Religious Cycles of Government Responsiveness: Why Governments Distribute in Ramadan

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Abstract

In many Muslim societies, autocrats expand their distributive policies in the religious season of Ramadan. *Why do autocrats distribute in Ramadan? And, who do they target?* Focusing on Egypt (2014-2020), this paper argues that the regime distributes in Ramadan to contain political threats to its survival by co-opting areas where such threats are more credible. This strategy addresses rising political pressures during the season while signaling the regime's competency and goodness by capitalizing on the month's religious norms. I test this argument using an original municipality-level dataset of government-reported provision of economic benefits. The findings show that the government reports more economic distribution in places where political threats are higher: more socioeconomically developed, more contentious, and more affected by unpopular austerity measures. Using survey data, I also find that distribution in Ramadan translates into reputational gains for the regime, particularly among its critics. The conclusions suggest that autocrats might adopt multiple targeting strategies to respond to different threats to their survival, sometimes rewarding threatening groups to buy their acquiescence.

*I would like to thank John Huber, Daniel Corstange, John Marshall, Kimuli Kasara, Steven Brooke, Marc Lynch, Lisa Anderson, and Timur Kuran for their valuable comments. The paper also benefited from presentations at Columbia Graduate Student Seminar, POMEPS workshop, AALIMS Graduate Student Conference, MPSA 2021, and SPSA 2021.

When do autocrats respond to citizens' economic concerns and expand their distributive policies? And, how does the religious context shape their incentives for distribution? Electoral pressures (Gonzalez, 2002, Pepinsky, 2007, Blaydes, 2010) and collective action threats (Klomp and de Haan, 2013*b*, Cleary, 2007) determine the timing of government distribution and its responsiveness to public demands, even in non-democracies. Meanwhile, the religious environment might help governments in religious societies avoid their economic responsibilities. Political elites could exploit religious loyalties to evade accountability (Corstrange, 2016, Kalin and Siddiqui, 2016, Wilkinson, 2006). Parties might divert voters away from their economic demands by focusing on religiously salient social issues (De La O and Rodden, 2008). And, governments in religious societies could limit their support to economically vulnerable groups to rely on religious charities as substitutes (Scheve and Stasavage, 2006, Chaudhary and Rubin, 2016).

This paper adopts a different view of the religious environment as a time-variant structural factor that shapes the timing of government responsiveness to economic demands and its returns from economic distribution, in interaction with existing political threats to the autocrat. This perspective is motivated by an empirical observation. In Muslim majority (predominantly authoritarian) countries, governments time their distributive policies strategically to signal their support to economically vulnerable groups around the religious season of Ramadan, the ninth month of the Islamic calendar, known as *the month of charity*. I document this pattern in 23 Muslim majority countries. This observation questions the predominant focus on electoral cycles as an explanation for the timing of distributive policies in authoritarian regimes, where electoral pressures -if present- might not be the only or primary threat to the autocrat. It also proposes that government distribution and responsiveness might be governed by multiple calendars, raising further questions on the profile of beneficiaries at different times.

My argument is that governments distribute in Ramadan to build political support and insure against short-term political threats by co-opting more disenchanted and threatening constituencies. Ramadan introduces structural changes into the religious environment that heighten the religious salience of distributive issues, link distributive actions to charitable norms, and increase the potential political costs of non-responsiveness to citizens' economic insecurity. By timing distributive policies

in the religious season, the incumbent could capitalize on these changes to signal its competency and religiosity and contain short-term political threats rising during the season. Since the reputational and political returns of these distributive interventions would be higher where political threats are more credible, distribution in Ramadan would target constituencies posing the highest threat to *buy their acquiescence*.

To evaluate this argument, this paper presents an in-depth study of Egypt between 2014 and 2020. Egypt is the sixth most populous Muslim country and the most populous in the Arab World. It is a context where government responsiveness to Ramadan's charitable message is strongly pronounced, despite the country's autocratic politics and the regime's anti-Islamist stance. The regime expands its provision of in-kind transfers and subsidies during the season, but with considerable variation across subnational units. This renders it a convenient case to understand the logic behind the distributive politics of Ramadan.

Testing my theoretical claims is a data-demanding task because it requires high-frequency reports of the regime's distributive actions at the subnational level. I address this by developing an original dataset of publicly reported daily distributive campaigns in Egyptian municipalities. Distributive campaigns are short campaigns, lasting for one or few days, that provide free or heavily subsidized products. Their deployment has been an important and highly visible strategy to respond to citizens' economic concerns. Due to their flexibility, they provide a good measure of short-term fluctuations in government distribution. To construct this dataset, I web-scraped daily reports by Egyptian municipalities and governorates on the operations of these campaigns from their official Facebook pages over the period of the study.

The findings confirm that government-reported distributive campaigns peak significantly in Ramadan's season: defined as Ramadan and the month preceding it. They also increase significantly before elections, being an instrument for electoral mobilization. Spatially, economic distribution is higher in Ramadan's season in places where socioeconomic development and anti-regime collective action are higher. These are areas, I argue, where threats to the regime are the highest due to their propensity for contention. Interestingly, distributive campaigns are allocated differently before elections: weakly governed by socioeconomic conditions, but biased against more

contentious constituents. Various tests confirm the robustness of these findings.

To corroborate the causal link between political threats and distribution in Ramadan, I leverage spatial and temporal variation in exposure to government-orchestrated price shocks -triggered by the lifting of energy subsidies- to identify the effect of unpopular economic austerity policies (a potential source of political unrest and public discontent) on the level of distribution in Ramadan. I find that distribution in Ramadan is higher in places most affected by the regime's unpopular economic policies. This confirms that distribution in Ramadan tries to appease more discontent groups to lessen the regime's concerns over its popularity.

The empirical analysis then shifts to pinpoint the causal mechanisms linking Ramadan to the regime's distributive decisions. I first report evidence showing that distribution in Ramadan reflects the regime's capitalization on the season's norms to signal its goodness (morality and religiosity), particularly to groups most concerned about their government's religiosity. Using a dictionary-based approach to analyze the framing of government announcements of its distributive efforts, I find that "moral and religious" frames are more likely to be used in Ramadan, particularly in communication with more contentious areas. Additionally, distributive campaigns are more likely to target places with stronger preferences for religious governments and where religious mobilization is most likely.

When tracing the implications of Ramadan's campaigns on voters' perceptions of the regime using survey data, I find that they are associated with better views of the regime's institutions as trustworthy and uncorrupt, especially among its critics and supporters of religious governments. The evidence also shows that voters do not perceive Ramadan's campaigns as a politically motivated strategy similar to vote-buying, which might contribute to Ramadan's campaigns' relationship with improved perceptions of the regime. This suggests that government distribution in Ramadan has significant political returns that might contain critics' dissatisfaction and justify its spatial allocation.

This paper makes several contributions. First, it draws attention to the importance of distribution in non-electoral times and its function in autocratic survival. Studies of distributive politics in semi-democratic and authoritarian regimes have mainly

focused on electorally motivated distribution and confined the debate on targeting between core and swing voters. In autocracies, the incumbent's supporters are the most likely winners from distribution in electoral seasons (Blaydes, 2010, Magaloni, 2006), rendering distribution as another coercive apparatus in such contexts (Albertus, Fenner and Slater, 2018). And while scholars argue that autocrats might use distribution to co-opt threatening groups, this discussion has primarily focused on rewarding political elites (Svolik, 2012, Mesquita et al., 2004). Integrating these two perspectives while maintaining our focus on distribution towards voters (the masses rather than elites) reveals the complex nature of distribution in autocracies.

Autocrats might target different constituencies (supporters versus opposition) at different times: deciding on *who gets what and when*. Vote-buying discriminates against the opposition to maximize supporters' votes, but acquiescence-buying rewards threatening groups to co-opt them. Since time determines which of these goals is to be sought, the profile of beneficiaries from distribution would change over time. This adds another dimension to the study of mixed targeting strategies. Stokes et al. (2013) argue that different preferences within parties can lead to distribution to both core and swing voters. Kramon and Posner (2013) show that African governments allocate private and public goods to different constituencies. In Egypt, the multiplicity of targeting strategies manifests itself over time driven by the political circumstances arising in different seasons: electoral and religious. This calls for taking time more seriously in analyzing distributive policies. Focusing on total distribution and overlooking its temporal allocation might lead to an incomplete understanding of economic distribution as a strategy for political survival because there could be complementarity in targeting strategies across different times.

Second, our findings pose informal institutions (religious norms) and non-institutional threats (collective action pressures) as alternative pathways that could regulate economic policy-making in autocratic settings.[1] The vast literature on political business cycles documents an association between electoral and economic policy cycles (Nordhaus, 1975, Rogoff, 1990, Dubois, 2016, Brender and Drazen, 2007, Klomp and de Haan, 2013*a*, Block, 2002), even outside democracies (Gonzalez, 2002, Pepinsky, 2007, Blaydes, 2010). However, formal political institutions might not constitute

[1] According to North (1990), informal institutions include religion and moral behavioral norms.

the most serious threat in authoritarian contexts. As the events of the Arab Spring demonstrate, mass collective action facilitated by religious norms and institutions could be detrimental to autocrats (Ketchley and Barrie, 2019). The pattern of distribution in Ramadan and its responsiveness to potential threats of mobilization indicate that economic policy-making might follow multiple calendars in response to different political threats, creating multiple policy cycles.

This also outlines alternative mechanisms to explain policy responsiveness in authoritarian contexts. Soroka and Wlezien (2005) describe government responsiveness as follows: "where the public notices and responds to policy in a particular domain, policymakers would notice and respond to public preferences themselves" (p.668). Formal political institutions such as elections (Miller, 2015) and parliaments (Truex, 2016) could generate policies responsive to public demands in some authoritarian contexts. However, for many autocracies, such formal institutions are less concerned with the representation of citizens' preferences (Gandhi and Przeworski, 2006, Gandhi and Lust-Okar, 2009). In Muslim societies where democratic mechanisms malfunction, Ramadan fosters policy responsiveness by activating the function of informal rules and non-institutional political threats. Thus, informal institutions, under certain conditions, might increase the alignment between citizens' demands and policy-making in autocracies and compensate -at least partially- for the failures of formal institutions to keep autocrats in check. Similarly, non-institutional threats might be a more effective mechanism for citizens to extract benefits from autocrats.[2]

Third, this study brings a different perspective on the relationship between religion and distributive politics. Evidence from predominantly Christian democracies shows that government redistribution is lower in more religious societies (Scheve and Stasavage, 2006, Huber and Stanig, 2011, De La O and Rodden, 2008). This is partly because citizens substitute governmental for religious redistribution, which disincentivizes the government to redistribute. My findings show that government distribution is higher in Ramadan, *despite higher religious redistribution.* This does not mean that Muslim governments redistribute more, but that they do so when religious substitutes are particularly abundant. Therefore, religious distribution might

[2]In a relevant contribution, Cleary (2007) shows that non-electoral participation is a better predictor of government responsiveness than electoral competition in Mexico, casting doubts on the perception of elections as a cure-all for governance.

not necessarily reduce government distribution. Pressures on the government to abide by the religious norms of its subjects can turn religious and governmental channels of distribution into complements rather than substitutes.

Finally, most of the existing work on service delivery in the Muslim World focuses on the role of Islamism, rather than Islam itself. The former is a political movement with religious bases and only followed by a subset of Muslims. The latter binds all Muslims together with a similar set of norms, rituals, and beliefs. And, while the role of political Islam in service delivery is established in the literature (e.g. Masoud, 2014, Wickham, 2003, Hamzeh, 2001), little we know about how Islam affects service delivery by non-Islamist governments. The evidence presented here shows that salient Islamic norms create incentives for non-Islamist political actors to enhance their service delivery and tie their economic policy-making to the religious environment. Hence, anti-Islamist governments might copy Islamists' strategies to contest the "Islamist advantage" of their opponents. This is because, in religious Muslim societies, political actors can gain by appearing "more Muslim", which deepens the influence of Islam on policy-making and breaks the monopoly of its use by Islamists.

This paper is organized as follows. I first discuss the empirical motivation of the paper. In Section 2, I present the main argument. Then, I explain the data collection process and present the main empirical analysis in Section 3. This is followed by various tests of the causal mechanisms implied in the argument in Section 4.

1 Government Responsiveness in Ramadan

Across the Muslim World, incumbents demonstrate high levels of attentiveness to citizens' welfare concerns as the Islamic season of Ramadan approaches. High-profile officials issue statements and visit domestic markets to assure citizens of their seriousness in supporting low-income groups. Governments expend more effort in providing targeted benefits and controlling the prices of basic commodities. Table 1 summarizes the main policy measures and governments' actions in Ramadan based on media reports from Muslim majority countries in the period 2015-2019.[3]

[3]These data were collected from local and international news outlets covering each Muslim majority country. To distinguish actions that are Ramadan-specific versus routine measures, I only include government actions that were explicitly linked to Ramadan in the source. A full list

Policy/Action	Country
Cash or In-Kind Transfers	Algeria, Egypt, Morocco, Tunisia, Mauritania, Jordan, Saudi Arabia, Bahrain, Oman, Iraq, Sudan, Indonesia, Iran, Malaysia, Nigeria, Turkey
Supply of Subsidized Goods	Egypt, Mauritania, Jordan, Sudan, Pakistan, Indonesia, Iran, Niger
Tax Cuts on Basic Commodities	Chad, Mali
Monitoring Markets and Price Controls	Morocco, Egypt, Tunisia, Algeria, Jordan, Indonesia, Iran, Malaysia, Bangladesh, Mali, Senegal
High Profile Field Visit	Morocco, Egypt, Tunisia, Sudan, Indonesia, Malaysia, Tajikistan
High Profile Announcement	Morocco, Algeria, Tunisia, Jordan, Saudi Arabia, Bahrain, Sudan, Pakistan, Iran, Senegal, Egypt

Table 1 – Government Responsiveness Around Ramadan

This observation questions some arguments in the existing literature. Most of these countries are non-democratic or semi-democratic, where we should expect governments to be weakly incentivized to respond to citizens' economic concerns. And even if there were to be a temporal pattern for economic responsiveness and distribution, we would expect it to be in electoral seasons in line with the prevalent focus on electoral policy cycles and clientelism in the literature on distribution in autocracies (e.g. Pepinsky, 2007, Blaydes, 2010). Yet, we observe a different source of systematic economic policy-making emerging from the religious environment. More interestingly, these seasonal changes in distributive policies occur in a highly religious environment at a time where religious mechanisms for distribution are the most active. This questions the argument that religious distribution reduces incentives for government distribution (Scheve and Stasavage, 2006, Chaudhary and Rubin, 2016). In Muslim societies, Ramadan is a time where distribution via religious mechanisms is the highest, but government distribution also rises in parallel.

Egypt is one case where government responsiveness to citizens' welfare concerns in Ramadan is strongly evident, although the specifics of Egypt's politics during the

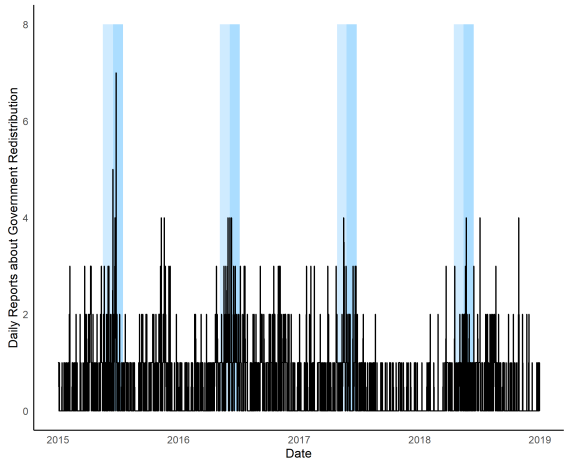
of sources is available upon request.

period of the study (2014-2020) should lead us to predict the opposite. Between 2014 and 2020, Egypt functioned as an autocracy with no serious electoral challengers. The incumbent president, al-Sisi, won two successive elections with 97 percent of the votes. The regime adopted an anti-Islamist stance and shut down charities employed by the Islamist opposition for service provision in Ramadan to prevent its opponents from exploiting the charity sector to recruit and mobilize supporters. Nevertheless, charities unaffiliated with Islamists are allowed to operate freely, which alleviates some of the distributive pressures on the state without significant political risks. Despite that, the regime still maintains a significant commitment to distribution in Ramadan. In anticipation of the season, it expands its announcements of programs to support low-income groups in alignment with the charitable norms of the month.

To provide a systematic overview of this, I examine daily media reports about government economic distribution in the four-year period between 2015 and 2018 published in the main state-run newspaper, *al-Ahram*. Reports by the state newspaper are not only telling about the extent of these distributive efforts but also demonstrate the regime's interest in publicizing these policies. I define distributive reports as those covering governmental: expansion of subsidies on basic goods and services, in-kind transfers, cash transfers, and increases in social insurance benefits and salaries. Figure 1 plots the number of daily reports over time. The plot reveals a systematic rise in media reports about government distribution around Ramadan with the religious season consistently coinciding with spikes in reporting.[4]

[4]Obviously, Ramadan is not the only time when these reports increase. Media discussions of these topics could also surge in electoral seasons and in reaction to macroeconomic changes. Yet, Ramadan remains a consistent -and statistically significant- predictor of distributive reports.

Figure 1: Daily Egyptian Media Reports on Government Distribution (2015-2018)



Note: The blue shade refers to Ramadan. The lighter shade refers to the month before Ramadan.

Attempts to understand the rationale behind these measures cross-nationally are hampered by the diversity of the policy instruments used in various contexts and the lack of systematic data across countries and over time. Therefore, this paper focuses on Egypt in the period between 2014 and 2020 to explain the rationale behind Ramadan's distributive policies. It asks: *Is there a systematic expansion of distributive policies during Ramadan's season?. If so, what is the political rationale behind Ramadan's distributive policies? And, who benefits from them?*

2 The Argument

I argue that government distribution in Ramadan aims at cultivating support and containing short-term political threats *by co-opting constituencies where support for the regime is low and political threats are high.* Distribution in Ramadan signals two qualities about the regime: capacity and goodness. The former is related to its performance. The latter is linked to its moral qualities: religiosity, generosity, and trustworthiness. Ramadan makes this dual-signaling feasible and politically desirable by raising the salience of distributive issues, associating distribution with charitable norms, and boosting the political risks associated with non-responsiveness to economic demands. Hence, by strategically timing its delivery of economic benefits in Ramadan, the regime can capitalize on these seasonal structural changes in the religious environment to increase the visibility of its distributive interventions, frame

them as sincere, religious, and depoliticized actions, and insure against short-term reputational and collective action threats. Given that, the regime is more likely to distribute in Ramadan to *buy the acquiescence* of constituencies where these threats are more credible.

2.1 The Nature of Distribution in Ramadan

Ramadan introduces structural changes to the religious environment that redefine the salience, meaning, and political returns of distributive policies. These alterations incentivize the incumbent to increase economic provision to signal its capacity and goodness, as well as, contain political threats arising during the season.

First, Ramadan increases the salience of distributive issues. While religious calls for social solidarity are not confined to Ramadan or Islam, the degree to which they are emphasized is stronger in the month of charity. The religious norms and rituals of the month encourage empathy with the poor. As Muslims fast from dawn to sunset, they are primed to think about the struggles of the poor and the hungry. Muslims are also obliged to pay alms, *zakat al-fitr*, and encouraged to increase charitable giving, *sadaqa*, during the month. Hence, charity organizations and religious institutions expand their charity campaigns in Ramadan to highlight social inequalities and encourage donors to contribute to their projects.

Wlezien (2005) defines salience as the "importance" of an issue; how much individuals care about it and view it as a problem. Ramadan ties distributive issues to personal religious obligations and salvation which adds to the weight of these problems in Muslims' life. Alternatively, salience could refer to the "prominence" of an issue: how much attention it receives in voters' minds and media. Besides the priming role of rituals, charity campaigns increasing awareness of existing social disparities in sermons, public spaces, and mass media are very prolific in Ramadan. In this religious environment, Muslims are bombarded with reminders, information, and religious calls related to economic deprivation and social inequalities which raises the salience of these issues. Subsequently, citizens might weigh government responses to these issues more in Ramadan.

For the regime, salience is a double-edged weapon. On one hand, the rising salience

of a certain issue could reveal failures in service provision. On the other hand, salience brings more visibility and public attentiveness to government interventions and facilitates performance-signaling (Besley and Burgess, 2002). This generates incentives for the regime to signal its capacity and responsiveness and capitalize on this seasonal salience to make reputational gains by distributing more in Ramadan.

Second, Ramadan's norms determine what actions are socially and religiously desirable. Scholars of religion argue that religious rituals and norms allow followers to identify good and bad religious types. Members' abidance by religious norms and costly rituals signals their commitment to the religious community and its doctrine (Stark and Finke, 2000, Iannaccone, 1992, Hall et al., 2015, Sosis and Bressler, 2003). Meanwhile, those who ignore salient religious norms would be perceived as a "bad" religious type and suffer reputational costs. In Ramadan, charitable giving could act as a screening device that enables members to test the religiosity and morality of their fellow Muslims.

In a religious society, political actors -similar to individuals- might be evaluated on their abidance by religious norms and their moral qualities. This rationale is posed by various scholars to explain the "Islamist" political advantage in Muslim societies. Cammett and Luong (2014) claim that the Islamist political advantage lies in Islamists' reputation as honest, competent, pure, and trustworthy. In the case of the Muslim Brotherhood in Egypt, Brooke (2019) argues this reputation was made possible by their success in depoliticizing service-provision, associating it with charity, and demonstrating their availability on regular basis - not only in electoral times. This strategy projected them as compassionate and honest political actors, even amongst their opponents. Along the same lines, Vannetzel (2016) highlights that the Muslim Brotherhood framed their service provision as a religious and charitable act to distinguish it from clientelism and generate political support on moral and reputational bases. But even anti-Islamist autocrats in the Arab World, as Masoud (1999) and Feuer (2018) argue, have pursued "Islamic" policies to signal their morality, boost their religious legitimacy, and compensate for their weak democratic legitimacy.

