

# The psychology of political risk: Repression, fear and mobilization

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## Abstract

Many authoritarian regimes wield the threat of repression to suppress dissent. Cognitive psychology predicts that the emotion of fear should affect how citizens perceive and process information about repression risk, and ultimately how they behave. I test the implications of this model of decision-making by studying how opposition supporters make participation decisions and how different types of citizens vary in their decision-making and outcomes. I test these predictions using a mix of quantitative and qualitative data, including an original lab-in-the-field experiment with 671 urban and rural opposition supporters in Zimbabwe. The experiment shows that fear reduces participation in dissent by between 14 and 77% on a range of measures, and that these effects are mediated by increases in risk perceptions and risk aversion. Second, a psychological propensity to feel fear in the face of a threat is a better predictor of political participation than other prominent explanations including ideological preferences and access to information. These effects suggest that the threat of coercive violence is a powerful tool to demobilize dissent, and that a model of decision-making that takes emotions into account can help us understand how repression is used to influence citizens and how its negative effects can be mitigated.

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# 1 Introduction

Since the end of the Cold War, electoral autocracy has become the most common form of non-democratic regime in the world (Schedler, 2013). Sixty-nine countries in the world are currently considered to be non-democratic, despite the fact that all but twelve have held national elections in the past fifteen years (Hyde and Marinov, 2012; Freedom House, 2015). In many of these electoral autocracies, repression is a key tool wielded by incumbent regimes to maintain power despite a lack of popular support. In sub-Saharan Africa, one in five elections since 1990 have been afflicted by significant electoral violence, mostly perpetrated by ruling parties (Straus and Taylor, 2012), and 48% of voters continent-wide reported fear of violence during elections in the fifth round of the Afrobarometer survey. Large numbers of citizens must decide how to vote by considering not only the cost of voting and promises of the respective parties, but also the potential physical and material sanctions that they might face because of the party they choose.

Opposition supporters in repressive regimes must make difficult decisions about whether or not to participate in collective expressions of dissent – difficult not only because the stakes are high, but also because information about potential costs and benefits is highly ambiguous. Citizens know that the regime has an interest in exaggerating the cost of opposition, so they must judge this probability on the basis of credible signals such as past acts of repression. However, violent events are generally rare, even in highly repressive regimes. What does it mean for a citizen in one Harare slum trying to decide whether or not to attend a protest that someone in another neighborhood was beaten for wearing an opposition t-shirt last week? Would every potential attendee of that protest interpret the signal in the same way? Most importantly, these risks must be assessed in emotional environments characterized by ardent calls to protest and violent threats. Coercive violence is often perpetrated in a way that seems designed to maximize fear through graphic torture, public spectacle, or violating norms. Does the terror that violence incites play any role in how citizens perceive and process information about the risks and opportunities of rising up collectively against an autocratic regime? More plainly, does the emotion of fear itself affect whether or not citizens choose to participate in pro-democracy action?

This study proposes and tests a theory of how emotions influence participation in pro-democracy action by shaping how citizens perceive and process information about the risks and benefits of dissent. My starting point is the calculation that citizens use to weigh the potential costs and benefits of participation. I present a simple decision framework for citizens that is a function of the strength of their preferences for an alternative regime, the repressiveness of the regime, and the number of other people who are expressing dissent. Citizens form beliefs about these parameters on the basis of past repression events, which they interpret as signals about the regime's repressive capacity and intent. However, repression events also have an emotional impact, which I follow

neuroscientists in defining as patterns of chemical and neural responses to environmental stimuli that affect cognitive and bodily processes. Specifically, repressive violence is intended to incite fear, which makes citizens more pessimistic in their own perceptions of the risk of repression and less tolerant of risk. Through these parameters – namely, pessimism and risk aversion – fear has a causal impact on citizens' propensities to participate in acts of collective dissent.

Modeling decision-making in this way has important implications. First, it can help explain who participates in risky acts of dissent in autocracy. Because citizens differ in their propensities to feel fear in response to a negative situation, the same repression event may terrify one citizen while leaving another unmoved. This implies that variation in the subjective interpretation of signals of repression risk can explain variation in protest participation across individuals. Second, it implies that fear can be used strategically in the struggle between elites and citizens for control of the state. Autocrats must allocate resources between coopting and coercing potential challengers. Some have argued that coercion is an undesirable tool for autocrats because building up repressive institutions creates a greater threat than it neutralizes. However, if autocrats can effectively use fear to coerce citizens without needing to create the full capacity to carry out the threat, it may make coercion a viable option, particularly for regimes that lack the capacity to buy off the support of large numbers of citizens.

This paper uses a mix of experimental, observational, and qualitative methods to test the implications of this theory using data from Zimbabwe, an electoral autocracy in which the regime that is currently in power has previously used violence to win elections. First, in order to test the effect of fear on how citizens make decisions about participating in dissent, I carried out a series of lab-in-the-field experiments with a total of 1,145 opposition supporters in Zimbabwe. I experimentally induce fear using standard techniques from psychology experiments, and measure pessimism about the cost of dissent and risk attitudes. I measure both self-reported propensity to participate in a series of acts of dissent, and an actual behavior that is indicative of the desire to express dissent. Second, I use my original survey data to test whether variation in the psychological predilection for fear can explain participation in dissent. I test whether low self-efficacy, a psychological characteristic that predisposes people to have fear reactions in negative situations, is related to pessimism, risk aversion, and ultimately a lower propensity to engage in pro-democracy action.

The evidence presented here shows that fear has a strong effect on dissent that may work through pessimism and risk aversion. Experimentally induced fear reduces a hypothetical and behavioral measure of participation in pro-democracy collective action. Mediation analysis using the methodology of [Imai and Yamamoto \(2013\)](#) suggests that these changes in dissent are driven by increases in pessimism about the cost of dissent and risk aversion. Second, there is strong and consistent evidence that self-efficacy perceptions can explain which citizens react fearfully in the face of repression, and therefore who continues to dissent in the face of threats and who abstains.

Self-efficacy beliefs are in fact a stronger predictor of dissent than measures of access to information or strength of preferences for the opposition.

A number of models explaining participation in collective challenges against entrenched regimes have emphasized how beliefs about the risk of repression, signaled by informational signals of the regime's strength and expectations about how other opposition supporters will behave, influences participation in collective dissent (Kuran, 1991; Lohmann, 1994; Angeletos et al., 2007; Shadmehr and Bernhardt, 2011; Tyson and Smith, 2015). However, these models have largely ignored how citizens interpret information about potential risks and benefits of participation. The origins of preferences and formation of beliefs about the state of the world are assumed to be exogenous or constant across citizens. None of this literature considers that heterogeneity in interpretation of this information might be important in explaining who dissents and who abstains. These theories have at their base a model of citizen decision-making based on expected utility that assumes that emotions felt at the time of the decision are epiphenomenal, and again, the way in which beliefs about the expected utility of strategies are formed is not explained.

On the other hand, there are arguments that emotions are central to participation in anti-regime speech, protest, or rebellion. Gurr (1970), for instance, argues that the anger caused by relative deprivation enables citizens to overcome the collective action dilemma, and that this anger is even redoubled by the threat of repression. Scott (1990) similarly argues that dissent is experienced as “a loss of temper, a rush of anger that overwhelms one’s deliberative self rather than an act of calculated anger” (218). Much of this literature, however, has ignored the strategic dimensions of dissent, often assuming that emotions cause decisions to be completely dominated by expressive benefits, even in the face of large potential costs. In addition, both formal models of coordination for regime change and theories that focus on the role of emotions in dissent have been subjected to few rigorous empirical tests.

This study integrates insights on emotions and decision-making about risk from cognitive psychology into a model of decisions about participation in high-risk, pro-democracy collective action. It fills an important gap in the literature between theories explaining collective action using an expected utility framework, and studies that document the importance of emotions in social movements. While others have done this by modeling emotions as part of “expressive benefits” (Downs, 1956; Varshney, 2003) that are weighed against the costs of political participation, I contend that the emotions felt at the moment of making a decision influence assessments of multiple parameters as well as basic preferences like risk attitudes that shape how these parameters are processed. Similar frameworks have been proposed to explain attitudes towards counter-terrorism (Lerner et al., 2003), welfare (Lerner and Small, 2008), and voting (Valentino et al., 2011) in the United States, but this study extends this research to a new, important domain of political behavior.

Second, this is one of the first studies to use experimental methods to test a theory about

emotions and participation in contentious politics. Most past theories rely on case studies or interviews with protesters to bring evidence to bear on how emotions influence behavior. However, these methods cannot definitively resolve questions around whether emotions have a causal effect or are epiphenomenal to the observed outcomes. By isolating the effect of emotions, independent of new information, selection effects, or even thoughts about existing information on parameters in the decision to participate in collective dissent, my empirical strategy isolates the effect of fear itself on perceptions and behavior. This empirical strategy draws from a long literature in psychology, as well as a number of recent experiments in American politics and economics studying the causal effects of emotions (Valentino et al., 2008; Banks and Valentino, 2012; Callen et al., 2014).

Finally, this study paints a rich picture of the experiences of opposition supporters in a repressive regime. By leveraging the local expertise and networks of an NGO that conducts research and provides support to the victims of violence in Zimbabwe, I was able to survey more than 2,000 opposition supporters living under the current threat of violence from a repressive regime over several weeks of piloting and two rounds of an experimental study. The methodology that we developed to do this safely and to a high quality standard builds on practices deployed in contexts of civil war or counter-insurgencies to protect participants and research staff. The data that we produced gives a rare glimpse into the lives of people living under an autocratic state that is willing to use violence to maintain power.

## **2 A psychological theory of dissent in autocracy**

Psychologists view emotions as processes that help individuals take advantageous actions in response to a stimulus. Emotions are activity in specific parts of the brain that send signals to other parts of the brain and body through the bloodstream and neural pathways. These signals set off a series of reactions in the brain and body that prepare the individual to take appropriate action such as fight or flight. Just as fear causes an individual's heart rate to increase, it also causes changes in cognitive processes and preferences such as attention, cognitive capacity, perceptions of risks, and tolerance for risk. Fear specifically has been shown to make people risk averse, uncertain, attentive to threats over incentives, and pessimistic, with the overall effect of facilitating retreat or vigilance in response to a negative stimulus.

Citizens with pro-democracy preferences living under a repressive regime must make decisions on a daily basis about whether to express or hide their dissent. Before they can make such a decision, however, citizens must assess a number of parameters that shape the costs and benefits of dissent, including how many other pro-democracy citizens will join them and the likelihood that they will face repression if they engage in a specific act of dissent. These assessments are non-trivial, and must be made in a context where information is scarce and multiple parties have incentives to

misrepresent. The core insight of the theory that I elaborate in Section 2.1 is that these assessments and how they are weighed together are affected by the emotional state of the decision-maker.

If this insight is correct, it has widespread implications for understanding pro-democracy collective action and the strategic interactions between autocrats and activists. First, if certain emotions have a large effect on dissent decisions, then people who are more likely to experience those emotions should be less likely to dissent. I argue in Section 2.2 that self-efficacy, or an individual's subjective assessment of her general ability to cope in negative situations, predicts whether individuals will react to repressive threats with fear, and as a result how the threat will affect their behavior. Second, if fear makes opponents of the regime less likely to take action, then the regime should try to maximize fear in order to reduce dissent at minimal cost, while pro-democracy activists should try to fortify opposition supporters against fear. Ultimately, these effects have implications for the strategies that agents of the regime and pro-democracy activists should use to mobilize or demobilize citizens, including how much coercive threats should be used relative to other strategies such as patronage.

## 2.1 Emotions and decisions to dissent

Opposition supporters face daily decisions about whether or not to express their anti-regime preferences. On an average day, they must decide whether to criticize the government in front of their neighbors or wear their opposition t-shirt. Higher-stakes decisions can involve going to an opposition rally, attending a protest, or casting a vote against the regime. Each of these decisions must be made by weighing a set of complex probabilistic outcomes. If I go to the rally, how many others will be there? Does the government care enough about this particular rally to send its militia to beat us? If so, will I be among those who are beaten?

Citizens considering whether or not to participate in an act of dissent must weigh the expected costs and benefits of their action. At a very simple level, the expected utility of expressing dissent involves weighing the expressive and instrumental benefits of dissent against the costs, including the potential of being repressed.<sup>1</sup> The focus of this paper is on the potential costs of dissent, which may involve some opportunity cost in terms of time or money, plus the expected disutility of repression. The disutility of repression is a function of the severity and probability of the violence that an

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<sup>1</sup>While most of the terms in this decision framework are probabilistic, most theories assume that the expressive benefits of dissent are certain. For example, [Kuran \(1995\)](#) assumes that people derive some fundamental utility from expressing their preferences. The instrumental benefits of dissent, based on the probability that your individual act of dissent will bring about a change of regime and the extent to which you value that change, are typically thought to be negligible because each individual action has an extremely small probability of being necessary to bring about change. However, there is evidence that people actually tend to give such small probabilities outsized weight when making decisions ([Kahneman, 2013](#)). Furthermore, there is ample qualitative evidence that protesters do not just protest for to experience it but also because they hope that their protest will have some influence. Nevertheless, these benefit parameters are not the focus of this theory.

individual might face. I follow a number of other models of protest in arguing that because the regime has a limited capacity to repress, an individual's personal risk of repression also depends on the number of other people who are expressing dissent.

These terms – the expressive benefits, perceived potential for change, opportunity cost, and potential repression – must be weighed against each other. At this point citizens' risk attitudes can also influence their decision. Citizens who are risk neutral will simply sum the expected utility of different outcomes. However, those who are risk averse will need the potential benefits of dissent to outweigh the potential costs to compensate for the risk that they are taking on.

Citizens must judge the risk of repression based on credible signals because regimes have an incentive to exaggerate the risk of repressive violence in order to keep citizens in line at minimal cost. The regime's past use of violence is the best signal of its capacity and intention to repress. For example, if someone who went to an opposition rally was recently killed by the regime in your neighborhood, it sends a strong and credible signal that your personal risk of being killed if you take a similar action is high. Repression events are relatively rare and interpreting what they mean for you personally is not trivial. This implies that more often than not people must assess risks based on little information, much of which is not credible. Of course, repression events are not purely informational signals: repressive violence often induces fear. As a result, citizens must update their beliefs about the costs and benefits of dissent in highly stressful, emotional environments based on rare, noisy, and potentially biased signals.

This type of low-information, emotional environment is exactly where we would expect cognition to be influenced by affect. Emotions play an integral role in decision-making of all kinds, including decisions about political participation. Emotions are chemical and electrochemical processes triggered by the brain in response to a stimulus (Damasio, 1994). Emotions have objects or stimuli that cause them, such as a specific threat or opportunity (Russell, 2003), which distinguishes them from moods or "background emotions" such as malaise, calm or tension (Damasio, 2000). While the pathways through which emotions affect behavior and cognition are thought to be hard-wired through evolutionary processes, the emotional reactions to specific objects can be either innate or learned.

The focus in this study is on "incidental" or "anticipatory" emotions that an individual is actually experiencing at the time of making a decision. These emotions have been shown to influence decision parameters, including risk appraisals and attitudes.<sup>2</sup> Importantly, while incidental affect is initially caused by a specific object, it influences all judgments, decisions, and behaviors

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<sup>2</sup>This is in contrast to what Lerner and Keltner (2001) call "integral affect" or Lowenstein et al. (2001) calls "anticipated emotions", which are defined as emotions that the decision-maker expects to feel in the future as a result of their choices. Anticipated emotions are integrated into how people calculate the utility of specific strategies, while incidental emotions have a broader impact on decisions.

that the individual makes while under its influence (Lerner and Keltner, 2000).<sup>3</sup>

Emotions are associated with changes in how the body and brain functions that are intended to prepare an individual for action. These include physiological changes that affect the autonomic nervous system including breathing patterns, heart rate, and the central nervous system. They also include significant changes in cognitive functioning including memory, attention (Eysenck, 1982), the distribution of cognitive capacity (Eysenck and Calvo, 1992), the use of heuristics (Park and Banaji, 2000), evaluative judgments (Schwartz and Clore, 1983), appraisals of uncertainty and lack of control (Lerner and Keltner, 2001), and evaluations of risks (Johnson and Tversky, 1983).

Fear, the focus of this paper, is associated with a bundle of cognitive and physical changes that evolved to help an organism survive an imminent threat. Fear causes people to pay more attention to threatening stimuli, at the expense of other activities (Gray, 1987). A number of studies in political psychology have found that information-seeking and vigilance are increased by anxiety (Brader, 2005; Valentino et al., 2008). It also redirects cognitive capacity to threats, reducing performance on non-threat related cognitive tasks (Eysenck and Calvo, 1992). Most importantly for this study, however, fear leads to heightened perceptions of risks (or in other words, more pessimistic) (Johnson and Tversky, 1983; Lerner and Keltner, 2000, 2001; Lerner et al., 2003) and risk aversion (Guiso et al., 2013; Cohn et al., 2015).

