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The Institutional Foundations of Religious Politics: Evidence from Indonesia*

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Abstract

Why do religious politics thrive in some societies but not others? This paper explores the institutional foundations of this process in Indonesia, the world's largest Muslim country. We show that an important Islamic institution, the *waqf*, fostered the entrenchment of Islamism at a critical juncture. In the early 1960s, rural elites transferred large amounts of land into *waqf*—a type of inalienable charitable trust—to avoid expropriation by the government as part of a major land reform effort. We exploit policy rules to show that greater intensity of the planned reform led to more prevalent *waqf* land and Islamic institutions endowed as such, including mosques and religious schools. After Indonesia's democratic transition, the Islamist movement leveraged these endowments to confront the secular state and expand the influence of religion in public life. We identify lasting effects on electoral support for Islamist parties, the adoption of *sharia* regulations, and the size of the religious sector. These changes do not come from higher religiosity, but are instead driven by distinct views about the role of religion in government. However, this also comes with economic costs, particularly in agriculture where large *waqf* endowments reduce productivity. Overall, our findings shed new light on the origins and consequences of Islamism.

JEL Classifications: D72, D74, P16, P26, Z12

Keywords: Religion, Institutions, Land Reform, Islam, Sharia Law

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1 Introduction

Religion, the “the heart of a heartless world” (Marx, 1844), has been a driving force of historical change. In the wake of the Iranian Revolution, the rise of the religious vote in the United States, and the fall of Communism, many came to describe the growing influence of religion on public life worldwide as the advent of “God’s Century” (Toft et al., 2011). A prominent manifestation of this trend has been the rise of Islamism, the social movement to “return to the scriptural foundations of the Muslim community... for application to the present-day social and political world” (Al-Rahman, 2009). Yet, Muslim societies vary widely in their support for Islamism (Cammatt and Luong, 2014). Nor is Islam unique; one finds substantial variation in religious politics among all faiths (Barro and McCleary, 2005). The causes of this variation, and the role that institutions and culture play in explaining it, remain poorly understood.

In contrast, there is a wealth of evidence on how religion shapes human behavior and development. Researchers have explored links between religion and economic growth, looking at both Christian (Becker and Woessmann, 2009; Cantoni et al., 2018) and Muslim societies (Kuran, 2011; Rubin, 2011). Islamic practices such as pilgrimage (Clingingsmith et al., 2009) and fasting (Campante and Yanagizawa-Drott, 2015) are known to affect socioeconomic well-being.¹ Still others show how religion mediates institutional change (Belloc et al., 2016; Chaney, 2013; Platteau, 2017). Much less is known about why different societies endorse the mixing of religion and politics.² To explain the resurgence of religious politics in the late twentieth century, social scientists have emphasized the failure of the secular state to uphold traditional values in the global era (Almond et al., 2003).

This paper instead emphasizes the role of institutions as a fundamental cause of religious influence on politics and society Greif (1994), among others, argues that cultural factors can initiate distinct institutional trajectories. We revisit this argument and find evidence for its converse: institutional shocks generate downstream cultural and political change. By empowering conservative religious actors, specific institutions have the capacity to change beliefs about the role of religion in society. We show that schools and places of worship endowed in Islamic trusts provide venues for conservative forces within the broader Muslim community to mobilize political support and wage ideological warfare.

We use a natural historical experiment in the world’s largest Muslim country, Indonesia, to identify the effect of Islamic institutions on religious preferences, politics, and the local organization of society. Our analysis centers on the aborted land reform of the 1960s known as the Basic Agrarian Law (BAL). Following other work on critical junctures (Banerjee and Iyer, 2005; Dell, 2012), we identify the consequences of this historical episode for the revival of the Islamist movement in Indonesia. As part of the BAL, the Sukarno government attempted to expropriate and redistribute large holdings. While the redistribution effort ultimately failed, a policy loophole led to a resource windfall for Islamic organizations in regions facing the greatest expropriation threat. We show how this loophole fostered the entrenchment of Islamism: inalienable land endowments provided Islamists with the social and physical capital

¹Others argue that economic risk increases religiosity (Ager and Ciccone, 2018; Bentzen, forthcoming; Chen, 2010). See Kuran (2018) for a comprehensive survey of the literature on Islam and economic performance.

²A relevant historical example is the *Non Expedit* given to Catholics by Pope Pius IX in 19th-century Italy, which explicitly prohibited Catholics from voting and standing in parliamentary elections. Similarly, within Islam, there are longstanding debates about whether participation in elections is religiously permissible (see Hasan, 2009).

needed to build conservative institutions capable of confronting the secular state.

Crucially for our research design, the land reform exempted religious lands held in Islamic charitable trust—known as *waqf*—from redistribution. Knowing this, many large landowners transferred expropriable land to *waqf* endowments under the authority of local religious leaders. We show that areas intensely targeted by the land reform exhibit more pervasive *waqf* and institutions endowed as such today, including Islamic schools and mosques. In affected districts, these endowments first arise in the 1960s and then exhibit sustained growth thereafter, as the initial resource shock laid the foundations for future expansion (see Section 5.1). This stands in contrast to the lack of any systematic effects of the reform on land inequality over the ensuing decades, which is consistent with most expropriated lands being reclaimed in the late 1960s as the land reform was largely undone (Huizer, 1972; Utrecht, 1969).

Several decades later, regions facing greater expropriation intensity in the 1960s exhibit stronger support for Islamist political parties and a deeper influence of Islamic precepts on local governance, ranging from the adoption of *sharia* regulations to the use of Islamic courts and vigilante activity by Islamist organizations.³ At the same time, we can show that the entrenchment of Islamism is not fueled by greater religiosity per se. This is an important finding. Like most secular (authoritarian) governments in Muslim countries past and present, the Suharto regime that ruled Indonesia from 1967–1998 actively promoted Islamic culture and piety while aggressively suppressing its political organization. The democratic transition in 1998 brought an opportunity to capitalize on the Islamist fervor that had been nurtured in the conservative schools and mosques borne out of the *waqf* transfers during the 1960s.

We explore these downstream effects of the land reform by assembling one of the most comprehensive datasets ever used to measure the spread of Islamism in a modern democracy. Our data include, among others, (i) administrative records from 243,000 mosques, 26,000 religious schools, 1.2 million Islamic court cases, and 400 *sharia* regulations; (ii) textual data from 241,000 legislative campaigns; (iii) district-level electoral returns; (iv) village-level census data on land use; (v) media-based reports on religious vigilantism; and (vi) survey data on religious practice, beliefs, and political preferences.

We identify causal effects of the land reform using a *difference-in-discontinuity* design. This specification leverages two sources of identifying variation. The *discontinuity* exploits policy variation at a population density threshold determining the scope of expropriation. In districts with more than 400 people/km², the maximum size of holdings was set at 5 hectares (ha) as opposed to 9 ha in districts below 400 people/km². The *difference* exploits variation in the number of expropriable landholdings between 5–9 ha. The interaction of the difference and the discontinuity determines the intensity of the expropriation threat under the BAL. Importantly, the number of expropriable holdings is continuous across the 400 threshold. Our main specification thus identifies the difference in outcomes between districts with and without a large number of 5–9 ha holdings, and by estimating whether this difference changes discontinuously at the 400 threshold above which 5–9 ha holdings become expropriable.

We validate this design by showing that expropriation intensity is unrelated to potential confounders of Islamism before the land reform, including the vote share for Islamist parties in the 1950s and the prevalence of mosques and religious schools in the early 1900s. We also show the absence of pre-trends

³The *sharia* regulations we examine cover many facets of life, including, among others, the payment of alms (*zakat*), the banning of alcohol, and the requirement that women wear the Islamic veil.

in *waqf* land allocated to mosques created in the years leading up to the land reform. Moreover, as detailed in Section 6.2, our key insights are robust to incorporating identifying variation at other population density thresholds in the BAL. There were two other thresholds at 50 and 250 people/km² below which the scope of expropriation changed, exempting progressively larger holdings from redistribution. However, given the staggered implementation of the BAL and its abrupt halt in the mid-1960s (see Section 2.3), redistribution efforts were much more limited in regions affected by these thresholds.

A widely adopted institution in Muslim societies, the *waqf* has been the subject of a large historical literature and was described by Kuran (2001, 2011) as a major factor behind economic and political stagnation in the Middle East. While a charitable institution in name, the *waqf* has been used throughout history as protection against expropriation by the state rather than as a vehicle for redistribution (see Section 3.1). In the same manner, the exemption of religious lands in the BAL led wealthy landowners to shield their assets by transferring them to religious institutions endowed as *waqf*. These *waqf* endowments closely correspond to the “modern” *waqf* in Kuran’s (2016) classification, akin to charitable foundations and similar to the type of *waqf* established across the Muslim world in the twentieth century.

Why would an increase in the amount of land held in *waqf* impact support for Islamism? The effects of the *waqf* are tied to its specific institutional features and its ability to sustain a variety of Islamic organizations over time. *Waqf* are inalienable under Islamic law and provide autonomy from the state. For example, *waqf* lands in Indonesian are often used to support Islamic boarding schools known as *pesantren*. These schools are privately funded, maintain their own curriculum, and remain outside Ministry of Education oversight; they are also key conduits for Islamist ideas and action (Van Bruinessen, 1995, 2008; McVey, 1983).⁴ Many *pesantren* leaders have strong ties to Islamist political parties as well as non-governmental organizations.⁵ These parties advocate for an Islamic state based on *sharia* law and reject the national ideology of *Pancasila*, which promotes a secular and inclusive vision for Indonesia. In districts with greater expropriation intensity, Islamists gain at the expense of parties that embrace *Pancasila*, including more moderate Islamic parties. This is consistent with the possibility that the *waqf* transfers of the 1960s were less important for moderate Islamic organizations that did not face the same degree of repression historically as more fundamentalist Islamist organizations.

Further evidence suggests that these downstream effects of the land reform most plausibly originated in the *waqf* land endowments. First, we rule out alternative alternative pathways related to changes in land inequality, the quantity of schooling, public goods provision, and anti-Communist violence in the mid-1960s. Second, while prioritizing the reduced form, we also consider an instrumental variable approach to identifying the long-run political and economic effects of the *waqf*, using the difference-in-discontinuities term as an IV for *waqf* land. These results clarify that indeed the reduced form effects on the *waqf* and on Islamism are driven by the same regions, namely those facing the greatest expropriation intensity in the 1960s and where *waqf* endowments nurture conservative Islamic institutions today.

⁴In 2012/13, roughly 3.8 million or around 7.3% of all students across Indonesia were enrolled in *pesantren* according to the Ministry of Education. Other Islamic day schools, *madrasa*, are also supported by *waqf* and play an important role in shaping religious attitudes. However, they are less focused on producing religious scholars, clerics, and leaders than are *pesantren*. See Section 4.1 for further discussion of these differences. According to the Indonesia Family Life Survey, by 2014, nearly one-third of Indonesians had attended a *pesantren* or *madrasa* at some time in their educational years.

⁵We provide illustrative examples throughout the paper (see, e.g., Sections 3.3, 5.2, and 5.3).

Our findings point to a shift in both the demand for and supply of religious politics. Survey data show that respondents in districts with greater expropriation intensity are more likely to scrutinize the religion and religiosity of politicians, and to support the adoption of *sharia* regulations, even though they do not display higher levels of personal piety. On the supply side, legislative candidates in these districts are more likely to run on explicitly Islamist themes. These results corroborate our findings on electoral and policy outcomes and, collectively, highlight the influence of Islamists beyond the ballot box.

We close by asking how the land reform affected economic development. Despite sizable political impacts, the economic effects of the *waqf* transfers seem to have been relatively circumscribed. In particular, we find productivity losses in agriculture but not for broader measures of development. This is consistent with the fact that the *waqf* endowments in modern Indonesia tend to be confined to agricultural lands supporting religious institutions rather than wider swathes of the economy. Still, such lands often come with restrictions on crop type, tenancy arrangements, and labor coercion (under religious authority) that may result in efficiency losses.⁶ In sum, although a small part of the overall economy, *waqf* endowments can have outsized influence on society through their effects on politics.

Across spiritual traditions, religious institutions provide stability and privacy to the individuals who operate them, which makes them ideal venues for political activism. We hypothesize that three characteristics of the institutions we study caused their sizable influence on Indonesian politics and could similarly define the role of clerical institutions in other contexts. First, inalienable religious institutions can protect particular groups during sustained periods of political oppression, allowing them to survive until they can again compete or seek indirect influence in the political arena. This was true historically not only for Islamist movements under hostile regimes (Egypt, Indonesia, Turkey), but also, for example, for conservative movements associated with the Roman Catholic Church such as the Opus Dei. Second, institutions that attract charitable giving are bound to foster opportunistic alliances between elites and religious interest groups to influence law and policymaking.⁷ Third, religious institutions outside government purview can be used to foment opposition to the state. In the same way that radical clerics have used mosques and religious schools to cultivate Islamism in Indonesia, there is widespread anecdotal evidence that radical leaders in India have used temples to cultivate Hindu nationalism.⁸

Related Literature. Overall, our paper contributes new insights to the political economy literature on religion. In a survey of this literature, [Iyer \(2016\)](#) notes an important puzzle, namely the persistence of religion despite the array of secular forces and economic development that militate against it. Our findings suggest that the durability of religious institutions and their role in organizing political coalitions are important factors in understanding Islamism. This echoes a theme in [Rubin \(2017\)](#), whose work, like that of [Chaney \(2013\)](#), suggests that Islamic authorities were granted a large say in politics historically as a result of the threat they posed to ruling elites. Our findings shed light on the microfoundations of this

⁶Like other governments across the Muslim world, Indonesia's has been pushing for *waqf* formation in new areas of the economy ([Bank Indonesia, 2016](#)). This may imply future scope for local economy-wide impacts if districts with greater expropriation intensity—already with greater *waqf* prevalence—are more likely to take up subsequent opportunities for *waqf* expansion.

⁷In the U.S., groups such as Priests for Life, the Women's Christian Temperance Union, and the American Jewish Congress "collectively spend over \$350 million every year attempting to entrench religious values into the law" ([Robinson, 2015](#)).

⁸In 2015, the state of Kerala moved to forbid military drills ('shakha') on temple premises by the Rashtriya Swayamsevak Sangh Hindu nationalist group, triggering the opposition of the right-wing Bharatiya Janata Party party ([Times of India, 5 June 2015](#)).

threat.⁹ Consistent with [Platteau \(2017\)](#), we also provide empirical evidence that the fusion of religion and politics is not quintessential to Islam but can instead arise from specific institutional arrangements within Islam’s decentralized organization, and from the capture of Islamic institutions by conservative forces within the Muslim community.

Our paper also adds to a wider social science literature on the rise of Islamism ([Berman, 2011](#); [Blaydes and Linzer, 2011](#); [Fourati et al., forthcoming](#); [Pepinsky et al., 2012](#)). [Binzel and Carvalho \(2017\)](#) argue that the Islamic revival in Egypt—and perhaps elsewhere in the Muslim world—is rooted in unmet aspirations that come with greater education but limited scope for upward mobility. Increased religiosity in this case helps individuals to cope and recalibrate expectations. While this study draws a connection between growth in piety and the resurgence of Islamism, we find that the two need not be related and may respond to different underlying triggers.¹⁰ This is consistent with [Roháč \(2013\)](#) who argues that voters support Islamists not due to piety but because they offer the only credible commitment to provide public goods. We rule out this reciprocity-based mechanism, finding that public goods are not systematically different in districts with greater expropriation intensity, despite greater prevalence of *waqf*.

We contribute to this literature by providing causal evidence on the institutional mechanisms driving the emergence and success of Islamist groups. Our key innovation is to isolate a shock to the supply of conservative religious institutions, which fuel Islamism through three complementary mechanisms: (i) by expanding opportunities for ideological exposure, (ii) by helping to mobilize around elections and key policy issues, and (iii) by cultivating future political leaders. [Iannaccone and Berman \(2006\)](#) argue that participating in “extreme” religious behavior can screen out potential free-riders. This provides Islamist parties with a screening technology that other parties may not have, which makes institutions like Indonesia’s Islamic boarding schools (outside the purview of the state) particularly useful for political mobilization. Our results suggest that independent, *waqf*-endowed institutions are important for understanding why Islamism gradually rose to prominence after a long period of marginalization (see, e.g., [Lacroix, 2011](#); [Wickham, 2002, 2013](#)).

Finally, we add to a growing literature exploring the link between culture and institutions ([Alesina and Giuliano, 2015](#); [Bisin and Verdier, 2017](#); [Lowe et al., 2017](#); [Tabellini, 2010](#)). Numerous studies identify a relationship between economic circumstances and religious culture (see comprehensive reviews in [Chen and Hungerman, 2014](#); [Iannaccone, 1998](#); [Iyer, 2016](#)). Much less is known about how religious institutions shape culture and vice versa. Our findings are consistent with a shock to religious institutions in the 1960s feeding back onto religious culture during the authoritarian era, which then facilitated further institutional change during the era of democracy and decentralization when Islamists could influence politics more directly. These dynamics have potential implications for other countries with deep religious cultures undergoing political openings.

⁹Our findings also relate to [Heldring et al. \(2017\)](#) who link the dissolution of religiously-owned monastery lands in 15th century England to growth in innovation, agricultural commercialization, and industrial development. We show that religiously-owned land played an important role in shaping political development even though that land did not cover the vast swathes of territory it did in historical England or elsewhere in Muslim world (see [Kuran, 2011](#)).

¹⁰[Pepinsky et al. \(2018\)](#) draw similar conclusions from survey experiments in Indonesia. Moreover, [Buehler \(2016\)](#), which compiles the *sharia* law data we use, argues, like we do, that local variation in the institutional strength of Islamist groups is key to understanding the “Islamization of politics” in Indonesia.

The paper proceeds as follows. Sections 2 and 3 provide relevant background on the 1960 Indonesian land reform and the *waqf*, respectively. Section 4 describes our data and empirical strategy. Section 5 presents our main results, and Section 6 addresses alternative explanations and robustness checks. Section 7 concludes.

2 The 1960 Indonesian Land Reform

In the tumultuous decades after independence, the Sukarno regime sought to launch a major land reform aimed at empowering poor households across Indonesia. In this section, we provide relevant background on this reform effort, known as the Basic Agrarian Law (BAL) of 1960, which, as we later document, inadvertently fostered the spread of Islamic institutions throughout the archipelago.

2.1 Design of the Land Reform

The origins of the 1960 land reform lie in the pervasive inequality across Indonesia in the colonial era. In the early days of the Indonesian republic, land was owned through a variety of property regimes in force since the Dutch Agrarian Law of 1870. Inequality was most pronounced in Java and Bali where the average landholder cultivated no more than half a hectare and where 60% of households were landless (Soemardjan, 1962). Post-independence, President Sukarno and his supporters attempted to do away with the old colonial laws governing agriculture and to impose a technical solution that would address landlessness by redistributing land away from large landholders.

The government first laid out its detailed plans for “the termination of proprietary rights on land” in its August 1959 *Political Manifesto* (Utrecht, 1969). This prompted fears among rural landowners that comprehensive land redistribution would soon be implemented. These plans were codified in the BAL (Number 5) introduced on 24 September 1960 and a subsequent law (Number 56) introduced on 28 December 1960. The law distinguished different thresholds for maximum allowable landholdings, with surpluses in excess of cutoffs at the district level destined for redistribution to landless peasants. A subsequent law (Number 224) introduced on 12 September 1961 stipulated the arguably unfavorable terms of redistribution.¹¹

Ceilings on the amount of land any household could own were defined in the BAL as a function of population density at the district level. These arbitrary cutoffs, which inform our empirical strategy in Section 4, stipulated that districts with more than 400 people/km² could have maximum holdings of 5 (6) hectares of wetland (dryland), districts with 251–400 people/km² could have maximum holdings of 7.5 (9) hectares of wetland (dryland), districts with 51–250 people/km² could have maximum holdings of 10 (12) hectares of wetland (dryland), and districts with less than or equal to 50 people/km² could

¹¹The law No. 224 of 1961 detailed the course of indemnification for seized lands under the BAL. The fair price was set at 10 times the assessed annual profits from the land for the first five hectares and 9 times for the next five hectare increments with 7 times for any remaining land beyond that. The government was to deposit 10 percent of the payment in a public bank with the remainder in promissory notes that could be redeemed one year after the land was redistributed. Beneficiaries would have 16 years in which to pay the government to recoup these costs. Landowners that refused redistribution would be imprisoned for 3 months and receive no indemnification. Huizer (1972) provides further details on the law.

have maximum holdings of 15 (20) hectares of wetland (dryland). The maximum allowable holdings could not exceed 20 hectares anywhere in the country.

2.2 The Religious Lands Exemption

In early discussions with the Sukarno regime, Islamic leaders expressed strong reservation about restrictions on land ownership being in contradiction to Islamic law (Mortimer, 1972). The regime faced significant political risks when it undertook the land reform and chose not to antagonize religious authorities by conceding that the law would not be contrary to religious law. Thus the original BAL (No. 5) stipulated that religious lands, including all land under Islamic trusts (*waqf*), were exempt from redistribution.¹² Importantly, this regulation and subsequent ones did not exempt *waqf* held as family trusts but rather those held as endowments for religiously sanctioned charitable purposes.¹³ This precluded the possibility of shielding one's assets through private trust but incentivized transfers to religious leaders who managed *waqf* endowments historically (see Section 3.1). The *waqf* exemption in the Indonesian case follows a long historical tradition throughout the Muslim world where rulers were often hesitant to confiscate *waqf* properties because they feared the consequences of seizing land "owned" by God (Encyclopaedia of Islam, 2012).

Regulations and decrees adopted after the initial BAL No. 5 clarified the exemption procedure. A Ministry of Agriculture Law (No. 2, October 10, 1960) stipulated that religious lands must be registered as such within six months. Act No. 10 in March 1963 mandated that registration of land with local government would prove legal validity of ownership, effectively allowing *waqf* transfers prior to the date of registration. Law No. 38 of 1963 attempted to clarify the definition of religious lands, ensuring that such lands were deemed to serve a religiously sanctioned purpose.

2.3 Implementation and Demise of the Reform

At the outset, the government prescribed a two-stage implementation process to be completed by the mid-1960s (Utrecht, 1969). Redistribution would begin in the densely populated Inner Islands of Java, Bali and Nusa Tenggara Barat (NTB) where all but two districts (out of 95) fell above the 50 people/km² cutoff. By 1964, redistribution efforts would expand to the Outer Islands where all but two districts (out of 96) fell below the 50 people/km² cutoff.

Despite this ambitious agenda, implementation was fraught with challenges. While peasant organizations linked to the Communist Party (*Partai Komunis Indonesia* or PKI) led information campaigns in the early 1960s, most local redistribution committees established under the BAL did not become operational until September 1962. These village-level committees, overseen by the district government, were often composed of representatives of the local elite sympathetic with large landowners. As implementation of the reform slowed, vigilante groups affiliated with the PKI began unilaterally seizing property in

¹²Article 49(3) addresses the exemption, stipulating: "Perwakafan tanah milik dilindungi dan diatur dengan Peraturan Pemerintah." This translates as "Waqf land with the right of ownership shall be protected and overseen by Government Regulation."

¹³These two categories are known in Arabic as *waqf ahli* and *waqf khayri*, respectively.

December 1963 and early 1964, which significantly escalated tensions in the countryside.¹⁴ After a failed coup in October 1965 by junior army officers accused of being loyal to the PKI, mass violence spread throughout rural areas targeting “leftists” and Sukarno’s supporters (Cribb, 2001; Farid, 2005; Roosa, 2006). The ensuing violence brought land reform efforts to a standstill.

Although the land reform was never formally repealed, assessments of its legacy note that the innumerable contradictions contained in the BAL fatally undermined its ability to address rural inequality (Lucus and Warren, 2013). An evaluation of changes in the distribution of land between the 1963 and 1973 Agricultural Censuses concluded that “there appears to be no appreciable change between censuses in inequality of holdings” (Montgomery and Sugito, 1980). Utrecht (1969) details a process by which the land reform stalled and was eventually undone by the late 1960s in most parts of the country as most landowners took back their properties. This was not the case, however, for religious lands held in *waqf* since the inalienability and general sanctity of the land, now under religious tutelage, made it difficult if not impossible to reverse. Ultimately, the historical record points to a fundamental role of the *waqf* exemption in hindering the course of reform, as we discuss below.