Similar to Islamists' strategies, economic distribution in Ramadan could enable the regime to signal desirable qualities such as religiosity, goodness, generosity, and

trustworthiness. Complying with the norms of the season highlights the incumbent's abidance with the same religious and moral values as its constituents. This feature of distribution in Ramadan is less likely to generalize to distribution in other times. In electoral seasons, clientelistic benefits are tainted with clear electoral motives and constitute a political transaction where benefits are delivered in exchange for support (Hicken, 2011). In contrast, distribution in Ramadan is annual, occurs independently of elections, and is tied to a charitable message which obscures its link to the provider's political incentives. Outside religious and electoral seasons, charitable norms are less salient compared to Ramadan which might reduce the effectiveness of distribution in goodness-signaling. Therefore, it is in Ramadan's season that distribution would be the most associated with religious and moral norms.

Third, Ramadan increases the political risks resulting from non-responsiveness to economic concerns. Similar to the role of Friday's congregations in facilitating Muslims' collective action (Lynch, 2013, Butt, 2016, Hoffman and Jamal, 2014), Ramadan's congregations create a threat of political mobilization. During Ramadan, mass religious congregations are held daily. Their popularity surpasses any other time of the year. Mosques are fully occupied with worshippers who expand their congregations to side streets and squares every night of the month. This high rate of mosque attendance provides an opportunity for opposition groups to find new recruits and incite anti-government sentiments.[5] Although opposition groups of different ideologies can benefit from such an opportunity, Islamist groups (constituting a primary political threat in Egypt's case) have a particular advantage in Ramadan due to their access to mass congregations, ideological proximity to religious citizens, and their activism in the provision of charity in Ramadan. As a result, the regime could be particularly incentivized to mimic Islamists' strategies by increasing its distribution and charitable works in Ramadan to cripple its opponents' mobilization attempts and pose itself as an alternative service provider.

Anecdotal evidence corroborates the assumption that ignoring distributive concerns involves serious political risks in Ramadan. In the last year of Mubarak's rule in 2010, government inaction towards distributive issues provided the opposition with an opportunity to mobilize disenchanted citizens in Ramadan's season. A protest by

[5]This has propelled some governments, as in Tunisia and Egypt, to increase their surveillance of mosques in Ramadan.

6^{th} of April movement against rising food prices erupted one day before Ramadan in Cairo. On that same day, an opposition group, *Hashd*, organized a seminar entitled, "Ramadan is generous, but the government is not", criticizing the government's weak support for the poor in the holy month (Saoud and Al-Khouli, 2010). These protest movements highlighted the contrast between government actions and the norms of the month to criticize and challenge the regime. The Jordanian protests of 2018 offer another illustration of the policy-sanctioning role of Ramadan. The nationwide nightlong protests came as a reaction to new austerity measures imposed in the month of Ramadan. The protests were facilitated by the evening mass religious congregations particular to Ramadan. Successfully, the protesters forced the government to resign and suspend most of its austerity measures in the holy month.

Meanwhile, the regime's options to respond to these rising threats are more limited in Ramadan. The cost of repression is higher in Ramadan because violence against dissenters might be viewed as a violation of the month's norms. Reese, Ruby and Pape (2017) argue that violence on Islamic holidays is very likely to generate societal outrage as it violates the sanctity of these days. They find that Islamist militants decrease their violent attacks on important Islamic holidays to avoid societal disapproval. Similarly, we should expect that the regime tames its repressive apparatus in Ramadan and relies on co-optation by distribution to contain public discontent.

These structural changes to the religious environment create favorable conditions for the regime to employ distribution as a signaling device of its performance and goodness. They also raise the cost of political inaction on distributive issues.

2.2 Targeting

If Ramadan raises potential threats to the regime's reputation and stability, then it is reasonable to assume that pressures for distribution would be stronger in places where these threats are more credible. The allocation of economic benefits in Ramadan, thus, would be biased towards less supportive and more threatening constituencies to buy their political acquiescence.

There are reasons to suggest that Ramadan poses more risks in areas with low political support. Such areas are more likely to receive negative information about

the incumbent's performance in Ramadan. This could result from selective exposure whereby individuals choose to attend certain mosques and follow media outlets based on their political predispositions. These areas are also more likely to be targeted by political opposition for recruitment and mobilization, which is made easier in Ramadan by the high frequency of social interactions and mass congregations. In these contexts, the regime's legitimacy deficit could prove to be costly in Ramadan.

Distribution in Ramadan facilitates the co-optation of potential dissidents. Economically, it alleviates the financial burdens of targeted constituencies. Ideologically, it enhances the incumbent's reputation as a service provider and a religious actor. This could bridge the ideological gap between the incumbent and its opponents, particularly in Egypt where a significant sector of the political opposition has strong ties to Islamist movements and preferences for religious rule. As a result, co-optation could create divisions among potential targets of the opposition and limit the chances that seasonal episodes of discontent escalate into serious political threats (Kuran, 1991, Magaloni and Kricheli, 2010).

Furthermore, attracting weak supporters with economic benefits could be more effective in Ramadan compared to other times. Since giving in Ramadan is motivated by a religious message and less politicized, economic distribution resembles a gift or charity rather than a price of political support. Gifts can signal the giver's intention to invest in a relationship (Camerer, 1988) and lead to trust and cooperation (Carmichael and MacLeod, 1997). If provided to untrustworthy and threatening social groups, gifts can insure against the receivers' threat to the giver (Schechter, 2007). Hence, when framed in benevolent and religious terms as in Ramadan, distribution can cultivate trust between the regime and its opponents.[6] This insight is critical when contrasted with giving in electoral seasons, for example. Distribution in electoral times works because there is a minimal level of trust that can facilitate cooperation and reciprocation (Finan and Schechter, 2012). Distribution in Ramadan aims at establishing trust, where it is weak, to facilitate future cooperation and mitigate immediate threats. With that goal in mind, it is optimal for the regime

[6]In India, Thachil (2011) finds that Hindu nationalist service providers invest in presenting their efforts as "apolitical" to reach out to communities mistrustful of their motives. This depoliticization of service provision enables them to win the hearts and minds of voters outside their core support base. I argue that Ramadan performs a similar function (depoliticizes distribution) to the regime.

to target discontent and threatening constituencies in Ramadan.

Tracing the cognitive processes of how citizens evaluate political actors would lead us to similar predictions. Empirical evidence suggests that salient issues and recent actions related to them carry more weight in voters' political evaluations (e.g. Fournier et al., 2003, de Vries and Giger, 2014, Wilkin, Haller and Norpoth, 1997). Given the religious salience of economic issues in Ramadan, the regime can exploit this feature of citizens' bounded rationality to enhance its image -at least temporarily- by distributing in Ramadan. Yet, this strategy could still be less effective among opponents who constitute the regime's primary concern. Motivated reasoning, where individuals process information based on their initial predispositions, might reduce opponents' responsiveness to the regime's signals (Kunda, 1990). This creates incentives for the regime to shift more resources towards such constituents to enhance its signals' credibility and avoid rising disenchantment.[7]

This logic of distribution in Ramadan aligns with the argument that incumbents might divert resources towards destabilizing and opposition constituencies to contain their threats in autocratic or semi-democratic regimes (e.g.: Bates, 2005). In post-Soviet Russia, Treisman (1996) finds the central government provided more resources to more discontent and threatening regions. A similar pattern is reported in post-Soeharto Indonesia (Toha, 2009), Mali (Baldwin, 2005), Zambia (Masaki, 2018), and China (Ang, 2016). This targeting criterion contradicts the notion of "punishment" regimes describing distribution in autocracies (Magaloni, 2006, Blaydes, 2010) because the incumbent's incentives to distribute to core supporters are relatively weaker when containing non-electoral threats is a motivating factor. First, it is hard to assume that the threat posed by core supporters in Ramadan is higher than that of weak (or opposition) supporters. Second, the reputational gains made by signaling performance and goodness would be higher among weak supporters. Core supporters are already predisposed to think well of the regime, consume more positive information, and are more invested in the regime. Third, their political affinity to the regime makes it easier to buy core voters' support with clientelistic

[7]This claim mirrors recent empirical evidence by Cruz, Keefer and Labonne (2021) showing that politicians might respond to informational shocks dampening their support by delivering more clientelistic benefits to disappointed voters to counter negative perceptions and neutralize the implications on their electoral support.

policies in electoral seasons or contentious times. In contrast, winning the hearts and minds of weak supporters requires more investments to create trusting relationships. Fourth, weak supporters have more outside political options compared to core supporters. The latter might be tied to the regime with patronage links, economic need, or ideological orientation. Rutherford (2018) suggests that this holds in Egypt, where the regime's core supporters view it as the main -if not only- protector against internal and external threats and so are bound to it. As Kasara (2007) and Corstrange (2016) point out, limited outside options and the dependency of core constituencies on the incumbent could lead to diverting resources away from them to expand the incumbent's support base.

Having said that, I do not argue that these two patterns of distribution might not coexist under the same regime. Autocratic and semi-democratic regimes are faced with two primary threats from the masses to their survival: electoral loss and mass collective action. These might demand different (and possibly opposite) strategies because the constituents that the autocrat needs to appease to sustain its survival would be different. Electoral threats require autocrats to maximize the number of supporters mobilized to the polls while curbing the participation of opposition voters. This makes it optimal for incumbents to prioritize core then swing voters with distribution in electoral seasons. However, when faced with mobilization threats, the regime's objective is to silence dissident groups. If repression is costly (as might be the case in Ramadan), distribution would be targeted towards threatening groups to buy their inaction. Therefore, under the same objective of political survival, the regime might buy the turnout and votes of supporters and swing voters in electoral seasons, while also buying the acquiescence of threatening constituents when collective action threats are more credible, i.e. in Ramadan.

In sum, Ramadan creates cycles of government responsiveness to non-institutional (non-electoral) pressures for distribution. The season introduces structural changes to the religious environment that create favorable conditions for the regime to increase its returns from distributive policies while raising the cost of non-responsiveness to distributive concerns. This theoretical argument leads us to two main testable predictions. First, Ramadan's season would be associated with a temporary expansion of distributive actions by the regime. Second, distribution in Ramadan is more likely to target constituents posing more credible political threats to the regime.

3 Empirical Analysis

3.1 Data and Variables

This empirical analysis aims at: (1) documenting Ramadan's effect on government distribution, and (2) explaining subnational variation in distribution in Ramadan. Scholars of economic policy cycles rely on government budgets to tackle similar questions. This approach is not feasible given the specifics of this study. Analyzing Ramadan's effects requires frequent budgetary reporting by local governments to detect within-year variations in expenditures for subnational units. Such data are not publicly available for Egypt's local governments. In addition, distribution in Ramadan might be partially funded by extra-budgetary resources. In 2014, the Egyptian government initiated a special fund, *Tahia Masr Fund*, which is separate from the general budget. The fund collects donations to implement infrastructure projects and provide social support for the poor. It functions as a parallel redistributive channel to the state's system of taxes and transfers. Thus, solely focusing on budgetary data underestimates the government's role in economic distribution.

To address these challenges, I develop an original dataset of daily publicly reported distributive campaigns by government entities in Egyptian municipalities for the period between March 2014 -when President Abdel Fatah al-Sisi was elected- and May 2020. This dataset defines government distribution as *the provision of in-kind food transfers and food subsidies by governmental institutions.* Hence, distributive campaigns involve: (1) provision of in-kind food transfers as free food boxes to the public, or (2) increasing the supply of government-subsidized food products by deploying mobile outlets for discounted goods into the municipality, announcing the delivery of additional supplies to existing outlets, or opening up a new outlet. In practice, the provision of in-kind food transfers is done by handing out free food boxes to beneficiaries in targeted neighborhoods. Beneficiaries are not always required to show evidence for economic need. Similarly, a significant portion of food subsidies reaches beneficiaries through mobile government trucks and temporary outlets that sell government-subsidized goods at below-market prices. These are often positioned in a given place for a day or few days, before being diverted to a different location.

The management of these campaigns involves multiple governmental entities but remains highly centralized. The provision of subsidized goods is primarily directed by the Ministry of Supply and Internal Trade. The supply of in-kind food transfers involves the ministries of Social Solidarity and Religious Endowments. The police and military also contribute with their own campaigns. Local governments facilitate the operation of the campaigns.[8] Despite the involvement of multiple players, most campaigns emphasize their association with the regime and the incumbent president by using slogans, logos, and pictures associated with both. This makes it easier for citizens to attribute the responsibility for these campaigns to the regime.

Focusing on distributive campaigns serves this study's goals in several ways. First, their high flexibility allows the government to alter the temporal and spatial allocation of economic benefits in the short-run. In contrast, alternative forms of transfers are determined by rigorous national-level criteria and are stickier in the short-term. Second, these campaigns are linked to one of the most salient policy areas during the period of the study: food prices. Since 2014, the Egyptian government has adopted major economic reforms including cutting energy subsidies and floating the Egyptian currency. To ameliorate the adverse effects of these reforms, the government has expanded its direct provision of in-kind food transfers and food subsidies. Third, although there are no available systematic official counts of the total beneficiaries of these campaigns, their scale is non-trivial. In 2018, the government claimed that one million households benefited from their campaigns in Ramadan, which is approximately equal to targeting about 13 percent of poor households (Kandil, 2018). Yet, the significance of these distributive means is not limited to their coverage, but extends to their high visibility. More visible policy areas are strongly associated with politically-driven policy cycles (Dubois, 2016) because their political returns might exceed their direct beneficiaries. Accordingly, for the purpose of this study, these campaigns offer a good measure to understand the signaling function of distribution in Ramadan at the municipality-level.[9]

The outcome variable is *the number of publicly reported distributive campaigns by*

[8]The involvement of multiple government entities in these campaigns is reflected in the data. Besides local governments, campaigns' reports mention the involvement of the military (19%), civilian ministries (21%), and the police (5%) in distribution.

[9]In contrast, means-tested transfers are targeted to particular households and their political effects might remain limited to receivers due to their low public visibility.

government entities in a given municipality-day. Municipalities provide updates on these campaigns on an almost daily basis on their official Facebook accounts. The daily data on distributive campaigns are collected from announcements made by local governments, at the municipality and governorate levels, on their official social media accounts. Being the most popular social media outlet in Egypt, Facebook is the primary medium on which the government makes its announcements.[10]

The data collection process is composed of several steps. I first constructed a list of Facebook pages associated with each Egyptian municipality based on the country's administrative divisions. These are official government accounts administered by local government officials to communicate their daily actions to the public. Some municipalities, however, do not manage their own pages but communicate their actions and announcements on their governorate's official page.[11] Even when a municipality manages its own page, some government interventions are only reported on the governorate's official page as they might be coordinated with a higher level of government. Given that, the dataset also takes into account municipalities' reports published on their governorates' pages. The final dataset covers 319 municipalities, representing 98 percent of all Egyptian municipalities.[12] I then scrapped all the posts on the list of Facebook pages for the period of the study. This yielded approximately 500,000 posts containing information about daily local governments' actions. To classify these posts, I prepared a detailed manual to categorize the contents of the posts. Research assistants manually classified these posts to identify 5216 distributive campaigns' announcements in the period of the study.[13] The rarity of distributive campaigns relative to other government activities is unsurprising. The vast majority of local government reports are concerned with the daily maintenance of infrastructure and interventions to maintain law and order. Economic distribu-

[10] In 2019, there were 38 million daily users of Facebook in Egypt amounting to 90 percent of internet users in the country (Radcliffe and Abuhmaid, 2020).

[11] Governorates represent the largest subnational divisions in Egypt. Each governorate is divided into a set of municipalities. While most municipalities coincide with electoral districts, some might include multiple electoral districts.

[12] The few missing municipalities are new cities that are sparsely populated and lacking data on other relevant variables.

[13] Due to the large volume of the data, the intercoder reliability was assessed on a random sample of 2000 posts. Positive reports of distribution were sampled at a higher probability due to their rarity and to obtain a conservative assessment of intercoder reliability. The sample's Cohen's kappa is 0.9, indicating strong agreement among coders. Appendix G provides some examples of the posts related to distribution.

tion remains far less common than these routine activities. Finally, I transform the event data into daily counts of distributive campaigns for each municipality.[14]

Although I refer to this outcome as a proxy for government distribution, this comes with important caveats regarding its interpretation. First, this measure is not a perfect record of distributive campaigns by local governments. It is an account of *publicly reported distributive campaigns.* Despite possible discrepancies between these two accounts, this outcome captures the portion of distributive efforts that the government wants and does communicate to the public. Moreover, I expect this measure to be correlated with the operations of distributive campaigns on the ground. Government officials have an interest in communicating news about economic distribution to cultivate political support. More importantly, local government officials have strong career incentives to make these announcements. It signals, to their superiors, their seriousness in polishing the regime's image at the grass-root level. Meanwhile, there are constraints to inflating reports about distributive campaigns. The publicity of these posts acts as an accountability check on local government reports. Government Facebook pages are followed by local citizens who could call out inaccuracies in government posts by commenting on them. This pushes local governments to support their posts with accurate details and pictures to validate their claims. These incentives and constraints, therefore, reduce the possibility that government reports are consistently biased either negatively or positively.[15] Second, this measurement captures a specific channel of distribution that is salient, highly visible, and flexible. This strategy resembles other works that focus on the politics of particular distributive programs (e.g.: De La O, 2013, Magaloni, 2006). Finally, this measure does not account for differences in the scale of these campaigns, but only their incidence. Yet, based on my observations in the field and the written and visual information contained in the announcements, these campaigns seem to have comparable magnitudes because of the logistical constraints to their deployment.

[14]It is important to note that not all municipalities start reporting their activities on the same date. Municipalities enter the dataset starting from the date of their first report, regardless of whether that report is related to distributive campaigns.

[15]Note that this does not rule out the presence of measurement error in the variable. Yet, this error is likely to be random, rather than systematic. Since distribution is the outcome variable, this random measurement error would increase statistical uncertainty, but without biasing our estimates.

To measure the effect of Ramadan, I employ an indicator for Ramadan's season (RAMADAN): a dummy variable with positive values for days falling in Ramadan or the month preceding it. Since the government anticipates Ramadan, it launches some of its campaigns in the month before, which extends the full effect of *Ramadan's season* on distributive campaigns to the two-month period.

My hypothesis is that distribution in Ramadan would be higher in municipalities where political threats to the regime are higher. I employ two variables to test this claim: socioeconomic development and the threat of anti-regime collective action.

First, drawing on the literature on autocracies and Egypt, I expect political threats to the regime to increase with socioeconomic development, and so distribution in Ramadan would be higher in more developed municipalities. Socioeconomic development expands the middle-class and subsequently increases political threats in authoritarian regimes. Middle-class citizens tend to be more ideological, harder to co-opt with clientelistic strategies, and have stronger preferences for programmatic politics and good governance (Kitschelt, 2010). The economic interests and political preferences of the middle-class might undermine the survival strategies of authoritarian regimes and act as a democratizing force (Acemoglu and Robinson, 2005, Boix, 2003, Leventoğlu, 2014, Magaloni, 2006). Furthermore, more developed areas are not only ideologically prone to contention but also have the economic and human resources for mobilization. This creates a positive association between economic development and the threat of collective action generally and in autocracies (Dalton, Sickle and Weldon, 2010, Hoffman and Jamal, 2014).

In Egypt, developed constituencies pose key threats to authoritarian survival. During Mubarak's era, the regime utilized its clientelistic machine to mobilize poor voters in elections (Blaydes, 2010), crippling the opposition's ability to win the votes of the poor. Middle-class constituents, however, were more more invested in the ideology and qualities of their politicians and less willing to compromise for clientelistic benefits (Blaydes, 2010, Masoud, 2014, Brooke, 2019). Masoud (2014) shows that this reflected on the strategies of the Islamist opposition, who directed their resources to target middle-class voters all year long and in Ramadan's season, allowing Islamists to build a reputation as a benevolent service provider. Brooke (2019) argues that this strategy allowed the regime to alleviate distributive pressures, par-

ticularly during times of economic crises, at the expense of increasing middle-class voters' closeness to Islamists.[16] This proved to be a costly strategy, since middle-class, urban, and educated constituents became the engine of the mass uprising that ended Mubarak's rule in 2011 (Kandil, 2012). After al-Sisi's coming to power, the regime implemented a set of economic reforms to increase its tax revenue and reduce subsidies, placing new economic burdens on the middle class. Meanwhile, the regime's crackdown on charity organizations affiliated with Islamists meant that ex-beneficiaries of these institutions -who are mostly middle class- now look to the state for social and economic support. Given that, it is reasonable to argue that more developed constituencies present a credible source of political threats in Egypt's case.[17]

Municipalities' socioeconomic development is measured using an index (DEV), ranging from 0 to 1, that combines five indicators of human and economic development: the proportion of the urban population, the proportion of adults with formal education, and the proportion of the municipality's buildings with access to water, electricity, and sewage.[18] The index is an inverse covariance weighted average of these dimensions, such that the weights are calculated to maximize the amount of information incorporated into the index by rewarding dimensions that add new information. The method is described in detail in Anderson (2008).

