Revolutions and Democracy

*Can Democracies Prevent Revolutionary Armed Violence?*

Vadim Ustyuzhanin | ORCID: 0000-0003-3800-1108
HSE University, Moscow, Russia
vvustiuzhanin@hse.ru

Andrey Korotayev | ORCID: 0000-0003-3014-2037
HSE University, Moscow, Russia
Institute for African Studies, Russian Academy of Sciences,
Moscow, Russia
akorotayev@gmail.com

**Abstract**

In recent years, the question of what form a revolutionary uprising will take – armed or unarmed – has been raised more often. This is because, as shown by numerous studies, revolutionary nonviolence can explain why an uprising fails or succeeds to lead to democracy. In the recent decades the likelihood of revolution being nonviolent appears to have significantly increased, but it is still not clear why this tendency is observed. Moreover, there are only a few quantitative cross-national studies on this topic, in which the authors tried to explain the apparent pattern. However, none of them considered political factors separately. This article tests the hypothesis that a country’s level of democracy can inhibit the armed revolutionary violence. By applying logistic regression to the NAVCO database, the authors analyze more than 400 revolutionary episodes and conclude that, in general, the more democratic the political system, the more likely the revolution take an unarmed form. Nevertheless, various revolutionary events could be of a rather different nature, and it is further shown that the level of democracy matters only for sociopolitical revolutions, while for ethno-separatist revolutions it does not play a significant role.

**Keywords**

1 Introduction

In their recent book *The Narrow Corridor*, renowned political economists Daron Acemoglu and James Robinson pose the following question: How do states come to democracy? What path do they have to take (Acemoglu & Robinson, 2019)? The most cardinal method is revolution, but the experience of the 20th century shows that most revolutions attempting to impose democracy failed and ended in the establishment of equally or even more authoritarian regimes (see, e.g., Goldstone, 2001; 168; see also Gurr, 1988; Weitman, 1992; Foran & Goodwin, 1993; Grinin & Korotayev, 2016). However, in the recent decades the revolutionary overthrow of the old regime led to the establishment of democracies much more frequently than in the previous period (Goldstone, 2001, p. 168; Chenoweth & Schock, 2015; Chenoweth & Ulfelder, 2017; Grinin & Korotayev, 2022a; Ustyuzhanin, Grinin et al., 2022). But what could account for this shift? Why do some revolutions lead to democracies and others to dictatorships?

Research in recent years has shown that revolutionary uprisings have significantly different results depending on what form they take – armed/violent or unarmed/nonviolent (Butcher & Svensson, 2016; Pishedda, 2020; Rasler et al., 2022; Stephan & Chenoweth, 2008). More specifically, it was found that nonviolent revolutions are significantly more likely to lead to stable democracy than violent ones (Ackerman & Karatnycky, 2005; Butcher & Svensson, 2016; Celestino & Gleditsch, 2013; Chenoweth & Stephan, 2011; Johnstad, 2010; Kim & Kroeger, 2019; Rasler et al., 2022).

Note that most of these authors prefer to denote revolutions as “maximalist campaigns”. Following Ackerman and Kruegler (1994, pp. 10–11), Chenoweth and Stephan (2011, p. 14) define “campaign” as “a series of observable, continual, purposive mass tactics in pursuit of a political objective”. What is more, the above mentioned studies consider campaigns “with goals that are perceived as maximalist (fundamentally altering the political order); ... we deliberately choose campaigns with goals commonly perceived to be maximalist in nature: regime change, antioccupation, and secession” (Chenoweth & Stephan, 2011, p. 68). Thus, the abovementioned works study “series of observable, continual, purposive mass tactics in pursuit of fundamentally altering the political order: regime change, antioccupation, and secession”. Let us note that in this article we rely on such definitions of revolution as “a revolution is a collective mobilization that attempts to quickly and forcibly overthrow an existing regime in order to transform political, economic, and symbolic relations” (Lawson, 2019, p. 5); “anti-government (very often illegal) mass actions (mass mobilization) with the following aims: (1) to overthrow or replace the existing government within a certain period of time; (2) to seize power or to provide conditions for coming to power; (3) to make significant changes in the regime, social or political institutions” (Goldstone et al., 2022b, p. 1), or “an effort to transform the political institutions and the justifications for political authority in a society, accompanied by formal or informal mass mobilization and noninstitutionalized
Thus, in order to answer the previous question about dictatorships and democracies we have to understand why revolutions take a violent/armed or nonviolent/unarmed form. Actually, Kadivar and Ketchley (2018) quite convincingly show that the participants in the majority of the so-called “nonviolent maximalist campaigns” resorted to violence on a fairly serious scale, in connection with which they, with good reason, maintain that it is wrong to call such revolutionary events “nonviolent”, suggesting rather to designate them as “unarmed”. However, in this article we will still continue denote unarmed uprisings as “nonviolent” because this way they are denoted in the database (Chenoweth & Shay, 2020) which we use; note that “campaigns” denoted in this database as “violent” were in fact armed revolutionary rebellions (we present some cases to clarify this idea in the materials and methods section).

By now, a very few quantitative cross-national studies have attempted to answer the question why revolutions take a violent/armed or nonviolent/unarmed form (Butcher & Svensson, 2016; Chenoweth & Ulfelder, 2017; Dahlum, 2019; Ustyuzhanin, Grinin et al., 2022). However, the results of these authors are somehow contradictory as regards the democracy as a predictor of the revolutionary nonviolence. Thus, Dahlum (2019) find that the level of democracy is significantly and negatively associated with nonviolence during revolutionary campaign. Butcher & Svensson (2016) demonstrate a significant curvilinear relationship between the level of democracy and the risks of nonviolent revolutions, but find no significant relationship between democracy and the risks of violent revolutions. Chenoweth & Ulfelder (2017) show that the level of civil liberties significantly affects the likelihood of nonviolent revolutionary uprisings, without determining the direction of the relationship. Worth noting, democracy variable in this research turned out to be an insignificant factor. Finally, Ustyuzhanin, Grinin et al. (2022) do not consider at all the democracy as a possible predictor of the revolutionary nonviolence in their analysis. Thus, the conclusions of these articles remain contradictory, and the existing research does not provide a convincing answer to the question

actions that undermine existing authorities” (Goldstone, 2001, p. 142). Thus, we find that “maximalist campaigns” are just nothing else but revolutions (including national liberation/ethno-separatist ones); hence, the abovementioned works actually study revolutions (rather oddly denoted as “campaigns”). This point is further supported by the fact that Chenoweth’s database of Nonviolent and Violent Campaigns and Outcomes (NAVCO) designates as “campaigns” all the indisputable revolutions since 1900 – including Russian revolutions of 1905–1907 and 1917, Constitutional Revolution in Iran, Xinhai Revolution in China, Mexican Revolution of 1910–1917 and so on (Chenoweth & Shay, 2020a). Thus, the results of the abovementioned studies on the outcomes of “maximalist campaigns” turn out to be perfectly relevant for our understanding of the outcomes of revolutions.
whether transition from autocracy to democracy is increasing or decreasing the likelihood of revolutions taking a nonviolent form.