Applying these findings from psychology to the study of dissent decisions is relatively straightforward. Fear should affect perceptions of the risks associated with dissent as well as how those potential risks and benefits are weighed against each other. First, fear should make people more pessimistic in their beliefs about the number of other citizens who will express dissent. If I expect that the regime is going to arrest ten people at a rally, the fewer other people that I expect to stand with me in expressing anti-regime preferences, the higher the probability that the repression will affect me personally. In addition, the number of other people whom you expect to turn out could affect the chance that the action will successfully bring about regime change, which I argue that citizens perceive as non-negligible. Second, fear should make people more pessimistic in their expectations that they personally will face repressive violence. This term may be a function of changes in expectations about whether other people will also dissent, or in expectations about how much repression the regime is willing or capable of doing. Third, fear should make people more risk averse. In the case of political participation, this would imply that the expected benefits will have to outweigh the expected costs by a larger amount to compensate for the risk involved in dissenting. As a result of these effects, fear should reduce participation in dissent.

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<sup>3</sup>For example, Lerner et al. (2003) show that experimentally inducing fear around the September 11th terrorist attacks in the United States affected not only beliefs about political phenomena, but also perceptions of the probabilities of basic risks such as catching the flu.



## 2.2 Self-efficacy and selection into fear

One important determinant of vulnerability to fear or anxiety is self-efficacy, or the perception of one's ability to cope with threats or challenges (Bandura, 1977, 1988). People who perceive themselves as less efficacious are more likely to react fearfully to a threatening stimuli (Bandura et al., 1982; Gamson, 1968). Those with high internal efficacy, on the other hand, are more likely to assess that they have the capacity to face a challenge and therefore react with anger and action (Bandura, 1977).

There is existing evidence that self-efficacy is linked to participation in the political sphere. Valentino et al. (2009) show using data from the ANES that American voters who have higher perceptions of their personal efficacy are more likely to feel angry rather than fearful in response to policy threats, and that this anger in turn boosts participation in politics. The idea of self-efficacy is also related to a large literature on "political efficacy" first identified by Campbell et al. (1954) to be correlated with political participation. The concept of political efficacy, however, often combines both an individual's notion of personal effectiveness and her view of the responsiveness of the system – a dimension that subsequent authors labelled external political efficacy (Iyengar, 1980).<sup>4</sup> General self-efficacy has been linked to higher participation in several political actions in a non-contentious context, including participation in political campaigns (Rudolph et al., 2000) and calling in on radio shows (Newhagen, 1994).

In non-democratic settings, however, the effects of self-efficacy are more nuanced. Chen and Zhong (2002) show that people with lower self-efficacy are more likely to turn out to vote in semi-competitive elections during a relatively repressive period in Beijing in the 1990s. In this context, turnout is additionally related to support for the authoritarian regime, affective attachments to the political authority, and lower support for democracy, suggesting overall that voting is less about influencing policy than showing support for the regime. Similar theories have been suggested in other authoritarian environments, including the Soviet Union (Bahry and Silver, 1990), and in Zimbabwe, there is evidence that education causes reductions in turnout that might work through a psychological characteristic like self-efficacy (Croke et al., 2014). In addition, self-efficacy has been linked to participation in protest in a number of contexts (Van Zomeren et al., 2008; Tausch et al., 2011).

I follow Valentino et al. (2009) by hewing closely to the original view of self-efficacy from

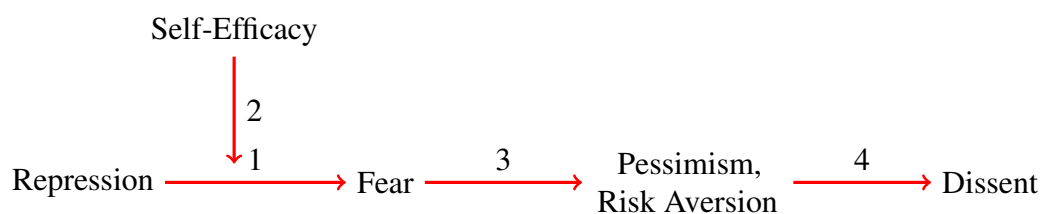
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<sup>4</sup>Despite the recent theoretical clarity around internal and external political efficacy, these two elements have remained difficult to disentangle in survey measures. For instance, internal political efficacy is often measured with survey questions like "People like me don't have any say about what the government does" on a four-point agree-disagree scale. However, this measure actually conflates internal and external efficacy, as agreement requires that respondents both believe that the political system is responsive to citizens and that they are personally efficacious (Morrell, 2003). To avoid these measurement problems and separate the concept of personal or "internal" self-efficacy from views of the political system, I measure self-efficacy using a battery of general questions about personal power and ability to cope in difficult situations (Jerusalem and Schwarzer, 1995).

psychology as a general tendency to view a negative stimulus as a challenge rather than a threat (Bandura, 1977). As a result, I predict that people with low self-efficacy are more likely to react more fearfully to repressive threats. In turn, if fear has the effects on decision-making that I predicted in Section 2.1, people low in self-efficacy should experience fear reactions more strongly and frequently in a repressive political system than those high in self-efficacy. Thus, the model of emotions and cognition that I posit implies that people low in self-efficacy should participate less in dissent, be more pessimistic in their assessments of the risk of repression, and be more risk averse. In effect, people who see themselves as inefficacious – even conditional on their actual coping ability – should be more likely to select into fear, which subsequently affects how they make decisions about dissent.

To summarize, I propose that a series of causal relationships are at play when a citizen in a non-democratic regime is exposed to a repressive threat. Figure 1 presents these relationships as a directed acyclical graph (DAG).

Figure 1: Diagram of mechanisms and moderators in proposed theory



In Figure 1, repression represents a repressive threat that is received by a citizen with pro-opposition or pro-democracy preferences. Repressive threats induce fear in a relationship that is moderated by self-efficacy such that citizens low in self-efficacy have stronger fear reactions after repression. Subsequently, fear changes the way that information is perceived and processed, specifically by making decision-makers pessimistic and risk averse. By increasing how decision-makers view and weigh the potential cost of dissent, these psychological parameters reduce dissent.

This diagram focuses on the causal processes of interest in this project rather than all possible channels by which repression might influence dissent. In some ways, this figure presents the ideal use of repressive threats by an autocrat. By working through fear, repression can effectively demobilize citizens without bearing the full cost in terms of spending resources, creating an internal threat to its own security, and losing international standing. The most important omitted set of processes are effects that repression could have on alternative emotions (most importantly, anger), as well as preferences and beliefs through an informational channel. These are not tested in this paper, but certainly help explain why repression in some cases leads not to decreases but increases in dissent.

### 3 The Zimbabwean context

Since gaining independence in 1980, Zimbabwe has been an electoral autocracy (Kriger, 2005). It holds regular elections but these have not resulted in any peaceful transitions of power between parties, in part because of the ruling party's use of violent force. ZANU-PF grew out the independence struggle and enjoyed widespread popular support in the 1980s and 1990s that diminished in the 1990s in part due to a severe structural adjustment program (LeBas, 2011).

Zimbabwe's ruling party began seriously employing the threat of repression against dissenters in the year 2000. Beginning around 1999, an opposition party that grew out of the country's major trade union began to credibly challenge ZANU-PF. The opposition party MDC had just orchestrated the unexpected defeat of ZANU-PF's proposed constitution in a referendum. Shortly thereafter, opposition supporters and organizers began to be killed, and the government stopped protecting white commercial farmers and their farm workers from threats by land invaders, often led by self-claimed veterans of Zimbabwe's independence struggle (LeBas, 2006). Zimbabwe's white minority had been an important source of funding and mobilization during the referendum.

From 2000 to 2008, repressive violence by the ruling party, targeting opposition supporters and organizers, took a number of forms. In 2001 the government initiated a national youth training program that created a nationwide militia for the party. These militia set up bases around the country and began using more sophisticated forms of torture (Reeler, 2003; LeBas, 2011; Sachikonye, 2011). Party agents, youth wing members, members of the association of independence war veterans, soldiers, and traditional leaders have all played a role in organizing intimidation campaigns around recent elections (Bratton and Masunungure, 2008). By some accounts, by 2008 the youth militia had as many as 50,000 members (Sachikonye, 2011, 48).

Violent repression reached a peak during the 2008 elections, which took place in a context of hyperinflation, deindustrialization and the collapse of public services that led to widespread dissatisfaction with the ruling party. The lead-up to the first-round election in March 2008 was largely peaceful, but as the results were counted, it became clear that ZANU-PF had lost its parliamentary majority and the office of the presidency, and "the party-state launched a terror campaign of a scope and intensity never before seen in Zimbabwe" (Bratton and Masunungure, 2008, 51). This campaign was centrally controlled by the Joint Operations Command under the leadership of the Defense Minister Emmerson Mnangagwa (HRW, 2008; Sachikonye, 2011).

A passage from a report by the Catholic Commission for Justice and Peace in Zimbabwe describes how the 2008 violence was orchestrated:

"Perpetrators moved in groups of up to 30 and established 'distinguishable bases' supplied from confiscated foodstuffs and other necessities. The overwhelming numbers of perpetrators made it difficult for individual victims to defend themselves. The

tools used varied from logs, sjamboks, machetes, steel rods, knobkerries to knives and chains. However, there were cases where tools and equipment associated with security agencies like the police (batons and guns) were used in the perpetration of the violence, suggesting the direct involvement of state security agents or deliberate issuance of such tools to party militia...”

(CCJPZ, 2009, 43)

As a result of this violence, the opposition leader Morgan Tsvangirai pulled out of the run-off election scheduled for July. Negotiations brokered by the international community between the government and the opposition MDC led to the formation of a coalition government with the long-serving president and ruling party leader Robert Mugabe remaining as president and Tsvangirai serving as Prime Minister. Entry into government in February 2009 was the beginning of the MDC’s loss of popular support, as shown by a number of polls conducted by the Afrobarometer and the Mass Public Opinion Institute, a well-respected Zimbabwean survey firm (Bratton and Masunungure, 2012; Booysen, 2012). The MDC, focused on skirmishes over parliamentary procedures and largely dismissive of internal and external research showing that they had lost support, ran an anemic campaign in 2013 (Zamchiya, 2013). By contrast, the ZANU-PF 2013 campaign was “slick, well-funded, united and peaceful” (Tendi, 2013).

Post-2013, both ZANU-PF and the MDC fell into internecine conflicts. In 2014 President Mugabe rapidly fired Vice President Joice Mujuru and purged her supporters from national and regional posts, and promoted his unpopular wife Grace Mugabe to a powerful position as head of the ZANU-PF women’s league (Freedom House, 2015). At the same time, the MDC’s defeat “catalysed and consolidated sentiment against Tsvangirai who had now lost three presidential elections” (ICG, 2014, 10). A faction led by core members of the MDC leadership split off, creating a third MDC in addition to an earlier regional faction that had split in 2005 (ICG, 2014).

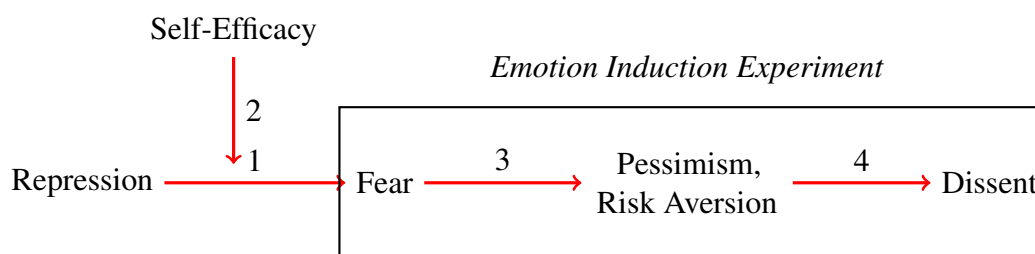
As a result of both ruling party and opposition members getting expelled from their parties, a series of by-elections for parliamentary seats were held in 2015 around the time of this study. The main opposition party boycotted these elections, leaving ZANU-PF to compete against some of its former members who ran as independents and several smaller opposition parties. In cases where the ruling party candidate faced a credible challenge, such as from one of its former members running as independents, the elections were preceded with widespread threats and attacks on candidates as well as efforts to monitor, buy off and intimidate voters. Low-level violence also continued around the country, though during this time it primarily consisted of violations perpetrated by and against members of the same party as part of factional struggles (Zimbabwe Peace Project, June 2015). It is in this context of a long history of repressive violence and growing dissatisfaction with both the ruling party and the major opposition party that this study took place.

## 4 Empirical analysis: Fear and decisions to dissent

In this section I describe the research design and results of the first level of tests of the implications of this theory. The core goal of this research design was to test whether emotions have a causal effect on whether opposition supporters participate in collective dissent that works through pessimism and risk aversion.

To go back to the diagram presented in Section 2, this section tests the second half of the proposed causal chain. Figure 2 uses the original DAG to show which processes are tested in this section.

Figure 2: Diagram of mechanisms and moderators in proposed theory



In this section, I use an emotion induction experiment to identify the effect of fear on decisions about dissent. This experiment aims to shut down selection into fear by inducing fear in a random subset of participants – regardless of whether they are a type that is susceptible to feeling fear after a repressive threat. The design enables me to test for the causal effect of the treatment on both the psychological outcomes of interest and on dissent. However, the design does not allow me to test whether pessimism and risk aversion mediate the relationship between fear and dissent. Instead, I use mediation analysis based on the methodology of [Imai and Yamamoto \(2013\)](#) that rests on identifying assumptions to test whether the psychological changes mediate the changes in dissent.

### 4.1 Research design: Identifying the effect of fear

The specific hypotheses that I set out to test in this section are based on the theory described in Section 2.1. They were pre-registered with the EGAP experimental registry on September 29, 2015:<sup>5</sup>

1. Participants who receive the fear treatments will be more pessimistic in their expectations about their fellow opposition supporters propensity to take pro-opposition action.

<sup>5</sup>I also pre-registered a fifth hypothesis that the effects of fear would spill over into economic domains. I do not focus on here in the interest of parsimony, but discuss it and present the results in ???. A sixth, non-substantive hypothesis that the effects of two different versions of the treatment would be the same was also pre-registered.

2. Participants who receive the fear treatments will be more pessimistic in their assessments of their own probability of facing repression.
3. Participants who receive the fear treatments will be more risk averse.
4. Participants who receive the fear treatments will be less willing to take pro-opposition political actions.

There are several important design decisions that structure this section of the analysis. First, testing the causal proposition that emotions affect collective action requires that we isolate the impact of emotions independent of information or selection into feeling particular emotions. For example, citizens with a higher objective risk of facing repression are likely to be both more fearful and have a higher perceived risk of repression. Similarly, certain types of citizens may be more likely to be both more fearful and have higher subjective perceptions of risk.

My research design addresses this issue by randomly assigning participants to an emotion induction treatment that is commonly used in psychology experiments. Specifically, I use a reflection task in which respondents are instructed by the enumerator to describe a situation that makes them feel a specific emotion. The techniques that I use to stimulate emotions have been used in numerous studies in psychology (Strack et al., 1985; Lerner and Keltner, 2001). Exercises based on recall are one of the most effective ways to stimulate specific emotions, particularly compared to alternative treatments like viewing videos (Harmon-Jones et al., 2007). It has also been shown to be a strong enough treatment to cause physiological effects of emotions such as heart rate and skin conductance. This method is increasingly used in political psychology to study the effect of emotions on political attitudes towards welfare (Lerner and Small, 2008) or racial minorities (Banks and Valentino, 2012).

The second inferential challenge that my research design must solve is around selection into risk. Because the probability of facing repression is conditional on their decision to participate in dissent, general perceptions of the risk of repression are confounded by choices about actions. For example, an individual may believe that if they attend a pro-opposition protest it is very likely that they will be killed, but because they have no intention of going to a protest they may believe that their chance of being killed is very low. Therefore, accurately measuring perceptions of risk requires that I measure perceived risk conditional on a level of participation in dissent. To this end, I measure perceptions of the risk of repression conditional on participation in a common act of dissent in the Zimbabwean context – attending a rally for an opposition party.

Third, measuring propensity to take risky action in a way that does not expose participants in a repressive environment to risk and minimizes desirability bias is a serious challenge. Self-reported measures of propensity to take actions such as attending a rally, wearing a t-shirt, or sending an SMS for the opposition are all closely related to the ultimate behavior of interest. However, whether someone thinks that it is likely that they would take any of these actions is potentially only loosely related to what they would actually do, and it is unclear how the desire to please or look brave

before the surveyor might differ based on the emotional state of the participant. For these reasons, a real behavioral measure of action is the gold standard for measuring propensity to take action. Other experiments have measured willingness to take non-risky political action by giving participants the chance to sign real petitions or send messages to their representatives (Grossman et al., 2014). However, in this context, actions that link a participant by name to pro-opposition political actions put participants at an unjustifiable level of risk.

To measure propensity to take meaningful pro-democracy action while minimizing bias and risk to participants, I devised a new behavioral measure based on the type of thank-you gift that a participant decided to take towards the end of the experiment. Specifically, I offer participants the choice of one of two wristbands as a token of appreciation – first, a political wristband that they are told would “show their political beliefs” when they wear it and is printed with the text “Voice for Democracy” and “Speak out against Violence!” Alternatively, they are offered a similar plain wristband with no text.

This measure identifies propensity to take pro-opposition political action if the only reason that fear might induce a respondent to choose the plain wristband over the political is because they become unwilling to show their political beliefs. The wristbands are the same size and color, and from a distance appear exactly the same, so there is no reason to believe that one would be more attractive from a stylistic perspective or have a higher re-sale value (or that the fear treatment would affect concerns about personal style or the desire to sell the wristband). Wearing pro-democracy or pro-opposition paraphernalia is an act of dissent in Zimbabwe that can put people at risk of facing low-level repressive violence such as threats or assault, particularly during election periods. However, giving the participants a wristband that they may or may not choose to wear after the induced emotions have worn off does not meaningfully increase the level of risk that they face.

