounds of certain scope conditions.

I should also talk about the constraints I faced with my data. I ultimately utilized one dataset for my analysis, that comes from surveys that were conducted three and five years after Ben-Ali's ousting and during the beginning of Tunisia's democratization process. There may be some concern that this falls outside the temporal scope I wish to study. However, I would argue that this is actually more beneficial. As I touched on previously when explaining my case selection, because the surveys I am utilizing were conducted in 2013 and 2015, these years are not too long after Ben-Ali's ousting in 2011, but still well into Tunisia's democratization process, I would argue that this alleviates the

concern of preference falsification. It is less likely that the individual's surveyed fear the possibility of retaliation for their answers because there was no longer a repressive regime in place, thus still allowing for past behavior under an authoritarian state to be analyzed as these surveys were not too far removed.

Conclusion

In conclusion, this study has explored the multifaceted role of education in shaping political behaviors and attitudes. Through a comprehensive review of the literature and empirical analysis, my findings provide robust support for my primary hypothesis, that formal education increases the likelihood of engaging in violent political activities under authoritarianism. In turn, this suggests that the previously well-established pacifying effect of education is context specific, highly dependent on the political institution in which the behavior is being analyzed. I also present compelling evidence to show that those with higher levels of formal education were more likely to indicate future engagement in nonviolent protest activities, more likely to view violence as effective in fulfilling its goal, and less likely to view nonviolence as effective. I highlighted four mechanisms that I contend are at work here and contribute to my hypothesized outcome: First, citizens will have higher expectations of government and economic prosperity as education level increases. Second, these higher expectations are not met, and feelings of relative deprivation and grievances develop, as the wants and needs that people feel they ought to have or deserve (both economic and political) are not being met. Third, authoritarian states are comprised of rigid institutions that do not offer formal avenues of political participation to express these grievances. And fourth, these institutional conditions exacerbate citizens grievances, resulting in the use violence as a means of political expression as they have no other means of participation. I place a heavy emphasis on the institutional conditions that authoritarianism can impose, as I feel that this distinction has been missing from much of the existing research on education and unconventional political participation, especially when it comes to violence.

The literature has long held that education is a significant factor in shaping personal beliefs, values, and behaviors. People who are more educated are more likely to participate in politics in a variety of ways, including voting, volunteering, and contacting elected officials. It also holds that educational attainment reduces engagement in political violence by encouraging conventional political participation and channeling conflicts of interest through institutional pathways rather than

through the use of violence. However, my findings suggest the contrary, indicating that the relationship between education and political participation is not always this straightforward.

Political participation under authoritarianism is inherently different than it is in democracies. There are very few, if any institutionalized channels for conventional participation. Even when there are formal institutions present, such as elections, the regime offers them with specific intention in mind, utilizing them as a coercive tool to legitimize the regime. Oftentimes, citizens will recognize that their participation does not provide genuine input into the political process and see such participation as only serving to support the regime, and will completely refrain from conventional participation, completely eliminating any mechanism by which they can express their grievances (Croke et al., 2016).

Education fosters political awareness and participation, in addition to providing political knowledge and social networks. It exposes individuals to new ideas and increases their political knowledge, leading to higher expectations of government. As people's political knowledge increases, they become more likely to desire involvement in political decision-making processes (Dahlum & Wig, 2019). When such opportunities do not exist through conventional, institutionalized channels, this can exacerbate citizens grievances, resulting in the use violence as a means of political expression as they have no other means of participation.

There is a need for more research on violent forms political participation in authoritarian states, research that bridges the gap between conventional political participation and political violence, and vice versa. Conflict studies rarely focus on how ordinary political activities lead to aggressive, or more violent forms of political participation (Desai et al., 2018). There is much that can be learned from understanding how people escalate from conventional political participation to intermediary forms of violence that are not as extreme as, say, clandestine political violence or civil war. Instead of studying these phenomena singularly and separately, different acts of political participation and political violence should be analyzed together as part of a cohesive range, from non-violent to violent activities, where it is broadly understood that the primary purpose of the behavior is to signal discontent (Desai et al., 2018). The system under which the behavior is being analyzed also needs more attention, as regime type and the formal institutions they choose to employ can greatly shape behavior, causing well-established explanatory factors of behavior to function differently than as previously understood. In particular, a comparative analysis of the

relationship between education and political engagement across different authoritarian regimes or regions could be very beneficial. A comparative approach could highlight variations in the impact of education on political behavior based on contextual factors that perhaps were not shown in the Tunisian case.