1.1  

**Democracy and Revolutions**

In general, the idea that democratic and inclusive institutions reduce possible violence is not new. Relatively long ago, Karl Popper called “the type of government that can be eliminated without violence ‘democracy,’ and the other ‘tyranny’” (Popper, 1949, p. 90). Note, that the elimination of certain type of government without violence is actually a nonviolent revolution. Conclusions of many contemporary researchers are quite similar: the likelihood of peaceful protest, which is the central component of the nonviolent revolutionary repertoire (Lawson, 2019), in democracies is higher than in autocratic regimes (Caren et al., 2017; Chenoweth & Ulfelder, 2017; Colon-Rios & Hutchinson, 2012; Dahl et al., 2021; Inglehart & Welzel, 2005; Korotayev, Bilyuga, & Shishkina, 2016, 2018; Pischedda, 2020; Romanov et al., 2021; Walter, 2006). Nevertheless, majority of these authors tend to consider rather consolidated democracies, but do not take partial democracies and anocracies into account, whereas most contemporary states are neither consolidated democracies nor full autocracies, that is they are mostly anocracies of various types. It is important to note that consolidated democracies facilitate mass mobilization, but inhibit any revolutionary overthrow of the government, even nonviolent revolutionary change of power (e.g., Goldstone et al., 2022a; Goodwin, 2001a, 2003). For instance, it is possible that large maximalist protests lead to radical change of the ruling elite, but through elections rather than through a revolution as was, for example, the case in Greece in 2015. In fact, there was a revolutionary situation without a revolution, when the mechanisms of Greek consolidated democracy were able to prevent a real revolutionary uprising (Ardagna & Caselli, 2014; Evripidou & Drury, 2013; Karyotis & Rüdig, 2018; Vogiatzoglou, 2017) by allowing the radical opposition (SYRIZA) to legally come to power. Nevertheless, such a conclusion is not valid for partial democracies. For instance, revolutions such as the 2013–2014 Ukrainian Revolution (Euromaidan) or the 2018 Armenian Velvet Revolution demonstrate that revolutions may well overthrow democratically elected presidents. However, taking into account the reasoning of the reviewed authors, we claim that even partial democracies and partial autocracies are less prone to a violent type of revolution than full autocracies that is preliminarily illustrated just by the Armenian and Ukrainian cases where revolutions occurred, but were nonviolent. In general, there is a good reason to believe that even a small movement from full to partial autocracy should lead to noticeable reduction of the risks that revolution would take a violent rather than nonviolent form. Note also that, though the consolidated
democracy prevents the revolutionary overthrow of regimes, some revolutionary events (first of all, revolution analogues and revolutionary movements without revolutions) turn out to still be possible even in consolidated democracies (e.g., Goldstone et al., 2022a, 2022b, 2022c), and if such revolutionary events still happen in consolidated democracies, they are really likely to take an unarmed form.

There are several reasons for this relationship. Foremost, it is easier for dissatisfied citizens to present their demands to the government or to mobilize in a democracy where the institutional structure is designed to include the masses in governance (Nam, 2007). This is reflected in the fact of the relatively high level of freedoms in non-authoritarian regimes, that, therefore, are unlikely to, firstly, repress demonstrators due to their limited opportunity for repressions (Pischedda, 2020; Walter, 2006) and, secondly, to perceive a disagreement as a threat (Davenport, 1999). Thus, Henderson (1991) empirically shows that democracy is the most important predictor that repression is extremely unlikely, which stems from its “responsiveness”. Indeed, democratic process is based on compromise, taking into account the interests of a large number of people and group of interests that can use unpopular methods of their opponent such as repression to win elections and remove an incumbent leader or elite. On the other hand, a higher level of political repression on the part of authorities provokes violence on the part of protestors that entails an increased likelihood of violent/armed insurrection due to the impossibility of using nonviolent/unarmed tactics (Regan & Norton, 2005), while in regimes with the relatively high level of freedoms the likelihood of nonviolent tactics increasing (Korotayev, Sawyer, Gladyshev et al., 2021; Massoud et al., 2019; Sawyer et al., 2022). Hence, the more authoritarian the regime, the more intensively it uses violence to suppress protest. The harsher this repression and use of violence, the more likely it is that revolutionary action will take a violent form.

Moreover, the democratic regimes can be called, following Meyer and Tarrow (1998), “social movement societies”, because they have institutionalized the right to protest, which is perceived as an inalienable and legitimate form of political participation. Colon-Rios and Hutchinson (2012, p. 593), relying on Alexis de Tocqueville, claim that “there is no need in a true democracy to invent the end of revolution as it becomes a continuing and integral part of democratic arrangements themselves”. Such “right of revolution” that becomes a constitutional norm leads to peaceful demonstrations, because of the un necessity of violence as such for the solution; however, within partial democracies this can well result in actual nonviolent revolutions (e.g., Goldstone et al., 2022a; Grinin & Korotayev, 2022b).
Developing the “legal argument” further, we can say that the mass of the people has a kind of “constitutional majority” or “constitutional power”, and thus the right to regime transformation (Colon-Rios & Hutchinson, 2012). In other words, in the case of mass grievance and the taking to the streets, the legislature will essentially be obliged to make significant concessions or to withdraw at the next election, giving way to the opposition. The most remarkable thing is that in such a case there can be no armed violence – there is no need for it. “The right to revolution” is recognized by all parties to the conflict and is notoriously successful by recruiting a critical mass of protesters (Beissinger, 2022; Chenoweth & Stephan, 2011; DeNardo, 1985), so that no institution is immune to change (Unger, 1987). Thus, the aim of the revolutionary demonstrators will be to use “population-intensive tactic”, i.e., to spread information and to attract new supporters, rather than to attempt the armed violent overthrow of the regime (e.g., Beissinger et al., 2022; Dahl et al., 2021). Such a democratic mechanism, of course, does not exist in full autocracies, where the majority of the population has no real representation, which changes the tactics of the protesters. In other words, from the perspective of the so-called “theory of constitutional force”, people can “overthrow the regime” through peaceful protests, but not through armed violence. In authoritarian regimes, the logic is more likely to be the opposite. It is important to note that even if such a “right to revolution” is not fully institutionalized in partial democracies and anocracies, it will be implied informally, which gives protesters hope for a successful outcome of nonviolent tactics (Goldstone et al., 2022a; Grinin & Korotayev, 2022b).

Summarizing, democracy itself does not lead to a decrease in discontent, but opens the way for its expression through peaceful mass mobilization in the polls and on the streets (Dahl et al., 2021), not with a gun in the hand. Moreover, any democratization of a regime leads to reduction of probability that, during revolutionary uprising, violence will be used because protestors hope that by “population-intensive tactic” they can reach the success, and government will not use repression extremely intensively (Dahl et al., 2021; Beissinger, 2022).

