

A Service of



Leibniz-Informationszentrum Wirtschaft Leibniz Information Centre

Lee, Wang-Sheng; Khalil, Umair; Johnston, David W.

#### **Working Paper**

Religiosity and Crime: Evidence from a City-Wide Shock

IZA Discussion Papers, No. 16933

#### **Provided in Cooperation with:**

IZA - Institute of Labor Economics

Suggested Citation: Lee, Wang-Sheng; Khalil, Umair; Johnston, David W. (2024): Religiosity and Crime: Evidence from a City-Wide Shock, IZA Discussion Papers, No. 16933, Institute of Labor Economics (IZA), Bonn

This Version is available at: https://hdl.handle.net/10419/295956

#### Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

#### Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.





### **DISCUSSION PAPER SERIES**

IZA DP No. 16933

## Religiosity and Crime: Evidence from a City-Wide Shock

Wang-Sheng Lee Umair Khalil David Johnston

APRIL 2024



### **DISCUSSION PAPER SERIES**

IZA DP No. 16933

## Religiosity and Crime: Evidence from a City-Wide Shock

Wang-Sheng Lee

Monash University and IZA

**Umair Khalil** 

Deakin University

**David Johnston** 

Monash University

APRIL 2024

Any opinions expressed in this paper are those of the author(s) and not those of IZA. Research published in this series may include views on policy, but IZA takes no institutional policy positions. The IZA research network is committed to the IZA Guiding Principles of Research Integrity.

The IZA Institute of Labor Economics is an independent economic research institute that conducts research in labor economics and offers evidence-based policy advice on labor market issues. Supported by the Deutsche Post Foundation, IZA runs the world's largest network of economists, whose research aims to provide answers to the global labor market challenges of our time. Our key objective is to build bridges between academic research, policymakers and society.

IZA Discussion Papers often represent preliminary work and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. A revised version may be available directly from the author.

ISSN: 2365-9793

IZA DP No. 16933 APRIL 2024

### **ABSTRACT**

## Religiosity and Crime: Evidence from a City-Wide Shock

This paper estimates the impacts of religiosity on criminal activity using a city-wide shock to religious sentiment from a 2015 Papal visit. Using daily data on all reported offences between 2010 and 2015 in Philadelphia at the census tract level and a difference-in-differences approach, we demonstrate significant reductions in less serious crimes in the week of the visit and for several weeks following. Reductions are particularly pronounced for drug offences and in historically Christian areas. Notably, similar crime effects are not found for President Obama's 2015 visit, suggesting changes in police deployment do not drive results.

**JEL Classification:** D74, I25

**Keywords:** economics of religion, deviant behavior, crime

#### **Corresponding author:**

Umair Khalil
Department of Economics
Deakin University
221 Burwood Highway
VIC 3125
Australia

E-mail: umair.khalil@deakin.edu.au

#### 1. Introduction

Some of the earliest sociological theories of religion have emphasized the role it can play in curbing vice and minimizing deviant behavior in human societies (Durkheim, 1897). Socially imposed sanctions on norm-breaking can enhance community cohesion and positively influence various antisocial, deviant, and criminal behaviors. Criminologists have been exploring the impact of religion and religious practices on criminal behavior since the seminal work of Higgins and Albrecht (1977). However, given religiosity and adherence to religion are difficult to measure and are slow-moving, socially endogenous processes, establishing causal links between religion and crime is challenging. In the economics literature, the preferred approach has been to focus on short-term or unexpected shocks to religious participation or religiosity to generate causal estimates (Birkholz and Gomtsyan, 2022; Moreno-Medina, 2023).

In this paper, we study a city-wide shock to religiosity engendered by the celebrated visit of Pope Francis to Philadelphia. In September 2015, Pope Francis delivered a highly anticipated Papal Mass to an estimated one million people in the city-center of Philadelphia. In addition, the Pope visited a correctional facility, where he interacted with inmates and made a statement linking religious behavior, or lack thereof, to criminality. Our work explores whether the Papal visit significantly reduced criminal behavior in Philadelphia in the short- and medium-term.

Arguably, the entire city was treated by the Papal visit and so we use a temporal difference-in-differences approach, similar to that used in Barron et al. (2023) to estimate the impact of prohibition on crime rates in South Africa. Applied to detailed criminal offence data measured at the census tract and day level, we find significant reductions in less-serious Part 2 offences due to the Papal visit, with the most prominent negative effects found for drug offences and white-collar crimes like financial fraud.<sup>2</sup> In some specifications, we also find

<sup>&</sup>lt;sup>1</sup> For a comprehensive review of this literature see Adamczyk et al. (2017).

<sup>&</sup>lt;sup>2</sup> The Uniform Crime Reporting (UCR) Program divides offences into two groups, Part I and Part 2 crimes. Part 1 crimes are considered to be more serious crimes and include crimes such as murder, manslaughter, sex offences, robbery, aggravated assault, burglary, motor vehicle theft, and arson. Part 2 crimes are less serious offences and include simple assaults, forgery/counterfeiting, embezzlement/fraud, receiving stolen property, weapon violations, prostitution, sex crimes, crimes against family/child, narcotic drug laws, liquor laws, drunkenness, disturbing the peace, disorderly conduct, gambling, driving under the influence (DUI).

reductions in simple assaults, disorder, and public safety. Results from the event study specification, which allows for effects from 12 weeks before to 12 weeks after the visit, show that the Papal visit is associated with less crime up to five weeks after the event.

These effects subsume several channels through which crime may have been impacted, not only through changes in religiosity. For instance, increased police deployment for Papal security may also have affected criminal behavior during the days surrounding the visit, since greater police presence changes the criminal decision-making process in the short term (Mello, 2019; Weisburd, 2021). Alternatively, the large public gathering for the Papal Mass could have provided greater opportunity for crime (Kurland, 2019), particularly property crime, leading to a positive effect. Therefore, it is difficult to correctly attribute the reductions in crime to increases in religiosity caused by the Papal visit, especially in the week of the visit itself.

To explore the police deployment channel, we implement our difference-in-differences approach for an event of a similar magnitude, but political in nature, that also took place in Philadelphia in 2015. Namely, President Obama's visit for the 106th National Convention of the National Association for the Advancement of Colored People (NAACP). This serves as a good placebo test for the religiosity-related channel since it occurred in the same city in the same year, and thus, the criminal and law enforcement landscape is likely to be similar. Moreover, a major part of the rhetoric around the event involved criminal justice reforms and the rights of incarcerated populations, and police deployment and security infrastructure were similar to the Papal visit. Our analysis of the NAACP event reveals no discernible reductions in crime beyond the week of the event, unlike the Papal visit, where the reductions continued for several weeks.

The Obama-visit analysis provides confidence that the negative estimated crime effects associated with Pope Francis' visit were likely caused by lingering effects of higher religiosity. To further support this interpretation, we estimate crime effects separately for census tracts containing prominent, historical churches, which are a proxy for higher religious adherence. If reductions in crime are related to religiosity, these should persist in areas where the shock is likely to be more salient. This is precisely what we observe.