Education plays a fundamental role in shaping political behavior. But there is still much to be explored on this topic. Ultimately, my findings reinforce the notion that the role of education in shaping political attitudes and behaviors can be context dependent, largely shaped by the institutional context in which the behavior is being studied. This study contributes to the broader literature on the role of education in both political behavior and political violence. Continued research on the topic would help to deepen our understanding of the role of the institution in shaping political behavior, and the mechanisms through which education influences political participation; in particular, the conditions under which increased education may increase one's propensity to engage in acts of political violence.

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Appendix A

MEVS Coding

Variable: Secondary Access
Survey Variables used:

- Year of Birth (v117_t1)

Coded as:

- >= 1979 ~ "Fully Treated",
- >= 1973 & v117_t1 <= 1978 ~ "Partially Treated",
- <= 1972 ~ "Control"

Coded as:

- "Fully Treated" ~ 1,
- "Control" ~ 0,
- "Partially Treated" = 1973 ~ 0.143,
- "Partially Treated" = 1974 ~ 0.286,
- "Partially Treated" = 1975 ~ 0.429,
- "Partially Treated" = 1976 ~ 0.572,
- "Partially Treated" = 1977 ~ 0.715,
- "Partially Treated" = 1978 ~ 0.858.

Variable: Education
Survey Variables used:

- What is the highest educational level that you have attained? [IF STUDENT, HIGHEST LEVEL HE/SHE EXPECTS TO COMPLETE]: (v105_t1)
    1. No formal education
    2. Incomplete primary school
    3. Complete primary school
    4. Incomplete secondary school: technical/vocational type
    5. Complete secondary school: technical/vocational type
    6. Incomplete secondary: university-preparatory type
    7. Complete secondary: university-preparatory type
    8. Some university-level education, without a degree
    9. University-level education, with degree (include post-graduate education)

Coded as: Responses (1, 2) = 0, (3) = 1, (4, 6) = 2, (5, 7) = 3, (8, 9) = 4.

Variable: Engagement in Violence
Survey Variables used:

- Frequency of Activity since December 2010…

- Participate in a violent political activity that might lead to property damage or injury of others? (v57_t1)
    1. A lot
    2. Sometimes
    3. Rarely
    4. Not at all

Coded as: Responses (3, 4), equal 0, (1, 2), equals 1.

Variable: Engagement in Nonviolence
Survey Variables used:

- Frequency of Activity since December 2010…
    - Attend a non-violent protest, march, or sit-in? (v53_t1)
        1. A lot
        2. Sometimes
        3. Rarely
        4. Not at all

Coded as: Responses (3, 4), equal 0, (1, 2), equals 1.

Variable: Future Engagement in Violence
Survey Variables used:

- How likely is it that you will participate in the following activities in the next 12 months? Please use a scale from 1 to 4, where 1 means that you are extremely unlikely to participate in the following activity, and 4 means that you are extremely likely to participate in the activity.

    - T1_V88: Participate in a violent political activity that might lead to property damage or injury of others? (t1_v88)
        1. Extremely unlikely
        2. Somewhat unlikely
        3. Somewhat likely
        4. Extremely likely

Coded as: Responses (3, 4), equal 1, (1, 2), equals 0.

Variable: Future Engagement in Nonviolent Action
Survey Variables used:

- How likely is it that you will participate in the following activities in the next 12 months? Please use a scale from 1 to 4, where 1 means that you are extremely unlikely to participate in the following activity, and 4 means that you are extremely likely to participate in the activity.

