



# Political and economic protests in authoritarian regimes

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## Abstract

Why do some protests succeed at obtaining accommodation but other protests are repressed? The content of demands varies widely across protest events although prior research has not accounted for how the demands of protest movements influence outcomes. We construct a theoretical model to study how different types of protest demands impact whether a dictator accommodates or represses. The model explains that income levels of protesters influence the content of their demands, which in turn affect protest mobilization and effectiveness. Lower income classes join economic protests that dictators more often accommodate, but higher income classes join political protests that dictators tend to repress. The model also shows that dictators may be unable to deter limited protests from becoming mass mobilization events, even when there is no uncertainty in the strategic environment. We discuss how the argument explains patterns of protest and repression with illustrative cases across Asia, Africa, and the Middle East.

**Keywords** Protest and repression · Authoritarianism · Democratization · Income · Game theory

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# 1 Introduction

When is a protest movement effective at obtaining accommodation and when is it repressed? Much of the existing scholarship has focused on coordination and information,<sup>1</sup> the size of protests,<sup>2</sup> or resource mobilization.<sup>3</sup> Another growing literature has focused on which opposition tactics are more effective at achieving their goals.<sup>4</sup> However, this literature has generally not considered whether the substance of the goals of an opposition group influence who joins the mobilization effort or the opposition's likelihood of obtaining accommodation.<sup>5</sup>

Theoretically, the motives of protesters may influence mobilization and repression (Shadmehr 2015; Bueno de Mesquita and Shadmehr 2023). Empirically, the goals of a campaign may explain the effectiveness of nonviolent protests (Dworschak 2023). Studies of protest effectiveness have typically focused exclusively on maximalist demands, such as those that seek to overthrow an existing regime (Stephan and Chenoweth 2008; Cunningham et al. 2017; Gleditsch et al. 2023) and to democratize their governments (Kalandadze and Orenstein 2009; Kim and Kroeger 2019). However, focusing on only maximalist campaigns overlooks how initial grievances may either be remedied through accommodation or escalate into widespread mobilization. If the processes by which these initial demands are unaccounted for in theory or research designs, then studies risk invalid inference (Cunningham et al. 2017; Chenoweth et al. 2018).

The protest literature generally does not compare how political versus economic demands influence protest dynamics because studies do not account for different types of demands. A few studies have considered demands specifically within political protests (Chenoweth and Stephan 2011; Cunningham 2013; White et al. 2015; Butcher and Svensson 2016) or specifically within economic protests (O'Brien 1996; Lorentzen 2013) but these studies do not compare across types of demands. While there is literature that has studied how economic classes are motivated to protest for democracy (Przeworski 2009; Ansell and Samuels 2014; Dahlum et al. 2019; Higashijima and Mitchell 2024), and how economic grievances encourage protest participation (Grasso and Giugni 2016; Kurer et al. 2019), these studies do not compare the effectiveness of political and economic demands.<sup>6</sup> Explaining the conditions under which protesters mobilize is a good step towards understanding protest dynamics, but mobilization alone does not explain how regimes are likely to respond. As we witnessed in the Arab Spring, protest movements can take different strategies even if they occur under similar conditions. Moreover, protest strategies can

<sup>1</sup> See Lohmann (1994); Ginkel and Smith (1999); Shadmehr and Bernhardt (2011); Kricheli et al. (2011); Edmond (2013); Casper and Tyson (2014); Hollyer et al. (2015, 2019); Mueller (2024).

<sup>2</sup> See DeNardo (1985); Ginkel and Smith (1999); Yin (1998).

<sup>3</sup> See Jr et al. (1973); Cunningham et al. (2017); Inata (2021b).

<sup>4</sup> See Stephan and Chenoweth (2008); White et al. (2015); Dahl et al. (2021); Hillesund (2022)

<sup>5</sup> There are a few important exceptions. Mueller (2018) elucidated the dynamics of protests in Africa by focusing on heterogeneous preferences between the politically motivated middle class and the poor with economic grievances. Truong (2024) finds that support declines for local economic policy-based protests in Vietnam when pro-democracy protesters attempt to co-opt the local protests. However, these studies do not consider how governments respond under dissimilar preferences of protesters.

<sup>6</sup> Notable exceptions include Mueller (2018) and Truong (2024) who each consider how economic class influences demands. However, as mentioned above, these studies focus only on motivations and not on the effectiveness of protests.

be consequential for protest effectiveness, which is why we must account for the actual demands of the protesters.

We make an extensive form game of protest and repression which incorporates the substantive goals of protests. The model includes a protest organizer who chooses the relative extent of political versus economic demands,<sup>7</sup> and a dictator who chooses to accommodate or repress those demands. Political protests center on issues of political rights and civil liberties, such as accusations of state repression, electoral fraud, and demands for releasing political prisoners. Economic protests refer to popular economic needs including wage and subsidy increases, demands for infrastructure, and other public goods provisions. Examples of political protests include the recurrent protests over compulsory hijab policies in Iran or the protests against the death of pro-democracy leader Alexei Navalny in Russia. Examples of economic protests include recent protests against utility prices in Kazakhstan and Pakistan. Protests may also include both political and economic components, such as the protests for standards of living and political reforms in Libya in 2020.

The model explains that demands which are more economic tend to be accommodated, while demands that are more political tend to be repressed. Additionally, the model demonstrates that protesters' demands change according to their incomes: individuals with lower incomes join purely economic protests, those with middling incomes join protests that mix political and economic demands, and individuals with higher incomes join political protests. The former two types more often end with accommodation while purely political protests more often end in repression. Consistent with the literature on democratization (Lipset 1959; Moore 1966; Boix et al. 2003; Ansell and Samuels 2014; Dahlum et al. 2019), this indicates that the middle classes play a crucial role in peacefully extracting the maximum political concessions from the dictator. We draw multiple additional implications from the model for the study of mobilization and protest effectiveness. We also provide suggestions for how empirical research designs should account for protest demands to improve model estimation.

Our model also builds upon recent findings from the literature on the relationship between economic grievances and political protests (Brancati 2016; Germann and Sambanis 2021). For example, increases in domestic incomes may reduce the likelihood of protests thereby making repression more effective (Shadmehr and Boleslavsky 2022). In our model, increasing incomes leads to more political demands which also reduces the types of protests that are likely to be accommodated, and thereby makes repression appear more effective. Materialistic motives (compared to psychological motives) may also promote widespread mobilization because a new regime can share material resources (Bueno de Mesquita and Shadmehr 2023). Similarly, economic demands in our model lead to more protests because dictators are more likely to accommodate economic rather than political protests.<sup>8</sup> Our model also demonstrates that conflict negotiations can fail to prevent limited protests from destabilizing governments even when there is no private information, conflicts are costly, and the conflict outcome is a lottery, which is unlike canonical models of conflict (Fearon 1995; Wagner 2000).

<sup>7</sup> Economic and political demands are not the only types of protests. Social and religious grievances can lead to protests and violence (Basedau et al. 2017; Vüllers 2021; Carvalho et al. 2024; Maltsev 2024).

<sup>8</sup> Prior formal research has also argued that repression may generally reduce resistance campaigns but may induce more violent forms of resistance (Bueno de Mesquita and Dickson 2007; Shadmehr 2015).

## 2 The strategic context of protest and repression

The Law of Coercive Responsiveness suggests that regimes respond to dissent with violence (Davenport 2007) but repression can often backfire (Goodwin 2011). Government repression has been shown to increase dissent and promote backlash in different regions of the world (O'Brien and Deng 2015; Curtice and Behlendorf 2021), especially when government actions are widely perceived as unjust (Hess and Martin 2006). Protest organizers may strategically evoke a regime's initial repression in order to promote mobilization (Sander 2024). Repression can also lead nonviolent protests to evolve into more violent forms of dissent (Lichbach 1987). However, dissent does not always necessarily lead to repression (Ritter and Conrad 2016), which suggests that the study of protest effectiveness depends upon the context of the conflict. Research is beginning to consider the strategic choice of protest tactics (Edwards 2021), but the literature has not yet connected how mobilization strategies and protest effectiveness depend upon contextual factors.

