Does Religiosity 'Fast'ens the Seatbelts of the Crime Buggy?

Ashokankur Datta[*] and Sk Niyaj Mohammed [†]

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Abstract

As a social institution, religion creates incentives or disincentives for 'appropriate' social behaviour, including participation in criminal activities (Hirschi and Stark, 1969). The size of such an effect depends on the intensity of socio-religious norms regarding specific forms of crimes. Ramadan, a period of heightened religiosity among Muslims, involves expectations regarding socially desirable behaviour among individuals. Ramadan also involves mandated fasting that affects local economic activity (Campante and Yanagizawa-Drott, 2015; Schofield, 2020). How do such expectations affect the incidence of crime among believers directly and/or indirectly? Using a DID methodology and information from a unique dataset of criminal offenses registered by the Bihar state police department as first information reports, we estimate the impact of Ramadam on criminal offenses committed by those affected by it. Our identification strategy leverages the shifting timing of Ramadan through the Gregorian calendar to isolate the causal effect from confounding seasonality. We find that Ramadan leads to an economically and statistically significant reduction in most of the violent and non-violent crimes. We also conducted similar tests for other Islamic holy days to check for the uniqueness of Ramadan. Specifically, we check for effects during the Islamic month of *Dhu-al-Hijjah* and Fridays, which are also significant in Islam and we find that the effects are unique to the Ramadan period. These results highlight the unique influence of Ramadan on criminal activity and underscore the broader role of religious observances in modifying social behavior.

Keywords: Beliefs, Crime, Institutions, Ramadan, Religion
JEL Codes: K42, O43, Z12, Z13

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[*]Shiv Nadar Institution of Eminence, Uttar Pradesh 201314, India. E-mail: `ashokankur.datta@snu.edu.in`
[†]Shiv Nadar Institution of Eminence, Uttar Pradesh 201314, India. E-mail: `sm595@snu.edu.in`

1 INTRODUCTION

The seminal work of Becker (1968) provides an economic model of crime. Considering economic factors, Becker shows that a crime is committed when the expected returns to committing the crime outweighs the opportunity costs. Existing literature in economics has focused on the responsiveness of crime to police, sanctions, and local labour market opportunities (Chalfin and McCrary, 2017). However, non-market factors such as beliefs, norms, morals, culture, and values affect the economic attitudes and activities of individuals, groups, and societies (Iannaccone, 1998). In this context, it is important to understand that religious festivals, which change individuals' values and beliefs of individuals (Birkholz and Gomtsyan, 2023), could affect the intensity of committing a crime. In this paper, we utilize the timing of Ramadan, as a natural experiment to study the effect on Muslim individuals' propensity to commit a crime.

Ramadan is the ninth month of the Islamic (*Hijri*) calendar. For religious purposes, Islam uses *lunar* calendar for the dating system. The lunar calendar consists of 354/355 days and the Ramadan month is generally 29/30 days depending on the sighting of the moon. Fasting during the month is one of the Five pillars of Islam and acts as an obligation for all Muslims. Fasting during the month involves refraining from consuming food, and beverages, smoking, and engaging in sexual activities from dawn until sunset. Certain individuals, such as children, the elderly, those who are unwell, travelers, and breastfeeding women, are usually exempted from the obligations of fasting. The daily routine of Ramadan involves a pre-dawn Breakfast (*suhur*) and a fast-breaking meal at sunset (*iftar*). *Iftar* events usually occur with friends, family, acquaintances, and coworkers. Fasting individuals are involved with 'spiritual activities' (such as praying and reading Qu'ran), offering *tarawih* prayers (beyond the five daily prayers). *Eid-al-Fitr* celebration marks the end of Ramadan.

Our paper is the first in the context of India to find the effect of Ramadan on crime. There exists some literature that studies the impact of Ramadan on terrorism. (Reese et al., 2017; Hodler et al., 2024) studies focused predominantly on Muslim countries, provide evidence of the substantial decline in terrorist activities during Ramadan. They argue that the militant actors anticipate the societal disapproval of violence. Our paper broadly

focuses on crime rather than terrorist activities. We control for various factors that may induce the propensities of committing crimes by including the narrow fixed effects in our specification.