    - T1_V84_TN: Attend a non-violent protest, march, or sit-in? (t1_v84)
        1. Extremely unlikely

2. Somewhat unlikely
3. Somewhat likely
4. Extremely likely

Coded as: Responses <= 2, equal 1, everything else, equals 0.

Variable: Attitudes towards Effectiveness of Violence
Survey Variables used:

- How effective do you think the following types of political action are? Please use a scale from 1 to 4, where 1 means that the political activity is not at all effective in fulfilling its goal, and 4 means the political activity is extremely effective in fulfilling its goal.

    - V87: Engage in a violent political activity that might lead to property damage or injury of others (v61_t1)
        1. Not at all effective
        2. Somewhat effective
        3. Effective
        4. Extremely effective

Coded as: Responses (2, 3, 4), equal 1, (1), equals 0.

Variable: Attitudes towards Effectiveness of Nonviolence
Survey Variables used:

- How effective do you think the following types of political action are? Please use a scale from 1 to 4, where 1 means that the political activity is not at all effective in fulfilling its goal, and 4 means the political activity is extremely effective in fulfilling its goal.

    - V85: Attend a non-violent protest, march, or sit-in (v59_t1)
        1. Not at all effective
        2. Somewhat effective
        3. Effective
        4. Extremely effective

Coded as: Responses (2, 3, 4), equal 1, (1), equals 0.

Appendix B

Table 1: Effect of Secondary Access on Educational Attainment

	Dependent variable:	
	Education Level (1)	Education Level (2)
Secondary_Access	1.307*** (0.053)	0.353*** (0.091)
Sex		-0.102*** (0.012)
Age		-0.031*** (0.002)
Ethnicity		0.0002 (0.0002)
Constant	1.463*** (0.031)	3.526*** (0.149)
Observations	3,064	3,064
R2	0.167	0.226
Adjusted R2	0.167	0.225
Residual Std. Error	1.345 (df = 3062)	1.297 (df = 3059)
F Statistic	613.657*** (df = 1; 3062).	223.302*** (df = 4; 3059)

Note: * p<0.1; ** p<0.05; *** p<0.01

Round One (2013) Data IV Regression Results

Table 2a: Engagement in Violent and Nonviolent Political Activities

	Dependent variable:	
	Engagement in violence	Engagement in nonviolence
Education Level	0.006**	0.107***
	(0.003)	(0.009)
Constant	-0.001	-0.068***
	(0.006)	(0.019)
Observations	3,016	3,039
R2	-0.0003	0.027
Adjusted R2	-0.001	0.027
Residual Std. Error	0.106 (df = 3014)	0.345 (df = 3037)

Note: * p<0.1; ** p<0.05; *** p<0.01

Table 2b: Future Engagement in Violent and Nonviolent Political Activities

	Dependent variable:	
	F. engagement in violence	F. engagement in nonviolence
Education Level	0.001	0.151***
	(0.006)	(0.012)
Constant	0.057***	0.020
	(0.013)	(0.025)
Observations	3,014	3,018
R2	0.0003	0.016
Adjusted R2	-0.0001	0.016
Residual Std. Error	0.235 (df = 3012)	0.462 (df = 3016)

Note: * p<0.1; ** p<0.05; *** p<0.01

Round One (2013) Data IV Regression Results

Table 2c: Attitudes Towards the Effectiveness of Violent and Nonviolent Political Activities

	Dependent variable:	
	Att. towards e. of violence	Att. towards e. of nonviolence
Education Level	0.047***	-0.025*
	(0.009)	(0.014)
Constant	0.021	0.637***
	(0.020)	(0.031)
Observations	2,728	2,762
R2	-0.038	0.008
Adjusted R2	-0.038	0.008
Residual Std. Error	0.329 (df = 2726)	0.491 (df = 2760)

Note: * p<0.1; ** p<0.05; *** p<0.01

Round Two (2015) Data IV Regression Results

Table 3a: Engagement in Violent and Nonviolent Political Activities - *(2015 data)*