Important contextual factors have been overlooked in the study of protest and repression. We argue that the content of opposition complaints are vital to understanding the conditions under which regimes accommodate or repress protester demands, and subsequently the protesters' strategic choices for resistance. In particular, the content of protest demands are typically under-conceptualized in studies of protest. Empirical samples of protest and opposition resistance commonly require maximalist demands, which is defined as demands for regime or institutional changes that fundamentally alter the operation of the government (Chenoweth and Lewis 2013; Klein and Regan 2018; Butcher et al. 2022).<sup>9</sup> This sample restriction is useful but insufficient when attempting to understand the dynamics of protest and repression because minimalist protests that achieve accommodation will bias the sample towards groups and issues that have failed to obtain limited concessions.

Moreover, restricting studies to maximalist demands overlooks fundamental minimalist demands that may be the primary motivation for mobilization efforts. For instance, economic demands are a minimalist form of grievance that have the potential of providing the basis for mass mobilization against regimes (Greskovits 1998; Lorentzen 2013; Skonieczny and Morse 2014; Vassallo 2020). Mass protests that seek to overthrow dictatorships often begin from economic grievances (Brancati 2016; Thomson 2018), such as the cases of the Arab Spring (Campante and Chor 2012) and political liberalization in sub-Saharan Africa in the late 1980s to early 1990s (Bratton and van de Walle 1997). Prominent theories have argued that economic interests explain democratization (Boix et al. 2003; Acemoglu and Robinson 2006; Ansell and Samuels 2014)<sup>10</sup> but studies of protest and repression that attempt to explain protest size, choice of tactic, and effectiveness do not typically distinguish between the goals of different protest groups.

How should we begin to consider the impact of contextual factors on the strategic environment for protest and repression? Theory is the best place to start because thinking through the various potential outcomes helps us understand both what we observe as well as what we do not observe. Formal models in particular are useful for thinking through inter-strategic environments and can help elucidate appropriate comparison groups as well as control variables in the study of protest, repression, and conflict. In the following

<sup>9</sup> An important exception is the Nonviolent and Violent Campaigns and Outcomes (version 3) data which intentionally broadens the scope of the sample beyond maximalist claims (Chenoweth et al. 2018).

<sup>10</sup> However, economic downturns (Geddes 1999; Teorell 2010) rather than inequality (Houle 2009; Haggard and Kaufman 2012) often lead to democratization.

section, we build a model of protest and repression in which the goals of the opposition can be more economic or political, which are consequential for protest outcomes.

Before we present the model, we need to discuss the scope conditions for the argument. We model when protests and repression occur, as functions of the income of the representative protester and their demands. Our model applies to opposition groups, and not to the regime elites. Upper class groups are often regime supporters, and even when they oppose the regime they often have resources that allow them to organize coups, which is a strategy that is not available to the lower classes.<sup>11</sup> For these reasons, the model does not apply to either regime elites or those upper classes in the opposition who might support a coup but would not directly join protests. However, the upper classes are not uniform actors across country contexts and they have been important opposition supporters in many cases of regime change.<sup>12</sup> Taken together, these scope conditions limit, but do not completely preclude, the applicability of the model for the upper classes.

### 3 A model of protest and repression

There are two players in the model: a dictator  $D$  and a protest organizer  $P$ . The game is perfect and complete information with sequential actions. The protester first decides whether or not to organize a protest or stay home. When the protester stays home, the game ends and the players receive their status quo utilities. When  $P$  organizes a protest, they must choose a value of  $x \in [0, 1]$  which represents the political and economic characteristics of the protest demands. A demand of  $x = 0$  represents purely economic grievances while  $x = 1$  represents purely political grievances. Then, a demand between 0 and 1 indicates a mix of economic and political protests. For example,  $x = \frac{1}{2}$  means that a protest seeks both political and economic changes at equally moderate levels. After observing  $P$ 's demand, then  $D$  decides whether to accommodate or repress the  $x$  demand.<sup>13</sup> When  $D$  represses the protest then conflict occurs in which  $P$  and  $D$  fight over control of the regime (Table 1).

The players utilities depend upon the authority of the regime, public spending, and incomes.  $D$ 's income is  $1 - \omega - \rho$  and  $P$ 's income is  $i > 0$ . The revenue of the regime is normalized to 1 which means that economic welfare spending  $\omega \in [0, 1 - \rho]$  and the cost of repression  $\rho \in [0, 1 - \omega]$  are proportions of the regime's budget. Economic welfare spending  $\omega$  is public spending that supports the material well-being of citizens such as social insurance but also other forms of economic spending such as infrastructure and economic development.

The political authority of the regime,  $\alpha$ , represents the dictator's ability to influence policy. The converse,  $1 - \alpha$ , represents the political freedoms of the citizenry. A loose way to think about  $\alpha$  and  $1 - \alpha$  regards the institutionalization of the dictatorship. Highly

<sup>11</sup> Economic elites and regime elites typically threaten dictators through coups rather than protests (Casper and Tyson 2014) or initiate negotiations backed by the threat of a coup (Inata 2021a). Dictators also strategically target economic elites to obtain their cooperation (Gandhi 2008; Boix and Svolik 2013), which creates a different dynamic than between the dictator and the general public.

<sup>12</sup> Examples in which elites supported democratization include Spain in the 1970s (Gunther 1991), South Korea in the 1980s (Kim 2006), Brazil in the 1980s (Hagopian 1996), and Kazakhstan in the early 2000s (Junisbai and Junisbai 2005).

<sup>13</sup> Even though  $D$ 's choice is between either accommodation of  $P$ 's demand or repress, the accommodation outcome can represent partial concessions because  $P$ , as the first mover, can reduce their ideal demand according to what will be acceptable by  $D$ . This is a standard approach in the noncooperative games literature. See Rubinstein (1982); Fearon (1995); Powell (2002).

institutionalized dictatorships have lower values of  $\alpha$  and greater values of  $1 - \alpha$ . Institutionalization can also be methods of executive selection within the regime that constrain dictators. We solve for the equilibrium where  $\alpha > 1 - \omega$  since it relates to authoritarian regimes. The assumption  $\alpha > 1 - \omega$  functionally means that the dictator is more sensitive to political demands than economic demands. This is consistent with the standard assumption in the authoritarianism literature that dictators seek their own personal power and security within the regime.<sup>14</sup>

The players' utilities are defined as follows. When  $P$  stays home instead of protest, then the game ends with both players receiving their status quo utility functions:

$$P\text{'s status quo utility} : i + \omega + i(1 - \alpha) \quad (1)$$

$$D\text{'s status quo utility} : 1 - \omega + \alpha \quad (2)$$

The utility function for  $P$  contains important assumptions. The income parameter  $i$  appears twice in  $P$ 's status quo utility of  $i + \omega + i(1 - \alpha)$ . The first parameter  $i$  is  $P$ 's valuation of their income, which is regardless of the regime type. This assumption means that  $P$  is better off with higher income whether or not  $P$  lives in a country with an authoritarian regime. The second income parameter is modifying  $P$ 's valuation of political freedoms, where  $i(1 - \alpha)$ . The second  $i$  in  $P$ 's status quo utility function does not mean that  $P$  receives their income twice. Rather, the second  $i$  is a coefficient that modifies  $P$ 's utility for political rights  $(1 - \alpha)$ . This assumption means that individuals have greater valuation of their political freedoms as their incomes rise.<sup>15</sup> Whether  $P$  cares more about gaining material well-being through welfare spending  $\omega$  or gaining political rights  $(1 - \alpha)$  depends on their level of income. In other words,  $P$  values political rights but must first prioritize their economic security. The specific conditions for how  $i$  influences  $P$ 's preferences are defined in the next section.<sup>16</sup>