The following sections describe the experimental design in more detail.

#### **4.1.1 Treatment: Inducing emotions**

The treatment in this study is a reflection task commonly used in psychology to induce specific emotions. In the task, participants are asked to describe a time that they felt a targeted emotion in detail and in a way that would also make a reader or listener feel the emotion. Compared to other methods of inducing emotion, including videos or situations like public speaking or interactions with confederates of the experimenter, reflection tasks (also called directed recall) are one of the best ways to isolate a specific emotion in a range of people (Myers and Tingley, Forthcoming). This method is strong enough to cause changes in physical measures of emotional arousal based on cardiovascular, respiratory or electrodermal response (Kriebing, 2010).

In the task, the participant is asked by the enumerator to describe a situation that makes them

relaxed (control), or afraid (treatment).<sup>6</sup> Half of the treated participants were assigned to a version of the prime that directed them to talk fears around politics and elections. The entire interview, including the emotion induction, was done in private. The enumerator read a list of examples of things that a similar sample pool had reported made them afraid or relaxed before asking the participant to describe the situation in a way that might make the enumerator herself relaxed or afraid as well. Enumerators were given a list of probes to use to follow up on the response and were instructed to keep the participant focused on what makes him or her afraid until they were satisfied that they had reflected on a real, relevant fear, and to redirect the participant if they went off-topic. The text of the instructions for the reflection task are shown in Appendix Table 16.

The first question is designed to help the participant brainstorm several things that make him or her afraid or relaxed, and thus make it easier to focus later on the items in the list that make them most afraid or relaxed. After coming up with a list of at least two things that make them afraid or relaxed, participants were asked to describe in detail the one that makes them most afraid before completing the first battery of outcome measures. Then, before the second set of outcome measures, they were asked to describe in more detail another situation that makes them afraid or relaxed in order to re-induce the emotion to carry through to the end of the outcome modules.

Describing the situation to an enumerator is advantageous in this situation for several reasons. First, it enables us to include low-literacy participants in our sample. Second, the enumerator can use a series of several permitted probes to direct the participant in an interactive way to reflect on precisely the ideas or feelings that trigger the specific emotion, enabling a more potent treatment.

This type of emotion-induction technique has been used in a wide range of contexts, including in low- or middle-income countries such as Kenya, Afghanistan (Callen et al., 2014), and Colombia (Bogliacino et al., 2015), although I have adapted it to the Zimbabwean context. The method was developed and has most typically been used in internet- or lab-based surveys in the U.S. where respondents are asked to describe the situations in which they felt the specified emotion in writing (Lerner and Keltner, 2001; Lerner et al., 2003; Banks and Valentino, 2012).

Although this method is thought of as the best existing way to induce a specific targeted emotion, in practice the evidence suggests it meets a slightly lower standard. While there is consistent evidence that negative emotion inductions are able to induce the targeted emotion, they also tend to induce other negative emotions and reduce positive emotions. Some past studies using this type of emotion induction conduct a manipulation check with only a handful of subjects (often less than 20) (Lerner and Keltner, 2001), or run a manipulation check that only compares two negative emotions rather than comparing both to a control (Lerner and Keltner, 2001; Lerner et al.,

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<sup>6</sup>A recent validation exercise of this emotion induction technique found that it had little effect on positive emotions (Myers and Tingley, Forthcoming). I chose a control focusing on relaxation to ensure that the control participants, many of whom live in high-stress environments, had a low likelihood of reflecting on things that actually induced stress or fear.



2003), or simply do not run a manipulation check (Callen et al., 2014). A number of studies that have carried out manipulation checks on multiple emotions in large samples have found that the directed reflection task targeting one negative emotion like fear in many cases also increase other negative emotions such as anger (Valentino et al., 2011; Banks and Valentino, 2012; Myers and Tingley, Forthcoming).

Other researchers have suggested three ways of dealing with this exclusion restriction violation in the design and analysis of emotion induction experiments. First, some psychologists and social scientists have begun using alternative treatments such as the anticipation of electric shocks (Cohn et al., 2015) or injections of the stress hormone cortisol (Kandasamy et al., 2014). These methods are promising but are much less tested, less realistic, and difficult to implement outside of well-equipped labs. Others have argued that emotion inductions should be analyzed using mediation analysis to test whether the targeted emotion mediates the relationship between the treatment and outcomes of interest (Myers and Tingley, Forthcoming; Albertson and Gadarian, Forthcoming 2016). I contend that this method (particularly the method developed by Imai and Yamamoto (2013) that doesn't rely on the assumption of no post-treatment confounding) can provide an important secondary check, but shouldn't be used as the primary form of analysis. Even the Imai and Yamamoto (2013) relies on the sequential ignorability assumption, essentially requiring that the analysts control for all potential pre- and post-treatment confounders. In this way, most of the benefits of experimental design are lost. Finally, some have shown only that the targeted emotions were induced in greater amounts than the non-targeted emotions, and have relied on theory to make arguments about the direction of potential bias (Valentino et al., 2011; Banks and Valentino, 2012). Most commonly, researchers studying anger or fear have argued that these emotions, though they are often both induced by the same treatment, are believed to have the opposite effects on many outcomes, including risk assessments, risk attitudes, and propensity to take political action. In my discussion of the results, I will implement a mediation analysis as a secondary test, and also make logical arguments based on the size of the effects and directions of likely bias. Nevertheless, the results should be interpreted with concerns about this exclusion restriction violation in mind.

Randomization into the treatment categories was blocked on community, enumerator, and gender. Each enumerator used a survey dictionary to select the appropriate treatment based on the gender of the participant and the number of the interview.

#### **4.1.2 Measurement**

After the emotion induction treatment, participants went through a series of modules to measure outcomes. Assessment of political risks were measured with a series of twelve questions on six political risks that are relevant in the Zimbabwean context. As discussed in depth in section 4.1, to hold constant the riskiness of the behavior that the respondent typically engages in, I asked

participants to report their perception of the probability that they would face punishments if they engage in a specific action, namely going to an opposition rally. Participants were asked about the probability that they will face threats, assault, destruction of property, sexual abuse, abduction and torture, and murder. They were asked to report the risk of each if they go to a rally now (during a non-election period) and around the time of the next election. They assessed the likelihood of each risk on a five-point scale that was easy to understand in the local language including not at all likely, a little bit likely, somewhat likely, very likely, and sure. The responses to these questions were averaged together to make an index of perceived risk of repression.

Beliefs about other opposition supporters' willingness to engage in politics were measured in a similar way. Respondents reported the proportion of other opposition supporters in their community that they believe would wear an opposition party t-shirt, share a funny joke about the president, go to an opposition rally, refuse to go to a pungwe [a mandatory rally for the ruling party] when asked by a community leader, tell a war veteran [a type of individual who is known for perpetrating political violence] that she supports the opposition, or testify in court against a perpetrator of violence. They were asked to assess the proportion of other opposition supporters that would take each action now (during a non-election period) and around the next election on a five-point scale including none, a few, some, many, and all. The answers to these questions were averaged together to create an index of beliefs about others' propensity to participate in collective dissent.

The next two outcomes both measure propensity to participate in collective dissent. The first measure is hypothetical and follows the same structure as the questions about beliefs about other opposition supporters to reduce complexity for respondents. The response scale was the same five-point probability scale that respondents used to report the risk of repression. Respondents were asked to report the likelihood that they themselves would wear an opposition party t-shirt, share a funny joke about the president, go to an opposition rally, refuse to go to a pungwe [a mandatory rally for the ruling party] when asked by a community leader, tell a war veteran [a type of individual who is known for perpetrating political violence] that she supports the opposition, or testify in court against a perpetrator of violence. They reported the likelihood that they would take each action now (during a non-election period) and around the next election. The answers to these questions were used to make an index of propensity to participate in collective dissent.

As a behavioral measure of propensity to take political action, I record whether participants chose to take as a thank-you gift a wristband with a pro-democracy and anti-violence slogans on it over an otherwise similar plain wristband. The enumerator explained to participants when offering the wristband that one has a slogan that will "show your political beliefs" and read the written text, while the other has no political message. As discussed in section 4.1, the only reason that fear would cause an increase in the propensity to take the plain over political wristband is through a decrease in the willingness to express dissent.

Finally, I measured financial risk attitudes and pessimism about economic outcomes. Financial risk attitudes were measured with a module developed by [Eckel and Grossman \(2002\)](#) that uses a series of four 50-50 lotteries in which participants chose from five different bets with varying levels of risk. Across the four lotteries, there will be two standard conditions, one condition with ambiguity, and one with losses. From these I constructed several measures: risk aversion, ambiguity aversion, and loss aversion. Due to its reliance on 50-50 coin flips, which are easy to understand intuitively, this measure is designed to be effective with a participant pool that includes low-numeracy individuals.

Financial pessimism was measured using twelve scenarios similar to the political risk perceptions and the same five-point probability scale. These questions elicited the perceived likelihood that investment in a small business will pay off, that someone in the family would lose a job if they got one, that a family breadwinner would have to stop working, that a major asset would be broken or lost, or that savings would be lost or stolen. Each probability was assessed over the next six months and the next two years. All twelve questions were averaged into an index of economic risk perceptions.

Within each outcome module except for the lotteries and wristband, the order of the questions was randomly assigned.

As a manipulation check after the measurement of the five outcomes of interest, respondents were asked to report the extent to which they felt six primary emotions in the present moment to assess whether the treatment had in fact induced the targeted emotion. The emotions measured were fear, anger, surprise, happiness, sadness, and disgust, all on a four-point scale (not at all, a little bit, somewhat, and very). In practice, inducing fear is likely to also induce other negative emotions and reduce positive emotions. A principal concern was that the participants in the fear condition were not also induced to feel anger to the same degree as they felt fear, given the evidence that anger causes optimistic risk assessments ([Lerner et al., 2003](#)) and increases in participation in collective action ([Young, 2015](#)).

The participants' emotional states were measured after the last outcome measure to reduce the evidence that asking participants to report on their emotional states can reduce the extent to which they actually feel the targeted emotion ([Keltner et al., 1993](#); [Kassam and Mendes, 2013](#)). Carrying out the manipulation check at the end of the study also tests whether the emotions were induced throughout the course of all of the outcome modules.

In addition, 10% of the emotion inductions were randomly selected to be recorded and were transcribed and translated as a second manipulation check and to provide a qualitative sense of the political and apolitical fears that participants focused on.

Participants subsequently took part in a second short experiment using a conjoint analysis design, and then answered two batteries of questions on past exposure to repression and past

participation in opposition politics. These modules were put after the treatments to avoid priming the participants in all three treatment arms to think about repressive violence.

Some specifications also include a set of controls measured before the emotion induction treatments. Socioeconomic status was measured using an updated version of the index of asset ownership from the last Zimbabwean Demographic and Health Survey. It covers quality of housing, land ownership, major assets like generators and cars, small assets like mobile phones and radios, and livestock. I use the standardized first principal component of these questions as my measure of socioeconomic status.

Self-efficacy, a psychological concept that is related to perceptions of your personal ability to deal with challenging situations, was measured with a ten-point questionnaire developed by [Jerusalem et al. \(1992\)](#); [Schwarzer et al. \(1997\)](#). This module has previously been used in 28 different languages in North and South America, Europe, and Asia.

Past exposure to political violence is measured with a module based on the Harvard Trauma Questionnaire. The types of traumas asked about are taken from past applications of the Harvard Trauma Questionnaire in Zimbabwe. For each item, respondents were asked whether they experienced the trauma and whether they heard about it happening in their community since 2000. Last, I measured past participation in opposition politics with a series of eight questions about whether the respondent has taken pro-opposition actions many times, sometimes, once or twice, or never since the year 2000. In order to avoid priming participants on opposition politics and political violence, these last two batteries of questions came after the treatment.

### **4.1.3 Data and implementation**

This experiment was carried out by researchers connected with the Zimbabwean NGO Voice for Democracy (VfD), which conducts research on human rights abuses and organizes communities to prevent and respond to political violence. Relying on VfD's existing networks and local knowledge was crucial for this study to be carried out safely as the research team could leverage existing social ties with respondents to establish trust.

The researchers who interacted with participants and the research team leader were blind to the hypotheses of the study, although it was necessary that they understood that the emotion induction was a “treatment” designed to have some effect on participants' behavior. Even when asked what patterns they thought I expected to see after the survey concluded, they reported that they did not have any expectations about the hypotheses. Keeping participants and surveyors blind to the hypotheses was important to ensure that their behavior was not shaped by these expectations through subtle cues, desirability bias, or actual manipulation of the results.

Interviews were carried out by surveyors in pairs within isolated areas of private homes provided by the mobilizer to ensure privacy. Interviewers obtained informed consent verbally in the

local language of Shona. Data was collected on tablets using Open Data Kit software. No identifying information on participants was collected in order to reduce the probability that participants could be connected to their responses in case of a breach of information. To further reduce the likelihood that data could be leaked, surveyors sent completed surveys to the ODK database over the cellular network and deleted the responses from their tablet after each survey was completed.

Another concern given the topic of the study and the fact that we were asking participants to describe in detail a situation, often traumatic, that made them afraid was that participants could become traumatized. We dealt with this risk in three primary ways. First, the surveyors that implemented the study have significant experience working with the victims of violence through VfD's previous work with survivors to document the election violence that took place in 2008. Second, surveyors were trained to recognize signs of trauma, at what point to pause or stop the interview, and how to provide a limited amount of support during a post-interview debrief to participants. Third, surveyors tracked whether or not participants became traumatized to the point that they needed professional counseling. This was monitored in the field and by the investigator and plans for bringing participants to a well-respected trauma center in Harare were made.

Although this study was carried out during a period in which repressive violence against opposition supporters was extremely uncommon, safety for the surveyors was also a significant concern. To further reduce the small probability that the surveyors themselves would be targeted by perpetrators of violence during the course of the study we took several steps. First, surveyors traveled in small teams but never alone. Second, they spent no more than a few days in each community, and did not go to the same community two days in a row. Third, they assessed the security situation in each community through the local mobilizers before entering the community. Fourth, although we recruited only opposition supporters to participate in the study, we asked participants about their party identification early on in the survey to identify supporters of the regime who had mistakenly gotten into the participant pool. If they happened to survey a supporter of the regime, surveyors were trained to continue the study but skip all sensitive questions about politics and violence. Out of the target of 700 participants, three recruited participants ended up being supporters of the regime, and in all cases the surveyors followed the protocol appropriately. Finally, because Westerners are considered to be suspicious in many parts of Zimbabwe, particularly in the rural areas, I could not travel with the team. The use of the tablets and ODK software to send the data over the cellular network was an important implementation feature to overcome this limitation, as was relying on a highly skilled team leader who had a sophisticated understanding of the sampling and measurement strategies and could raise and even solve potential design problems proactively. Ultimately, due to these policies and primarily due to the discretion and good judgment of the research team, there were no security incidents or adverse events during the study.

Figure 3: Map of constituencies included in study



#### 4.1.4 Summary statistics and measure validation

671 participants were recruited from six communities in Zimbabwe where Vfd has a network of mobilizers and informants, and which have also been affected by state-sponsored violence since 2000. Half of the participants were recruited in the southern suburbs of the capital city Harare, and half from rural areas in Masvingo and Manicaland provinces in southern and eastern Zimbabwe. Figure 3 displays a map of the areas from which we drew our participants.

In each community, the research team used known local mobilizers to recruit opposition supporters, relying on local knowledge of residents' political beliefs in order to recruit and interview them discreetly. Though my sample is by no means representative, the recruitment strategy aimed to correct for some first-order biases. In particular, I wanted to avoid recruiting only the most active opposition supporters in each community because they were much more likely to be recruited and I suspected that activists might react to repressive threats in a way that was different from most of the population. In most communities, the surveyors started by interviewing the pro-democracy and pro-peace activists who were working as our mobilizers so that they understood the sensitive content of the study, and then asking them to recruit opposition supporters that they had been trying to mobilize, including those who were afraid to openly participate in opposition politics.

Table 1 presents summary statistics and tests of whether treatment assignment was balanced

across important covariates. Just more than half of study participants are female. The median respondent has a high school degree and is 35 years old. There is significant variation in asset ownership. To highlight just a few of the assets that we measured, around one in four owns a generator, more than one in three owns a smartphone, 34% have electricity in their home, more than one-third own cattle, and almost 60% own chickens. The median monthly income per capita within the participants' households is \$14.29, and the mean is \$27.40, with 22% of respondents' households earning no income at all.