Our contribution is possible through the use of a novel dataset that we scrapped from the Bihar state police department. The data set includes the universe of criminal incidents reported at each police station, including each incident's reporting date, accused names, and type, spanning six years from 2018 to 2023. We constructed panel data at the $PoliceStation \times Day \times Religion$ level, to study the impact of Ramadan on the crime behavior of Muslim individuals in India's state of Bihar. We construct eight individual crime categories and use difference-in-differences to test whether Ramadan accentuates any impact. We find a significant negative effect on crime, specifically for individual categories like murder, riot, theft, and kidnapping.

Our paper is closely related to Birkholz and Gomtsyan (2023) but differs in three ways. Firstly, the crime behavior of the individuals considered in Birkholz and Gomtsyan (2023) are the migrants from Muslim countries, our paper is looking at the native individuals. Secondly, our empirical strategy significantly differs from Birkholz and Gomtsyan (2023). While Birkholz and Gomtsyan (2023) use a reduced form regression to compare the crime behavior of the migrant individuals from countries with high Muslim and low Muslim population shares during Ramadan and Non-Ramadan period, we employ Difference-in-Differences (DID) strategy to compare the Muslim and Non-Muslim individuals crime behavior during Ramadan and Non-Ramadan period. Thirdly, Birkholz and Gomtsyan (2023) work is in the context of a Developed country, our paper is based on the Indian state of Bihar.

We contribute to a growing literature on the relationship between religion and economic activities (see Iyer, 2016 for a review). In the last decade, the effects of fasting during Ramadan have received special attention. Various studies investigate how fasting overlaps with early pregnancy and affects maternal health, educational outcomes, and economic success (Almond and Mazumder, 2011; Van Ewijk, 2011; Majid, 2015; Almond et al., 2015). They find that individuals whose mothers fasted while pregnant have shorter

lives, worse health, less cognitive skills, lower grades at school, and weaker labor market performance. These effects are secondary coming through the mother's observance of fasting. However, the effect of individuals' exposure to Ramadan fasting has also been studied. (Campante and Yanagizawa-Drott, 2015) shows a negative effect of Ramadan fasting on output growth but increases the subjective well-being of individuals; (Schofield, 2020) paper is in the context of India, finds a 20-40 percent decline in labor productivity per fasting individual; (Weiner, 2021) uses Malawai Integrated Household Survey finds that the working age population reduces there weekly labour supply by three hours; (Dasgupta and Datta, 2024) studies the impact of Ramadan using India's Time Use Survey data on the gender distribution of time use within Muslim households and the results show that gender distance during the Ramadan period is 23 minutes less than the average gender distance outside the month of Ramadan; (Gulek, 2024) shows using Turkey's traffic accidents data that driving while fasting increases road accidents during rush hours. Additionally, our work also contributes to the literature that studies the relationship between religion and crime (Heaton, 2006; Gruber and Hungerman, 2008; Moreno-Medina, 2023).

The rest of the paper is organized as follows: Section 2 introduces the data, construction of relevant variables, and empirical strategy. Section 3.1 presents the main estimation results and conducts robustness checks, and Section 4 concludes.

2 DATA

In this paper, the primary source of crime data is the First Information Reports (FIRs) published by the Bihar state police department available from the period January 1st, 2018, to August 12th, 2023.[1] The dataset provides detailed information on the date of reporting, FIR number, incident date, accused names, district name, police station name, and most importantly, the Indian Penal Code (IPC) sections associated with each case, which we use to identify different types of crime[2]. This is the country's most granular

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[1]The data can be accessed from the following link:https://police.bihar.gov.in/

[2]This information is available due to a mandate dictated by the Supreme Court of India in September 2016. Offenses of sensitive nature (sexual offenses, offenses about insurgency, terrorism, and of that category, offenses under the Protection of Children from Sexual Offenses Act) are not reported.

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data available on criminal cases (Imbert et al., 2016; Poblete-Cazenave, 2020; Singh and Visaria, 2021). Notably, information regarding police stations is unavailable for the period before 2018. Therefore, we focused our analysis on the data available from 2018 onwards.