When  $P$  organizes a protest that  $D$  accommodates,  $P$  gains  $(1 - x)(1 - \omega) + xai$  in addition to their status quo utility.<sup>17</sup> Similarly,  $D$  loses  $-(1 - x)(1 - \omega) - x\alpha$  from their status quo utility. The player's utilities of accommodation become:

$$P\text{'s accommodation utility} : i + \omega + (1 - x)(1 - \omega) + i(1 - \alpha + x\alpha) \quad (3)$$

$$D\text{'s accommodation utility} : 1 - \omega - (1 - x)(1 - \omega) + \alpha - x\alpha \quad (4)$$

The  $(1 - x)(1 - \omega)$  represents the economic concessions and  $x\alpha$  are political concessions. For instance, if  $P$  makes a purely economic protest in which  $x = 0$  and  $D$  accommodates then  $P$  receives  $i + \omega + (1 - 0)(1 - \omega) + i(1 - \alpha + 0\alpha)$  which is  $i + 1 + i(1 - \alpha)$ . When  $x = 0$ ,  $D$  spends the budget on economic policy and social welfare but provides no additional

<sup>14</sup> We omit cases in which  $\alpha \leq 1 - \omega$ , which correspond to relatively more democratic regimes. Such cases may be of theoretical interest but since our research question is specific to dictatorships, we assume  $\alpha > 1 - \omega$  for consistency.

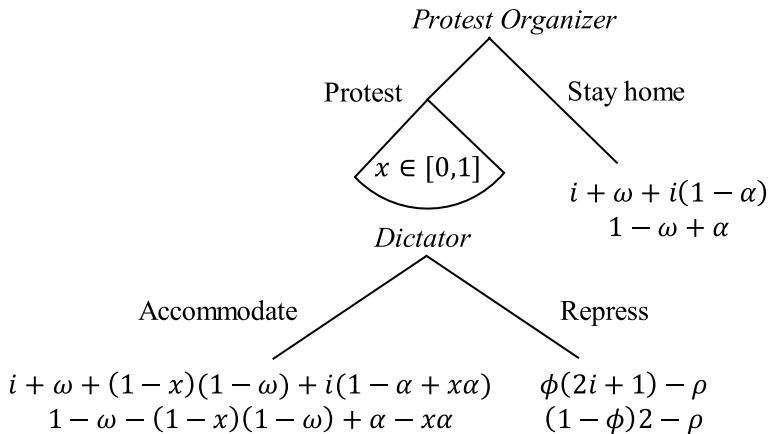
<sup>15</sup> Basic material needs such as food and shelter are more fundamental than political rights when incomes are low (Maslow 1948). We could further justify the assumption  $i(1 - \alpha)$  as representing how higher income individuals are able to use their incomes to influence politics. Political rights provide individuals in society with the ability to contest their government's policies. An individual's income can be used to influence politics, such as through campaigns, advertisements, and donations.

<sup>16</sup> See also inequalities A7 and A8 in the Appendix for further details.

<sup>17</sup> When accommodation occurs,  $P$  materially gains  $(1 - x)(1 - \omega) + x\alpha$  but since they value political rights according to their income  $i$ , they value their material gains as  $(1 - x)(1 - \omega) + xai$ .

**Table 1** Notation of terms in the model

Notation	Definition
$x$	$P$ 's protest demand
$i$	$P$ 's income
$\omega$	Economic welfare spending
$\rho$	Repression spending
$\alpha$	Political authority of the regime
$\phi$	Probability that $P$ wins a conflict

**Fig. 1** The game's extensive form

political rights. Likewise, when  $x = 1$ ,  $P$  receives  $i + \omega + (1 - 1)(1 - \omega) + i(1 - \alpha + 1\alpha)$  which is equivalent to  $i + \omega + i$ . When  $x = 1$  is accommodated,  $D$  gives  $P$  political rights but does not change budgetary policy. Since  $D$  will not accommodate both full economic policy and political rights,  $P$  faces a trade-off in what they can demand through protests.

When  $P$  organizes a protest that  $D$  represses then  $P$  and  $D$  enter a conflict for control of the regime which includes both budgetary and political authority (Fig. 1).  $P$  wins the conflict with probability  $\phi \in (0, 1)$  and  $D$  wins with probability  $1 - \phi$ . The parameter  $\phi$  represents  $P$ 's characteristics such as mobilization capacity, size of protests, technology, resources, etc., that influence  $P$ 's ability to win a conflict against the regime. If conflict occurs,  $D$  spends  $\rho \in [0, 1 - \omega]$  on repression, and  $P$  faces a cost of repression equal to  $\rho$ . The winner of the conflict obtains both budgetary and political control of the regime. The loser of the conflict receives 0. For instance, if  $P$  wins then they set  $\omega = 1 - \rho$  and  $\alpha = 0$  which yields  $P$  a payoff of  $2i + 1 - \rho$  for their income, economic spending, and political rights.<sup>18</sup> Similarly if  $D$  wins they set  $\omega = 0$  and  $\alpha = 1$ .

$$P's \text{ conflict utility} : \phi(2i + 1) - \rho \quad (5)$$

<sup>18</sup> In models of protests in authoritarian regimes, the dictator represents a small group of people while protesters represent a larger portion of society. Preferences for more private versus public benefits follow from group size (Bueno de Mesquita et al. 2005).

$$D\text{'s conflict utility} : (1 - \phi)2 - \rho \quad (6)$$

## 4 Equilibrium

Since the game involves no private information, the solution concept is subgame perfect equilibrium. All proofs are available in the Appendix. The propositions, below, specify the set of conditions under which each model outcome occurs. Table 2 provides definitions of thresholds in the equilibrium. Figure 2 illustrates the parameter space into regions accordingly.

In a manner similar to solving the game, we first summarize the dictator's optimal actions. Intuitively, the dictator is not always open to negotiations. Given the dictator's strategy, the protest organizer decides whether or not to organize a protest, and if so, what type of protest to organize. The dictator's willingness to accommodate protesters hinges on the opposition's ability to threaten the regime (i.e.  $\phi$ ) and the type of protest (i.e.  $x$ ). When the opposition's protest threat is too weak (Figure 2, left part of the diagram) or when the opposition pursues too much political accommodation (Figure 2, upper-middle part of the diagram) then the dictator represses such protests. In other words, the peaceful resolution of disputes between the dictator and protester can occur only under restricted circumstances (Figure 2, lower-middle and right parts of the diagram). Repression occurs only when the cost of repression is not minuscule. As Proposition 2.1 states, when repression does little harm, the protest organizer always carries a protest of any type, regardless of their income level (Figure 2, intermediate part of the diagram).