This study contributes to an economics literature exploring the effects of religion and religious behavior on social and economic outcomes. For instance, Clingingsmith et al. (2009)

show that the annual Islamic pilgrimage to Mecca leads to improvements in inter-faith harmony and favorable attitudes towards women rights, while Campante and Yanagizawa-Drott (2015) show that shocks to religiosity due to longer Ramadan fasts increase subjective wellbeing but reduce economic growth. Similarly, Fruehwirth et al. (2019) establish that higher religiosity lowers the prevalence of depression among adolescents in the United States. Iyer (2016) provides an excellent review of the empirical literature linking religion to various outcomes of interest.

Despite this significant 'economics of religion' literature, few papers robustly link religion and religiosity to deviant behavior, like the perpetration of criminal offences. This is partially due to the lack of exogenous variation in religious behavior that can be used to identify causal effects. An exception is Moreno-Medina (2023), which explores rainfall-shock induced changes in church attendance and its subsequent effect on crime rates. Another is Birkholz and Gomtsyan (2022), which uses variation in religiosity by Ramadan observance among Muslim immigrants in Switzerland, finding reductions in crime rates during the holy month. Our paper adds to this small but growing literature that explores the impacts of changes in religious behavior on criminal offences and other norm-breaking behaviors; a link that has long been hypothesized theoretically but rarely established empirically.

The rest of the paper is organized as follows. Section 2 provides a brief background of the Papal visit to Philadelphia. Section 3 details our data sources, while section 4 outlines the employed empirical strategy. Section 5 presents the results and a discussion of the findings. Section 6 then concludes the paper.

#### 2. Background: Pope Francis in Philadelphia

Pope Francis was elected as the 266<sup>th</sup> Pope of the Roman Catholic Church in March 2013. His approach to leadership, emphasizing compassion, humility, and inclusivity, marked a departure from the traditional image of the papacy. His popular appeal extended beyond the Catholic Church, resonating with many who admired his values and vision for a more compassionate and just world. Pope Francis's visit to Philadelphia in September 2015 was part of a larger trip to the United States.

Pope Francis participated in several highly publicized events during his time in Philadelphia. In chronological order, he celebrated Mass at the Cathedral Basilica of St. Peter and Paul (Sept 26), delivered speeches at the Independence Mall and the Festival of Families (Sept 26), visited the Curran-Fromhold Correctional Facility (Sept 27), and celebrated a mass for the conclusion of the World Meeting of Families (Sept 27).

The largest public event was the World Meeting of Families Mass on the Benjamin Franklin Parkway, an open-air event attended by an estimated 1 million people.<sup>3</sup> The World Meeting of Families is held every three years and is the world's largest Catholic gathering of families. The World Meeting of Families took place from September 22 to 27, 2015, and involved approximately 20,000 attendees. This Meeting may have (to a small extent) induced increased religiosity within Philadelphia separately from the Papal events.

Especially relevant for this study was Pope Francis's visit to the Curran-Fromhold Correctional Facility. There, he underscored his advocacy for criminal justice reform and urged people to believe in the possibility of rehabilitation, stating that Jesus "comes to save us from the lie that says no one can change." <sup>4</sup> Though not a public event, his speech to prisoners at the facility was widely reported.

#### 3. Data and Sources

We use geocoded and time-stamped data on all reported offences to the Philadelphia police department between 2010 and 2015. We observe over 30 types of offences ranging from violent to property crime, including white-collar and public disorder-related offences. To illustrate the incidence and types of crimes in Philadelphia, Appendix Table A1 presents a tabulation of crimes committed in 2014. The most common crimes include thefts, assaults, vandalism, fraud, and drug violations. These data are aggregated to the daily-census tract level, separately by offence categories.<sup>5</sup> For our main analysis, we use nine categories

<sup>&</sup>lt;sup>3</sup> Figure A1 in the appendix shows a photo of the crowd for the Papal Mass on 27 September 2015.

<sup>&</sup>lt;sup>4</sup> An excerpt from the Pope's remarks at the Curran-Fromhold Correctional Facility is provided in Exhibit 1 in the Appendix.

<sup>&</sup>lt;sup>5</sup> Figure A2 in the appendix shows the census tract boundaries in the city of Philadelphia.

following the United Nation's International Classification of Crime for Statistical Purposes (ICCS).6

We also use information on historic and landmark churches within Philadelphia as a marker of areas with persistent religious practices. Specifically, we use the database established by Lester (2011) that includes 747 prominent churches and their addresses within Philadelphia. These are matched with the crime data at the census tract level.

Figure 1 describes crime trends across weeks for Part 1 offences (more serious, often violent) and Part 2 offences (less serious), before and after the Papal visit. The figure reveals several interesting features of the data. First, the patterns in the weeks before the Papal visit (covering months July, August and September) are similar in 2015 and 2010-2014, suggesting parallel trends for both crime types. Second, the Papal visit is associated with a striking drop in Part 2 crimes for two weeks, but no corresponding decline for Part 1 crimes. Third, the incidence of Part 2 crimes reverts to its historical seasonal trend shortly after the conclusion of the Papal visit. This descriptive evidence strongly suggests that the Papal visit caused a substantial shortterm decrease in less serious crimes.

#### 4. Empirical Approach

The Papal visit arguably treated the entire city of Philadelphia, so a standard difference-indifferences (DID) design with parts of Philadelphia as control areas is not viable. In addition, using other U.S. cities as controls requires strong assumptions on time trends in crime rates. Therefore, we instead use a temporal DID approach.

We consider all census tracts in Philadelphia as treated during the weeks surrounding the Papal visit in 2015. In other words, the 'treatment series' includes census tract-days from 2015 while the 'control series' comprises of census tract-days from 2010-2014. The intervention period is defined as a 'treatment window' period of the 'treatment series' and

<sup>&</sup>lt;sup>6</sup> Categories of ICCS crimes: 1) Acts leading to death or intending to cause death; 2) Acts causing harm or intending to cause harm to the person; 3) Injurious acts of a sexual nature; 4) Acts against property involving violence or threat against a person; 5) Acts against property only; 6) Acts involving controlled drugs or other psychoactive substances; 7) Acts involving fraud, deception or corruption; 8) Acts against public order, authority and provisions of the State; 9) Acts against public safety and state security; 10) Acts against the natural environment. We combine categories 8 and 10 together and refer to the category as "Disorder".

'control series.' For 2015, the treatment window period for the treatment series is defined as the period following the Pope's visit. For 2010-2014, the treatment window period for the control series are the calendar weeks corresponding to a hypothetical Pope visit in those years. A similar specification was used by Barron et al. (2023) to study the impact of alcohol prohibition, where the entire geographic landscape is treated in a given year. Our exact empirical approach is described below.

Pope Francis visited Philadelphia from 9:30 am Sat 26 Sep to 8:00 pm Sun 27 Sep 2015. The main highlights of his visit were a visit to a correction center and delivering a Papal Mass as mentioned in section 2. As the Papal visit occurred on a weekend, for our analysis that is conducted at the weekly level, we consider Week 0 starting from Monday 21 Sep 2015 to Sunday 27 Sep 2015 as the primary 'treatment window.' This period includes preparation time for the mass event that involved a large police presence around the area where the Pope was to be delivering his sermon, the World Meeting of Families event which was held before the two day Papal visit, as well as anticipation of the Pope's visit by the public.