Thus, the main reason why more democratic regimes are less prone to revolutionary armed violence during revolutions is the possibilities to mass mobilization. In anocracies and democracies there are institutional or semi-institutional channels which allow people “to go to the streets” and hope for success due to much more pronounced sensitivity of their governments, while in full autocracies opportunities to the chances of being heard by the authorities are much lower than even in anocracies. In other words, the overall utility
of nonviolent methods in full autocracies tends to zero, because success is unlikely (Pischedda, 2020; Walter, 2006), and the costs are very high due to the retaliatory actions of the state – repressions. Hence, armed violent methods and an attempt to overthrow authoritarian regime with arms are often perceived by dissenters as the only option (Carey, 2006).

1.2 Discrimination and Revolutions

However, it would be wrong to assume that the level of freedoms is determined only by the electoral procedures. The inclusiveness of institutions is also determined by the degree of involvement of all citizens, not just majority, in governance. In other words, even if a country has formalized democratic institutions, but a part of the population is deprived of the right to govern or does perceive itself as excluded from governing, it is fair to assume that the probability of armed violence will be quite high. This can be attributed to the fact that their perception and choice of tactics of disagreement is similar to the one as if they were in an authoritarian state.

Confirmation of such connection can be found in most work on the theory of civil wars, which can be considered an extreme form of violent revolutionary mobilization. Numerous studies argue that the probability of an armed uprising is positively related to ethnic discrimination (Besançon, 2005; Buhaug & Lujala, 2005; Gurr, 2000; Regan & Norton, 2005; Wimmer et al., 2009), i.e., an exclusion of a part of population from governance and, therefore, from resources and their distribution. Thus, discriminated population is more likely to choose armed tactics, because: first, they usually have lack of the capacity for successful nonviolent rebellion due to dominant ethnic groups owning most resources and use the state to limit minority access to various assets that are necessary for successful peaceful protest (such as education or high-paying jobs) (Besançon, 2005). Moreover, discriminated groups have limited opportunities to attract supporters (Pischedda, 2020) and, as a result, to gain the critical mass that is necessary for success of nonviolent unarmed tactics (Beissinger, 2022; Chenoweth & Stephan, 2011; Dahl et al., 2021).

On the other hand, the costs of collective armed violent action for discriminated groups are lower, because: (1) there are stable social ties and trust among members of the oppressed group; (2) the opportunity costs to them are small because the welfare of the discriminated group is usually low, and its members generally have little accumulated investment in human capital. Consequently, their possible benefit from the success of a violent campaign outweighs any risk of losing their small capital (Sambanis, 2001), which is not the case for the rest of the population, which has much to lose.
1.3 Democracy, Discrimination and Separatist Movements

Against this background, it is important to note that various revolutionary events could be of a rather different nature. Many authors point out that it is necessary to distinguish different types of conflicts and revolutions in particular, because an overgeneralization can mislead their analysis. Thus, Omer Yair and Dan Miodownik show by the example of civil wars, which can be regarded as an extreme form of violent revolutions (Beissinger, 2022), that empirical inconsistencies with the theory are largely due to “collapsing all civil wars into one group instead of theorizing about and studying factors that are more likely to affect one type of war but not another” (Yair & Miodownik, 2016, p. 26).

They emphasize that it is important to distinguish between ethnic-separatist revolutions (aimed at secession/self-determination/national independence) and non-ethnic, sociopolitical revolutions (aimed at the regime change in the whole polity). These types have very different causes: ethnic conflicts, for example, are much less explained by economic factors (Sambanis, 2001) or age structure (Cincotta & Weber, 2021; Yair & Miodownik, 2016) than others.

Thus, in countries where the level of democratic institutions is low and the degree of discrimination is high, the revolution is more likely to take an armed form. However, it is important to bear in mind that the correlation between the democracy of the regime and the absence of discrimination is not quite high ($r = -0.25$, see Figure A1, for details about data, see materials and methods section), but even truncated democratic procedures presuppose a priori the inclusion of most citizens in the political system. Therefore, the goals of discriminated groups are not more about regime change, but rather about self-determination (Cederman et al., 2013; Wimmer et al., 2009). In other words, when analyzing revolutionary events, it is necessary to consider separatist/national-liberation revolutionary actions separately in order, on the one hand, not to downplay the impact of democratic institutions and, on the other hand, not to exaggerate the impact of discrimination on the protesters’ choice of tactics – armed or unarmed. So, our hypothesizes can be formulated as follows:

**H1:** The more democratic the institutions, the less likely social and political (non-separatist) revolutions are to take an armed form.

**H2:** The greater the proportion of the population that is discriminated against, the greater the likelihood for separatist/national-liberation revolutionary actions to take an armed form.

**H3:** The level of democracy has small effect on the choice of tactic during separatist/national-liberation revolutionary actions.
2 Materials and Methods

2.1 Methodology and Empirical Strategy
As the main method of analysis, we use binary logistic regression to determine the effects of independent variables and their interaction with each other. Moreover, we introduce region fixed effects due to the fact that our data have a panel form, where the unit of observation is a country-year. In other words, each country measured repeatedly over time, but not every state has experienced a revolution, so we include a regional effect rather than a country effect, which, as Dahlum (2019) has shown, should better control models for uncounted variables. Also, as will be shown below, many of the control variables in our models are in one way or another part of one big process – modernization, which gives rise to the problem of multicollinearity. If we include all the modernization variables in one model, we cannot get real estimates of the coefficients because of “bloated” standard errors, so we use the principal component analysis to create a “modernization” variable.

2.2 Dependent Variable
We rely on the information provided by the Nonviolent and Violent Campaigns and Outcomes (NAVCO) 1.3 (Chenoweth and Shay, 2020a), which identifies 622 revolutionary events/“campaigns” from 1900 to 2019. It describes numerous instances of violent and nonviolent revolutionary protests for the purpose of regime change, national self-determination, or important social change (e.g., the end of apartheid). Based on the hypotheses of our study, we will divide revolutions into separatist/national-liberation revolutions, which combines the goals of “self-determination” and “secession” in the classification of the used database, and sociopolitical (non-separatist) revolutions with goals of regime change and/or important social change (but without the goal of national self-determination).

As a dependent variable, we take another indicator from the same database – whether the revolutionary movement was armed/violent or not. This is a binary variable, where “1” designates unarmed/nonviolent revolutionary actions and “0” designates armed/violent revolutionary episodes. However, as we mentioned in the beginning of this article, in the majority of the so-called “nonviolent maximalist campaigns” protesters resorted to violence on a fairly serious scale. Here one can recall, for example, the Egyptian revolution of 2011 or the Ukrainian revolution [“Euromaidan”] of 2013–2014, where protesters widely used violence. Thus, Kadivar and Ketchley (2018: 10) described hand-to-hand
fighting during Egyptian revolution on 2 February, where “anti-regime protesters and pro-Mubarak forces exchanged stones and Molotov cocktails in a protracted street battle that lasted into the following day”. On the other hand, during “Euromaidan” protest repertoire included “assembling catapults, throwing bricks, fireworks, and Molotov cocktails at police, and setting buses and tires on fire” (Zelinska, 2017, p. 5), and about 30% of all protest’s events were violent or confrontational (Ishchenko, 2016). As Ishchenko noted, “the Maidan confrontations and violence were on a scale larger than anything Ukraine had experienced since the last operations of the nationalist Ukrainian Insurgent Army in 1950s” (Ishchenko, 2016, p. 463). However, as Mohammad Ali Kadivar and Neil Ketchley note, within the revolutionary campaigns denoted by Erika Chenoweth as “nonviolent”, quite often “civilian demonstrators rely on rocks, Molotov cocktails, sticks, and other improvised weapons” (Kadivar & Ketchley, 2018, p. 3), suggesting that such revolutionary uprisings should be denoted as “unarmed” rather than nonviolent. They further note that “the effects of unarmed collective violence vary significantly from those of armed insurgency” (Ibidem). Thus, the distinction between two types of revolutionary events proposed by Chenoweth remains valid, but with an important qualification: what Chenoweth denotes as “nonviolent maximalist campaigns” should be rather called “unarmed revolutionary uprisings”, whereas what Chenoweth denotes as “violent maximalist campaigns” should be rather called “armed revolutionary insurgencies”.