**Proposition 1** (*Accommodation*) *P stages a protest and D accommodates according to two sets of conditions.*

- 1.1) *When P's ability to win a conflict is low but sufficiently strong (i.e.  $\phi_{max}^D > \phi \geq \phi_{min}^D$ ), D accommodates if P's demand is sufficiently low,  $x \leq x^D$ . When P's income is low (i.e.  $i \leq i^{med}$ ), then they offer  $x = 0$ . When P's income is intermediate (i.e.  $i^{med} < i \leq i^{high}$ ),*

**Table 2** Definitions of thresholds in the model

Notation	Definition
$x^P$	P's minimum acceptable proposal when their income is low
$x^{\bar{P}}$	P's minimum acceptable proposal when their income is above intermediate
$x^D$	D's maximum acceptable accommodation
$\phi^P$	Limit of $\phi$ for P to consider protesting if repression occurs
$\phi_{min}^D$	Limit of $\phi$ for D to consider any accommodation
$\phi_{max}^D$	Limit of $\phi$ for D to accept all $x$ accommodation offers
$i^{med}$	Intermediate income (above low) for P
$i^{high}$	High income for P

The thresholds are defined in the Appendix. P's minimum acceptable proposals  $x^P$  and  $x^{\bar{P}}$  are related to whether P prefers  $x \leq x^P$  or  $x > x^{\bar{P}}$ , respectively



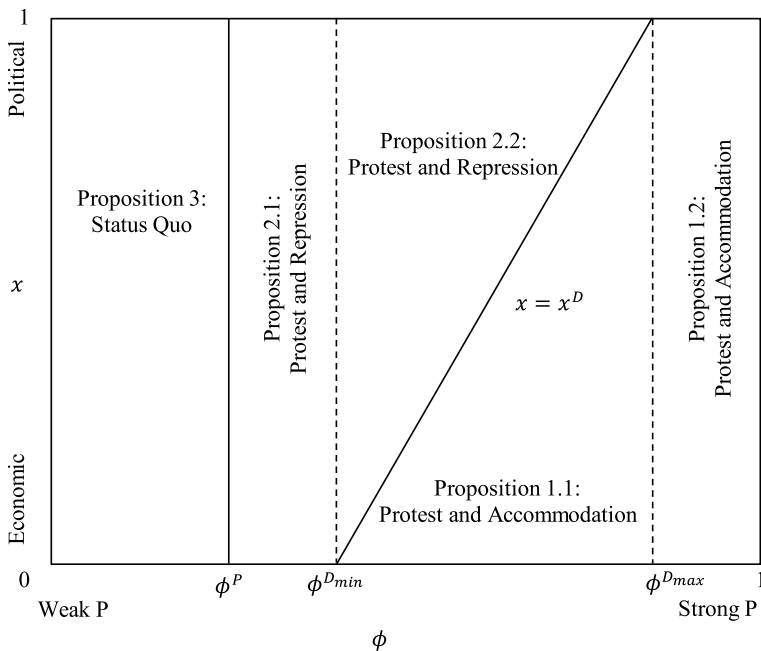
they offer  $x = x^D$ . Income  $i^{high}$  is the point at which  $P$ 's minimum acceptable demand exceeds  $D$ 's maximum acceptable accommodation ( $x^{\bar{P}} > x^D$ ). (Income  $i^{med}$  is defined below. Income  $i^{high}$  is defined in the Appendix.)

- 1.2) When  $P$ 's ability to win a conflict is sufficiently high (i.e.  $\phi \geq \phi^{D_{max}}$ ),  $D$  accommodates any  $x \in [0, 1]$ . When  $P$ 's income is low (i.e.  $i \leq i^{med}$ ), then they offer  $x = 0$ . When  $P$ 's income is intermediate or above (i.e.  $i^{med} < i$ ), they offer  $x = 1$ .

**Proposition 2** (Repression)  $P$  stages a protest when mobilization capacity is great enough ( $\phi^P \leq \phi$ ) despite knowing that  $D$  represses in the following two sets of conditions.

- 2.1)  $P$  stages a protest and offers any  $x \in [0, 1]$  when  $P$  is not strong enough for  $D$  to consider accommodation (i.e.  $\phi^P \leq \phi < \phi^{D_{min}}$ ) and the cost of repression is sufficiently low (i.e.  $\rho < \frac{2(1-\omega)-\alpha}{2i+3}$ ).
- 2.2) When  $P$  is sufficiently strong such that  $D$  is willing to consider some, but not all,  $x$  demands (i.e.  $\phi^{D_{min}} \leq \phi < \phi^{D_{max}}$ ), and  $P$ 's income is sufficiently high such that  $P$  is unwilling to accept  $D$ 's accommodation (i.e.  $i > i^{high}$ ), then  $P$  stages a protest demanding  $x \in (x^D, 1]$  which  $D$  rejects.

**Proposition 3** (Status quo)  $P$  stays home when their odds of winning a fight are sufficiently low such that  $P$  is unwilling to face repression (i.e.  $\phi < \phi^P$ ).  $D$  is always willing to repress in this case, and  $P$  does not protest.



**Fig. 2** The equilibrium outcomes as a function of  $P$ 's probability of winning a fight ( $\phi$ ) and  $P$ 's  $x$  offer when  $\phi^P < \phi^{D_{min}}$ . Note that the solid lines indicate different propositions but the dashed lines separate sub-propositions

Equilibrium outcomes depend on exogenous factors of mobilization capacity ( $\phi$ ) and protester income ( $i$ ). Accommodation occurs under two scenarios. Proposition 1.1 states that when the dictator is open to some forms of accommodation but  $P$  has a limited ability to win a conflict ( $\phi^{D_{min}} \leq \phi < \phi^{D_{max}}$ ), then  $P$  chooses the type of protest depending on their level of income. When their income is low ( $i \leq i^{med} = \frac{1-\omega}{a}$ ), the protester organizes a purely economic protest (i.e.  $x = 0$ ).<sup>19</sup> When their income is intermediate ( $i^{med} < i \leq i^{high}$ ),  $P$  demands accommodation at  $D$ 's maximum acceptable offer (i.e.  $x = x^D$ ), which can reflect both economic and political accommodations at moderate levels. But when the protest organizer has high income ( $i > i^{high}$ ) then their demands are too great for the dictator to accommodate (Proposition 2.2).<sup>20</sup> In Proposition 1.2,  $P$  also chooses protest demands according to their income, but  $P$  is able to obtain either purely economic or purely political accommodation because their ability to challenge the regime is high ( $\phi^{D_{max}} < \phi$ ).

Conflict also occurs under two different scenarios. In the first scenario (Proposition 2.1), the dictator is unwilling to consider any of the protester's demands and represses any protests. The dictator is only willing to consider protest demands when the protests present a potential risk to the regime. When the protester's probability of winning a conflict with the regime is low enough ( $\phi < \phi^{D_{min}}$ ) then the dictator will not consider any demands no matter if they are economic or political. At the same time, even though the dictator thinks the opposition's chances in a conflict are too low, if the protester believes they have a sufficiently strong chance of winning a conflict ( $\phi^P \leq \phi$ ) then they will protest despite repression.

In a second repression and conflict scenario, the dictator is willing to consider some demands, but the protester does not find any of them acceptable (Proposition 2.2). In this situation, the dictator will accept accommodation for any  $x$  within the range of 0 to  $x^D$ . However, when the protester has more political interests, then their demands may exceed the dictator's range of accommodation ( $x^D < x^P$ ). In such a case, the protester would rather fight to overthrow the regime than accept the dictator's limited accommodation. This assumes the protester's mobilization is strong enough that they prefer fighting rather than staying home ( $\phi^P \leq \phi$ ).

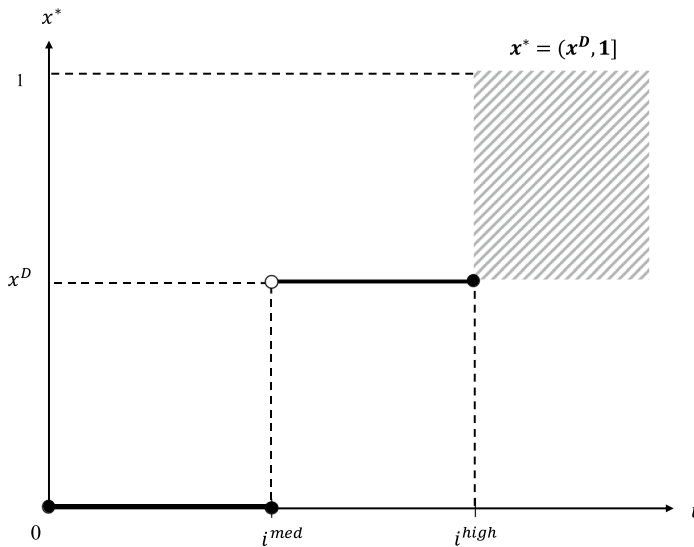
Next we explore how  $P$ 's income impacts their equilibrium protest demands. Figure 3 plots  $P$ 's optimal offer at different income thresholds. The figure assumes that  $D$  is open to at least some accommodation because  $P$  has a minimally sufficient mobilization capacity  $\phi^P < \phi^{D_{min}} \leq \phi$  to create a negotiation space but not a high enough capacity  $\phi^{D_{max}} < \phi$  to obtain all possible demands. This means that Figure 3 represents Propositions 1.1 and 2.2. Figure 3 does not represent Proposition 1.2 which requires  $\phi^{D_{max}} < \phi$ , Proposition 2.1 which requires  $\phi^P < \phi < \phi^{min}$ , or Proposition 3 which requires  $\phi < \phi^P$ .