Second, the regime might avoid the escalation of dissent in Ramadan by redirecting resources towards more contentious areas. Since the Egyptian uprising of 2011, mass collective action has proven to be a serious threat after contributing to ending the rule of two Egyptian presidents in 2011 and 2013. And even though protest activity has declined gradually under al-Sisi's rule, attempts for political mobilization by opposition groups -particularly the Muslim Brotherhood- sometimes translate into real threats.[19] President al-Sisi's speeches reflect the regime's concerns over

[16] Also, see: Binzel and Carvalho (2017).

[17] This does not mean that distribution in Ramadan is not targeted to the poor. Areas with higher socioeconomic conditions would still have poor residents, though they are not the poorest of the poor. Distributing in Ramadan to the poor in areas with more middle and upper-class citizens has the advantage of demonstrating government actions to more economically privileged classes.

[18] The data was obtained from the Egyptian censuses of 2006 and 2017 conducted by the Egyptian Central Agency for Public Mobilization and Statistics (CAPMAS). Distribution data were matched with the latest available census.

[19] For example, in 2019, a former government contractor in self-imposed exile called on social media to revolting against the regime's corruption. His call was backed by the Muslim Brotherhood and found some public resonance, triggering a few protests in various cities.

the threat of revolution. For example, in face of calls for protests in 2015, President al-Sisi addressed the people, "I hear new calls for revolution. Why? Do you want to lose Egypt? Why? ... countries that get destroyed never come back as before" (RT, 2015). In 2021, while discussing the issue of population growth, the President argued, "you put too much pressure on yourself, your children, and the state. Then, you revolt and go out to the streets to destroy your country and so the series of destruction continues" (Abdelgelil, 2021). Since protest activity is strongly restricted during the period of the study, anti-regime protests send a strong signal to the regime and enable it to identify areas where collective action is likely to reoccur.

Accordingly, the threat of collective action (ACTION) is captured by the number of violent protests in the month before a given date in a given municipality, obtained from the Armed Conflict Location and Event Data (ACLED) project. This dataset has the advantage of covering the whole time period of our analysis and providing detailed information about the reported events, which allows us to classify their nature and identify the perpetrators. I exclude peaceful protests and focus on violent collective action to better capture the threat to the regime. Limitations on mass collective action during the period under study have increased the potential for violence during anti-regime protests due to clashes with security forces. In contrast, pro-regime protests are more likely to be peaceful as they meet almost no opposition from security forces.[20]

3.2 Estimation

To first evaluate Ramadan's effects on distribution, I regress the number of distributive campaigns in a given municipality-day on the indicator for Ramadan's season (RAMADAN). The estimation procedure uses a Poisson regression to account for over-dispersion in the outcome variable.[21] The skewed distribution of the nonnegative count outcome prompts the use of a count model. Among possible count models, Poisson regression is less likely to suffer problems with fixed effects (Greene, 2007). The model includes fixed effects for municipalities and years. The municipality fixed effects absorb time-invariant municipality-specific factors that might influence the outcome such as natural terrain, political history, or variation in reporting patterns

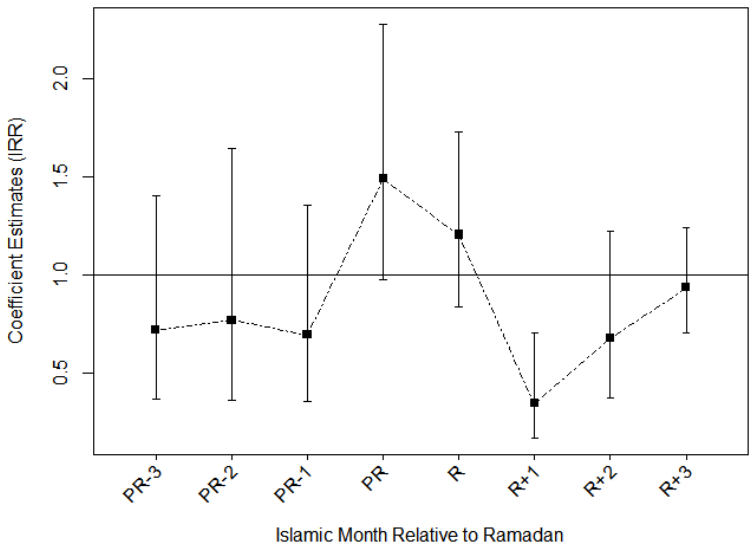
[20] Descriptive statistics of the main variables are in Appendix E.

[21] Testing for over-dispersion in the outcome using the procedure described in Cameron and Trivedi (1990) leads to rejecting the null hypothesis of no-dispersion at the 99 percent level.

across municipalities. The year fixed effects control for national-level time shocks such as electoral years and macro-economic policy changes.

This design assumes that Ramadan's season is not preceded by an upward trend in the outcome and that its effects are unlikely to persist beyond the two-month window. To validate this, I plot the coefficients on the two months constituting Ramadan's season and three months of lags and leads (with the other Islamic months as the reference category) estimated from the baseline model described above. Figure 2 shows that Ramadan's effects are concentrated in Ramadan and the month before it, with no evidence for anticipation or persistence.

Figure 2: The Relationship between Ramadan's Season, Lags, and Leads and Distributive Campaigns



Note: R refers to Ramadan. PR refers to the month preceding Ramadan. The other Islamic months constitute the reference category. Coefficients are estimated from the baseline model with standard errors clustered for municipalities and years. Confidence intervals are presented at the 95 percent level. The coefficients are presented in Incidence Rate Ratios (IRR).

I then expand the RHS of this baseline model. I include seven lags for the dependent variable to account for the possibility that the presence of a campaign in a given location is dependent on the presence of campaigns over the past week. I also incorporate a variable for municipality-specific time trends which serves two functions. It absorbs the effect of potential trends in distributive campaigns within municipalities

and accounts for possible within-municipality trends in reporting (which addresses concerns over the outcome's measurement). The model also contains a set of time-variant controls to minimize potential bias due to unobserved heterogeneity.

Besides accounting for socioeconomic development and the threat of collective action, I control for the log of the municipality's population which could shape the demand for these campaigns. The turnout rate and vote share of President al-Sisi in the preceding election could reflect on the regime's incentives for distribution and so are incorporated into the model. Relatedly, distribution might be affected by the occurrence of elections. So, I add a dummy indicator for the month of elections (ELECTION) with positive values for the day of the election/referendum and the month leading to it. All models include dummies for the two-month period preceding and following the electoral month as well.[22] In addition, all models include indicators for national and religious holidays and weekends which could affect the operations of distributive campaigns. I also control for the first month of the fiscal year, which might shape the government's spending decisions.[23] Equation 1 summarizes the full model.

$$Y_{mt} = exp(\beta_0 + \beta R_t + \alpha Y_{m,t-1}...Y_{m,t-7} + \rho X_{mt} + \pi_y + \Omega_m + \epsilon_{mt}) \quad (1)$$

where m indexes municipalities, t is the date of the day, and y is the year. Y_{mt} is the outcome, with seven lags on the RHS. R_t is the indicator for Ramadan. X_{mt} is a matrix of controls. π_y refers to year fixed effects and Ω_m is municipality fixed effects. Standard errors are clustered for municipalities and years.

β is the coefficient of interest. It captures the change in the outcome during Ramadan's season. Throughout the analysis, I report the coefficients in terms of log odds ratios and incidence rate ratios –presented in parentheses. The interpretation of the results would focus on the incidence rate ratios.

I then extend Equation 1 to test whether distribution in Ramadan is more likely to target places with higher socioeconomic development and threats of anti-regime collective action. This is done by interacting the indicator for Ramadan with the

[22]Note that I treat referendums as elections. Egypt had two referendums in 2014 and 2019, but both were aimed at consolidating the political power of the incumbent president.

[23]Descriptions of the variables and sources are provided in Appendix F.

measures for socioeconomic development and anti-regime collective action. Equation 2 demonstrates this extension.

$$Y_{mt} = exp(\beta_0 + \beta_1 R_t + \beta_2 R_t \text{ x } M_{mt} + \phi M_{mt} + \alpha Y_{m,t-1}...Y_{m,t-7} + \rho X_{mt} + \pi_y + \Omega_m + \epsilon_{mt}) \quad (2)$$

M_{mt} refers to a matrix of the moderating variables (socioeconomic development and collective action). β_2 is a vector of the coefficients of interest: the change in Ramadan's effects by socioeconomic development and collective action threats. Theoretically, I expect these coefficients to be positive.

3.3 Main Findings

Table 2 presents the estimates of Ramadan's effects on distributive campaigns. In column (1), the results are estimated with only fixed effects, but no controls. Model (2) provides the estimates from Equation 1. The effects of Ramadan's season are positive, statistically significant, and substantively meaningful. The number of distributive campaigns increases by 69-79 percent on any given day in the religious season, confirming that the regime expands its distributive campaigns in Ramadan.

Distribution is also higher in the month of elections. When citizens are expected to vote in an upcoming election or referendum, distributive campaigns increase by 38 percent in the days leading to the election compared to other times outside the electoral season. Distributive campaigns, therefore, are one manifestation of political business cycles and an instrument for short-term political mobilization. None of the main socio-economic or political variables are statistically significant. Yet it remains worth noting that the coefficients on socioeconomic development and collective action are negative, suggesting that distributive campaigns are generally biased against more threatening and contentious municipalities.

Next is to understand the spatial distribution of Ramadan's distributive campaigns. Theoretically, I expect Ramadan's campaigns to target municipalities with higher levels of socioeconomic development and collective action threats. Model (3) presents the main coefficients of interest estimated from Equation 2. As theoretically expected, the interaction terms are statistically significant and positive. Figure 3 plots the increase in the marginal effects of Ramadan with socioeconomic development

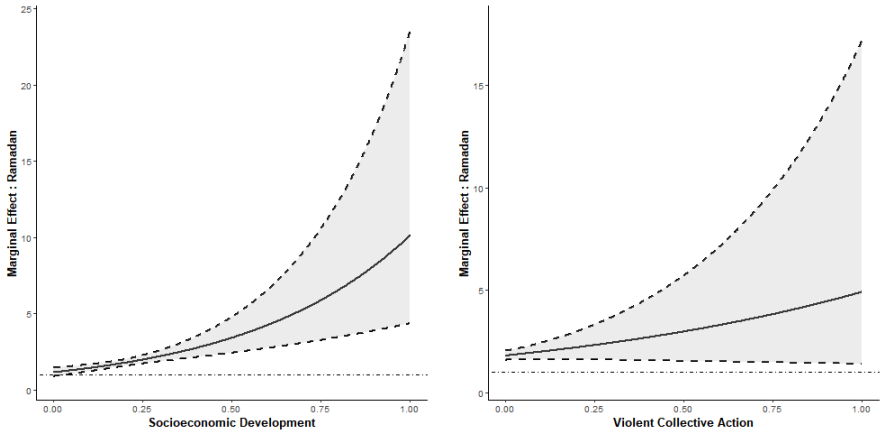
and collective action. Note that the coefficient on Ramadan is statistically insignificant and small in magnitude, indicating that Ramadan's campaigns are primarily concentrated in more developed and contentious municipalities.

Table 2: Poisson Regression Estimates of Ramadan's Effects

	(1)	(2)	(3)	(4)
RAMADAN	0.52 (1.69)***	0.58 (1.79)***	0.14 (1.15)	0.57 (1.77)***
	(0.14)	(0.15)	(0.18)	(0.15)
ELECTION		0.32 (1.38)*	0.22 (1.25)+	-0.06 (0.94)
		(0.14)	(0.12)	(0.24)
DEV		-1.9 (0.15)	-2.8 (0.06)*	-2 (0.13)
		(1.3)	(1.3)	(1.3)
ACTION		-0.28 (0.76)	-0.65 (0.52)	-0.25 (0.78)
		(0.27)	(0.45)	(0.29)
RAMADAN x ACTION			1 (2.72)*	
			(0.50)	
RAMADAN x DEV			2.2 (8.79)**	
			(0.78)	
ELECTION x ACTION				-9.8 (0)***
				(0.37)
ELECTION x DEV				1.6 (5.04)
				(1.4)
Controls	N	Y	Y	Y
Observations	646,808	589,945	589,945	589,945

Note: Incidence Rate Ratios are reported in parentheses. Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. Models (2)-(4) contain all the controls described in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 3: The Marginal Effects of Ramadan on the Incidence Rate Ratio of Distributive Campaigns by Socioeconomic Development and Collective Action



(a) Economic Development **(b)** Collective Action

Note: The plotted line refers to the marginal effects of Ramadan on incidence rate ratio at different levels of the moderating variable. All models contain municipality and year fixed effects. Confidence intervals are estimated at the 95 percent level.

During Ramadan's season, resources are directed towards municipalities with higher levels of socioeconomic development: more urban, educated, and with higher access to basic services. The magnitude of these additional gains in developed areas is substantively large. For example, the median municipality receives an increase in distributive campaigns by 85 percent in Ramadan. Meanwhile, a municipality at the 75$^{\text{th}}$ percentile (with a 28 percent higher development index than the median) witnesses a rise in campaigns in Ramadan by 111 percent.

Ramadan's distributive campaigns are more likely to target municipalities where violent collective action has recently occurred. A municipality experiencing no contentious events before Ramadan would witness only a 15 percent increase in distributive campaigns in Ramadan's season. This same municipality could have experienced more than a 200 percent increase in distributive campaigns in Ramadan, had it undertaken one protest.[24] So, citizens are able to extract more resources by signaling their threat before Ramadan. The regime insures against further escalation during the season by channeling more resources towards contentious areas.

[24]In Ramadan, the average municipality experiences 0.04 violent protests.

To further understand the political rationale behind distribution in Ramadan, we could compare it to distribution before elections. In column (4), I re-estimate Equation 2 after replacing the indicator for Ramadan with that of the electoral month to compare the spatial allocation of Ramadan's campaigns with pre-electoral distributive campaigns. Although model (2) shows that distributive campaigns increase in the lead-up to the elections, model (4) indicates that they are directed to different constituencies in electoral seasons from those targeted in Ramadan. Most remarkably, they are diverted away from contentious areas in electoral seasons. And, although distributive campaigns are still biased towards more developed areas in electoral times, this bias is weaker than it is during Ramadan as demonstrated by the statistical insignificance and smaller magnitude of the relevant interaction term in column (4). The literature suggests that autocratic regimes favor loyalists in electoral times (Magaloni, 2006, Blaydes, 2010). Electoral returns from clientelistic strategies are also maximized when benefits are targeted towards supporters and swing voters over opposition groups to ensure reciprocation (Nichter, 2008, Finan and Schechter, 2012). It, thus, follows that distributive campaigns would be less likely to target contentious areas before elections.

Ramadan's campaigns, however, have a different function from those before elections. They aim at buying the acquiescence of constituencies where political threats to the regime are high, as is the case in more socioeconomically developed and politically contentious areas. This is because the religious season raises the potential for political discontent, which requires the regime to shift resources away from loyalists towards areas with less trusting constituencies and a higher risk of contention.

In Appendix A, I exclude two alternative explanations for this pattern of distribution in Ramadan. First, I do not find evidence that the provision of goods in developed areas is simply a capitalization on the commercial aspect of the season to increase the government's sales of goods produced by the public sector. As a placebo test, I find that the distribution of free goods is also directed towards more developed areas, although there is no profit to be sought from distributing these goods. Second, the regime might allocate more resources to more efficient local bureaucracies that might also be in more developed areas. However, using a novel measure for municipalities' bureaucratic capacity, I find that the targeting of Ramadan's campaigns is independent of local bureaucracies' capacity.

3.4 Robustness Checks

I then evaluate the findings' robustness to various concerns. I first approach issues related to research design. Although the main models account for common seasonal factors that could influence distribution by controlling for religious/national seasons and the beginning of the fiscal year, there remains the possibility that the results might be affected by other seasonal trends. In Appendix B.1, I replicate the analysis using two different model specifications that add month and day of the year fixed effects, separately. This strategy exploits variation in the month (or day) in which Ramadan's season falls and yields results consistent with our conclusions.[25] A related concern is regarding the use of municipality fixed effects at the expense of explaining variation between (in addition to within) municipalities. In Appendix B.2, I show that the use of governorate (instead of municipality) fixed effects does not alter the findings. Moreover, in Appendix B.3, I check the robustness of the conclusions to the use of Poisson regressions by redoing the analysis using negative binomial and OLS regressions and find most conclusions largely unchanged.[26] These tests demonstrate that the results are robust to alternative modeling decisions.

Next is to check robustness to the measurement and coding of the main variables. Starting with the outcome, one concern is that the regime might distribute in Ramadan via indirect channels -besides local governments- such as parties affiliated with the regime. In Appendix B.4, I recode the outcome to include distributive campaigns by the Nation's Future Party (NFP) - the party most affiliated with the regime- and report consistent results.[27] Relatedly, there is the question of how far announcements of local governments match distributive patterns on the ground, i.e. what we might obtain from a perfect bureaucratic record of this form of distribution. The unavailability of official public bureaucratic records of the locations and timings of these campaigns hinders evaluating this link. However, for the years 2018 and

[25] As the study spans only the period between 2014 and 2020, there is not wide variation in the timing of Ramadan relative to Gregorian months/days. So, adding the month (day) fixed effects restricts the research design and serves as a conservative robustness check.

[26] The only diversion from the main findings is related to the interaction effects between Ramadan and collective action when using OLS models. However, given the distribution of the count outcome, the OLS results should be taken with greater caution.

[27] Note that the NFP is only unofficially affiliated with the regime. To elaborate, the National Democratic Party under Mubarak's rule was the official party of the president and the government. However, under al-Sisi's regime, the president and the government are not officially affiliated with the NFP, despite their political alignment.

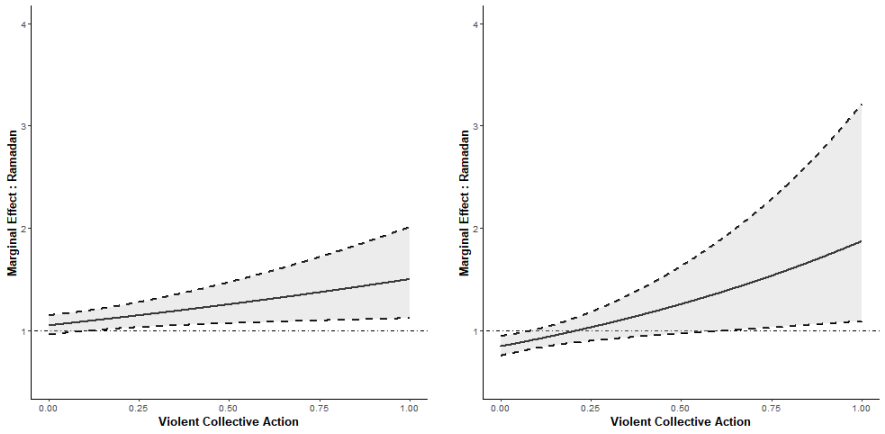
2019, the government published bureaucratic records of the precise locations of temporary markets of subsidized goods opened exclusively for Ramadan's season. Using this alternative data, I show in Appendix B.5 that these markets are also allocated to more developed and contentious municipalities. Therefore, the results obtained from our data match those concluded from measuring distribution in Ramadan using a precise bureaucratic record, which adds to the reliability of our measure and findings.

I also re-estimate the two main equations using a different index of socioeconomic development, disaggregated measures of development, two different recodings of collective action (Appendix B.6), and separate indicators for Ramadan and the preceding month (Appendix B.7). The findings remain robust to different coding decisions. Another concern is regarding the distribution of the collective action variable. The frequency of protest activity under al-Sisi's regime declined gradually over time. For example, there are 354 violent protests in 2014, but the number drops gradually to 32 protests in 2019. The lower variation on protest activity in later years raises the issue that our results might be affected by few influential observations in those years. In Appendix B.8, I redo the analysis by gradually excluding years with lower variation in protest activity and report similar conclusions.

Finally, I check the external validity of the analysis by looking at alternative outcomes related to distributive issues. I first consider the number of market monitoring campaigns as an outcome. These campaigns entail: arrests of private business owners engaged in illegal transactions, visits by government auditors to private businesses, confiscation of spoiled goods, and supervising vendors' adherence to pricing regulations. Such campaigns reflect on citizens' welfare by controlling prices and ensuring the quality of goods and services. I identified 7625 reports of these campaigns. I also consider the number of maintenance works to the drinking water infrastructure as an outcome (6671 events). Water is a critical service in Ramadan for drinking, cooking, and performing religious rituals. And, water shortages sometimes lead to violent protest activity. Thus, tackling problems in its delivery sends a strong signal to the public about government responsiveness and respect for the season's religious norms. In Appendix B.9, I demonstrate that both outcomes rise in Ramadan only in more contentious areas. This is also shown in Figure 4 which plots the marginal effect of Ramadan on both outcomes by violent collective action, as estimated from Equation 2. Hence, government responsiveness in Ramadan extends

beyond direct distribution to other policy areas related to distributive concerns.

Figure 4: The Marginal Effects of Ramadan on the Incidence Ratio of Market Monitoring Campaigns and Water Services Maintenance by Collective Action



(a) Market Monitoring **(b)** Water Services Maintenance

Note: The plotted line refers to the marginal effects of Ramadan on incidence rate ratio at different levels of the moderating variable. All models contain municipality and year fixed effects. Confidence intervals are estimated at the 95 percent level.

3.5 Probing Causality: Price Shocks and Ramadan

I argue that the regime distributes more when Ramadan's season coincides with political threats and public discontent. Although the research design is set to minimize potential bias to the coefficients of interests, causal identification remains a concern. Accordingly, I leverage a series of price shocks triggered by the government's reforms to the energy subsidy program to identify the causal link between political discontent/threat and distribution in Ramadan,.