The point that nonviolent/violent classification in NAVCO 1.3 actually means unarmed/armed is also clear from the very definitions of Chenoweth and Shay (2020, p. 6): “campaigns are primarily nonviolent when the vast majority of participants are unarmed, and when they use mostly nonviolent practices to confound, impede, and challenge the regime and its supporters. Campaigns are primarily violent when most participants use force, especially armed force, to target regimes and their supporters”.

A salient example of a revolution that Chenoweth and Shay classify as “violent”, but that should be more appropriately called “armed” is Al-Houthi Rebellion (also known as Houthi Revolution) that started in 2004. This case differs from above examples radically: the conflict escalated into armed clashes, when government troops tried to arrest the protesters. In the near future it escalated into the so-called “Six Saada Wars” and eventually led to the Houthis takeover of power in Sanaa in September 2014 (Brandt, 2017; Korotayev & Issaev, 2021). In fact, the rebels started a guerrilla war, and “killed at least a thousand Yemeni security services personnel in four years” using “ambushes, sniper attacks, and small- to medium-sized bombings” (Freeman, 2009, p. 1013).
2.3 Independent Variable and Controls

As the first main independent variable, we take the index of electoral democracy from the V-Dem database, that “is formed by taking the average of, on the one hand, the weighted average of the indices measuring freedom of association, clean elections, freedom of expression, elected officials, and suffrage and, on the other, the five-way multiplicative interaction between those indices” (Coppendge et al., 2021, p. 43), and it scales from 0 to 1. V-Dem provides us with the most comprehensive information on the level of democracy from 1900 to the present for most of the world.

The second independent variable is the proportion of the discriminated population from the Ethnic Power Relations (EPR) database, which gives the following description of this variable: “group members are subjected to active, intentional, and targeted discrimination by the state, with the intent of excluding them from political power. Such active discrimination can be either formal or informal, but always refers to the domain of public politics (excluding discrimination in the socio-economic sphere)” (Vogt & Rüegger, 2021, p. 6).

In addition, we take these variables with a lag of one year because they may be subject to strong changes during the revolution/“campaign” itself.

We include several control variables that were found as strong factors associated with the revolutionary violence/nonviolence. First of all, one may mention higher GDP per capita and urbanization (Beissing, 2022; Gleditsch & Rivera, 2017; Grinin & Korotayev 2016; Inglehart & Welzel 2005; Korotayev, Bilyuga, & Shishkina 2018; Korotayev, Vaskin et al., 2018; Sawyer et al., 2022). For instance, Inglehart and Welzel (2005) claim that the explosive growth of wealth (using proxy through GDP per capita) is also generating a growing need for self-expression including political participation; and the expansion of markets and trade has always been a crucial factor in reducing violence due to the demand for nonviolent communication (Inglehart, Puranen, & Welzel 2015). So, higher well-being is associated with higher nonviolent protest activity, because economic development and the natural expansion of the middle class have led to a greater public interest in expanding political and civil liberties (Chenoweth & Ulfelder, 2017; Korotayev, Sawyer, & Romanov, 2021; Massoud, Doces, & Magee 2019). Researchers find robust evidence that GDP per capita is positively associated with nonviolent protests and negatively with violent destabilization (Dahl et al., 2020a; Gleditsch & Rivera, 2017; Korotayev, Bilyuga, et al., 2018; Korotayev et al., 2017; Korotayev, Vaskin, et al., 2018; Wimmer et al., 2009) and civil wars (Hegre & Sambanis, 2006). This relationship is accounted for by the point that high well-being dramatically increases opportunity costs for protesters: people have bigger accumulated investments, and the risk of
losing everything outweighs all possible benefits. So, if the pre-conflict state equilibrium provides people with a small level of utility, the marginal utility of each increase in benefits from regime change will be higher, which pushes people to risk giving up their usual life (Besançon, 2005; Sambanis, 2001). Moreover, the elites of rich countries can actively use various redistributive policies or co-opt the opposition elite to mitigate general discontent, which is possible due to soft resource constraints (Wimmer et al., 2009). Thus, we have to introduce the GDP per capita as the proxy for well-being. We use GDP per capita, PPP (constant 2017 international $) from the World Bank (The World Bank, 2022). However, this variable is available only from 1990 that reduces our time period significantly. So, we expanded this variable by combining information from the World Bank with the database of Mark Beissinger (Beissinger, 2022, Appendix 3). In doing so, we converted everything to 2017 international dollars and we expanded the time period to 1900–2019. Worth noting, we take natural logarithm of GDP per capita in order to normalize it.

The level of urbanization is also relevant. For example, mass mobilization is more likely in the most urbanized and complex societies with dispersed social power (Gleditsch & Rivera, 2017; Ustyuzhanin, Sumernikov et al., 2022), where a high concentration of the population and human capital helps disaffected groups find a larger audience (Beissinger, 2022; Butcher and Svensson 2016; Chenoweth and Ulfelder 2017; Dahl et al. 2021; Sawyer et. al., 2022). It is also important to note that in urbanized areas there is a high likelihood of peaceful protests, whereas, at the periphery radical groups choose another method of disagreement – violent actions (Buhaug & Lujala, 2005; Dahl et al., 2021; Romanov et al., 2021; Sawyer et al., 2022). For our urbanization variable, we take the share of the population that lives in urban areas. These data are from the United Nations Population Division (UNPD) World Urbanization Prospects database (United Nations Population Division, 2021). Nevertheless, the time period of this original variable is also strongly restricted, and we merged it with Mark Beissinger’s data (Beissinger 2022, see appendix 3).

A recent study by Cincotta and Weber (2021) demonstrates that violent revolutions are significantly more likely in countries with a very high proportion of the youth in the total adult population of this society – the so-called ‘youth bulge’. This finding is very congruent with other research on demographic structural factors of revolutions. This relationship is associated with the fact that young people are easier to engage in violent revolutionary actions because, as “most young people have fewer responsibilities for families and careers, they are relatively easily mobilized for social or political conflicts. Youth have played a prominent role in political violence throughout recorded
history, and the existence of a ‘youth bulge’ (an unusually high proportion of youths 15 to 29 relative to the total adult population) has historically been associated with times of political crisis” (Goldstone, 2002, pp. 11–12; Weber, 2019). Thus, the higher the proportion of young people in the population, the higher the likelihood of violent destabilization and the lower stability of the regime (Cincotta & Doces, 2012; Cincotta & Weber, 2021; Farzanegan & Witthuhn, 2017; Korotayev et al., 2011, 2022). Following Cincotta and Weber (2021), we operationalize “youth bulge” through the median age of the population. The data on this variable is provided by the United Nations Population Division (UNPD) World Population Prospects database (UNPD, 2022).