3 Expropriation Threat and the Spread of *Waqf*

This section provides general background on the *waqf* and its specific use in Indonesia. We also document how elites used exemptions in the BAL to transfer resources to religious institutions.

3.1 The *Waqf* in Islamic Law and History

Often described as a type of Islamic trust, the *waqf* is defined by the *Encyclopedia of Islam* as “the elements that a person, with the intention of committing a pious deed, declares part of his or her property to be henceforth unalienable and designates persons or public utilities as beneficiaries of its yields.” A voluminous literature on the *waqf* argues that, ever since its introduction in Arabia soon after the death of the Prophet Muhammad, the institution served as a protection against the threat of expropriation by the state rather than solely as a vehicle for redistribution (Abbasi, 2012; Gil, 1998; Singer, 2008; *Encyclopaedia of Islam*, 2012).¹⁵ The sanctity of the norm against expropriation of land in *waqf* is illustrated in the first enduring record of a *waqf* from around 913 CE, which reads in part:

This [waqf] is inviolable. Fa’iq ibn ‘Abd Allah the Sicilian has renounced it, and whoever interferes in the distribution of these alms (*sadaqa*) and of this *waqf* or changes them, does so without authority May Allah punish him for his bad deed, for verily he has taken upon himself the burden of his sin and exposed himself to the anger of his Lord. . . . He who

¹⁴These so-called unilateral actions (*aksi sepihak*) were, according to Mortimer (2006), “part of a sustained PKI attempt to mobilize the poor peasants and share-croppers to assert their rights under the land reform laws of 1960, the implementation of which had bogged down under the weight of bureaucratic inertia and the resistance of interested persons and groups. The ‘actions’ ranged from holding a deputation, presenting a petition, or staging a demonstration, to the unilateral seizure of land by force and the refusal to pay the landowner more than a certain percentage of the crop.”

¹⁵There is significant anecdotal evidence that in numerous contexts the *waqf*, particularly the *waqf ahli* (family *waqf*), which named descendants of the founder as beneficiaries in perpetuity, was used as a vehicle for shielding wealth from redistribution mandated by inheritance laws (Crecelius, 1995; Mandaville, 1979).

interferes with [the regulations of] this [waqf] and who modifies it is warned of being struck by a violent death in this world or by the chastisement of the fire of Hell.” (Sharon, 1966)

In principle, any Muslim can endow a *waqf*. In practice, since endowing a *waqf* requires significant resources, usage of the institution has historically remained circumscribed to the wealthy.¹⁶ *Waqf* endowments require funds not only to cover the operating costs of the charitable cause identified by the founder, but also to pay the salary of the administrator. Because a *waqf* is traditionally meant to last in perpetuity, the funds used to support it are often valuable assets that yield annual profits. Endowing a *waqf* is therefore a pious deed but one typically available to those with the means necessary for permanently alienating a tangible asset and its revenues.

Notwithstanding these standard features, Kuran (2016) draws an important distinction between the traditional and the modern form of *waqf*. The former prohibited resource pooling and mandated strict uses of the endowment as stipulated by the founder. These institutional rigidities are at the heart of Kuran’s original thesis that the *waqf* stymied innovation and growth across the Middle East historically. However, more recent manifestations of the institution across the Muslim world appear more flexible than their historical counterpart. These now-pervasive modern *waqf* look more akin to a charitable foundation that allows for institutional growth and change beyond the original founder’s directive, while still restricting the use of *waqf* assets to activities with a religious purpose. To quote Kuran (2016), the modern *waqf* “has managerial flexibilities denied to its Islamic namesake”, “is directed by a board of trustees rather than a single caretaker”, “may invest in liquid assets”, and “can engage in politics” even “in cooperation with other entities, including other *waqf*”. These features are important for understanding the eventual impact of the modern *waqf* originating out of the 1960s land reform.

3.2 Usage of the *Waqf* in Indonesia

The *waqf* institution reached Indonesia in the 1500s as Islam was taking hold across the archipelago. In sharp contrast with the Middle East, only a small fraction of land was held in *waqf*. The Dutch colonial administration did not legally recognize the *waqf* for much of the time they ruled Indonesia. In the late 18th century, this gradually changed as the influential colonial adviser Christiaan Snouck Hurgronje introduced more liberal policies toward Islam (Benda, 1958). Nevertheless, these colonial restrictions limited the diffusion of the *waqf* in Indonesia relative to the Middle East or South Asia (Abbasi, 2012; Bussons de Janssens, 1951). The creation of new *waqf* gathered pace during the 20th century first during the 1930s and again during the Sukarno regime (Djatnika, 1985; Fauzia, 2013).

While in Indonesia, as elsewhere, any charitable act can be endowed by a *waqf*, today, the *waqf* is primarily used for supporting houses of worship or religious education. Indeed, most mosques and Islamic schools are endowed as *waqf* properties, often at the initiative of the local elites who use the *waqf* to “endow public goods in perpetuity and to benefit from the prestige and reputational benefits associated with this public demonstration of piety”, allowing “public recognition of their legacy to survive for decades, regardless of political power changes” (Fauzia, 2013). However, because most economic

¹⁶In specific periods, the institution has also been popular among women and former slaves, whose property was otherwise vulnerable after their death (Fay, 1997; Shaham, 2000).

entities, including farmland, were not under *waqf* historically, the geographic coverage of *waqf* (in terms of land area) remains fairly limited (see [Jahar, 2006](#)).¹⁷ At the same time, its widespread use in Indonesia for mosques and schools leaves open the possibility for outsized political influence via the enshrinement and emboldenment of institutions that are central to the organization of the Islamist movement.

3.3 Islamic Institutions and *Waqf* Transfers in the 1960s

By exempting *waqf* from redistribution in the BAL, the Sukarno government united the interests of large landowners and religious conservatives who were both threatened by the land reform. While landowners feared the confiscation of their property, Islamists feared a coup by forces sympathetic to Communism and the marginalization of rural landowners directly responsible for funding religious institutions. Not surprisingly, landowners took advantage of the exemption granted in the BAL to protect their land by transferring it to *waqf*. The institutional characteristics of the *waqf* described in Section 3.1—its immunity from expropriation and the reputational benefits conferred on the founder—help explain why, when threatened by the land reform, large landowners opted to transfer land to *waqf* rather than have it seized by local redistribution committees. Here, we explain how this happened in practice along with some prominent examples.

First and foremost, the legal context discussed in Section 2.2 made it possible for landowners to transfer their surplus land to religious authorities before it could be deemed expropriable. [Utrecht \(1969\)](#) alludes to these “antedated acts of transfer”. This meant that prior to coming under scrutiny by redistribution committees, a landowner simply had to designate the surplus (i.e., land owned in excess of the maximum allowable holdings) as *waqf* properties endowed for charitable uses sanctioned by religious law. The most common application would have been to support a local mosque or religious school.

Moreover, this process of endowing land as *waqf* was extremely simple. Different schools of Islamic law (*fiqh*) vary in the formalities of endowment. Indonesian Muslims follow the *Shafi'i* school, which stipulates that an oral declaration to a local cleric with at least one other person present is typically sufficient: a “*waqf* is directly effective and legally binding if the founder has declared his *waqf* and given it to a signed person, even without any legal documents” ([Jahar, 2005](#), p. 135). With the support of religious authorities, a landowner could then assert alienation of property when confronted with forces agitating for redistribution. This assertion could be readily endorsed by a local Ministry of Religion office, which were authorized as of 1958 (Regulation No. 3) to register and legalize all *waqf* endowments in their respective subdistricts. Even without formal certification as such, the sanctification by religious leaders would be enough in most contexts to maintain the inviolability of the *waqf* lands.¹⁸

Putting all this together makes clear why “many Muslim landowners prefer giving up their excess land in the form of wakaf [sic], rather than seeing them attributed to the Peasant Front (BTI)” ([Djatnika, 1985](#)), and perhaps the “most formidable obstruction to land reform came from the religious organisations” ([Utrecht, 1969](#)). [Djatnika \(1985\)](#), for example, documents a surge in registered *waqf* properties in

¹⁷Approximately 2,400 km², or 0.12% of total land area was held in *waqf* in 2003, according to the village administrative census known as *Podes* (see Section 4.1).

¹⁸In fact, the lack of official documentation may have enabled religious leaders to extract rents as competing claims on the founder’s objectives arose in subsequent generations.

the province of East Java during the period when the agrarian reform was announced.

Qualitative Evidence. A large body of qualitative evidence supports these claims in the historical literature. [Castles \(1965\)](#) recounts an instance in which elites transferred land under threat of expropriation to religious leaders:

“For some years the school [*Pondok-Moderen pesantren*] has possessed 25 hectares of rice-field, but this has recently been greatly increased by about 240 hectares, which was dedicated [to *waqf*] (*diwakafkan*) by landowners in the Ngawi district who were to lose it under the land reform law. In late 1964 the communist peasant organization B.T.I, was trying to prevent the *Pondok-Moderen* from getting any benefit from the land while the *Pondok-Moderen* was having a struggle to hold on to it. But apparently it is legal to dedicate land in excess of the legal maximum for religious purposes in this way.”

This once-modest local *pesantren* has since blossomed into a center of Islamic education with a large network of schools growing out of the original Islamic school at Gontor. Today, its *waqf* board manages nearly 18,000 hectares of land across Indonesia and its leaders routinely engage in politics.¹⁹ Among its alumni are many influential Muslim leaders including Hidayat Nur Wahid, an early leader of the Prosperous Justice Party (*Partai Keadilan Sejahtera* or PKS), one of Indonesia’s two major Islamist parties. This example illustrates some of the potential mechanisms linking *waqf* transfers in the 1960s to the entrenchment and growth of Islamism, which we explore in section 5.

The Gontor case also illustrates the important historical role of *waqf* lands in supporting brick-and-mortar Islamic institutions in which economic and religious elites interact. This relationship has long been a feature of Islamic institutions in the Indonesian context, as described in [Hefner \(2011\)](#):

“Qur’anic schools [*pesantren*] across Indonesia have always depended on gifts from wealthy landowners and on produce from lands controlled by the school owner. Endowments (*waqf*) to religious institutions are strongly sanctioned in Islamic law, linked as they are to the reproduction of institutions at the heart of religious life. This circulation of wealth from economic to religious elites (themselves sometimes from the ranks of the former) is all part of the way differences of wealth and class are moralized in traditionalist Muslim communities.”

Another major network of Islamic schools have their roots in this tradition and also experienced a large institutional shift in the 1960s. K.H. Choer Affandi, a local Islamist leader in Tasikmalaya district in West Java established the *Miftahul Huda pesantren* around the time of the land reform. He received *waqf*-endowed land from numerous individuals in 1962 with the blessing of political elites, including the district mayor ([Teguh, 2018](#)). In 1967, he built a second *pesantren* elsewhere in the district after receiving another *waqf* land transfer of 8 ha. Today, many *Miftahul Huda* alumni are key actors in Islamist mobilization campaigns pushing for *sharia* law. They are also well represented among Islamist politicians and have strong ties to the United Development Party (PPP) discussed later in the paper.

One important caveat is that many mosques and religious schools are not affiliated with the conservative Islamist movement but instead with more moderate Islamic organizations. Below, we explore the

¹⁹[Kuran \(2016\)](#) posits a similar role for modern *waqf* institutions across the Muslim world.

hypothesis that, historically, Islamists may have been more resource-constrained than moderates as a result of repression by the Dutch and the Sukarno regime. Hence, the *waqf* transfers in the 1960s may have had a relatively larger effect on their organizational capacity thereafter. Our results in Section 5 speak to these divergent institutional trajectories.

4 Empirical Framework

This section describes our main data sources and identification strategy for estimating the effect of the land reform on Islamism.

4.1 Data: Expropriation Intensity, Islamic Institutions, and Islamism

We draw upon a wide array of historical, census, administrative, and survey data. Here, we detail core regressors and outcomes. We introduce other outcomes of interest as they arise in the results Section 5. We report summary statistics and data sources in Appendix Table A.1 and provide more complete details in Appendix B.

Land and Demographic Data. Our analysis relies on two historic district-level variables that determined the intensity of expropriation under the land reform: 1960 population density and the presence of expropriable landholdings. We reconstructed district-level population density using population figures from the 1961 Population Census, and land area figures calculated in ArcGIS, based on the historic district boundaries. There are 202 historic districts in the 1960 Census records, and 200 districts in the 1963 Agricultural Census. After linking with other data sources, detailed below, we are left with 191 historic districts, which are the level at which the policy varies and hence our main source of identifying variation. The average district has 342 people/km² across all of Indonesia. The threshold of 400 people/km², which we focus on in our baseline analysis, is approximately the 70th percentile.

To capture differences in expropriable landholdings, we use district-level figures from the 1963 Agricultural Census. The Central Bureau of Statistics (BPS) used this Census to evaluate the land tenure situation ahead of the implementation of the land reform (Huizer, 1972). The Census provides, at the district level, the number of landholdings falling in seven discrete bins under 5 hectares, as well as the total number of holdings above 5 hectares.

Our interest lies in *marginal expropriable holdings*. At the 400 people/km² cutoff, these include holdings between 5 and 9 hectares (5–7.5 hectares for irrigated land, and 6–9 hectares for dry land). Holdings below 9 hectares were not expropriable in districts below the 400 cutoff. However, any holdings above 9 hectares would have been confiscated in all districts above the next lowest threshold of population density of 250 people/km². It is in this sense that the 5–9 ha holdings are marginal to the 400 cutoff. Analogous marginal bins apply at other cutoffs (see robustness checks in Section 6.2).

Since the exact distribution of holdings above 5 hectares is unobserved in the Census tabulations, we estimate the number of holdings in the marginal bins, following methods popularized in recent work on upper tail income and wealth (e.g., Piketty and Saez, 2003; Saez and Zucman, 2016). In particular,

we assume a Pareto distribution over landholdings and estimate the shape parameter separately for each district (see Appendix B.2 for full details). There is growing consensus that the Pareto distribution appropriately describes the distribution of landholdings (e.g., see Allen, 2014 and Bazzi, 2017 for evidence from the Philippines and Indonesia, respectively). To the extent that this approach mismeasures marginal holdings, this should bias our estimates towards zero so long as that measurement error is not systematically correlated with proclivities for Islamism.²⁰ Nevertheless, it is somewhat reassuring that our results are robust to using the *observed* number of holdings above 5 ha rather than the estimated marginal holdings in the 5–9 ha range (see Section 6.2).

Islamic Institutions. Our data on Islamic institutions comes from several sources. First, we measure the amount and fraction of land under *waqf* in the 2003 Village Potential Statistics (*Podes*) administrative census, which is available for approximately 69,000 villages across Indonesia.²¹ These data are based on village records and ideally provide more accurate local measures of land use than what might be more patchily recorded in official records at higher levels of government administration. The amount of land held in *waqf* is small relative to total land. In 2003, 66% of villages have some land under *waqf*, and the average village has 3.4 hectares of *waqf*, with *waqf* parcels covering 6.1% of legally zoned land.

Second, we measure *waqf*-endowed institutions: *pesantren*, *madrassa* and mosques. In *Podes* 2003, we observe mosques and the total number of Islamic schools, and in *Podes* 2008, we observe the number of *pesantren* and *madrassa* separately. We also draw upon administrative data from the Ministry of Religion that contain more detailed information on the universe of *pesantren* ($N = 25,938$) and mosques ($N = 243,340$) in Indonesia, including location and dates of establishment for both, number of students in the former, and amount of *waqf* land in the latter (see Section 5.1).

While *pesantren* and *madrassa* both provide teachings based on Islam, there are important differences between the two institutions. *Pesantren* are typically boarding schools, drawing students from many villages beyond their point of operation, and they devote much of their curriculum to the study of Islamic texts. In the same manner as Christian seminaries, *pesantren* are geared towards the production of religious scholars (ulama), clerics, and leaders. *Madrassa* are more akin to public day schools in their pedagogical methods, though they require 2–4 times more religious content in subjects such as Islamic theology and law. While both *madrassa* and *pesantren* rely on private sources of funding, the latter have typically been more independent of government oversight and regulation in part due to the

²⁰Ideally, we would have data on the distribution of landholdings before the announcement of land reform aims in 1959. While such data is not available, the Pareto estimating procedure will capture the leading sources of cross-sectional variation in large holdings so long as there is not significant misreporting at the cutoffs. We find no indication of pervasive bunching below the 5 hectare threshold in affected districts. We assess this directly by checking for a violation of the monotonicity implication of the power law distribution for landholdings, which implies that the number of landholders with farms of 3–3.99 hectares should exceed the number of landholders with farms of 4–4.99 hectares. Violations of this pattern could point to misreporting of holdings above 5 hectares as just below 5 hectares to avoid expropriation in districts with population density above 400 people/km². We see 4 out of 58 districts above the 400 cutoff with more landholdings in 4–4.99 ha than in 3–3.99 ha. This suggests that the bunching, if it exists, is limited. Moreover, results are robust to omitting these four districts. Another reassuring check is possible using the 1973 Agricultural Census, which is only available in province-level tabulations. There, we observe actual holdings in bins 5–7.5 ha, 7.5–10 ha, and 10–15 ha. The correlation in observed holdings across these categories is nearly identical to the correlation across these same bins based on estimated holdings in the 1963 Census.

²¹We restrict attention to around 55,000 villages covered by the scope of the land reform and with data that can be linked to the historic districts from the 1963 Agricultural Census.

self-sustaining nature of their (*waqf*-endowed) agricultural operations. According to a leading expert on these schools, *pesantren* “were virtually the only non-state institutions actually functioning at the grassroots level” during the authoritarian Suharto era (Van Bruinessen, 2008).²²

Electoral Support for Islamist Parties. We draw on two main data sources to measure electoral outcomes. First, we use the 2003 *Podes*, which records village-level information on the 1999 national legislative election—the first election in the post-Suharto, democratic era. This election was won by the Indonesian Democratic Party (PDI-P, center-left and secular) with 33.8% of the vote; Suharto’s party, Party of Functional Groups (Golkar, center-right and secular), finished second with 22.5% of the vote. Our primary focus is on the performance of Islamic and Islamist parties. Among others discussed in Section 5.2, the National Awakening Party (PKB, moderate Islamic) won 12.6% of the vote, and the United Development Party (PPP, Islamist) won 10.7%.²³ Other Islamist parties like the Prosperous Justice Party (PKS) garnered smaller vote shares but become important in subsequent elections. The *Podes* data reveal which party finished first, second, and third in each village but do not indicate the vote shares. This is the only available dataset with voting outcomes below the district level in the 1999 election.

Second, we use district-level vote shares from the Electoral Commission, which allow us to track voting behavior over the entire study period including in 1955 with the first legislative election after independence.²⁴ These data cover elections through 2014 and provide a more complete picture of voting patterns in the democratic era but come at the expense of the geographic detail in *Podes*. For both the historical and post-Suharto period, we categorize parties as secular, moderate Islamic, and Islamist using well-established classifications in the political science literature (see Section 5.2).

Other Measures of Islamism. We consider a range of other downstream outcomes capturing the influence of Islamism on local governance, public affairs, and citizens’ attitudes. These come from different sources and span several domains: the size of the local religious bureaucracy, *sharia* regulations passed by local government, Islamic court use, and Islamist vigilante activity; demand for religious politicians and *sharia* law in survey data; and Islamist appeals by legislative candidates. We also examine numerous measures of religious piety and practice in survey data as well as economic outcomes plausibly affected by *waqf* transfers. We describe these variables at length when presenting the results below.

²²Geertz (1956) describes a common scene in the Javanese countryside: “The rich hadji [sic], surrounded by a group of satellite landholders and young laborer students, could build up a system of agricultural production (often with home industry attached) which took the form of a kind of small-scale plantation.” Geertz (1960) goes on to note that “When a European first sees a traditional *pesantren*, it reminds him almost inevitably of a Catholic monastery.”

²³The PPP was the umbrella Islamic party founded in the early 1970s when the repressive Suharto regime forced all Islamic parties (of which there were five in the first legislative election in 1971) into a single ticket. This grouping of diverse parties survived until the mid-1980s when it split along ideological and regional lines. The PKB emerged after the fall of Suharto as an alternative to the longstanding PPP and as a vehicle for organizing votes among those long affiliated with the *Nahdlatul Ulama* movement originating in East Java. See Section 5.2 for more on these party and organizational distinctions.

²⁴Several districts are missing data for the 1955 elections. We therefore supplement the 1955 national legislative election data with data from the 1957 district legislative elections that were held in select districts before being halted by the Sukarno regime. We digitize the latter from raw electoral report files shared with us by Donald Hindley.

4.2 Identification

To identify the effects of the anticipated land reform, we use the difference-in-discontinuity design described and formalized in [Grembi et al. \(2016\)](#). Our specification leverages both discontinuous variation in the intensity of the reform and cross-sectional variation in the number of “marginal” landholdings subject to expropriation. The RD component exploits the discontinuity in the number of holdings to be seized at 400 people/km²: the maximum allowable size of landholdings fell discontinuously from 9 to 5 hectares at the 400 cutoff. The difference-in-differences component looks at the prevalence of holdings in this 5–9 ha range before the reform. The difference on top of the discontinuity helps to identify areas where the land reform was binding; districts above 400 people/km² would have limited exposure to redistribution if there were few landholdings between 5–9 ha. Our measure of *expropriation intensity* is therefore the interaction between (i) an indicator for districts with a population density greater than 400 people/km² and (ii) the number of landholdings between 5–9 ha.

One important note on the design is that the reform stipulated three different cutoffs at 50, 250, and 400 people/km², as discussed above. Unfortunately, we have limited power to estimate separate discontinuities at each cutoff since our variation comes at the level of 1960 districts, of which there are 191 in our data.²⁵ As a baseline, we focus on the maximum threshold of 400 people/km². In robustness checks in Section 6.2, we explore effects at the other cutoffs and also consider more complicated designs that pool across cutoffs. Our main findings hold across these alternative specifications.

There are also historical reasons to focus on the 400 cutoff as a baseline. The initial government plan was to implement the land reform in stages beginning with the most densely populated islands of Java, Bali, and NTB (see Section 2.3). Here, the 400 cutoff was by far the most relevant one; only 11 out of 95 districts had a density under 250 people/km² and only two under 50 people/km². Only later was the reform to proceed to the Outer Islands where the 50 cutoff was relevant but also where publicity about the reform and state capacity for implementing it was much weaker. Moreover, by the time implementation was to gain momentum in these regions, the land reform was already under threat and eventually halted after the September 1965 coup attempt.

As our baseline specification, we estimate variants of the following equation:

$$\begin{aligned}
 y_{ij} = & \alpha + \gamma_0 Above400_j + \gamma_1 Expropriable_j + \beta(Above400_j \times Expropriable_j) \\
 & + g(\mathbf{density}_j) \times [\delta_0 + \delta_1 Above400_j + \delta_2 Expropriable_j + \delta_3(Above400_j \times Expropriable_j)] \\
 & + f(\mathbf{X}_{ij}, Above400_j, Expropriable_j) + island_j + \varepsilon_{ij},
 \end{aligned} \tag{1}$$

where i denotes village and j denotes 1960 district; *Above400* is a dummy variable for districts above 400 people/km²; *Expropriable* is the number of marginal expropriable landholdings at the onset of the land reform; six *island* fixed effects (Java, Bali, . . .); $g(\mathbf{density})$ is a polynomial in population density estimated separately on each side of the 400 people/km² cutoff, and fully interacted with *Expropriable*. We use a third-order polynomial as a baseline but consider other orders for robustness. We also estimate versions of equation (1) including a vector of predetermined or time-invariant controls, \mathbf{X} , fully interacted

²⁵There are 59 historic districts in the > 400 people/km² category, 27 districts with 251–400, 43 with 51–250, and 62 with ≤50.

with *Above400* and *Expropriable*, $f(\cdot)$, analogous to the density interactions. Our baseline specification includes all districts, and in robustness checks, we vary the bandwidth around the 400 cutoff. We cluster standard errors by 1960 district, the level of variation of the land reform.²⁶

The main coefficient of interest in equation (1) is β , the coefficient on the interaction of *Above400* with *Expropriable*. This term identifies how the threat of expropriation under the land reform varies with the number of expropriable landholdings at baseline. *Above400* and *density* are akin to the treatment dummy and the running variable in a standard RD framework, while *Expropriable* serves as the interacted variable in a difference-in-differences setup.