We construct a *PoliceStation × Day* level panel of the number of FIRs registered at each police station using the information on the date of registration of the FIR. While incident date data is available, there are multiple issues with it: *first*, the incident date is missing for 15% of the sample; *second*, there are cases where the incident dates are reported as future dates. However, in approximately 80% of the samples, the reporting date coincides with the incident date, indicating that the reporting date is a reliable proxy for an incident date in most of the cases. Therefore, we create the crime variables as well as the Ramadan variable based on the reporting date. The data includes the names of the accused, following the methodology of Chaturvedi and Chaturvedi (2024) that predicts the religion of the accused based on their names with a high degree of accuracy[3]. Therefore, for each police station, we have two observations for each day, with each observation corresponding to a specific group. The data is aggregated by group at the police station level for each date.

We create eight different crime heads to understand the crime behavior: Murder, Rape, Riot, Robbery, Theft, Burglary, Dacoity, and Kidnapping. The specific Indian Penal Codes and laws associated with crimes that we analyze are presented in Appendix Table 2. We follow what NCRB uses IPC sections for different crime heads to collect the data (National Crime Records Bureau, 2022).

2.1 POLICE STATIONS TO NCRB

The NCRB publishes data on cognizable crimes prescribed under the Indian Penal Code, as reported to the police. The Criminal Procedure Code of India divides all crimes into two categories: (i) cognizable crimes, which are dealt with by the police and in which a police officer may arrest a person with or without a warrant, and (ii) non-cognizable, which are generally left to be pursued by the affected parties themselves in courts. Only

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[3]We discuss this further in detail in Section 2.2

cognizable crimes are reported in the NCRB publications, see (Iyer et al., 2012) for an overview.

The NCRB data is based on information gathered from two processes. First, once an incident occurs and is reported, the police are required to register a First Information Report (FIR). Second, the NCRB asks for data on crimes reported from each of the State Crime Record Bureaus (SCRB). The SCRB asks for the data from the district administration at the end of every year to send it to the NCRB. The NCRB asks for data in the prescribed format and contains a questionnaire comprising some 300 pages. The district administration fills up the questionnaire and sends it back to the SCRB which then finally sends it to the NCRB (Amaral et al., 2021). We will be using the way NCRB reports the IPC sections for different crime heads.

2.2   NAME TO RELIGION

Muslims and non-Muslims can be easily classified by their names. We have data on 1.4 million accused names from FIRs of the Bihar Police Department. Therefore, manual classification is not feasible. To overcome this, we use a new and highly accurate[4] algorithm developed by Chaturvedi and Chaturvedi (2024) who infer religion from names using character sequence-based machine learning models used in Natural Language Processing (NLP). The algorithm uses character-based machine learning models that learn character patterns to predict religion. The model helps in identifying what character makes a name Islamic or non-Islamic. They have applied layer-wise relevance propagation (LRP) [5] test on Rural Economic & Demographic Survey (REDS) data to identify the character patterns distinguishing Muslim and non-Muslim names in India[6].

2.3   EMPIRICAL STRATEGY

Using FIR data from the Bihar state police department, we constructed the daily number of crimes committed by Muslims and non-Muslims, for each police station, forming

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[4]With 97 percent accuracy the model correctly identifies the true Muslim and true non-Muslim names.

[5]For our purpose, we use a machine learning architecture that combines a convolutional neural network and a long short-term memory network.

[6]Chaturvedi and Chaturvedi (2024): p 39-41.

a *PoliceStation × Day × Religion* level panel. This allows us to use a difference-in-differences estimation strategy by comparing the number of crimes committed by Muslims and Non-Muslims during and outside of Ramadan. Ramadan is celebrated by Muslims, and non-Muslims act as a suitable control group. In addition, given the nature of our data, we can control for tehsil, calendar date, month, year, and police station fixed effects. The difference in difference methodology is based on the assumption that in the absence of the treatment, the difference in outcomes between the treated (Muslims) and control (Non-Muslims) group is constant over time.