Moreover, we introduce another strong factor – education that has a pacifying effect, because it increases the level of human capital, reduces the relative costs of organizing protests leading to an increase in the likelihood of peaceful revolutionary protests (Brancati, 2014; Korotayev, Sawyer, & Romanov, 2021; Ustyuzhanin, Sawyer et al., 2023), and makes violence unacceptable on the personal level, instilling in people a tendency to tolerance (Jenkins & Wallace, 1996; Ustyuzhanin, Grinin et al., 2022). In general, it is confirmed by empirical studies: researchers find that the mean years of schooling is positively and significantly associated with the level of peaceful protests (Brancati, 2014; Butcher & Svensson, 2016; Korotayev, Bilyuga, & Shishkina, 2016, 2017, 2018; Korotayev, Sawyer et al., 2020, 2021; Kostelka & Rovny, 2019; Machado et al., 2011; Sawyer & Korotayev, 2022). But at the same time, it is negatively associated with the likelihood of a civil war, which appears as an extreme form of violent revolutionary conflict (Barakat & Urda, 2009; Collier, 2004), or violent riots (Sawyer & Korotayev, 2022). Moreover, in the article by Ustyuzanin, Grinin et. al. (2022) education is identified as the key factor of why the revolution takes violent or nonviolent form. Thus, mean years of schooling strongly reduce the risks that revolutionary action will take an armed form.

It has also been found that the size of the population itself is a powerful predictor of both revolutionary events in general (Besançon, 2005; Butcher & Svensson, 2016; Chenoweth & Ulfelder, 2017; Dahl et al., 2021; Ustyuzhanin, Zhodzishskaya et al., 2022) and protests in particular (Hegre and Sambanis 2006; Korotayev, Sawyer, & Romanov, 2021; Romanov et al., 2021), while anti-government demonstrations are a major component of the revolutionary repertoire of unarmed revolutionary uprisings (Lawson, 2019). This variable is presented in thousands by the Cross-National Time-Series (CNTS) Data Archive (Banks & Wilson, 2021), and we introduce its natural logarithm in order to normalize it and to understand how the difference in population affects not in thousands, but in orders of magnitude.
2.4 Principal Component Analysis and Modernization

As one can see in Figure A2 in Appendix, there is a strong multicollinearity between the variables from the “modernization” group (log per capita GDP, urbanization, median age, mean years of schooling), and not really high with democracy. All correlations between them are significant and mostly greater than 0.6. For example, per capita GDP and urbanization are significantly correlated with Pearson’s r as high as 0.8, while GDP and median age are significantly correlated with r of 0.78. In other words, there is an extremely close relationship between variables, which does not allow us to include all the factors considered in one model, because in this case the standard errors will be extremely high, which will not allow to estimate the coefficients and understand the direction of the relationship (Farrar & Glauber, 1967; Mansfield & Helms, 1982).

One of the most proven methods of dealing with multicollinearity that does not involve throwing variables out of the analysis is principal component analysis (PCA) (Abdi & Williams, 2010; Bro & Smilde, 2014). In our case it is particularly well suited, because the modernization factors are all connected in a common direction, and therefore can be interpreted and evaluated in a single principal component.

Thus, from the principal component analysis (where log per capita GDP, urbanization, median age and mean years of schooling are scaled), first of all, we can see that the first component explains on average more than 80% of the variance (see Figure A3), which allows us to include in our regression models only this variable, quite reasonably assuming that it absorbs everything that we in this article consider as “modernization”; we denote this variable as a “Modernization Index”. In addition, as we assumed, all the modernization variables have the same pairing (Figure A4), and, interestingly, the same contribution (Figure A5), which allows us to interpret it with models.

3 Results

In this section, we first present the results of logistic regression with different controls and fixed effects across all revolutionary events to examine how the levels of democracy and discrimination relate to the revolutionary violence and nonviolence. Afterwards, there are models with a limited sampling of revolutionary events: first, only sociopolitical revolutionary episodes, and then only ethno-separatist ones. Moreover, each group of models is followed by: (1) predicted probabilities plots of nonviolence during revolutionary campaigns, where the joint effects of democracy and discrimination are shown;
and (2) average marginal effects analysis. Overall, we find robust evidence that democracy is one of the strongest pacifying factors – but only for sociopolitical revolutionary events, because for ethno-separatist revolutionary campaigns it has no significant effect on the revolutionary nonviolence.

3.1 All Revolutionary Events

Table 1 shows results for logistic models where the outcome is whether NAVCO’s revolutionary campaign was nonviolent. The main explanatory variables are the level of electoral democracy \((t-1)\) and share of discriminated population \((t-1)\).

As might be expected on the basis of our theoretical analysis, democracy is indeed positively and significantly associated with the nonviolent type of any revolutionary campaigns in the vast majority of models while discrimination is negatively associated with revolutionary nonviolence but the significance of these correlations is well below any acceptable thresholds.

Thus, in bivariate regression M1, the level of electoral democracy \((t-1)\) significantly \(\text{(at the level } p < 0.01\text{)}\) affects the protesters’ choice of nonviolent tactic. After introduction of the share of discriminated population \((t-1)\) and population in M2 and M3, democracy is still significantly \(\text{(at the same level)}\) related to revolutionary nonviolence while discrimination is negatively, but insignificantly associated with dependent variable. Moreover, its effect is too small in comparison with democracy. For instance, in the M3, the odds of a revolutionary event taking on an unarmed form are reduced by a bit more than twice \(\text{(as is suggested by the odds ratio from the model)}\) if the entire population is discriminated, relative to no discrimination at all. At the same time, the odds of revolutionary nonviolence are increased by full democracy by almost 14 times in comparison with full autocracy.