Illustration of Identification Strategy. We illustrate in Figure 1 the intuition behind our identification strategy. The figure plots the prevalence of *waqf* as a fraction of zoned land at the level of historical districts, above and below the 400 people/km² and for two groups of districts based on a binary transformation of *Expropriable*: districts with a number of marginal landholdings above the sample median (black circles) and below the sample median (gray triangles). We highlight four districts to illustrate the discontinuous change in outcomes between both groups of districts at the cutoff. On the left side of the cutoff, Sampang and Malang have historical population densities of 396 and 399 people/km², respectively. Sampang has relatively few marginal landholdings (72), and Malang has many more (403). Today, *waqf* represent 2.0% and 3.8% of zoned land in Sampang and Malang, respectively. On the right side, two districts close to the cutoff are Klungkung (414 people/km²) and Bogor (415 people/km²). Klungkung has many fewer marginal landholdings (21) than Bogor (297). The gap in *waqf* prevalence is 2.3% (Klungkung) versus 9.2% (Bogor). Our estimate of β in equation (1) approximates the difference-in-differences across the 400 people/km² cutoff (i.e., $(9.2-2.3) - (3.8-2.0)$).

Figure 1 also illustrates why we do not use a simple RD around the 400 people/km² cutoff to estimate the effects of the BAL. There is no discontinuous jump in *waqf* when looking across the entire sample. This particular feature of the data is consistent with the fact that the 400 people/km² cutoff was only relevant for landowners with expropriable holdings. For other landowners (i.e, those with holdings under 5 hectares or above 9 hectares), the intensity of expropriation was orthogonal to population density in the district. In other words, these landowners should not have perceived a differential (higher) threat of expropriation at this particular cutoff.

Yet, districts without a large number of marginal holdings provide a useful comparison group for our analysis. By definition, these districts also had a larger landed elite prior to the reform.²⁷ Our argument is that the long-term effects of the reform materialized from the targeting of this particular group. The BAL provided elites with an incentive to collude with religious leaders. Thus, by design, our estimation framework does not simply capture a discontinuous jump in the threat of expropriation at the 400 people/km² cutoff. Rather, it identifies the differential effects of this threat faced by two groups of districts: those with and without a large landed elite pre-reform.

Importantly, difference-in-discontinuities were not present before the land reform. Figure 2(a) shows

²⁶Inference is robust to alternative approaches including the wild cluster bootstrap, spatial HAC (Conley, 1999), and an effective degrees of freedom adjustment (Young, 2016). See Appendix Table A.4.

²⁷Among districts above 400 people/km² cutoff, five have zero 5–9 ha landholdings and 25 have less than 100.

this using the only available measure of *waqf* endowments in the 1950s (based on the mosque-level administrative data from the Ministry of Religion). Figure 2(b) presents a similar finding for the Islamist vote share in the 1950s elections, our best measure of the strength of the Islamist movement just prior to the land reform. Together, these graphs point to no differential prevalence of *waqf* or Islamism in districts with greater expropriation intensity before the land reform. We discuss additional evidence for a lack of pre-trends in Section 5.1.

Identification Checks. In the Appendix, we provide additional support for the main identifying assumption, namely that potential outcomes be continuous at the 400 people/km² threshold and parallel across the distribution of expropriable holdings. We discuss the main validation tests here and a complete set of robustness checks in Section 6.2. First, we find no evidence of manipulation of the running variable, population density in 1960, based on the McCrary (2008) test (Appendix Figure A.3). Second, the number of 5–9 ha landholdings, *Expropriable*, is continuous across the 400 cutoff (Appendix Figure A.2), which provides further evidence against systematic misreporting of expropriable holdings in the 1963 Agricultural Census (see footnote 20).

Third, there are no systematic difference-in-discontinuities across potential confounders (Appendix Table A.2). These include proxies for the prevalence and strength of Islamic institutions before the land reform: the number of mosques and *pesantren*, Islamist vote share in the 1950s (as in Figure 2), ethnic Arab population in the 1930s, and distance to the nearest of nine shrines at the grave sites of “saints” that brought Islam to Indonesia in the 1400 and 1500s.²⁸ Moreover, we find a small null effect on the Communist vote share in the 1950s. This is reassuring as Communist-affiliated organizations played a strong role in agitating for local redistribution. We also find no correlation with local rainfall shocks in the years leading up to (1955–59) and during the land reform (1960–65). This helps rule out endogenous policy design aimed at alleviating prior or (unanticipated) future drought (e.g., Mortimer, 2006, p. 206 describes the effects of a late 1963 drought on local redistribution effort). Together, these checks bolster the case for identifying causal reduced form effects of *expropriation intensity* prescribed by the BAL.

4.3 Isolating the Long-Term Effects of *Waqf*

While the reduced form in equation (1) is our preferred specification, we can also ask how *waqf* holdings affect long-run outcomes. We estimate the following specification via ordinary least squares (OLS) and instrumental variables (IV):

$$\begin{aligned}
 y_{ij} = & \alpha + \gamma_0 Above400_j + \gamma_1 Expropriable_j + \beta^w Waqf_{ij} \\
 & + g(\mathbf{density}_j) \times [\delta_0 + \delta_1 Above400_j + \delta_2 Expropriable_j + \delta_3 (Above400_j \times Expropriable_j)] \\
 & + f(\mathbf{X}_{ij}, Above400_j, Expropriable_j) + island_j + \varepsilon_{ij},
 \end{aligned} \tag{2}$$

where $Waqf_{ij}$ denotes hectares of *waqf* in the village in 2003. In the IV specification, we use the difference-in-discontinuity term from equation (1), $Above400_j \times Expropriable_j$, as an instrument for

²⁸While a few geographic variables exhibit significant difference-in-discontinuities, this is to be expected by chance with such a large number of variables. To be sure, we demonstrate robustness to controlling for these covariates in Appendix Table A.2.

$Waqf_{ij}$.²⁹ Under the assumption that expropriation intensity only affects contemporary outcomes via its effect on *waqf*, the IV estimate of β^w identifies the causal effect of *waqf* on downstream outcomes. This parameter is of considerable interest in the literature on the economics of Islam where Kuran (2001, 2011) has argued that historically the *waqf* served to stymie political reform and economic development in the Middle East. Of course, as with any IV, the exclusion restriction is subject to caveats and hence why we prioritize the reduced form equation (1) in most results that follow.

5 Results: Land Reform and the Islamization of Society and Politics

This section presents our core empirical results in five steps. First, we link the land reform to increased prevalence of *waqf* and Islamic institutions. Second, we identify downstream effects on Islamist politics. Third, we find a deeper role for Islam in public affairs. Fourth, we distinguish both demand- and supply-side factors shaping the advance of Islamism. Finally, we estimate adverse effects on agricultural development that seem to be driven by *waqf*. We present core robustness checks along the way but defer alternative explanations and further robustness checks to the following section.

5.1 Effects on *Waqf* and Endowed Institutions

Table 1 reports our estimates of the effect of the aborted land reform on contemporary *waqf* holdings and the prevalence of Islamic institutions endowed as *waqf*. We present the estimated effect of expropriation intensity, i.e., the interaction of *Above400* and *Expropriable* in equation (1); all other terms in that equation are included in the regression but their output suppressed. We express *Expropriable* in 100s so that the coefficient can be interpreted as the differential effect of having 100 additional expropriable landholdings above versus below the 400 cutoff. For reference, *Expropriable* (in 100s) has mean 3.9 and standard deviation 5.8. All regressions are run at the village level, which is the level at which *waqf* and *waqf*-endowed institutions are observed.

Land Under *Waqf*. Our measures of *waqf* prevalence come from the 2003 *Podes* survey. Columns 1–3 of Table 1 consider *waqf* land in hectares (hyperbolic-sine transformed), the fraction of total land under *waqf*, and the fraction of zoned land under *waqf*. Across columns, we find that villages in districts facing greater expropriation intensity have significantly more land under *waqf*. Each additional 100 expropriable holdings is associated with 20% more ha of *waqf* land (column 1) or nearly 50% more of zoned land in the average village (column 3). Consistent with the historical accounts above, these estimates suggest that in anticipation of the land reform, large landowners sought to protect their land from expropriation by placing it under *waqf*. The inalienable nature of the *waqf* meant that even when expropriated lands were eventually reclaimed by their original owners in the late 1960s, lands designated *waqf* could not be reclaimed. These *waqf* estates persisted until the modern period.

Mosques and Islamic Schools. In columns 4–6 of Table 1, we report effects of the land reform on mosques, *pesantren* (Islamic boarding schools), and *madrassa* (Islamic non-boarding schools) at the village

²⁹We retain the complete set of discontinuity and difference controls in the OLS to ensure strict comparability with the IV.

level in 2008.³⁰ Since *waqf* in Indonesia are mainly used to support houses of worship and educational institutions, we should expect expropriation intensity under the BAL to also increase the prevalence of these institutions. We find that this is indeed the case. Each additional 100 expropriable holdings is associated with 3 more mosques relative to the mean of 3.9, 0.5 more *pesantren* relative to the mean of 0.5, and 1 more madrasa relative to the mean of 0.9.

While both types of religious school are instrumental in shaping Islamic knowledge and identity, *pesantren* have played a particularly important role in advancing the cause of Islamism in Indonesia. Most Islamist political leaders were educated in *pesantren* (see Section 3.3 for examples). *Pesantren* students often retain their social networks when entering university, where Islamic groups played a central role in sustaining Islamist organizational capital amidst the repression during the Suharto era (see Machmudi, 2008). *Pesantren* also engage in community-based activism that would likely influence those outside the immediate family networks in these schools. Hamayotsu (2011), for example, details the vital role of Islamic schools and related community-building efforts in mobilizing support for the hardline Prosperous Justice Party. Finally, *pesantren* often maintain their own militias, which are used for agitation and mobilization around elections (Buehler, 2016). In Sections 5.2–5.4, we revisit these mechanisms as they help clarify some of the downstream outcomes of the *waqf* transfers.

Robustness Checks. In Appendix Table A.8, we show that the results in Table 1 are robust to a range of alternative specifications and controls. We run different versions of equation (1) including province fixed effects, village-level geographic controls (altitude, coastal location, distance to the nearest sub-district capital and the nearest district capital), baseline agricultural controls from the 1963 Agricultural Census (number of males, total irrigated land area, and total dry land area), baseline political controls (Islamist and Communist vote shares in the 1950s), and baseline Islamic organizations (the number of mosques and *pesantren* in the district by 1920). These controls help rule out confounding factors that predate the reform. All controls are fully interacted with the *Above400* dummy, the number of expropriable holdings, and their interaction. Reassuringly, our key findings are not sensitive to the inclusion of these controls.

We also show in Table A.8 that our core results are robust to excluding Sulawesi and Sumatra from our estimation sample, and to using all holdings above 5 hectares (which are observed) instead of holdings between 5–9 hectares (which are estimated) in our main specification. The former ensures that our results are driven by islands where the land reform was most intensely implemented before its demise. The latter ensures that our results are not driven by the assumption that landholdings are Pareto-distributed.

Finally, Table A.8 reports a simple placebo check where we look for a discontinuous jump in outcomes at 500 people/km², which was not a relevant cutoff in the land reform. Here we interact a dummy for districts above 500 people/km² (instead of 400 in our main specification) with the number of holdings between 5–9 hectares. As expected, we do not find any evidence that this interaction is associated with the contemporary prevalence of *waqf* lands or *waqf*-endowed institutions.

³⁰The sample size falls relative to columns 1–3 due to an inability to link some villages from later rounds of *Podes* to our main data, which includes other village-level variables used in robustness checks. We find similar insights using data on mosques and religious schools in *Podes* 2003, but this round groups *pesantren* and madrasa together.

Timing of Waqf Endowments. Figure 3 provides further evidence that the land reform caused an increase in the size of new *waqf*-endowed mosques and *pesantren*. We rely on data from the Indonesian Ministry of Religious Affairs containing the universe of mosques and *pesantren* active in 2018.³¹ In panel (a), we plot the coefficient of interest from equation (1), using as the dependent variable the amount of *waqf* land provided to mosques established in each 5-year interval since 1925. Although limited to mosques, this is the only time-varying measure of *waqf* land transfers spanning the study period. Panel (b) reports the same set of coefficients, but looks at student enrollment in *pesantren* established in each 5-year interval since 1925. Under reasonable assumptions, *pesantren* enrollment could be proportional to the size of its *waqf* properties, which are unfortunately not recorded in the data.

These graphs offer three important lessons. First, prior to the land reform, there are no systematic pre-trends in *waqf*-endowed Islamic institutions, as seen in the flat difference-in-discontinuity estimate (β) around zero from 1925 to 1959. Note that this is not due to a lack of institutional growth during this period (see Appendix Figure A.1). Second, beginning in the early 1960s, β exhibits a sizable jump as *waqf* endowments begin to grow relatively faster in districts with greater expropriation intensity. In Appendix Table A.3, we compare estimates of β across different time periods and find a statistically significant increase between the 1950s and 1960s.

Third, and perhaps most striking, the increase in *waqf* endowments seems to continue well after the land reform. To explain this dynamic trend, we conjecture four interrelated mechanisms, which are borne out in the qualitative literature. First, new mosques and *pesantren* created in the 1960s helped mobilize donations from worshippers, allowing these institutions to expand—a fundraising channel.³² Second, land donations allowed existing institutions to build up and generate additional revenue, multiplying opportunities for subsequent expansion—a capital accumulation channel. Third, individuals educated in *pesantren* created in the 1960s may have demanded more religious education for their children, leading to higher demand for religious educational infrastructure in their district—a human capital transmission channel. Fourth, new mosques and *pesantren* may have induced a competition for social prestige, with members of the local elite seeking to outbid each other in the provision of religious goods to the community—a competition channel.

Pesantren alumni are an important contributor to each of these four channels. As boarding schools, *pesantren* draw students from many different villages. After graduating, many return home to take up leadership positions in mosques and religious schools. Some even start *pesantren* of their own, affiliating with the original institution where they were educated.³³ This geographic diffusion process engenders far-reaching alumni networks and clarifies how a small amount of *waqf* land in the 1960s can have large and lasting sociopolitical consequences.

Overall, Figure 3 suggests that the land reform led to a resource windfall for Islamic institutions,

³¹Both data have missing establishment dates: 5,689 out of 25,938 *pesantren* and 4,689 out of 243,340 mosques. However, neither are systematic with respect to expropriation intensity.

³²The spike in the mid-1990s may be due to a push by the Indonesian government to encourage *waqf*, as stipulated in a 1991 *Waqf Act* and subsidized in part by the government of Saudi Arabia.

³³Both of the *pesantren* discussed in Section 3.3 fit this characterization: “When some of its [Gontor’s] graduates returned to their home towns or migrated to new places, they also founded *pesantren* or Islamic schools” (Isbah, 2016). “In fact, almost every *kelurahan* or *kampung* [i.e., village] [in Tasikmalaya district] has an alumni from Miftahul Huda” (Pamungkas, 2018).

putting heavily impacted districts on a diverging institutional trajectory.³⁴ Institutions borne out of this historical episode shaped the supply of and the demand for similar institutions in subsequent decades. In the next sections, we explore the downstream effects of these diverging institutional paths, documenting greater influence of organized religion on preferences, politics, and the local organization of society.

5.2 Effects on Electoral Support for Islamism

We show in Table 2 that districts targeted by the 1960 land reform provide greater electoral support for Islamist parties in the democratic era. The 1999 election was especially important since it was the first under democratic rule and hence offered an early indication of underlying preferences long dormant in the Suharto era of political repression. However, being the first election, it was also subject to uncertainty and limited information about the nature and credibility of party platforms. Thus, we also examine whether effects persist across the 2004, 2009, and 2014 parliamentary elections.

Party Classification. We look at measures of electoral support for three groups of political parties: Islamist, moderate Islamic, and secular parties. Panel (a) of Table 2 examines outcomes for three hardline Islamist parties that advocate for a central role of Islam in government: the United Development Party (*Partai Persatuan Pembangunan*) or PPP, the Prosperous Justice Party (*Partai Keadilan Sejahtera*) or PKS, and the Crescent Star Party (*Partai Bulan Bintang*) or PBB. All three parties advocated for Islamic law and rejected *Pancasila* (the national secular ideology of the state), including the PPP which was forced to accept *Pancasila* when it was the only Islamic party allowed to run during the Suharto era. Panel (b) examines outcomes for the two moderate Islamic parties with no interest in pushing for an Islamic state. The National Mandate Party (*Partai Amanat Nasional*) or PAN and the National Awakening Party (*Partai Kebangkitan Bangsa*) or PKB both initially adopted *Pancasila* prior to the 1999 election, when parties could for the first time choose whether or not to embrace this ideology.³⁵ Panel (c) looks at outcomes for all other parties. These include both the longstanding secular parties—the Indonesian Democratic Party of Struggle (*Partai Demokrasi Indonesia Perjuangan*) or PDI-P and the Golkar Party (*Partai Golongan Karya*)—as well as newer ones such as the Democrat Party or PD and the Great Indonesia Movement Party (*Partai Gerakan Indonesia Raya*) or Gerindra.

There are two fundamental distinctions between the Islamist and moderate Islamic parties that are crucial for understanding the results in Table 2. First, Islamist politicians routinely agitate for *sharia* law while NU and PAN explicitly reject such efforts.³⁶ Second, these parties are closely affiliated with the two largest and longstanding Muslim non-governmental organizations in Indonesia (*Muhammadiyah* for PAN and *Nahdlatul Ulama* or NU for PKB). These organizations have long had considerable financial resources at their disposal. As a result, the resource windfall for Islamic institutions in the 1960s may have been

³⁴Our interpretation of institutional trajectories is closest to that of Platteau (2000).

³⁵PKB is the successor to a political bloc that disbanded from the PPP in 1984 on account of ideological differences over the role of conservative ideology in the party's future.

³⁶In 2002, for example, Hamzah Haz, former leader of PPP and Vice President of Indonesia from 2001–2004 led a push with Islamist legislators to revive the so-called “Jakarta Charter”, a proposed seven-word preamble to the Constitution obliging Muslims to follow Islamic law, which came to embody the fight over *Pancasila* versus Islam during the early days of independence. PKB and PAN legislators joined secular ones in thwarting this effort.

less consequential for moderate Islamic political leaders than for long-repressed Islamist ones.³⁷

Islamist Party Support, 1999–2014. In column 1 of Table 2, the dependent variable is an indicator for whether the given party family was represented among the top 3 parties in the village in 1999. We find robust evidence that the land reform increased long-term electoral support for Islamist parties (panel a). As we discuss below, there is some indication that the Islamist advantage in affected districts comes at the expense of moderate Islamic parties (panels b and c). Column 2 bears out the electoral advantage for Islamists in 1999, but this comes from reduced support for both moderate Islamic and secular parties. Finally, column 3 shows that this holds across all elections from 1999 to 2014. For each additional 100 expropriable holdings above the 400 cutoff, Islamist parties gained nearly 4.4 percentage points relative to a mean vote share of 15.4%.

Importantly, the effects of the land reform on Islamist vote shares from 1999 onward are significantly different from the pre-reform period. In particular, we can reject that the standardized effect size in column 3 (0.619) is the same as the effect size (0.164) for Islamist parties in the 1955/57 elections (p-value of 0.018). This suggests that the effect on Islamist vote shares marks a shift in political preferences and not merely a continuation of pre-reform regional sorting across party lines.³⁸

In Appendix Table A.9, we report the same set of robustness checks as those implemented earlier for the outcomes in Table 1 (see Section 5.1 for a detailed description). We focus on voting for Islamist parties (PPP, PKS, and PBB) for these checks. Both the point estimates and standard errors increase in some specifications but decrease in others. Overall, though, the key takeaways remain unchanged.

These results suggest that an important legacy of the land reform was to shift the population towards hardline Islamist parties in affected districts. This initially took the form of support for the PPP and over time shifted to PKS and PBB (see Appendix Tables A.5 and A.6). The sustained support for conservative Islamist parties may be due in part to mobilization through social networks affiliated with *pesantren* and mosques. This is a recurring theme in the qualitative literature on religious politics in Indonesia. Buehler (2016) provides a compelling account of how Islamist activists—based in *pesantren* and mosque-based networks discussed earlier—pushed local governments to implement *sharia*-inspired laws, an outcome we explore below. Moreover, conservative Islamic institutions endowed as a result of the land reform may have shaped political religious beliefs as well as the supply of political leaders. We take a closer look at these mechanisms in the following sections.

Finally, there is some indication that Islamist advantage in affected districts may come from capturing votes that would otherwise go to moderate Islamic parties. In the qualitative literature, Hamayotsu (2011) among others, argues that increasing support for PKS over the first few democratic elections likely came at the expense of support for PKB, which increasingly finds itself competing locally with PKS-affiliated *pesantren*. Appendix Table A.7 provides stronger evidence on this margin of substitution

³⁷Both *Muhammadiyah* and NU also engage in politics. For example, in 2007, NU leaders issued a *fatwa* warning Indonesian Muslims against calls for an Islamic state and urging against support for local *sharia* regulations being “propagated by Islamist organizations through their mosque-based activism” (Zuhri, 2013).

³⁸The Islamist parties in the 1950s include Maysumi, NU, Perti and PSII (see Appendix B.5). At the time, all four parties advocated for an Islamic state based on *sharia* law, though NU would subsequently moderate to accommodate the crackdown on Islamic parties first by Sukarno and later by Suharto. Omitting NU from the group of Islamist parties in the 1950s, we still find a significant difference with the effect size in column 3 of Table 2 (p-value of 0.066).

using an individual-level survey on voting in the 2004 election. This switch would be consistent with the institutional shock of the land reform having a stronger effect on Islamist party capacity as noted above. If moderates and hardliners compete for votes in a standard Hotelling framework (with voters ordered on a line from most religious to most secular), then the *waqf* transfers may have enabled hardliners to outbid moderates within the segment of the voting population that is more inclined to vote Islamic.

5.3 Islamist Capture of the Local State

In Table 3, we explore effects of expropriation intensity on the Islamization of local governance. Do *waqf* assets and the increase in electoral support for Islamist movements allow Islamists to exert greater influence over public affairs? Here we examine the reduced-form effects of the land reform on outcomes capturing linkages between Islam and the state: the size of the religious bureaucracy in government, the adoption of *sharia* regulations, judicial activity by *sharia* courts, and the presence of Islamist vigilantes.

Explaining regional variation in these outcomes is important for three reasons. First, these measures reflect the success of Islamist actors in exerting a greater role for Islam in the state, which has been a recurring point of tension and conflict since independence. Second, these measures are informative about influence beyond the ballot box. After decades of suppression under authoritarian rule, Islamist parties faced an uphill battle in developing the institutional capacity to win elections in the democratic era. Yet, as detailed below, decentralization has allowed Islamists to influence politics through other means. Third, these regional policy victories for the Islamist movement have the potential to influence national politics as Islamist politicians command increasingly pivotal voting blocs that ensure their role in coalition governments. Since democratization, newly elected presidents, all from secular parties, have typically appointed at least one if not more Islamist politicians to cabinet-level positions, where they have considerable scope for affecting the orientation of certain ministries or aspects of governance.³⁹

Religious Bureaucracy. The first outcome we consider in column 1 of Table 3 is the number of bureaucrats serving in the local Ministry of Religious Affairs (*Kemenag*) in 2018. These are not high-level bureaucrats allocated by the central government but rather employees appointed at the discretion of the district parliament and mayor, including Islamic court officials, *zakat* administrators, and public *madrassa* instructors. We estimate a positive and significant effect of expropriation intensity: 100 additional expropriable holdings are associated with a religious bureaucracy that is one-third larger than the mean. In other words, a larger share of local government resources is dedicated to the management of religious affairs. To ensure that these results are driven by local discretion, we restrict the outcome to include only those “structural” bureaucrats appointed by the central government. As expected, doing so yields a small and insignificant effect of expropriation intensity, 5.3 (4.5), relative to a mean of 31.

³⁹For example, Tifatul Sembiring, chairman of PKS, was appointed Minister of Communication and Information in 2009 and proceeded to push for censorship of internet sites deemed antithetical to Islam. He also developed programs to connect mosque-based youth activists through online networking. Other examples include (i) the ascendance of Hamzah Haz, noted earlier, to the vice presidency in 2001, (ii) the awarding of several cabinet positions to PPP leaders in the administration of Susilo Bambang Yudhoyono elected president in 2004, (iii) the election of PKS leader Hidayat Nur Wahid to the Speaker of Parliament after the party’s strong performance in the 2004 legislative election.