Table 1: Summary statistics and balance on baseline covariates

	Control	Fear General	Fear Political	Fear - Control	
		<i>Mean</i>		<i>Difference</i>	<i>p-value</i>
Female	0.54	0.50	0.53	0.03	0.60
Education	1.72	1.67	1.69	0.04	0.62
Age	38.99	39.77	40.26	-1.02	0.50
Generator	0.23	0.21	0.30	-0.03	0.55
Smartphone	0.38	0.33	0.40	0.02	0.76
Electricity	0.35	0.31	0.35	0.02	0.68
Bicycle	0.21	0.26	0.23	-0.04	0.41
Chickens	0.57	0.60	0.57	-0.01	0.87
Cattle	0.37	0.37	0.37	0.00	0.93
Income (USD)	22.61	25.40	26.97	-3.57	0.37

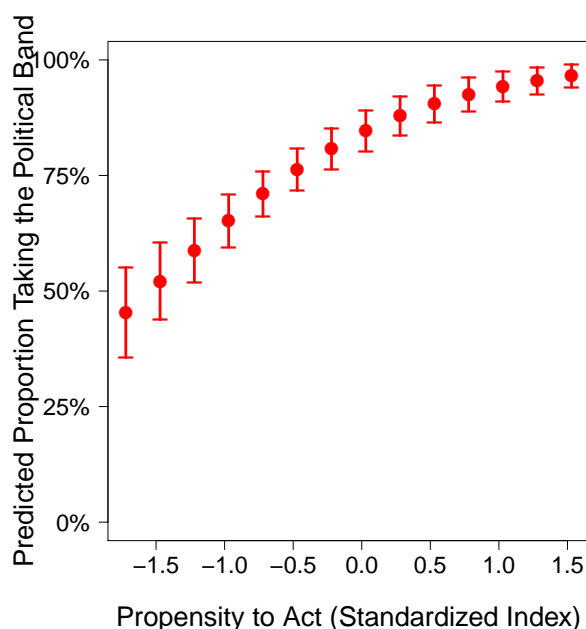
The average respondent in the sample has experienced a significant amount of past exposure to repressive violence. Since the year 2000, 83% of the control group reported that, in the context of political violence, they had experienced verbal abuse or threats, 67% withholding of benefits such as food or goods, 43% torture, 41% destruction of property, 40% assault, 21% abduction, 19% arbitrary arrest or detention, 2% sexual violence, and 0% murder. Surveyors defined “experience” for the respondent as something that happened to you or someone in your household.<sup>7</sup> These numbers suggest an extremely high level of victimization, but there is evidence to suggest that this is not far from the average experience in Zimbabwe. A nationally representative study carried out by the most respected Zimbabwean survey firm in 2009 found similar levels of victimization, including that 51% of Zimbabweans had experienced threats or intimidation, 17% have experienced personal injury and 31% have a family member who has, and 13% have a family member who has died in a politically-motivated event (Bratton, 2011). These responses are not directly comparable due to differences in the question wordings and the different time frame. A full comparison of my sample on demographic measures and in terms of past exposure to repression is presented in Appendix D. Nevertheless, the similarly high incidence of political violence in the nationally representative data

<sup>7</sup>Because these variables were measured post-treatment, I only report these statistics for the control group.

suggests that my experimental sample is not completely different than the average Zimbabwean on this dimension, and again reiterates the importance of coercion in this context.

Before presenting the results it is also important to validate the choice of the political wristband as a measure of propensity to take political action.<sup>8</sup> To do so, I look at the distributions of the hypothetical and behavioral measures of propensity to take risky political action. The primary goal of this exercise is to test whether taking a political wristband does in fact seem to be an indicator of willingness to take pro-democracy action. In fact, the hypothetical index is strongly predictive of the binary wristband measure. Figure 4 shows that responses on the hypothetical measure of political action are strongly predictive of taking the wristband.

Figure 4: Validation of wristband as a measure of propensity to take political action



The predicted probability of taking the wristband for a respondent who is at the bottom extreme of the distribution on the hypothetical measures, which means that they responded that it is “not at all likely” that they would take the twelve political actions, is 0.46. For someone at the high extreme of the distribution, meaning that they are “sure” that they would take all twelve actions, the predicted probability of taking the wristband is 0.96. 95% confidence intervals are displayed around the predicted probabilities.

Qualitatively, participants who did not take the political wristband reported that they were afraid to wear it, and there is no reason to expect that there are any financial or aesthetic reasons

<sup>8</sup>Because we increased the sample size of the study after piloting (but before pre-registration), we did not have enough wristbands for the full sample. The analyses with the wristband outcome presented throughout this paper are from a restricted sample of only people surveyed on days where we offered real wristbands. On days after the wristbands had run out, we still collected a hypothetical measure of whether they would prefer a wristband with a political message or a plain wristband.

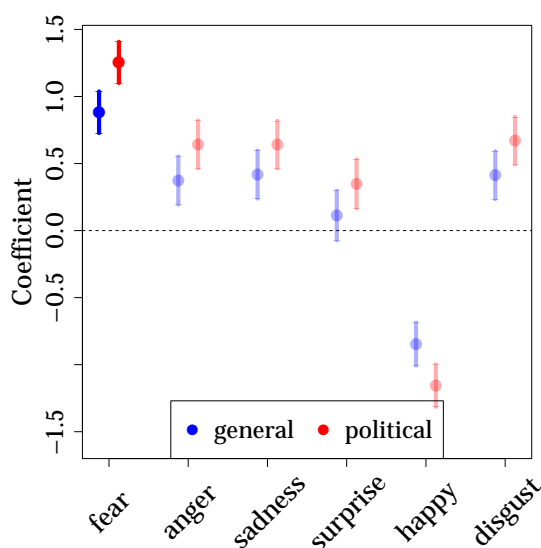


that participants would choose the plain wristband, or that if there are that these would be affected by fear.

#### 4.1.5 Manipulation check

First I present the results of the manipulation check that the emotion inductions are actually increasing the level of fear reported by participants. While I expected that the fear induction would also cause increases in other negative emotions and decreases in positive emotions, my goal was to increase fear more than other emotions, and particularly more than anger, which other research has shown to have opposite effects to fear on risk perceptions. Figure 5 presents the coefficients on regressions of the six primary emotions on the treatment indicators.

Figure 5: The impact of the treatments on six major emotions



The coefficients presented in Figure 5 confirm that the emotion induction increased self-reported fear by a significant and substantively large amount. The political fear treatment increased fear by 1.7 points on a four-point scale, or 1.25 standard deviations. The general fear treatment increased reported fear by 1.18 points on the same scale, or 0.88 standard deviations. At the same time, happiness decreased by between 1.06 and 1.51 points, and other negative emotions increased by between 0.12 and 0.93 points.

Because the manipulation checks show that the fear treatments increased not only fear but also other negative emotions, and decreased happiness, one could be concerned about violations to the exclusion restriction. In other words, one could worry that the observed effects are driven not only by increases in fear, but are also biased by changes in other emotions. In order to assuage worries about this form of bias, I implement a mediation analysis using the methodology of [Imai and](#)

Yamamoto (2013), which accommodates testing for the Average Causal Mediation Effect (ACME) of a single mediator (in this case, fear) that may be confounded by other post-treatment factors (other emotions). Several political psychologists who use similar emotions inductions to study American political behavior have identified this method as a best practice in the analysis of this type of study (Myers and Tingley, *Forthcoming*; Albertson and Gadarian, *Forthcoming* 2016). That analysis is presented in Appendix A.1 and the results are discussed later in this section.

## 4.2 Results: The effect of fear on dissent

In this section I test whether fear reduces the propensity to participate in collective dissent. I test this prediction by comparing propensity to take pro-democracy political action using both the index based on how likely participants say it is that they would take action, and the behavioral wristband measure. I measure participation in high-risk acts of dissent using an index of responses to the six separate ways that they could express dissent in two periods on a five-point likelihood scale.

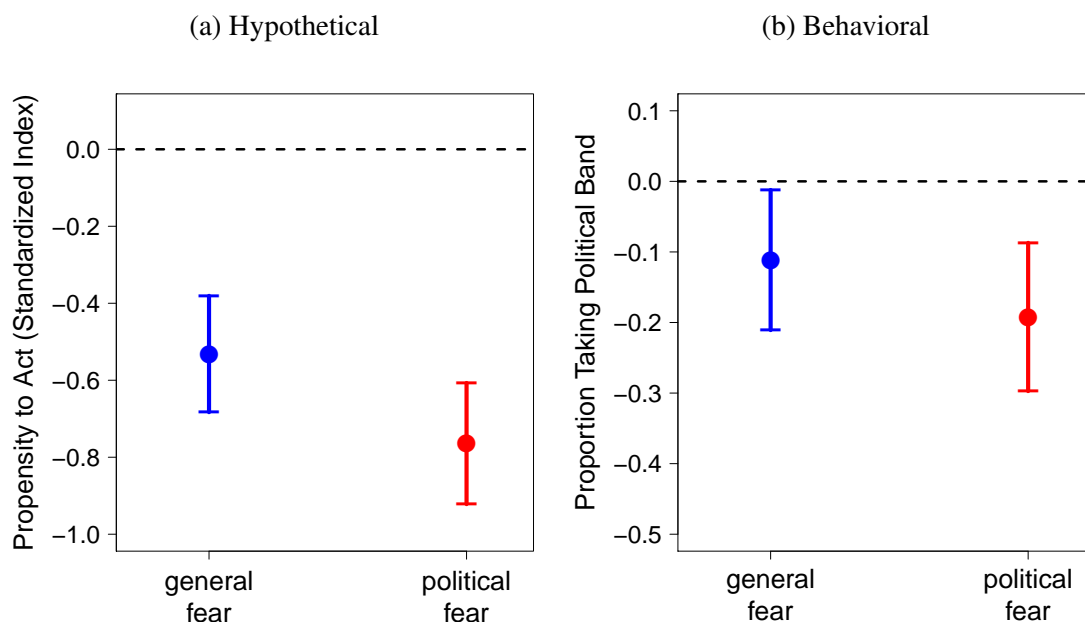
As a behavioral measure of propensity to take pro-opposition action, I measure whether the participant chose to take as a thank-you gift a wristband inscribed with a pro-democracy, anti-violence message, or a plain wristband with no political message that is otherwise indistinguishable. As discussed in Section 4.1.4, taking the political wristband is strongly correlated with higher propensity to take pro-opposition actions on the hypothetical measure. The analysis presented here is restricted to the 441 participants who actually had to choose whether they would take a real political wristband. Figure 6a plots the differences between the control group and each of the treatment groups with 95% confidence intervals from a t-test. The p-values calculated from non-parametric statistical tests, including randomization inference, are presented in Appendix A.2.

Figure 6a shows that participants experiencing fear both report significantly lower likelihood of expressing dissent, and are less likely to actually take a wristband indicating that they support democracy. These effects are substantively large and statistically significant, even on the binary measure of taking a wristband in a reduced sample. The general and political fear treatments reduced how likely participants said they were to take action on the hypothetical measure by 0.53 and 0.76 standard deviations, respectively. The fear treatments reduced the proportion of respondents who took the political over plain wristband by 11 percentage points in the case of the general fear treatment and 19 percentage points in the case of the political fear treatment.

In Appendix A.3, I present the treatment effects broken down by act of dissent and by period (now vs. during the next election). While the treatment effects are larger for self-reported propensity to act during the election period, there is no clear pattern in the size of the treatment effect across individual acts. The coefficients on all of the individual acts are significant.

These reductions in dissent are substantively large and important. Table 2 shows the proportion

Figure 6: Fear and participation in collective dissent



of participants who either took the political wristband or say that they are “very likely” or “sure” to take each of the six hypothetical political actions during an election period.

Table 2: Proportion of respondents who are very likely or sure to take express dissent by treatment assignment

	Percent “Very likely” or “Sure” during election period		
	Control	General Fear	Political Fear
Wristband	82%	71%	63%
Rally	50%	36%	33%
Shirt	49%	25%	24%
Reveal	39%	15%	21%
Refuse	39%	16%	16%
Testify	31%	13%	11%
Joke	28%	8%	7%

On the wristband, while 82% are willing to take the wristband in the control group, only 71% of participants experiencing general fear and 63% of participants experiencing fear in a political context chose the political wristband that they were told would “show their political beliefs” over the plain option. These effects represent reductions of 14% in the case of general fear and 23% in the case of political fear. To give another example, while 28% of people in the control group said they were very likely or sure to share a joke about the president during an election period, just 7-8% of respondents in the fear treatment group reported the same high propensity to dissent by sharing a

joke. This represents a 70-77% reduction in the proportion of respondents who say they are likely to take that action.

A mediation analysis confirms that increases in fear mediate all of the observed effects, rather than changes in other emotions. This analysis uses the methodology of Imai and Yamamoto (2013) to identify the ACME of a single mediator (fear) conditional on potentially confounded post-treatment mediators (other emotions) is presented in Appendix A.1.

### 4.3 Results: Fear, pessimism and risk aversion

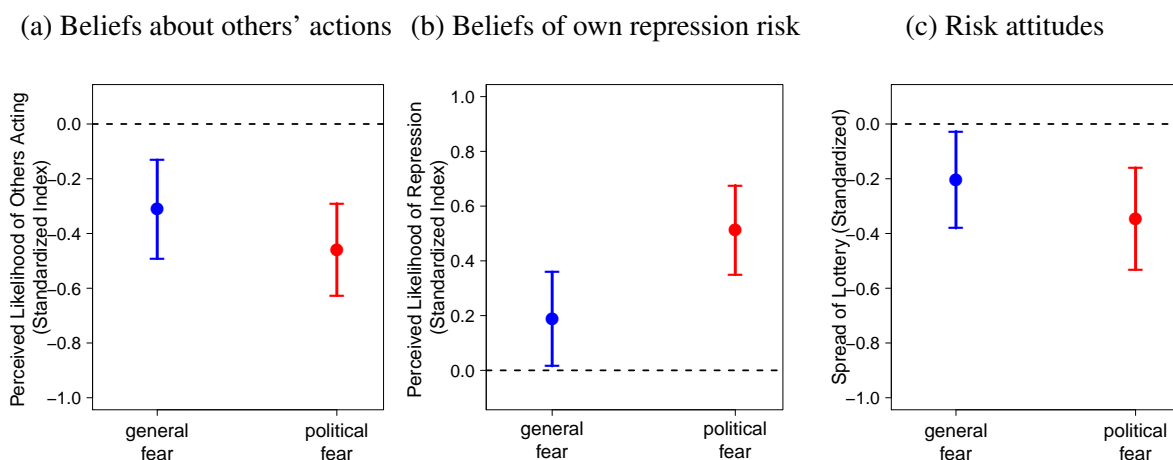
The first results provided strong support for the prediction that the emotion of fear has a causal effect on participation in pro-democracy political action. In this section, I test whether fear affects the variables that I posited as mechanisms – namely, that fear increases pessimism around the cost of expressing dissent and risk aversion. In this section I present difference-in-means tests to test these predictions.

I test the effect of the fear inductions on three outcomes: the index of expectations about how many other opposition supporters will take pro-democracy action, the index of the perceived risk of repression associated with attending a protest, and the amount of risk that the participant chose to take on the monetary lottery. In this section I present the results of difference-in-means tests between pairs of each of the three randomly assigned groups, and results broken down by period (now and during the next election) and by individual act of dissent or repression are presented in Appendix A.4. Additional statistical tests that do not rely on the assumption of normality are presented in Appendix A.2.

Figure 7 plots the estimated treatment effects with 95% confidence intervals. Figure 7a displays the effect of the treatments on expectations of other opposition supporters' actions. Increases in expectations of others' actions indicates that respondents believe that more of the other opposition supporters in their community would take pro-opposition action. Figure 7b displays the effect of the treatments on expectations of the respondent's personal risk of facing repression if she attended an opposition rally. Increases in this perceived risk index indicate that respondents believe that it is more likely that they would face repression. Finally, Figure 7c displays the effect of the treatments on the riskiness of the lottery that respondents chose to play during the survey. Higher values on this scale indicate that the respondent chose a lottery with a larger spread and a higher expected value in the 50-50 draw that we offered them.

Figure 7 shows that both political and general fear cause participants to become more pessimistic in their estimation of parameters in the expected cost of expressing dissent, and more risk averse. Figure 7a shows that the general fear treatment reduced the index of beliefs about how many other opposition supporters would take political action by 0.31 standard deviations, while

Figure 7: Beliefs about costs of collective action and risk aversion



the political fear index reduced expectations of others by 0.46 standard deviations. To put this into real terms, while the average response for the control group is 2.90, or almost precisely that on average “some” opposition supporters would take each pro-opposition action (in fact, the average response in the control group during a non-election period is 3.30, between “some” and “many”, and the average during an election period is 2.51, between “a few” and “some”), the average for people induced to feel fear in a political or non-political context is 2.59 and 2.69, respectively.

These treatment effects are slightly larger for assessments of others' actions during election periods and for more contentious actions, although the differences between the treatment effects are not statistically significant. The political and general fear treatments have the largest effects on perceptions of the probability that other opposition supporters would share a joke about the president (a highly sensitive act in Zimbabwe) and testify in the trial of someone who has killed for ZANU-PF. Tables with these results are presented in Appendix A.4.

Figure 7b shows that both political and general fear also increase expectations that participants will personally be the victims of repressive violence if they attend an opposition rally. The general fear treatment increased the perceived risk of repression by 0.19 standard deviations, and the political fear increased perceived risk by 0.51 standard deviations. In real terms, the average control group respondent thinks that it is slightly less than “somewhat” likely that they would experience the average act of violent repression ( $\mu_C = 2.87$ ). In the general fear treatment, this perception increases to slightly more than somewhat likely ( $\mu_{TG} = 3.05$ ), and in the political fear treatment, it is between somewhat and very likely ( $\mu_{TP} = 3.38$ ). In this case, the difference between each of the fear treatment arms and the control is statistically significant (in the case of general fear, only at the 5% level) and the difference between the two fear treatments is also significant.