In the further models, the variables from the “modernization” group are added in turn to the already ruminated democracy and discrimination. As one can see from M4, after the introduction of modernization \(PC\) in the model, democracy mostly loses its significance \(\text{(in M4 it is still marginally significant at the } p = 0.1392\text{ level)}\). At the same time, it is difficult to explain this by multicollinearity between the modernization index \(\text{(PC1 factors score)}\) and V-dem index of electoral democracy. Thus, using \(VIF\) analysis, the coefficient for democracy is just 2.18, while many authors consider the critical level to be 10 or 20 \(\text{(see, e.g., Craney & Surles, 2002)}\). Thus, we can conclude that such a multidimensional phenomenon as modernization is a really strong factor and more significant than democracy. Nevertheless, in subsequent models we introduce modernization variables in a different way and see that democracy regains its effect. All modernization variables have a significant and unidirectional positive effect on revolutionary nonviolence. The greater GDP per
### Table 1
Unarmed/nonviolent campaign/revolution on democracy and discrimination (for all revolutionary events)

Dependent variable:
Unarmed/nonviolent (= 1) vs. armed/violent (= 0) form of revolutionary event

<table>
<thead>
<tr>
<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>M5</th>
<th>M6</th>
<th>M7</th>
<th>M8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democracy (t-1)</td>
<td>3.304***</td>
<td>2.652***</td>
<td>2.621***</td>
<td>1.192</td>
<td>1.912***</td>
<td>1.665**</td>
<td>1.837***</td>
</tr>
<tr>
<td>Population (ln)</td>
<td>0.027</td>
<td>-0.111</td>
<td>0.023</td>
<td>0.007</td>
<td>0.011</td>
<td>-0.065</td>
<td></td>
</tr>
<tr>
<td>Modernization Index (PC1 factor score)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discrimination (t-1)</td>
<td>-0.743</td>
<td>-0.760</td>
<td>-0.752</td>
<td>-0.809</td>
<td>-0.569</td>
<td>-0.980</td>
<td>-0.481</td>
</tr>
<tr>
<td>Economy (ln)</td>
<td>0.732</td>
<td>0.799</td>
<td>0.752</td>
<td>0.744</td>
<td>0.776</td>
<td>0.794</td>
<td></td>
</tr>
<tr>
<td>Urbanization</td>
<td>0.081</td>
<td>0.099</td>
<td>0.083</td>
<td>0.085</td>
<td>0.087</td>
<td>0.099</td>
<td></td>
</tr>
<tr>
<td>Median age</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP per capita (ln)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M1</td>
<td>M2</td>
<td>M3</td>
<td>M4</td>
<td>M5</td>
<td>M6</td>
<td>M7</td>
<td>M8</td>
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<tr>
<td><strong>Dependent variable:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unarmed/nonviolent (= 1) vs. armed/violent (= 0) form of revolutionary event</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.342***</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.036***</td>
<td>-0.756***</td>
<td>-1.005</td>
<td>1.682*</td>
<td>-1.772**</td>
<td>-3.01***</td>
<td>-6.76***</td>
</tr>
<tr>
<td>(0.222)</td>
<td>(0.257)</td>
<td>(0.787)</td>
<td>(0.992)</td>
<td>(0.831)</td>
<td>(0.970)</td>
<td>(1.421)</td>
<td>(0.962)</td>
</tr>
<tr>
<td>Observations</td>
<td>409</td>
<td>387</td>
<td>387</td>
<td>341</td>
<td>386</td>
<td>376</td>
<td>386</td>
</tr>
</tbody>
</table>

*Note*: Region fixed-effects are included in all the models. *p < 0.1; **p < 0.05; ***p < 0.01.
capita, urbanization, median age or mean years of schooling, the greater the likelihood of unarmed tactics during the revolutionary events. Meanwhile, model with mean years of schooling (M8) has the best quality ($\text{AIC}$ is 386.58) across all other models, which shows education as one of the most pacifying modernization factors that should be investigated in the further research.

Figure 1 presents average marginal effects (AMEs) of variables from M4 of Table 1. We consider this particular model because it has one of the lowest $\text{AIC}$ (393.677) relative to the other models (which suggests better quality), and also takes into account all the variables of modernization at once (because it contains PC Modernization Index) that makes model more comprehensive. In the following analysis, we will consider models with this set of variables for the sake of comparison. In short, this graph shows how, on average, increasing each variable by 1 unit affects the probability that revolutionary event will take nonviolent form with 95% confidence intervals (in Appendix one can find standardized AMEs, but in the core article we present simple AMEs because of our variables of interest – index of electoral democracy and the share of discriminated population – has similar continuous scale from 0 to 1).\footnote{Note that we omit the regional variables so as not to unduly strip the graphs.}

Figure 1 demonstrates that democracy has a rather strong effect on the probability of nonviolence during the revolutionary campaign. However, it crosses the decisive boundary (at zero) that separates negatives from positives, suggesting that it is insignificant because, with some probability, its effect could be reversed.
At the same time, discrimination reduces the probability of nonviolence, but its effect is totally insignificant.

Figures 2A and 2B display the predicted probability of revolutionary nonviolence with the depicted effects of democracy and discrimination, where a particular variable takes on only a few values. This is necessary to understand how each variable affects the probability of a nonviolent revolution occurring when the others variables are constant. The graphs visualize M4 from Table 1, and show the 95% confidence intervals when the control variables are fixed at their means (the regional effect is also taken into account exactly the same way). As one can see in Figure 2A, which shows the effect of democracy on the probability of revolutionary nonviolence for different shares of the discriminated population, the index of electoral democracy has positive, relatively strong but insignificant effect on dependent variable. Meanwhile, discrimination has much smaller and totally insignificant effect on it, greatly inflating confidence interval. Figure 2B shows the same: the most impact on probability of revolutionary nonviolence belongs to democracy (though this impact is statistically insignificant), while discrimination has a negative effect, but it is much weaker and totally insignificant statistically.

**Figure 2A** The predicted probability of revolutionary nonviolence with democracy and discrimination as independent variables (for all revolutionary campaigns [M4, table 1])
Figure 2B  The predicted probability of revolutionary nonviolence with democracy and discrimination as independent variables (for all revolutionary campaigns [M4, table 1])

3.2  Sociopolitical Revolutionary Events

Table 2 shows results for logistic models where the outcome is whether NAVCO’s sociopolitical revolutionary campaign was nonviolent. The main explanatory variables are again the level of electoral democracy (t-1) and share of discriminated population (t-1).

As might be expected, based on our theoretical research, democracy is the strongest predictor and significant in all models, which was not the case in the analysis of all revolutionary episodes taken together (Table 1). Moreover, in contrast with the previous analysis of all revolutionary events, discrimination now is totally insignificant and, in several models, has positive effect on revolutionary nonviolence (M2, M4, M6) that is explained by a too large confidence interval which crosses the zero.

Also worthy of special attention is M4, where the Modernization Index (PCI) has been introduced. In contrast with the similar model from Table 1, democracy does not lose its significance even here, which once again proves its importance in the case of sociopolitical revolutions.
Figure 3 illustrates average marginal effects (AMES) of variables on probability of nonviolence during sociopolitical revolutionary events from M4 of Table 2. As can be seen, democracy is significant and strongly and positively associated with revolutionary nonviolence, while the effect of discrimination is about zero. Making comparisons with the effect from the model including all revolutionary episodes (see Figure 1), we can see that the effect of democracy on the probability of nonviolence has increased greatly: from about 0.2 to 0.3.