This is an important result given the historical role of the Ministry in facilitating the expansion of mosques and *madrasas* (Hefner, 1993). According to Salim (2008), the Ministry “had transformed itself into an official agent of Islamization” during the authoritarian era. With decentralization, district-level *Kemenag* and their subdistrict branches have been at forefront of efforts to advance Islamic institutions into new domains of public life.

Sharia Regulations. In column 2 of Table 3, we find sizable positive effects of expropriation intensity on *sharia*-inspired regulations adopted between 1998 and 2013. One hundred additional expropriable holdings leads to a doubling of regulations off a mean of 1.5. These regulations, compiled by Buehler (2016, 399 in total spanning 176 contemporary districts), include both laws adopted by local parliaments and decrees adopted by district mayors (*bupatis*). Topically, they cover four domains: (i) vice (e.g., alcohol bans), (ii) Islamic dress (e.g., mandatory veil for women), (iii) mandatory Islamic study and practice, and (iv) payment of *zakat*. Technically, religious regulations are the sole purview of the central government. Before 1998, there are no such regulations on record according to Ministry of Home Affairs data on regional legislation.⁴⁰ However, with democracy and decentralization, the center has done little to stop such legislation, effectively allowing *sharia* regulations to flourish.

Importantly, many of these regulations were supported by secular parties and leaders beholden to the political clout of the Islamist movement. Consider again an example from Tasikmalaya district (see Section 3.3). In 2001, local activists effectively lobbied for the adoption of Regulation No. 13/2001 on “Restoring Peace and Order Based on Moral Teachings, Religion, Ethics, and Local Cultural Values.” This sweeping regulation facilitated several policy changes, including a Qur’an reading skills requirement for entry into public primary schools (Buehler, 2016, pp. 147-8). Another interesting example comes from Maros district in South Sulawesi, where an incumbent mayor from the secular *Golkar* Party had close ties to a local *pesantren* network (*Darul Istiqamah*) and implemented a flurry of *sharia* regulations in the lead up to an election, including dress codes for Muslims and local civil servants as well as requirements to pray and give *zakat* (Buehler, 2016, pp. 166-7). While anecdotes abound, a common theme across different cases in Buehler (2016) is the central role of mosques and religious schools in coordinating the Islamist movement. While not all such institutions nurture Islamist actors, it seems plausible that many of those originating in the 1960s shock may be more predisposed to conservative ideology for the reasons outlined in the prior section on voting.

Islamic Courts. The next columns of Table 3 look at the activity of Islamic courts.⁴¹ While Islamic courts go back to Dutch Rule in the 1800s, a 1989 Religious Judicature Act called for the creation of Islamic courts in every district, granting them purview over a range of issues (Cammack and Feener, 2012). In column 3, we find a positive and significant effect on the volume of cases related to *waqf*, which is consistent with the findings reported in Table 1. Districts targeted for expropriation under the BAL have

⁴⁰Thanks to Nicholas Kuipers for sharing this data, scraped from <http://peraturan.go.id>.

⁴¹The data span 1.2 million cases with varying coverage from 2007 to 2019 across districts. The sample size in these specifications falls to 80 districts, which are the only 1960 districts for which administrative data on Islamic courts are available online (see Appendix B). Importantly, though, expropriation intensity does not predict missingness. Regressing a dummy for any available Islamic courts data yields a coefficient of -0.090 (0.160).

more land under *waqf*, and more *waqf*-related cases adjudicated by Islamic courts. This result is worthy of note in the context of a dual legal system where public and religious courts coexist and oftentimes compete. The usage of an institution that falls outside the secular legal framework creates demand for its own adjudication and dispute settlement mechanism, outside the purview of government courts.

We then consider the two most common types of cases adjudicated by Islamic law: inheritance cases (column 4) and marital cases (column 5), which include polygamy, divorce, and child marriage, among others. Greater expropriation intensity leads to a greater volume of inheritance cases, while the effect on marriage cases is positive but imprecise. Unfortunately, due to lack of data on secular courts, it is not possible to measure substitution effects across the two types of legal systems for each type of case. Nonetheless, the effects we find in columns 3–5 of Table 3 are consistent with citizens demanding more dispute settlement by Islamic courts in areas endowed with more Islamic institutions as a result of the land reform. The 1989 Act solidified the dual legal system and allowed the initial institutional shock of the 1960s to translate into a greater prevalence of *judicial* institutions associated with religion. Islamists agitate for greater use of these courts, and the local Ministry of Religion examined earlier played an important role in getting these courts off the ground.

Islamist Vigilantes. The last two columns of Table 3 explore violence perpetrated by a prominent Islamist vigilante group called the Islamic Defenders Front (*Front Pembela Islam*) or FPI. Established in 1998, the FPI acts as a morality police, targeting social activities deemed incompatible with Islam (e.g., selling alcohol, remaining open during Ramadan). We find positive, significant effects of expropriation intensity on FPI-related incidents and casualties in columns 6 and 7, respectively, as reported by the National Violence Monitoring System.⁴² This suggests that districts targeted for redistribution either exhibit a greater demand for moral policing or a weaker response by the secular state to prevent violence by Islamist vigilantes. In many places, FPI has strong roots in local *pesantren* networks (e.g., Miftahul Huda alumni are key FPI members in Ciamis and Tasikmalaya districts; see Pamungkas, 2018). The organization sees its efforts as complementary to those of Islamist parties in hastening the implementation of *Sharia*-compliant policies. Consistent with the other findings reported in Table 3, this is one of the several ways in which affected districts experience a greater Islamization of society and public affairs.

In Table A.10, we report the same set of robustness checks as for prior outcomes. Despite limited power for some specifications, we find largely consistent takeaways as the baseline.

5.4 Demand- and Supply-Side Factors

The results thus far suggest that the land reform may have changed both the demand for and supply of Islamist politics. This section sheds deeper light on these two forces and reveals that the effects are not due to a change in religiosity or piety per se. Rather, the institutional shock led to a shift in beliefs about the role of religion in politics *and* greater entry of religious candidates into politics.

⁴²The underlying event-based data come from hundreds of media sources (see Appendix B for details). However, these data do not cover all of Indonesia and hence the reduced sample size of 114 districts. Reassuringly, though, the coverage is unrelated to expropriation intensity, which has a coefficient of 0.051 (0.139) in a regression testing for systematic missingness.

Demand for Religious Politics. In Table 4, we provide direct evidence on voter preferences in line with Islamists' success at the polls. We measure these preferences using survey questions on the importance of a candidate's religion and religiosity in influencing voting decisions, and self-reported demand for *sharia* law. We first report estimates for two different variables from the Indonesian Family Life Survey (IFLS) in 2007 and 2014: whether respondents say a candidate's religion makes it very likely to vote for him/her (column 1), and whether a candidate's religiosity makes it very likely to vote for him/her (column 2). We find large and significant effects of expropriation intensity on both outcomes. We also report positive effects on two similar outcomes from an entirely different survey conducted by [Pepinsky et al. \(2018\)](#) in 2008:⁴³ whether respondents deem the religion (column 3) and the religiosity (column 4) of the President of Indonesia very important.⁴⁴ In addition to supporting Islamist parties, voters in districts targeted by the land reform are more likely to support religious candidates.

In columns 5-6, we examine two measures of support for the adoption of *sharia* law: an index of support for specific dimensions of *sharia*,⁴⁵ and stated support for the adoption of *sharia* law broadly defined. We find positive effects of expropriation intensity on both outcomes.

In Table 5, we highlight an important distinction between the effects on political religious beliefs documented in Table 4, and the lack of effects on broader measures of religious piety. Expropriation intensity had strong effects on beliefs about the role of Islam in public life and the organization of society, but this does not seem to operate through a change in religiosity or intensity of religious practice. Indeed we find null effects on the following outcomes from the IFLS: a dummy for being a Muslim (column 1),⁴⁶ self-reported religiosity (column 2), relative trust towards co-Muslims and non-Muslims (column 3), and tolerance of non-Muslim activities in one's community (column 4). From the [Pepinsky et al. \(2018\)](#) data, we look at individuals who self-report as Muslim (column 5), pray 5 times a day (column 6), fast during Ramadan (column 7), read the Qur'an (column 8), always attend Friday prayer (column 9), recite non-mandatory Sunnah prayers (column 10), are part of a prayer group (column 11), and pay *zakat* (column 12). Column 13 pools all practices in columns 6-12 into a single index. Across columns, we fail to detect any systematic effects of expropriation intensity on religious piety and practice.

While this may seem counterintuitive, it is wholly consistent with the observation that religious voters often have little appetite for organized religion to play a greater role in government. In fact, they regularly lend their support to explicitly non-religious politicians in settings as diverse as the Philippines, Italy, or the United States—a point emphasized in the recent literature on populism ([Müller, 2016](#)). Our findings suggest the lack of a strong relationship between religiosity and religious political preferences also applies to the Indonesian context. We bear this out in Appendix Table A.7, which examines individual-level votes from the [Pepinsky et al. \(2018\)](#) survey. To be sure, more devout Muslims—proxied

⁴³Neither the IFLS nor [Pepinsky et al. \(2018\)](#) survey cover all districts in our study. However, the coverage is not systematically correlated with expropriation intensity.

⁴⁴The outcome in column 3 is important as it has been a longstanding Islamist demand—harking back to the Jakarta Charter debates discussed in Section 5.2—that the Constitution stipulate that the President must be Muslim.

⁴⁵We take a simple average of binary responses indicating very strong support for corporal punishments for individuals found guilty of robbery, prohibiting interest, mandatory wearing of the *hijab*, polygamy, stoning individuals found guilty of adultery, and the death penalty for apostasy.

⁴⁶Subsequent columns are restricted to Muslims respondents. We find similar null results for the Muslim share of the village population based on the complete-count 2000 Population Census: -0.015 (0.028).

by the piety index in column 13 of Table 5—are more likely to vote for religious parties than for secular parties. However, within the Muslim bloc pious voters are equally likely to support Islamist and moderate Islamic parties, and Islamists gain at the expense of moderate Islamic parties in districts most affected by the land reform in the 1960s.⁴⁷ In addition, the effect of expropriation intensity on party choices is unchanged when controlling for piety. This margin of substitution from hardline to moderate among pious voters is consistent with our institutional explanation in Section 5.2.

Overall, these results imply that the entrenchment of Islamism is not fueled by greater piety. This is an important finding, especially given that under the authoritarian rule of Suharto, the government aimed to promote Islamic culture and piety while repressing Islamic politics. With political opening in the late 1990s came an opportunity to institutionalize the Islamist fervor that had been nurtured in the conservative institutions borne out of the *waqf* transfers during the 1960s.

Supply of Religious Politicians. The Islamization of politics that we document may come not only from a change in voters' preferences, but also from supply-side factors. Mosques and religious schools created out of the land reform surely trained and influenced multiple generations of Islamic leaders, some of whom may have been inclined to enter local politics. Columns 7–9 of Table 4 shed light on this channel using original data on legislator profiles in 2019 to measure the effects of the land reform on the supply of religious politicians.⁴⁸ We consider the number of candidates explicitly mentioning Islam- and *sharia*-related terms in their campaign platform (column 7), candidates indicating in their listed name that they accomplished the *Hajj* pilgrimage to Mecca (column 8), and clerics running as candidates (column 9).⁴⁹ We find large, positive effects on these outcomes. For example, an additional 100 expropriable holdings roughly doubles the number of candidates campaigning on religious themes. Moreover, this result holds when looking solely at candidates for Islamist parties, which suggests that these candidates amplify their religious messaging in districts most exposed to the land reform.

Of course, whether this result purely isolates supply or an equilibrium response to demand is impossible to tell. What it does provide is suggestive evidence that the shock to Islamic institutions led to lasting changes in the religious credentials and predisposition of future politicians. To the extent that leaders matter (Jones and Olken, 2005), this is another important channel by which a small shock to *waqf* endowments in the 1960s might exert a lasting influence on politics and society.

5.5 Economic and Political Effects of the *Waqf*

In Tables 2-5, we implicitly assumed that the reduced-form effects of expropriation intensity on the Islamization of politics can be attributed to the higher prevalence of *waqf* lands inherited from the 1960s. We probe this assumption in Tables 6 and 7, where we regress economic and political outcomes on the

⁴⁷This finding is consistent with a thesis in Pepinsky et al. (2018): "... there is scant evidence that expressive Islam corresponds to religious politics. It may, instead, be that expressive piety is a form of identity maintenance in the face of the complex changes associated with modernization, urbanization, and social change experienced by Indonesia's Muslim population."

⁴⁸Thanks to Nicholas Kuipers for scraping these data from the Indonesian Electoral Commission: <http://www.kpu.go.id/>.

⁴⁹The outcome in column 7 is based on a search for the following terms: *umma*, *dawah*, Muslim, Islam, *sharia*, jihad. See Appendix B for further details.

prevalence of *waqf*, as described in equation (2). Table 6 looks at our core political outcomes while Table 7 looks at measures of agricultural and economic development.

Both tables report the coefficient of interest from equation (2) estimated via OLS and IV. The OLS specification does not have a causal interpretation but estimates a conditional correlation between *waqf* prevalence and the outcomes examined in Tables 1-3, which is of independent interest. In the IV estimation, the difference-in-discontinuity term ($Above400 \times Expropriable$) is used as an instrument for land under *waqf*. Since the first stage has a relatively low *F*-stat (in the 4–6 range), we report the p-value for a weak-instrument robust test that the coefficient on *waqf* is different from zero.

Political Outcomes. Table 6 examines three families of outcomes: *waqf*-endowed institutions; electoral support for Islamist parties; and measures of the role of Islam in public affairs. As expected, there is a strong association between *waqf* lands and the prevalence of mosques, *pesantren*, and *madrasas* in columns 1–3, respectively. Looking at IV estimates, a 10% increase in land under *waqf* leads to 1.4 more mosques, 0.26 more *pesantren*, and 0.5 more *madrasas* in the village. The magnitude of these coefficients is arguably large enough to explain downstream variation in support for Islamists.

In columns 4–5 of 6, we estimate significant impacts of *waqf* land on support for Islamist parties. Under the identifying assumption in Section 4.3, the IV estimates imply that a 10% increase in *waqf* lands leads to a 1.5 percentage points increase in the Islamist vote share between from 1999 to 2014—a relatively large effect given that Islamists gather 15.4% of the vote in the average district.

Finally, columns 6–7 of Table 6 look at effects of the *waqf* on linkages between Islam and the state, measured by the number of local employees of the Ministry of Religious Affairs (column 6) and the number of *sharia* regulations adopted in the district (column 7). While these estimates are somewhat imprecise, we find positive effects of *waqf* land on these outcomes. For example, a 10% increase in *waqf* leads to 0.26 more *sharia* regulations adopted in the district between 1998-2013—a 16% effect relative to the sample mean of 1.68.

Across all outcomes, the IV estimates are larger than the OLS, and this difference is statistically significant for most outcomes (based on Hausman-type tests). This could be due to measurement error in the measure of *waqf* land reported by village officials in *Podes*. It could also be consistent with a large local average treatment effect whereby regions with experiencing the greatest uptick in *waqf* endowments due to expropriation intensity were precisely those where the Islamist movement was the most resource-constrained before the reform. A third and closely related explanation is that the OLS is biased downward because the moderate Islamic organizations that reject Islamism (i.e., *Muhammadiyah* and NU) command more *waqf* land on account of their deeper organizational history. This is the flip side of the argument in Section 5.2 for why *waqf* transfers might have larger marginal effects on Islamist parties.

Agricultural and Economic Outcomes. While there is a debate about the long-run consequences of the *waqf* for economic development, there is a strong argument that the *waqf*'s inflexibility made it increasingly inefficient, especially after the introduction of the corporation. This perspective argues that the perpetual alienation of property inevitably becomes inefficient as modes of production and technologies change. Because the terms of traditional *waqf* cannot be changed, the *waqf* “locks” land into inefficient

uses and unlike a corporation, cannot be easily dissolved when it is no longer viable (Kuran, 2001, 2011). The 20th century *waqf* in Indonesia, like elsewhere in the Muslim world, are mostly of the more flexible modern variety described by Kuran (2016) as akin to a charitable foundation (see Section 3.2). Yet, it is possible that modern *waqf*-endowed lands are less efficient than alternative property arrangements. This may be especially true in an agricultural economy where land is the most valuable asset.

In Table 7, we find evidence that the land reform adversely affected village-level agricultural productivity via its impact on *waqf*.⁵⁰ We report reduced form, OLS and IV specifications in keeping with prior results. In Panel A, column 1 shows that expropriation intensity is associated with lower agricultural income per capita, as measured using crop-specific output from *Podes* 2003 and prices from the FAO. The IV estimate in Panel C suggests that this effect runs in part through *waqf*: a 1% increase in *waqf* land reduces agricultural income per capita by 2.5%. Column 2 reports similar, albeit noisier, negative effects on agricultural output per hectare planted, appropriately weighted by crop-specific revenue shares (see Bazzi et al., 2016). Columns 3 and 4 suggest that some of these productivity losses may be due to lower capital intensity relative to labor (column 3) and land (column 4).

These results are consistent with at least four potential mechanisms. First, the *waqf* endowment may impart certain restrictions on crop choice that restrict farmland to be used to grow food crops demanded by local beneficiaries (e.g., students at the *pesantren*) rather than potentially more profitable cash crops for consumption outside the village. Second, most *waqf*-endowed land is farmed under a sharecropping arrangement known as *muzara'a*, a type of partnership compliant with Islamic law.⁵¹ Given the well-known inefficiencies of sharecropping (Burchardi et al., 2018), the *waqf* could have inhibited alternative, productivity-enhancing tenancy arrangements. Third, the *waqf* may limit the scope for reinvestment and future growth given that much of the revenue is allocated towards short-run religious consumption (by mosques and schools, see Jahar, 2005, for examples). Finally, with relatively cheap labor under coercion by religious authority, *waqf* administrators may be prone to labor-intensive modes of production at the expense of capital upgrading.

In column 5 of Table 7, we find null effects on nighttime light intensity in 2003. This is the best available proxy for overall village-level development in the absence of a more complete measure of non-agricultural income.⁵² While we cannot rule out large negative or positive effects, the weak effects of expropriation intensity and *waqf* on overall development suggests that the economic consequences may be circumscribed to agriculture. This seems plausible for the average village where only 0.5% of total land is under *waqf* and only one-quarter of the population reports agriculture as their primary occupation (in the 2000 Population Census). The results in column 5 also goes against an alternative interpretation of our findings, namely that Islamist dominance grew in districts most affected by the land reform because these districts became systematically less developed than those where there was less of an increase in the *waqf* and more flexible land institutions were adopted as Indonesia grew economically.

⁵⁰These results are restricted to villages with agricultural production in 2003. See Appendix B for details on the measures.

⁵¹Returning to the Gontor example in Section 3.3, once the land was designated as *waqf* in the early 1960s, the *waqf* administrator, a local cleric, maintained the prior sharecropping terms with each cultivator holding 1 ha of land (Winarko, 2006).

⁵²The sample size fall somewhat due to a lack of effective merges between *Podes* 2003 villages and those in the shapefiles underlying the light intensity data. Restricting columns 1–4 to those with non-missing light intensity leaves the results qualitatively and quantitatively unchanged.

We explore other alternative explanations, including an inequality channel, in Section 6.1.

Ultimately, we view these economic effects as being closely connected to the political ones. First, one does not need a great deal of *waqf* land to sustain a mosque or *pesantren*, which can exert sizable political impacts through the three mechanisms outlined above. However, the mere 6% of zoned land under *waqf* in the average village seems much too limited for the economy-wide losses in aggregate income of the sort conjectured by Kuran (2011) for the historical Middle East, where *waqf* land comprised as much as half or even three-quarters of all agricultural land. Nevertheless, by controlling productive assets, religious authorities in Indonesia can accrue political rents. Even if it were possible to convert the *waqf* land to an alternative use, religious elites would have little incentive to do so as this could undermine their authority over laborers on that land.

5.6 Summary and Proposed Mechanisms

Our findings thus far suggest that the 1960 land reform led to the entrenchment of Islamism in regions facing the greatest expropriation intensity. We argue that the causal pathway runs through *waqf* land endowments, which provided conservative Islamic institutions a resource base with which to grow and expand their efforts to push for a greater role of Islam in public life. We argued that this was not due to an underlying change in piety and religious practice.

Instead, we view the results above as consistent with three mutually reinforcing mechanisms: (i) greater exposure to Islamist ideology through mosques and religious schools, (ii) greater mobilization through mosque- and school-based activist networks, and (iii) a greater pipeline of potential Islamist leaders educated in religious schools and nurtured in mosque-based youth groups. Each of these are plausible and in line with the qualitative literature on Islamist politics in Indonesia, some of which was cited throughout the results discussed above.

6 Alternative Explanations and Robustness Checks

This section provides additional evidence bolstering the case for our interpretation of the main results. First, we consider several leading alternative explanations. Second, we present additional robustness checks, including a careful examination of the other expropriation cutoffs at 50 and 250 people/km².

6.1 Alternative Explanations

We argue above and show IV results implying that *waqf* endowments are the key mediator linking the land reform to the entrenchment of Islamism. While it is impossible to rule out all other causal pathways, we can reject several alternative explanations that are not related to Islamist politicization of *waqf*-endowed institutions. We present these results here.

Residual Land Inequality. One possibility is that the land reform affected the land distribution in targeted districts. This would be a concern if land inequality increases support for Islamism (e.g., as an alternative to secular elite). Columns 1, 3, and 5 of Table 8 show that expropriation intensity did

not substantially affect the change in the number of holdings above 5 hectares from 1963 to 1980, 1985, and 1990, respectively.⁵³ Columns 2, 4, and 6 report analogous tests using district-level estimates of the Pareto dispersion parameter (λ) over those same time horizons. The results suggest that expropriation intensity did not reduce inequality in the countryside in the first few decades after the reform.⁵⁴

Overall, the lack of an effect on inequality is consistent with the studies mentioned in Section 2.3, arguing that the land redistribution efforts were largely undone by the early 1970s. Yet, the null result may seem puzzling given that the *waqf* transfers alone should have changed inequality by reallocating land from large holders. However, note that in most cases, this land simply changed hands without being broken up into small parcels, which would have happened had that land been expropriated by the state. Also, many large holders may have transferred their excess land to a few religious institutions in their communities, which would have potentially increased land concentration.

Demographic Changes from the 1965–66 Mass Violence. Another concern is that the massacre of purported Communists may have tracked the land reform. While the data limitations concerning this episode of potential genocide are well known (Cribb, 1990), we explore this possibility in columns 7–8 of Table 8, where we test for effects of the land reform on two measures of demographic change that are potentially informative about the incidence of mass violence: population growth between 1961–71 (column 7), and changes in male-to-female sex ratios between 1961 and 1971 (column 8).

We find no significant evidence that expropriation intensity is correlated with these proxies for anti-Communist violence.⁵⁵ This has two implications for our main results. First, the effects we find on contemporary support for Islamism are not likely to be explained by changes in the underlying voting population. Second, even if Islamist groups organized around *pesantren* contributed to the mass violence in 1965–66 (Van Bruinessen, 2008; Fealy and McGregor, 2010), the districts with greater expropriation intensity were not necessarily those where the mass killings disproportionately took place. This is in line with the identification check in Appendix Table A.2 showing that expropriation intensity is unrelated to the Communist vote share in the 1950s. Overall, these results provide further support to the particular channels we highlight in Section 3.3: the land reform contributed to contemporary support for Islamism through its effect on specific Islamic institutions, namely *waqf*, *pesantren*, and mosques. Of course, a corollary to this explanation is that these religious institutions may have helped to maintain a strong and persistent ideological opposition to any potential resurgence of Communism in Indonesia.

⁵³These data come from large-scale Population Census and survey data. While there was another Agricultural Census conducted in 1973, the data are only available in province-level tabulations, which makes it unusable for our purposes given the policy variation is at the lower, district level in the 1960s. Nevertheless, a comparison of aggregates from the two Censuses provides suggestive evidence against a large change in inequality subsequent to the land reform. In particular, there are 307,368 holdings of 5+ hectares in 1973 compared to 274,013 in 1963, and using the province-level variation in 1973, we estimate 75,943 holdings of 5–9 ha in 1973 compared to 70,003 in 1963.

⁵⁴We find similar null results using village-level Pareto dispersion parameters (λ) recovered from the Agricultural Census in 2003 (reduced form coefficient of 0.030 with a standard error of 0.137). Moreover, there appears to be little relationship between *waqf* land and λ at the village level based on OLS and IV specifications.