These treatment effects are again larger during election periods, and generally slightly larger for acts of repression that people judged to be more probable at an opposition rally, such as threats,

assault, and destruction of property. They were lowest for sexual violence, which respondents generally judged to be improbable.

Figure 7c shows that participants in the control group chose on average a lottery with a higher level of risk, compensated by a higher expected utility, than participants in the two treatment arms. The general and political fear treatments caused reductions of 0.20 and 0.35 standard deviations compared to control in the spread of the lottery that respondents chose to play in the 50-50 draw. Almost one in five (17%) of respondents in the control group seem to be risk-neutral, indicated by the fact that they chose the riskiest lottery with a spread of \$1.10 despite the fact that its expected utility (\$0.55) was equal to that of the second riskiest lottery with a spread of \$0.90. In the general and political fear treatment arms, however, 10% and 12% of respondents chose a lottery indicating that they are risk-neutral, and much larger proportions of respondents chose lotteries with lower expected utilities in exchange for higher sure payouts.

Results for other aspect of risk attitudes including uncertainty aversion and loss aversion, are shown in Appendix A.4. These additional analyses are exploratory: because the psychology literature does not have clear implications for how fear should affect attitudes towards losses or uncertainty, I did not pre-register predictions around how fear should affect these parameters. I do not find that fear has any effect on attitudes towards losses or uncertainty.

If we accept that individuals' attitudes towards risk are stable across domains, these results indicate that fearful citizens making decisions about whether or not to participate in pro-democracy collective action would need to perceive that the potential gains of participation actually outweigh the potential losses by a larger amount than citizens not experiencing fear.

Again, a mediation analysis confirms that increases in fear mediate all of the observed effects, rather than changes in other emotions. This analysis uses the methodology of Imai and Yamamoto (2013) to identify the ACME of a single mediator (fear) conditional on potentially confounded post-treatment mediators (other emotions) is presented in Appendix A.1.

I also use the Imai and Yamamoto (2013) method to conduct a substantive mediation analysis. Specifically, I test whether pessimism about the risk of repression, others' actions, and risk aversion mediate the observed decreases in dissent. The main results of this analysis confirm that the reductions in the hypothetical measure of dissent are mediated by all three potential mechanisms: pessimism about the risk of repression, pessimism about others' actions, and risk aversion. The effect on the behavioral wristband measure, however, is only found to be mediated by increases in risk aversion. This may be because the wristband is a much lower-risk action than the hypothetical measures where there is relatively little ambiguity about the risk of punishment. These results are presented in full in Appendix A.1.

## 5 Empirical analysis: Heterogeneity in reactions to repression

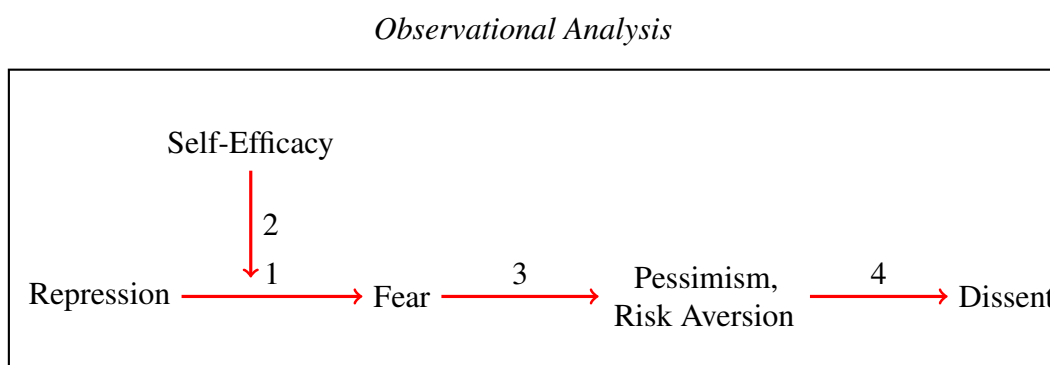
The results so far have shown that fear has a causal effect on participation in risky political behavior that is mediated by increases in pessimism and risk aversion. Can this theory, however, help us understand which citizens will participate in pro-democracy action in a repressive environment? In this section I test whether a psychological characteristic that increases individuals' propensities to feel fear in response to a negative stimuli is related to lower participation in dissent.

### 5.1 Research design

The goal of the research design in this section is to test whether self-efficacy can explain why some opposition supporters in a repressive environment express dissent while others remain silent.

To go back to the diagram presented in Section 2, this section tests which type of opposition supporter are more likely to react fearfully after in a repressive context. Figure 8 uses the original DAG to show which processes are tested in this section.

Figure 8: Diagram of mechanisms and moderators in proposed theory



I test these hypotheses by testing for the relationship between self-efficacy and all of the subsequent outcomes of interest, including fear, pessimism, risk aversion, and dissent. The standard way to test for a moderating relationship would be to test for the interaction of the cause (in this case, repression) and the moderator on the outcomes. However, in this design I am essentially conditioning on repression, as all of the people in my sample are opposition supporters living under a repressive regime who have experienced at least some repression and perceive that there is a future threat of repression. This research design therefore tests whether, in a repressive context, self-efficacy is related to the subsequent outcomes of interest. Finally, it is important to note that although my theory proposes a chain of mediated causal relationships (for example, that the effect of repression on pessimism is mediated by fear), in this design I do not have the analytical leverage to test for all of these proposed relationships. Instead, I will provide suggestive evidence that self-efficacy is correlated with each step of the proposed causal chain in a repressive context.

It is also important to note that this section is on a different temporal scale than the previous analysis in Section 4. The cognitive and physical reactions that make up a fear response to a particular stimulus last a relatively short time, on the order of minutes rather than hours or days. In this section, instead of testing for the effects of specific, known repressive threat in a short period, I assume that the opposition supporters in the study are exposed to repeated, unmeasured threats, or memories of threats, that shape their behavior over a short period. Primary or secondary exposure to repressive violence in the past constitute threats that could induce fear, as well as reflecting on those past experiences to answer my survey questions about the risk of repression and past exposure to repression. Past repeated exposure to fear reactions can also cause people to permanently update their beliefs about parameters like the risk of repression and propensity of others to act.

it is also important to note that while the experimental design in Section 4 allowed me to test for the immediate effects of fear

I outlined the following hypotheses in Section 2.2.

1. Opposition supporters low in self-efficacy will experience more fear after repression events.
2. Opposition supporters low in self-efficacy will be more pessimistic about the costs of dissent.
3. Opposition supporters low in self-efficacy will be more risk-averse.
4. Opposition supporters low in self-efficacy will be less likely to dissent in repressive environments.

I test these hypotheses using regression analysis based on the data from the experiment participant pool. Specifically, I regress the outcomes of interest (dissent, risk aversion, etc.) on a standardized measure of self-efficacy, a vector of pre-treatment demographic controls, two and a community fixed effect.

One concern with this type of correlational analysis is that the observed relationship between self-efficacy and dissent might be confounded by a third, unobserved variable. The most plausible confound that could be driving this effect is actual rather than perceived coping ability. While my argument is focused on the role of the psychological characteristic of self-efficacy, perceived self-efficacy is thought to develop over time through experiences of mastery and is most likely strongly related to the actual ability to cope in a negative environment. In order to rule this alternative explanation out, I control for a number of demographic characteristics including age, education, assets, and gender that shape whether an individual is actually more capable of protecting him or herself against the threat of repression. However, self-efficacy is not strongly related to many demographic characteristics in this sample: only education and age both positively predict self-efficacy, suggesting that it may not be very strongly related to the actual ability to cope with physical threats. Appendix ?? presents a table of the demographic correlates of self-efficacy.



### 5.1.1 Measurement

Self-efficacy, the main variable of interest, is measured with a standard 10-question scale developed by Jerusalem and Schwarzer (1995). The individual measures include questions such as “I can always manage to solve difficult problems if I try hard enough” and “I can remain calm when facing difficulties because I can rely on my coping abilities.” This scale has been validated across cultures in multiple studies spanning 14 (Schwarzer, 1999) or 25 different cultural contexts (Scholz et al., 2002). I modified the answer categories based on pre-testing in Zimbabwe such that the answers were recorded on a five-point agreement scale rather than a four-point scale from not at all true to exactly true. In Western populations, past research has shown that general self-efficacy and self-esteem, locus of control, and neuroticism are all measures of the same underlying self-evaluative construct (Judge et al., 2002). I create a standardized measure of general self-efficacy using principal components analysis.

In addition, I test self-efficacy against two other prominent explanations for individual participant in dissent. First, I include a measure of exposure to information based on a principal components analysis of ownership of information, communication, and technology (ICT) assets, including a cell phone, a smartphone, a computer, a television, and a radio. Conditional on the other assets indices, which pick up other household (generator, electricity, stove, car, etc.) and farm (livestock) assets, theories of protest participation that focus on the role of information would predict that people with higher access to information would be more likely to participate in dissent. Second, I include a measure of the strength of political preferences measured on a three-point scale of how close the respondent feels to an opposition party: not very close, close, or very close. In this sample of control participants, 68% of people reported feeling very close to an opposition party, 24% close, and 8% not very close. This measure is included in the specification to test whether the strength of preferences for the opposition predicts dissent.

I use four separate strategies to measure propensity to dissent in this section: self-reported past behavior, two hypothetical measures, and a behavioral measure. One advantage to having four separate measures of the same underlying construct is that each has different drawbacks and qualities: while the hypothetical measures are potentially biased by recall and desirability bias, they allow me to examine high-risk acts of dissent. The behavioral measure is the least prone to bias but also as a very low-risk action is the most distant from the real behavior of interest.

To measure actual past dissent, I create an index using principal components analysis of responses to seven measures of past participation in different forms of pro-opposition politics, each measured on a four-point frequency scale.<sup>9</sup> The measures include attending an opposition rally, refusing to go to a ruling party rally, wearing pro-opposition paraphernalia, volunteering for

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<sup>9</sup>Possible responses are never, once or twice, sometimes, or many times.

an opposition party, volunteering for a peace NGO, volunteering for an election-related NGO, or posting a pro-opposition or anti-government message on Facebook, all since the year 2000. In addition, I use the behavioral and hypothetical measures of dissent from the experiment as outcomes in this section.

Finally, as a second hypothetical measure of propensity to dissent, I asked participants to report how likely it is that they would attend a pro-opposition rally after two repression events described to them by the enumerator with randomly assigned characteristics.<sup>10</sup> Each respondent reported how likely it is that they would attend an opposition rally after two randomly assigned scenarios. The scenarios described repression events that varied along a number of dimensions:

Imagine that it is one **day/week/month** before the next election. You have just heard that an opposition **supporter/organizer/candidate** in a community in **Manicaland/Matabeleland/Harare** has been **threatened/beaten/abducted/killed** by a government agent. You received this information from **a friend/an opposition activist/a ruling party activist**.

Although the variation in these scenarios was created for the purposes of a separate conjoint analysis, one benefit of the fact that there are 324 individual scenarios that vary along dimensions like the severity of the event and the identity of the victim is that it increases confidence that the results are not driven by one particular scenario.

To measure the cognitive outcomes of interest, I use the measures of fear, risk aversion, and pessimism from the experiment, as well as hypothetical measures of fear that respondents report they would feel after the described repression scenarios.

## 5.2 Results: Self-efficacy and dissent

This section presents the results of the analysis of the correlation between self-efficacy and dissent. I test for this relationship using four different measures of dissent that vary from low-risk, behavioral measures to high-risk hypotheticals. Propensity to Dissent (Columns 1-2) and Propensity to Dissent - Scenarios (Columns 3-4) are both self-reported assessments of the respondent's own likelihood to participate in dissent. Past activism (Columns 5-6) and the wristband measure (Columns 7-8), on the other hand, measure the respondent's actual behavior (although in the case of Past Activism we could be worried about bias due to the self-reported nature of the measure). Table 3 presents the results of the analysis of the relationship between self-efficacy and dissent.

Table 3 shows that the psychological characteristic of self-efficacy is strongly associated with all of the measures of participation in dissent, including the two different hypothetical measures,

<sup>10</sup>In fact, these data were collected as part of a conjoint experiment testing how citizens interpret repression events as informational signals of their personal risk. The results of that experiment will be presented in a separate paper.

Table 3: Self-efficacy and participation in dissent

	<i>Dependent variable:</i>							
	Propensity to Dissent		Propensity to Dissent - Scenarios		Past Activism		Wristband	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Self-Efficacy Index	0.28*** (0.04)	0.23*** (0.04)	0.28*** (0.04)	0.23*** (0.04)	0.16** (0.07)	0.12* (0.07)	0.05** (0.02)	0.04* (0.02)
ICT Index		-0.01 (0.04)		-0.03 (0.04)		0.11* (0.07)		0.01 (0.02)
Closeness to Party		0.13*** (0.04)		0.13*** (0.04)		0.11 (0.08)		0.01 (0.02)
Female	-0.17** (0.07)	-0.18*** (0.07)	-0.14* (0.07)	-0.16** (0.08)	-0.20 (0.13)	-0.21 (0.13)	0.003 (0.04)	0.01 (0.04)
Age	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.05** (0.02)	0.05** (0.02)	0.005 (0.01)	0.005 (0.01)
Age <sup>2</sup>	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0002)	-0.0001 (0.0002)	-0.0005* (0.0003)	-0.0005* (0.0003)	-0.0001 (0.0001)	-0.0001 (0.0001)
Education	0.07 (0.06)	0.08 (0.06)	0.04 (0.07)	0.05 (0.07)	0.05 (0.11)	0.02 (0.11)	0.05 (0.04)	0.04 (0.04)
Assets - Urban	-0.05 (0.05)	-0.06 (0.05)	-0.03 (0.06)	-0.05 (0.06)	0.04 (0.10)	0.05 (0.10)	-0.02 (0.04)	-0.02 (0.04)
Assets - Rural	0.02 (0.05)	0.04 (0.05)	-0.01 (0.05)	0.01 (0.05)	-0.11 (0.09)	-0.12 (0.09)	-0.001 (0.03)	-0.002 (0.03)
Constant	-0.07 (0.33)	-0.14 (0.33)	0.39 (0.36)	0.31 (0.36)	-1.10* (0.60)	-1.09* (0.61)	0.72*** (0.21)	0.72*** (0.21)
Treatment Status FE	✓	✓	✓	✓	✓	✓	✓	✓
Community FE	✓	✓	✓	✓	✓	✓	✓	✓
Observations	644	630	663	649	325	319	434	426
R <sup>2</sup>	0.24	0.26	0.19	0.21	0.09	0.11	0.10	0.10
Sample	All				Control		Wristband	

Standard errors in parentheses.

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

The dependent variable in Columns 1-2 is a standardized measure of how likely respondents say it is that they would participate in six different forms of dissent in two different time periods. The dependent variable in Columns 3-4 is a standardized measure of the average of how likely the participant says they would be to go to an opposition rally after the two described repression scenarios occurred. The dependent variable in Columns 5-6 is a standardized index of how frequently the participant participated in 7 different types of dissent over the past 15 years. In Columns 7-8, the dependent variable is a binary measure of whether the respondent chose the political wristband as a thank-you gift. Self-efficacy is a standardized index of responses to the [Jerusalem and Schwarzer \(1995\)](#) self-efficacy scale. The independent variables include dummies for the two fear treatments, a dummy for being a female, and the age of the respondent at the time of the experiment. Education is a five-point measure of the highest level of education completed by the participant. The assets indices are the first principal components of lists of urban and rural assets based on the Demographic and Health Survey's assets module from Zimbabwe. Finally, I include fixed effects for each of the constituencies where the experiment was conducted. In Columns 1-4, the results are estimated using all respondents, while in Columns 5-6 they are estimated using only respondents from the control group because past activism was measured post-treatment, and in Columns 7-8 they are measured for the subset of the sample for whom a real political wristband was available. Models are estimated using ordinary least squares (OLS).

self-reported past dissent, and the behavioral wristband measure. Columns 2 and 4 shows that participants who are one standard deviation higher on the self-efficacy index are 0.23 standard deviations higher on the propensity to dissent scale used as an outcome in the main experiment. Indeed, the results with these two different measures are strikingly consistent in magnitude. In terms of past activism, respondents who are one standard deviation higher on the self-efficacy scale are 0.12 standard deviations higher in terms of their self-reported past activism (Column 6).<sup>11</sup> On the behavioral wristband measure, a one standard deviation increase in self-efficacy is associated with a 0.04 percentage point decrease in propensity to take the political wristband.

By contrast, there is little empirical support for the alternative hypotheses based on existing theory. The coefficient on an index of ICT that would increase access to information is positive and significant at the 10% level in one regression, but is negative in two others. There is stronger support for the hypothesis that the strength of ideological preferences would predict participation in dissent, but this result only appears in the hypothetical measures and not the measure of past behavior or the behavioral wristband measure. This pattern raises concerns about social desirability bias, as people who feel closer to an opposition party may feel pressured during the survey to exaggerate their commitment to participating in dissent.

### 5.3 Results: Self-efficacy, fear, pessimism and risk aversion

Next I turn to the psychological measures to examine whether the observed relationship between self-efficacy and dissent may be driven by fear, pessimism, and risk aversion. Table 4 presents the results of this analysis.