In Figure 3, for incomes between  $0 \leq i \leq i^{med}$ ,  $P$ 's optimal offer is  $x = 0$ . When income is  $i^{med} < i \leq i^{high}$ ,  $P$ 's optimal offer is  $D$ 's maximum acceptable accommodation,  $x^D$ . For incomes  $i^{high} < i$ ,  $P$  no longer prefers limited accommodation but instead prefers protesting to overthrow the regime despite the threat of repression.

Since income impacts the demands of the protester, income relates to whether accommodation or repression occurs. Accommodation (Proposition 1) is more likely to occur when the protester has lower or intermediate income. The easy case is when the protester has lower income and more economic demands since dictators are more willing to change economic policy rather than increase political rights. When an intermediate income

<sup>19</sup> Income threshold  $i^{med}$  is derived from inequalities A7 and A8 in the Appendix. It is not an assumption.

<sup>20</sup> Income threshold  $i^{high}$  is defined by inequalities A9-A11 the Appendix.



**Fig. 3**  $P$ 's optimal  $x$  offer according to their income  $i$  when their capacity to challenge the regime is minimally sufficient  $\phi^{D_{min}} \leq \phi < \phi^{D_{max}}$ . Note: When  $i \leq i^{med}$   $P$  sets and receives  $x = 0$  and when  $i^{med} < i \leq i^{high}$   $P$  sets and receives  $x^D$  (Proposition 2.1). The shaded area indicates that when  $i^{high} < i$   $P$  chooses any  $x \in (x^D, 1]$  but conflict occurs (Proposition 2.2)

protester pursues a moderate degree of political liberalization, they propose a middling  $x$  that calls for both political and economic accommodation to modest extents. In this case, it is possible for the game to end peacefully with the dictator's accommodation of limited political demands.

As income further increases from intermediate to high, the protester's demands are less likely to be accommodated because higher incomes create more political demands. In the model, higher levels of income lead to stronger preferences for political liberalization, which makes a conflict more likely unless the protester backs down and stays home. When the protester is unwilling to stay home ( $\phi \geq \phi^P$ ), a higher income protester makes an  $x$  demand that is too large for the dictator to consider accommodating. In this case, a direct confrontation occurs in which the protester is unwilling to lower their demands to a level that is acceptable to the dictator. The opposition engages in protests that seek regime change to forcefully remove the dictator (Proposition 2.2). This space is depicted in the shaded area of Figure 3 where  $P$  chooses any  $x \in (x^D, 1]$ . Alternatively, if the opposition's chances of winning a conflict are low ( $\phi < \phi^P$ ), then higher income  $P$  stays home to avoid a conflict (Proposition 3).

In sum, outcomes of accommodation and repression tend to occur according to what protesters demand. Since income levels influence the demands of protesters, their incomes also relate to whether protests end peacefully or violently. Lower income protests favor economic grievances and are most likely to end in accommodation. Protests that appeal to intermediate income protesters mix economic and political grievances. These mixed demands are less likely to be accommodated than purely economic protests but are not as likely to be repressed as purely political protests. Higher income protests are most often

repressed, though protesters may be inclined to stay home to avoid repression. In the next section, we discuss in greater detail how these contextual factors relate to both the existing literature as well as existing cases.

## 5 Implications

We draw multiple implications from the model for the study of protest and repression. In particular, the model helps provide context for when different types of protests succeed and fail. The model informs existing questions about mobilization, protest effectiveness, and democratization.

### 5.1 Income and mobilization

The model result answers the question of who joins which types of protests. Lower income oppositions more often join economic protests while higher income oppositions rarely join protests but if they do then they more often join political protests. Although the value of income is individually subjective, we can loosely interpret the different incomes in the model as representing economic classes.<sup>21</sup> Lower incomes reflect the masses or labor classes, and intermediate incomes represent the middle classes. Higher incomes are conceptually a bit more difficult because of the scope condition we discussed above. Higher incomes in the model represent only those individuals in upper-middle or upper classes who are willing to join or support protests. As we discussed above, this group may be limited or nonexistent in some contexts.

If we consider that income somewhat represents class, Figure 3 yields a substantive interpretation that the masses typically hold economic protests, upper classes more often hold political protests, and the middle classes pursue a mix of economic and political protests. Since economic protests are less likely to be repressed, lower classes more often engage in protest behavior compared to other classes. In contrast, the political demands of the upper classes are often unacceptable to the regime, which yields either a submissive upper class or an upper class opposition that engages in direct confrontation with the regime. An empirical implication of this comparison is that we should more often observe lower classes joining protests and much less often observe upper classes engaging in or supporting protests.

In our model results, the demands of a protest organizer who has either mass or upper class preferences are straightforward. The more nuanced case is a protest organizer with middle class preferences. A middle class protester prefers political accommodation but because they have more moderate demands, middle class protesters are willing to negotiate for a mix of economic and political demands. To understand this, consider the  $x$  demand when income is above intermediate (see inequality A8 in the Appendix). The protest organizer with above intermediate income prefers political accommodation over economic accommodation, but the preference of the intermediate income protester is moderate

<sup>21</sup> Different individuals within the same class might have different valuations of their own income. Moreover, materialistic values can differ across cultures. For these reasons, it is more difficult to apply the model to economic classes rather than simply comparing how increasing or decreasing incomes impacts preferences.

compared to when the protester has higher income. The result suggests that political protests are often led by the middle classes rather than the lower or upper classes.

The model result for middle class political protests is consistent with the empirical findings from the political economy of political development (Moore 1966; Lipset 1959; Boix et al. 2003; Acemoglu and Robinson 2006; Ansell and Samuels 2014; Mueller 2018). This prior research finds that urban labor and urban middle classes obtained democracy, rather than rural labor or the landed upper classes (Przeworski 2009; Ansell and Samuels 2014; Dahlum et al. 2019). Our model is consistent with this prior literature on factor-based economic classes which is an important feature of the theoretical model even though the model does not assign interests based on income or classes.

## 5.2 Opposition grievances and protest effectiveness

Economic protests are more likely to be accommodated while political protests are more likely to be repressed. This model result provides an implication that has been overlooked in the literature on protest effectiveness. The literature has typically focused on mobilization and capacity of protests (McCarthy and Zald 1977; DeNardo 1985; White et al. 2015; Butcher and Pinckney 2022) but has not accounted for the substance of demands. As Propositions 1 and 2 state, accommodation and repression in dictatorships are often related to the substance of the demands.

Dictators seek to maintain their security in office, and are more willing to make economic concessions rather than political concessions to promote regime stability. This result adds a necessary dimension in understanding the protest-repression nexus. While the literature has focused on the question of whether or not protests lead to repression and whether repression creates a protest backlash (Carey 2006; O'Brien and Deng 2015; Hager and Krakowski 2022), this literature has generally not considered the content of protest demands. The model helps explain why some types of protests are more likely to evoke repression while other protests obtain meaningful policy outcomes without violence. The model results suggest why empirical studies of protest effectiveness must account for protest demands or else risk invalid inference because the effectiveness of economic and political protests are not directly comparable.