Austerity measures, reductions in government subsidies, and subsequent price hikes are key sources of political unrest (Giugni and Grasso, 2016, Canak, 2019, Fjelde, 2015). Egypt's attempt to reduce food subsidies in 1977 led to violent "bread riots" before the subsidies were reinstated. These events discouraged most subsequent Egyptian governments from reducing food and energy subsidies. Similar IMF-mandated reforms to the Tunisian subsidy program led to public riots in 1983-1984. The Jordanian government's imposition of austerity measures in Ramadan of 2018 sparked nationwide protests. Therefore, one can assume that public dis-

content and political threats are proportional to the extent of citizens' exposure to government-orchestrated positive price shocks (i.e. negative shocks to subsidies).

In 2014, the Egyptian government started the implementation of a multi-year plan to reduce energy subsidies gradually at the beginning of every fiscal year in July. The reforms altered the pricing of several energy products. I focus on the impact of electricity prices. Electricity takes the largest share (50 percent) of the Egyptian household's energy bill (Banerjee et al., 2017). Exposure to electricity price shocks, thus, can offer a good assessment of citizens' vulnerability to the reforms. The provision of electricity is monopolized by the state which makes it easier for citizens to attribute the responsibility for price changes to the regime. The supply chain of other necessities (such as food and gas) involve private market actors to whom the regime can deflect the blame. This clarity of responsibility is critical, knowing that the reforms were unpopular among several societal groups: low and middle-income classes, leftists, and Muslim Brotherhood sympathizers. A household survey conducted before the implementation of the reforms reports that two-thirds of respondents believed that energy prices were already high and about 80 percent of respondents stated that they could afford a maximum of 5 percent increase in their energy bill (Banerjee et al., 2017). Therefore, exposure to electricity price shocks can provide a proxy for the level of political discontent and threat.

The execution of these reforms provides temporal and spatial variation in the degree of exposure to the price changes of electricity, and subsequently the level of political discontent. The first source of variation stems from the gradual implementation of the program over time. Lifting the subsidies starts in July -the first month of the fiscal year.[28] Since the beginning of Ramadan is governed by the lunar calendar and changes every year, whether a given day in Ramadan's season coincides with a price shock (and potentially high discontent) is exogenous.[29] Thus, exposure to the price shocks occurs on different days of the Islamic calendar in different years and remains independent of the timing of Ramadan.

The extent of exposure to the shock also varies among municipalities. To elab-

[28]The changes in the level of subsidies and energy prices are announced at the beginning of the fiscal year, which is fixed. This eliminates concerns over the endogeneity of the policy's timing.

[29]In our data, Ramadan's beginning moves from the end of June in 2014 to April in 2020.

orate, consumers are classified into seven tiers based on their level of electricity consumption. The tier of the consumer determines the price of electricity units and the share of subsidies in the pricing. Every fiscal year, the reforms introduced discriminate changes to the pricing of electricity based on consumers' tier. The change in the price of each unit of electricity varies for each tier and fiscal year and ranges from a 0 percent to 69 percent increase in the price per unit.[30]

For any given municipality, exposure to the price shock depends on the tier of its representative household. I deduce the tier of the representative consumer in every municipality using data on levels of electricity consumption in 2013 before the implementation of the subsidy-reduction program.[31] Relying on past consumers' classification assumes that discontent from these price changes is not only financial but might also be due to lifestyle changes to reduce the cost of the bill. Acknowledging that consumers might change their behavior (and so their municipality's tier) to conserve their consumption, this measurement strategy ensures that municipalities' exposure to the shock is not endogenous to the level of change in electricity prices.

The temporal and spatial variation in exposure to the price shocks allows us to identify their causal effect on the campaigns and understand how such an effect differs in Ramadan's season. I measure the level of exposure to the electricity price shock as the price per kilowatt for the average household in a given municipality-day, which is standardized with a mean of 0 and standard deviation of 1. The estimation procedure first employs a difference-in-differences design with two-way fixed effects for municipalities and days (dates). The model is estimated with a Poisson regression and includes the same controls employed in Equation 1.[32] As presented in Equation 3, the main coefficients of interest are (β_2 and β_3), which capture the effect of the price shock and its differential change in Ramadan's season. β_2 is expected to be positive (regardless of β_3).

$$Y_{mt} = exp(\beta_0 + \beta_1 R_t + \beta_2 R_t \text{ x } P_{mt} + \beta_3 P_{mt} + \alpha Y_{m,t-1} ... Y_{m,t-7} + \rho X_{mt} + \eta_t + \Omega_m + \epsilon_{mt}) \tag{3}$$

[30] The structure of energy subsidies is set at the national level, based on tiers of consumption, and is not set for each subnational unit separately. Hence, a municipality could not change its exposure to the price shock through protest activity.

[31] Appendix C provides details on data sources, the policy, and how the tiers are derived.

[32] It also controls for the lagged price per kilowatt.

where m indexes municipalities and t is the day (date). Y_{mt} is the outcome, with seven lags on the RHS. R_t is the indicator for Ramadan. P_{mt} refers to the pricing variable. X_{mt} is a matrix of time-variant municipality-level controls. η_t refers to day of the year (date) fixed effects and Ω_m is municipality fixed effects.

Since there is a possibility that different municipalities behave differently during Ramadan independently of the price shocks, I also estimate the model with fixed effects for (municipality x Ramadan) as demonstrated in Equation 4. This design exploits only variation in exposure to the price shock within season-municipality (and absorbs the coefficient on Ramadan).

$$\begin{aligned} Y_{mt} = exp(\beta_0 + \beta_2 R_t \text{ x } P_{mt} + \beta_3 P_{mt} + \alpha Y_{m,t-1} ... Y_{m,t-7} \\ + \rho X_{mt} + \eta_t + \Omega_m + \Omega_m^{'} \text{ x } R_t + \epsilon_{mt}) \end{aligned} \tag{4}$$

Table 3 presents the estimated coefficients for the theoretically relevant variables. In column (1), I estimate Equation 3 without interaction effects. The coefficient on the price variable is negative -and only significant at the 90 percent level- suggesting that distributive campaigns do not *generally* aim at compensating constituents most affected by the reforms. The interaction effects are added in model (2), allowing us to understand how the effect of pricing differs in Ramadan. The coefficient on the price variable is statistically significant and negative, indicating that distributive campaigns drop in places most vulnerable to electricity price shocks. The positive interaction term, however, suggests that these areas are at least partly compensated by distributive campaigns in Ramadan. Campaigns in Ramadan are more likely to target areas most affected by government-orchestrated price shocks. The number of Ramadan's campaigns would increase by 27 percent when a municipality is subjected to a price hike of one standard deviation. Column (3) presents the estimates from Equation 4, where the effects of Ramadan are absorbed by the fixed effects. Yet, the coefficients on the price and interaction variables remain almost unchanged.

Table 3: Poisson Regression Estimates of Price Shocks and Ramadan

	(1)	(2)	(3)
Price	-0.98 (0.38)$^{+}$	-1.3 (0.27)*	-1.3 (0.27)*
	(0.58)	(0.51)	(0.58)
Ramadan	1.2 (3.32)***	1.1 (3)***	
	(0.15)	(0.14)	
Ramadan x Price		0.24 (1.27)**	0.26 (1.3)*
		(0.09)	(0.09)
Observations	577,078	577,078	560,810

Note: Incidence Rate Ratios are reported in parentheses. The first two models contain municipality and day of the year fixed effects, with standard errors in parentheses below the coefficients clustered at the same levels. The third model contains day of the year and (municipality x ramadan) fixed effects. All models contain the controls described in Equation 1. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

These findings align with our main conclusions. Price shocks, particularly those initiated by the regime itself, can cause social unrest and fuel political grievances. The negative effect of price shocks on distributive campaigns implies that distribution is not always targeted towards places with the highest potential threats. This mirrors the results in column (3) of Table 2, where the coefficients on the development and collective action variables are also negative. It could be because the regime employs other strategies to deal with political threats outside Ramadan. Yet, during Ramadan's season, such areas (more developed, contentious, and vulnerable to price shocks) become the likely targets of the regime's distribution, being the ones with the highest potential for political discontent. This supports the claim that distribution in Ramadan aims at containing political threats and buying the acquiescence of societal groups posing the most serious political risks to the regime.[33]

4 Causal Mechanisms

This section attempts at testing the causal mechanisms tying Ramadan to the regime's incentives for distribution. My argument suggests that the religious salience of distributive issues and the potential for escalating political discontent in Ramadan

[33] Appendix C.3 indicates that these findings are robust to alternative modeling specification and measurement of the outcome. I also find that maintenance of water services increases in places most affected by price shocks in Ramadan (similar to distributive campaigns).

constitute the driving force behind the regime's actions in Ramadan. By distributing in Ramadan, the regime leverages the salience of charitable norms to highlight its capacity, signal its abidance by religious and moral norms, depoliticize its distributive acts in favor of posing them as sincere acts of charity, and so increase its reputational gains. There are a few predictions that follow from this causal story.

4.1 Framing Distribution

If distribution in Ramadan reflects the regime's intention to benefit from the salience of Ramadan's religious norms to signal its desirable moral/religious qualities, then we should expect that the government's announcements about its distributive efforts to frame them in moral and religious terms more in Ramadan relative to other times. To test this claim, I employ a dictionary-based approach to classify the content of the government's posts about distribution based on their use of moral and religious vocabulary related to Ramadan's norms. I first aggregate a list of the most frequent words used in the proportion of posts discussing government distribution. Then, I construct a dictionary of words associated with Ramadan's charitable norms from that list. Since the posts rely on relatively limited vocabulary, the dictionary contains 19 words related to Ramadan's norms such as gift, generosity, humanitarian, giving, Ramadan, holy, alms, charity, blessings...etc. The frame of a post is classified to be "moral/religious" if the post contains at least one word from the dictionary.

I expect posts about distribution in Ramadan's season to use religious and moral vocabulary to emphasize the goodness of providers. Since this signaling function of Ramadan is more needed among less supportive and more threatening constituencies, we should also observe that government communication utilizes these religious/moral frames in Ramadan when communicating to citizens in those contexts. I test these predictions by regressing a dummy for whether a given distributive post uses a religious frame on the same set of predictors used in Equation 1.[34] The analysis is at the post level. The estimation uses OLS regression (linear probability model) with fixed effects for both municipalities and years.

[34]The only difference is that the model does not contain lags of the dependent variable.

Table 4: OLS Regression Estimates of Ramadan's Effects on Framing of Distributive Posts

	(1)	(2)
RAMADAN	0.249***	0.239***
	(0.039)	(0.053)
ELECTION	0.040	0.030
	(0.082)	(0.077)
ACTION	-0.063*	-0.137***
	(0.034)	(0.039)
DEV	0.767***	0.706***
	(0.200)	(0.194)
RAMADAN x ACTION		0.250***
		(0.063)
RAMADAN x DEV		0.059
		(0.262)
Observations	4,196	4,196
R^2	0.25	0.26

Note: Both models contain fixed effects for municipalities and years and the controls in Equation 1. The analysis is done at the post-level. Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The results in Table 4 reveal that announcements of distributive campaigns are more likely to use religious and moral frames in Ramadan. In model (1), Ramadan is associated with a 25 percent higher probability that a given distributive post would use a moral/religious frame. We do not see a similar use of such frames in electoral times. This supports the idea that the regime frames distribution in Ramadan distinctively from that in other times by emphasizing its association with the religious and moral norms of the season.

In model (2), I test whether this religious framing of Ramadan's campaigns is more prominent in threatening municipalities by interacting Ramadan with the measures of socioeconomic development and collective action. The statistically significant interaction on (RAMADAN x ACTION) indicates that the use of religious frames in Ramadan is higher in more contentious municipalities: one protest doubles the probability that a distributive post would use religious framing in Ramadan. Note that

religious framing is less likely to be employed in contentious areas outside Ramadan, which suggests that Ramadan alters the government's communicative strategies in these places.[35] I do not find support for the use of religious framing during Ramadan in more developed areas.[36]

Therefore, distribution in Ramadan is not only quantitatively different, but it is also qualitatively distinct by the virtue of its association with salient religious and moral norms. I have argued that this religious nature of distribution in Ramadan creates an opportunity for political actors to frame their distributive efforts in depoliticized terms and exploit salient religious and moral norms to signal "goodness". Indeed, we see evidence that the regime relies more on religious framing in Ramadan, particularly when communicating to more discontent constituencies.

In line with this quantitative analysis, anecdotal evidence suggests that the regime invests in maintaining the religious and moral facade of Ramadan's campaigns and disassociates them from other clientelistic practices and electoral incentives. In 2017, the secretary of the Nation's Future Party (NFP), the party most affiliated with the regime, in Menoufia governorate announced that the party would take its name off of any food packages they distribute to the needy in Ramadan, to show that their goal is to socially support the poor with no additional intentions. The NFP's leader in Fayom's governorate made a similar statement saying that their Ramadan campaigns send a message to the "tendentious and mercenaries" who claim that the party only provides for the poor before elections or referendums.[37] These efforts to distance distributive campaigns in Ramadan from politically-motivated ones add to the plausibility that these campaigns aim at polishing providers' reputation by emphasizing their moral and religious qualities.

[35] It is possible that the use of these religious/moral frames might be less credible in other times in areas where locals have more grievances and mistrust the regime. Ramadan, however, might enhance the credibility of this messaging strategy and prompt the regime to alter its strategy.

[36] To probe the robustness of these findings, Appendix D.1 alters the dictionary by removing words that are directly associated with Ramadan itself. Yet, the conclusions remain unchanged.

[37] These statements were reported on the official Facebook account of the Nation's Future Party https://www.facebook.com/mostqbalwataneg/

4.2 Distribution and Religious Mobilization

If Ramadan's religious norms increase the religious -and so the political- salience of distributive issues and raise the potential for religious mobilization, then we would expect more resources to be allocated to areas where religion is most likely to have political consequences. These would be places where citizens are more likely to be religious, incorporate religious factors into the evaluations of the regime, and are susceptible to political mobilization by religious actors. Support for Islamists is associated with individuals' religiosity and preferences for a bigger role of religion in politics (e.g. Ciftci, 2013, Grewal et al., 2019). Islamists could exploit Ramadan's season to their advantage by the virtue of their ideology and access to Ramadan's congregations and religious channels of distribution. By targeting areas where Islamists' mobilization is more likely, the regime can contest the religious advantage of Islamist groups, signal its religious qualities to constituents favoring a bigger public role of religion, and address the threat of religious mobilization in Ramadan.

To assess this claim, I estimate Equation 2 after replacing the measure for collective action with the number of collective actions by Islamist actors.[38] As shown in Table 5 and Figure 5, Ramadan's distributive campaigns are more likely to target areas witnessing more collective actions by Islamist groups as indicated by the positive and statistically significant interaction term. This is despite the fact that areas with Islamist mobilization are -slightly- more likely to be punished outside the religious season, which suggests that Ramadan alters the seriousness of Islamist mobilization threats and prompts a different reaction from the regime. This particular nature of Ramadan is also manifested in column (2), where we do not observe that distributive campaigns in electoral seasons respond to the Islamist threat.[39] In Appendix D.2, I further confirm this conclusion using an alternative measure of Islamists' capacity for mobilization based on the historical presence of Muslim Brotherhood's branches in the municipality obtained from Brooke and Ketchley (2018).

[38] This measure is constructed by coding the perpetrators of contentious events in the ACLED dataset based on their association with Islamist groups.

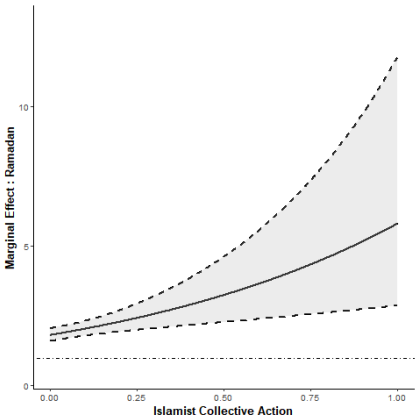
[39] In Appendix D.2, I conduct this analysis on subsets of the data to account for the fact that Islamists' mobilization declines over the years under al-Sisi's regime. I also find that these findings are robust to the same tests discussed in the main analysis. In addition, I report that market monitoring campaigns and improvements of water services respond to Islamist mobilization threats in Ramadan similar to distributive campaigns.

Table 5: Poisson Regression Estimates - Ramadan's Effects on Distributive Campaigns by Islamist Collective Action

	(1)	(2)
RAMADAN	0.14 (1.15)	0.57 (1.77)***
	(0.18)	(0.15)
ISLAMIST	-0.69 (0.50)$^{+}$	0.11 (1.12)
	(0.40)	(0.21)
DEV	-2.8 (0.06)*	-2 (0.13)
	(1.3)	(1.3)
ELECTION	0.23 (1.26)$^{+}$	-0.06 (0.94)
	(0.12)	(0.23)
RAMADAN x ISLAMIST	1.2 (3.20)**	
	(0.36)	
RAMADAN x DEV	2.2 (9.05)**	
	(0.78)	
ELECTION x ISLAMIST		0.03 (1.03)
		(0.23)
ELECTION x DEV		1.6 (4.98)
		(1.4)
Observations	589,945	589,945

Note: Incidence Rate Ratios are reported in parentheses. All models contain municipalities and year fixed effects. Standard errors in parentheses below the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 5: The Marginal Effects of Ramadan on the Incidence Ratio of Distributive Campaigns by Islamist Collective Action



Note: The plotted line refers to the marginal effects of Ramadan on incidence rate ratio at different levels of the moderating variable. The model contains municipality and year fixed effects. Confidence intervals are estimated at the 95 percent level.

By distributing in Ramadan, the regime contests the Islamist advantage of its opponents. Egypt's Islamists have often utilized charity organizations to depoliticize their social service and build linkages with voters based on a reputation for religiosity and goodness (e.g. Brooke, 2019). The salience of charitable norms in Ramadan creates an opportunity for the regime to mimic such a strategy by delivering to constituents with stronger preferences for religious governments and posing itself as a charity provider and credible religious alternative to Islamist groups.

4.3 The Political Returns of Ramadan's Campaigns

My argument suggests that the regime times its campaigns in Ramadan because distribution in Ramadan: (1) enables the regime to signal its capacity and goodness, (2) benefits from the season's religious norms to enhance the regime's reputation, and (3) is less likely to be perceived by voters as a politically-motivated strategy. In this section, I test these claims by studying voters' reactions to distribution in Ramadan.

The analysis of these causal mechanisms employs the sixth wave of the Afrobarometer data on Egypt. The data collection process of this survey started only five days before Ramadan of 2015 and ended during the month of Ramadan. This offers a unique opportunity for studying the relationship between distribution in Ramadan and voters' perceptions of the regime due to the close temporal proximity between

the survey's fieldwork and distribution of benefits. The main independent variable of interest is the number of distributive campaigns in a respondent's municipality over the week preceding the date of the interview.

I first test whether the presence of distributive campaigns in a municipality is associated with improved perceptions of the regime's capacity and goodness. Citizens' evaluation of the regime's economic performance (capacity) is captured using two different measures. *Performance* is a summative index of respondents' evaluation of the government's economic performance on several dimensions: handling the economy, combating poverty, reducing inequalities, job creation, containing inflation, and fighting hunger. *Economic Conditions* is a summative index of respondents' retrospective, current, and prospective evaluations of the country's economic conditions.[40] Next, to assess whether distribution in Ramadan signals the regime's positive "moral" qualities, I construct a summative index of respondents' trust in the president, local governments, parties, the military, and the police.[41] As an alternative measure of citizens' evaluations of the regime's "moral" quality, I use an index for respondents' perceived integrity of the government, local government, and the police. These two measures capture the perceived trustworthiness and integrity of the regime's institutions, which could be tied to its religious and moral image.[42] All outcomes are standardized to have a mean of 0 and standard deviation of 1.[43]

The estimation procedure employs OLS to regress the outcomes on the independent variable (the total number of distributive campaigns in the week preceding the date of the interview) and a set of individual controls: gender, age, age-squared, employment status, urban residency, and educational level. I include fixed effects for municipalities to absorb time-invariant municipality characteristics that might shape the outcome such as political affiliation, level of trust in the regime, socioeconomic development...etc. This modeling choice leverages *variation in exposure to distributive campaigns within a municipality over time* because the independent

[40]These variables measure subjective evaluations of the economy to understand how the public reacts to distributive campaigns and updates their evaluations of the government accordingly, regardless of their true impact on economic outcomes. This matches our objective of understanding the signaling function of these campaigns.

[41]These are the only available political institutions available in the survey for Egypt.

[42]The Cronbach's alpha values of these four measures are 0.82, 0.85, 0.76, and 0.75, respectively. This indicates a good level of internal consistency and reliability of the four indices.

[43]The relevant survey questions of all measures are provided in Appendix D.3

variable is measured daily. Equation 5 summarizes the estimated model:

$$Y_{imt} = \beta_0 + \beta_1 D_{mt} + X_{imt} + \Omega_m + \epsilon_{imt} \tag{5}$$

where i refers to individuals, m indexes municipalities and t is the date (day). Y_{imt} is the outcome. D_{mt} is the independent variable. X_{imt} is a matrix of individual-level controls. Ω_m is municipality fixed effects.

Table 6 presents the coefficient on the distribution variable for the four outcomes. Columns (1) and (2) show that there is no significant relationship between distribution in Ramadan and voters' evaluations of the regime's economic performance. However, column (3) reveals that distributive campaigns are associated with more trust in the regime's institutions. This correlation is substantively large: one distributive campaign is associated with one-third of a standard deviation increase in trust of institutions. The results in column (4) go along the same lines, albeit statistically insignificant. Accordingly, distribution in Ramadan translates into reputational gains for the regime, yet without altering perceptions about its competency.