Denoting the count of crimes at the daily-tract level as  $Y_{ct}$ , our baseline DID specification is:

$$Y_{ct} = \beta_o + \beta_1 Trt + \beta_2 Post + \beta_3 Trt \times Post + \alpha_c + \delta_t + \varepsilon_{ct}$$
 (1)

where Trt equals 1 for 2015 observations and 0 for 2010-2014 observations,  $\alpha_c$  are census tract fixed effects and  $\delta_t$  is a vector of time-related dummy variables to control for the time-varying trend in daily crime. It includes day-of-week, month and year fixed effects, as well as dummy variables corresponding to holidays and the first day of each month.  $\varepsilon_{ct}$  is the unobserved error term.

The first set of results are based on using three different definitions of *Post* (which refers to the respective treatment window of the series). Besides using Week 0 as the treatment window, we also use alternative treatment windows where we define Week 0 and Week 1 as the treatment period, and the more traditional DID approach of defining Week 0 onwards as the treatment period. More specifically, we first estimate the immediate short-

term effect, where *Post* equals 1 for observations during the calendar week of the Pope's visit (which we label Week 0) in both 2015 and 2010-2014, and is 0 otherwise.<sup>7</sup> Second, we estimate the average short-term effect, where *Post* equals 1 during Week 0 and Week 1 and is 0 otherwise. Third, we estimate the average short- and medium-term effect, and *Post* equals 1 in Weeks 0-12.

For subgroup analyses, we restrict the city to three geographic rings around the Philadelphia Art Museum, where the Papal Mass was held. The first ring includes all census tracts with a center-point within 7 km. The second and third rings include all census tracts within 7 km to 13 km and 13 km to 30 km respectively. We conduct robustness exercises around varying the radii of these rings as well and the results largely remain consistent.

Denoting the count of crimes at the daily-tract level as  $Y_{ct}$ , our event study specification is as follows:

$$Y_{ct} = \sum_{s=-12}^{s=12} \beta_s Z_{c,t-s} + \alpha_c + \delta_t + \varepsilon_{ct}$$
(2)

The 'policy variable'  $Z_{c,t-s}$  allows the Papal visit to have dynamic effects for a period of 12 weeks before and after the visit. It is defined as 1 for 2015 observations and 0 for 2010-2014. The parameters  $\{\beta_s\}_{s=-12}^{s=12}$  summarize the magnitude of these dynamic effects. We use week s=-1 as the baseline omitted term.

#### 5. Results

#### 5.1 Baseline DID Estimates

We begin by considering the change in the number of daily criminal offences per census tract during the week of the Papal visit (i.e. Week 0), compared with the 12 weeks before and after

<sup>&</sup>lt;sup>7</sup> In 2015, Week 0 is defined as Monday 21 Sep 2015 to Sunday 27 Sep 2015. For the 2010-2014 samples, Week 0 is defined as Monday 22 Sep 2014 to Sunday 28 Sep 2014, Monday 23 Sep 2013 to Sunday 29 Sep 2013, Monday 24 Sep 2012 to Sunday 30 Sep 2012, Monday 19 Sep 2011 to Sunday 25 Sep 2011, and Monday 20 Sep 2010 to Sunday 26 Sep 2010.

<sup>&</sup>lt;sup>8</sup> The details of the census tracts located in each ring are provided in Table A2 in the Appendix.

this week in 2015 and 2010-14 (see Column 1, Table 1). Estimates are presented separately for nine ICCS crime categories. The results indicate a significant reduction in daily drug offences per census tract of 0.021 and a significant reduction in daily fraud/corruption offences per census tract of 0.014, during the week of the visit. Relative to the sample means (day-census tract average number of crimes), this equates to a 18.9% and 18.2% reduction in drug and fraud offences, respectively. There are no discernible impacts for other offences.

Alternatively, we can use both Week 0 and Week 1 as the treatment period (Column 2 of Table 2) to capture any short-run effects that cover a two-week window surrounding the Papal visit. The estimates show a significant 0.033 reduction (19.4%) in simple assaults (e.g. these are violent incidents where a weapon is not involved) and a marginally significant 0.008 (12.9%) reduction in homicide and aggravated assaults. There are no discernible impacts for other offences such as sexual assaults and property-related crime. However, there are significant reductions in several non-violent crimes: drug offences (0.032 or 28.8%), fraud/corruption (0.014 or 18.2%), disorder (0.012 or 8.2%), and public safety (0.004 or 40%).

The specification that sets the entire 13-week post-period (Weeks 0 to 12) as the treatment (column 3 of Table 1), provides estimates of the short- to medium-term average effect of the Papal visit. In this case, there are significant reductions for simple assaults (0.027 or 15.9%), drug offences (0.028 or 25.2%) and fraud/corruption (0.016 or 20.8%).

The estimates shown in Table 1 are from linear regressions. Given that each dependent variable is the count of crimes at the daily-tract level, we could alternatively use a Poisson regression. These estimates are consistent with the results in Table 1.10

Overall, the results from alternative DID specifications establish that the Papal visit corresponded with a significant reduction in criminal offences. However, it is difficult to attribute these changes solely to an increase in religious feelings in the city resulting from the Pope's visit. For instance, a major strand of literature in the economics of crime has established how increased police presence leads to a reduction in crime perpetration (Chalfin and McCrary, 2017, 2018; Mello, 2019). Police presence was markedly increased and likely

<sup>&</sup>lt;sup>9</sup> In various other specifications, we extend this window beyond these lower and upper bounds, however, the findings remain similar to those reported in this section.

<sup>&</sup>lt;sup>10</sup> These results are available upon request.

more vigilant during Week 0 owing to security concerns for the visit of a major dignitary. Therefore, some of the above reductions can certainly be attributed to these factors. On the other hand, the visit also led to massive gatherings and large crowds, with devotees flocking to Philadelphia from other cities, which can provide more opportunities for potential offenders to commit crimes, particularly small property offences like petty theft and pickpocketing. The Papal visit may have had a positive impact on certain types of crimes. Previous work has found some evidence of such channels in operation (e.g., Kurland, 2019). Hence, the overall effect presented in Table 1 can include these two opposing channels.<sup>11</sup>

#### 5.2 DID Results by Subgroup

We next conduct subgroup analyses to determine whether the DID results differ spatially and demographically. We focus on all Part 1 and Part 2 criminal offences as the two outcome variables because Figure 1 and Table 1 suggest clear differences in the effects of the Papal visit along these dimensions.<sup>12</sup>

First, we implemented the DID analysis for rings around where the Papal Mass occurred to isolate where crime reductions were the largest. This is motivated by the fact that religious feelings engendered in Philadelphia residents were likely stronger among people who attended Papal events, and ceteris paribus, attendance was likely higher among people who lived closer (given travel times and associated costs are lower). This analysis also helps us study crime displacement across the city, which can be particularly important during Week 0 due to potential changes in police deployment (Draca et al., 2011; Weisburd, 2021). Criminals may have turned to committing crimes in areas with lower police presence.

The spatial subgroup analysis (models 1 to 3 in Table 2) shows that distance matters and that there were greater reductions in crime in areas closer to where the Papal Mass occurred. For example, model (1) estimates indicate that in the inner ring there were 0.228, 0.254, and 0.277 fewer Part 2 daily offences per census tract for Week 0, Weeks 0-1 and

<sup>&</sup>lt;sup>11</sup> We examine the issue of mass gatherings using an event study in Section 5.3 and the issue of police presence using President Obama's visit in Section 5.4.