⁵⁵These null findings are in line with a consensus view among demographers of Indonesia that there is little evidence of missing people in Population Censuses conducted after the violence during the 1960s. We confirmed this view in several lengthy email discussions in 2013 with Terrence Hull and Peter McDonald, leading demographers with decades of experience working on the Population Census in Indonesia.

Schooling and Public Goods. Given its long-term impact on the supply of religious educational institutions, the land reform could have affected local support for Islamism via public goods provision. Citizens may support Islamists because they provide more local public goods than secular and moderate representatives. This reciprocity-based mechanism has been put forward in other contexts to explain support for Islamists (see, e.g., [Cammatt and Luong, 2014](#), on the Muslim Brotherhood, Hamas, and Hezbollah). We find no evidence of this alternative explanation across a range of outcomes in [Table 9](#): the number of public schools per 1,000 children built in the district in the 1970s as part of the government’s landmark *INPRES* program (column 1, see [Duflo, 2001](#), on the program); the share of the village population in 2000 with primary (column 2), junior secondary (column 3), and senior secondary school completed (column 4); and two summary indices capturing a host of village-level public goods in health (column 5) and infrastructure (column 6) from 1999 to 2014 (see the table notes). The small null effects across these outcomes suggests that the land reform did not lead to sizable shifts in access to education or broader public goods. Rather, the *waqf* transfers in the 1960s empowered Islamists to provide a different *type* of public good more focused around conservative religion in lieu of the prevailing alternatives.

6.2 Further Robustness Checks

Before concluding, we discuss several additional robustness checks on the core outcomes in [Tables 1–3](#). Overall, the stability of results points to the robustness of our findings and interpretation of the pathway from the attempted land reform to Islamic institutions and Islamist influence today. The results, reported in [Appendix A.7](#), are as follows. Recall first from [Section 5](#) that our results are robust to a range of alternative specifications and controls in [Appendix Tables A.8–A.10](#).

[Appendix Tables A.11–A.13](#) demonstrate robustness to alternative parametrizations of the RD specification. For comparison, the top row of each of these tables reports estimates from the baseline specification. We then report the following checks. First, we vary the degree of the polynomial in the running variable (1960 population density) in [equation \(1\)](#). Our main results are robust to alternative polynomials (linear, quadratic, and quartic) besides the cubic one used in the baseline. Second, we vary the bandwidth around the population density cutoff of 400 people/km², with bandwidths ranging from 100 to 300. The difference-in-discontinuity estimate remains positive and significant in most of these specifications. At the lower end, we see the limits of the identifying variation afforded by the policy as we are left with too few districts (46 out of 191) to estimate statistically well-powered regressions. We view these results not as illustrating the fragility of our findings but rather the limits of the available identifying variation in this historical setting.

Other Population Density Cutoffs. [Appendix Tables A.14–A.16](#) probe the role of other cutoffs used in the land reform. While our analysis focuses on the 400 people/km² cutoff, the reform plan stipulated two other cutoffs at 50 and 250 people/km². However, in districts subject to these cutoffs, especially 50, enforcement was weaker and redistribution efforts much less far along by the time the land reform was halted in the mid-1960s, as discussed in [Sections 2.1](#) and [4.2](#). Nevertheless, for the sake of completeness, we consider two approaches to identifying the effects of expropriation at these other cutoffs.

First, we estimate a version of equation (1) where we “pool” all three cutoffs and each district is matched to the nearest cutoff: districts under 150 people/km² are matched to the 50 cutoff, districts between 150–300 people/km² are matched to the 250 cutoff, and districts above 300 people/km² are matched to the 400 cutoff.⁵⁶ In this case, expropriable holdings are defined for each cutoff following the BAL schedule: holdings between 5–9 hectares at the 400 cutoff, 9–12 hectares at the 250 cutoff, and 12–20 hectares at the 50 cutoff. The difference-in-discontinuity estimate remains positive in all tables, and is statistically significant in Table A.15 and most columns of Table A.16. However, the fact that little expropriation occurred at the 50 and 250 cutoffs implies that these results are more imprecise.

Second, we look for discontinuities in outcomes at each cutoff, estimated both separately and in the same regression. We first separately estimate the effect of expropriation intensity at the 50 and 250 cutoffs. We then estimate the full model including all the terms associated with the 50, 250, and 400 cutoffs. The bottom panel of Appendix Tables A.14–A.16 report the corresponding estimates of β^{50} , β^{250} , and β^{400} and the p-value from a test of joint significance. These coefficients are jointly significant when looking at land under *waqf* (Table A.14), Islamist voting (Table A.15) and *sharia* regulations (Table A.16).

Overall, the evidence as to whether expropriation intensity at the 50 people/km² cutoff increased the prevalence of *waqf* lands is mixed. The difference-in-discontinuity coefficient is small in magnitude and insignificant when estimated separately but positive and significant in the specification with all 3 cutoffs (Appendix Table A.14, bottom panel, columns 2–3). Correspondingly, there is no evidence that this led to an increase in electoral support for Islamists (Appendix Table A.15), and in linkages between Islam and the local state (Appendix Table A.16). The effects of expropriation intensity at the 250 people/km² are more consistent and more robust. The difference-in-discontinuity estimate for this cutoff is positive and significant for *waqf* as a fraction of total land (especially when restricting the sample to the Inner Islands, Appendix Table A.14), and for Islamist voting (Table A.15).

These heterogeneous effects of the land reform across the three policy cutoffs are entirely consistent with the history of the land reform prior to its reversal. Redistribution first began in the more central and populous Inner Islands of Java, Bali, and NTB where the 250 and 400 cutoffs were meaningful (only two out of 95 districts had fewer than 50 people/km²). In a second stage, redistribution efforts would expand to the more sparsely populated outlying regions of the country in the Outer Islands where the 50 cutoff was the only meaningful one (only two out of 96 districts had more than 250 people/km²). However, by the time efforts got underway in this second stage, the turmoil of the mid-1960s and seizure of power by Suharto had already led to a scaling back and eventually halting of all government-led redistribution efforts. Putting this history together, it is clear why we find such muted effects around the 50 people/km² cutoff and relatively stronger effects at 250 and especially 400.

7 Conclusion

This paper provides causal evidence of the effects of Islamic institutions on religious politics and the spread of Islamism. Our results suggest that a major Islamic institution, the *waqf*, played a disproportion-

⁵⁶See Appendix Section A.7 for a detailed description of this specification.

ately important role at a critical juncture in Indonesian history. The 1960 land reform exempted religious lands from redistribution, prompting rural landowners to transfer their holdings to *waqf* endowments to avoid seizure by the government. These transfers proved especially valuable for the Islamist movement, which was able to use the endowed institutions—mosques and religious schools—to entrench their conservative ideology and ultimately influence the course of politics. Citizens in affected regions demand a greater role for Islam in public affairs and are more successful in implementing that preference. We argue that these institutional changes are not due to a change in piety per se but rather to a change in views about the role of religion in public life and the resources available to actors capable of leveraging those views to enact political change.

While the resurgent Islamist movement has brought profound changes to Indonesia, the movement itself remains fractured, with its vote split across three parties, to say nothing of their contentious relationship with moderate Islamic groups. It is possible that the personalized nature of the *waqf* plays a part in this fragmentation, effectively ensuring sustained competition in the market for votes and political support. Iannaccone and Berman (2006) highlight a potential upside in that religious competition may act as a moderating force over the long-run under certain conditions. Whether this competition mechanism holds in Muslim countries like Indonesia and what role the *waqf* plays in this process is an important question for future research.

More generally, our findings may also have implications for understanding the relationship between religious institutions and the rise of religious politics in other societies. This pertains, first and foremost, to support for Islamism in the Muslim World. While *waqf* represent a small fraction of land in Indonesia, they are more intensively used in the Middle East, North Africa, and India, where their impacts on Islamism and the economy deserves further exploration. Beyond Islamist politics, the literature on the economics of religion has generally not focused on the impact that specific institutions play in shaping political activism by religious actors and organizations. Much like the *waqf* created in the 1960s continue to influence Indonesian politics, institutions may also condition the ways in which religious actors engage in politics in the West, or in other parts of the developing world.

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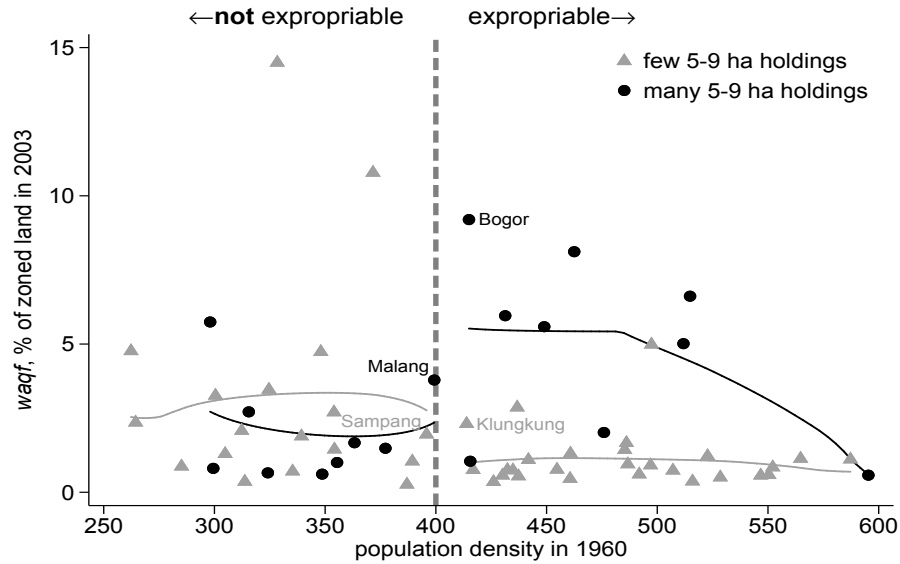
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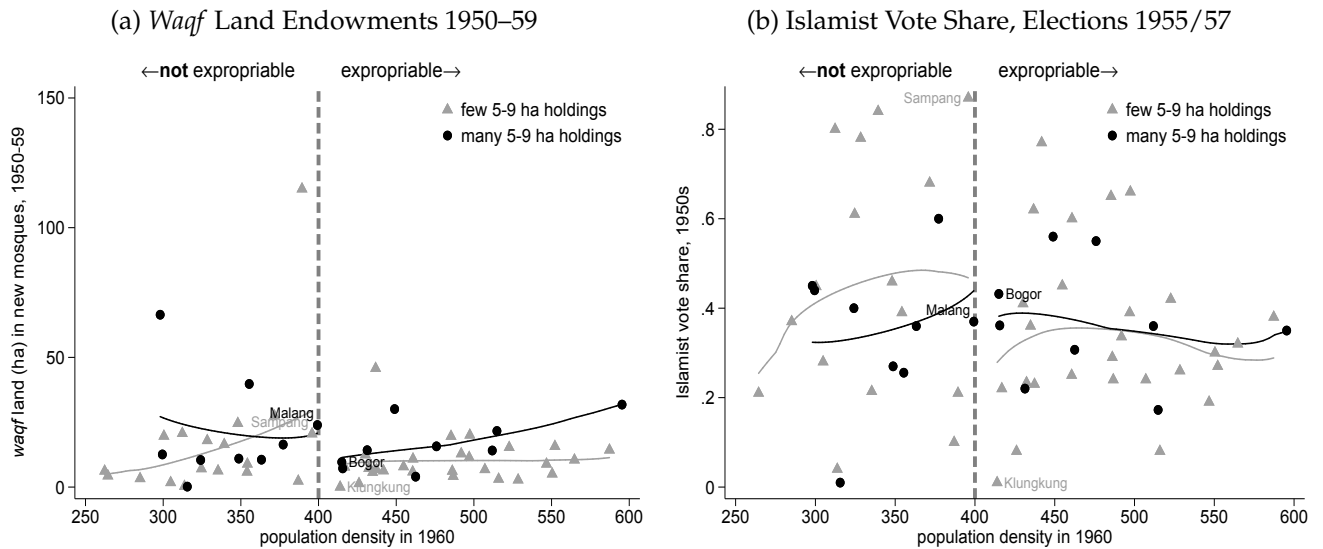
Figures

Figure 1: Illustration of the Difference-in-Discontinuities Design (I)
Waqf Post-Land Reform



Notes: This figure illustrates how the difference in outcomes, here *waqf* land in 2003, between districts with high and low numbers of marginal 5–9 ha landholdings (above and below the median, respectively) changes at the 400 people/km² cutoff, above which 5–9 ha holdings are expropriable and below which they are not. We restrict attention to districts in the 250–600 people/km² range for presentational purposes. The curves are local linear regressions with an Epanechnikov kernel and bandwidth of 50. We highlight the four districts discussed in Section 4.2.

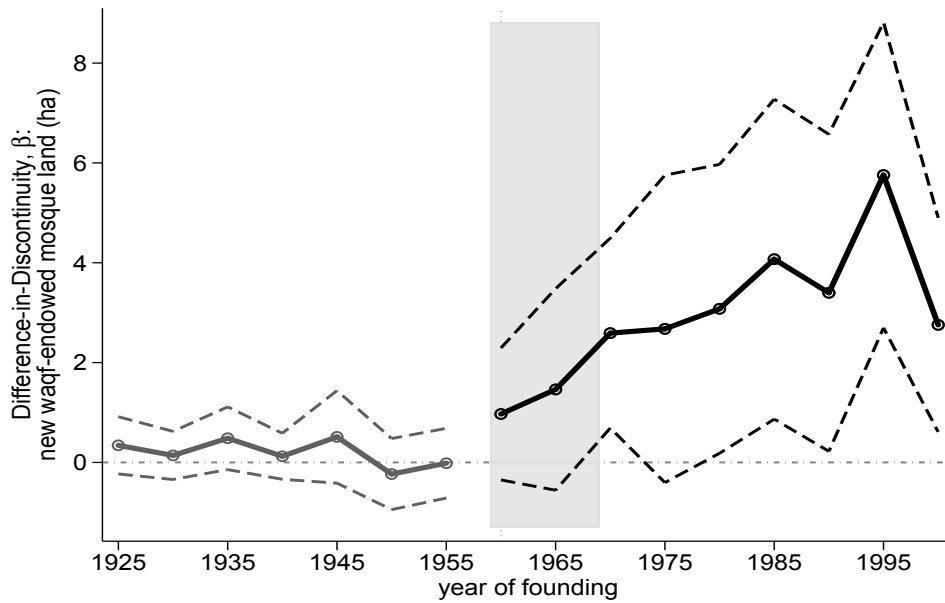
Figure 2: Illustration of the Difference-in-Discontinuities Design (II)
Waqf and Islamism Pre-Land Reform



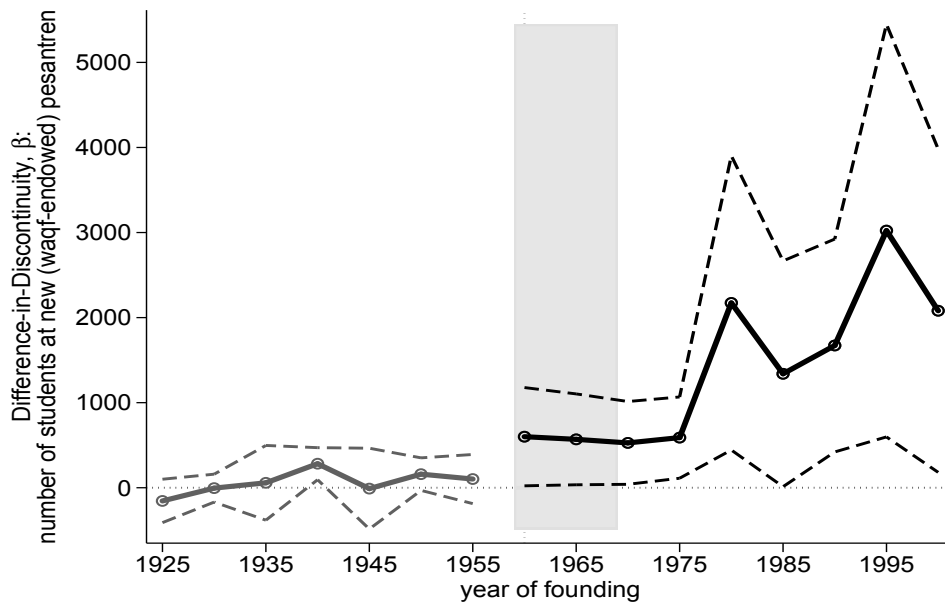
Notes: These graphs present an analogous illustration of the empirical strategy to that in Figure 1, focusing here on pre-land-reform outcomes: (a) the amount of *waqf* land allocated to mosques created in the decade prior to the land reform, and (b) the vote share of Islamist parties in the 1950s.

Figure 3: Timing of *Waqf* Endowments

(a) *Waqf* Land Endowments in Newly Created Mosques



(b) Size of Newly Created *Pesantren*



Notes: This figure shows difference-in-discontinuity estimates from equation (1), using as the dependent variable (a) the amount of *waqf* land allocated to mosques established in each 5-year interval beginning in 1925, and (b) total student enrollment in *pesantren* established in each 5-year interval beginning in 1925. Both outcomes are constructed from Ministry of Religion administrative records. Each coefficient (circle) is estimated from a separate regression (one regression for each five-year period of establishment). The dashed lines represent 90% confidence intervals. The gray area spans the 1960s during which the land reform was being implemented. See Section 5.1 for details.

Tables

Table 1: Contemporary Waqf Land and Waqf-Endowed Institutions

	Waqf Land			Waqf-Endowed Institutions		
	hectares (1)	% total (2)	% zoned (3)	mosques (4)	<i>pesantren</i> (5)	madrasas (6)
expropriation intensity	0.207** (0.097)	0.251** (0.107)	3.291** (1.485)	2.956*** (0.985)	0.532** (0.264)	1.024** (0.410)
Number of Villages	55,200	55,622	55,388	48,978	48,978	48,978
Number of Districts	191	191	191	189	189	189
Dependent Variable Mean	0.848	0.516	6.106	3.921	0.503	0.787
R ²	0.033	0.005	0.044	0.234	0.165	0.195

Notes: This table reports estimates of equation (1). *Waqf* land is observed in the 2003 Podes village survey and measured in hectares (hyperbolic sine transformed) in column 1, as % of total land in column 2, and as % of legally zoned land in column 3. *Waqf*-endowed institutions are observed at the village level in 2008 and include: the number of mosques in column 4, the number of Islamic boarding schools (*pesantren*) in column 5, and the number of Islamic non-boarding schools (*madrasa*) in column 6. *Expropriation intensity* denotes the interaction of an indicator equal to one for districts above 400 people/km² in 1960 (*Above400*) with the number of landholdings in the size categories subject to redistribution above this cutoff according to the Basic Agrarian Law, namely holdings between 5 and 9 hectares (*Expropriable*). The coefficients on each of these terms is included in the regression but not reported here. The specification includes island fixed effects and a cubic polynomial in 1960 population density interacted separately with the two land reform exposure variables (*Above400* and *Expropriable*) and their interaction. The sample size drops in columns 4–6 as the data could not be linked to the baseline 2003 data for certain villages as a result of changes in administrative codes and boundaries. Including a combined measure of *pesantren* and *madrasa* for the complete sample in 2003 yields a coefficient of 0.689 (0.270)**.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors clustered by 1960 district.

Table 2: Islamist Party Support in Legislative Elections

	Village 1999 Top 3 Finish (1)	District Level 1999 Vote Share (2)	District Level 1999-2014 Vote Share (3)
(a) Islamist Parties			
expropriation intensity	0.158* (0.083)	0.049** (0.024)	0.044** (0.020)
Number of Villages	55,623	189	746
Number of Districts	191	–	–
Dependent Variable Mean	0.517	0.136	0.154
R ²	0.051	0.205	0.222
(b) Moderate Islamic Parties			
expropriation intensity	-0.128 (0.083)	-0.024 (0.037)	-0.008 (0.023)
Number of Villages	55,623	189	746
Number of Districts	191	–	–
Dependent Variable Mean	0.468	0.170	0.152
R ²	0.202	0.387	0.339
(c) Secular Parties			
expropriation intensity	-0.009 (0.027)	-0.025 (0.044)	-0.036 (0.031)
Number of Villages	55,623	189	746
Number of Districts	191	–	–
Dependent Variable Mean	0.932	0.695	0.695
R ²	0.266	0.414	0.327

Notes: This table reports estimates of equation (1). The dependent variable is an indicator of whether a given political family finished in the top 3 in the 1999 national legislative elections, as observed in the 2003 Podes (column 1), district-level vote shares in the 1999 elections (column 2), and district-level vote shares in the 1999, 2004, 2009 and 2014 elections (column 3). The top panel reports effects on electoral support for Islamist parties, which include the United Development Party (PPP), the Prosperous Justice Party (PKS), and the Crescent Star Party (PBB). In the middle panel, electoral support is defined with respect to moderate Islamic parties: the National Mandate Party (PAN) and the National Awakening Party (PKB). Unlike Islamist parties, which rejected *Pancasila* in 1999 and had advocated for including Islamic law in the Indonesian Constitution, these two parties have pluralistic ideologies that embrace *Pancasila*, the secular-nationalist doctrine of the Indonesian state. The bottom panel looks at effects on support for all other, secular parties, including the Indonesian Party of Struggle (PDI-P) and the Golkar Party. See Appendix Tables A.5 and A.6 for party-specific outcomes. Regressions in column 1 are at the village level while regressions in columns 2 and 3 are at the district and district×election year level, respectively. See the notes to Table 1 for additional details on the specification.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors clustered by 1960 district.

Table 3: Islamist Capture of the Local State

	Local Relig. Gov. Officials (1)	<i>Sharia</i> Regulations (2)	Islamic Court Cases re: <i>Waqf</i> Inherit. Martial (3) (4) (5)			Islamist Vigilante Activity Incidents Casualties (6) (7)	
expropriation intensity	301.9** (128.2)	1.533** (0.739)	1.496* (0.782)	515.3** (247.7)	454.7 (4242.0)	0.762** (0.318)	1.154*** (0.369)
Number of Districts	191	191	80	80	80	114	114
Dependent Variable Mean	784.7	1.68	0.61	208.3	10840.2	0.30	0.31
R ²	0.297	0.136	0.436	0.688	0.451	0.268	0.304

Notes: This table reports estimates of equation (1) for: the number of district-level government employees dedicated to managing religious affairs in the local Ministry of Religion office (column 1), the number of *sharia* regulations adopted in the district between 1998-2013 (column 2), the number of *sharia* court cases related to *waqf*, inheritance, and marriage/divorce (columns 3-5, respectively), and the number of incidents (column 6) and casualties (column 7) inflicted by the *Islamic Defenders Front* (FPI), an Islamist vigilante group. All regressions are run at the district level. The sample size is smaller in columns 3-7 due to missing data on court cases and Islamist vigilante activity. Expropriation intensity is not significantly associated with attrition in either dataset (see text for details). See the notes to Table 1 for additional details on the specification.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors.

Table 4: Demand for and Supply of Religious Politics

Data Source:	IFLS Survey		Pepinsky et al. Survey				Legislator Web Profiles, 2019		
Outcome:	<i>candidate [...] very impnt. in determining vote religion</i>		Muslim president very impnt.	Religiosity president very impnt.	Sharia Law support		Number of Candidates		
	religion	religiosity			objective	subjective	campaign on Islam & Sharia	Hajj experience	religious scholar
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
expropriation intensity	0.092*** (0.026)	0.083*** (0.029)	0.117*** (0.044)	0.088** (0.043)	0.056* (0.033)	0.062 (0.052)	9.624*** (3.318)	43.406*** (15.805)	0.809** (0.322)
Number of Individuals	43,965	43,965	1,825	1,822	1,840	1,709	–	–	–
Number of Districts	157	157	129	129	129	129	191	191	191
Dependent Variable Mean	0.394	0.406	0.665	0.770	0.435	0.605	7.110	45.272	0.257
R ²	0.084	0.076	0.052	0.035	0.087	0.082	0.160	0.267	0.324

Notes: This table reports estimates of equation (1). Columns 1–2 look at two outcomes from the *Indonesia Family Life Survey* (IFLS): namely an indicator for whether the religion (column 1) and the religiosity (column 2) of a candidate is a very important factor in individual voting decisions. Columns 3–6 look at outcomes from the [Pepinsky et al. \(2018\)](#) survey data: whether respondents say the president being Muslim (column 3) and being religious (column 4) is very important; and whether they support an index of specific *Sharia*-inspired legal regulations (column 5) and generically support *Sharia* law (column 6). These two surveys do not cover all districts in Indonesia, hence the smaller district sample size. These individual-level regressions control for gender, age and age squared, and an indicator for urban; the IFLS regression additionally controls for survey wave fixed effects. None of these added controls affect the results. The regressions in column 1–4 are also restricted to Muslims (see [Table 5](#)). In columns 7–9 we look at data on legislators' profiles in the 2019 election: whether candidates for district parliament mention Islam- or *Sharia*-related concepts in their campaign platforms (column 7), indicate their status as Hajj pilgrims in their formal name listed on the ballot (column 8), and hail from a religious scholar background (column 9). See the notes to [Table 1](#) for additional details on the specification.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors clustered by 1960 district.