Table 6: OLS Analysis of the Relationship between Distribution in Ramadan and Respondents' Evaluations of the Regime

	(1) Performance	(2) Econ. Cond.	(3) Trust	(4) Integrity
DISTRIBUTION	0.11	0.01	0.34*	0.22
	(0.17)	(0.16)	(0.14)	(0.14)
R^2	0.31	0.258	0.26	0.29
Observations	1,057	1,056	1,061	998

Note: All models include fixed effects for municipalities and controls for gender, age, age-squared, employment, labor force status, urban residency, and educational level. Standard errors in parentheses are clustered for municipalities. All outcomes are measured in standard deviations. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

If Ramadan's campaigns derive their effectiveness from their association with religious norms, we should then expect the regime's gains from distribution to be higher among respondents who incorporate the moral and religious qualities of public officials into their evaluations. These respondents should be the most sensitive to the

regime's response to Ramadan's norms. I define this profile of respondents as those agreeing that "the country is better with more religious people in public office". So, I extend Equation 5 to include an interaction term between the level of distribution and a dummy for respondents' religious (as opposed to secular) position.

Table 7: OLS Analysis of Respondents' Reactions to Distribution in Ramadan by Ideological Position (Religious versus Secular)

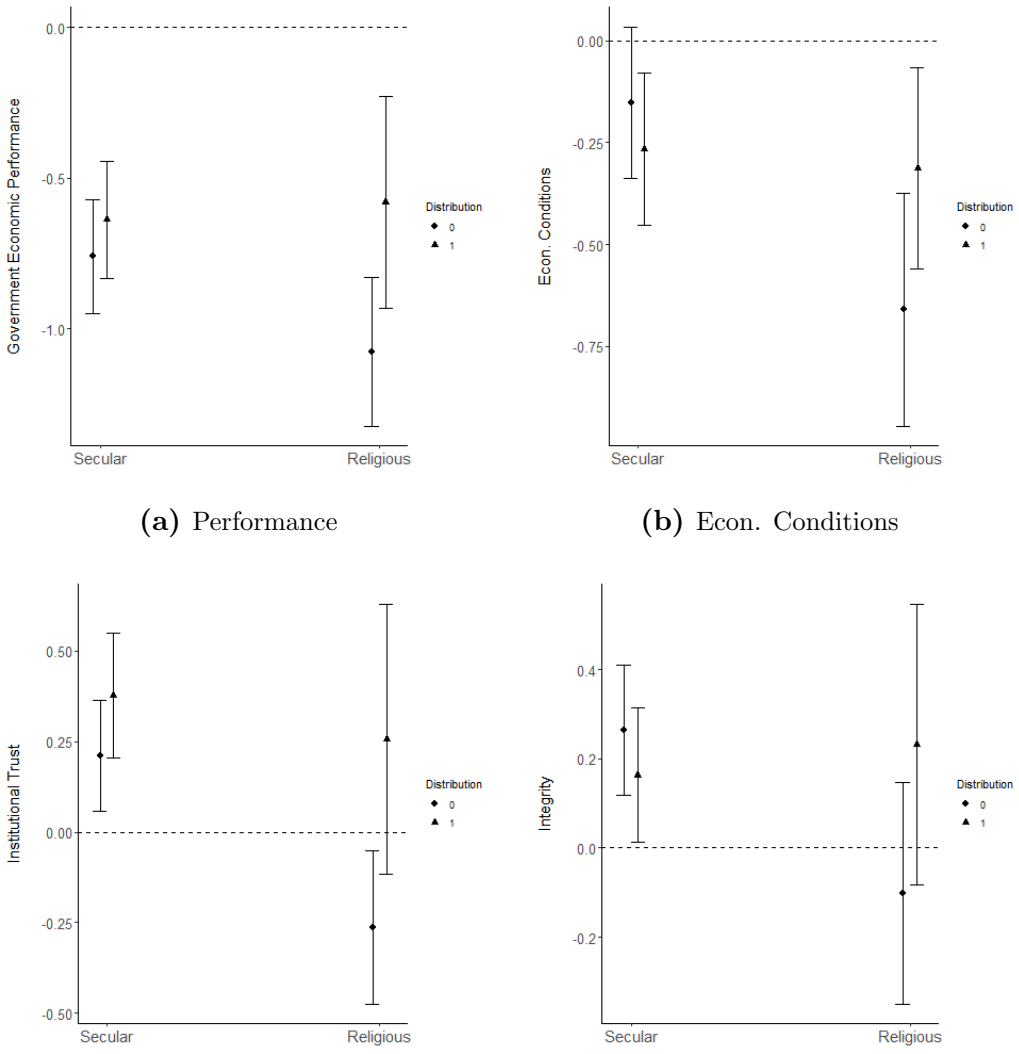
	(1) Performance	(2) Econ. Cond.	(3) Trust	(4) Integrity
DISTRIBUTION	0.12	-0.11	0.17	-0.10
	(0.18)	(0.17)	(0.15)	(0.13)
RELIGIOUS	-0.32***	-0.51***	-0.47***	-0.37***
	(0.08)	(0.12)	(0.09)	(0.10)
DISTRIBUTION x RELIGIOUS	0.37**	0.46***	0.35*	0.43**
	(0.14)	(0.11)	(0.16)	(0.14)
R^2	0.35	0.31	0.34	0.34
Observations	910	910	910	881

Note: All models include fixed effects for municipalities and controls for gender, age, age-squared, employment, labor force status, urban residency, and educational level. Standard errors in parentheses are clustered for municipalities. All outcomes are measured in standard deviations. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The results in Table 7 strongly support the idea that the regime's reputational gains from Ramadan's campaigns are concentrated among "religious" respondents. Across all models, the coefficient on (RELIGIOUS) is significantly negative, indicating that religious respondents view the regime as incompetent, untrustworthy, and corrupt. This is unsurprising since preference for religious public officials is a strong indicator of support for Sharia and Islamists (Ciftci, 2013). Given al-Sisi's regime's anti-Islamist stance, these ideological voters are more likely to oppose the regime and perceive it negatively. Despite that, their negative perceptions vanish and flip as they witness more distributive campaigns in Ramadan. This is visually demonstrated in Figure 6, which plots the predicted outcomes for secular and religious respondents pending on the presence of campaigns in their municipalities. In all models, one distributive campaign is associated with at least a third of a standard deviation improvement in the regime's evaluation among religious respondents. The coefficients on the (RELIGIOUS) variable and the interaction term are almost equal in

magnitude and opposite in direction in models (1-4). Thus, Ramadan's campaigns are associated with a reduction in the reputational disadvantage of the regime among this class of citizens, contributing to the erosion of the "Islamist disadvantage" of the anti-Islamist regime.

Figure 6: The Predicted Outcomes for Secular and Religious Voters by the Number of Distributive Campaigns



(a) Performance **(b)** Econ. Conditions

(c) Institutional Trust **(d)** Integrity

Note: The figure plots the predicted outcomes for secular and religious respondents by the number of distributive campaigns. All models contain municipality fixed effects. Confidence intervals are estimated at the 95 percent level.

The fact that distributive campaigns have almost no effect on secularists is very suggestive of how these campaigns serve their political goals. If Ramadan's campaigns work because they turn the salient religious norms to their advantage, then we expect their political returns to be generated primarily from constituents who care about these norms, follow them, enforce them, and desire a government abiding by them. The findings credit this claim.

Finally, I investigate whether distribution in Ramadan is perceived as another politically motivated form of distribution. Since there is no survey question that is exclusive to Ramadan's campaigns, I use a question that asks "how common it is that voters are bribed". If respondents equate distribution in Ramadan with other politically motivated distributive interventions, then we might expect them to evaluate voters' bribery to be more prevalent as they witness more distributive campaigns. The estimation is done using Equation 5 and the outcome is standardized.

Table 8: OLS Analysis of the Relationship between Distribution and Perceived Prevalence of Clientelism

	(1)	(2)
Distribution	-0.59**	-0.65**
	(0.20)	(0.20)
Religious		0.25**
		(0.08)
Distribution x Religious		-0.51**
		(0.18)
R^2	0.35	0.37
Observations	960	863

Note: All models include fixed effects for municipalities and controls for gender, age, age-squared, employment, labor force status, urban residency, and educational level. Standard errors in parentheses are clustered for municipalities. All outcomes are measured in standard deviations. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The results in Table 8 indicate that voters do not perceive distribution in Ramadan similarly to other clientelistic practices. On the contrary, respondents witnessing more campaigns in their municipality perceive clientelism to be less prevalent. The

magnitude of the coefficient is also large: one campaign is associated with almost a half standard deviation decline in perceived clientelism.[44] The magnitude of this effect is puzzlingly large, but it confirms that voters perceive distribution in Ramadan and electorally motivated distribution differently. Model (2) further confirms this point. Despite that religious respondents view voters' bribery to be more prevalent, their position is reversed as they witness more distributive campaigns.[45]

Therefore, Ramadan's campaigns are associated with better perceptions of the regime's moral qualities and could facilitate the establishment of a reputation-based linkage with citizens. This might be attributed to the less politicized perceptions of these campaigns among voters, due to their association with charitable norms. Interestingly, the reputational returns of Ramadan are higher among religious citizens who are generally more critical of the regime. This might rationalize the spatial allocation of Ramadan's campaigns in favor of discontent areas.

In Appendix D.3, I probe the robustness of these findings to model specification by redoing the analysis using governorate fixed effects and find similar results. I also check the sensitivity of the findings to the measurement of the independent variable. Moreover, I address the question of whether the observed correlation between Ramadan's campaigns and respondents' perceptions is driven by the timing of these campaigns or the act of distribution itself (regardless of the timing). By analyzing two Arab Barometer surveys conducted outside Ramadan as a placebo test, I find no association between distribution and perceptions of the regime. Thus, it is the religious timing that contributes to the political function of Ramadan's campaigns rather than mere distribution.

4.4 Distribution in Other Islamic Seasons

Ramadan introduces two main changes into the religious environment related to our argument: increasing the religious salience of distributive actions and increasing the frequency of mass religious congregations. This raises the question of how each of

[44] We might also suspect that municipalities receiving more distributive campaigns in Ramadan are less likely to be targeted with clientelistic benefits in electoral times. Yet, this possibility is accounted for by the municipality-level fixed effects.

[45] A potential explanation for why distributive campaigns in Ramadan lead to a lower perceived prevalence of clientelism is recency effects. Since Ramadan's campaigns are more recent than vote-buying in voters' minds and qualitatively different, their effects might trump previous perceptions.

these changes contributes to the observed distributive patterns. To evaluate this, I study distribution in another major Islamic occasion, *Eid al-Adha*, which has a similar religious message to Ramadan, but no equivalent threat of mobilization.

The four-day celebration coincides with the season of pilgrimage and starts about two months after the end of Ramadan. Its religious message is similar to that of Ramadan; urging Muslims to support the poor. Financially capable Muslims are encouraged to sacrifice cattle and donate a portion of their meat to the poor. Despite the similarity in the content of the religious message emphasized in both seasons, they differ in the seriousness of the political threats they pose. Mass religious congregations are widely popular, longer, and more frequent in Ramadan. Eid al-Adha is shorter and Muslims are required to gather for only one congregation to celebrate it. Therefore, studying distribution in Eid al-Adha provides a placebo test to understand how Ramadan's religious message might incentivize government distribution in the absence of any serious threats of contention posed by its congregations.

I first estimate the effect of Eid al-Adha on distributive campaigns using Equation 1. The independent variable is an indicator for Eid al-Adha (EID): a dummy variable with positive values for days coinciding with Eid al-Adha or the two weeks before. As shown in model (1) of Table 9, Eid al-Adha is associated with an increase in distributive campaigns almost identically in magnitude to Ramadan's effect. Model (2) estimates the interaction effects of Eid as in Equation 2. Unlike it is the case in Ramadan, distribution in Eid is not significantly moderated by the socioeconomic profile of municipalities. More importantly, more contentious places are *less likely* to receive distributive campaigns in Eid al-Adha. I also confirm this result in model (3) using the number of Islamists' protests as the measure of collective action. Contrasting the profile of beneficiaries from distribution in Ramadan and Eid al-Adha helps us to unpack how Ramadan increases government distribution. The two occasions share a similar message, and so they both rationalize distribution. Yet, the religious rituals of Eid do not amplify the threat of collective action as they do in Ramadan, leading to a different spatial allocation of distributive efforts. This distinction suggests that the threat of collective action is one mechanism by which Ramadan creates incentives for government distribution.[46]

[46]In Appendix D.4, I investigate the robustness of these conclusions using a similar set of tests to those employed for the main analysis.

Table 9: Poisson Regression Estimates of Eid al-Adha's Effects on Distributive Campaigns

	(1)	(2)	(3)
Eid	0.57 (1.77)***	0.61 (1.84)**	0.61 (1.84)**
	(0.14)	(0.19)	(0.19)
Ramadan	0.58 (1.79)***	0.57 (1.77)***	0.57 (1.77)***
	(0.15)	(0.16)	(0.15)
dev	-1.9 (0.15)	-1.9 (0.15)	-1.9 (0.15)
	(1.3)	(1.4)	(1.4)
Action	-0.28 (0.76)	-0.25 (0.78)	
	(0.27)	(0.29)	
Islamist			0.11 (1.12)
			(0.23)
Eid x Dev		-0.45 (0.64)	-0.45 (0.64)
		(1.6)	(1.6)
Eid x Action		-8.2 (0)***	
		(0.45)	
Eid x Islamist			-6.2 (0)***
			(0.48)
Observations	589,945	589,945	589,945

Note: Incidence Rate Ratios are reported in parentheses. All models contain fixed effects for municipalities and years. Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. All models include all the controls specified in Section 3, but only controls with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

5 Conclusion

The question of *who gets what* is at the heart of distributive politics, but it can be better studied by also asking *when*. Timing contributes to the meaning of government actions, their relevance to the public, and the types of threats they are positioned to tackle. Ramadan introduces structural changes to the religious environment that increase the visibility of the incumbent's distributive policies, add religious meaning to them, and amplify the costs of overlooking citizens' economic concerns. As the evidence from Egypt indicates, this prompts the regime to respond to Ramadan by expanding the provision of economic benefits to co-opt areas where political threats and discontent are higher. This strategy of "acquiescence-buying"

capitalizes on the religious nature of distribution in Ramadan to earn the incumbent a reputation for trustworthiness and goodness, even among its critics, and contain the threats posed by the season.[47] This temporal and spatial allocation of economic benefits poses Ramadan's season as a catalyst for government responsiveness (even for anti-Islamist governments) to citizens' economic concerns in Muslim societies.

Besides underlining the role of timing in distributive policy-making, this study reveals the power of religion in shaping short-term and long-term policy-making in religious societies. In the short-run, Ramadan creates favorable conditions for the government to expand its distributive policies. Although this expansion is temporary, it is telling of a deeper impact of religion on the structure of economic policy-making. In Muslim societies, governments anticipate Ramadan, understand the importance of redistribution in this time, and plan their temporal allocation of financial resources accordingly. Ramadan also changes the allocation of the government's human resources over time. During the season, bureaucracies are diverted towards addressing salient concerns in Ramadan. Mechanically, this would decrease their supply of less salient services during that period. Thus, the full effect of Ramadan extends across various policy areas over the course of the year.

One limitation of this study is the lack of financial data to evaluate the cost of Ramadan's campaigns relative to overall government spending. Distributive campaigns might merit their own analysis, being one of the most well-publicized, visible, and salient measures taken by the Egyptian regime to tackle economic concerns. Yet, there remains the question of whether the political rationale behind these campaigns extends to government spending decisions more generally. In a separate paper utilizing Egypt's monthly budgetary data at the national level, I find that Ramadan's season is associated with higher growth in total government expenditure and spending towards welfare channels when preceded by episodes of political contention. Government spending in Ramadan, thus, follows a similar logic to that governing distributive campaigns and so our explanation is not specific to a particular outcome.

[47] Note that the presence of political motives behind Ramadan's campaigns does not contradict the idea that public officials might themselves be religious and sincerely following Ramadan's charitable norms. Yet, these religious incentives are not enough to overcome budget constraints. The government still needs to make allocation decisions on who gets their "charity". This is when political incentives become relevant.

Furthermore, it is critical to underline the scope of this study. The effect of Ramadan on government responsiveness and distributive politics is documented across the Muslim World. While this paper develops a theoretical explanation for patterns of distribution in Egypt, similar rationales might govern the politics of Ramadan in other Muslim majority countries. For example, in Turkey, Ark-Yıldırım (2017) reports that the AKP's brokers reach out with economic benefits to Kurdish voters (a key opposition group to the ruling AKP) during Ramadan. Future research can explore these religious patterns of distribution in other contexts. Moreover, religious seasons are not particular to Muslim societies. In religious Christian societies, Christmas might perform a similar role to Ramadan. Politicians' behavior in religiously diverse societies could be even more complicated, having to balance support among different religious groups. These are fruitful areas for future research.

Finally, it is rather difficult to evaluate whether Ramadan's effects are generally welfare-enhancing. On one hand, distribution in religious seasons might be a cheaper alternative for autocrats to win the hearts and minds of their populations without sponsoring bigger structural reforms to the state's distributive apparatus. On the other hand, given the weakness of formal political accountability mechanisms in autocracies, it is unlikely that overall redistribution would be higher -or that structural reforms to the distributive machine would be adopted- in the absence of the pressures amalgamating in Ramadan. If so, then Ramadan might -at the least- prevent citizens' economic welfare from dropping. Besides that, Ramadan's norms and rituals facilitate the working of welfare-enhancing mechanisms by enabling citizens to reap more benefits from their collective actions. So, even if we cannot assess whether the overall economic provision would be lower without Ramadan, there is evidence that the religious season induces government responsiveness.

Similarly, the normative implications of Ramadan's distributive politics are unclear. To one end, Ramadan provides a natural opportunity for citizens to extract more resources from their governments. Incumbents in religious societies might find it risky to ignore salient religious messages adhered to by the vast majority of their subjects. Hence, these religious norms provide citizens with leverage over their rulers, even if occasionally. One can argue that this is good for governance, particularly when alternative accountability mechanisms are weak. At the other end, these seasonal forms of distribution are often framed as "gifts", "charity", and "gestures of the

regime's generosity", rather than citizens' rights. I have argued that this framing is integral to the political functioning of Ramadan's benefits. It is also its serious normative flaw. These seasonal gifts promote citizens' dependency on the whims of their governments, rather than emphasizing their entitlement to these benefits. They turn rights into favors. Future research can enrich our understanding of this area by exploring how citizens react to the governmental provision of material benefits differently pending on their framing and timing.

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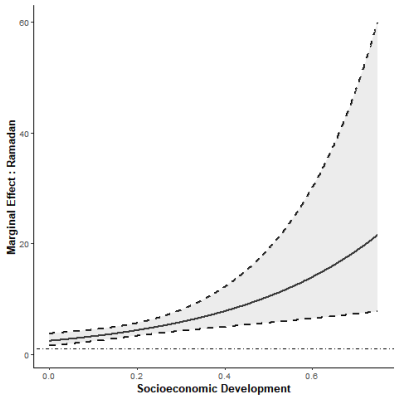
Appendices

Appendix A Alternative Explanations

There are two possible alternative explanations for Ramadan's distributive campaigns. First, the government might capitalize on citizens' propensity for consumption in Ramadan to increase their sales of goods produced by the public sector and generate revenues. These producers enjoy privileges that bring their costs down and enable them to maintain a profit margin, even after lowering their prices. Boosting the supply of discounted goods, thus, might be a profit-seeking strategy to capitalize on the commercial aspect of Ramadan. Although this explanation would not account for targeting areas with past collective action, it could explain targeting more developed areas. I test this possibility by recoding the outcome to only include campaigns offering free goods. Since there is no profit to be sought from distributing free goods, they should be directed towards less developed municipalities. Figure 1 plots the marginal effects of Ramadan's season on the distribution of free goods by socioeconomic development. In accordance with the main results, campaigns offering free goods are more likely to target areas with higher levels of development. This undermines the possibility that the results are driven by targeting discounted goods towards economically developed areas to generate revenues.

Figure 1: The Marginal Effects of Ramadan on the Incidence Ratio of Distribution of Free Goods



Note: The plotted line refers to the marginal effects of Ramadan on incidence rate ratio at different levels of the moderating variable. Confidence intervals are estimated at the 95 percent level.

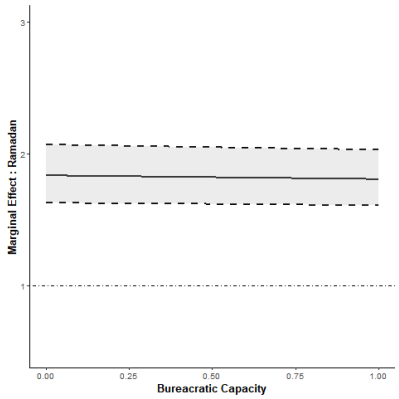
Alternatively, more resources might be directed towards municipalities with more

capable bureaucracies. During the period of the study, local governments in Egypt are appointed, not elected, and so they behave as a bureaucracy. To avoid the misallocation of resources, the central government might direct more resources to municipalities with more efficient bureaucracies. It is also possible that more efficient local governments might have a bargaining advantage and are better positioned to extract more resources from the central government. This hypothesis could explain why developed municipalities receive more campaigns. However, it contradicts the evidence that distribution is higher in areas with past collective action because efficient local governments are expected to contain any political unrest (Blaydes, 2010).