<sup>&</sup>lt;sup>12</sup> There is no direct one-to-one correspondence between the ICCS crime categories and the UCR classification of crimes into Part 1 and Part 2 crimes. Using the UCR classification allows us to focus broadly on the effects of the Pope's visit on more and less serious crimes.

Weeks 0-12, respectively, which equates to a 28.0%, 31.2% and 34.1% reduction in Part 2 offences, respectively. Estimated effects for other rings are considerably smaller.

Second, we assess the role of religion by considering census tracts with higher baseline religiosity. These areas are likely to be impacted more by the Papal visit – in terms of experiencing a larger religiosity shock – and hence might have larger crime reductions. It is difficult to measure spatial variation in religious behavior (e.g., church attendance) at the census tract level, so we instead use a database of historic and landmark churches in Philadelphia compiled by Lester (2011). This data has information on 747 large and historically significant churches that largely continue to serve their local communities. Census tracts with historic and/or landmark churches are reasonably assumed to have higher baseline (Christian) religiosity.

Estimates in Table 2 (models 4-6) indicate that reductions in crime were larger for census tracts with landmark churches, though there is little difference between areas with Catholic churches and Christian non-Catholic churches. For instance, the estimated Weeks 0-12 effects in tracts with Catholic churches (model 4) and Christian churches (model 5) equal -0.231 (-28.4%) and -0.212 (-26.1%), respectively, which are similar to the effect for the inner ring (<7 km) and somewhat larger than the effect for the full sample (-0.161).<sup>13</sup> Estimated effects for tracts without landmark churches (model 6) are considerably smaller and only significant for Weeks 0-1. Again, we find that the estimated reduction in criminal offences is driven by reductions in Part 2 crimes, with estimates for Part 1 crimes being small and statistically insignificant.

Third, we examine if census tracts with high poverty rates and large teenage populations have different impacts. Larger reductions for Part 2 crimes are found for census tracts with poverty rates that are greater than 10% (Table 2, column 7), possibly reflecting Papal influence on the urban poor due to his consistent messages of compassion, empathy, and care for the less fortunate. Using Week 0 and Week 1 as the treatment period, broader effects of the Papal visit are found for areas with more youths aged 15 to 24 (Table 2, column

<sup>&</sup>lt;sup>13</sup> There are 272 out of 384 census tracts with landmark churches and churches are located in all three spatial rings. Specifically, in ring 1, 79.8% of the census tracts have at least one landmark church. The percentages for rings 2 and 3 are 69.8% and 41.7%, respectively.

8), with significant reductions seen for both Part 1 crimes (-0.035 or 6.06%) and Part 2 crimes (-0.227 or 27.9%).

#### 5.3 Event-Study Analysis

Next, we expand our analysis by allowing effects to change flexibly across weeks. This allows us to explore how impacts on crime evolved in weeks before Week 0 and after Week 0, which had no mass gatherings and regular police deployment but potentially higher religiosity. Specifically, we implement an event study design that considers treatment effects for each week within the -12 to +12 week window, with the week before the visit (-1) designated as the reference week (see Equation 2).<sup>14</sup>

Table 3 presents the dynamic event study results for the nine ICCS crime categories we previously defined in Section 3. A few patterns are immediately apparent from this analysis. First, serious violent offences are generally not impacted through the window we consider. Consistent with our findings from the DID models, for simple assaults (column 2), we find a significant 0.038 (22.4%) reduction. However, this effect is found only for Week 1. On the other hand, we find substantial reductions in drug offences (column 6) that persist through Week 5 where the effect is a 0.030 (27.0%) reduction. The pattern that we observe is intuitive since violent offenses like assaults are more likely to be crimes of passion on which religiosity related channels may have a lower impact, whereas drug offences are classic vice type offenses and more directly carry religion based normative prescriptions against them.

Since police deployment and other intervening factors are likely to operate only in Week 0, we interpret this extended reduction in drug offences as induced by the positive shock of religious feelings and behavior engendered by Pope Francis and his activities in Philadelphia. A major feature of his visit, as highlighted in section 2, was directly speaking to offenders and inmates at a correctional facility and encouraging them to desist from recidivism and forge a path to rehabilitation. These aspects of the visit can create a direct link through which potential offenders in the city were encouraged to reduce their criminal activities.

<sup>&</sup>lt;sup>14</sup> We have extended this time window beyond these bounds but the main findings remain the same.

It is reassuring that point estimates for weeks preceding the event in Table 3 are generally close to zero and statistically insignificant. The exception is 'property only' crime (column 5), where significant effects at the 5% level were found for weeks -12 and -10, and marginally significant effects at the 10% level for week -8. Hence, in general, crime in 2015 did not follow different processes in the relevant weeks compared to the preceding five years (2010-2014), implying that estimated effects in the post-period can be attributed to the Papal visit.

#### 5.4 A Robustness Check: President Obama's Visit to Philadelphia

In this section, we conduct an important robustness check to assess whether the above results are driven by the temporary disruption of the criminal enterprise landscape in the city due to changes in the deployment of the security apparatus. Specifically, we explore a similar mass scale event of an entirely different nature two months before the Papal visit. President Barack Obama attended the 106th National Convention of the NAACP on 14 July 2015, which involved a substantial increase in security and police deployment, arguably, even more than the Papal visit given the involvement of the U.S. Secret Service. Therefore, if our findings are only a direct consequence of increased police presence, we should uncover similar estimated effects for similar types of crimes in the weeks following President Obama's visit. This visit also provides a suitable counterfactual to probe this issue since it also focuses on criminal justice-related issues. President Obama's visit involved Presidential pardons of inmates, generating a similar message of second chances as the one by Pope Francis. 15

Table 4 presents the DID estimates for President Obama's visit using an analogous DID specification, with 2015 as the treatment year and 2010-2014 as the control years. Week 0 for Obama's visit is defined as Monday 13 July 2015 to Sunday 19 July 2015. We uncover marginally significant reductions in Part 1 offences in the week of the visit. However, unlike the Papal visit, there is no discernible impact in any of the weeks after the event. For Part 2 offences, we consistently find null effects till we reach week 10, 11 which actually corresponds to the Pope's visit. This check further strengthens our interpretation that the Papal visit was

<sup>&</sup>lt;sup>15</sup> An excerpt from President Obama's speech to the NAACP is provided in Exhibit 2 in the Appendix.

<sup>&</sup>lt;sup>16</sup> See Figure A3 in the Appendix for the event study plots. The pre-period effects on Part 1 crimes reflects more property crime before 1 June 2015 which could be due to a recent bust in a major drug ring in 2015 from a year-long operation called "Operation Snow and Ice Removal" (there were less drug crimes in the same period).

unique in its crime reduction effect and was not plainly due to the effect of the large, potentially disruptive in terms of daily activities, nature of the event. Although we cannot unequivocally establish that the crime reductions were due to increased religiosity in the exposed population, the above exercise certainly points in that direction.<sup>17</sup>

#### 6. Conclusion

In this paper, we estimate the impact of Pope Francis's visit to Philadelphia in September 2015, which generated a city-wide positive shock to religious sentiment. The outcomes we focus on are reported offences to the Philadelphia police department, allowing us to examine the effects of increased religiosity on crime rates. Religiosity is hypothesized to reduce crime, given religious teachings on moral decision-making and behavior and the expanded social networks from attendance of religious services.