Again, the analysis in Table 4 shows a very strong and consistent relationship between self-efficacy and the psychological outcomes of interest in this study: fear, pessimism, and risk aversion. The coefficient in Column 2 implies that a one standard deviation increase in self-efficacy is related to a 0.07 standard deviation decrease in the amount of fear felt by the respondent in the moment at the end of the survey. Column 4 shows that a one standard deviation increase in self-efficacy is associated with a slightly larger, 0.17 standard deviation, decrease in the hypothetical measure of fear, i.e. how afraid the respondent says she would feel in two described repression scenarios. Thus, this analysis confirms that self-efficacy is related to a lower propensity to feel fear in a negative situation.

There is also evidence that self-efficacy is related to pessimism and risk aversion. People who are one standard deviation higher in self-efficacy are 0.09 standard deviations lower in their perceptions of the risk of repression associated with six acts of dissent in two time periods (Column 6). They are 0.21 standard deviations higher in their expectations about the proportion of other

<sup>11</sup>For this outcome, I restrict the analysis to the control group only because past activism was measured post-treatment to avoid inducing fear in the entire sample.

Table 4: Self-efficacy, fear, pessimism and risk aversion

	<i>Dependent variable:</i>									
	Fear - Immediate		Fear - Hypothetical		Perceived Repression Risk		Perceived Others' Actions		Risk Aversion	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Self-Efficacy Index	-0.06*	-0.07*	-0.16***	-0.17***	-0.07*	-0.09**	0.22***	0.21***	-0.09**	-0.10**
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)
ICT Index		0.05		-0.02		0.13***		-0.04		0.004
		(0.03)		(0.04)		(0.04)		(0.04)		(0.04)
Closeness to Party		0.02		0.03		0.06		0.04		0.02
		(0.04)		(0.04)		(0.04)		(0.04)		(0.04)
Female	-0.09	-0.06	0.08	0.09	-0.06	-0.05	-0.10	-0.11	0.13	0.14
	(0.07)	(0.07)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Age	0.003	0.003	-0.01	-0.01	0.02	0.02	0.01	0.01	-0.02	-0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)
Age <sup>2</sup>	0.0000	0.0000	0.0001	0.0001	-0.0002	-0.0002	-0.0001	-0.0001	0.0002	0.0002
	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Education	-0.04	-0.05	-0.03	-0.03	-0.02	-0.08	0.01	0.02	0.02	0.02
	(0.06)	(0.06)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Assets - Urban	0.03	0.04	0.06	0.06	-0.01	0.02	0.0002	-0.01	-0.02	-0.01
	(0.05)	(0.05)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Assets - Rural	-0.04	-0.06	0.03	0.03	0.08	0.07	0.12**	0.13**	-0.04	-0.05
	(0.05)	(0.05)	(0.05)	(0.06)	(0.05)	(0.06)	(0.05)	(0.06)	(0.06)	(0.06)
Constant	-0.25	-0.26	0.27	0.28	-0.37	-0.30	0.13	0.09	0.48	0.46
	(0.32)	(0.32)	(0.37)	(0.37)	(0.36)	(0.36)	(0.36)	(0.37)	(0.39)	(0.39)
Treatment Status FE	✓	✓	✓	✓	✓	✓	✓	✓		
Community FE	✓	✓	✓	✓	✓	✓	✓	✓		
Observations	663	649	662	648	643	630	646	632	663	649
R <sup>2</sup>	0.36	0.37	0.16	0.17	0.08	0.10	0.11	0.12	0.05	0.06
Sample	All									

Standard errors in parentheses.

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

The dependent variable in Columns 1-2 is a standardized measure of how afraid the respondent reported being in the moment at the end of the survey. The dependent variable in Columns 3-4 is a standardized measure of how afraid the respondent said that she hypothetically would be after two repression scenarios. The dependent variable in Columns 5-6 is a standardized index of the perceived risk of repression based on six different actions in two periods. In Columns 7-8, the dependent variable the perceived proportion of other opposition supporters who would take six different actions in two time periods. In Columns 9-10, it is a standardized measure of risk averse based on the inverse of the spread of the lottery choice that the respondent chose. Self-efficacy is a standardized index of responses to the [Jerusalem and Schwarzer \(1995\)](#) self-efficacy scale. The independent variables include dummies for the two fear treatments, a dummy for being a female, and the age of the respondent at the time of the experiment. Education is a five-point measure of the highest level of education completed by the participant. The assets indices are the first principal components of lists of urban and rural assets based on the Demographic and Health Survey's assets module from Zimbabwe. Finally, I include fixed effects for each of the constituencies where the experiment was conducted. In Columns 1-4, the results are estimated using all respondents, while in Columns 5-6 they are estimated using only respondents from the control group because past activism was measured post-treatment, and in Columns 7-8 they are measured for the subset of the sample for whom a real political wristband was available. Models are estimated using ordinary least squares (OLS).

opposition supporters in their area who would participate in six acts of dissent in two time periods (Column 8). Finally, they are 0.1 standard deviations lower on the scale of risk aversion measured with a behavioral, incentivized lottery.

Although we do not have strong priors about whether access to information or strength of party affiliation should be related to these psychological outcomes, I nevertheless include these alternative explanations in some specifications. While nine out of ten of the coefficients are indistinguishable from zero, there is a positive and significant relationship between the ICT assets index and the perceived risk of repression. This may be because people with more exposure to information hear more about repression events, although this seems less likely given that the coefficient on perceptions of others' actions is negative. Nevertheless, the overall evidence that these alternative explanations are related to variation in fear, perceptions of the costs of dissent, or risk aversion is quite weak.

## 6 Conclusion

In this paper, I have argued that incorporating an understanding of emotions and cognition into a theory of participation in high-risk acts of dissent can shed light on critical questions in the study of protest and democratization. Citizens making decisions in a state of fear are more pessimistic about the costs of dissent and more risk averse. By implication, variation in the propensity to feel fear can explain why one citizen will participate in dissent while another with equally anti-regime preferences and the same informational signal will abstain.

The empirical tests presented in this paper provide strong support for the prediction that the emotion of fear enhances the effectiveness of repressive threats. The results from a lab-in-the-field experiment, conducted with 671 supporters of the opposition in urban and rural Zimbabwe, show that fear affects perceptions of key parameters in decisions to participate in collective action, including perceptions of the actions of other citizens, perceptions of your own risk of repression, and risk aversion. Ultimately, fear has substantively large effects on the propensity of opposition supporters to actually express their dissent in public ways. Fear causes reductions in both self-reported propensity to express pro-democracy and anti-regime preferences, and causes a reduction of between 14 and 23% in an actual behavior that indicates a desire to express support for democracy. These effects seem to be mediated by the changes in pessimism and risk aversion.

These results help explain why there is such high variation in who participates in risky political behavior, even for people with the same beliefs and objective risk factors. I find that psychological characteristics that make people prone to feeling more or less fearful are strongly related to pro-democracy political participation in a repressive environment. Self-efficacy is a better predictor of dissent, as well as a better predictor of the perceived risk of repression, expectations about the

behavior of other opposition supporters, and risk aversion, than access to information or strength of preferences for the opposition. These patterns can help us understand why there is such variation across individuals in the subjective perception of risk and propensity to act.

This evidence strongly suggests that fear can be used by autocrats to manipulate perceptions of the costs of dissent in order to lower the cost of repression. Because the goal of repressive threats is to coerce citizens into not taking action against a regime that they do not support, the fact that this violence also instills a terror that leads people to become pessimistic and risk averse increases the potency of this informational signal. Ultimately, fear enables regimes to exaggerate their coercive capacity.

This project stops short of testing the implications of the theory for the strategies that autocrats and activists adopt to demobilize or mobilize citizens with pro-democracy preferences. However, there are a few implications that may explain patterns in the use of violence and the tactics used by activists. For example, repression events that aim to maximize fear should be public, graphic, and memorable. In Zimbabwe, during the peak periods of violence state agents used public assault and murder, unique forms of torture including beatings on the soles of the feet, and prolonged beatings that caused severe and permanent scars to not only inform citizens about the cost of dissent but also induce fear. State agents should try to reinforce fear by reminding people of the In the words of one pro-opposition Zimbabwean informant, “once they’ve burned down your house, they only need to shake the matchbox” in order to silence your dissent. In addition, given that citizens vary in their susceptibility to fear, this theory suggests that while regimes may use violence to incapacitate activists high in self-efficacy, it should target fear on people with anti-regime preferences but low self-efficacy because these people are most likely to respond to coercive threats by reducing their dissent.

On the other hand, this theory helps explain some of the central strategies that activists use to mobilize social movements. Activist toolkits stress the importance, for example, of building confidence by starting with low-risk successes, or modeling fearlessness in the face of threats. These strategies can be easily linked to common interventions in psychology such as interventions to increase self-efficacy (Bandura, 1982; Ghosal et al., 2015) or to enable people to regulate their emotions through methods like reappraisal (Goldin et al., 2008; Halperin et al., 2013). Writing on Zimbabwe, Masunungure (2006) argues that any mobilization strategy in Zimbabwe needs to take into account that “risk-averseness is now an integral part of Zimbabwe’s political culture” (2) due to a long process of conditioning through “more than a century of uninterrupted authoritarianism” (3). For Masunungure, this implies that passive resistance such as stayaways and rent boycotts that involves “not physically confronting the state, but eroding the state” will garner more participation than active resistance like protest (Ibid, 2). This framework of decision-making highlights the importance

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## A Additional results: The effect of fear on dissent

### A.1 Mediation analysis

The theory that I propose in Section 2 specifies a chain of causal relationships: first, that fear increases pessimism and risk aversion, and second, that pessimism and risk aversion reduce dissent. Although the lab-in-the-field experiment does not allow a design-based test of this causal process, I conduct a mediation analysis using the methods developed by Imai et al. (2010, 2011); Imai and Yamamoto (2013). In this section I discuss the identifying assumptions of this method and present the results of two mediation analyses. First, I test whether fear mediates the changes in all four outcomes of interest. This is important, and indeed has been recommended as a best practice in the analysis of emotion inductions (Myers and Tingley, Forthcoming; Albertson and Gadarian, Forthcoming 2016) because these treatments tend to induce emotions in addition to the one that is targeted. Second, I test whether increases in pessimism and risk aversion mediate the reductions in propensity to dissent that I observe.

Imai et al. (2011) provide a framework for estimating causal mediation effects with a single mediator. They use potential outcomes notation to describe the causal model.  $M_i$  and  $Y_i$  represent the observed value of the mediator and the outcome, respectively, for unit  $i$ .  $M_i(t)$  represents the potential mediator values under treatment status  $t = 0, 1$ , and  $Y_i(t, m)$  represents the potential outcome values under treatment status  $t$  and mediator value  $m$ . As a result, the causal mediation effect, or the causal effect of the treatment on the outcome caused by the change in the mediator induced by the treatment, is  $\delta_i(t) \equiv Y_i(t, M_i(1)) - Y_i(t, M_i(0))$ . The direct effect is  $\zeta_i(t) \equiv Y_i(1, M_i(t)) - Y_i(0, M_i(t))$ . Imai et al. (2010) show that the mediation and direct effects can be identified under the assumption of sequential ignorability.

Imai and Yamamoto (2013) expand the mediation framework to accommodate the existence of a second mediator  $W_i(t)$  that is not assumed to be independent from  $M_i(t)$ . Under this framework, the sequential ignorability assumption is relaxed to allow  $M_i$  to be exogenous conditional on post-treatment confounders  $W_i$ . Formally, the sequential ignorability assumption is:

$$\begin{aligned} \{Y_i(t, m, w), M_i(t, w), W_i(t)\} &\perp\!\!\!\perp T_i | X_i = x \\ \{Y_i(t, m, w), M_i(t, w)\} &\perp\!\!\!\perp W_i | T_i = t, X_i = x \\ \{Y_i(t, m, w)\} &\perp\!\!\!\perp W_i(t) = w, T_i = t, X_i = x \end{aligned}$$

This assumption requires that the treatment, mediator of interest, and alternative mediators are conditionally exogenous. However, the mediator of interest  $M$  is only assumed to be exogenous after conditioning on the alternative mediators, treatment, and pretreatment confounders. In addition, in

order to identify the mediation effect, we must either assume no interaction between the treatment and mediator, or set two parameters by assumption. The first parameter  $\rho_t$  is the correlation between the mediator  $M_i(t)$  and the interaction effect of the mediator and the treatment. The second is the standard deviation of the coefficient for the treatment-mediator interaction,  $\sigma$ . Imai and Yamamoto (2013) suggest presenting the results assuming that  $\sigma = 0$  and assessing the sensitivity of the analysis to a range of values of  $\rho_t$  and  $\sigma$ .

In this application, the biggest threat to inference is that the fear induction not only increased levels of fear, but also increased other negative emotions and decreased happiness. Thus, fear is the mediator of interest  $M$  and anger, disgust, surprise, sadness, and happiness are a vector of alternative mechanisms  $W$ . In this case, rather than assuming that  $M$  is unconfounded by any post-treatment variables, we use the Imai and Yamamoto (2013) method to condition on other emotions that the treatment may have induced. In this case, it is plausible that other emotions would be related to the amount of fear induced as well as the outcomes of interest. In order to make  $W$  and  $M$  conditionally unconfounded, I also control for a number of pre-treatment variables  $X$  that might be related to emotions and the outcomes of interest, including gender, age, education, household assets, farm assets, the number of earners in the household, two subjective measures of economic insecurity, the number of rooms in the household, self-efficacy, and a community fixed effect. Table 5 presents the results of an analysis of whether fear mediates the relationship between the treatment and the four outcomes of interest, conditional on the other five post-treatment emotions.

The results confirm that increases in fear are mediating the treatment effects. Conditional on the pre-treatment characteristics  $X$  listed above and post-treatment levels of five other emotions  $W$ , I find that the Average Causal Mediation Effect (ACME) of the pooled fear treatment is substantively large and statistically significant for all of the outcomes of interest. The tests of only the General Fear and Political Fear treatments are also significant at the 95% level in five out of eight cases.

Next, I test whether increases in pessimism and risk aversion mediate the decreases in the propensity to dissent. In this analysis, it is somewhat more plausible that some of the potential mediators are independent of each other given that my measurement strategy for risk aversion shuts down variation in risk perceptions. Nevertheless, given that risk aversion and pessimism are thought to be closely related (Weber and Milliman, 1997), and given the clear relationship between the perceived risk of repression and pessimism about others' actions, I continue to use the framework for multiple mediators rather than the framework that relies on unconfoundedness of the mediator on post-treatment factors. Therefore, in this analysis, in addition to conditioning on the same vector of pre-treatment characteristics, I condition on the alternative post-treatment psychological outcomes in order to estimate the mediation effect of each mechanism. For example, to estimate the ACME of pessimism about the risk of repression, I condition on the post-treatment measures of pessimism about others' participation and risk aversion. Table 6 presents the results.

Table 5: Analysis of whether fear mediates the effect of the treatment conditional on other emotions

	Fear (Pooled)		Political Fear		General Fear	
	ACME	ADE	ACME	ADE	ACME	ADE
Propensity to Act	-0.41** (-0.54, -0.29)	-0.1** (-0.25, 0.05)	-0.55** (-0.73, -0.37)	-0.03 (-0.29, 0.23)	-0.31** (-0.46, -0.17)	-0.12 (-0.31, 0.07)
Wristband	-0.09** (-0.16, -0.02)	-0.08 (-0.18, 0.01)	-0.12** (-0.22, -0.02)	-0.04 (-0.19, 0.11)	-0.05 (-0.11, 0.01)	-0.08 (-0.21, 0.06)
Perceived Repression Risk	0.18** (0.03, 0.32)	0.1 (-0.08, 0.29)	0.21** (0.01, 0.41)	0.12 (-0.16, 0.39)	0.08 (-0.05, 0.21)	0.01 (-0.21, 0.24)
Others' Participation	-0.15** (-0.29, -0.01)	-0.11** (-0.33, 0.11)	-0.3** (-0.51, -0.1)	0.01** (-0.27, 0.3)	-0.1 (-0.23, 0.03)	-0.19 (-0.43, 0.04)
Risk of Lottery	-0.19** (-0.38, 0)	-0.06 (-0.32, 0.19)	-0.13 (-0.36, 0.1)	-0.14 (-0.49, 0.2)	-0.17** (-0.31, -0.03)	0.1 (-0.13, 0.33)

95% confidence intervals in parentheses.

\*\* 95% confidence intervals do not include zero.

The first two columns present the results from a mediation analysis where the treatment variable is a pooled version indicating that the participant received either fear treatment. The middle columns present the results of a mediation analysis on the General Fear treatment compared to control, and the last two columns present the same for the Political Fear treatment. The ACME (Columns 1, 3, and 5) represents the estimated Average Causal Mediation Effect, while the ADE (Columns 2, 4, and 6) represents the Average Direct Effect.