Besides that, the empirical evidence does not support this possibility. I test this hypothesis by employing a measure of local governments' bureaucratic capacity based on the number of infrastructure maintenance works to basic services (water, electricity, roads, gas pipes, sewage, and other public facilities) conducted by the local government in the past six months. The choice of a six-month period attempts at maintaining a balance between relative stability in performance and accounting for short-term fluctuations in performance due to bureaucratic turnover or seasonal factors. Maintaining local infrastructure is one of the key functions of municipalities. It is also an indicator of the resources available to local governments to perform their primary functions. Thus, I expect more efficient and capable local governments to be more active in solving the key problems under their jurisdiction.

Local governments announce maintenance work conducted on local infrastructure on a semi-daily basis, which is communicated to the public via their social media accounts. This information was collected and aggregated following the same data collection process of the main outcome. I follow the same estimation procedures described and employed in the main analysis to test the moderating role of bureaucratic capacity by interacting its measure with the indicators for Ramadan's season. The results plotted in Figure 2 strongly indicate that there is no moderating role for bureaucratic capacity.

Figure 2: The Marginal Effects of Ramadan on the Incidence Ratio of Distributive Campaigns by Bureaucratic Capacity



Note: The plotted line refers to the marginal effects of Ramadan on incidence rate ratio at different levels of the moderating variable. Confidence intervals are estimated at the 95 percent level.

Appendix B Robustness Checks for the Main Analysis

B.1 Seasonality

This section tests the robustness of the findings to common seasonal patterns in the outcome. Table 1 replicates the main analysis of Equation 1 and Equation 2 after adding month fixed effects. Table 2 uses day of the year fixed effects. Overall, most of our conclusions remain unchanged.

Table 1: Poisson Regression Estimates of Ramadan's Effects - Month FEs

	(1)	(2)	(3)	(4)
RAMADAN	1.1 (2.95)***	1.1 (2.89)***	0.68 (1.97)***	1 (2.78)***
	(0.16)	(0.16)	(0.18)	(0.16)
ELECTION		0.06 (1.07)	0.04 (1.04)	-0.21 (0.81)
		(0.14)	(0.14)	(0.41)
DEV		-1.9 (0.15)	-2.6 (0.08)$^{+}$	-2 (0.14)
		(1.3)	(1.3)	(1.2)
ACTION		-0.31 (0.73)	-0.71 (0.49)	-0.30 (0.74)
		(0.33)	(0.55)	(0.33)
RAMADAN x ACTION			1 (2.82)$^{+}$	
			(0.62)	
RAMADAN x DEV			1.6 (5.12)*	
			(0.64)	
ELECTION x ACTION				-9.6 (0) ***
				(0.48)
ELECTION x DEV				1.4 (3.9)
				(1.8)
Controls	N	Y	Y	Y
Observations	646,808	589,945	589,945	589,945

Note: Incidence Rate Ratios are reported in parentheses. All models contain municipalities, year, and month fixed effects. Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. Models (2)-(4) contain all the controls described in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2: Poisson Regression Estimates of Ramadan's Effects - Day of the Year FEs

	(1)	(2)	(3)	(4)
RAMADAN	1.2 (3.26)***	1.2 (3.17)***	0.73 (2.07)***	1.1 (3.00)***
	(0.17)	(0.20)	(0.22)	(0.19)
ELECTION		0.06 (1.06)	0.04 (1.04)	-0.26 (0.77)
		(0.14)	(0.14)	(0.40)
DEV		-1.9 (0.15)	-2.6 (0.07)*	-2 (0.13)
		(1.3)	(1.3)	(1.2)
ACTION		-0.21 (0.81)	-0.57 (0.57)	-0.20 (0.82)
		(0.30)	(0.55)	(0.31)
RAMADAN x ACTION			0.89 (2.45)	
			(0.62)	
RAMADAN x DEV			1.7 (5.73)**	
			(0.63)	
ELECTION x ACTION				-9.5 (0) ***
				(0.47)
ELECTION x DEV				1.6 (4.96)
				(1.9)
Controls	N	Y	Y	Y
Observations	646,808	589,945	589,945	589,945

Note: Incidence Rate Ratios are reported in parentheses. All models contain municipalities, year, and day of the year fixed effects. Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. Models (2)-(4) contain all the controls described in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B.2 Governorate Fixed Effects

Table 3 replicates the main analysis of Equation 1 and Equation 2 after replacing the municipality fixed effects with governorate fixed effects. This allows for exploiting further variation between (in addition to within) municipalities. The findings are consistent with the paper's results.

Table 3: Poisson Regression Estimates of Ramadan's Effects - Governorate FEs

	(1)	(2)	(3)	(4)
RAMADAN	0.52 (1.69)***	0.56 (1.75)***	0.12 (1.13)	0.55 (1.72)***
	(0.13)	(0.12)	(0.14)	(0.12)
ELECTION		0.31 (1.36)*	0.22 (1.24)+	0.01 (1.01)
		(0.14)	(0.13)	(0.08)
DEV		0.50 (1.65)	-0.24 (0.79)	0.43 (1.53)
		(1.1)	(1.1)	(1.1)
ACTION		-0.58 (0.56)	-1.2 (0.31)+	-0.55 (0.57)
		(0.54)	(0.63)	(0.55)
RAMADAN x ACTION			1.5 (4.35)**	
			(0.57)	
RAMADAN x DEV			2.2 (8.71)*	
			(0.89)	
ELECTION x ACTION				-8.5 (0)***
				(0.63)
ELECTION x DEV				1.2 (3.3)
				(0.83)
Controls	N	Y	Y	Y
Observations	646,808	644,290	644,290	644,290

Note: Incidence Rate Ratios are reported in parentheses. Standard errors in parentheses *below* the coefficients are clustered for governorates and years. Models (2)-(4) contain all the controls described in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B.3 Model Specification

Table 4 re-estimates Equation 1 and Equation 2 (in line with the main analysis) using negative binomial regression, which takes into account over-dispersion in the data. In Table 5, same models are estimated from OLS regression models. Both modeling strategies yield results consistent with our main conclusions. The only exception is our results on collective action in column (2) of Table 5, which is statistically insignificant, small in magnitude, and negative. This result should be considered with some caution due to the dispersed distribution of the outcome variable.

Table 4: Negative Binomial Regression Estimates

	(1)	(2)	(3)
RAMADAN	0.63 (1.88)***	0.22 (1.25)	0.62 (1.86)***
	(0.15)	(0.15)	(0.15)
ACTION	0.07 (1.08)	-0.26 (0.77)	0.10 (1.10)
	(0.13)	(0.23)	(0.13)
DEV	-1.3 (0.28)	-2 (0.13)$^{+}$	-1.4 (0.26)
	(1.2)	(1.2)	(1.1)
ELECTION	0.31 (1.37)*	0.22 (1.24)	0.03 (1.03)
	(0.15)	(0.14)	(0.19)
RAMADAN x ACTION		0.71 (2.04)**	
		(0.27)	
RAMADAN x DEV		2 (7.50)**	
		(0.74)	
ELECTION x ACTION			-14.2 (0)***
			(0.86)
ELECTION x DEV			1.1 (3.15)
			(1.3)
Observations	589,945	589,945	589,945

Note: Incidence Rate Ratios are reported in parentheses. All models contain municipalities and year fixed effects. Standard errors in parentheses below the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5: OLS Regression Estimates

	(1)	(2)	(3)
RAMADAN	0.004^{***}	0.002	0.004^{***}
	(0.001)	(0.001)	(0.001)
ACTION	0.002	0.003	0.003
	(0.002)	(0.003)	(0.002)
DEV	-0.014^{*}	-0.017^{*}	-0.015^{*}
	(0.007)	(0.007)	(0.007)
ELECTION	0.001^{*}	0.001	-0.001
	(0.001)	(0.001)	(0.001)
RAMADAN x ACTION		-0.002	
		(0.004)	
RAMADAN x DEV		0.010^{*}	
		(0.004)	
ELECTION x ACTION			-0.012^{+}
			(0.007)
ELECTION x DEV			0.009^{*}
			(0.004)
Observations	644,290	644,290	644,290

Note: Incidence Rate Ratios are reported in parentheses. All models contain municipalities and year fixed effects. Standard errors in parentheses below the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B.4 Extended Definition of the Outcome - Inclusion of Nation's Future Party's Campaigns

This section expands the outcome to include distributive campaigns by the Nation's Future Party (NFP), the party most affiliated with the regime. I collect reports about distributive campaigns by the Nation's Future Party (NFP) from their official social media accounts using the same data collection procedures described earlier. The modified outcome is the total number of publicly reported distributive campaigns by local governments and the NFP. As shown in Table 6, replicating the main analysis with the modified outcome does not change the conclusions.

Table 6: Poisson Regression Estimates of Ramadan's Effects - Extended Definition of the Outcome

	(1)	(2)	(3)	(4)
RAMADAN	0.50 (1.66)***	0.57 (1.76)***	0.24 (1.27)	0.55 (1.73)***
	(0.14)	(0.15)	(0.17)	(0.15)
ELECTION		0.32 (1.37)*	0.22 (1.25)	-0.11 (0.89)
		(0.16)	(0.15)	(0.19)
DEV		-1.7 (0.18)	-2.3 (0.10)+	-1.9 (0.15)
		(1.2)	(1.3)	(1.2)
ACTION		-0.42 (0.66)	-0.88 (0.41)	-0.40 (0.67)
		(0.37)	(0.54)	(0.38)
RAMADAN x ACTION			1.3 (3.73)*	
			(0.59)	
RAMADAN x DEV			1.5 (4.61)+	
			(0.93)	
ELECTION x ACTION				-9.9 (0)***
				(0.50)
ELECTION x DEV				1.7 (5.59)
				(1.1)
Controls	N	Y	Y	Y
Observations	658,245	600,848	600,848	600,848

Note: Incidence Rate Ratios are reported in parentheses. Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. Models (2)-(4) contain all the controls described in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

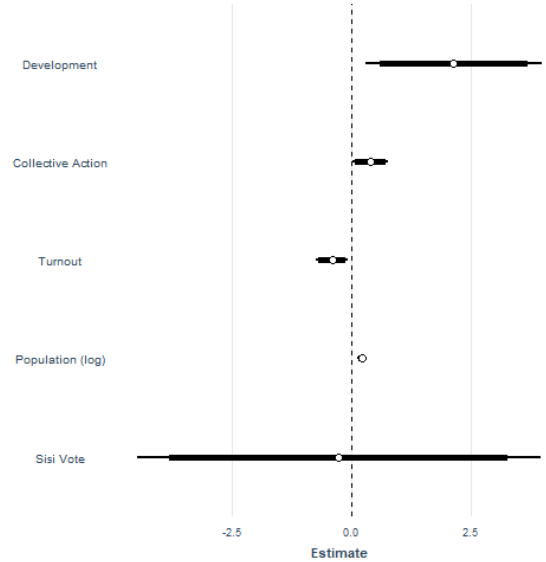
B.5 Outlets

This section evaluates whether the conclusions derived from analyzing local governments' announcements of distributive campaigns match what we could have obtained from a complete bureaucratic record of distribution in Ramadan. For the years 2018 and 2019, the government provided the precise locations of temporary markets -sponsored by various governmental entities- opened exclusively for Ramadan's season. These are *immobile* outlets offering subsidized goods to the public. I use the number of these outlets as an outcome to check whether they are governed by the same political rationale behind the distributive campaigns. I estimate an OLS regression equation with the moderating variables as the main predictors of interest. The model also controls for the log of the population, the turnout rate, and al-Sisi's vote share in the last presidential election. It includes year and governorate fixed

effects.[48]

Figure 3 presents the estimated coefficients from the analysis. The results show that the government is more likely to place Ramadan's subsidized markets in more economically developed and politically contentious areas (the coefficients on both predictors are statistically significant at the 95 percent level). Furthermore, the allocation of Ramadan's market also depends on the turnout rate in the last presidential elections with electorally engaged municipalities receiving fewer Ramadan markets. Croke et al. (2016) argue that electoral disengagement in autocratic elections is a means to delegitimize the elections and signal discontent with the regime. Thus, it is possible that diverting resources away from electorally engaged municipalities is an alternative means to contain potential threats in Ramadan. This finding remains in line with our theoretical predictions that distribution in Ramadan is skewed against those who are most supportive and invested in the regime. Overall, this implies that measuring distribution in Ramadan using data from bureaucratic records would lead us to similar conclusions to those obtained from government announcements about distributive campaigns.

Figure 3: OLS Analysis of Determinants of Immobile Ramadan Markets (2018-2019)



Note: The outcome is the number of immobile markets in Ramadan season. The model contains fixed effects for years and governorates. Standard errors are clustered for governorates. Confidence intervals are at 90 and 95 percent.

[48]Instead of municipality fixed effects, I employ governorate fixed effects because the main predictor variables - except for collective action- are time-invariant after 2018.

B.6 Measurement of Moderators

Table 7 checks the robustness of the analysis of Ramadan's effects in Equation 2 using different measures of the moderating variables: socioeconomic development and collective action. In column (1), socio-economic development is measured using a summative index (DEV (I)), ranging from 0 to 1, that combines five indicators of human and economic development: the proportion of the urban population, the proportion of adults with formal education, and the proportion of the municipality's buildings with access to water, electricity, and sewage.The index has a Cronbach's alpha value of 0.77, indicating its high reliability. In column (2), the index is reduced to only include access to services (SERVICE (I)). Model (3) focuses on the two indicators of socioeconomic development related to human development: the proportion of the urban population and the proportion of adults with formal education, separately. These different measures of socioeconomic development still indicate that Ramadan's campaigns are directed towards more developed areas. Models (4) and (5) replace the collective action variable with the number of violent protests in the past week (ACTION (W)) and day (ACTION (D)), respectively. Again, we see that Ramadan's campaigns are delivered to more contentious municipalities. Thus, our analysis is robust to different measurements of the moderating variables. Table 8 replicates the analysis for distribution in electoral seasons.

Table 7: Poisson Regression Estimates - Ramadan's Effects by Municipality Characteristics - Measurement of Moderators

	(1)	(2)	(3)	(4)	(5)
RAM.	0.21(1.24)	0.57(1.78)***	0.58(1.79)***	0.15(1.17)	0.14(1.15)
	(0.17)	(0.11)	(0.15)	(0.18)	(0.18)
ACTION	-0.64(0.53)	-0.64(0.53)	-0.64(0.53)		
	(0.45)	(0.45)	(0.45)		
DEV (I)	-3.4(0.03)*				
	(1.5)				
RAM. X ACTION	1(2.73)*	1(2.80)*	0.97(2.64)+		
	(0.50)	(0.50)	(0.50)		
RAM. X DEV (I)	1.8(5.84)**				
	(0.56)				
SERVICE (I)		-0.46(0.63)+			
		(0.24)			
RAM. X SERVICE (I)		0.25(1.29)*			
		(0.12)			
FORMAL			-0.07(0.93)		
			(0.19)		
URBAN			-0.31(0.74)+		
			(0.18)		
RAM. X FORMAL			0.11(1.11)+		
			(0.06)		
RAM. X URBAN			0.08(1.08)		
			(0.08)		
ACTION (W)				-0.48(0.62)	
				(0.33)	
RAM. X ACTION (W)				1.4(4.10)***	
				(0.28)	
ACTION (D)					-0.69(0.50)
					(0.50)
RAM. X ACTION (D)					1.3(3.82)*
					(0.67)
Observations	589,945	589,945	589,945	589,945	589,945

Note: Incidence Rate Ratios are reported in parentheses. All models contain municipalities and year fixed effects. Standard errors in parentheses below the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 8: Poisson Regression Estimates - Elections' Effects by Municipality Characteristics - Measurement of Moderators

	(1)	(2)	(3)	(4)	(5)
RAM.	0.57(1.77)***	0.57(1.77)***	0.57(1.77)***	0.57(1.77)***	0.57(1.77)***
	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)
ELE.	0.08(1.09)	0.28(1.32)*	0.28(1.32)*	-0.05(0.95)	-0.06(0.94)
	(0.21)	(0.14)	(0.14)	(0.24)	(0.24)
ACTION	-0.24(0.79)	-0.24(0.79)	-0.25(0.78)		
	(0.28)	(0.28)	(0.29)		
DEV. (I)	-2.8(0.06)*				
	(1.4)				
ELE. X ACTION	-9.8(0)***	-9.8(0)***	-9.7(0)***		
	(0.36)	(0.35)	(0.39)		
ELE. X DEV (I)	0.92(2.51)				
	(1.1)				
SERVICE (I)		-0.36(0.69)			
		(0.22)			
ELE. X SERVICE (I)		0.04(1.04)			
		(0.19)			
FORMAL			-0.04(0.96)		
			(0.19)		
URBAN			-0.29(0.75)		
			(0.18)		
ELE. X FORMAL			0.18(1.20)***		
			(0.03)		
ELE. X URBAN			0.06(1.06)		
			(0.16)		
ACTION (W)				0.19(1.21)	
				(0.37)	
ELE. X ACTION (W)				-7.9(0)***	
				(0.36)	
ACTION (D)					-0.34(0.71)
					(0.34)
ELE. X ACTION (D)					-9.7(0)***
					(0.43)
Observations	589,945	589,945	589,945	589,945	589,945

Note: Incidence Rate Ratios are reported in parentheses. All models contain municipalities and year fixed effects. Standard errors in parentheses below the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B.7 Breaking Down Ramadan's Effects

In Table 9, I re-estimate the baseline model, Equation 1, and Equation 2 after replacing the indicator for Ramadan with two dummy variables for Ramadan and the preceding month, separately. In columns (1) and (2), we can see that distributive campaigns are high in both Ramadan and the month before it. Column (3) also shows that distributive campaigns in Ramadan's season are also higher in more contentious and developed areas. Interestingly, campaigns delivered during Ramadan itself (rather than the month before) are significantly dependent on the municipality's threat of contention, while pre-Ramadan campaigns are more skewed towards developed areas. This suggests that the regime prioritizes developed areas with earlier campaigns (possibly due to their known higher propensity for contention). The dependency of campaigns in the month of Ramadan on prior contention could be driven by the regime's interest in avoiding the escalation of protest activity during the month's congregations by delivering its services while the threat is the highest (during Ramadan, rather than the month before).

Table 9: Poisson Regression Estimates - Ramadan's Effects by Municipality Characteristics - Breakdown of Ramadan's Effects

	(1)	(2)	(3)
PRE-RAMADAN	0.60 (1.83)***	0.68 (1.97)***	0.08 (1.08)
	(0.14)	(0.16)	(0.20)
RAMADAN	0.44 (1.55)**	0.48 (1.62)**	0.22 (1.25)
	(0.16)	(0.16)	(0.26)
ACTION		-0.28 (0.76)	-0.65 (0.52)
		(0.28)	(0.44)
DEV		-1.9 (0.15)	-2.9 (0.06)*
		(1.3)	(1.3)
ELECTION		0.31 (1.36)*	0.20 (1.22)+
		(0.13)	(0.11)
PRE-RAMADAN X ACTION			0.74 (2.10)
			(0.49)
PRE-RAMADAN X DEV			2.8 (16.37)***
			(0.82)
RAMADAN X ACTION			1.2 (3.34)*
			(0.60)
RAMADAN X DEV			1.4 (4.22)
			(1.3)
Observations	646,808	589,945	589,945

Note: Incidence Rate Ratios are reported in parentheses. All models contain municipalities and year fixed effects. Standard errors in parentheses below the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B.8 Distribution of Protest Activity

In Table 10, I check the robustness of the findings by dropping years with less variation in protest activity and replicate the analysis of Equation 2 presented in the main text. Although dropping years of the analysis affects the sample size and the precision of the estimates, I still find that Ramadan's campaigns are more likely to target more contentious areas, in contrast to the targeting pattern observed for pre-electoral campaigns.

Table 10: Poisson Regression Estimates - Ramadan's Effects by Municipality Characteristics - Dropping Years with Low Variation on Protest Activity

	(1)	(2)	(3)	(4)
RAMADAN	0.24	0.44*	0.26	0.68***
	(0.19)	(0.18)	(0.23)	(0.08)
ACTION	-0.57	-0.21	-0.40	0.19*
	(0.41)	(0.27)	(0.41)	(0.09)
DEV	-2.9***	-2.6***		
	(0.68)	(0.77)		
ELECTION	0.05	-0.20	-0.06	-0.65***
	(0.17)	(0.35)	(0.08)	(0.14)
RAMADAN X ACTION	0.93+		0.78+	
	(0.50)		(0.40)	
RAMADAN X DEV	1.1		2.8*	
	(1)		(1.2)	
ELECTION X ACTION		-8.2***		-8.4***
		(0.38)		(0.34)
ELECTION X DEV		1.5		4.1***
		(2.4)		(0.90)
Years	2014-2018	2014-2018	2014-2016	2014-2016
Observations	425,583	425,583	203,058	203,058

Note: Incidence Rate Ratios are reported in parentheses. All models contain municipalities and year fixed effects. Standard errors in parentheses below the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B.9 External Validity: Alternative Outcomes

This investigates the external validity of our findings to other outcomes related to distributive concerns. Table 11 considers the number of market monitoring campaigns as an outcome. Table 12 takes the number of maintenance works to the water infrastructure as a second outcome. Both outcomes are measured at the level of municipality-day. The data collection procedure for these variables follows the same procedures used in generating the measure of distributive campaigns. Model (1) estimates Equation 1 and models (2)-(3) are based on Equation 2. These models suggest that Ramadan is associated with more market monitoring campaigns and maintenance works of drinking water infrastructure only in more contentious areas.