We estimate the following regression to estimate the effect of Ramadan:

$$y_{gpdmy} = \beta_0 + \beta_1 Ramadan_{dmy} + \beta_2 Muslim_g \times Ramadan_{dmy}$$
$$+ \tau_p + \theta_{dmy} + \delta_g + \epsilon_{gpdmy}$$
(1)

where y_{gpdmy} is the number of crimes committed by group g reported in the police station p on the date dmy. $Muslim$ is a dummy variable that takes the value one if the accused is Muslim and zero otherwise. $Ramadan$ is a dummy variable that takes the value one if the date falls on the Ramadan period and zero otherwise. θ_{dmy}, τ_p and δ_g denotes calendar date, police station, and group fixed effects. Date-fixed effects account for specific dates and incorporate various factors that may influence the likelihood of committing and detecting offenses on a given day. These factors include seasonal factors, political and economic events relevant to Bihar, as well as national holidays. Failing to control for the date-fixed effects may inadvertently introduce biases, particularly when significant events such as Ramadan coincide with certain dates. A notable aspect of Ramadan, for identification purposes, is its consistent backward movement by 10–12 days each year in the Gregorian calendar. This characteristic partially mitigates some of the aforementioned concerns, even without employing date-fixed effects. By incorporating date-fixed effects, we attribute our identification strategy to the variations in the propensity of Muslims to commit crimes on a specific day compared to others. Group fixed effects controls for systematic differences between Muslims and non-Muslims. We have also included the police station fixed effects to account for time-invariant characteristics of police stations. Standard errors are clustered at the level of the police station, to allow for correlations in the errors of crimes around each police station.

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β_1 is the difference in the outcome for Ramadan and non-Ramadan period for Non-Muslims. Since we include calendar date fixed effects ϕ_{dmy}, it absorbs the standalone impact of $Ramadan_{dmy}$. As a result, $Ramadan_{dmy}$ will not be observed. Our main variable of interest is β_2 that measures the effect of Ramadan on outcomes.

3 Results

3.1 Descriptive Statistics

Table 1 presents the summary statistics for both the outcome of interest and independent variables. The dataset indicates that 50% of the sample comprises Muslims, confirming the correct construction of the panel data. Approximately 9% of the days in the sample overlap with Ramadan, during which Muslims are expected to observe religious rituals. Around 11.68% of the reported cases involve theft, while 2.79% of the incidents are categorized as riots. The average cases reported for murder, rape, kidnapping, robbery, burglary, and theft in our sample are 0.46%, 0.06%, 0.72%, 0.19%, 0.26%, and 0.04%, respectively.

3.2 Ramadan Effect on Crime

We estimate Eq.(1) using $PoliceStation \times Day \times Religion$ level panel data. The results are reported in Table 3. There is a significant decline in daily reported crimes committed by Muslims on the days of Ramadan and the effect is statistically significant at 1% level of significance. We find a significant decline in murder, riot, theft, and kidnapping. However, the decline in crime is substantial in the case of theft, showing a 505% decrease from the sample mean. However, we don't have any significant effect on robbery, burglary, or dacoity-related crimes. This result is important in terms of the short-run impacts of Ramadan. Our result is consistent with studies from sociology and criminology (Hirschi and Stark, 1969; Johnson and Jang, 2010; Adamczyk et al., 2017) that emphasize the role of religion in reducing crime. Therefore, it is important to understand the mechanism behind these results.

3.3 Robustness Check

Before discussing the implications of the finding, we perform several robustness checks to ensure that this decrease in crime during Ramadan is caused by changes in beliefs and values and not by other confounders. We discussed the results in detail below.

3.3.1 Alternative Specifications

We implement several robustness tests. Our results are robust to several alternative specifications. The estimates are similar to our baseline results with the inclusion of police station-month and year fixed effects in Table 4, police station-year and month fixed effects in Appendix Table 5, tehsil-month and year fixed effects in Table 6, tehsil-year and month fixed effects in Table 7.

3.3.2 Alternate Clustering of Standard Errors

In our paper, standard errors are clustered at the police station level, allowing possible correlations over time within police stations. The results are statistically significant and the coefficients are negative. However, in Table 8, we showed that our estimates are robust to different levels of clustering.