Table 5: Religious Piety and Private Practice

Source: Outcome:	IFLS Survey				Pepinsky et al. Survey								
	Am I Muslim?	Am I Very Religious?	Trust Co-Muslims More	Tolerance Non-Muslims Index (1-4)	Am I Muslim	Pray 5x/day	Fast Ramadan	Read Quran	Friday Mosque	Pray Sunna	Prayer Group	Pay Zakat	Practices Index cols. 6-13
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
expropriation intensity	0.033 (0.050)	-0.003 (0.006)	-0.004 (0.014)	-0.041 (0.035)	-0.002 (0.032)	0.024 (0.043)	0.063 (0.043)	-0.046 (0.060)	-0.065 (0.048)	-0.036 (0.046)	0.006 (0.055)	0.030 (0.056)	-0.014 (0.039)
Number of Individuals	45,296	43,965	40,727	40,728	2,047	1,847	1,848	1,843	1,842	1,829	1,841	1,841	1,848
Number of Districts	158	157	157	157	137	129	129	129	129	129	128	129	129
Dependent Variable Mean	0.899	0.102	0.119	2.308	0.807	0.665	0.817	0.264	0.231	0.177	0.258	0.837	0.440
R ²	0.244	0.037	0.094	0.091	0.329	0.132	0.075	0.035	0.076	0.056	0.048	0.048	0.087

Notes: This table reports estimates of equation (1) for the following outcomes: from the IFLS, a dummy for being a Muslim (column 1), self-reported religiosity (column 2), relative trust towards co-Muslims and non-Muslims (column 3), and tolerance towards non-Muslims (column 4). From the [Pepinsky et al. \(2018\)](#) data, we look at individuals who self-report as Muslim (column 5), individuals who report praying 5 times a day (column 6), fasting during Ramadan (column 7), reading the Qur'an (column 8), always attending Friday prayer (column 9), attending non-mandatory Sunnah prayers (column 10), being part of a prayer group (column 11), and paying *zakat* collection group (col. 12). We also pool all practices in columns 6–12 in an index, and regress this index on our main specification in column 13. All regressions except those in columns 1 and 5 are restricted to Muslims. All regressions control for gender, age and age squared, and an indicator for urban; the IFLS regression additionally controls for survey wave fixed effects. None of these added controls affect the results. See the notes to Table 1 for additional details on the specification.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors clustered by 1960 district.

Table 6: Effects of *Waqf*-Endowed Land on Religious Institutions and Politics

	<i>Waqf</i> -Endowed Institutions			Religious Politics			
	mosques	<i>pesantren</i>	madrasas	Islamist Party		Min. Religion	<i>Sharia</i>
	(1)	(2)	(3)	Top 3, 1999	Vote Shr. 99-14	Employees	Regulations
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(a) Ordinary Least Squares							
<i>waqf</i> land	0.614*** (0.067)	0.129*** (0.021)	0.177*** (0.028)	0.037*** (0.007)	0.034*** (0.008)	0.102* (0.060)	0.527** (0.229)
Number of Villages/Districts	48,710	48,710	48,710	55,200	191	191	191
Dependent Variable Mean	3.930	0.505	0.791	0.516	0.154	6.474	1.681
R ²	0.231	0.166	0.188	0.052	0.306	0.362	0.139
(b) Instrumental Variables							
<i>waqf</i> land	14.612** (6.967)	2.632** (1.083)	5.062** (2.199)	0.766** (0.369)	0.148* (0.087)	0.654* (0.373)	2.633 (2.065)
[weak-instrument robust p-value]	[0.003]	[0.045]	[0.013]	[0.057]	[0.017]	[0.095]	[0.156]
Number of Villages/Districts	48,710	48,710	48,710	55,200	191	191	191
Dependent Variable Mean	3.930	0.505	0.791	0.516	0.154	6.474	1.681
First Stage Effective <i>F</i> Statistic	4.5	4.5	4.5	4.6	7.3	5.8	5.8
Underidentification Test, p-value	0.040	0.040	0.040	0.038	0.016	0.010	0.010

Notes: This table reports estimates of equation (2). Panel (a) reports OLS estimates, and panel (b) reports IV estimates, where we use the difference-in-discontinuity term from equation (1), $Above400 \times Expropriable$, as an instrument for *waqf* land (hyperbolic-sine transformed as in Column 1 of Table 1). Columns 1–3 examine institutional outcomes from Table 1: the number of mosques (column 1), Islamic boarding schools (*pesantren*, column 2), and Islamic non-boarding schools (*madrasa*, column 3) observed at the village level in 2008. Columns 4–5 look at outcomes from Table 2: an indicator for whether Islamist parties finished in the top 3 in the 1999 national legislative elections (column 4), and the district-level vote share received by Islamist parties across the 1999, 2004, 2009 and 2014 elections (column 5). Columns 6–7 examine outcomes from Table 3: the number of local government employees dedicated to managing religious affairs (column 6), and the number of *sharia* regulations adopted in the district between 1998–2013 (column 7). See the notes to Table 1 for additional details on the specification.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors.

Table 7: Waqf Land, Agricultural Development, and Misallocation

	log agric. GDP/capita (1)	log agric. productivity (2)	capital/labor ratio (3)	capital/land ratio (4)	light intensity (5)
(a) Reduced Form					
expropriation intensity	-0.577*** (0.215)	-0.113* (0.059)	-0.729*** (0.298)	-0.050** (0.025)	0.112 (0.103)
Number of Villages	47,598	47,598	47,598	47,597	41,459
Number of Districts	191	191	191	191	187
Dependent Variable Mean	13.012	-0.473	2.223	0.111	1.648
R ²	0.060	0.158	0.038	0.017	0.658
(b) Ordinary Least Squares					
<i>waqf</i> land	-0.011 (0.021)	0.016 (0.013)	0.008 (0.050)	-0.006** (0.003)	-0.011 (0.011)
Number of Villages	47,249	47,249	47,240	47,248	41,151
Number of Districts	191	191	191	191	187
Dependent Variable Mean	13.0	-0.470	2.239	0.112	1.657
R ²	0.053	0.159	0.037	0.016	0.657
(c) Instrumental Variables					
<i>waqf</i> land	-2.526** (1.013)	-0.495 (0.335)	-3.219** (1.444)	-0.221* (0.122)	0.563 (0.495)
[weak-IV robust p-value]	[0.008]	[0.058]	[0.015]	[0.049]	[0.272]
Number of Villages	47,249	47,249	47,249	47,248	41,151
Number of Districts	191	191	191	191	187
Dependent Variable Mean	13.0	-0.470	2.239	0.112	1.657
1st Stage Effective <i>F</i> Stat	6.4	6.4	6.4	6.4	4.5
Underidentification, p-value	0.012	0.012	0.012	0.012	0.038

Notes: This table reports estimates from equation (1) in panel (a), and estimates from equation (2) in panels (b) and (c) using OLS and IV, respectively, as in Table 6. The village-level dependent variable, measured in 2003, is: the log of agricultural GDP per capita (column 1), the revenue-weighted log of output per hectare by crop (column 2), the total number of agricultural machines per capita (column 3) and per hectare planted (column 4), and nighttime light intensity (hyperbolic-sine transformed). The sample in columns 1–4 is restricted to villages with positive production of at least one crop. The sample drops in column 5 due to problems merging luminosity shapefiles with the administrative data in 2003. See the notes to Table 1 for additional details on the specification.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors clustered by 1960 district.

Table 8: Alternative Explanations (I): Land Inequality and Demographic Change

	Δ Landholdings Distribution						Δ Demographics, 1961-71	
	1963–1980		1963–1985		1963–1990		population	sex ratio
	no. >5 ha (1)	λ (2)	no. >5 ha (3)	λ (4)	no. >5 ha (5)	λ (6)	(7)	(8)
expropriation intensity	-0.075 (0.179)	-0.206 (0.192)	-0.011 (0.154)	-0.222 (0.170)	0.068 (0.214)	-0.144 (0.190)	-0.090 (0.102)	-0.323 (0.237)
Number of Districts	191	191	191	191	191	191	168	168
R ²	0.086	0.404	0.131	0.395	0.076	0.359	0.169	0.157

Notes: This table reports estimates of equation (1) for district-level measures of changes in the land distribution since 1963: changes in the number of 5+ hectare holdings and land dispersion (λ) between 1963 and 1980 (columns 1 and 2), 1963 and 1985 (columns 3 and 4); and 1963–1990 (column 5 and 6). Recall that the estimated Pareto parameters, λ , are decreasing in in dispersion/inequality. We also consider district-level population growth between 1961 and 1971 (column 7) growth in the male-to-female sex ratio between 1961 and 1971 (column 8). The sample size is smaller in columns 7–8 due to uncovered districts in the 1971 Population Census. All dependent variables are normalized to have mean zero and standard deviation one. See the notes to Table 1 for additional details on the specification.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors clustered by 1960 district.

Table 9: Alternative Explanations (II): Schooling and Public Goods

	INPRES Schools (1)	Population Share with ... Primary (2)	Junior Sec. (3)	School Senior Sec. (4)	Public Goods Index Health (5)	Infrastructure (6)
expropriation intensity	0.001 (0.261)	-0.027 (0.017)	-0.003 (0.008)	0.007 (0.008)	0.005 (0.015)	-0.012 (0.029)
Number of Villages	191	46,628	46,628	46,628	41,437	41,437
Number of Districts	191	190	190	190	187	187
Dep. Var. Mean	2.242	0.372	0.123	0.092	0.392	0.497
R ²	0.281	0.109	0.159	0.114	0.088	0.264

Notes: This table reports estimates of equation (1) for the following outcomes: the number of public primary schools per 1,000 students constructed at the district level by the Suharto government from 1973–78 as part of the *INPRES* program (column 1); the share of the village population in 2000 with primary schooling (column 2), with junior secondary schooling (column 3), with senior secondary schooling (column 4); village-level indices, ranging from zero to one, capturing the presence of health public goods including doctors, midwives, and health clinics (column 5) and infrastructure public goods including 4-wheel road access, safe water, sewage, garbage collection, and kerosene supply. These indices are based on the mean across all rounds of *Podes* from 1999 to 2014. The sample size is smaller in columns 5 and 6 due to changing boundaries and merging difficulties. See the notes to Table 1 for additional details on the specification.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors clustered by 1960 district.

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A Further Empirical Results

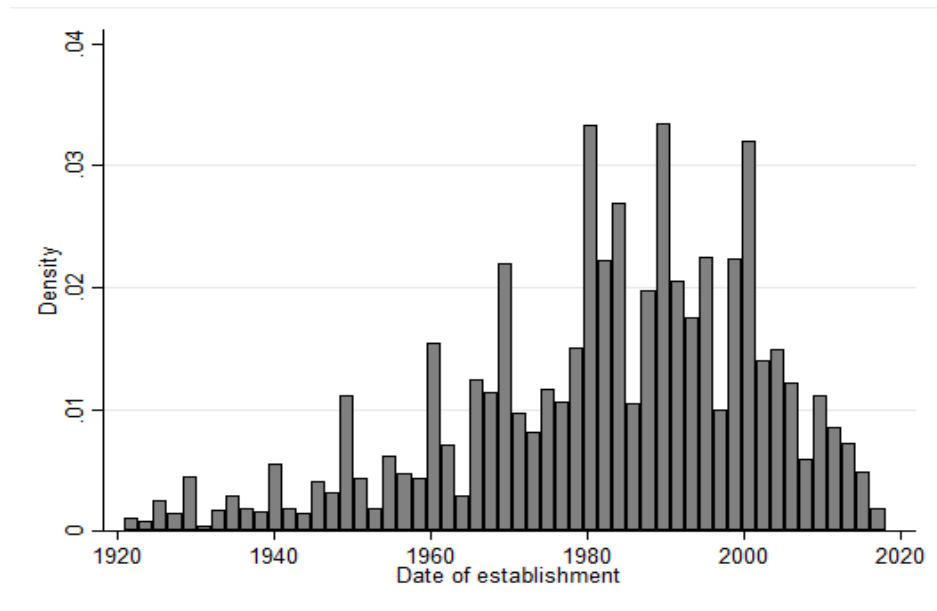
A.1 Descriptive Statistics

Table A.1: Summary Statistics

	Mean	SD	<i>N</i>	Source
<i>District-level data</i>				
Historic Population density	342.38	754.34	191	1961 Population Census
Above 400 ppl/km ² threshold	.309	.463	191	1963 Agricultural Census
Expropriable holdings (5-9 hectares)	391.97	576.76	191	1963 Agricultural Census
Baseline land dispersion	.846	.335	191	1963 Agricultural Census
Mosques by 1920	22.69	29.47	191	Min. Relig. Affairs (Kemenag)
Pesantren by 1920	3.40	31.71	191	Min. Relig. Affairs (Kemenag)
Islamic vote 1955-57	.424	.222	191	Dwight King
Communist vote 1955-57	.127	.131	191	Dwight King
Islamist vote share, 1999	.136	.098	189	Electoral Commission
Islamist vote share, 1999-2014	.154	.086	746	Electoral Commission
Islamic moderate vote share, 1999	.170	.142	189	Electoral Commission
Islamic moderate vote share, 1999-2014	.152	.106	746	Electoral Commission
Local employees Min. Relig. Affairs	777.92	480.34	191	Min. Relig. Affairs (Kemenag)
Sharia regulations	1.68	2.56	191	Buehler (2016)
Islamic court inheritance cases	.015	.026	80	Relig. Courts Info. Syst. (SIPP)
Islamic court marital cases	.94	.103	80	Relig. Courts Info. Syst. (SIPP)
FPI incidents	.298	.911	114	Violence Monitoring Syst. (SNPK)
FPI casualties	.298	.986	114	Violence Monitoring Syst. (SNPK)
<i>Village-level data</i>				
Waqf land in village (hectares)	.669	.82	55,200	2003 Podes
Waqf in village (% total land)	.518	2.969	55,199	2003 Podes
Waqf in village (% zoned land)	6.13	20.80	55,200	2003 Podes
Mosques in village	3.32	4.23	55,200	2008 Podes
Pesantren in village	.516	1.25	55,200	2008 Podes
Madrasas in village	.791	1.83	48,710	2008 Podes
Islamist parties in top 3, 1999	.516	.5	55,200	2003 Podes
Distance to nearest shrine (km)	669.15	620.57	48,956	Google Maps/GIS
Dist. to subdistrict office (km)	10.01	21.78	55,200	2003 Podes
Dist. to district office (km)	46.53	56.07	55,200	2003 Podes

Notes: This table reports summary statistics for dependent and independent variables used in the regression analysis. For a full elaboration of sources and variable construction, see Appendix B.

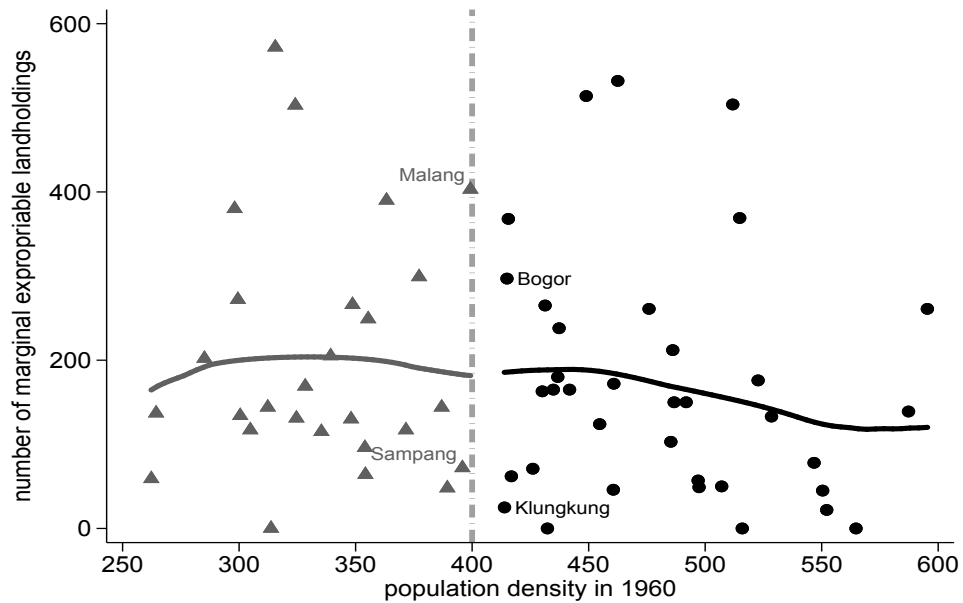
Figure A.1: Distribution of Establishment Dates for *Waqf*-Endowed Mosques



Notes: This figure reports the distribution of establishment dates for the universe of *waqf*-endowed mosques observed in 2018. Data from the Ministry of Religious Affairs.

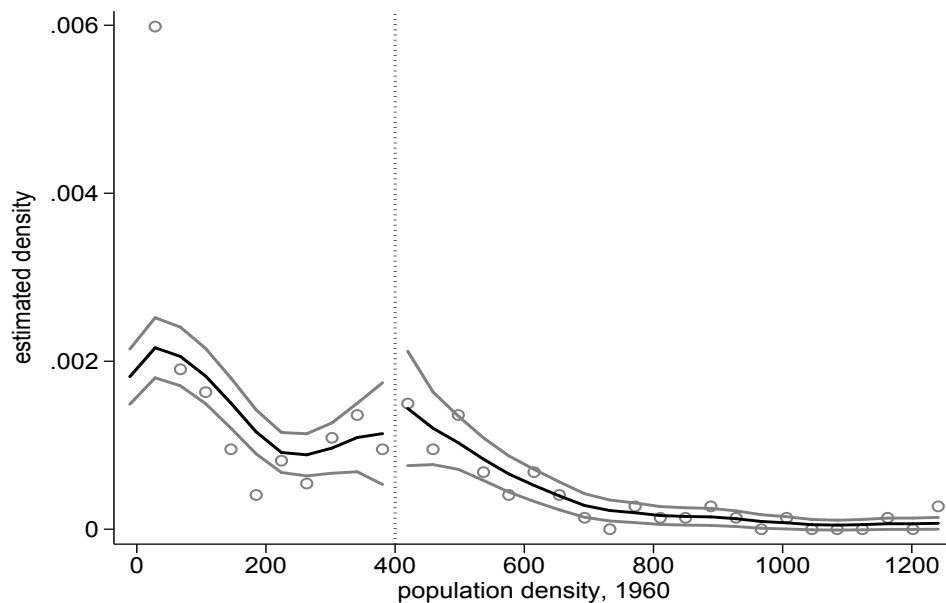
A.2 Identification Checks

Figure A.2: Continuity of Expropriable Landholdings Around the 400 Cutoff



Notes: This figure illustrates the continuity of expropriable landholdings at the 400 people/km² cutoff. We restrict attention to districts in the 250–600 people/km² range for presentational purposes. The curves are local linear regressions with an Epanechnikov kernel and bandwidth of 50. See Section 4.2 for details.

Figure A.3: Population Density: [McCrary \(2008\)](#) Test



Notes: This figure reports the [McCrary \(2008\)](#) test for manipulation of the running variable, population density in 1960. The graph reveals no evidence of such manipulation. The figure excludes three districts with population density above 1300 people/km² for presentational purposes.

Table A.2: Balance on Time-Invariant and Pre-Reform Covariates

	<i>N</i>	Mean	Diff-in-disc
Mosques by 1920	191	22.7 (29.47)	5.879 (7.511)
Pesantren by 1920	191	3.4 (31.71)	27.142 (26.833)
Islamist vote, 1955/57	160	.37 (.22)	.038 (.062)
Communist vote, 1955/57	160	.14 (.14)	-.03 (.047)
Ethnic Arab population, 1930 Pop. Census	180	.67 (1.21)	.515 (.396)
Ethnic European population, 1930 Pop. Census	180	.83 (2.22)	.122 (.338)
Ethnic Chinese population 1930 Pop. Census	180	6.27 (13.61)	4.592 (3.797)
Mean rainfall shocks, 1955-59	191	.05 (.06)	.013 (.019)
Mean rainfall shocks, 1960-65	191	-.08 (.05)	.013 (.012)
Baseline land dispersion, 1963	191	.85 (.34)	.07 (.054)
Number of males, 1961 Pop. Census	191	215.64 (150.54)	25.554 (54.555)
Number of females, 1961 Pop. Census	191	221.37 (157.82)	23.4 (56.158)
Number of farms, 1963 Ag. Census	189	61.16 (41.14)	2.76 (12.61)
Dryland area (ha), 1963 Ag. Census	190	42.9 (40.58)	-10.041 (8.877)
Wetland area (ha), 1963 Ag. Census	189	22.27 (17.28)	5.901 (3.979)
Total agricultural area (ha), 1963 Ag. Census	190	64.78 (47.49)	-4.18 (9.765)
Village located on hill	55623	.29 (.45)	-.035 (.042)
Altitude	55623	288.16 (1787.59)	22.641 (149.265)
Village located on beach	55623	.1 (.3)	.036** (.014)
Distance to nearest shrine (km)	49311	672.28 (620.52)	69.782 (60.366)
Distance to subdistrict office	55623	10.03 (21.76)	1.734 (1.122)
Distance to district office	55623	46.63 (56.15)	8.982* (5.32)
Java-Bali-NTB	55623	.44 (.5)	-.018 (.016)

Notes: This table reports balance checks on baseline covariates (either time invariant or measured prior to the 1960 land reform). Each cell reports estimates from a separate regression. Column (2) reports the mean of each dependent variable. In column (3), we report our difference-in-discontinuity coefficient from equation (1).

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors clustered by 1960 district.

A.3 Waqf Establishments across Time Periods

Table A.3 reports results based on aggregating five-yearly outcomes in Figure 3. Column 1 and 5 show the flat pre-trends for *waqf* land endowments in new mosques and the number of students in new *pesantren* before the land reform. Columns 2 and 6 show a significant difference-in-discontinuity for these outcomes measured after the land reform from 1960 to 2005. Columns 3 and 7 of show that the difference-in-discontinuity for institutions endowed between 1960-2005 is significantly different (at 5%) from the coefficient for institutions endowed between 1925–1959. Columns 4 and 8 show that the difference between the difference-in-discontinuity coefficient for institutions endowed between 1960–1969 is significantly different (at 10%) from the coefficient for institutions endowed between 1950–1959.

Table A.3: *Waqf* Land and *Waqf*-Endowed Institutions, 1925–2005

	<i>Waqf</i> Land, New Mosques				Number of Students, New <i>Pesantren</i>			
	1925–1959	1960–2005	Δ (2)-(1)	Δ (60-69) -(50-59)	1925–1959	1960–2005	Δ (6)-(5)	Δ (60-69) -(50-59)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
expropriation intensity	1.38 (2.25)	26.76** (12.32)	25.37** (11.07)	2.68* (1.36)	486.2 (614.1)	12,573.7*** (4705.3)	12,087.5*** (4478.4)	906.6* (507.2)
Number of Districts	191	191	191	191	191	191	191	191
Dependent Variable Mean	8	38	30	3	1,158	11,678	10,520	613
R ²	0.665	0.328	0.308	0.306	0.440	0.392	0.360	0.295

Notes: This table reports estimates of equation (1) for the time-varying measures of *waqf* endowed land given to new mosques and the number of students enrolled in new *pesantren* over the given period as in Figure 3. See the notes to Table 1 for additional details on the specification.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors clustered by 1960 district.