Consider the following comparative scenarios for protest escalation. One protest begins as a limited protest with economic demands and the other protest begins with purely political demands. Of these two limited protests, the economic protest is more likely to be accommodated while the political protest is more likely to be repressed. Since the economic protest was limited and did not incorporate maximalist demands, it is likely to be excluded in scholars' samples for empirical analyses. Additionally, repressed political protests are more likely to be covered by international media which means these protests are more likely represented in samples for empirical studies.<sup>22</sup> In short, ignoring the content of demands can yield sampling biases which may inhibit valid inferences.

The situation for empirical studies has even more difficulties in order to obtain valid inferences. Suppose that both the limited economic and political protests were repressed. The limited economic protest might then escalate into a maximalist campaign to overthrow the regime (economic escalation) or the economic protesters may demobilize (economic demobilization). Similarly, the limited political protest when repressed may also escalate

<sup>22</sup> A similar sampling argument has been made for nonviolent and violent protests (Dworschak 2023).

into a maximalist campaign (political escalation) or the political protesters may demobilize (political demobilization).

These cases indicate the difficulties of accurately assessing protest effectiveness. Scholars typically want to study the effectiveness of protests in the case of political escalation. However, when they do not account for economic grievances and the paths of mobilization, they are at best comparing cases of economic and political escalation but without identifying these different cases in their research designs. These cases will likely have different rates of protest effectiveness because the substance of the demands impact 1) how attractive the demands are to the mass public and 2) how averse the dictator is to the demands. Moreover, empirical samples might contain cases of either economic or political demobilization in addition to the escalated protests, which further troubles the comparisons. The lesson for empirical scholarship is that the content of demands, not simply maximalist demands, must be accounted for in order to ensure appropriate comparisons and valid inferences. Further below we expand on this discussion by highlighting how accounting for demands may help scholars build better empirical research designs.

A few examples help illustrate the differences in outcomes for economic and political protests. The 2011 Arab Spring consisted of protests across Northern Africa and the Arabian Peninsula. Two countries in particular serve as a good comparison for how the content of protests led to different outcomes. At the time of the protests, Bahrain and neighboring Oman had similar levels of economic poverty. Yet the protests in Bahrain were primarily political and the protests in Oman were primarily about economic grievances (Worrall 2012), despite that the Oman protests began in part because of the Bahrain protests (Bank et al. 2014). Both protests began peacefully but the Bahraini protests ended with violent repression by King Khalifa while Sultan Qaboos resolved the situation in Oman through accommodating demands for job creation, improving unemployment benefits, and raising wages. Despite that these protests occurred during the same global event, we should have very different expectations over the outcomes of these protests. We can not directly compare the effectiveness of the protests in Bahrain and Oman and expect to make valid inferences about why one or the other succeeded, unless we take into account the demands of the protesters.

In the same vein, Kazakhstan serves as another case illustrating the manner in which autocrats selectively use repression and accommodation according to the type of protests within a country. Facing a growing number of political and economic protests under the Nazarbayev-Tokayev regime (2018–2021), the Kazakh government needed to choose which tactics to use to control dissent. Political protests, which were primarily organized by opposition leaders and civil activists, were typically repressed by the government. In contrast, economic protests supported by ordinary citizens were more likely to be accommodated by the government through holding meetings with protesters and making policy concessions (Higashijima 2023). In so doing, the government tried to divide and conquer the emerging anti-government dissent.

### 5.3 Political demands and protest strategies

Higher income groups are more likely to protest for political rights because they do not need greater economic security from government spending. However, dictators tend to repress political protests. Higher income groups also have a difficult time winning a conflict through protests because they constitute a minority of the population which often means a low mobilization capacity (Acemoglu and Robinson 2006). Taken together, the

model suggests that higher income groups with political grievances are more effective at obtaining accommodation when they incorporate economic demands rather than pursuing purely political protests.

Politically-minded protest organizers who incorporate economic grievances can improve the opposition's mobilization and likelihood of winning a protracted conflict. However, the reverse is not true; the model suggests that economic protests that incorporate political demands increase the likelihood that the protest ends in repression. Economically-minded protesters have reason to guard against being co-opted by politically-minded activists. This model implication is consistent with findings from Truong (2024). Through an internet survey experiment in Vietnam, Truong (2024) studies local policy protests which are typically based on economic grievances, and led by more low income groups. The study finds that endorsements by pro-democracy protesters reduce public support for local economic protests. Consistent with the implications of our formal model, Truong's research indicates that the incorporation of economic demands into political protests may benefit politically-minded protest organizers, but not vice versa.

These implications for protest effectiveness are also illustrated by South Korea's successful democratization campaign which contrasts with China's failed student protests. In South Korea in the 1980s, a repressed student movement reorganized with labor to successfully democratize the regime. Attempts at pressuring the regime to provide greater political rights occurred throughout South Korea's authoritarian period from 1961–1987. Similar to the case of China, students were the main driver of political protests in South Korea, and these protests were also initially repressed. However, after being repressed in the 1970s, the South Korean students made the strategic decision to ally and organize labor (Kim and Park 2017). Students took jobs within factories for the purpose of spreading organization. With both economic and political interests mobilized, the democratization movement had widespread support and eventually succeeded in 1987.

The student demonstrators in China in 1989 demanded greater political rights for themselves, and sought to appeal to the regime by intentionally excluding other sectors of society. Most notably, the students intentionally excluded the labor class in order to make their demands appear more moderate to the regime (Perry 2002, Ch 10). Students in developing countries such as China in the 1980s were a small minority who viewed themselves as socially above laborers (Altbach 1989). As intellectuals, the Chinese students could have chosen to broaden the ideology of their protests in order to incorporate the lower classes (Kelliher 1993). However, their approach of excluding labor meant that the demography of the protesters was exceptionally narrow while their demands were unacceptable to the regime. The protesters' mobilization capacity was quite limited compared with the repressive capacity of the regime. Consistent with our model, the result was a purely political protest that was quickly ended through repression.

Cases within sub-Saharan Africa also suggest that it is important for political protests to incorporate the economic grievances of lower income groups. Under the Mugabe regime in Zimbabwe, the emerging opposition party Movement for Democratic Change (MDC) successfully responded to popular economic discontent brought about by economic decline and structural adjustments in the 1990s. This appeal to a broad range of the masses enabled the MDC to obtain large mass support and build strong alliances between the party and constituencies. In contrast despite facing a similar emergence of economic grievances during the same period, opposition movements in Kenya all failed to engage popular constituencies in a systematic manner, which made the opposition fragmented geographically and ethnically (Lebas 2011).

## 5.4 Suggestions for empirical research

The discussions above highlighted the differences between economic and political protests. We claim that empirical research may suffer from bias if protest demands are not accounted for in research designs. To clarify how research designs may benefit from including protest demands, we discuss the results from two empirical studies of protest effectiveness: Chenoweth and Stephan (2011) and Dahlum et al. (2019). Each of these publications have advanced our understanding of protest dynamics by conducting novel empirical research on which types of protests are more effective at achieving their goals. These studies also have different research questions for which types of protests are effective. Chenoweth and Stephan (2011) study the effectiveness of nonviolent protests while Dahlum et al. (2019) study the effectiveness of class-based protests. We discuss these publications to clarify how accounting for protest demands may help improve future research designs.

The research by Chenoweth and Stephan (2011) was groundbreaking in the study of nonviolent resistance because it utilized a newly coded dataset that distinguished between violent and nonviolent protests. To be clear, our current critique is not informative for the debate between nonviolence and violence, as our model does not allow us to consider violence as an option for the protesters. Rather, our critique potentially explains that the findings for nonviolent protests may be biased because of heterogeneity in the types of demands that led to the protests.