3.3.3 Placebo Treatment

As an additional check on our identification strategy, we conducted several 'placebo' tests. Firstly, we estimate the same difference-difference regression using Friday [7] as the treatment group and non-Fridays are the control group. We would be concerned if we found the effect on Friday when Ramadan is not observed on these days. Any such placebo effect might suggest that the effect that we get is not a Ramadan effect. The results are shown in Table 9. We find that, unlike Ramadan, the treatment effects are quite small and statistically insignificant. We also ran the same regression while excluding Ramadan Fridays' and still, the results were insignificant. Secondly, we estimate the impact of Dhu-al-Hijjah [8] on crime, the last month of the Islamic calendar and the first ten days of this

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[7]This is a dummy variable that takes the value one if the day is a Friday and zero otherwise

[8]This is a dummy variable and takes the value one for the first 10 days of Dhu-al-Hijjah month and zero otherwise

month has high religious importance. During these ten-day Hajj starts on the 8th day and ends on the 10th day after performing Qurbani rituals. The results are presented in Table 10. We find the treatment effects are small and statistically insignificant.

4   Conclusion

Crime is an economic phenomenon, but the role of religious institutions and their impact on crime is less known. This paper provides the causal effect of Ramadan on the intensity of crime Muslims commit. Our estimates are based on a robust identification strategy that exploits the Ramadan timing as a natural experiment. Using data on the offenses registered by the Bihar state police department, we estimated specifications with a rich set of fixed effects and showed that the number of crimes committed by Muslims during the holy month of Ramadan is declining. Our results are robust to a host of robustness checks.

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Table 1: Summary Statistics

Variable	Mean	Std. Dev.	N	Min	Max
Muslim	0.5000	0.5000	2962854	0	1
Ramadan	0.0888	0.2845	2962854	0	1
Murder	0.0046	0.0725	2962854	0	18
Rape	0.0006	0.0277	2962854	0	6
Kidnapping	0.0072	0.0951	2962854	0	53
Riot	0.0279	0.2075	2962854	0	16
Robbery	0.0019	0.0456	2962854	0	6
Theft	0.1168	0.4506	2962854	0	41
Burglary	0.0026	0.0540	2962854	0	6
Dacoity	0.0004	0.0231	2962854	0	10

Notes: The objective of this table is to describe the sample dataset. This table shows the mean and standard deviation used in this paper. The variables mentioned here are used as dependent variables.

Table 2: Crime Head with Sections

Crime Head	Sections
Riots	147-151 IPC
Murder	302 IPC
Rape	376 IPC
Robbery	392, 393, 394, 397, 398 IPC
Kidnapping & Abduction	363 IPC
Dacoity	395, 397, 398 IPC
Theft	379-382 IPC
Burglary	453-460 IPC

Notes: This table shows the criminal charges and enacted acts that are associated with different crime heads.

Table 3: Effect of Ramadan on Individual Crime Categories

VARIABLES	(1) Murder	(2) Rape	(3) Riot	(4) Robbery	(5) Dacoity	(6) Kidnapping	(7) Burglary	(8) Theft
Religion X Ramadan	-0.0010***	0.0002**	-0.0049***	0.0003	-0.0000	-0.0010**	0.0003	-0.0096***
	(0.0003)	(0.0001)	(0.0011)	(0.0002)	(0.0001)	(0.0004)	(0.0002)	(0.0021)
Police Station Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Calendar Date Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Group Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations				2,962,854				
Mean Dep. Var.	0.0046	0.0006	0.0072	0.0279	0.0026	0.0004	0.1168	0.0019

Notes: The data consists of police station level from 1st January 2018 to 12th August 2023, as obtained from Bihar Police Department. The table reports coefficients of the specification estimated in eq. (1) of the main paper. The dependent variable is the number of offenses committed by Muslims and Non-Muslims on a day in a given police station. Our outcome variable is the number of crimes as indicated in the column heading. All specifications include police station fixed effects, calendar date fixed effects, and group fixed effects. Standard errors, clustered at the police station level, are displayed in parentheses. * denotes significant at 10%, ** denotes significant at 5% and *** denotes significant at1% .