Based on difference-in-differences models and an event study analysis, we find significant reductions in less serious offences that persist for several weeks. For example, we see a persistent decrease in drug-related offences five weeks after the Papal visit. Effects are larger for areas of Philadelphia that are historically Christian. There is no evidence of any long-term impacts.

To explore potential influences stemming from altered police deployments during this period, we also examine the impact of a non-religious event of a similar magnitude: President Obama's visit to the city, where he delivered a public address on criminal justice reform. The results of this supplementary analysis support our conclusion that the crime reduction observed in the weeks following the Papal visit is due to the lingering effect of a positive religiosity shock on criminal behavior.

13

 $<sup>^{17}</sup>$  We also conducted a placebo test using 2014 as the treatment year and 2010-2013 as the control years. The results are presented in column 2 of Table 4.

#### References

Adamczyk, A., Freilich, J. D., and Kim, C. (2017). Religion and crime: A systematic review and assessment of next steps. *Sociology of Religion*, 78(2):192–232.

Barron, K., Parry, C. D., Bradshaw, D., Dorrington, R., Groenewald, P., Laubscher, R., and Matzopoulos, R. (2023). Alcohol, violence and injury-induced mortality: Evidence from a modern-day prohibition. *Review of Economics and Statistics*.

Birkholz, C. and Gomtsyan, D. (2022). Immigrant religious practices and criminality: The case of ramadan. *Journal of Comparative Economics*.

Campante, F. and Yanagizawa-Drott, D. (2015). Does religion affect economic growth and happiness? Evidence from Ramadan. *Quarterly Journal of Economics*, 130(2):615–658.

Chalfin, A. and McCrary, J. (2017). Criminal deterrence: A review of the literature. *Journal of Economic Literature*, 55(1):5–48.

Chalfin, A. and McCrary, J. (2018). Are U.S. cities underpoliced? Theory and evidence. *Review of Economics and Statistics*, 100(1):167–186.

Clingingsmith, D., Khwaja, A. I., and Kremer, M. (2009). Estimating the impact of the Hajj: religion and tolerance in Islam's global gathering. *Quarterly Journal of Economics*, 124(3):1133–1170.

Draca, M., Machin, S., and Witt, R. (2011). Panic on the streets of London: Police, crime, and the July 2005 terror attacks. *American Economic Review*, 101(5):2157–81.

Durkheim, E. (1897). Suicide [1897].

Fruehwirth, J. C., Iyer, S., and Zhang, A. (2019). Religion and depression in adolescence. *Journal of Political Economy*, 127(3):1178–1209.

Gruber, J. and Hungerman, D. M. (2008). The church versus the mall: What happens when religion faces increased secular competition? *Quarterly Journal of Economics*, 123(2):831–862.

Heaton, P. (2006). Does religion really reduce crime? *Journal of Law and Economics*, 49(1):147–172.

Higgins, P. C. and Albrecht, G. L. (1977). Hellfire and delinquency revisited. *Social Forces*, 55(4):952–958.

Iyer, S. (2016). The new economics of religion. *Journal of Economic Literature*, 54(2):395–441.

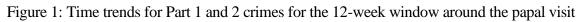
Kurland, J. (2019). Arena-based events and crime: An analysis of hourly robbery data. *Applied Economics*, 51(36):3947–3957.

Lester, M. (2011). Inventory of historic religious properties in Philadelphia: An assessment of significant and at-risk houses of worship. Preservation Alliance of Greater Philadelphia.

Mello, S. (2019). More cops, less crime. *Journal of Public Economics*, 172:174–200.

Moreno-Medina, J. (2023). Sinning in the rain: Weather shocks, church attendance, and crime. *Review of Economics and Statistics*, 105(1):54–69.

Weisburd, S. (2021). Police presence, rapid response rates, and crime prevention. *Review of Economics and Statistics*, 103(2):280–293.



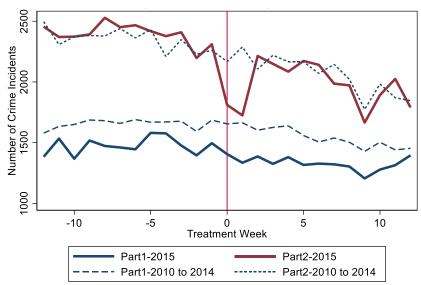


Table 1: Difference-in-differences estimates separately by crime categories

	Week 0		Week 0-1		Weeks 0-12		Sample
	(1)		(2)		(3)		means
Homicide/ Assault	-0.003	(0.007)	-0.008*	(0.005)	-0.004	(0.006)	0.062
Simple Assault	-0.012	(0.011)	-0.033**	(0.007)	-0.027***	(0.010)	0.170
Sexual Offence	0.004	(0.004)	-0.001	(0.002)	0.002	(0.003)	0.017
Violent Property	-0.002	(0.009)	-0.003	(0.007)	-0.008	(0.008)	0.137
Property Only	-0.01	(0.017)	-0.013	(0.012)	-0.008	(0.015)	0.372
Drug Offence	-0.021***	(0.008)	-0.032***	(0.007)	-0.028***	(0.008)	0.111
Fraud/ Corruption	-0.014***	(0.007)	-0.014***	(0.005)	-0.016***	(0.006)	0.077
Disorder	-0.002	(0.011)	-0.012*	(0.007)	-0.012	(0.009)	0.146
Public Safety	-0.003	(0.002)	-0.004**	(0.002)	-0.003	(0.002)	0.010

Notes: Each cell presents the treatment effect estimate from a different DID regression using the ICCS crime category shown in the left-hand column as the outcome variable. The outcome variable is the count of crimes at the daily-tract level. The sample includes  $\pm$ 12 weeks around the date of the Papal visit in the years 2010-2015. Number of observations in each regression equals 403,200. Clustered standard errors in parentheses. \*\*\*p<0.01, \*\* p<0.05, \* p<0.1.

Table 2: Difference-in-differences estimates for Part 1 and Part 2 crimes, by subgroups

	]	Part 1 Crimes	3	Part 2 Crimes			
	Week	Weeks	Weeks	Week	Weeks	Weeks	
	0	0-1	0-12	0	0-1	0-12	
Full sample	-0.015	-0.025*	-0.02	-0.113***	-0.178***	-0.161***	
	(0.021)	(0.015)	(0.019)	(0.030)	(0.023)	(0.028)	
Spatial subgroups							
(1) Ring 1 (<7km)	-0.044	-0.064***	-0.060**	-0.228***	-0.254***	-0.277***	
	(0.030)	(0.020)	(0.025)	(0.046)	(0.035)	(0.043)	
(2) Ring 2 (7-13km)	0.04	0.032	0.061	0.025	-0.110***	-0.042	
	(0.039)	(0.029)	(0.038)	(0.045)	(0.033)	(0.038)	
(3) Ring 3 (13-30km)	-0.018	-0.002	-0.037	0.018	-0.046	0.013	
	(0.036)	(0.033)	(0.036)	(0.051)	(0.031)	(0.045)	
Religiosity subgroups							
(4) Catholic church	0.018	0.009	0.017	-0.166***	-0.232***	-0.231***	
	(0.039)	(0.030)	(0.040)	(0.057)	(0.046)	(0.057)	
(5) Christian church	0.001	-0.011	-0.003	-0.161***	-0.223***	-0.212***	
	(0.025)	(0.017)	(0.022)	(0.037)	(0.028)	(0.035)	
(6) No church	-0.052	-0.060*	-0.061	0.001	-0.069**	-0.035	
	(0.039)	(0.031)	(0.035)*	(0.047)	(0.033)	(0.041)	
Demographic subgroups							
(7) High poverty rate	0.007	-0.014	-0.001	-0.153***	-0.242***	-0.226***	
	(0.027)	(0.019)	(0.024)	(0.040)	(0.031)	(0.038)	
(8) Young population	-0.009	-0.035**	-0.026	-0.150***	-0.227***	-0.209***	
	(0.025)	(0.017)	(0.022)	(0.037)	(0.029)	(0.035)	
Sample means (full sample)		0.578			0.813		