Figs. 4A and 4B are very different from those that we have seen for the case of analysis of all revolutionary episodes taken together (Figs. 2A and 2B). Thus, the share of discriminated population has literally no effect on the revolutionary violence vs. nonviolence. Figure 4A shows that the lines of different levels of discrimination are layered on top of each other, showing an essentially identical, zero effect of this variable on probability of revolutionary nonviolence. At the same time, the lines themselves have a fairly steep slope, which suggests the importance of democracy as a factor increasing the likelihood of revolutionary actions taking unarmed/nonviolent form. Figure 4B displays a similar picture, but from a different point of view: as the share of discriminated population increases, there is no change in the probabilities because the lines are parallel and have no slope. At the same time, the differences in the distances of the different lines along the probability axis reflect an important effect of the level of democracy on sociopolitical revolutions. All these findings strongly support our first hypothesis.
Figure 4A: The predicted probability of revolutionary nonviolence with democracy and discrimination as independent variables (for sociopolitical revolutionary campaigns [M4, table 2]).

Figure 4B: The predicted probability of revolutionary nonviolence with democracy and discrimination as independent variables (for sociopolitical revolutionary campaigns [M4, table 2]).
<table>
<thead>
<tr>
<th></th>
<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>M5</th>
<th>M6</th>
<th>M7</th>
<th>M8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democracy(t-1)</td>
<td>3.930***</td>
<td>3.390***</td>
<td>3.262***</td>
<td>1.816*</td>
<td>2.624***</td>
<td>2.082**</td>
<td>2.498***</td>
<td>0.786*</td>
</tr>
<tr>
<td></td>
<td>(0.758)</td>
<td>(0.822)</td>
<td>(0.829)</td>
<td>(0.942)</td>
<td>(0.873)</td>
<td>(0.921)</td>
<td>(0.886)</td>
<td>(0.971)</td>
</tr>
<tr>
<td>Discrimination(t-1)</td>
<td>0.016</td>
<td>-0.023</td>
<td>0.016</td>
<td>-0.018</td>
<td>0.221</td>
<td>-0.209</td>
<td>-0.032</td>
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</tr>
<tr>
<td></td>
<td>(0.788)</td>
<td>(0.792)</td>
<td>(0.869)</td>
<td>(0.818)</td>
<td>(0.821)</td>
<td>(0.849)</td>
<td>(0.862)</td>
<td></td>
</tr>
<tr>
<td>Population (ln)</td>
<td>0.173*</td>
<td>0.043</td>
<td>0.149</td>
<td>0.123</td>
<td>0.111</td>
<td>0.201</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>(0.100)</td>
<td>(0.120)</td>
<td>(0.103)</td>
<td>(0.110)</td>
<td>(0.109)</td>
<td>(0.144)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modernization index</td>
<td></td>
<td></td>
<td></td>
<td>0.655***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(PC 1 factors score)</td>
<td></td>
<td></td>
<td></td>
<td>(0.143)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Urbanization</td>
<td></td>
<td></td>
<td></td>
<td>0.023***</td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.008)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Median age</td>
<td></td>
<td></td>
<td></td>
<td>0.213***</td>
<td></td>
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<td>(0.047)</td>
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<tr>
<td>GDP per capita (ln)</td>
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<td></td>
<td></td>
<td>0.802***</td>
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</table>
## Table 2

Unarmed/nonviolent campaign/revolution on democracy and discrimination (cont.)

<table>
<thead>
<tr>
<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>M5</th>
<th>M6</th>
<th>M7</th>
<th>M8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unarmed/nonviolent (= 1) vs. armed/violent (= 0) form of revolutionary event</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0.919*** (0.262)</td>
<td>-0.751** (0.304)</td>
<td>-2.358** (0.987)</td>
<td>0.235 (1.214)</td>
<td>-2.86*** (1.020)</td>
<td>-5.65*** (1.322)</td>
<td>-7.93*** (1.652)</td>
</tr>
<tr>
<td>Observations</td>
<td>333</td>
<td>314</td>
<td>314</td>
<td>288</td>
<td>313</td>
<td>306</td>
<td>313</td>
</tr>
<tr>
<td>Akaike Inf. Crit.</td>
<td>392.934</td>
<td>361.421</td>
<td>360.427</td>
<td>301.901</td>
<td>352.175</td>
<td>321.385</td>
<td>338.969</td>
</tr>
</tbody>
</table>

Note: Region fixed-effects are included in all the models. * p < 0.1; ** p < 0.05; *** p < 0.01.
3.3 Separatist Revolutionary Events

Table 3 shows results from logistic models where the outcome is whether NAVCO’s ethno-separatist revolutionary campaign is unarmed/nonviolent. Once again, the main explanatory variables are the level of electoral democracy \( (t-1) \) and share of discriminated population \( (t-1) \).

As might be expected on the basis of theoretical analysis above, democracy has no significant effect in all models except the bivariate one (M1), which was not the case in the analysis of sociopolitical revolutionary episodes (Table 2). Worth noting, in M4, M5 and M8 democracy has a negative effect on revolutionary nonviolence, but this is explained by large confidence interval and has no real information about association between this factor and dependent variable (to be more precise, it shows complete insignificance).

What is more interesting is that, in contrast with the previous analyses of sociopolitical revolutions and all revolutionary events taken together (Tables 2 and 1 respectively), discrimination now is the most significant and important factor. In majority of models, it is significant at \( p < 0.1 \) level, but in the other models it is marginally significant at \( p < 0.13 \) level (M2, M4, M8) – that is due to a small number of observations (the database only includes about 70 ethno-separatist revolutionary events). It should be also emphasized that while the Modernization Index \( (P_{C1}) \) variable is marginally significant and has a positive effect, its individual components are not always significant. While GDP per capita, urbanization, and mean years of schooling behave in the predicted direction and have a significant effect on the probability of revolutionary nonviolence, the median age (quite in congruence with the findings of Yair and Miodownik [2016] and, especially, Cincotta and Weber [2021]) appears to be a completely insignificant factor and, moreover, is negatively related to the dependent variable, which again can be explained by poor significance.

Figure 5 displays average marginal effects \( (A\text{MEs}) \) of M4 model from the regression table above. One can see that the share of discriminated population has the strongest effect on probability of nonviolence of ethno-separatist revolutionary episodes, while average marginal effect of the index of electoral democracy is about zero.

The same result can be seen in Figs. 6A and 6B where predicted probabilities of nonviolence during separatist revolutionary movements are presented (however, we had to remove the confidence intervals because the democracy variable has a significance level greater than 0.9 and the resulting intervals are difficult to visualize and perceive). It is clearly shown that the index of electoral democracy is totally insignificant and has no effect on revolutionary violence/nonviolence. In Figure 6A one can see that all lines are parallel to the axis, they have no slope and, therefore, no obvious effect. Thus, for a given
Table 3  Nonviolent campaign/revolution on democracy and discrimination (for separatist revolutionary events)

<table>
<thead>
<tr>
<th>Dependent variable: Nonviolent (= 1) vs. violent (= 0) form of revolutionary event</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Democracy (t-1)</td>
</tr>
<tr>
<td>(1.575)</td>
</tr>
<tr>
<td>Discrimination (t-1)</td>
</tr>
<tr>
<td>Population (ln)</td>
</tr>
<tr>
<td>(0.255)</td>
</tr>
<tr>
<td>Modernization index</td>
</tr>
<tr>
<td>(PC1 factors score)</td>
</tr>
<tr>
<td>Urbanization</td>
</tr>
<tr>
<td>(0.023)</td>
</tr>
<tr>
<td>Median age</td>
</tr>
<tr>
<td>(0.068)</td>
</tr>
<tr>
<td>GDP per capita (ln)</td>
</tr>
<tr>
<td>(0.481)</td>
</tr>
<tr>
<td>Mean years of schooling</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Constant</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Observations</td>
</tr>
<tr>
<td>Log Likelihood</td>
</tr>
<tr>
<td>Akaike Inf. Crit.</td>
</tr>
</tbody>
</table>

Note: Region fixed-effects are included in all the models. † p < 0.13; * p < 0.1; ** p < 0.05; *** p < 0.01.
Figure 5: Average marginal effects of variables on nonviolence of revolutionary episodes (for separatist revolutionary campaigns [M4, table 3]).