Table 6: Analysis of whether pessimism and risk aversion mediate the effect on dissent

<i>M</i>	<i>Y</i>	Fear (Pooled)		Political Fear		General Fear	
		ACME	ADE	ACME	ADE	ACME	ADE
Perceived Repression Risk	Propensity to Act	-0.04** (-0.07, -0.01)	-0.46** (-0.6, -0.32)	-0.04 (-0.09, 0)	-0.53** (-0.69, -0.37)	-0.01 (-0.03, 0.02)	-0.37** (-0.5, -0.25)
	Wristband	0.01 (0, 0.02)	-0.13** (-0.2, -0.06)	0 (-0.01, 0.02)	-0.14** (-0.25, -0.04)	0.01 (-0.01, 0.03)	-0.11** (-0.2, -0.02)
Risk Aversion	Propensity to Act	-0.04** (-0.06, -0.01)	-0.46** (-0.59, -0.34)	-0.04** (-0.08, -0.01)	-0.55** (-0.7, -0.41)	-0.02 (-0.05, 0.01)	-0.36** (-0.51, -0.22)
	Wristband	-0.02 (-0.04, 0)	-0.14** (-0.21, -0.07)	-0.03** (-0.05, -0.01)	-0.15** (-0.25, -0.06)	-0.01 (-0.02, 0.01)	-0.12** (-0.21, -0.03)
Others' Participation	Propensity to Act	-0.13** (-0.2, -0.06)	-0.37** (-0.49, -0.24)	-0.15** (-0.27, -0.03)	-0.46** (-0.64, -0.29)	-0.11** (-0.21, -0.01)	-0.28** (-0.41, -0.16)
	Wristband	-0.03** (-0.05, 0)	-0.1** (-0.17, -0.02)	-0.03** (-0.06, -0.01)	-0.1** (-0.2, 0)	-0.02 (-0.05, 0.01)	-0.08 (-0.17, 0.02)

95% confidence intervals in parentheses.

\*\* 95% confidence intervals do not include zero.

The first two columns present the results from a mediation analysis where the treatment variable is a pooled version indicating that the participant received either fear treatment. The middle columns present the results of a mediation analysis on the General Fear treatment compared to control, and the last two columns present the same for the Political Fear treatment. The ACME (Columns 1, 3, and 5) represents the estimated Average Causal Mediation Effect, while the ADE (Columns 2, 4, and 6) represents the Average Direct Effect.



Table 6 shows that all of the observed effects are mediated by changes in risk aversion or pessimism about the risk of repression or others' participation in dissent. The first set of results in Columns 1-2 show the ACME and ADE based on a pooled version of the treatment. It shows that the reductions in hypothetical measure of dissent, Propensity to Act, are mediated by changes in both the perceived risk of repression, the perceived likelihood that others will act, and risk aversion. These effects are mostly driven by the effects of the Political Fear treatment, but the 90% confidence intervals on the tests for whether the effects of the General Fear treatment on the hypothetical measure of dissent is mediated by risk aversion and pessimism both exclude zero. The effects on the wristband, however, are only mediated by changes in risk aversion. One explanation for this pattern might be that the wristband is such a low-risk action that there is little ambiguity about the risk of punishment.

## A.2 Nonparametric hypothesis tests

In this section I discuss the estimation strategy chosen to test the hypotheses that there are differences between the outcomes for participants in the fear treatments and those in the control group. In the results sections I presented graphs with confidence intervals and p-values from hypothesis tests based on t-tests, which require an assumption that the data are normally distributed. In this section, I test that assumption and present the results of two other tests for treatments effects based on a. non-parametric statistical tests, and b. randomization inference.

I first present the results of tests for the significance of the treatments using non-parametric statistical tests. In fact, all of my continuous outcomes fail the Shapiro-Wilk test for normality, so I present results for all outcomes. To calculate p-values for the difference tests on the continuous variables I use Wilcoxon's rank sum test with a two-sided alternative hypothesis. To test for the significance of the effects on the binary outcome of taking a political wristband, I use Fisher's exact test. All of the hypothesis tests of the treatment effects remain significant at the 5% level. The p-values are shown in Table 7.

Table 7: *p*-values using non-parametric statistical tests

	<i>p</i> -value	
	General Fear	Political Fear
Propensity to dissent (hypothetical)	0.000	0.000
Propensity to dissent (behavioral)	0.025	0.000
Perceived likelihood of repression	0.025	0.000
Perceived proportion of others' acting	0.000	0.000
Spread of lottery choice	0.016	0.000

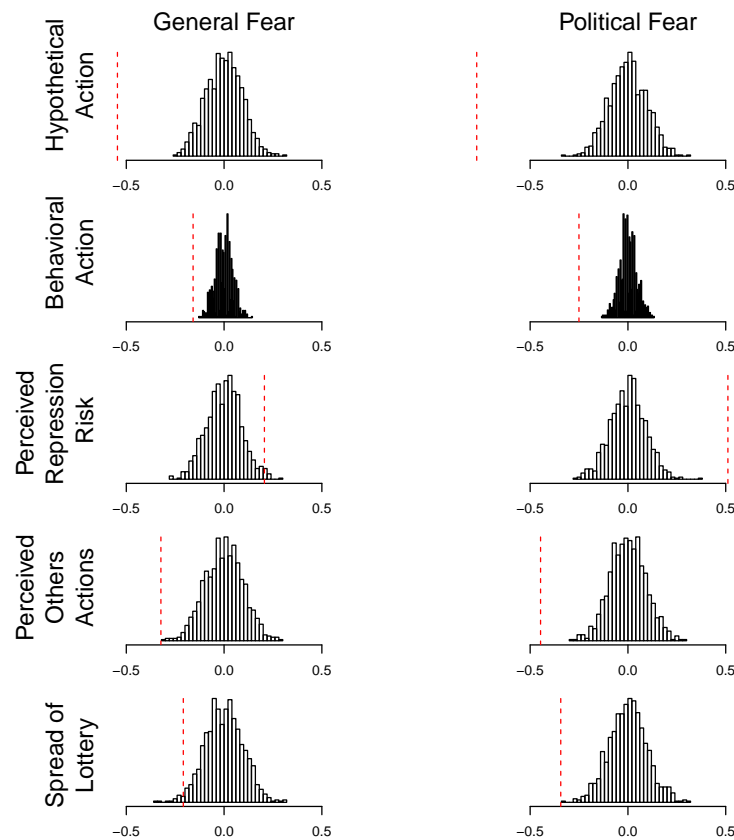
Randomization inference provides another non-parametric method to test the sharp null hypothesis of no treatment effect. To test the sharp null for each of my two treatment arms, I split the data into subsamples that include only the control group and the treatment group of interest. These p-values are constructed by assuming that the treatment has no effect and using random permutations of treatment assignment to estimate the likelihood that we would see a treatment effect as far from zero as the one we observe in the experiment just by random chance. The p-values from a two-tailed test using randomization inference are shown in Table 8.

The distributions of the ATEs and are presented graphically in Figure 9 as histograms. The observed ATE is plotted as a red dashed line.

Table 8:  $p$ -values using randomization inference

	$p$ -value	
	General Fear	Political Fear
Propensity to dissent (hypothetical)	0.000	0.000
Propensity to dissent (behavioral)	0.000	0.000
Perceived likelihood of repression	0.021	0.000
Perceived proportion of others' acting	0.000	0.000
Spread of lottery choice	0.027	0.000

Figure 9: Distributions of ATEs under sharp null and observed ATE



### A.3 Full models: The effect of fear on propensity to dissent

Table 9: The effect of fear on propensity to dissent

	<i>Dependent variable:</i>						
	<i>Hypothetical</i>						<i>Behavioral</i>
	Shirt (1)	Joke (2)	Rally (3)	Reveal (4)	Refuse (5)	Testify (6)	Wristband (7)
Fear - General	-0.44*** (0.08)	-0.48*** (0.08)	-0.46*** (0.09)	-0.46*** (0.08)	-0.47*** (0.08)	-0.48*** (0.08)	-0.11** (0.05)
Fear - Political	-0.72*** (0.09)	-0.65*** (0.08)	-0.70*** (0.09)	-0.63*** (0.08)	-0.72*** (0.08)	-0.72*** (0.08)	-0.18*** (0.05)
Female	-0.02 (0.07)	-0.11 (0.07)	-0.16** (0.08)	-0.18** (0.07)	-0.10 (0.07)	-0.21*** (0.07)	0.01 (0.04)
Age	0.002 (0.01)	0.03** (0.01)	0.03 (0.02)	0.03** (0.01)	0.02 (0.01)	0.01 (0.01)	0.01 (0.01)
Age <sup>2</sup>	-0.0001 (0.0002)	-0.0003** (0.0001)	-0.0003* (0.0002)	-0.0003** (0.0002)	-0.0002 (0.0002)	-0.0001 (0.0002)	-0.0001 (0.0001)
Education	0.08 (0.06)	0.11** (0.05)	0.06 (0.06)	0.03 (0.06)	0.10* (0.06)	0.12** (0.05)	0.04 (0.03)
Assets Index	0.01 (0.06)	-0.01 (0.05)	0.0003 (0.06)	-0.05 (0.06)	-0.08 (0.06)	-0.03 (0.05)	0.03 (0.04)
Constant	0.33 (0.35)	-0.80** (0.32)	-0.18 (0.37)	-0.22 (0.35)	-0.25 (0.33)	-0.32 (0.32)	0.68*** (0.20)
Community FE	✓	✓	✓	✓	✓	✓	✓
Observations	647	647	647	647	646	646	436
R <sup>2</sup>	0.13	0.13	0.12	0.12	0.14	0.15	0.09
Sample	All						Real Wristband

Robust standard errors in parentheses.

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

The dependent variable in Columns 1-6 is a standardized measure of the self-reported propensity of the respondent to take each type of expression of dissent on a five-point scale, averaged over the two time periods. The dependent variable in Column 7 is a binary measure that takes a value of 1 if the respondent chose the wristband with a political slogan on it during the experiment over an otherwise identical plain wristband. The independent variables include dummies for the two fear treatments, a dummy for being a female, the age of the respondent at the time of the experiment. Education is a five-point measure of the highest level of education completed by the participant. The assets index is the first principal component of a list of assets based on the Demographic and Health Survey's assets module from Zimbabwe. Finally, I include fixed effects for each of the constituencies where the experiment was conducted. In Columns 1-6, the treatment effects are estimated using all of the participants without missing data, while in Column 7 the sample includes every participant who was offered a choice between real (rather than hypothetical) wristbands. Models are estimated using ordinary least squares (OLS).

## A.4 The effect of fear on the perceived cost of dissent and risk attitudes

Table 10: The effect of fear on perceptions of own repression risk by risk

	<i>Dependent variable:</i>					
	Threat	Assault	Property	Abduction	Sexual	Murder
	(1)	(2)	(3)	(4)	(5)	(6)
Fear - General	0.23** (0.09)	0.21** (0.09)	0.21** (0.09)	0.19** (0.09)	0.06 (0.09)	0.16* (0.09)
Fear - Political	0.52*** (0.08)	0.50*** (0.09)	0.54*** (0.08)	0.52*** (0.09)	0.32*** (0.09)	0.55*** (0.09)
Female	-0.15* (0.08)	-0.05 (0.08)	-0.06 (0.08)	-0.002 (0.08)	-0.01 (0.08)	0.004 (0.08)
Age	0.02 (0.01)	0.03* (0.01)	0.02* (0.01)	0.01 (0.01)	0.02 (0.01)	0.0004 (0.01)
Age <sup>2</sup>	-0.0002 (0.0001)	-0.0002 (0.0002)	-0.0002 (0.0002)	-0.0001 (0.0002)	-0.0001 (0.0001)	-0.0000 (0.0002)
Education	0.003 (0.05)	-0.01 (0.06)	-0.06 (0.06)	0.01 (0.06)	-0.02 (0.06)	-0.03 (0.06)
Assets Index	0.13** (0.06)	0.15** (0.06)	0.18*** (0.06)	0.16*** (0.06)	0.16*** (0.06)	0.25*** (0.06)
Constant	-0.65** (0.33)	-0.67* (0.35)	-0.24 (0.34)	-0.32 (0.35)	-0.11 (0.34)	0.21 (0.34)
Community FE	✓	✓	✓	✓	✓	✓
Observations	645	646	646	646	646	646
R <sup>2</sup>	0.09	0.07	0.09	0.07	0.07	0.09

Robust standard errors in parentheses.

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

The dependent variable in each column is a standardized measure of the perceived likelihood of each type of repression on a five-point scale, averaged over the two time periods. The independent variables include dummies for the two fear treatments, a dummy for being a female, the age of the respondent at the time of the experiment. Education is a five-point measure of the highest level of education completed by the participant. The assets index is the first principal component of a list of assets based on the Demographic and Health Survey's assets module from Zimbabwe. Finally, I include fixed effects for each of the constituencies where the experiment was conducted. Models are estimated using ordinary least squares (OLS).

Table 11: The effect of fear on perceptions of others' actions by act

	<i>Dependent variable:</i>					
	Shirt	Joke	Rally	Reveal	Refuse	Testify
	(1)	(2)	(3)	(4)	(5)	(6)
Fear - General	-0.14* (0.08)	-0.30*** (0.08)	-0.16* (0.08)	-0.17** (0.08)	-0.22*** (0.08)	-0.30*** (0.08)
Fear - Political	-0.28*** (0.08)	-0.33*** (0.08)	-0.28*** (0.08)	-0.26*** (0.08)	-0.29*** (0.08)	-0.43*** (0.08)
Female	0.02 (0.07)	-0.07 (0.07)	-0.01 (0.07)	-0.15** (0.07)	-0.07 (0.07)	-0.08 (0.07)
Age	0.002 (0.01)	0.02 (0.01)	0.02 (0.01)	0.0002 (0.01)	0.01 (0.01)	0.02 (0.01)
Age <sup>2</sup>	-0.0001 (0.0001)	-0.0002 (0.0001)	-0.0002 (0.0001)	0.0000 (0.0001)	-0.0001 (0.0001)	-0.0002 (0.0001)
Education	0.04 (0.05)	0.05 (0.05)	0.001 (0.05)	-0.03 (0.05)	0.01 (0.05)	0.02 (0.05)
Assets Index	0.002 (0.04)	0.04 (0.04)	0.04 (0.04)	0.08* (0.04)	0.03 (0.04)	0.07 (0.04)
Constant	3.42*** (0.31)	2.40*** (0.31)	3.03*** (0.32)	3.04*** (0.30)	2.91*** (0.30)	2.32*** (0.31)
Community FE	✓	✓	✓	✓	✓	✓
Observations	649	649	648	649	649	649
R <sup>2</sup>	0.04	0.06	0.04	0.05	0.04	0.09

Robust standard errors in parentheses.

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

The dependent variable in each column is a standardized measure of the expected proportion of other opposition supporters in the respondents' area who would take six different actions to express dissent, averaged over the two time periods. The independent variables include dummies for the two fear treatments, a dummy for being a female, the age of the respondent at the time of the experiment. Education is a five-point measure of the highest level of education completed by the participant. The assets index is the first principal component of a list of assets based on the Demographic and Health Survey's assets module from Zimbabwe. Finally, I include fixed effects for each of the constituencies where the experiment was conducted. Models are estimated using ordinary least squares (OLS).

Table 12: The effect of fear on perceptions of repression risk and others' actions by period

	<i>Dependent variable:</i>			
	Repression Risk		Others' Actions	
	Now	Election	Now	Election
	(1)	(2)	(3)	(4)
Fear - General	0.17*	0.17**	-0.25***	-0.32***
	(0.09)	(0.08)	(0.10)	(0.09)
Fear - Political	0.43***	0.51***	-0.41***	-0.43***
	(0.09)	(0.07)	(0.09)	(0.08)
Female	-0.10	0.02	-0.01	-0.16**
	(0.08)	(0.07)	(0.08)	(0.07)
Age	0.01	0.02	0.02	0.01
	(0.01)	(0.01)	(0.01)	(0.02)
Age <sup>2</sup>	-0.0001	-0.0002	-0.0002	-0.0001
	(0.0002)	(0.0001)	(0.0002)	(0.0002)
Education	-0.03	-0.01	0.03	0.01
	(0.06)	(0.05)	(0.06)	(0.06)
Assets Index	0.11*	0.22***	0.02	0.07
	(0.06)	(0.05)	(0.06)	(0.06)
Constant	-0.60*	0.03	-0.03	-0.06
	(0.36)	(0.32)	(0.37)	(0.35)
Community FE	✓	✓	✓	✓
Observations	646	646	649	649
R <sup>2</sup>	0.06	0.11	0.05	0.06

Robust standard errors in parentheses.

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

The dependent variable in Columns 1-2 is a standardized measure of an index measuring perceived likelihood of six type of repression on a five-point scale. In Columns 3-4 it is a standardized measure of an index measuring the perceived proportion of other opposition supporters who would turn take each of six different actions on a five-point scale. In Columns 1 and 3, the dependent variable index is based on perceptions of what would happen in this period (a non-election period), while in Columns 2 and 4 the index is made up of perceptions of what would happen around the next election. The independent variables include dummies for the two fear treatments, a dummy for being a female, the age of the respondent at the time of the experiment. Education is a five-point measure of the highest level of education completed by the participant. The assets index is the first principal component of a list of assets based on the Demographic and Health Survey's assets module from Zimbabwe. Finally, I include fixed effects for each of the constituencies where the experiment was conducted. Models are estimated using ordinary least squares (OLS).