Notes: Each cell presents the results from a different DID model for a different subgroup, with the coefficient only shown for the Treat×post variable. The sample size for the full sample equals 403,200. The sample sizes corresponding with models (1)-(8) equal: 218,400; 121,800; 63,000; 111,300; 285,600; 117,600; 271,950; 292,950. Clustered standard errors in parentheses. \*\*\*P<0.01, \*\* p<0.05, \* p<0.1.

Table 3: Event study estimates, weeks -12 to 12

	Homicide/	Simple	Sexual	Violent	Property	Drug	Fraud/		Public
	Assault	Assault	Offence	Property	Only	Offence	Corruption	Disorder	Safety
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Week -12	0.008	0.001	0.009	0.010	-0.116**	0.024	-0.008	-0.008	0.006
	(0.024)	(0.040)	(0.010)	(0.031)	(0.051)	(0.027)	(0.027)	(0.032)	(0.008)
Week -11	0.005	-0.011	0.005	0.020	-0.081	0.022	-0.014	-0.028	0.003
	(0.022)	(0.038)	(0.010)	(0.032)	(0.050)	(0.027)	(0.027)	(0.031)	(0.007)
Week -10	-0.001	-0.019	0.008	0.003	-0.126**	0.023	-0.026	-0.032	0.002
	(0.022)	(0.037)	(0.010)	(0.030)	(0.049)	(0.027)	(0.027)	(0.032)	(0.007)
Week -9	0.011	-0.005	0.010	0.004	-0.080	0.015	-0.026	-0.004	0.003
	(0.023)	(0.039)	(0.010)	(0.029)	(0.049)	(0.026)	(0.027)	(0.031)	(0.007)
Week -8	-0.002	-0.019	0.002	0.011	-0.075*	0.023	-0.019	-0.019	0.004
	(0.020)	(0.035)	(0.009)	(0.028)	(0.044)	(0.024)	(0.025)	(0.029)	(0.007)
Week -7	0.004	-0.045	0.002	0.013	-0.051	-0.008	-0.031	0.005	-0.000
	(0.018)	(0.030)	(0.009)	(0.027)	(0.040)	(0.018)	(0.023)	(0.025)	(0.006)
Week -6	0.002	-0.053*	0.009	0.008	-0.052	-0.014	-0.027	0.010	-0.003
	(0.018)	(0.028)	(0.009)	(0.024)	(0.040)	(0.021)	(0.023)	(0.025)	(0.005)
Week -5	0.009	-0.035	0.003	0.022	-0.019	-0.012	-0.041*	0.006	-0.000
	(0.019)	(0.030)	(0.009)	(0.024)	(0.039)	(0.020)	(0.022)	(0.025)	(0.006)
Week -4	0.016	-0.041	0.010	0.030	-0.036	-0.013	-0.033	0.008	-0.002
	(0.019)	(0.028)	(0.009)	(0.026)	(0.039)	(0.019)	(0.023)	(0.024)	(0.005)
Week -3	0.001	-0.007	-0.001	0.008	-0.022	-0.008	-0.003	0.003	-0.001
	(0.008)	(0.014)	(0.003)	(0.011)	(0.017)	(0.011)	(0.009)	(0.013)	(0.003)
Week -2	-0.012	-0.000	0.002	-0.004	-0.020	-0.027**	0.002	-0.012	-0.001
	(0.007)	(0.013)	(0.004)	(0.009)	(0.017)	(0.013)	(0.009)	(0.012)	(0.003)
Week 0	-0.007	-0.013	0.004	0.002	-0.032*	-0.046***	-0.017**	-0.015	-0.002
	(0.008)	(0.012)	(0.004)	(0.010)	(0.017)	(0.012)	(0.008)	(0.012)	(0.003)
Week 1	-0.007	-0.038**	-0.003	-0.007	-0.006	-0.051***	-0.014	-0.031**	-0.001
	(0.010)	(0.015)	(0.005)	(0.014)	(0.022)	(0.014)	(0.012)	(0.014)	(0.004)
Week 2	0.009	-0.004	0.003	-0.010	0.021	-0.029*	-0.008	-0.011	0.002
	(0.014)	(0.020)	(0.006)	(0.017)	(0.029)	(0.016)	(0.015)	(0.019)	(0.005)
Week 3	-0.003	-0.010	0.003	-0.013	0.022	-0.040***	0.004	-0.011	0.006
	(0.013)	(0.021)	(0.006)	(0.017)	(0.028)	(0.015)	(0.015)	(0.018)	(0.005)

Week 4	0.004	0.009	0.008	-0.015	0.031	-0.030**	-0.014	-0.023	0.004
	(0.012)	(0.021)	(0.006)	(0.017)	(0.029)	(0.015)	(0.015)	(0.018)	(0.005)
Week 5	-0.010	0.006	0.001	-0.023	0.023	-0.030**	-0.003	0.010	0.011**
	(0.013)	(0.022)	(0.006)	(0.017)	(0.031)	(0.015)	(0.015)	(0.020)	(0.005)
Week 6	-0.007	0.005	-0.013	-0.034	-0.026	-0.029	-0.027	-0.024	0.004
	(0.023)	(0.038)	(0.012)	(0.029)	(0.047)	(0.023)	(0.025)	(0.033)	(0.008)
Week 7	-0.020	0.008	-0.016	-0.051*	0.008	-0.025	-0.036	-0.030	0.007
	(0.024)	(0.038)	(0.012)	(0.029)	(0.047)	(0.024)	(0.024)	(0.033)	(0.007)
Week 8	-0.016	-0.007	-0.018	-0.046	-0.012	-0.014	-0.029	-0.027	0.011
	(0.023)	(0.038)	(0.012)	(0.030)	(0.047)	(0.023)	(0.024)	(0.033)	(0.008)
Week 9	-0.024	-0.032	-0.018	-0.048	-0.034	-0.039*	-0.039	-0.023	0.005
	(0.023)	(0.038)	(0.011)	(0.029)	(0.047)	(0.021)	(0.024)	(0.033)	(0.007)
Week 10	0.006	-0.006	-0.016	-0.035	-0.003	-0.037	-0.042	-0.008	0.009
	(0.026)	(0.042)	(0.014)	(0.037)	(0.057)	(0.024)	(0.027)	(0.041)	(0.010)
Week 11	0.023	0.013	-0.017	-0.026	-0.006	-0.034	-0.045	0.007	0.005
	(0.028)	(0.044)	(0.015)	(0.038)	(0.061)	(0.025)	(0.029)	(0.043)	(0.011)
Week 12	0.027	-0.004	-0.015	-0.023	0.012	-0.047*	-0.035	-0.021	0.001
	(0.028)	(0.045)	(0.015)	(0.038)	(0.062)	(0.027)	(0.029)	(0.043)	(0.011)
Observations	403,200	403,200	403,200	403,200	403,200	403,200	403,200	403,200	403,200
Adjusted R <sup>2</sup>	0.034	0.062	0.009	0.039	0.176	0.189	0.037	0.045	0.012

Notes: Clustered standard errors in parentheses. Week -1 is the reference week in the event study. \*\*\*P<0.01, \*\* p<0.05, \* p<0.1.