The sample for the Chenoweth and Stephan (2011) study includes only maximalist campaigns, which are campaigns with overtly political demands that seek to replace the regime or remove the regime's authority from the group protesting. The main finding is that nonviolent protests are more effective at achieving their goals than are violent protests, by about 22 percentage points. Further, the likelihood of success of a nonviolent campaign increases as mobilization increases.<sup>23</sup>

The crux of our critique is that not all maximalist campaigns should be directly compared because the initial demands which led to the maximalist campaign can differ, with important implications for mobilization and effectiveness. Consider our discussion above about protest effectiveness. If some maximalist campaigns begin as economic protests, or a politically-motivated opposition intentionally co-opts lower classes by appealing to economic grievances, then the mobilization is likely to be more effective. Dictators are also more likely to accommodate partial political and economic demands rather than strictly political demands, according to the model. Otherwise, a maximalist campaign that focuses especially on political rights but neglects economic grievances is not as likely to increase mobilization or obtain concessions from the regime. Moreover, the demographic composition of the protesters may impact the severity of their demands and their willingness to negotiate for partial accommodation.

What this means for studies of protest effectiveness is that analytical results are sensitive to the composition of protest demands within the sample. In other words, for a study such as Chenoweth and Stephan (2011), there is likely unexplored heterogeneity in the association of nonviolent protests and protest success. Based on the model, we can expect that including a control variable for economic grievances would likely reduce the magnitude of the association of nonviolence and success. Alternatively, if economic grievances are included as a multiplicative interaction then an empirical model might result in a larger

<sup>23</sup> See especially Table 2.4 in Chenoweth and Stephan (2011).



association for the effectiveness of maximalist protests with economic demands but a weaker association for purely political protests.

However, not all studies of protest effectiveness will necessarily benefit from the inclusion of demands in empirical models. Studies which account for economic classes or income might already be capturing the important variation between demands, mobilization, and effectiveness. According to the formal model, income levels influence demands, which means that income or class might be a sufficient proxy for economic versus political demands.

The study on economic classes and democratization by Dahlum et al. (2019) is a good example in which the inclusion of demands might not improve the empirical model of protest effectiveness. The authors test which protests are effective at obtaining political rights according to the economic classes that are leading the protests. The empirical models find that protests led by urban labor or urban middle classes are more likely to improve democratization. While even class-based protests can take different strategies - recall our discussion of the Chinese and South Korean protests - accounting for class and income is a useful way to sort some of the heterogeneity in protest types. The Dahlum et al. (2019) findings might not change if protest demands are included in the model, though demands could act as a mediator variable. Future work can study whether accounting for both class/income and protest demands are useful for improving empirical models.

We hope that this discussion has clarified how the inclusion of political demands within empirical research can help scholars obtain more accurate inferences from their research designs. Accounting for protest demands may reveal that purely political protests are less effective than previously thought while the effectiveness of protests with broader demands may have been underestimated in previous work. Ideally, empirical models account for protest demands in addition to the income/class of protesters as well as the extent of mobilization. However, the exact specification of empirical models depends upon the research question and how scholars believe the data generation process works.

## 6 Conclusion

This paper sought to answer the question of when dictators accommodate versus repress protests. To approach this broad question, we constructed an argument that accounted for the content of protest demands, which has been overlooked in the literature. We found that the theoretical model explains who joins protests and which types of protests receive accommodation or repression. The model produces additional implications for protest strategies and effectiveness. However, the model was constructed as simply as possible to directly answer the research question. The limitations of the model suggest directions for future research to answer additional questions.

A limitation of the game is that it does not allow for uncertainty. This choice was by design because we wanted to know how players would respond if they knew the consequences of their actions. Our model with complete information allows for scrutinizing the complicated relationships between income, types of demands, protest, and repression. However, several studies demonstrate that uncertainty can produce inefficient political outcomes such as war and political violence (Fearon 1995; Powell 2004; Pierskalla 2010; Spaniel and Bils 2018), and this would definitely apply to our formal model of protests and repression. Dictators with uncertainty about opposition grievances might mistakenly believe that accommodation will result in political stability but instead encourages future

protests by signaling regime weakness. Protesters who overestimate the dictators' cost of repression might also unexpectedly face a crack down by the regime. Yet, our formal model demonstrates that conflict outcomes can happen even if the game involves no uncertainty and that groups of citizens may tolerate repression to achieve their political goals.

The model also does not consider dynamic or long term equilibria. Economic accommodation in dictatorships may be stabilizing in the short term but potentially destabilizing in the long term. Future work could investigate how accommodation of economic demands may benefit autocratic stability in the short term while creating long term consequences for regime survival. In the short run, a dictator that acquiesces to the demands of an economic protest will appease the current opposition and resolve their grievances. Changes in economic policy can help bring the poor out of poverty and grow the middle class. According to the model, as income and development rises in a society, the population gains greater preferences for more political rights compared to economic policy. If these preferences for political rights become widespread, the regime may risk facing an effective political protest movement in the future. In short, economic accommodation today could lead to political grievances and authoritarian breakdown tomorrow.

The model also did not consider how political institutions might impact protest and repression. A long literature finds that elections in dictatorships are a double-edged sword (Higashijima 2022). On one hand, dictators use this information to manage their oppositions (Lust-Okar 2004; Magaloni 2006) and construct public policy (Miller 2015; Mitchell 2025). Political institutions may allow dictators to better understand how to utilize accommodation and repression to divide their oppositions, for instance, by accommodating a moderate faction of the opposition while repressing the extremists. This might suggest that dictators in electoral autocracies are more effective in their policies to maintain regime stability. On the other hand, opposition groups in electoral autocracies may also feel empowered to protest more often because election results often reveal the weaknesses of the regime and thus opposition leaders may believe they can organize protests.

Lastly, this paper studied how economic and political demands relate to protest outcomes, but many other factors can contribute to mass mobilization and protest outcomes. A two dimensional model between economic and political interests is a first step towards incorporating the substance of demands into analyses of protest and repression. However, the inferences for economic protests may not be generalizable to social and religious protests because of the importance of country context for these latter issue areas. Recent literature has also studied how ethnic identities explain resistance types and government responses (Thurber 2018; Rørbæk 2019; Manekin and Mitts 2022). Moreover, our approach did not allow for factional differences within either the regime or the opposition which could influence protest and political change dynamics (Przeworski 1991; Abrams 2024; Goldstone 2024). This suggests that more research must be conducted to adequately understand how the content of protest demands in combination with protest context explains accommodation and repression in authoritarian regimes.

## Appendix

Solving backwards yields the subgame perfect equilibrium. The calculations follow the order of the propositions in the main text. Since each of the propositions require thresholds for  $P$ 's strategies according to their income, we calculate these income thresholds and  $P$ 's  $x$  demands after providing the proofs for each proposition.

We first solve for the  $x$  in which  $D$  accommodates versus represses. Then we calculate the thresholds for  $\phi$  by which the players are willing to enter conflict. We calculate the  $x$  demands by which  $P$  is willing to accept accommodation rather than face repression. Lastly, we calculate the income threshold by which  $P$  prefers fighting a conflict over regime change rather than accepting accommodation of  $x$ .