Table 13: The effect of fear on risk attitudes

	<i>Dependent variable:</i>					
	Risk Acceptance		Uncertainty Acceptance		Loss Acceptance	
	(1)	(2)	(3)	(4)	(5)	(6)
Fear Treatment - General	-0.34*** (0.11)	-0.34*** (0.11)	-0.09 (0.12)	-0.09 (0.12)	0.15 (0.16)	0.15 (0.16)
Fear Treatment - Political	-0.45*** (0.11)	-0.44*** (0.11)	0.04 (0.12)	0.04 (0.12)	0.19 (0.16)	0.18 (0.16)
Female	-0.09 (0.09)	-0.09 (0.10)	0.12 (0.10)	0.10 (0.10)	0.35** (0.14)	0.35** (0.14)
Age		0.02 (0.02)		-0.02 (0.02)		0.004 (0.03)
Age <sup>2</sup>		-0.0002 (0.0002)		0.0002 (0.0002)		-0.0000 (0.0003)
Education		-0.04 (0.07)		-0.03 (0.07)		0.07 (0.10)
Assets Index		0.13** (0.06)		-0.06 (0.07)		-0.14 (0.09)
Constant	3.13*** (0.21)	2.52*** (0.45)	0.03 (0.23)	0.47 (0.48)	-0.10 (0.31)	-0.12 (0.66)
Community FE	✓	✓	✓	✓	✓	✓
Observations	669	666	669	666	669	666
R <sup>2</sup>	0.05	0.07	0.01	0.02	0.02	0.02

Standard errors in parentheses.

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

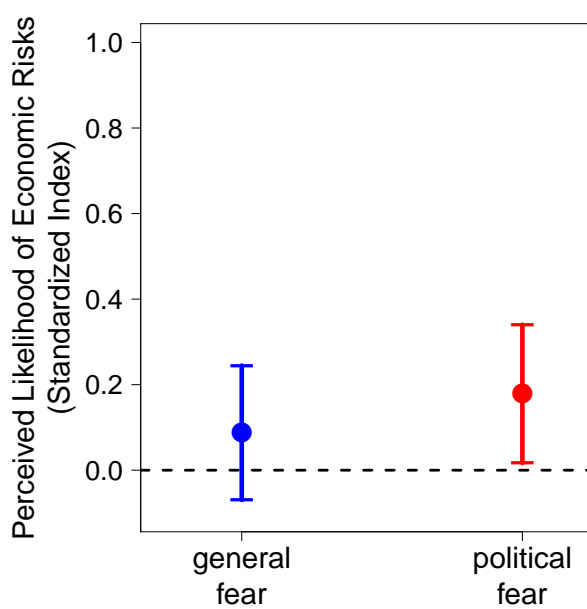
The dependent variable in Columns 1-2 is a standardized measure of the spread of the lottery that the participant chose to play in a draw with 50-50 chances of winning. In Columns 3-4, it is the difference between the participants' choice of lottery in the standard draw and her choice in the draw in which 60% of the balls were of an unknown color. In Columns 5-6, the outcome is the difference between the participants' choice in the standard draw and on a draw where the choices were framed as losses rather than gains. The independent variables include dummies for the two fear treatments, a dummy for being a female, the age of the respondent at the time of the experiment. Education is a five-point measure of the highest level of education completed by the participant. The assets index is the first principal component of a list of assets based on the Demographic and Health Survey's assets module from Zimbabwe. Finally, I include fixed effects for each of the constituencies where the experiment was conducted. Models are estimated using ordinary least squares (OLS).



## A.5 The effect of fear on pessimism in economic domains

Next, I test the prediction that fear, including fear of repression, should create pessimism that spills over into perceptions of economic domains. I have already shown that fear causes increases in risk aversion on a series of monetary lotteries, which has consequences for economic risk taking. To test whether fear also affects pessimism in economic domains, I measured a series of six perceived economic risks over two time periods and created an index of economic pessimism.<sup>12</sup> Figure 10 presents the average treatment effects calculated by treatment arm with 95% confidence intervals.

Figure 10: Fear and perceptions of economic risks



In the case of economic risks, participants in both the general and political fear treatment arms are more pessimistic than the control participants. Only the difference between participants experiencing fear in a political context, however, is statistically significant ( $p = 0.03$ ). These results, coupled with the results showing that fear increases risk aversion on lotteries presented in Section ??, show that fear of repression affects beliefs and preferences in economic domains that could lead to under-investment and lower economic outcomes.

<sup>12</sup>The measures included in the economic pessimism index include the risk that a business would not make a profit (measured as the probability of making profits and then inverted), the risk of job loss, the risk of losing or breaking an asset, the risk of your economic situation in general getting worse, and the risk that a family breadwinner would have to stop working. For all six of these economic risks, I measured the perceived likelihood that it would happen in the next six months and in the next two years.

## A.6 Results from the first experiment

The first experimental test of some of the propositions tested here was carried out in May 2015 with a similar participant population. While most of the experimental design was the same, there were several aspects that differed. First, we induced three different emotions: anger, fear, and a relaxed control. Second, all participants were asked about past exposure to political violence before they responded to the modules measuring outcomes. Third, rather than using different instructions for the political and apolitical versions of the emotion inductions, we used an encouragement design that increased the proportion of participants who reflected on political anger and fear by randomizing the order of two pre-treatment modules of questions. Specifically, some people were asked to reflect on what makes them angry or afraid immediately after answering a module of questions on past political violence, while for others that module came earlier in the study. Fourth, in the emotion inductions, in addition to describing something that makes them angry, afraid or relaxed, participants looked at a photograph of a person expressing that emotion.

These aspects of the design were changed in the second round for various reasons. The anger treatment was dropped in order to increase power for the fear treatment. The questions about past political violence were moved to the end of the survey because of worries that they were priming everyone to think about traumatic negative events and therefore reducing the effect sizes. The encouragement into thinking about politics was dropped in favor of directly asking some people to think about politics and giving examples of situations involving political violence.

Table 14 also shows that fear is associated with decreases in the propensity to act, but these effects are not significant. This may be because respondents did not seriously consider the hypothetical actions, or because the increases in risk perceptions did not lead them to change their propensity to act. To test whether this might be a measurement issue, I will take a several steps. First, because it is possible that the effect of the primes had simply worn off during the questions about political risks, I will randomly assign the order of the risk assessments and political action measures. Second, because it is possible that participants don't take the hypothetical questions seriously, I will add a real, though low-risk, political action. Although my hypotheses predict that fear should decrease political action, I have no previous estimates of this relationship to give me strong priors about what the effect size might be.

Table 14: Effect of fear and anger stimuli on perceived probability of punishment and propensity to act

	<i>Dependent variable:</i>					
	Prob(Pun)			Prob(Act)		
	(1)	(2)	(3)	(4)	(5)	(6)
Fear	0.27** (0.11)	0.25** (0.11)	0.27* (0.15)	-0.04 (0.12)	-0.05 (0.12)	-0.07 (0.16)
Anger	0.16 (0.11)	0.15 (0.11)	0.15 (0.15)	-0.06 (0.12)	-0.07 (0.12)	-0.09 (0.16)
Political (Z)			0.03 (0.15)			0.03 (0.17)
Fear × Political (Z)			-0.04 (0.22)			0.05 (0.24)
Anger × Political (Z)			-0.02 (0.22)			0.03 (0.24)
Female	-0.08 (0.09)	-0.08 (0.09)	-0.08 (0.09)	-0.49*** (0.10)	-0.47*** (0.10)	-0.47*** (0.10)
Age		0.03 (0.02)	0.03 (0.02)		0.04* (0.02)	0.04* (0.02)
Age <sup>2</sup>		-0.0003 (0.0003)	-0.0003 (0.0003)		-0.0005* (0.0003)	-0.0005* (0.0003)
Education		0.08** (0.04)	0.08** (0.04)		-0.13*** (0.04)	-0.13*** (0.04)
Assets		0.05 (0.05)	0.05 (0.05)		-0.04 (0.05)	-0.04 (0.05)
Intercept	2.10*** (0.15)	1.13** (0.49)	1.12** (0.49)	3.28*** (0.17)	3.03*** (0.52)	3.03*** (0.53)
Community FE	✓	✓	✓	✓	✓	✓
Observations	473	473	473	473	473	473
R <sup>2</sup>	0.25	0.26	0.26	0.17	0.19	0.19
Specification	OLS	OLS	OLS	OLS	OLS	OLS

Standard errors in parentheses.

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

## B Additional results: Self-efficacy and dissent

### B.1 Determinants of self-efficacy

Table 15: Determinants of self-efficacy

	<i>Dependent variable:</i>	
	Self-Efficacy Index	
	(1)	(2)
Female	0.170** (0.078)	0.112 (0.078)
Age	0.034** (0.015)	0.034** (0.015)
Age <sup>2</sup>	-0.0004** (0.0002)	-0.0004** (0.0002)
Education	0.145** (0.067)	0.173** (0.068)
Urban Assets	-0.193*** (0.052)	-0.064 (0.067)
Rural Assets	0.135*** (0.050)	0.003 (0.061)
Constant	-1.026*** (0.332)	-1.382*** (0.369)
Community FE		✓
Observations	663	663
R <sup>2</sup>	0.078	0.113

Standard errors in parentheses.  
\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

## C Text of survey measures used

Table 16: Reflection Treatments

Control	Assignment	
	General	Political
<i>N</i> = 350	<i>N</i> = 175	<i>N</i> = 175
1. What are the three to five activities that you like to do to relax? Please tell me two to three sentences about each thing that you like. (Examples of things you might talk about include: playing with your children, resting, taking tea, talking to friends.)	1. What are the three to five things that make you most afraid? Please tell me in two-three sentences about each thing that makes you afraid. (Examples of things you might talk about include: being alone on a dark street, being in a traffic accident, dangerous animals like snakes or lions, etc.)	1. What are the three to five things that make you most afraid about politics and elections? Please tell me in two-three sentences about each thing that makes you afraid. (Examples of things you might talk about include: getting beaten up, being abducted, losing your home, etc.)
2. Now we'd like you to describe in more detail the (another) way you typically like to relax. Begin by giving a description of your favorite relaxing activities. Examples of things you might describe include going to church, spending time with certain friends, watching football, eating a meal with your family, etc. What is it like to be in this situation? Why is it so relaxing? <b>X2</b>	2. Now we'd like you to describe in more detail the one (another) situation that makes you most afraid. This could be something you are presently experiencing or something from the past. Please tell me as if you're trying to make me afraid as well. What is it like to be in this situation? Why is it so scary? <b>X2</b>	2. Now we'd like you to describe in more detail the one (another) situation around elections and politics that makes you most afraid around politics and elections. This could be something you are presently experiencing or something from the past. Please tell me as if you're trying to make me afraid as well. What is it like to be in this situation? Why is it so scary? <b>X2</b>

Enumerators were given a list of probes to use to follow up on the response, including “What makes you feel most relaxed / afraid?”, “Why does it make you feel so relaxed / afraid?”, and “What does it feel like to be relaxed / afraid?”

## **D Comparison of sample to nationally representative data**

One concern with the experimental results presented in Section ?? is that they were run on a non-random sample of Zimbabwean opposition supporters. While this is quite standard for a lab experiment, it raises questions about the generalizability of the results to other populations. In particular, given the very high levels of past exposure to political violence observed in my sample, we may be worried that if other Zimbabweans are less exposed to political violence and past exposure moderates the effects, then the effects observed in this sample may overstate the effect size in the population. In this section, I compare the experiment participants to the pool of respondents on two nationally representative samples of Zimbabweans. I find that the demographic breakdown as well as the past exposure to political violence observed in my sample is quite similar to that observed in nationally representative samples in Zimbabwe. The only measures where I find substantively large differences between the nationally representative sample and my participant pool are measures of subjective poverty.

For a demographic comparison, I use the most recent round of the Afrobarometer survey for which the data is publicly available. I exclude people from the comparison group who reveal that they support the regime on the survey because this was an eligibility criteria for my study. On demographic measures, the experimental sample is quite similar to the opposition supporters surveyed in the fifth round of the Afrobarometer survey in 2011. The median age in my sample is 35, while the Afrobarometer opposition supporters' median age is 34. The median level of education in both samples is a high school degree, with means of 1.72 in my sample and 1.55 in the Afrobarometer.<sup>13</sup> My sample is 52% female, while the Afrobarometer opposition supporters are 51% female. However, my sample seems to be poorer than the Afrobarometer opposition supporters. In my sample, the median respondent reports that they “often” go without enough food and without a cash income, while the median Afrobarometer opposition supporter reports that she “rarely” goes without enough food and “sometimes” goes without a cash income. The mean values of these variables in my sample are 3.59 and 4.12 for food and a cash income on a five-point frequency scale, while in the Afrobarometer they are 2.13 and 3.15. This is not a function of the constituencies that we selected, which are quite similar to the national averages in the Afrobarometer on the subjective poverty measures. It is possibly because the potential to win up to \$1.10 in the lottery was more attractive to the poorest residents, whereas the Afrobarometer did not offer any incentivized games.

Finally, I turn to another dataset to assess whether my sample is similar to the national average in terms of its past exposure to state repression. Past exposure to repression is not covered in the Afrobarometer surveys, but it was included in a 1,200 person, nationally representative survey

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<sup>13</sup>0=no formal education, 1=finished primary school, 2=finished high school, 3=finished vocational school or university, and 4=post-graduate studies.

conducted by the Mass Public Opinion Institute (MPOI) in 2009. In the MPOI 2009 survey, respondents were asked: “Thinking of the period since independence in 1980, please tell me if you personally/members of your family were ever affected in any of the following ways. Important: please refer only to events that were politically motivated.” In the experiment survey, respondents were asked: “I’m going to read you a list of things that many people consider political violence. For each of these things, please tell me whether you have personally experienced it and whether you have heard about it happening here since the year 2000” and enumerators clarified (1) that “experience” referred to something that happened to you or to a member of your household, and (2) that respondents should report things that they consider to be political violence.

A few things must be kept in mind while comparing the observed victimization in the two populations. First, because I do not have access to the raw data from this survey, I am restricted to reporting the published numbers based on an analysis done by [Bratton \(2011\)](#). As a result, I only know the observed victimization for the full sample, rather than the subset of non-supporters of the regime. However, this concern is mitigated by the fact that only 11% of that sample, taken shortly after the peak of support for the opposition, reveals that they support ZANU-PF, which means that excluding this group would have limited effects on the results. Second, the questions in the MPOI 2009 survey and on my survey measuring past exposure to repression ask about different specific items. Again, this is not a major concern because all of the items can be linked to one or more questions in the other survey. Third, the two surveys ask about different time periods: the MPOI 2009 survey asks respondents to report repression that has occurred between 1980 and 2009, while my survey asks about repression exposure between 2000 and 2015. This is unlikely to lead to large differences both because the two measures both include the period from 2000-2008 when most state repression occurred, and because recall bias and age would likely lead respondents to under-report violence between 1980 and 2000, when the median respondent was a child or adolescent. Fourth, while MPOI asks separately about the respondent’s personal experience and the experiences of their family members, my survey asks about the experiences of the respondent and his family together. This means that the measures are not directly comparable because calculating the proportion of the MPOI sample that either personally experienced violence or had a member of her family experience it requires that we know how many respondents both personally experienced violence and had a family member experience it. Finally, the MPOI survey stressed that reported experiences should be “politically motivated,” while my survey only mentioned “political violence.” However, given that “political violence” is frequently discussed in Zimbabwe as politically motivated abuse, it is unlikely that this changes the measure in important ways.

Table 17 presents a comparison of the incidence of different types of political violence in the MPOI sample and in my experiment participant pool. Because this measure was asked post-treatment to avoid inducing negative emotions in the control group, I present the results only for the

control group that did not go through a fear induction.

Table 17: Comparison of past exposure to political violence in the experiment participant pool and a nationally representative sample

Experiment Control Group		Bratton (2011)		
	Self/Family		Self	Family
Verbal abuse or threats	83%	Intimidation, threat or harassment	51%	54%
Withholding of benefits (food, goods, etc)	67%	Denial of food or starvation	24%	26%
		The closure of a business	10%	14%
		The loss of a job	9%	14%
Torture	43%	Personal injury (including physical assault, sexual assault, or torture)	17%	31%
Physical harm (beating, assault, etc)	40%			
Sexual abuse or rape	2%			
Destruction of property	41%	Theft of (or damage to) your personal property	16%	25%
		Forced removal from your home or confiscation of land	13%	23%
Kidnapping or abduction	21%	Arrest, kidnap or abduction	9%	19%
Arbitrary detention or arrest	19%			
Murder	0%	Death	-	13%
		Witnessing someone else being injured or killed	38%	34%

Despite the differences across these measures, they present broadly similar pictures of the overall level and distribution of victimization in Zimbabwe. Whereas in my sample 83% of the respondents or their family members have experienced verbal abuse, 51% of respondents have experienced verbal abuse and 54% report a family member who has experienced it in the MPOI sample. Indeed, on some measures my sample appears to have much lower exposure to violence: 13% of the MPOI sample report that a family member has been killed, while no one in my sample reports that they have experienced murder.

Overall, this analysis suggests that my participants, who have been exposed to extremely high levels of political violence in the past, are not far from the average exposure in Zimbabwe. Assuming that groups tracking political violence in Zimbabwe are correct that the vast majority of politically-motivated violence is perpetrated by the ruling party, the MPOI survey underscores the widespread use of repression. It also suggests that we have little reason to believe that the effects of the treatment observed with this non-random participant population are unlikely to generalize to the rest of the population of Zimbabwe because the participants are quite similar on key measures to representative samples taken around the same time.