A.4 Alternative Inference Procedures

Table A.4: Alternative Approaches to Inference

	<i>Waqf</i>	<i>Waqf-Endowed Institutions</i>			Islamist Party		Religious Politics	<i>Sharia</i>	Vigilante
	land, ha	mosques	<i>pesantren</i>	madrasas	Top 3, 1999	Vote Shr. 99-14	Min. Religion Employees	Regulations	Casualties
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
expropriation intensity	0.207	2.956	0.532	1.024	0.157	0.047	301.9	1.532	1.154
clustering by 1960 district, baseline	(0.097)**	(0.985)***	(0.264)**	(0.410)**	(0.083)*	(0.020)**	(128.2)**	(0.739)**	(0.369)***
clustering by 1960 district, wild bootstrap p-value	[0.046]**	[0.004]***	[0.055]*	[0.036]**	[0.098]*	[0.062]*	[0.020]**	[0.056]*	(0.421)**
clustering by 1960 district + Young (2016) effective d.o.f.-adj.	(0.115)*	(1.174)**	(0.315)	(0.489)*	(0.098)	(0.026)**	–	(0.819)*	[0.032]**
Conley (1999) spatial HAC, 100 km bandwidth	(0.110)**	(1.039)***	(0.354)	(0.324)***	(0.108)	(0.020)**	(99.9)***	(0.915)*	(0.312)***
Conley (1999) spatial HAC, 300 km bandwidth	(0.111)**	(0.288)***	(0.132)***	–	(0.082)*	(0.014)***	(96.5)***	(0.876)*	(0.214)***
Number of Observations	55,200	48,978	48,978	48,978	55,623	191	191	191	114

Notes: This table re-estimates core results from Tables 1–3 using alternative approaches to inference besides the baseline clustering by 1960, the level at which the land reform policy varies. After that baseline, we use the wild cluster bootstrap, reporting the p-value. The [Young \(2016\)](#) adjustment accounts for the effective degrees of freedom implied by the residual variation. The [Conley \(1999\)](#) spatial HAC allows for correlated unobservables across districts or villages within 100 and 300 km of the given district or village centroid. The two missing standard errors (“–”) are due to matrix computational failures.

* p<0.1, ** p<0.05, *** p<0.01.

A.5 Party-by-Party Electoral Outcomes

Tables A.5 and A.6 report results for individual political parties in the 1999 and the 2014 legislative elections, respectively. The 3 Islamist parties running in these elections are the United Development Party (*Partai Persatuan Pembangunan*) or PPP, the Prosperous Justice Party (*Partai Keadilan Sejahtera*) or PKS, and the Crescent Star Party (*Partai Bulan Bintang*) or PBB. These parties advocate for an Islamic state based on *sharia* law and reject *Pancasila*, the doctrine promoting a secular and inclusive vision for Indonesia. The two moderate Islamic parties competing in these elections are the National Mandate Party (*Partai Amanat Nasional*) or PAN and the National Awakening Party (*Partai Kebangkitan Bangsa*) or PKB. Both parties endorsed *Pancasila* prior to the 1999 election. Secular parties include the Indonesian Democratic Party of Struggle (*Partai Demokrasi Indonesia Perjuangan*, the party of President Joko Widodo) or PDI-P and the Golkar Party (*Partai Golongan Karya*, the party of former President Suharto), as well as (in the 2014 election) the Great Indonesia Movement Party (*Partai Gerakan Indonesia Raya*) or Gerindra, the Democrat Party (PD), the Nasdem Party (*Partai Nasdem*), the People's Conscience Party (*Partai Hati Nurani Rakyat*) or Hanura, and the Indonesian Justice and Unity Party (*Partai Keadilan dan Persatuan Indonesia*) or PKIP, a split from the Golkar party.

Table A.5: Party-by-Party Voting Results, Top 7 (out of 48) Parties in the 1999 Election

	Islamist			Moderate Islamic		Secular	
	PPP	PKS	PBB	PAN	PKB	Golkar	PDIP
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Village-Level Top 3 Finish (col. 1 of Table 2)							
expropriation intensity	0.158*	-0.000	-0.000	-0.005	-0.114	-0.037	0.002
	(0.082)	(0.002)	(0.004)	(0.018)	(0.089)	(0.062)	(0.049)
Number of Villages	55,623	55,623	55,623	55,623	55,623	55,623	55,623
Number of Districts	191	191	191	191	191	191	191
Dependent Variable Mean	0.504	0.004	0.021	0.146	0.350	0.830	0.807
R ²	0.047	0.001	0.020	0.056	0.308	0.126	0.209
Panel B: District-Level Vote Share (col. 2 of Table 2)							
expropriation intensity	0.042**	0.004	0.003	0.013	-0.038	-0.001	-0.030
	(0.021)	(0.003)	(0.003)	(0.008)	(0.043)	(0.020)	(0.033)
Number of Villages	189	189	189	189	189	189	189
Dependent Variable Mean	0.107	0.010	0.019	0.060	0.110	0.276	0.301
R ²	0.178	0.392	0.154	0.540	0.373	0.749	0.427

Notes: This table reports estimates of equation (1) using specifications analogous to those in columns 1 and 2 of Table 2, further disaggregating the three groups of parties.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors clustered by 1960 district.

Table A.6: Party-by-Party Voting Results, All 12 Parties in the 2014 Election

	Islamist			Moderate Islamic			Secular					
	PPP (1)	PKS (2)	PBB (3)	PAN (4)	PKB (5)	Golkar (6)	PDIP (7)	Gerindra (8)	Demokrat (9)	NasDem (10)	Hanura (11)	PKPI (12)
expropriation intensity	0.014 (0.012)	0.014* (0.008)	0.007* (0.004)	0.006 (0.008)	-0.026 (0.019)	0.014 (0.033)	-0.032* (0.018)	0.016 (0.011)	-0.013 (0.009)	-0.005 (0.012)	0.007 (0.006)	-0.001 (0.003)
Number of Villages	175	175	175	175	175	175	175	175	175	175	175	175
Dependent Variable Mean	0.071	0.064	0.028	0.084	0.087	0.151	0.153	0.108	0.097	0.071	0.062	0.025
R ²	0.265	0.234	0.347	0.330	0.411	0.244	0.418	0.151	0.233	0.233	0.399	0.482

Notes: This table reports estimates of equation (1) using a specification analogous to that in column 2 of Table 2 but for the 2014 Legislative Election and further disaggregating the three groups of parties. We are missing data for 16 districts that did not post complete voting outcomes to the Indonesian National Electoral Commission website from which we obtained the data (via Nicholas Kuipers).

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors clustered by 1960 district.

A.6 Individual-Level Voting Outcomes

Table A.7: Voting at the Individual Level in the 2004 Legislative Election

	Islamist			Voted for ... Party Moderate Islamic			Secular		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
piety index	0.132*** (0.037)		0.151*** (0.039)	0.172*** (0.047)		0.151*** (0.045)	-0.286*** (0.057)		-0.292*** (0.056)
expropriation intensity		0.075** (0.030)	0.079** (0.031)		-0.145** (0.067)	-0.142** (0.064)		0.045 (0.070)	0.039 (0.066)
Number of Individuals	1,398	1,398	1,398	1,398	1,398	1,398	1,398	1,398	1,398
Number of Districts	128	128	128	128	128	128	128	128	128
Dependent Variable Mean	0.133	0.133	0.133	0.173	0.173	0.173	0.662	0.662	0.662

Notes: This table reports estimates of equation (1) for voting outcomes in the 2004 legislative election as reported in the [Pepinsky et al. \(2018\)](#) survey data. The dependent variable is an indicator equal to one if the individual voted for an Islamist party (columns 1–3), a moderate Islamic party (columns 4–6), and a secular party (columns 7–9). See the notes to [Table 2](#) for these party classifications. The *piety index* is based on the summary index used in column 13 of [Table 5](#), capturing a range of obligatory and non-obligatory Islamic practices. The specifications are otherwise identical to those using the [Pepinsky et al. \(2018\)](#) data in [Tables 4](#) and [5](#).

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors clustered by 1960 district.

A.7 Further Robustness Checks

A.7.1 Alternative Specifications

We elaborate here on the robustness checks on our core Tables 1, 2, and 3 as described in Section 6.1. In the tables described below, we report estimates from our baseline specification (1) in the top row, and we describe alternative specification choices in the first column. Each subsequent column reports the difference-in-discontinuity term estimated from a different regression.

In Tables A.8, A.9, and A.10, we show the robustness of our main results to different versions of equation (1) where we include: **province fixed effects**; baseline **agricultural controls** from the 1963 Agricultural Census (number of males, total irrigated land area, and total dry land area); baseline **political controls** (the vote share received by Islamist parties and by the Communist Party in the 1955/57 elections); and baseline **Islamic organizations** (the number of mosques and *pesantren* in the district by 1920). In Table A.8, where regressions are estimated at the village level, we also show robustness to including village-level **geographic controls** (altitude, coastal location, distance to the nearest subdistrict capital and the district capital). All controls are fully interacted with the *Above400* dummy, the number of expropriable holdings, and their interaction. We also show robustness of our core results to **excluding Sulawesi and Sumatra**, motivated by concerns for the quality of the 1963 Agricultural Census data.

Tables A.8, A.9, and A.10 also report a simple placebo check where we look for a discontinuous jump in outcomes at 500 people/km², which was not a relevant cutoff in the land reform. Here we interact a dummy for districts above 500 people/km² (instead of 400 in our main specification) with the number of holdings between 5–9 hectares. As expected, we do not find any evidence that this interaction is associated with the contemporary prevalence of *waqf* lands, *waqf*-endowed institutions, voting for Islamist parties, and Islamist capture of the local state.

Finally, we report in these tables estimates from a specification where we use all **holdings above 5 hectares** in lieu of holdings between 5–9 hectares in our main specification. Holdings above 5 hectares are observed in the 1963 Agricultural Census, while holdings between 5–9 hectares are estimated with the assumption that landholdings are Pareto distributed, as described in the main text. The last row in Tables A.8, A.9, and A.10 show that our core results are robust to using the actual measure of large landholdings, and therefore do not depend on the Pareto assumption.

A.7.2 RD Robustness Checks

In Tables A.11, A.12, and A.13, we show that our main results are mostly robust to alternative parametrizations of the RD specification. For comparison, the top row of each of these tables reports estimates from the baseline specification in Tables 1, 2, and 3, respectively. We then report the following checks. First, we vary the degree of the polynomial in the running variable (1960 population density) in equation (1). Our main results are robust to alternative polynomials (**linear, quadratic, and quartic**) besides the cubic specification used in the baseline estimates.

Second, we vary the **bandwidth** around the population density cutoff of 400 people/km², with bandwidths ranging from 100 to 300. The difference-in-discontinuity estimate remains positive and significant in most of these specifications. At the lower end, we see the limits of the identifying variation afforded by the policy as we are left with too few districts (46 out of 191) to conduct statistically well-powered difference-in-discontinuity regressions with the associated interactions.

A.7.3 Other Land Reform Policy Cutoffs

In Tables A.14, A.15, and A.16, we probe the role of other cutoffs used in the 1960 land reform. While the core of our analysis focuses on the 400 people/km² cutoff, nominally the reform used two other cutoffs

at 50 and 250 people/km², as discussed in Sections 2.1 and 4.2. We proceed in two ways. First, we estimate a version of equation (1) where we “pool” all three cutoffs and each district is matched to the nearest cutoff: districts under 150 people/km² are matched to the 50 cutoff, districts between 150–300 people/km² are matched to the 250 cutoff, and districts above 300 people/km² are matched to the 400 cutoff. The specification takes the following form:

$$\begin{aligned}
y_{ij} = & \alpha + \sum_{d=1}^3 c_j^k [\gamma_{0d} Above_j + \gamma_{1d} Expropriable_j] + \beta (Above_j \times Expropriable_j) \\
& + \sum_{d=1}^3 c_j^k g(\mathbf{density}_j) [\delta_{0d} + \delta_{1d} Above_j + \delta_{2d} Expropriable_j + \delta_{3d} (Above_j \times Expropriable_j)] \\
& + island_j + \varepsilon_{ij}
\end{aligned} \tag{A.1}$$

where $c = 1, 2, 3$ is a set of indicators equal to 1 if threshold d is the nearest threshold ($d = 1, 2, 3$ denote the cutoffs at 50, 250, and 400, respectively), and $Above_j$ is equal to 1 if district j is above the population density threshold of the nearest cutoff. In this case, expropriable holdings are defined for each cutoff as follows: holdings between 5–9 hectares at the 400 cutoff, holdings between 9–12 hectares at the 250 cutoff, and holdings between 12–20 hectares at the 50 cutoff. To increase precision, we use a binary measure of these expropriable holdings at each cutoff, based on a sample split between above/below the sample median. In these tables, we also control for baseline vote shares in 1955–57 as they also help with precision. The difference-in-discontinuity estimate remains positive in all tables, and is statistically significant in Table A.15 and most columns of A.16. However, the fact that considerable less expropriation actually occurred at these lower cutoffs implies that the results delivered in this specification are much more imprecise.

Second, we look for **discontinuities in outcomes** at each cutoff, estimated both separately and in the same regression. The regression specification in this case is:

$$\begin{aligned}
y_{ij} = & \alpha + \gamma_0^{50} Above_{50j} + \gamma_1^{50} Expropriable_{50j} + \beta^{50} (Above_{50j} \times Expropriable_{50j}) \\
& + \gamma_0^{250} Above_{250j} + \gamma_1^{250} Expropriable_{250j} + \beta^{250} (Above_{250j} \times Expropriable_{250j}) \\
& + \gamma_0^{400} Above_{400j} + \gamma_1^{400} Expropriable_{400j} + \beta^{400} (Above_{400j} \times Expropriable_{400j}) \\
& + \sum_{d=1}^3 g(D_j^d) [\delta_{0d} + \delta_{1d} Above\{d\}_j + \delta_{2d} Expropriable\{d\}_j + \delta_{3d} (Above\{d\}_j \times Expropriable\{d\}_j)] \\
& + island_j + \varepsilon_{ij},
\end{aligned} \tag{A.2}$$

where D_j^d represent the distance to cutoff d for district j and $d = 1, 2, 3$ denote the cutoffs at 50, 250, and 400, respectively. We first estimate this equation including only the terms associated with the 50 and 250 cutoffs. We then estimate the full model including all the terms associated with the 50, 250, and 400 cutoffs. The bottom panel of Tables A.14, A.15, and A.16 reports the corresponding estimates of β^{50} , β^{250} , and β^{400} as well as the p-value from a test of joint significance of all three coefficients. We find that these coefficients are jointly significant when looking at land under *waqf* (Table A.14), Islamist voting (Table A.15) and *sharia* regulations (Table A.16, column 2). Again, the results are less precise than when focusing solely on the 400 cutoff where expropriation intensity was most binding. As discussed in Section 6.2, these patterns are in line with the historical record of policy implementation, which suggests that by the time the land reform was halted in the mid-1960s it had mostly not reached regions of the country where the other cutoffs were most pervasive.

Table A.8: Waqf Land and Waqf-Endowed Institutions: Alternative Specifications

	Waqf Land			Waqf-Endowed Institutions		
	hectares (1)	% total (2)	% zoned (3)	mosques (4)	pesantren (5)	madrastas (6)
Baseline specification (Table 1)	0.207** (0.097)	0.251** (0.107)	3.293** (1.486)	2.479*** (0.862)	0.689** (0.270)	1.024** (0.410)
Province Fixed Effects	0.204** (0.083)	0.265** (0.105)	2.541** (1.231)	1.262 (0.944)	0.512** (0.232)	0.712** (0.333)
Controls: Geography	0.194* (0.099)	0.239** (0.118)	3.036** (1.479)	2.487*** (0.765)	0.639** (0.266)	0.981** (0.408)
Controls: Agriculture	0.334* (0.173)	0.503** (0.204)	5.314*** (1.766)	1.735 (1.403)	0.848** (0.358)	1.324** (0.524)
Controls: Mosques & Pesantren in 1920	0.173 (0.136)	0.274** (0.120)	6.275** (2.488)	1.681* (0.879)	0.692** (0.288)	0.592 (0.517)
Controls: 1955-57 Vote Shares	0.350*** (0.111)	0.270* (0.137)	5.389*** (1.605)	3.703** (1.827)	0.644* (0.341)	1.038** (0.431)
Placebo: expropriation at 500 ppl/km²	0.027 (0.063)	-0.042 (0.065)	1.553 (1.836)	0.724 (1.468)	0.175 (0.197)	0.305 (0.285)
No Sulawesi/Sumatra	0.199** (0.097)	0.206* (0.107)	2.015** (0.965)	2.929*** (1.074)	0.774** (0.318)	1.122** (0.465)
Holdings above 5 Ha	0.076** (0.034)	0.096*** (0.036)	1.004** (0.450)	0.797*** (0.293)	0.238** (0.106)	0.416*** (0.159)
Number of Villages	55200	55622	55388	55200	55200	48978
Number of Districts	191	191	191	191	191	189
Dependent Variable Mean	0.848	0.516	6.106	3.319	0.516	0.787
R ²	0.033	0.005	0.044	0.223	0.213	0.195

Notes: This table reports estimates from variants of equation (1) using the same outcomes as in Table 1. Geographic controls include altitude, coastal location, distance to the nearest subdistrict capital and the district capital. Agricultural controls include number of males, total irrigated land area, and total dry land area measured in the 1963 Agricultural Census. Vote shares refer to Islamic parties and the Communist Party in the 1955/57 legislative elections. Controls are fully interacted with the *Above400* dummy, the number of expropriable holdings, and their interaction. In the last specification we use all observed holdings above 5 ha instead of holdings between 5-9 ha in equation (1). The R^2 reported in the bottom panel corresponds to the baseline specification. See section A.7.1 for a detailed description of each specification.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors clustered by 1960 district.

Table A.9: Islamist Party Support: Alternative Specifications

	Village 1999 Top 3 Finish (1)	District Level 1999 Vote Share (2)	1999-2014 Vote Share (3)
(a) Islamist Parties			
Baseline specification (Table 2)	0.158* (0.083)	0.049** (0.024)	0.044** (0.020)
Controls: 1955-57 Vote Shares	0.336*** (0.102)	0.107*** (0.031)	0.099*** (0.021)
Controls: Mosques & Pesantren by 1920	0.162 (0.106)	0.028 (0.028)	0.035* (0.021)
Controls: Agriculture	0.443*** (0.168)	0.146*** (0.055)	0.129*** (0.038)
Province Fixed Effects	0.090 (0.092)	0.034 (0.028)	0.031 (0.023)
No Sulawesi/Sumatra	0.211** (0.094)	0.057** (0.027)	0.049** (0.022)
Holding above 5 Ha	0.050* (0.029)	0.015* (0.009)	0.014* (0.007)
Placebo: expropriation at 500 ppl/km ²	0.025 (0.109)	0.001 (0.027)	-0.007 (0.020)
Number of Villages	55623	–	–
Number of Districts	191	189	191
Dependent Variable Mean	0.517	0.136	0.154
R ²	0.051	0.205	0.222

Notes: This table reports estimates from variants of equation (1) using the same outcomes as in panel (a) of Table 2. The estimate in column 3 pools across all five quinquennial elections. Agricultural controls include number of males, total irrigated land area, and total dry land area. 1955/57 vote shares refer to Islamic parties and the Communist Party in the 1955/57 legislative elections. Controls are fully interacted with the *Above400* dummy, the number of expropriable holdings, and their interaction. In the last specification we use all observed holdings above 5 ha instead of holdings between 5–9 ha in equation (1). The R^2 reported in the bottom panel corresponds to the baseline specification. See section A.7.1 for a detailed description of each specification.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors clustered by 1960 district.

Table A.10: Islamist Capture of the Local State: Alternative Specifications

	Local Relig.	<i>Sharia</i>	Islamic Court Cases re:			Islamist Vigilante Activity	
	Gov. Officials (1)	Regulations (2)	<i>Waqf</i> (3)	Inherit. (4)	Divorce (5)	Incidents (6)	Casualties (7)
Baseline specification (Table 3)	294.946** (127.817)	1.533** (0.739)	1.496* (0.782)	515.256** (247.733)	500.139 (4264.977)	0.762** (0.318)	1.154*** (0.369)
Province Fixed Effects	47.264 (116.742)	1.057** (0.460)	1.176 (0.979)	147.870 (255.405)	-7647.972 (5930.919)	0.803** (0.327)	1.216*** (0.381)
Controls: Agriculture	764.885*** (196.845)	2.416* (1.260)	1.279 (0.815)	1110.018** (540.481)	-1030.629 (6223.417)	1.083 (1.461)	2.694 (2.406)
Mosques & Pesantren by 1920	311.822** (149.705)	1.753** (0.730)	1.577* (0.831)	557.116* (323.462)	-3107.041 (7023.040)	0.952** (0.397)	1.307*** (0.431)
1955-57 Vote Shares	436.953** (214.658)	3.642*** (1.321)	1.753 (1.258)	726.369* (419.823)	8581.006 (10244.078)	1.552** (0.673)	1.114* (0.571)
Placebo: expropriation at 500 ppl/km ²	58.652 (152.528)	-0.259 (1.208)	0.070 (0.678)	-10.436 (196.152)	7352.533 (5241.903)	-0.784* (0.466)	-1.349 (1.090)
No Sulawesi/Sumatra	259.810* (134.765)	1.614* (0.820)	2.166*** (0.687)	492.062 (296.462)	-285.943 (5001.732)	0.886*** (0.323)	1.343*** (0.352)
Holdings above 5 Ha	114.744*** (43.856)	0.553** (0.270)	0.408 (0.252)	180.875* (92.404)	116.533 (1392.964)	0.237** (0.119)	0.352** (0.153)
Number of Districts	191	191	80	80	80	114	114
Dependent Variable Mean	777.921	1.681	0.612	208.250	10933.212	0.298	0.307
R ²	0.289	0.136	0.436	0.688	0.453	0.268	0.304

Notes: This table reports estimates from variants of equation (1) using the same outcomes as in Table 3. All regressions are run at the district level. The sample size is smaller in columns 3-7 due to missing data on court cases and Islamist vigilante activity. Agricultural controls include number of males, total irrigated land area, and total dry land area. 1955/57 vote shares refer to Islamic parties and the Communist Party in the 1955/57 legislative elections. Controls are fully interacted with the *Above400* dummy, the number of expropriable holdings, and their interaction. The R^2 reported in the bottom panel corresponds to the baseline specification. See section A.7.1 for a detailed description of each specification. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors.

Table A.11: Waqf Land and Waqf-Endowed Institutions: RD Specification Checks

	Waqf Land			Waqf-Endowed Institutions		
	hectares (1)	% total (2)	% zoned (3)	mosques (4)	<i>pesantren</i> (5)	madrastas (6)
Baseline specification (Table 1)	0.207** (0.097)	0.251** (0.107)	3.293** (1.486)	2.479*** (0.862)	0.689** (0.270)	1.024** (0.410)
Linear in density	0.155*** (0.052)	0.143*** (0.050)	0.819 (1.008)	0.830 (0.635)	0.312** (0.129)	0.546** (0.214)
Quadratic in density	0.109 (0.071)	0.194** (0.075)	0.227 (1.315)	1.416* (0.756)	0.422* (0.222)	0.740** (0.366)
Quartic in density	0.128 (0.078)	0.155 (0.099)	1.057 (1.203)	1.955** (0.841)	0.554** (0.253)	0.935** (0.376)
Local linear, Bandwidth: 100	0.224* (0.113)	0.152 (0.159)	2.309 (1.635)	0.991 (1.136)	0.695** (0.317)	0.997** (0.429)
Villages	12,304	12,313	12,310	12,304	12,304	12,089
Districts	46	46	46	46	46	46
Local linear, Bandwidth: 200	0.223** (0.090)	0.182* (0.104)	1.968** (0.970)	2.843*** (0.982)	0.833*** (0.294)	1.206*** (0.428)
Villages	18,917	18,925	18,923	18,917	18,917	18,406
Districts	71	71	71	71	71	71
Local linear, Bandwidth: 300	0.197** (0.080)	0.277*** (0.091)	0.377 (1.194)	1.853*** (0.675)	0.546** (0.228)	0.939*** (0.345)
Villages	24,563	24,589	24,578	24,563	24,563	23,739
Districts	97	97	97	97	97	96
Number of Villages	55200	55622	55388	55200	55200	48978
Number of Districts	191	191	191	191	191	189
Dependent Variable Mean	0.848	0.516	6.106	3.319	0.516	0.787
R ²	0.033	0.005	0.044	0.223	0.213	0.195

Notes: This table reports estimates from variants of equation (1) using the same outcomes as in Table 1. Each row reports results from a different specification. In the second to fourth row, we vary the degree of the polynomial in the running variable (1960 population density) to alternative polynomials (linear, quadratic, and quartic) besides the cubic specification used in the baseline estimates. In subsequent rows, we vary the bandwidth around the 400 people/km² cutoff, with bandwidths ranging from 100 to 300. The bottom panel reports regression statistics from the baseline specification. See section A.7.2 for a detailed description of each specification.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors clustered by 1960 district.