Table 4: Ramadan and Crime (With Police Station-Month and Year Fixed Effects)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Murder	Rape	Riot	Robbery	Dacoity	Kidnapping	Burglary	Theft
Religion X Ramadan	-0.0010***	0.0002**	-0.0049***	0.0003	-0.0000	-0.0010***	0.0003	-0.0096***
	(0.0003)	(0.0001)	(0.0011)	(0.0002)	(0.0001)	(0.0004)	(0.0002)	(0.0021)
Police X Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations				2,962,854				
Mean Dep. Var.	0.0046	0.0006	0.0072	0.0279	0.0026	0.0004	0.1168	0.0019

Notes: The data consists of police station level from 1st January 2018 to 12th August 2023, as obtained from Bihar Police Department. The table reports the coefficients of the specification estimated in eq. (1) of the main paper. The dependent variable is the number of offenses committed by Muslims and Non-Muslims on a day in a given police station. Our outcome variable is the number of crimes as indicated in the column heading. All specifications include police station-month fixed effects and year fixed effects. Standard errors, clustered at the police station level, are displayed in parentheses. * denotes significant at 10%, ** denotes significant at 5% and *** denotes significant at1% .

Table 5: Ramadan and Crime (With Police Station-Year and Month Fixed Effects)

	(1) Murder	(2) Rape	(3) Riot	(4) Robbery	(5) Dacoity	(6) Kidnapping	(7) Burglary	(8) Theft
Religion X Ramadan	-0.0010***	0.0002**	-0.0049***	0.0003	-0.0000	-0.0010***	0.0003	-0.0096***
	(0.0003)	(0.0001)	(0.0011)	(0.0002)	(0.0001)	(0.0004)	(0.0002)	(0.0021)
Police X Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations					2,962,854			
Mean Dep. Var.	0.0046	0.0006	0.0072	0.0279	0.0026	0.0004	0.1168	0.0019

Notes: The data consists of police station level from 1st January 2018 to 12th August 2023, as obtained from Bihar Police Department. The table reports the coefficients of the specification estimated in eq. (1) of the main paper. The dependent variable is the number of offenses committed by Muslims and Non-Muslims on a day in a given police station. Our outcome variable is the number of crimes as indicated in the column heading. All specifications include police station-year fixed effects and month fixed effects. Standard errors, clustered at the police station level, are displayed in parentheses. * denotes significant at 10%, ** denotes significant at 5% and *** denotes significant at1% .

Table 6: Ramadan and Crime (With Tehsil-Month and Year Fixed Effects)

	(1) Murder	(2) Rape	(3) Riot	(4) Robbery	(5) Dacoity	(6) Kidnapping	(7) Burglary	(8) Theft
Religion X Ramadan	-0.0010***	0.0002**	-0.0049***	0.0003	-0.0000	-0.0010**	0.0003	-0.0096***
	(0.0003)	(0.0001)	(0.0011)	(0.0002)	(0.0001)	(0.0004)	(0.0002)	(0.0021)
Tehsil X Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations				2,962,854				
Mean Dep. Var.	0.0046	0.0006	0.0072	0.0279	0.0026	0.0004	0.1168	0.0019

Notes: The data consists of police station level from 1st January 2018 to 12th August 2023, as obtained from Bihar Police Department. The table reports the coefficients of the specification estimated in eq. (1) of the main paper. The dependent variable is the number of offenses committed by Muslims and Non-Muslims on a day in a given police station. Our outcome variable is the number of crimes as indicated in the column heading. All specifications include tehsil-month fixed effects and year fixed effects. Standard errors, clustered at the police station level, are displayed in parentheses. * denotes significant at 10%, ** denotes significant at 5% and *** denotes significant at1% .

Table 7: Ramadan and Crime (With Tehsil-Year and Month Fixed Effects)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Murder	Rape	Riot	Robbery	Dacoity	Kidnapping	Burglary	Theft
Religion X Ramadan	-0.0010***	0.0002**	-0.0049***	0.0003	-0.0000	-0.0010**	0.0003	-0.0096***
	(0.0003)	(0.0001)	(0.0011)	(0.0002)	(0.0001)	(0.0004)	(0.0002)	(0.0021)
Tehsil X Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations				2,962,854				
Mean Dep. Var.	0.0046	0.0006	0.0072	0.0279	0.0026	0.0004	0.1168	0.0019

Notes: The data consists of police station level from 1st January 2018 to 12th August 2023, as obtained from Bihar Police Department. The table reports the coefficients of the specification estimated in eq. (1) of the main paper. The dependent variable is the number of offenses committed by Muslims and Non-Muslims on a day in a given police station. Our outcome variable is the number of crimes as indicated in the column heading. All specifications include tehsil-year fixed effects and month fixed effects. Standard errors, clustered at the police station level, are displayed in parentheses. * denotes significant at 10%, ** denotes significant at 5% and *** denotes significant at 1% .