Table 11: Poisson Regression Estimates - Ramadan's Effects on Market Monitoring Campaigns

	(1)	(2)	(3)
RAMADAN	0.08 (1.09)	-0.12 (0.89)	0.07 (1.08)
	(0.13)	(0.08)	(0.13)
ACTION	0.10 (1.11)	-0.04 (0.97)	0.11 (1.11)
	(0.14)	(0.13)	(0.13)
DEV	0.37 (1.45)	0.20 (1.22)	0.42
	(1.5)	(1.5)	(1.5)
ELECTION	-0.12 (0.88)	-0.15 (0.86)	0.21 (1.24)*
	(0.18)	(0.18)	(0.11)
RAMADAN x ACTION		0.36 (1.43)**	
		(0.12)	
RAMADAN x DEV		0.82 (2.26)	
		(0.55)	
ELECTION x ACTION			-9.8 (0)***
			(0.14)
ELECTION x DEV			-1.5 (0.23)
			(0.94)
Observations	598,156	598,156	598,156

Note: Incidence Rate Ratios are reported in parentheses. All models contain municipalities and year fixed effects. Standard errors in parentheses below the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 12: Poisson Regression Estimates - Ramadan's Effects on Water Services Maintenance

	(1)	(2)	(3)
RAMADAN	-0.19 (0.83)***	-0.03 (0.97)	-0.20 (0.82)***
	(0.03)	(0.16)	(0.03)
ACTION	-0.15 (0.86)*	-0.41 (0.67)+	-0.13 (0.88)+
	(0.07)	(0.23)	(0.07)
DEV	-0.85 (0.43)+	-0.74 (0.48)	-0.82 (0.44)+
	(0.50)	(0.54)	(0.49)
ELECTION	-0.03 (0.97)	-0.02 (0.98)	0.20 (1.22)***
	(0.11)	(0.11)	(0.04)
RAMADAN x ACTION		0.80 (2.22)*	
		(0.36)	
RAMADAN x DEV		-0.66 (0.51)	
		(0.55)	
ELECTION x ACTION			-9.6 (0)***
			(0.20)
ELECTION x DEV			-0.88 (0.42)
			(0.59)
Observations	600,336	600,336	600,336

Note: Incidence Rate Ratios are reported in parentheses. All models contain municipalities and year fixed effects. Standard errors in parentheses below the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix C Causality

C.1 Description of the Reforms to the Energy Subsidy Program

The political events following the Egyptian mass uprising of 2011 exacerbated the Egyptian economy. Budget deficits grew from under 8 percent of GDP in 2010 to 14 percent in 2013. The government debt increased from 73 percent of GDP to 89 percent (James, 2015). Fuel and electricity subsidies constituted a large portion of government expenditure amounting to 22 percent of government expenditure or 6 percent of GDP in 2013 (Breisinger et al., 2019). After the election of 2014, the Egyptian government introduced a wide set of economic reforms to accelerate economic growth, cut the budget deficit, and attract international donors and investors.

Reforming the extensive energy subsidies program came at the top of these policies. The goal was to phase out all energy subsidies by 2021 including oil, gas, natural gas, LPG, and electricity.

I focus on the impact of the reforms to the electricity sector on Egyptian households. Not only that electricity constitutes the largest item on the energy bill of Egyptian households, but its cost of production -and so prices- are also dependent on the cost of other fuels which factor into its production process. So, it is strongly reflective of the overall impact of the reforms. I constrain the analysis to households and exclude commercial sectors. This is because households are more directly affected by the reforms and have fewer options to evade their costs. Commercial sectors, however, can transfer the costs of the price hikes to consumers by raising the prices of their services and goods.

For households, the pricing of electricity depends on the level of consumption. Consumers are divided into seven tiers. The price per kilowatt differs for every tier of consumption. The change in the prices with every fiscal year is also different for every tier. The table below provides the prices per kilowatt of electricity for household consumption for the seven consumption tiers for the fiscal years of the reform. Note that the fiscal year starts in July.

Table 13: The Price per Unit of Electricity for Household Consumption Tiers over Time

Year/Tier	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2013/2014	5	12	13	19	29	53	67
2014/2015	7.5	14.5	16	24	34	60	74
2015/2016	7.5	14.5	16	39	39	68	78
2016/2017	11	19	21	42	55	95	95
2017/2018	13	22	27	55	75	125	135
2018/2019	22	30	36	70	90	135	145
2019/2020	30	40	50	82	100	140	145

C.2 Determining Municipalities' Exposure to the Reforms

Exposure to electricity price shocks depends on consumers' level of consumption before the execution of the reforms. Based on their consumption, consumers are divided into seven tiers as previously described. Ideally, to determine the exposure of a given municipality to the impact of the reforms, we would need the distribution of its consumers over these consumption tiers. However, such data are not publicly available. Instead, I approximate the exposure of municipalities following a set of steps to deduce the average consumption level - and so exposure- of the representative consumer in any given municipality.

The Egyptian Central Agency for Public Mobilization and Statistics releases an annual bulletin of electricity and energy statistics. The document provides the level of electricity consumption at the governorate level for urban and rural areas. This is the key data source I employ to determine the consumption rate of the representative household at the municipality level. First, I calculate the average consumption rate of urban and rural households at the governorate level. This is done by dividing the total electricity consumption by rural/urban households over the rural/urban population of the governorate. This yields the average consumption rate per rural/urban resident. I then multiply that value by the average rural/urban household size in the governorate (approximately 4 individuals per household). This gives us the average consumption per rural and urban household for different governorates. Subsequently, we can deduce the tier of rural and urban households at the governorate level. Note that the tiers of consumers are derived based on consumption and population data from 2013, before the implementation of the policy.

I then use this information to determine the average cost of a kilowatt of electricity at the municipality level. This is determined using the following formula:

$$C_m = P_{urban,m} C_{G|urban} + P_{rural,m} C_{G|rural} \tag{6}$$

where C_m is the average cost of a kilowatt for the representative consumer in a given municipality (m), $P_{urban,m}$ and $P_{rural,m}$ are the proportions of rural and urban households in a given municipality, $C_{G|urban}$ is the cost per KW for an urban household in governorate (g), and $C_{G|rural}$ is the cost per KW for a rural household in governorate (g). The cost per KW is determined based on the tier of the representative

rural/urban consumer in the governorate.

Following these steps, we can approximate the average cost per kilowatt for a representative household in a municipality (m) in a governorate (G). This calculation is made for every year separately, but the tiers of the consumers are all based on consumption levels in 2013.

C.3 Robustness Checks

In this section, I conduct a set of robustness checks in line with the tests conducted earlier. Some tests are discarded for irrelevance or infeasibility. Table 14 employs negative binomial regression to estimate the effects of price shocks and Ramadan. Table 15 uses OLS regression. Table 16 considers the extended definition of the outcome (using reports from local governments and NFP). The results remain robust to these different changes.

Table 14: Negative Binomial Regression Estimates of Price Shocks and Ramadan on Distributive Campaigns

	(1)	(2)	(3)
Price	-0.88 (0.41)	-1.2 (0.3)	-1.4 (0.25)*
	(0.87)	(0.83)	(0.63)
Ramadan	1.2 (3.32)***	1.1 (3)***	
	(0.14)	(0.14)	
Ramadan x Price		0.23 (1.26)***	0.18 (1.2)*
		(0.07)	(0.09)
Observations	577,078	577,078	570,403

Note: Incidence Rate Ratios are reported in parentheses. The first two models contain municipality and day of the year fixed effects, with standard errors in parentheses below the coefficients clustered at same levels. The third model contains day of the year and (municipality x ramadan) fixed effects. All models contain the controls described in the text. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 15: OLS Regression Estimates of Price Shocks and Ramadan on Distributive Campaigns

	(1)	(2)	(3)
Price	-0.007**	-0.008***	-0.008***
	(0.002)	(0.002)	(0.001)
Ramadan	0.006***	0.006***	
	(0.001)	(0.001)	
Ramadan x Price		0.001*	0.002*
		(0.0006)	(0.0009)
Observations	631,942	631,942	631,942

Note: The first two models contain municipality and day of the year fixed effects, with standard errors in parentheses below the coefficients clustered at the same levels. The third model contains day of the year and (municipality x ramadan) fixed effects. All models contain the controls described in the text. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 16: Poisson Regression Estimates of Price Shocks and Ramadan - Extended Definition of the Outcome

	(1)	(2)	(3)
Price	-1.2 (0.3)*	-1.4 (0.25)**	-1.4 (0.25)*
	(0.58)	(0.53)	(0.63)
Ramadan	1.2 (3.32)***	1.1 (3)***	
	(0.14)	(0.14)	
Ramadan x Price		0.20 (1.22)*	0.18 (1.2)*
		(0.08)	(0.09)
Observations	587,922	587,922	570,403

Note: Incidence Rate Ratios are reported in parentheses. The first two models contain municipality and day of the year fixed effects, with standard errors in parentheses below the coefficients clustered at the same levels. The third model contains day of the year and (municipality x ramadan) fixed effects. All models contain the controls described in the text. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Finally, I check whether the effect of price shocks (and its change in Ramadan) impacts the other outcomes related to distributive concerns: market-monitoring campaigns and maintenance of water services. In Table 17, the results indicate that areas more exposed to the price shocks receive more market monitoring campaigns,

yet this effect does not change in Ramadan. The story in Table 18 is more similar to that observed for distributive campaigns: places more affected by the price shocks are more likely to witness improvements in water infrastructure in Ramadan.

Table 17: Poisson Regression Estimates of Price Shocks and Ramadan on Market Monitoring Campaigns

	(1)	(2)	(3)
Price	1.3 (3.67)***	1.2 (3.32)***	1.2(3.32)***
	(0.13)	(0.13)	(0.08)
Ramadan	0.007 (1.01)	-0.01 (0.99)	
	(0.08)	(0.07)	
Ramadan x Price		0.07 (1.07)	0.09 (1.09)
		(0.06)	(0.07)
Observations	590,218	590,218	567,937

Note: Incidence Rate Ratios are reported in parentheses. The first two models contain municipality and day of the year fixed effects, with standard errors in parentheses below the coefficients clustered at the same levels. The third model contains day of the year and (municipality x ramadan) fixed effects. All models contain the controls described in the text. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 18: Poisson Regression Estimates of Price Shocks and Ramadan on Water Services Maintenance

	(1)	(2)	(3)
Price	-1.1 (0.33)**	-1.2 (0.3)***	-1.2 (0.3)***
	(0.36)	(0.35)	(0.24)
Ramadan	0.10 (1.1)	0.05 (1.05)	
	(0.10)	(0.10)	
Ramadan x Price		0.11 (1.12)*	0.07 (1.07)
		(0.06)	(0.09)
Observations	589,752	589,752	564,118

Note: Incidence Rate Ratios are reported in parentheses. The first two models contain municipality and day of the year fixed effects, with standard errors in parentheses below the coefficients clustered at the same levels. The third model contains day of the year and (municipality x ramadan) fixed effects. All models contain the controls described in the text. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix D Causal Mechanisms

D.1 Framing Distribution

To probe the robustness of the findings, I try a different configuration of the dictionary in Table 19 by removing words that are strongly associated with Ramadan itself. Yet, the conclusions remain unchanged. In Table 20, I account for potential seasonal effects in the outcome by adding fixed effects for the month of the year, but report no remarkable change in the main results on Ramadan's effects.

Table 19: OLS Regression Estimates of Ramadan's Effects on Framing of Distributive Posts (Robustness-No Ramadan)

	(1)	(2)
Ramadan	0.084***	0.081
	(0.016)	(0.045)
Elections	0.045	0.040
	(0.064)	(0.061)
Action	-0.063	-0.150**
	(0.040)	(0.046)
Development	-0.063	-0.150**
	(0.040)	(0.046)
Ramadan x Action		0.284***
		(0.055)
Ramadan x Development		0.007
		(0.220)
Observations	4,196	4,196
R^2	0.22	0.22

Note: Both models contain fixed effects for municipalities and years and the controls in Equation 1. The analysis is done at the post-level. Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 20: OLS Regression Estimates of Ramadan's Effects on Framing of Distributive Posts - Addressing Seasonality - Month Fixed Effects

	(1)	(2)
Ramadan	0.094*	0.060
	(0.050)	(0.082)
Elections	0.080	0.073
	(0.062)	(0.059)
Action	-0.040	-0.116**
	(0.030)	(0.038)
Development	0.729***	0.668**
	(0.199)	(0.210)
Ramadan x Action		0.235***
		(0.049)
Ramadan x Development		0.169
		(0.246)
Observations	4,196	4,196
R^2	0.26	0.27

Note: Both models contain fixed effects for (municipalities, years, and month) and the controls in Equation 1. The analysis is done at the post-level. Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

D.2 Religious Mobilization

In this section, I present a set of robustness checks for the analysis of the role of Islamist mobilization threat. Table 21 introduces four different changes. Models (1) and (2) add month and day of the year fixed effects, respectively, to address concerns related to seasonality. Model (3) uses governorate FEs instead of municipality FEs. Model (4) considers the expanded definition of the outcome (including campaigns by NFP). Table 22 replicates the analysis using negative binomial and OLS regressions to check sensitivity to model specification. Table 23 drops years with less variation on the collective action variable (ISLAMIST). Finally, Table 24 considers different outcomes (market monitoring campaigns and maintenance of water services) to check the external validity of the findings. Across all these models, the interaction coefficient of interest (RAMADAN x ISLAMIST) remains significant and positive.

Table 21: Poisson Regression Estimates - Ramadan's Effects by Islamist Collective Action - Seasonality, Governonrate FEs, and Extended Outcome

	(1)	(2)	(3)	(4)
RAMADAN	0.67 (1.95)***	0.72 (2.05)***	0.12 (1.13)	0.24 (1.27)
	(0.18)	(0.21)	(0.16)	(0.18)
ISLAMIST	-0.68 (0.51)$^{+}$	-0.70 (0.50)$^{+}$	-0.66 (0.52)$^{+}$	-0.66 (0.52)$^{+}$
	(0.38)	(0.36)	(0.38)	(0.40)
DEV	-2.6 (0.08)*	-2.6 (0.08)*	-0.24 (0.79)	-2.3 (0.10)$^{+}$
	(1.3)	(1.3)	(1.1)	(1.3)
RAMADAN x ISLAMIST	1.1 (3)***	1.1 (3)***	1.2 (3.36)**	1.2 (3.37)***
	(0.31)	(0.30)	(0.40)	(0.36)
RAMADAN x DEV	1.7 (5.32)**	1.8 (5.93)**	2.2 (9.05)*	1.5 (4.70)$^{+}$
	(0.64)	(0.64)	(0.89)	(0.93)
Observations	589,945	586,725	644,290	600,848
Change	Month FEs	Day FEs	Gov. FEs	Extended Outcome

Note: Incidence Rate Ratios are reported in parentheses. Model (1) contains municipalities, year, and month fixed effects. Model (2) contains municipalities, year, and day of the year fixed effects. Model (3) contains governorate and year fixed effects. Model (4) contains municipality and year fixed effects but employs the extended definition of the outcome. Standard errors in parentheses below the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 22: Poisson Regression Estimates - Ramadan's Effects by Islamist Collective Action - Model Specification

	(1) (Negative Binomial)	(2) (OLS)
RAMADAN	0.21 (1.24)	0.001
	(0.15)	(0.001)
ISLAMIST	-0.63 (0.53)$^{+}$	-0.003
	(0.34)	(0.003)
DEV	-2 (0.13)$^{+}$	-0.02*
	(1.2)	(0.007)
RAMADAN X ISLAMIST	1.3 (3.72)***	0.004***
	(0.36)	(0.0007)
RAMADAN X DEV	2 (7.73)**	0.01
	(0.75)	(0.007)
Observations	589,945	644,290

Note: Incidence Rate Ratios are reported in parentheses in model (1). All models contain municipalities and year fixed effects. Standard errors in parentheses below the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 23: Poisson Regression Estimates - Ramadan's Effects by Islamist Collective Action - Dropping Years

	(1)	(2)
RAMADAN	0.23 (1.26)	0.25 (1.29)
	(0.20)	(0.24)
ISLAMIST	-0.84 (0.43)$^{+}$	-0.48 (0.62)
	(0.43)	(0.35)
DEV	-2.9 (0.06)***	
	(0.62)	
RAMADAN X ISLAMIST	1.3 (3.52)**	0.99 (2.70)**
	(0.40)	(0.34)
RAMADAN X DEV	1.2 (3.27)	2.9 (17.78)*
	(1)	(1.2)
Observations	425,583	203,058
Year	2014-2018	2014-2016

Note: Incidence Rate Ratios are reported in parentheses. All models contain municipalities and year fixed effects. Standard errors in parentheses below the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 24: Poisson Regression Estimates - Ramadan's Effects by Islamist Collective Action - Alternative Outcomes

	(1) (Market Monitoring)	(2) (Water Services)
RAMADAN	-0.13 (0.88)$^{+}$	-0.04 (0.97)
	(0.08)	(0.16)
ISLAMIST	0.05 (1.05)	-0.53 (0.59)
	(0.18)	(0.47)
DEV	0.20 (1.22)	-0.75 (0.47)
	(1.5)	(0.55)
RAMADAN X ISLAMIST	0.57 (1.76)**	0.91 (2.48)*
	(0.21)	(0.44)
RAMADAN X DEV	0.84 (2.32)	-0.64 (0.52)
	(0.55)	(0.55)
Observations	598,156	600,336

Note: Incidence Rate Ratios are reported in parentheses. All models contain municipalities and year fixed effects. Standard errors in parentheses below the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 2, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

As discussed in the text, I also confirm the validity of our conclusions on the role of Islamist mobilization capacity using an alternative measure obtained from Brooke and Ketchley (2018): the number of Muslim Brotherhood's branches in the municipality in 1940. These early branches constituted the earliest attempts of political Islam movements for recruitment and mobilization. This historical presence of MB offices might have contributed to the founding of infrastructure necessary for religious mobilization and increasing locals' preferences for religious rule. Using the same specification in Equation 2, Table 25 shows that Ramadan's campaigns are also more likely to target areas with historical MB presence, consistent with our main findings. Note that the coefficient on the (MB OFFICE) variable is absorbed by the municipality FEs.

Table 25: Poisson Regression Estimates - Historical Muslim Brotherhood Institutions

	(1)
RAMADAN	0.03 (1.03)
	(0.23)
DEV	-3.1 (0.05)*
	(1.4)
RAMADAN X MB OFFICE	0.09 (1.09)*
	(0.04)
RAMADAN X DEV	2.4 (11.02)**
	(0.90)
Observations	589,945

Note: Incidence Rate Ratios are reported in parentheses. The model contains municipalities and year fixed effects. Standard errors in parentheses below the coefficients are clustered for municipalities and years. The model includes all the controls specified in Equation 2, but only variables with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

D.3 Distribution and Perceptions of the Regime

D.3.1 Robustness Checks

In this section, I check the robustness of the analysis of voters' reactions to distributive campaigns. First, I employ the number of campaigns in the last two weeks, instead of one week, as the main independent variable to check the sensitivity of the findings to measurement. The results below closely resemble those presented in the main analysis.

Table 26: OLS Analysis of Respondents' Reactions to Distribution in Ramadan - Two Weeks of Campaigns

	(1) Performance	(2) Econ. Cond.	(3) Trust	(4) Integrity	(5) Clientelism
DIST. (2W)	0.110	0.013	0.336*	0.218	-0.588**
	(0.175)	(0.157)	(0.142)	(0.141)	(0.201)
R^2	0.31	0.25	0.26	0.29	0.35
Observations	1,057	1,056	1,061	998	960

Note: All models include fixed effects for municipalities and controls for gender, age, age-squared, employment, labor force status, urban residency, and educational level. Standard errors in parentheses are clustered for municipalities. All outcomes are measured in standard deviations. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 27: OLS Analysis of Respondents' Reactions to Distribution in Ramadan by Ideological Position - Two Weeks of Campaigns

	(1) Performance	(2) Econ. Cond.	(3) Trust	(4) Integrity	(5) Clientelism
DIST. (2W)	0.136	-0.101	0.174	-0.093	-0.660**
	(0.180)	(0.169)	(0.150)	(0.128)	(0.201)
RELIGIOUS	-0.303***	-0.501***	-0.474***	-0.373***	0.252**
	(0.085)	(0.131)	(0.088)	(0.104)	(0.088)
DIST. (2W) X RELIG.	0.165	0.248^{+}	0.211*	0.287*	-0.312*
	(0.117)	(0.127)	(0.103)	(0.138)	(0.143)
R^2	0.35	0.314	0.34	0.34	0.37
Observations	910	910	910	881	863

Note: All models include fixed effects for municipalities and controls for gender, age, age-squared, employment, labor force status, urban residency, and educational level. Standard errors in parentheses are clustered for municipalities. All outcomes are measured in standard deviations.

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The second robustness check changes the specification of the model to employ governorate -instead of municipality- fixed effects with standard errors clustered for governorates. To control for municipalities' characteristics, I include all the control and moderating variables used in the main analysis described in Equation 1. Again, the main conclusions still hold.