Table 4: Other difference-in-differences results

	Obama's visit (14 July 2015)	Placebo test (Treatment = 2014, control = 2010-2013)
	(1)	(2)
	(post = 1 for week 0 and = 0 othe	rwise)
Part 1 Crimes	-0.048**	-0.030
	(0.019)	(0.021)
Part 2 Crimes	0.015	0.015
	(0.029)	(0.032)
	(post = 1  for weeks  0  and  1  and  = 0  or  0	otherwise)
Part 1 Crimes	-0.019	-0.022
	(0.017)	(0.014)
Part 2 Crimes	-0.012	0.010
	(0.025)	(0.022)
	(post = 1 for week 0 onwards and = 0)	otherwise)
Part 1 Crimes	-0.034*	-0.029
	(0.019)	(0.019)
Part 2 Crimes	0.010	0.015
	(0.026)	(0.029)
N	403,200	336,000

Notes: Each cell presents the results from a different DID model, with the coefficient only shown for the Treat×post variable. Clustered standard errors in parentheses. \*\*\*P<0.01, \*\* p<0.05, \* p<0.1.

## Appendix



Figure A1: Crowds gathered at Benjamin Franklin Parkway in Philadelphia for the Papal Mass on Sunday, September 27, 2015. (Credit: Catholic Voices)

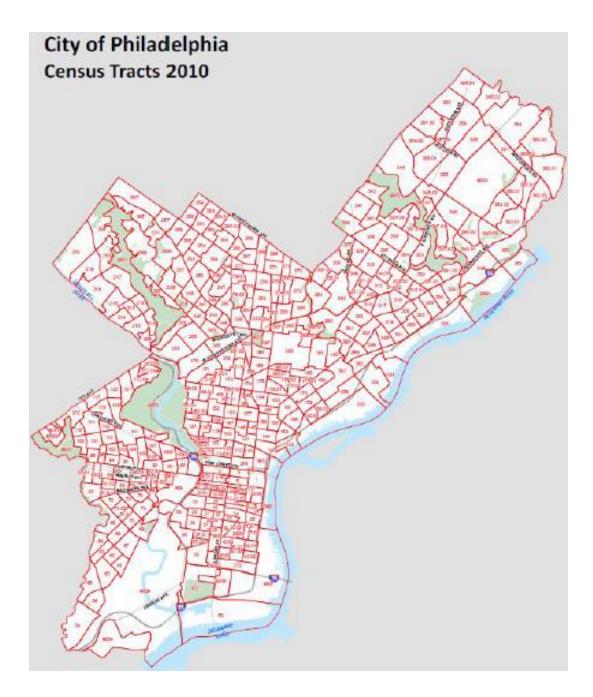


Figure A2: Census tract map of Philadelphia

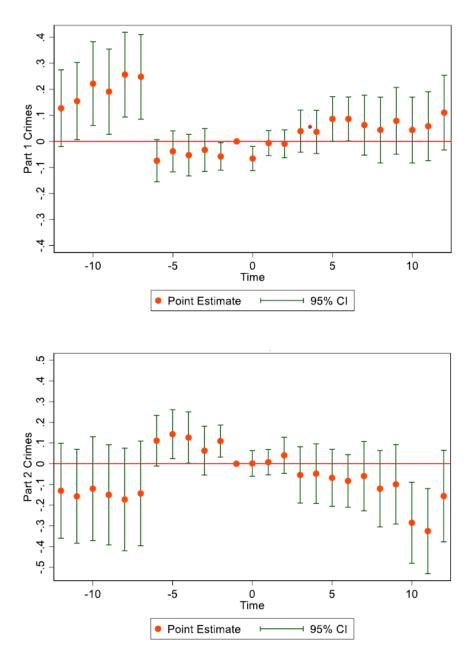


Figure A3: Event study estimates for Obama's visit to Philadelphia, Part 1 and Part 2 crimes.

Table A1: Type of offences committed in Philadelphia from 1 Jan to 31 Dec 2014

Type of Offence	Freq.	Percent
1. Aggravated Assault Firearm	2,065	1.11
2. Aggravated Assault No Firearm	5,415	2.91
3. All Other Offenses	41,182	22.12
4. Arson	401	0.22
5. Burglary Non-Residential	1,870	1
6. Burglary Residential	7,807	4.19
7. Driving Under the Influence	3,889	2.09
8. Disorderly Conduct	3,092	1.66
9. Embezzlement	400	0.21
10. Forgery and Counterfeiting	270	0.15
11. Fraud	11,229	6.03
12. Gambling Violations	46	0.02
13. Homicide - Criminal	207	0.11
14. Homicide - Criminal	46	0.02
15. Homicide - Gross Negligence	1	0
17. Liquor Law Violations	297	0.16
18. Motor Vehicle Theft	2,165	1.16
19. Narcotic / Drug Law Violations	9,626	5.17
20. Offenses Against Family and Children	151	0.08
21. Other Assaults	23,123	12.42
22. Other Sex Offenses (Not Commercialized)	1,029	0.55
23. Prostitution and Commercialized Vic	1,377	0.74
24. Public Drunkenness	453	0.24
25. Rape	1,216	0.65
26. Receiving Stolen Property	48	0.03
27. Recovered Stolen Motor Vehicle	7,701	4.14
28. Robbery Firearm	3,034	1.63
29. Robbery No Firearm	3,913	2.1
30. Theft from Vehicle	13,218	7.1
31. Thefts	24,037	12.91
32. Vagrancy/Loitering	442	0.24
33. Vandalism/Criminal Mischief	14,947	8.03
34. Weapon Violations	1,449	0.78
Total	186,146	100