	Dependent variable:	
	Engagement in violence	Engagement in nonviolence
Education Level	0.008**	0.057***
	(0.004)	(0.007)
Constant	0.005	-0.030**
	(0.008)	(0.015)
Observations	2,324	2,327
R2	-0.006	0.045
Adjusted R2	-0.007	0.044
Residual Std. Error	0.144 (df = 2322)	0.268 (df = 2325)

Note: * p<0.1; ** p<0.05; *** p<0.01

Table 3b: Attitudes Towards the Effectiveness of Violent and Nonviolent Political Activities - *(2015 data)*

	Dependent variable:	
	Att. towards e. of violence	Att. towards e. of nonviolence
Education Level	0.003	-0.038**
	(0.010)	(0.016)
Constant	0.120***	0.608***
	(0.023)	(0.035)
Observations	2,006	2,017
R2	-0.00002	0.019
Adjusted R2	-0.001	0.018
Residual Std. Error	0.333 (df = 2004)	0.495 (df = 2015)

Note: * p<0.1; ** p<0.05; *** p<0.01

Round One (2013) Data Robustness Check

Table 4a: Engagement in Violent and Nonviolent Political Activities - *(Removal of partially treated, 2013 data)*

	Dependent variable:	
	Engagement in violence	Engagement in nonviolence
Education Level	0.007**	0.111***
	(0.003)	(0.009)
Constant	-0.002	-0.069***
	(0.006)	(0.019)
Observations	2,649	2,667
R2	0.001	0.025
Adjusted R2	0.003	0.025
Residual Std. Error	0.109 (df = 2647)	0.348 (df = 2665)

Note: * p<0.1; ** p<0.05; *** p<0.01

Table 4b: Future Engagement in Violent and Nonviolent Political Activities - *(Removal of partially treated, 2013 data)*

	Dependent variable:	
	F. engagement in violence	F. engagement in nonviolence
Education Level	0.002	0.153***
	(0.006)	(0.012)
Constant	0.057***	0.021
	(0.013)	(0.025)
Observations	2,647	2,648
R2	0.0001	0.027
Adjusted R2	0.0002	0.027
Residual Std. Error	0.238 (df = 2645)	0.459 (df = 2646)

Note: * p<0.1; ** p<0.05; *** p<0.01

Table 4c: Attitudes Towards the Effectiveness of Violent and Nonviolent Political Activities - *(Removal of partially treated, 2013 data)*

	Dependent variable:	
	Att. towards e. of violence	Att. towards e. of nonviolence
Education Level	0.049***	-0.025**
	(0.010)	(0.014)
Constant	0.021	0.645***
	(0.020)	(0.030)
Observations	2,389	2,418
R2	-0.038	0.006
Adjusted R2	-0.038	0.006
Residual Std. Error	0.331 (df = 2387)	0.490 (df = 2416)

Note: * p<0.1; ** p<0.05; *** p<0.01

Round Two (2015) Data Robustness Check

Table 5a: Engagement in Violent and Nonviolent Political Activities - *(Removal of partially treated, 2015 data)*

	Dependent variable:	
	Engagement in violence	Engagement in nonviolence
Education Level	0.007*	0.057***
	(0.004)	(0.007)
Constant	0.005	-0.028*
	(0.008)	(0.015)
Observations	2,028	2,031
R2	-0.004	0.049
Adjusted R2	-0.005	0.049
Residual Std. Error	0.132 (df = 2026)	0.267 (df = 2029)

Note: * p<0.1; ** p<0.05; *** p<0.01

Table 5b: Attitudes Towards the Effectiveness of Violent and Nonviolent Political Activities - *(Removal of partially treated, 2015 data)*

	Dependent variable:	
	Att. Towards E. of Violence	Att. Towards E. of Nonviolence
Education Level	0.002	-0.036**
	(0.010)	(0.016)
Constant	0.121***	0.610***
	(0.023)	(0.034)
Observations	1,750	1,751
R2	-0.0001	0.020
Adjusted R2	-0.001	0.019
Residual Std. Error	0.332 (df = 1748)	0.494 (df = 1749)

Note: * p<0.1; ** p<0.05; *** p<0.01