Figure 6A: The predicted probability of revolutionary nonviolence with democracy and discrimination as independent variables (for separatist revolutionary campaigns [M4, table 3]).
levels of discrimination, it does not matter what the index of electoral democracy will be. In general, the same can be concluded from Figure 6B. Thus, the different lines corresponding to different levels of democracy are superimposed on each other, which shows the absence of any effect of democracy on the probability of nonviolence in the case of separatist revolutionary episodes. Nevertheless, we can clearly see a strong effect of discrimination, when the slope of the lines is rather steep. Interestingly, as the share of discriminated population increases from 0% to roughly 50%, we see an extremely steep slope, indicating a galloping reduction in the probability of revolutionary nonviolence during separatist episode as discrimination rises to this point. Once it reaches the about 50% mark, the rate of decline in the probability decreases, eventually reaching zero. All these findings strongly support our second and third hypotheses.

To sum up, when analyzing all the revolutionary events taken together, one should keep in mind that the share of the discriminated population and the level of democracy are completely different self-sufficient variables. Thus,
while democracy is mostly significant, its effect is not high in the analysis of all the revolutionary episodes taken together (see Table 1), while discrimination here is totally insignificant. This is connected with the fact that cardinally different types of revolutions are mixed, whereas the number of sociopolitical revolutionary events far exceeds the number of ethno-separatist revolutionary episodes. However, if we divide revolutionary uprisings into ethno-separatist and sociopolitical ones, the situation changes significantly: for ethno-separatist revolutionary events the discrimination turns out to be an undoubtably strong and significant negative predictor of revolutionary nonviolence, whereas democracy turns out to be totally insignificant. On the other hand, as regards the sociopolitical revolutionary episodes, while the discrimination continuous to be insignificant, the democracy turns out to be not only significant, but also rather strong and positive predictor of revolutionary nonviolence.

4 Conclusion and Discussion

In the late 20th and early 21st centuries, some researchers assumed that the global spread of democracy would end the era of revolutions (Fukuyama, 1989; Goodwin, 2001a, 2001b, 2003; Halliday, 1999; Nodia, 2000; Snyder, 1999) because “the ballot box has been the coffin of revolutionaries” (Goodwin, 2003, p. 67). In other words, the level of democracy was supposed as key factor in elimination of revolutions. Meanwhile, the experience of 21st century shows that full-scale revolutions can well occur in partial democracies, whereas certain revolutionary events are even possible in consolidated democracies (Goldstone et al., 2022a, 2022b, 2022c). Hence, the question how democracy affects revolutionary nonviolence remains open, which is especially important because most countries in the world today are full autocracies, partial autocracies or partial democracies.

Our analysis suggests that the level of democracy is indeed a significant and powerful predictor of whether a revolution will take an unarmed/nonviolent form. However, this applies only to sociopolitical, not ethno-separatist revolutions that is congruent with the conclusion of other researchers who show that some economic or demographic factors cannot explain ethno-national revolutionary episodes while accounting quite well for the sociopolitical ones (Cincotta & Weber, 2021; Sambani, 2001; Yair & Miodownik, 2016). Above all, this can be linked to the fact that “separatists’ core grievances are centred around their identity and the lack of political autonomy granted to their identity group” (Cincotta & Weber, 2021, p. 85), but not in such structural factors as economic development and age structure or transparency of electoral process.
Thus, for ethno-separatist revolutions, where the goal of the protesters is not a regime change, but autonomy or secession (Cederman et al., 2013; Wimmer et al., 2009; Yair & Miodownik, 2016), the most important factor in determining whether a revolution will take a violent or nonviolent form is discrimination, and democracy is not even a significant factor.

On the other hand, it appears appropriate to pay attention to another pattern we have found: even a slight democratization leads to a reduction in the risk that a revolution will take an armed violent form. Indeed, the higher the level of democracy, the greater the likelihood of revolutionary nonviolence. Meanwhile, if a revolution takes an unarmed/nonviolent form, it has a greater chance of success in the establishment of a more democratic regime (Ackerman & Karatnycky, 2005; Celestino & Gleditsch, 2013; Chenoweth & Stephan, 2011; Johnstad, 2010; Kim & Kroeger, 2019; Rasler et al., 2022). This suggests the existence of a positive feedback between democratization and revolutionary nonviolence. Thus, democratization leads to revolutionary nonviolence, which, in turn, leads to even greater democratization, which in turn results in more revolutionary nonviolence, and so on. In fact, this mechanism might contribute to the explanation of the overall global trend towards democratization (that can be quite confidently traced in the recent centuries notwithstanding the recent “democratic regression” [Abushouk, 2016; Diamond, 2021; Huntington, 1993, 1997; Lührmann & Lindberg, 2019; Sarhan, 2012; Skaaning, 2020]), but this, of course, requires further elaboration.

Moreover, in this article we introduce generalized “Modernization Index” and demonstrate that the likelihood that a revolutionary episode will take a nonviolent form is significantly influenced by it. Modernization is a strong and stable predictor of revolutionary nonviolence: the more developed society is (e.g., more wealthy, more educated, more urbanized, with older population), the higher the probability that the uprising will be unarmed. Furthermore, one might conclude that the level of modernization of society increases the chances of both sociopolitical and separatist revolution adopting a nonviolent form. However, in the case of ethno-separatist revolutions the modernization factor is still overshadowed by discrimination. Therefore, it is clearly impossible to explain the revolutionary nonviolence by a single, even generalized, factor.

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References


Evripidou, A., & Drury, J. (2013). This is the time of tension: Collective action and subjective power in the Greek anti-austerity movement. *Contention, 1*(1), 31–51.


**Appendix**

![Figure A1](image.png)

*Figure A1* Scatter plot between index of electoral democracy (V-Dem) and the share of discriminated population (with lag) with Pearson correlation

\[ R = -0.28, p < 2.2e-16 \]
Figure A2  Correlogram of main modernization control variables, with Pearson correlation

Figure A3  Variances of different modernization PCs
Figure A4  Dimensions of variables within PC1 and PC2

Figure A5  Contributions of variables within PC1
Figure A6  Average standardized marginal effects of variables on all revolutionary campaigns (M4, table 1)

Figure A7  Average standardized marginal effects of variables on sociopolitical revolutionary campaigns (M4, table 2)
Figure A8  Average standardized marginal effects of variables on sociopolitical revolutionary campaigns (M4, table 3)