Table A2: List of census tracts for the 'donut ring' analysis

Census Tracts in Each Ring

Census Tracts in Each King							
Ring 1			Ring 2			Ring 3	
200	100	3800	5000	5400	21800	30800	32900
300	1001	3902	5500	18300	22000	31000	33102
401	1002	4002	5600	18400	23100	31401	33300
402	1102	4101	6000	21600	25600	31402	33701
500	1500	4102	9801	21700	25700	31501	33702
600	1600	4201	9802	21900	25800	31502	34200
700	1700	4202	18800	23700	25900	32500	34400
801	1800	6100	19000	24800	26000	32600	34501
803	2000	6200	19100	24900	26100	33000	34502
804	2100	6300	21000	25300	26200	33101	34600
901	2200	6400	21100	25400	26301	33200	34701
902	2300	6500	21200	25500	26302	33400	34702
1101	2400	6600	21300	26400	26600	33500	34801
1201	2500	6700	21400	26500	29800	33600	34802
1202	2701	7200	21500	26700	30600	33800	34803
1300	2702	8101	23500	26800	30700	33900	34900
1400	2801	8200	23600	26900	30900	34000	35100
1900	2802	8301	23800	27000	31101	34100	35200
8701	2900	8302	23900	27100	31102	38100	35301
8702	3001	9600	24100	27200	31200		35302
8801	3002	10000	24200	27300	31300		35500
8802	3100	10100	24500	27401	31600		35601
9000	3200	11400	24600	27402	31700		35602
9100	3300	11500	24700	27500	31800		35701
9200	3600	11700	25200	27600	31900		35702
10500	3701	11800	27902	27700	32000		35800
10600	3702	12000	28100	27800	32100		35900
10700	3901	12100	28200	27901	32300		36000
10800	4001	12203	28300	29100	38400		36100
10900	6900	16000	28400	29200	38500		36201
11000	7000	16100	28500	29300	38700		36202
12500	7101	17601	28600	29400			36203
13100	7102	17602	28700	29900			36301
13200	7300	17701	28800	30000			36302
13300	7400	17702	28901	30100			36303
13401	7700	17800	28902	30200			36400
13402	7800	17900	29000	30501			36501
13500	7900	18001	37900	30502			36502
13601	8000	18002	38200	38000			980200
13602	8102	19200	980100	38600			980300
13700	8400	19501	980900	38800			989100
13800	8500	19502		38900			

13900	8601	19700	39000
14000	8602	19800	980400
14100	9300	19900	
14600	9400	20102	
14700	9500	20200	
14800	10200	20300	
14900	10300	20400	
15101	10400	20500	
15102	11100	20600	
15200	11200	20700	
15300	11300	20800	
36900	11900	20900	
37600	12201	24000	
980000	12204	24300	
	14200	24400	
	14300	28000	
	14400	37200	
	14500	37300	
	15600	37500	
	15700	37800	
	15800	38300	
	16200	980500	
	16300	980600	
	16400	980700	
	16500	980800	
	16600		
	16701		
	16702		
	16800		
	16901		
	16902		
	17000		
	17100		
	17201		
	17202		
	17300		
	17400		
	17500		
	20000		
	20101		
	36600 36700		
	36700		
	37700		

# Exhibit 1: Transcript of Pope Francis's remarks at the Curran-Fromhold Correctional Facility in Philadelphia on 27 September, 2015 (Source: The Vatican press office):

Thank you for receiving me and giving me the opportunity to be here with you and to share this time in your lives. It is a difficult time, one full of struggles. I know it is a painful time not only for you, but also for your families and for all of society. Any society, any family, which cannot share or take seriously the pain of its children, and views that pain as something normal or to be expected, is a society "condemned" to remain a hostage to itself, prey to the very things which cause that pain. I am here as a pastor, but above all as a brother, to share your situation and to make it my own. I have come so that we can pray together and offer our God everything that causes us pain, but also everything that gives us hope, so that we can receive from him the power of the resurrection.

I think of the Gospel scene where Jesus washes the feet of his disciples at the Last Supper. This was something his disciples found hard to accept. Even Peter refused, and told him: "You will never wash my feet" (Jn 13:8).

In those days, it was the custom to wash someone's feet when they came to your home. That was how they welcomed people. The roads were not paved, they were covered with dust, and little stones would get stuck in your sandals. Everyone walked those roads, which left their feet dusty, bruised or cut from those stones. That is why we see Jesus washing feet, our feet, the feet of his disciples, then and now.

Life is a journey, along different roads, different paths, which leave their mark on us.

We know in faith that Jesus seeks us out. He wants to heal our wounds, to soothe our feet which hurt from travelling alone, to wash each of us clean of the dust from our journey. He doesn't ask us where we have been, he doesn't question us what about we have done. Rather, he tells us: "Unless I wash your feet, you have no share with me" (Jn 13:8). Unless I wash your feet, I will not be able to give you the life which the Father always dreamed of, the life for which he created you. Jesus comes to meet us, so that he can restore our dignity as children of God. He wants to help us to set out again, to resume our journey, to recover our hope, to restore our faith and trust. He wants us to keep walking along the paths of life, to realize that we have a mission, and that confinement is not the same thing as exclusion.

Life means "getting our feet dirty" from the dust-filled roads of life and history. All of us need to be cleansed, to be washed. All of us are being sought out by the Teacher, who wants to help us resume our journey. The Lord goes in search of us; to all of us he stretches out a helping hand. It is painful when we see prison systems which are not concerned to care for wounds, to soothe pain, to offer new possibilities. It is painful when we see people who think that only others need to be cleansed, purified, and do not recognize that their weariness, pain and wounds are also the weariness, pain and wounds of society. The Lord tells us this clearly with a sign: he washes our feet so we can come back to the table. The table from which he wishes no one to be excluded. The table which is spread for all and to which all of us are invited.

This time in your life can only have one purpose: to give you a hand in getting back on the right road, to give you a hand to help you rejoin society. All of us are part of that effort, all of us are invited to encourage, help and enable your rehabilitation. A rehabilitation which everyone seeks and desires:

inmates and their families, correctional authorities, social and educational programs. A rehabilitation which benefits and elevates the morale of the entire community.

Jesus invites us to share in his lot, his way of living and acting. He teaches us to see the world through his eyes. Eyes which are not scandalized by the dust picked up along the way, but want to cleanse, heal and restore. He asks us to create new opportunities: for inmates, for their families, for correctional authorities, and for society as a whole.

I encourage you to have this attitude with one another and with all those who in any way are part of this institution. May you make possible new opportunities, new journeys, new paths.

All of us have something we need to be cleansed of, or purified from. May the knowledge of that fact inspire us to live in solidarity, to support one another and seek the best for others.

Let us look to Jesus, who washes our feet. He is "the way, and the truth, and the life". He comes to save us from the lie that says no one can change. He helps us to journey along the paths of life and fulfillment. May the power of his love and his resurrection always be a path leading you to new life.

# Exhibit 2: Excerpt from President Obama's speech to the NAACP in Philadelphia on 14 July 2015 (Source: White House, 2015)

"Over the last few decades, we've also locked up more and more nonviolent drug offenders than ever before, for longer than ever before. And that is the real reason our prison population is so high. In far too many cases, the punishment simply does not fit the crime. If you're a low-level drug dealer, or you violate your parole, you owe some debt to society. You have to be held accountable and make amends. But you don't owe 20 years. You don't owe a life sentence. That's disproportionate to the price that should be paid.

...

For nonviolent drug crimes, we need to lower long mandatory minimum sentences – or get rid of them entirely. Give judges some discretion around nonviolent crimes so that, potentially, we can steer a young person who has made a mistake in a better direction.

...

So on Thursday, I will be the first sitting President to visit a federal prison. And I'm going to shine a spotlight on this issue, because while the people in our prisons have made some mistakes – and sometimes big mistakes – they are also Americans, and we have to make sure that as they do their time and pay back their debt to society that we are increasing the possibility that they can turn their lives around."