Table A.12: Islamist Party Support: RD Specification Checks

	Village 1999 Top 3 Finish (1)	District Level 1999 Vote Share (2)	1999-2014 Avg. Vote Share (3)
(a) Islamist Parties			
Baseline specification (Table 2)	0.158* (0.083)	0.049** (0.024)	0.044** (0.020)
Linear in density	0.190** (0.096)	0.030** (0.014)	0.035*** (0.011)
Quadratic in density	0.264*** (0.101)	0.029 (0.018)	0.036** (0.014)
Quartic in density	0.321*** (0.105)	0.051** (0.024)	0.045** (0.019)
Local linear, Bandwidth: 100	0.020 (0.154)	0.056 (0.049)	0.054 (0.037)
Observations	12,313	46	179
Districts	46	46	46
Local linear, Bandwidth: 200	0.217* (0.123)	0.062** (0.027)	0.054** (0.021)
Observations	18,926	71	277
Districts	71	71	71
Local linear, Bandwidth: 300	0.186* (0.106)	0.039* (0.023)	0.043** (0.018)
Observations	24,590	97	380
Districts	97	97	97
Number of Villages	55623	–	–
Number of Districts	191	189	191
Dependent Variable Mean	0.517	0.136	0.154
R ²	0.051	0.205	0.222

Notes: This table reports estimates from variants of equation (1). Islamist parties are defined as in Table 2. Each row reports results from a different specification. In the second to fourth row, we vary the degree of the polynomial in the running variable (1960 population density) to alternative polynomials (linear, quadratic, and quartic) besides the cubic specification used in the baseline estimates. In subsequent rows, we vary the bandwidth around the 400 people/km² cutoff, with bandwidths ranging from 100 to 300. The bottom panel reports regression statistics from the baseline specification. See section A.7.2 for a detailed description of each specification.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors clustered by 1960 district.

Table A.13: Islamist Capture of the Local State: RD Specification Checks

	Local Relig. Gov. Officials (1)	<i>Sharia</i> Regulations (2)	Islamic Court Cases re:			Islamist Vigilante Activity	
			<i>Waqf</i> (3)	Inherit. (4)	Marriage (5)	Incidents (6)	Casualties (7)
Baseline specification (Table 3)	294.946** (127.817)	1.533** (0.739)	1.496* (0.782)	515.256** (247.733)	500.139 (4264.977)	0.762** (0.318)	1.154*** (0.369)
Linear in density	135.825** (64.396)	0.686 (0.487)	0.670* (0.384)	135.895 (190.573)	119.243 (2655.195)	0.430** (0.174)	0.496*** (0.181)
Quadratic in density	151.093* (86.139)	1.136* (0.582)	0.987* (0.561)	341.962 (312.648)	-186.337 (3448.711)	0.467* (0.245)	0.740** (0.300)
Quartic in density	79.496 (126.887)	1.123 (0.812)	1.358* (0.794)	415.369 (312.476)	-436.867 (3819.439)	0.438 (0.619)	0.618 (0.563)
Local linear, Bandwidth: 100	229.532 (233.916)	2.340** (1.076)	3.613*** (0.852)	331.339 (352.889)	-66.513 (4187.759)	0.743 (0.810)	1.329* (0.748)
Districts	46	46	22	22	22	33	33
Local linear, Bandwidth: 200	266.822* (139.371)	2.277** (0.874)	1.548 (0.923)	427.086 (299.090)	-3542.113 (4416.794)	0.619 (0.498)	0.965* (0.499)
Districts	71	71	37	37	37	47	47
Local linear, Bandwidth: 300	112.777 (121.282)	1.305* (0.714)	1.263 (0.765)	414.507 (292.233)	-2788.369 (3438.878)	0.473 (0.315)	0.595* (0.336)
Districts	97	97	47	47	47	62	62
Number of Districts	191	191	80	80	80	114	114
Dependent Variable Mean	777.921	1.681	0.612	208.250	10933.212	0.298	0.307
R ²	0.289	0.136	0.436	0.688	0.453	0.268	0.304

Notes: This table reports estimates from variants of equation (1) using the same outcomes as in Table 3. In the second to fourth row, we vary the degree of the polynomial in the running variable (1960 population density) to alternative polynomials (linear, quadratic, and quartic) besides the cubic specification used in the baseline estimates. In subsequent rows, we vary the bandwidth around the 400 people/km² cutoff, with bandwidths ranging from 100 to 300. The bottom panel reports regression statistics from the baseline specification. See section A.7.2 for a detailed description of each specification.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors clustered by 1960 district.

Table A.14: Waqf Land and Waqf-Endowed Institutions: Other BAL Cutoffs

	Waqf Land			Waqf-Endowed Institutions		
	hectares (1)	% total (2)	% zoned (3)	mosques (4)	<i>pesantren</i> (5)	madrasas (6)
Baseline specification (Table 1)	0.207** (0.097)	0.251** (0.107)	3.293** (1.486)	2.479*** (0.862)	0.689** (0.270)	1.024** (0.410)
Pooling all cutoffs	0.443 (0.507)	0.241 (0.487)	0.026 (5.717)	1.581 (3.321)	1.034 (1.012)	1.450 (1.715)
Expropriation at 50 ppl/km ²	0.003 (0.033)	0.019 (0.013)	0.027 (0.430)	-0.045 (0.084)	-0.006 (0.012)	0.000 (0.031)
Expropriation at 250 ppl/km ²	0.195*** (0.045)	0.085 (0.059)	-2.698 (2.465)	1.230** (0.587)	0.083 (0.130)	0.053 (0.200)
Expropriation at 250 (Java-Bali-NTB)	0.707*** (0.053)	0.651*** (0.060)	-0.140 (0.645)	7.788*** (0.704)	3.132*** (0.115)	5.230*** (0.188)
Expropriation at 50 ppl/km ²	0.054 (0.037)	0.036** (0.016)	1.010** (0.501)	0.157 (0.113)	0.017 (0.019)	0.012 (0.039)
Expropriation at 250 ppl/km ²	0.111 (0.112)	0.268** (0.129)	-1.260 (4.419)	0.521 (1.000)	0.132 (0.190)	-0.030 (0.358)
Expropriation at 400 ppl/km ²	0.087** (0.035)	0.070 (0.054)	1.954 (2.177)	0.676 (0.438)	0.036 (0.069)	0.181* (0.107)
<i>Joint significance (p-value)</i>	0.05	0.03	0.17	0.24	0.67	0.37
Number of Villages	55200	55622	55388	55200	55200	48978
Number of Districts	191	191	191	191	191	189
Dependent Variable Mean	0.848	0.516	6.106	3.319	0.516	0.787
R ²	0.033	0.005	0.044	0.223	0.213	0.195

Notes: This table examines the same outcomes as in Table 1. We first report estimates from equation (A.1) where each district is matched to the nearest cutoff: districts under 150 people/km² are matched to the 50 cutoff, districts between 150–300 people/km² are matched to the 250 cutoff, and districts above 300 people/km² are matched to the 400 cutoff. In the bottom four rows, we report estimates of β^{50} , β^{250} , and β^{400} from equation (A.2), estimated separately and jointly. See section A.7.3 for a detailed description of each specification.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors clustered by 1960 district.

Table A.15: Islamist Party Support in Legislative Elections: Other BAL Cutoffs

	Village	District Level	
	1999 Top 3 Finish (1)	1999 Vote Share (2)	1999-2014 Avg. Vote Share (3)
(a) Islamist Parties			
Baseline specification (Table 2)	0.158* (0.083)	0.049** (0.024)	0.044** (0.020)
Pooling all cutoffs	0.553* (0.332)	0.203* (0.122)	0.238** (0.112)
Expropriation at 50 ppl/km ²	-0.021 (0.019)	0.002 (0.009)	0.000 (0.003)
Expropriation at 250 ppl/km ²	0.048 (0.043)	0.007 (0.015)	0.006 (0.014)
Expropriation at 250 (Java-Bali-NTB)	0.198*** (0.043)	0.043*** (0.015)	0.049*** (0.016)
Expropriation at 50 ppl/km ²	0.012 (0.020)	-0.003 (0.004)	-0.001 (0.002)
Expropriation at 250 ppl/km ²	0.052 (0.075)	0.040 (0.026)	0.019 (0.017)
Expropriation at 400 ppl/km ²	0.083** (0.037)	0.023* (0.012)	0.029*** (0.010)
<i>Joint significance (p-value)</i>	0.12	0.05	0.02
Number of Villages	55623	–	–
Number of Districts	191	189	191
Dependent Variable Mean	0.517	0.136	0.154
R ²	0.051	0.205	0.222

Notes: This table examines the same outcomes as in Table 2. We first report estimates from equation (A.1) where each district is matched to the nearest cutoff: districts under 150 people/km² are matched to the 50 cutoff, districts between 150–300 people/km² are matched to the 250 cutoff, and districts above 300 people/km² are matched to the 400 cutoff. In the bottom four rows, we report estimates of β^{50} , β^{250} , and β^{400} from equation (A.2), estimated separately and jointly. See section A.7.3 for a detailed description of each specification.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors clustered by 1960 district.

Table A.16: Islamist Capture of the Local State: Other BAL Cutoffs

	Local Relig. Gov. Officials (1)	<i>Sharia</i> Regulations (2)	Islamic Court Cases re:			Islamist Vigilante Activity	
			<i>Waqf</i> (3)	Inherit. (4)	Marriage (5)	Incidents (6)	Casualties (7)
Baseline specification (Table 3)	294.946** (127.817)	1.533** (0.739)	1.496* (0.782)	515.256** (247.733)	500.139 (4264.977)	0.762** (0.318)	1.154*** (0.369)
Pooling all cutoffs	299.074 (758.944)	-2.106 (3.854)	15.455*** (3.590)	10811.353*** (780.288)	61987.152** (29192.789)	3.490** (1.584)	4.699*** (1.288)
Expropriation at 50 ppl/km ²	-33.500 (20.718)	-0.254** (0.105)	-0.366** (0.155)	-131.458 (145.935)	137.058 (1059.698)	-0.071 (0.068)	-0.025 (0.050)
Expropriation at 250 ppl/km ²	-131.677** (51.925)	0.035 (0.374)	0.037 (0.389)	135.833 (206.306)	2634.951 (2799.013)	0.434 (0.434)	0.447 (0.421)
Expropriation at 50 ppl/km ²	-47.101** (21.239)	-0.091 (0.138)	-0.244 (0.913)	775.063 (585.572)	2171.378 (4375.800)	-0.088 (0.082)	-0.073 (0.074)
Expropriation at 250 ppl/km ²	4.012 (109.199)	-0.849 (0.651)	0.903 (1.710)	1707.111 (1137.230)	9913.455 (9567.297)	0.097 (0.594)	0.163 (0.443)
Expropriation at 400 ppl/km ²	34.451 (69.183)	1.051** (0.502)	0.529 (0.498)	206.761 (188.557)	279.951 (2735.102)	0.408 (0.276)	0.273 (0.203)
<i>Joint significance (p-value)</i>	0.12	0.07	0.43	0.47	0.78	0.27	0.36
Number of Districts	191	191	80	80	80	114	114
Dependent Variable Mean	777.921	1.681	0.612	208.250	10933.212	0.298	0.307
R ²	0.289	0.136	0.436	0.688	0.453	0.268	0.304

Notes: This table examines the same outcomes as in Table 3. All regressions are run at the district level. We first report estimates from equation (A.1) where each district is matched to the nearest cutoff: districts under 150 people/km² are matched to the 50 cutoff, districts between 150–300 people/km² are matched to the 250 cutoff, and districts above 300 people/km² are matched to the 400 cutoff. In the bottom four rows, we report estimates of β^{50} , β^{250} , and β^{400} from equation (A.2), estimated separately and jointly. See section A.7.3 for a detailed description of each specification.

* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors clustered by 1960 district.

B Data Sources and Construction

We describe here the key variables and data sources used in the paper.

B.1 Historic Population Density

We measure historic district-level population density using tabulations from the 1961 Population Census available in island-level hard-bound report, Sensus Penduduk 1961 in the Central Bureau of Statistics (*Badan Pusat Statistik* or BPS) library in Jakarta. The specific table that we use is titled “Sensus Penduduk Republik Indonesia 1961. Angka Sementara Penduduk Indonesia Menurut Jenis Kelamin. Per Daerah Tingkat II.” We use ArcGIS to construct the area of historical 1961 districts by amalgamating later districts back to their 1961 boundaries. Using the resulting population density, we classify districts into the four categories discussed in the paper.

B.2 Historic Landholdings

We measure the historic landholdings distribution and number of large holders using the 1963 Agricultural Census conducted for the purposes of assessing landholdings in order to implement the stipulated reform. We digitized district-level tabulations available in a report by BPS, Sensus Pertanian 1963, with the table “Number of farms by size of area” (“Banjarknja usaha pertanian rakjat menurut golongan luas tanah”). While the raw data from the Agricultural Census are no longer available, these tabulations provide sufficient granularity to estimate (with noise) the number of large landholders in each district that would be affected by the land reform. For each district, we observe the number of holders with 0.1–0.49 hectares (ha), 0.5–0.99 ha, 1–1.49 ha, 1.5–1.99 ha, 2–2.99 ha, 3–3.99 ha, 4–4.99 ha, and greater than or equal to 5 ha.

As detailed in Section 4.1, assuming that landholdings L follow a Pareto distribution with probability density function $\lambda \underline{L}^\lambda L^{-\lambda-1}$, we can estimate the number of landholders in different bins above 5 ha. Given the Pareto formulation, the distribution parameter λ holds over all truncated segments of the distribution. As such, we can use the bins below 5 ha to recover the shape of the distribution above 5 ha where we do not know the number of landholders in each affected size bin subject to redistribution based on the four density cutoffs.

We proceed in two steps. First, we estimate the Pareto shape parameter, λ , for each district using a maximum likelihood procedure for landholdings $L \in [0.1, 5)$ ha. Second, we use $\hat{\lambda}$ to back out the number of landholders with 5–9 ha, 9–12 ha, 12–20 ha, and > 20 ha, following the stipulated cutoffs. Concretely, we multiply the number N_5 of landholders in the ≥ 5 ha bin by the share of the district’s total landholding distribution in the given range based on the Pareto cumulative distribution function (e.g., for 5–9 ha, this is given by $[1 - (\frac{5}{9})^{\hat{\lambda}}] \times N_5$).

Although we are not able to estimate these marginal landholdings separately by wetland and dryland, we are able to control for the total number of farms, total wetland area (ha), and total dryland area (ha) using district-level tabulations elsewhere in the Sensus Pertanian 1963 report under the table titled “Farm area, average size of Farm and Paddy area” (“Luas tanah Pertanian Rakjat dan luas panen padi”).

We measure the post-land reform distribution of landholdings using the 1980 and 1990 Population Censuses as well as the 1985 Intercensal Survey (*Supas*). These are the first three Census/Inter-census rounds that include measures of total landholdings owned by each household. We use the samples available on IPUMS International and estimate the Pareto landholdings dispersion parameter λ , for all

landholdings above 0.1 ha. These estimates are at the district-level, at which the population summary statistics are representative, and hence directly comparable with the tabulations from 1963.

We also use the 1973 Agricultural Census for descriptive purposes. However, this data is only available in province-level tabulations as the raw data and district-level tabulation are not provided by BPS. We digitized the province-level tabulations in the Serie 2A publication “Tabel-Tabel Pertanian I” available at BPS in Jakarta.

B.3 Contemporary Landholdings, Including *Waqf*

We measure contemporary landholdings using the 2003 Agricultural Census. We use this universal census data to estimate Pareto shape parameters, λ , for every village and also to construct a measure capturing the share of all households with greater than 0.1 ha over which λ is estimated. See [Bazzi \(2017\)](#) for details on the data and estimation procedure, which differs from that used for the coarser, binned 1963 Agricultural Census data.

We use the 2003 administrative village census (*Potensi Desa* or *Podes*) to measure the total land area under *waqf* status overall, as a share of total land, and as a share of zoned land.

B.4 Contemporary Islamic Institutions

We use the *Podes* 2003 and 2008 data to construct village-level measures of Islamic institutions. The 2003 data include the total number of Islamic schools (*pesantren* and *madrassa*), and the 2008 data disaggregate the two. Both rounds include the number of mosques.

We also draw upon administrative data from the Ministry of Religion to measure (i) the amount of *waqf* land allocated to new mosques and (ii) the number of students enrolled in *pesantren*, both by year and district of establishment. We scrape these administrative data from the web: (i) is from <http://simas.kemenag.go.id/> and (ii) is from <https://ditpdpontren.kemenag.go.id/pbsb/>.

B.5 Electoral Outcomes

We draw upon several sources to measure historic and contemporary electoral outcomes.

First, we draw upon district-level vote shares by party from the national legislative elections in 1955, 1999, 2004, 2009, and 2014. These data were graciously shared with us by individuals that worked with Dwight King. Several districts are missing data for the 1955 elections. We therefore supplement the 1955 legislative election data with data from the 1957 district legislative elections that were held in select districts. There are still some historic districts with no voting data from the 1950s, and for these 20 districts, we impute the vote shares for neighboring districts so as to retain the largest possible sample of districts when including this control in robustness checks. We digitize the latter from raw electoral reports obtained from files shared with us by Donald Hindley.

Second, we use the 2003 *Podes*, which records the top 1, 2, and 3 ranked parties at the village-level in the first post-Suharto legislative election held in 1999. Unfortunately, the vote shares themselves are not reported.

We categorize parties based on conventions put forward in the political science literature on Indonesia, including numerous works by Dwight King and R. William Liddle as well as a seminal article by [Baswedan \(2004\)](#) aligning parties in the post-Suharto era along a spectrum of Islamist leanings. In 1955 and 1957, we define Islamist parties as Masyumi, the Indonesian Islamic Union Party (*Partai Serikat Islam Indonesia* or PSII), the Islamic Educators Association (*Perhimpunan Tarbiyah Islamiyah* or Perti), and Nahdlatul Ulama (NU). While the first post-Sukarno election in 1971 saw several Islamic parties (NU, PSII,

Perti, and the Muslim Party of Indonesia), thereafter the Suharto regime allowed only a single Islamic party in the United Development Party (*Partai Persatuan Pembangunan* or PPP).

From 1999 onward, we follow [Baswedan \(2004\)](#) in classifying Islamic parties. We consider as moderate Islamic parties the National Mandate Party (*Partai Amanat Nasional* or PAN) and the National Awakening Party (*Partai Kebangkitan Bangsa* or PKB), both of which initially adopted the national ideology of *Pancasila* prior to the 1999 election when parties were allowed to choose whether or not to embrace this for the first time in the post-Suharto era. The PKB is the successor to a large part of the former NU political wing, which disbanded from the PPP in 1984. The Islamist parties include the PPP, the Prosperous Justice Party (*Partai Keadilan Sejahtera* or PKS), and the Crescent Star Party (*Partai Bulan Bintang* or PBB). All three parties rejected *Pancasila*, including the PPP which was forced to accept *Pancasila* during the Suharto era.

In sum, the PPP, PBB, and PKS can be seen as traditional Islamist parties whereas the PKB and PAN are Islamic albeit inclusive and non-Islamist in their orientation. While the particular leanings of these parties change over time and until today, this rough breakdown lines up with most historical and contemporary accounts by political observers.

There are numerous non-Islamic parties, nearly all of which are secular (except a few tiny Christian parties). We lump all of these parties into the residual, secular category. For a full elaboration, see [Appendix A.5](#).

In 1955/57, we also observe the Communist vote share.

B.6 Religious Political Preferences, Piety, and Practice

We use the *Indonesia Family Life Survey* (IFLS) rounds 4–5 in 2007 and 2014/15, respectively, to measure individual-level religious political preferences. These include the following questions: (i) In an election, having a candidate with the same religion as yours makes it [...] to vote for him/her. (... is a 1 to 5 scale ranging from very likely to very unlikely; and (ii) In an election, if the candidates have the same religion as yours, how important is the religiosity of a candidate in influencing your decision to vote for him/her? A more religious candidate make [...] to vote for him/her. (... is the same scale as (iv)). The IFLS also includes questions about tolerance towards other religious faiths living in one's village, neighborhood, house, and family as well as building a house worship nearby. We take the mean of these five questions which range on a 1 to 4 scale from very happy with to very opposed. We also consider two other variables capturing religiosity ("Am I a very a religious person?") and interreligious trust ("Do I trust members of other religious faiths less than those of my own?").

We use rich individual-level survey data from [Pepinsky et al. \(2018\)](#), which is based on a 2008 survey conducted by the authors in which 10 individuals were sampled from each district. The data include numerous questions we use in [Tables 4, 5, and A.7](#). This includes religious political preferences (e.g., how important is the religion and religiosity of the President of Indonesia, support specific *sharia* regulations) as well as a host of questions about Islamic practice (e.g., fasting, paying zakat).

B.7 Sharia Regulations

We use data from [Buehler \(2016\)](#), [Appendix 1](#), pp. 215–220 on the number of Sharia regulations adopted by district between 1998 and 2013. We use the total number of regulations, inclusive of legislative and executive branch regulations.

B.8 Legislator Profiles

In Table 4, we consider three measures capturing the religious appeal of legislative candidates in the 2019 election. Thanks to Nicholas Kuipers for scraping and sharing these data from the Indonesian Electoral Commission: <http://www.kpu.go.id/>. The first measure captures whether the candidate's online campaign statement appeals to Islamic or Islamist themes. These include *umma*, *dawah*, Muslim, Islam, *sharia*, and jihad. The second measure captures whether the candidate's official name listed on the ballot includes an honorific title (*Haji* or simply *H*) signaling their prior Hajj pilgrimage to Mecca. The third measure captures whether the candidate's official name listed on the ballot includes an honorific title signaling their status as a religious scholar (*Kyai* or *Kyai Haji* or simply *KH*).

B.9 Islamic Courts

We scrape data from web portals for every district-level Islamic court that reports such information online through the Religious Courts Information System (SIPP). A complete list of these portals is available upon request. The data, which vary in years of coverage include date of filing and type of case.

B.10 Islamist Vigilante Activity

We capture the number of incidents and casualties due to violent activities by the Islamic Defenders Front (FPI) using data from the National Violence Monitoring System (or SNPK by its Indonesian acronym). The event-based data include a textual description of the underlying media report, and we search for terms related to the FPI. We include counts over the entire period the data are available, beginning in 1998 through 2014. The SNPK do not cover all regions of the country and hence the more limited sample size for this analysis.

B.11 Local Religious Bureaucracy

We digitized tabulations of the number of different types of bureaucrats working in the district-level Ministry of Religious Affairs in 2018. These come from "Dalam Angka" reports available in pdf on the Ministry of Religious Affairs website.

B.12 Historic Demographics

We use the Sensus Penduduk 1961 report noted above to control for the total number of men and women in each district as of 1960 before the land reform. We use the 1971 Population Census to construct age-specific male-to-female sex ratios. The data come from IPUMS International, and we use the population weights to go from the sample constructed by IPUMS to the historic district-level total male and female population. We also construct district population growth between 1961 and 1971 using this data.

We also use the 1930 Population Census to measure the number of ethnic Arab, European and Chinese in each historic district.

B.13 Contemporary Demographics

We use the universal coverage 2000 Population Census to capture the share of the population reporting Muslim identity and the share with different levels of education.

B.14 Contemporary Agricultural Production, Development, and Public Goods

We use the triennial *Podes* to construct several village-level proxies for development and public goods. Using the 2003 round, we construct the price-weighted agricultural output and total agricultural productivity (with price weights coming the FAO, see [Bazzi et al. \(2016\)](#) for details). We also measure the total number of capital machines for farming in each village in 2003. We construct an index of locally provided health and infrastructure public goods using all six *Podes* rounds from 1999 to 2014. The infrastructure index is based on that used in [Martinez-Bravo \(2017\)](#). Following [Henderson et al. \(2012\)](#), we capture a summary measure development based on the share of the village with any nightlights as observed from NOAA satellites in 2000.

B.15 Geographic Controls

We use the *Podes* 2003 data to construct the following geographic controls: indicators for whether the village is located on a hill or on a beach, the altitude in meters, and the distance to subdistrict and district capitals in kilometers.