Table 28: OLS Analysis of Respondents' Reactions to Distribution in Ramadan - Governorate FE

	(1) Performance	(2) Econ. Cond.	(3) Trust	(4) Integrity	(5) Clientelism
DISTRIBUTION	0.014	0.078	0.129*	0.025	-0.175*
	(0.039)	(0.048)	(0.050)	(0.086)	(0.064)
R^2	0.12	0.12	0.14	0.18	0.1
Observations	1,049	1,048	1,053	990	952

Note: All models include fixed effects for governorates and controls for gender, age, age-squared, employment, labor force status, urban residency, and educational level. Standard errors in parentheses are clustered for governorates. All outcomes are measured in standard deviations. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 29: OLS Analysis of Respondents' Reactions to Distribution in Ramadan by Ideological Position - Governorate FE

	(1) Performance	(2) Econ. Cond.	(3) Trust	(4) Integrity	(5) Clientelism
DISTRIBUTION	-0.046	-0.084^{+}	0.095	-0.067	-0.025
	(0.034)	(0.044)	(0.076)	(0.066)	(0.091)
RELIGIOUS	-0.354***	-0.606***	-0.547***	-0.394***	0.337***
	(0.091)	(0.144)	(0.122)	(0.097)	(0.082)
DIST. X RELIG.	0.359*	0.567***	0.342*	0.403*	-0.599**
	(0.138)	(0.120)	(0.145)	(0.147)	(0.167)
R^2	0.17	0.2	0.2	0.23	0.12
Observations	903	903	903	874	856

Note: All models include fixed effects for governorates and controls for gender, age, age-squared, employment, labor force status, urban residency, and educational level. Standard errors in parentheses are clustered for governorates. All outcomes are measured in standard deviations. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

D.3.2 Survey Questions

The Afrobarometer questions used for the analysis:

- Performance: How well or badly would you say the current government is handling the following matters, or haven't you heard enough to say? (managing the economy - improving the living standards of the poor - creating jobs -

keeping prices down narrowing gaps between the rich and the poor - ensuring everyone has enough to eat)

- Economic Conditions:
  - Current evaluation: In general, how would you describe: The present economic condition of this country?
  - Retrospective evaluation: Looking back, how do you rate economic conditions in this country compared to twelve months ago?
  - Prospective evaluation: Looking ahead, do you expect economic conditions in this country to be better or worse in twelve months' time?
- Trust: How much do you trust each of the following, or haven't you heard enough about them to say? (The President - local government or council - political parties - police - army)
- How many of the following people do you think are involved in corruption, or haven't you heard enough about them to say? (government officials - local government councilors - police)
- Clientelism: In your opinion, how often do the following things occur in this country's elections: Voters are bribed?
- Islamist: The opinions of Islamic jurists and religious scholars differ with regard to their interpretations of certain issues in Islam. To what extent you agree or disagree with each of the following statements: The country is better off if religious people hold public positions in the state?

D.3.3 Placebo Test: Effect of Distribution in Non-Religious Times (Outside Ramadan)

One question is whether the observed effects pertain to distribution in Ramadan or distribution in general. If we expect that distribution in Ramadan has special qualities (as theoretically suggested), then we might suspect that distribution in non-religious times to have different effects, if any. Unfortunately, we cannot evaluate this hypothesis with the same Afrobarometer data used in the analysis, since most of the data collection happened in Ramadan.

To address this, I rely on the fourth and fifth waves of the Arab Barometer surveys conducted in Egypt. The fieldwork of both surveys took place outside any religious seasons (in normal times). This enables us to test the effect of distribution in non-religious times on voters' perceptions of the regime. However, data limitations require making some modifications to the original analysis. The Arab Barometer data provide precise geolocations of respondents which allows for matching respondents with the level of distribution in their municipalities. But the date of interviews is not provided for this data, inhibiting the construction of time-variant measures of the number of distributive campaigns within a municipality. Instead, I use the total number of campaigns in the month before the starting date of the fieldwork as the main independent variable. The decision to extend the period (instead of a week) covered is because of the relative rarity of distributive campaigns outside Ramadan and electoral seasons. This change provides us with more variation on the independent variable. Moreover, this limitation requires switching from the use of municipality FEs into governorate FEs and controlling for the municipalities' characteristics (using the same set of controls employed in Table 28). Another important modification is related to the outcome variables. The Arab Barometer data do not contain similar questions to those used for the *Corruption* and *Clientelism* variables. So, the analysis would be limited to the three other variables. The construction of the variable *Econ. Conditions* is identical to that from the Afrobarometer. *Trust* is very close to that from the Afrobarometer data, however, it also includes trust in parliament and government. These last two items were missing from the Afrobarometer data, despite relevance. Finally, the *Performance* variable includes the evaluations of the government's performance in handling the economy, creating jobs, tackling inflation, and narrowing income gaps. Thus, it excludes evaluations on fighting hunger.

The analysis replicates Table 28 and Table 29. In Table 30, distribution has no statistically or substantively significant relationship with the outcomes. In Table 31, the distribution variable is interacted with the (RELIGIOUS) variable which is a dummy variable capturing support for having religious individuals in public office. Although there is a negative correlation between the Islamist variable and the outcomes, the interaction coefficients are small and statistically insignificant. This suggests that distribution - in general- does not have a particular effect on potential opponents or less secular individuals.

Table 30: OLS Analysis of Respondents' Reactions to Distribution Outside Ramadan - Arab Barometer Data

	(1) Performance	(2) Econ. Cond.	(3) Trust
DISTRIBUTION	-0.052	0.016	-0.022
	(0.038)	(0.045)	(0.034)
R^2	0.11	0.04	0.05
Observations	3,313	3,231	3,322

Note: All models include fixed effects for governorates and controls for gender, age, age-squared, employment, labor force status, urban residency, and educational level. Standard errors in parentheses are clustered for governorates. All outcomes are measured in standard deviations. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 31: OLS Analysis of Respondents' Reactions to Distribution Outside Ramadan by Ideological Position - Arab Barometer Data

	(1) Performance	(2) Econ. Cond.	(3) Trust
DISTRIBUTION	-0.085^{+}	-0.018	-0.023
	(0.047)	(0.040)	(0.034)
RELIGIOUS	-0.120**	-0.274***	-0.060
	(0.033)	(0.033)	(0.037)
DISTRIBUTION X RELIGIOUS	0.038	0.051	-0.031
	(0.049)	(0.041)	(0.039)
R^2	0.13	0.06	0.05
Observations	3,016	2,938	3,021

Note: All models include fixed effects for governorates and controls for gender, age, age-squared, employment, labor force status, urban residency, and educational level. Standard errors in parentheses are clustered for governorates. All outcomes are measured in standard deviations.

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

This analysis suggests that distribution in non-religious times might not generate similar reactions from voters as that in Ramadan. Hence, it might be that timing the

delivery of economic benefits *in Ramadan's season* -and not just mere distribution- that yields the political returns for the incumbent and enhances its reputation.

D.4 Distribution in Eid al-Adha

This section presents a set of robustness checks to our analysis of distribution patterns in Eid al-Adha. Table 32 and Table 33 replicate the analysis using month and day of the year fixed effects, respectively. Table 34 uses the extended definition of the outcome (adding NFP campaigns). Table 35 and Table 36 employ negative binomial and OLS regressions. In Table 37, I drop years with less variation on collective action and replicate the analysis for different subsets of the data. Generally, the results indicate that our conclusions are robust to these various tests.[49]

[49]The only exception is the results from the OLS analysis regarding the moderating role of collective action, as the interaction term is statistically insignificant.

Table 32: Poisson Regression Estimates of Eid al-Adha's Effects on Distributive Campaigns - Month FE

	(1)	(2)	(3)
EID	0.80 (2.22)***	0.87 (2.40)***	0.88 (2.41)***
	(0.16)	(0.21)	(0.22)
RAMADAN	1.1 (2.89)***	1 (2.79)***	1 (2.79)***
	(0.16)	(0.16)	(0.16)
DEV	-1.9 (0.15)	-1.9 (0.15)	-1.9 (0.15)
	(1.3)	(1.3)	(1.3)
ACTION	-0.31 (0.73)	-0.30 (0.74)	
	(0.33)	(0.33)	
ISLAMIST			0.10 (1.10)
			(0.23)
EID x DEV		-0.45 (0.64)	-0.45 (0.64)
		(1.4)	(1.4)
EID x ACTION		-8.1 (0)***	
		(0.47)	
EID x ISLAMIST			-6.5 (0)***
			(0.46)
Observations	589,945	589,945	589,945

Note: Incidence Rate Ratios are reported in parentheses. All models contain fixed effects for municipalities, month, and years. Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only controls with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 33: Poisson Regression Estimates of Eid al-Adha's Effects on Distributive Campaigns - Day FE

	(1)	(2)	(3)
EID	0.90 (2.46)***	1 (2.72)***	1 (2.72)***
	(0.16)	(0.22)	(0.22)
RAMADAN	1.2 (3.32)***	1.1 (3)***	1.1 (3)***
	(0.20)	(0.20)	(0.20)
DEV	-1.9 (0.15)	-1.9 (0.15)	-1.9 (0.15)
	(1.3)	(1.3)	(1.3)
ACTION	-0.21 (0.81)	-0.20 (0.82)	
	(0.30)	(0.32)	
ISLAMIST			0.09 (1.09)
			(0.24)
EID x DEV		-0.63 (0.53)	-0.63 (0.53)
		(1.3)	(1.3)
EID x ACTION		-8.1 (0)***	
		(0.47)	
EID x ISLAMIST			-6.5 (0)***
			(0.46)
Observations	589,945	589,945	589,945

Note: Incidence Rate Ratios are reported in parentheses. All models contain fixed effects for municipalities, month, and years. Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only controls with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 34: Poisson Regression Estimates of Eid al-Adha's Effects on Distributive Campaigns - Extended Definition

	(1)	(2)	(3)
EID	0.51 (1.67)***	0.64 (1.9)***	0.65 (1.91)***
	(0.11)	(0.18)	(0.18)
RAMADAN	0.57 (1.76)***	0.55 (1.74)***	0.56 (1.74)***
	(0.15)	(0.16)	(0.16)
DEV	-1.7 (0.18)	-1.7 (0.18)	-1.7 (0.18)
	(1.2)	(1.2)	(1.2)
ACTION	-0.42 (0.66)	-0.40 (0.67)	
	(0.37)	(0.38)	
ISLAMIST			0.17 (1.18)
			(0.24)
EID x DEV		-1 (0.37)	-1 (0.37)
		(1.4)	(1.4)
EID x ACTION		-8 (0)***	
		(0.51)	
EID x ISLAMIST			-6.1 (0)***
			(0.48)
Observations	600,848	600,848	600,848

Note: Incidence Rate Ratios are reported in parentheses. All models contain fixed effects for municipalities and years. Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only controls with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 35: Negative Binomial Regression Estimates of Eid al-Adha's Effects on Distributive Campaigns

	(1)	(2)	(3)
EID	0.54 (1.72)**	0.48 (1.61)*	0.47 (1.61)*
	(0.17)	(0.21)	(0.21)
RAMADAN	0.63 (1.88)***	0.63 (1.87)***	0.63 (1.87)***
	(0.15)	(0.15)	(0.15)
DEV	-1.3 (0.28)	-1.3 (0.28)	-1.3 (0.28)
	(1.2)	(1.2)	(1.2)
ACTION	0.07 (1.08)	0.09 (1.10)	
	(0.13)	(0.13)	
ISLAMIST			0.19 (1.21)
			(0.19)
EID x DEV		0.17 (1.19)	0.17 (1.19)
		(1.5)	(1.5)
EID x ACTION		-12.9 (0)***	
		(0.82)	
EID x ISLAMIST			-10.7 (0)***
			(1.4)
Observations	598,156	598,156	598,156

Note: Incidence Rate Ratios are reported in parentheses. All models contain fixed effects for municipalities and years. Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only controls with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 36: OLS Regression Estimates of Eid al-Adha's Effects on Distributive Campaigns

	(1)	(2)	(3)
EID	0.003	0.006	0.006
	(0.002)	(0.004)	(0.004)
RAMADAN	0.63 (1.88)***	0.63 (1.87)***	0.63 (1.87)***
	(0.15)	(0.15)	(0.15)
DEV	-0.01^{+}	-0.01^{+}	-0.01^{+}
	(0.006)	(0.006)	(0.006)
ACTION	0.002	0.002	
	(0.003)	(0.003)	
ISLAMIST			-0.002
			(0.002)
EID x DEV		-0.01	-0.01
		(0.01)	(0.01)
EID x ACTION		-0.004	
		(0.003)	
EID x ISLAMIST			1.65810^{-5}
			(0.002)
Observations	644,290	644,290	644,290

Note: Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only controls with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 37: Poisson Regression Estimates of Eid al-Adha's Effects on Distributive Campaigns - Dropping Years with Less Variation in Collective Action

	(1)	(2)	(3)	(4)
EID	0.47 (1.60)*	0.47 (1.61)*	0.66 (1.93)*	0.66 (1.93)*
	(0.20)	(0.21)	(0.28)	(0.28)
RAMADAN	0.43 (1.54)*	0.44 (1.55)*	0.68 (1.97)***	0.68 (1.97)***
	(0.18)	(0.18)	(0.08)	(0.08)
DEV	-2.6 (0.08)**	-2.6 (0.08)**		
	(0.87)	(0.86)		
ACTION	-0.21 (0.81)		0.19 (1.20)**	
	(0.25)		(0.07)	
ISLAMIST		0.02 (1.02)		0.26 (1.30)*
		(0.28)		(0.13)
EID x DEV	0.55 (1.74)	0.56 (1.75)	-0.81 (0.45)	-0.81 (0.45)
	(1.6)	(1.6)	(2.4)	(2.4)
EID x ACTION	-9.2 (0)***		-6.9 (0)***	
	(0.46)		(0.38)	
EID x ISLAMIST		-5.7 (0)***		-7.1 (0)***
		(0.60)		(0.80)
Observations	425,583	425,583	203,058	203,058
Years	2014-2018	2014-2018	2014-2016	2014-2016

Note: Incidence Rate Ratios are reported in parentheses. All models contain fixed effects for municipalities and years. Standard errors in parentheses *below* the coefficients are clustered for municipalities and years. All models include all the controls specified in Equation 1, but only controls with theoretical relevance are displayed. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix E Descriptive Statistics

Table 38: Descriptive Statistics of the Main Variables

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
Main Variables								
DISTRIBUTION	709,992	0.007	0.124	0	0	0	0	16
DISTRIBUTION-EXTENDED	709,992	0.008	0.131	0	0	0	0	24
DEV	703,347	0.206	0.108	0	0.102	0.217	0.277	1.000
ACTION	709,992	0.023	0.237	0	0	0	0	10
RAMADAN	709,992	0.181	0.385	0	0	0	0	1
ELECTION	709,992	0.075	0.263	0	0	0	0	1
EID	709,992	0.034	0.181	0	0	0	0	1
MARKET MONITORING	709,992	0.013	0.132	0	0	0	0	16
WATER SERVICES	709,992	0.014	0.204	0	0	0	0	27
PRICE	670,873	0.000	1.000	−1.272	−0.811	−0.239	0.625	4.610
ISLAMIST	709,992	0.017	0.189	0	0	0	0	9
VOTE SHARE	662,348	0.911	0.039	0.723	0.894	0.918	0.938	0.977
POULATION (LOG)	684,103	11.414	1.506	3.784	10.733	11.714	12.484	13.976
TURNOUT	662,348	0.440	0.107	0.023	0.359	0.453	0.522	0.814
BUREAUCRATIC CAPACITY	652,153	28.413	34.296	0	4.000	17.000	43.000	420.000
Survey Variables (Afrobarometer)								
Distribution (A Week)	1,075	0.147	0.600	0.000	0.000	0.000	0.000	5.000
Distribution (Two Weeks)	1,075	0.221	0.705	0.000	0.000	0.000	0.000	6.000
Female	1,163	0.501	0.500	0.000	0.000	1.000	1.000	1.000
Urban	1,163	0.457	0.498	0.000	0.000	0.000	1.000	1.000
Age	1,163	36.671	13.208	−1.000	25.000	35.000	48.000	81.000
Employed	1,154	0.530	0.499	0.000	0.000	1.000	1.000	1.000
Not in Labor Force	1,154	0.399	0.490	0.000	0.000	0.000	1.000	1.000
Education	1,163	2.682	1.630	1.000	1.000	2.000	4.000	5.000
Trust	1,158	0.011	0.715	−2.457	−0.342	0.104	0.526	1.478
Corruption	1,090	−0.011	0.828	−1.876	−0.400	0.040	0.525	2.505
Performance	1,153	0.003	0.718	−1.459	−0.411	0.019	0.446	2.405
Econ. Conditions	1,151	−0.006	0.881	−2.394	−0.432	0.223	0.553	1.522
Clientelism	1,047	0.000	1.000	−1.776	−0.514	−0.514	0.749	2.011

Appendix F Variables and Data Sources

F.1 Variables

- Distributive campaigns: No. of distributive campaigns in a given municipality-day.
- Socioeconomic development(DEV): An index referring to inverse-covariance weighted average of economic development composed of the percentage of the urban population, the percentage of the adult population with formal education, the percentage of buildings with access to electricity, the percentage of buildings with access to water, the percentage of buildings with access to sewage. The measure is standardized with a mean of 0 and a standard deviation of 1.
- Collective action (ACTION): The number of violent protests and riots in the month before a day within a municipality.
- Political support (VOTE SHARE): The vote share of President Abdel Fatah al-Sisi of all votes cast in the last presidential election (i.e. 2014 and 2018 presidential elections).
- Electricity price (PRICE): A standardized measure of the price per kilowatt of electricity.
- Population (POPULATION): Log of the municipality's population in a given year.
- Turnout (TURNOUT): The municipality's turnout rate in the last presidential election.
- Ramadan (RAMADAN): A dummy variable for whether a day coincides with the Islamic month of Ramadan or the month preceding it.
- Electoral month (ELECTION): A dummy variable for whether a day coincides with the month of elections
- Islamist collective action(ISLAMIST)): The number of collective actions involving Islamist actors.

- Control variables: dummies for the beginning of the fiscal year, Eid al-Adha and the two weeks before it, the two months before and after elections, national holidays, Fridays, and Eid al-Fitr.

F.2 Data Sources

- Distributive campaigns: The data were obtained from the official Facebook pages of Egyptian municipalities and governorates following the procedures described in the main text.

- Turnout: The variable is the change in turnout rate in any given presidential election from the last presidential election. It is calculated using official electoral data provided by Egypt's Election Commission.

- Socioeconomic development: The variable is an index constructed from the percentage of buildings with access to electricity, percentage of buildings with access to water, percentage of buildings with access to sewage, percentage of the adult population with formal education, and percentage of the urban population. The first three variables are obtained from the building censuses of 2006 and 2017. The last two variables are reported in Egypt's population censuses of 2006 and 2017. The data was collected and published by Egypt's Central Agency for Public Mobilization and Statistics (CAPMAS).

- Collective action: The data on violent protests (and Islamist collective action) were obtained from the Armed Conflict Location Event Data Project (ACLED).

- Electricity Price Shocks: Data on electricity consumption in Egyptian governorates were obtained from the Annual Bulletin of Electricity and Energy of 2013/2014, provided by CAPMAS. Data on the pricing of consumption tiers and price changes were obtained from the official announcements of the Egyptian Ministry of Electricity and Renewable Energy.

- Population size: The data were obtained from the Egyptian population censuses of 2006 and 2017.

Appendix G Distributive Campaigns: Examples of Posts

The Facebook posts of distributive campaigns were extracted from the official pages of municipalities and governorates. I present below examples of these posts.

Example (1)

According to instructions by the Governor of Suhag and under the supervision of the president of Tema City and *Markaz*, Mr. Adli Abu Okil, 2000 boxes of food allocated to Tema City were distributed to local citizens at discounted prices in front of the local unit of Tema City and *Markaz*.

بناءا على توجيهات السيد الدكتور الوزير محافظ سوهاج وتحت إشراف السيد المحاسب الاستاذ عدلى ابو عقيل رئيس مركز ومدينة طما تم اليوم الخميس توزيع حصة مركز ومدينة طما من السلع الغذائيه بعدد الفين كرتونه وتم توزيعها على الأهالى بأسعار مخفضة وذلك أمام الوحدة المحليه لمركز ومدينة طما

Example (2)

As per the instructions of Mrs. Hala Said Abdelnabi, the deputy of the president of El-Tebin municipality, trucks providing meat and chicken at subsidized prices for locals were positioned in front of al-Bosta square.

بناءا علي توجيهات السيدة الاستاذه هالة سيد عبد النبي قائم بعمل رئيس حي التبين تم تواجد سيارات الحوم والفراخ امام ميدان البوسطة لبيع الحوم باسعار متناسبة للاهالى

Example (3)

In line with the efforts undertaken to deliver subsidized goods to citizens, the chair of al-Zaiton's municipality has coordinated with the Agency for National Service Projects to station a truck in the backstreets and in front of the municipality's building to serve citizens and employees, offer subsidized goods, and combat merchants' greed.

فى إطار الجهود المبذولة لتوصيل المواد الغذائية المدعمة للمواطنين قام رئيس حى الزينون بالتنسيق مع جهاز مشروعات الخدمة الوطنية باحضار سيارة فى الشوارع الخلفية و أمام مبنى الحى لخدمة المواطنين و الموظفين لشراء السلع المدعمة و محاربة جشع التجار

Example (4)

Engineer Amr Abdelaal (the governor's deputy), Engineer Mohamed Abdelgelil (General Secretary of Assyot's governorate), and Mr. Tag Abosadah (Chair of Abanob's city) participate in Friday's prayers in Ezbet Saed (village) and distribute 600 cartoons (of food) offered by the governorate, as well as, 150 kilos of meat presented by the directorate of the ministry of religious endowments in Assyot to help the people of Ezbet Saed.

المهندس عمرو عبد العال نائب المحافظ والمهندس محمد عبد الجليل سكرتير عام محافظة اسيوط والسيد تاج ابوسداح رئيس مركز ومدينة ابنوب يصلون الجمعة بعزبة سعيد ويقوموا بتوزيع ستمائة كرتونة مقدمة من المحافظة و مئة و خمسين كيلو لحوم مقدمة من مديرية الاوقاف باسيوط مساعدات لاهالى عزبة سعيد .....