Table 8: Ramadan and Crime: Alternate Clustering

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Murder	Rape	Riot	Robbery	Theft	Burglary	Dacoity	Kidnapping
Religion X Ramadan	-0.0010***	0.0002**	-0.0049***	0.0003	-0.0096***	0.0003	-0.0000	-0.0010***
	(0.0003)	(0.0001)	(0.0012)	(0.0002)	(0.0027)	(0.0002)	(0.0001)	(0.0004)
Police Station Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Calendar Date Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Group Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustering	Tehsil	Tehsil	Tehsil	Tehsil	Tehsil	Tehsil	Tehsil	Tehsil
Observations				2,962,854				
Mean Dep. Var.	0.0046	0.0006	0.0072	0.0279	0.0019	0.1168	0.0026	0.0004

Notes: The data consists of police station level from 1st January 2018 to 12th August 2023, as obtained from Bihar Police Department. The dependent variable is the number of offenses committed by Muslims and Non-Muslims on a day in a given police station. The table reports coefficients of the specification estimated in eq. (1) of the main paper. Our outcome variable is the number of crimes as indicated in the column heading. All specifications include police station fixed effects, calendar date fixed effects, and group fixed effects. Standard errors, clustered at the tehsil level, are displayed in parentheses. * denotes significant at 10%, ** denotes significant at 5% and *** denotes significant at1%

Table 9: Uniqueness of Ramadan: Religious Holy Days

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Murder	Rape	Riot	Robbery	Dacoity	Kidnapping	Burglary	Theft
Religion X Friday	-0.0003	-0.0000	0.0008	-0.0001	-0.0000	0.0001	-0.0001	0.0024*
	(0.0002)	(0.0001)	(0.0007)	(0.0002)	(0.0001)	(0.0004)	(0.0002)	(0.0014)
Police Station Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Calendar Date Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Group Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations				2,962,854				
Mean Dep. Var.	0.0046	0.0006	0.0072	0.0279	0.0019	0.1168	0.0026	0.0004

Notes: The data consists of police station level from 1st January 2018 to 12th August 2023, as obtained from Bihar Police Department. The dependent variable is the number of offenses committed by Muslims and Non-Muslims on a day in a given police station. Our outcome variable is the number of crimes as indicated in the column heading. All specifications include police station fixed effects, calendar date fixed effects, and group fixed effects. Standard errors, clustered at the police station level, are displayed in parentheses. * denotes significant at 10%, ** denotes significant at 5% and *** denotes significant at1%

Table 10: Uniqueness of Ramadan: Religious Holy Days

	(1) Murder	(2) Rape	(3) Riot	(4) Robbery	(5) Dacoity	(6) Kidnapping	(7) Burglary	(8) Theft
Religion X Dhu-al-Hijjah	-0.0008	-0.0003*	-0.0012	0.0003	0.0001	-0.0010	-0.0015***	-0.0178***
	(0.0005)	(0.0002)	(0.0015)	(0.0003)	(0.0001)	(0.0006)	(0.0004)	(0.0031)
Police Station Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Calendar Date Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Group Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations				2,962,854				
Mean Dep. Var.	0.0046	0.0006	0.0072	0.0279	0.0019	0.1168	0.0026	0.0004

Notes: The data consists of police station level from 1st January 2018 to 12th August 2023, as obtained from Bihar Police Department. The dependent variable is the number of offenses committed by Muslims and Non-Muslims on a day in a given police station. Our outcome variable is the number of crimes as indicated in the column heading. All specifications include police station fixed effects, calendar date fixed effects, and group fixed effects. Standard errors, clustered at the police station level, are displayed in parentheses. * denotes significant at 10%, ** denotes significant at 5% and *** denotes significant at1%