### Proof of Proposition 1 (Accommodation)

$D$  chooses accommodation over repression when:

$$1 - \omega - (1 - x)(1 - \omega) + \alpha - x\alpha \geq (1 - \phi)2 - \rho \quad (\text{A1})$$

$$x \leq \frac{\alpha + \rho - 2(1 - \phi)}{\alpha - (1 - \omega)} \equiv x^D \quad (\text{A2})$$

**Proposition 1.1** The cutpoint  $x^D$  requires  $\phi \geq \phi^{D_{\min}} \equiv \frac{2 - \alpha - \rho}{2}$  in order for  $x^D > 0$ . The cutpoint also assumes  $\alpha > 1 - \omega$ , which is explained in the main text. Overall,  $D$  accommodates when  $x \leq x^D$  and  $\phi \geq \phi^{D_{\min}}$ ; Otherwise,  $D$  represses. We explain  $P$ 's accommodation equilibrium  $x$  offer as a function of their income in the section, Calculation of  $P$ 's  $x$  demand, below.

**Proposition 1.2** We can also calculate the  $\phi$  from inequality A1 to which  $D$  will always accommodate any of  $P$ 's  $x$  demands.

$$\phi > \frac{1 + \omega - \rho}{2} \equiv \phi^{D_{\max}} \quad (\text{A3})$$

Since  $x = 1$  is the maximum demand that can be considered, any  $\phi > \phi^{D_{\max}}$  will yield accommodation for all  $x$  demands. In  $\phi^{D_{\max}}$ , the protester's ability to obtain accommodation increases as repression spending  $\rho$  increases, which is consistent with  $\phi^{D_{\min}}$  as well as  $x^D$ , above. Repression spending  $\rho$  helps  $D$  avoid conflict by deterring  $P$ 's protest, but  $\rho$  also makes accommodation more likely if protests occur. This is a form of a Punisher's Dilemma (Bueno de Mesquita et al. 2024).

### Proof of Proposition 2 (Repression)

The conditions under which  $D$  represses protests are already identified above: when A2 does not hold,  $D$  represses. Given this, therefore we then consider  $P$ 's decision whether to organize a protest with demand  $x \in [0, 1]$  or stay home. We consider  $P$ 's optimal actions given  $D$ 's strategies. Let's first consider the case that  $\phi < \phi^{D_{\min}}$ , where  $D$  always rejects  $P$ 's offer because  $x^D < 0$ . In this case,  $P$  must decide if they are willing to protest or stay home despite knowing that  $D$  represses.  $P$  protests and faces certain conflict instead of accepting the status quo if:

$$\phi(2i + 1) + (1 - \phi)0 - \rho \geq i + \omega + i(1 - \alpha) \quad (\text{A4})$$

$$\phi \geq \frac{i(2 - \alpha) + \omega + \rho}{2i + 1} \equiv \phi^P \quad (\text{A5})$$

**Proposition 2.1** For  $P$  to protest when the dictator is unwilling to consider any accommodation because  $\phi < \phi^{D_{min}}$ , then  $\phi^P < \phi^{D_{min}}$  must hold.  $\phi^P < \phi^{D_{min}}$  reduces to  $\rho < \frac{2(1-\omega)-\alpha}{2i+3}$ . Overall, in the case that  $\phi < \phi^{D_{min}}$ ,  $P$  organizes a protest offering  $x \in [0, 1]$  if and only if the cost of repression is sufficiently small.

**Proposition 2.2** When  $P$ 's ability to challenge the regime is at least minimally sufficient  $\phi \geq \phi^{D_{min}}$ , such that  $D$  considers at least some types of accommodation, but  $P$ 's demands cannot be met by  $D$  because  $i > i^{high}$ , then  $P$  prefers to face repression rather than stay home when  $\phi \geq \phi^P$ . The calculation of  $i^{high}$  is below.

### Proof of Proposition 3 (Status quo)

$P$  does not protest and  $D$  is always willing to repress when  $\phi < \phi^P$  as calculated above.

### Calculation of $P$ 's $x$ demand

$P$  prefers  $x$  being accommodated rather than being rejected when:

$$i + \omega + (1 - x)(1 - \omega) + i(1 - \alpha + x\alpha) \geq \phi(2i + 1) - \rho \quad (\text{A6})$$

Let  $x^P$  generically denote the minimum acceptable offer for  $P$  to propose a negotiated settlement. Note that "minimum" can be  $x < x^P$  or  $x > x^P$  in different situations. Whether  $P$  prefers more or less  $x$  depends upon  $P$ 's income  $i$  compared to the regime's budget and political authority. Medium income  $i^{med} = \frac{1-\omega}{\alpha}$  is the point at which  $P$ 's preferences switch between  $x < x^P$  and  $x > x^P$ . We define  $x^L$  when  $P$ 's income is low and  $x^{\bar{P}}$  if income is medium or higher. As shown below, when income is low then  $P$  prefers less  $x$  but when income is medium or higher then  $P$  prefers more  $x$ .

**$P$  demands  $x^L$  if income is low,  $i \leq i^{med}$**

When  $i \leq i^{med} = \frac{1-\omega}{\alpha}$ , then  $P$  prefers more economic demands and will offer  $x$  that  $D$  accepts rather than rejects if:

$$x \leq \frac{i(2 - \alpha) + 1 + \rho - \phi(2i + 1)}{(1 - \omega) - i\alpha} \equiv x^L. \quad (\text{A7})$$

In this case, since  $P$  demands  $x \leq x^L$  then  $P$  chooses the smallest  $x$  to maximize their payoff. The smallest possible  $x$  is  $x^L = 0$ , which is acceptable to  $D$  if  $x^D > 0$ .

**$P$  demands  $x^{\bar{P}}$  if income is medium or higher,  $i > i^{med}$**

Alternatively when  $i > i^{med} = \frac{1-\omega}{\alpha}$ , then  $P$  prefers more political type demands and prefers accommodation over conflict if:

$$x > \frac{\phi(2i+1) - i(2-\alpha) - 1 - \rho}{i\alpha - (1-\omega)} \equiv x^{\bar{P}}. \quad (\text{A8})$$

When  $P$  has a low but sufficiently strong ability to win a conflict ( $\phi^{D_{\min}} \leq \phi < \phi^{D_{\max}}$ )  $P$ 's protest demand depends on  $D$ 's potential response.  $P$  takes different strategies depending on the configuration between  $x^{\bar{P}}$  and  $x^D$ , that is either  $x^{\bar{P}} \leq x^D$  or  $x^{\bar{P}} > x^D$ . When  $x^{\bar{P}} \leq x^D$ , there exists a set of  $x$  which both  $P$  and  $D$  prefer agreeing on to rejecting. Since in this case  $P$  demands  $x \geq x^{\bar{P}}$ ,  $P$  chooses the largest  $x$  that  $D$  accommodates to maximize their payoff. That is,  $x^{\bar{P}} = x^D$ , which  $D$  accommodates.

### **$P$ demands $x^{\bar{P}*}$ if income is high, $i > i^{\text{high}}$**

When  $x^{\bar{P}} > x^D$ , there does not exist a set of  $x$  which both  $P$  and  $D$  prefer agreeing on rather than rejecting. The point at which  $x^{\bar{P}} > x^D$  can be defined in terms of  $P$ 's income where  $i \equiv i^{\text{high}}$ . Thus when  $i > i^{\text{high}}$ ,  $P$  organizes a protest offering  $x^{\bar{P}*} = (x^D, 1]$  which  $D$  rejects because  $x^{\bar{P}} > x^D$ . The offer  $x^{\bar{P}*}$  is a special case of  $x^{\bar{P}}$  that occurs when:

$$x^{\bar{P}} > x^D \quad (\text{A9})$$

$$\frac{\phi(1+2i) - i(2-\alpha) - (1+\rho)}{i\alpha - (1-\omega)} > \frac{\alpha + \rho - 2(1-\phi)}{\alpha - (1-\omega)} \quad (\text{A10})$$

$$i > \frac{\phi(1+\alpha-\omega) + \rho(2-\alpha-2\omega) + \omega(1-\alpha) - 1}{\alpha(1+\rho-\omega) - 2(1-\phi(1-\omega) + \omega)} \equiv i^{\text{high}} \quad (\text{A11})$$

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