

**Essays on the Political Behavior of Economic
Informality and Public Goods**

by

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Abstract

This dissertation examines the relationship between economic informality, political behavior, and public goods provision. In three papers, it explores how seemingly nonpolitical everyday social institutions and collective action rooted in economic informality help extend the reach of the state and advance public policies in developing societies. I document these complementary mechanisms using microdata and policy variations in Indonesia, an important case given its recent urbanization, democratic status, and the world's fourth largest and highly diverse population. Does informal housing (or slums) cause political marginalization? In the first paper, I delineate between housing informality of infrastructure and tenure insecurity, and posit that the former generates collective interests and demand for the state. Using a panel survey of Indonesian households from 1993 to 2014 with approximately 30,000 observations, I find that those in housing lacking piped water and sanitation access are significantly more likely to speak the national language, express support for vote buying, yet show lower ethnic trust. In light of theoretical knowledge on historical urbanization and political identity formation, results suggest that social contexts afforded by informal housing can produce clientelism alongside attitudes of political integration. I expand on the implications of the connected political and social behaviors of informality by assessing its effects on public policies. I develop a theory of community-driven development's impact on informal settlement leaders. A field survey of 258 formal and informal leaders in urban communities under Indonesia's National Slum Upgrading Program and a comparison group reveals modest effects. The final paper tests the role of quotidian social groups in the setting of Covid-19's economic distress and public health urgency. In a sample of 1,085 Indonesian workers across informal employment sectors, I ask if and why vulnerable informal workers may comply with costly restrictions. Survey experiments varying information regarding a hypothetical but realistic lockdown policy demonstrate that information endorsement by workers' membership associations significantly boosts compliance. Taken together, this dissertation challenges the scholarly pessimism around growing urban informality and contributes to the study of comparative political economy and urban politics of development.

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“A delightful train trip without itinerary; I hope you can make time to read Dante.”

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All errors and limitations are my own.

Introduction

The majority of people in the world have become city dwellers, but across the developing regions, many reside or work in unregulated informal sectors. Nearly a quarter of the global urban population is currently housed in informal housing, defined as dwelling units with few or none of the following attributes: infrastructure such as improved water and sanitation facilities, legal rights i.e. security of tenure, and not overcrowded or otherwise in inadequate physical shape. Around 2 billion people, representing the majority of the global working population, are informal workers earning livelihoods in jobs without the benefits of labor regulations or employment-based social protection. A growing proportion of informal workers are urban.

How the large and persistent presence of economic informality impacts the course of political development in today's developing regions is a concern with profound policy implications. Rapid urbanization and projected housing deficits in Asia and Africa coupled with a renewed concern with economic inequality across the rich and poor regions make the theoretical grasp of economic informality a pressing challenge in social science. Political science and economics scholarship has been devoting considerable attention to defining, explaining, and diagnosing economic informality as a critical context in development for at least six decades. Yet various synthesis and review articles, as well as global development agendas, make clear that our understanding of how, and when, economic informality determines collective political outcomes is inconsistent.

This dissertation engages with the debate to expand the understanding of the political-institutional consequences of economic informality by describing complementary links between the state and informal sectors through political behavior and

public attitudes. It broadly focuses on the relationship between economic informality, political behavior, and public goods provision by the state. How does the observed phenomenon of informality shape citizens' direct and indirect support for public goods provision by the state, under the general conditions of ongoing urbanization? Under what conditions can policies in urban contexts build on state-society relations characterized by informality to extend more efficient public goods delivery? These are the main questions animating this dissertation. To answer these questions, it explores and describes in detail how seemingly nonpolitical everyday social institutions and collective action rooted in economic informality help extend the reach of the state and advance public policies, strengthening the delivery of the state's public goods. Empirically, I document these complementary mechanisms leveraging survey data and policy variations in Indonesia, an important case given its recent urbanization, democratic status, and the world's fourth largest and extremely diverse population. One paper presents an observational analysis, while two others evaluate the conditions under which public policies informed by an understanding of the connected nature of social and political participation may make public goods outcomes more efficient. These two papers analyze the policy instances of urban slum upgrading and Covid-19 pandemic response.

The first paper titled "Distinct but Not Marginal: How Informal Housing Shapes Political Behavior in Indonesia" presents a historical and theoretical overview. Does informal (or slum) housing affect the course of political development by shaping political participation and public attitudes of ordinary citizens? The paper responds to a growing literature in comparative political economy that looks at informal settlement (or slum) residents' clientelistic political engagement to explain the macro phenomenon of relatively weak public goods provision by the state in developing regions and particularly Latin America. This emerging consensus on the clientelistic politics of economic informality, therefore, views that the informal economy hinders the development of political institutions and particularly inclusive welfare states in consolidating democracies.

I posit that housing informality's public goods consequences can be positive,

rather than only negative, under the condition of rapid urbanization. In particular, I propose that housing informality in terms of a lack of infrastructure, in contrast to tenure insecurity, generates collective interests and demand for the state rather than a preference for non-state public goods. Using the Indonesian Family Life Survey (IFLS), a nationally representative multi-purpose panel household survey, and a difference-in-differences approach, the paper empirically delineates between housing informality of infrastructure and tenure insecurity. I find that those in poor housing lacking water and sanitation access are much more likely to express support for electoral clientelism, yet speak the national language at home more and show a lower ethnic and religious identity-based trust premium. Results persist after accounting for demographic, migration, and household formation dynamics. I also find limited support for political, economic, or social marginalization. I interpret the results in light of major theories of historical urbanization and collective political attitude formation emphasizing class, community, and nationalism. The analysis offers novel longitudinal evidence that social contexts fostered by inadequate housing shape the formation of political attitudes in urbanizing Indonesia, including and beyond what may be deemed clientelistic, and is consistent with increased attitudes of national integration.

What are the implications and effects of the connected political and social behaviors of informality on public policies? Motivated by this concern, the second paper titled “Participatory Development and Political Leaders in Urban Informal Settlements: Evidence from Indonesia’s National Slum Upgrading” develops and tests a theory of how community-based policy intervention may impact community leaders/elites in urban informal settlements. The use of participatory designs in development such as community-driven development (CDD) projects purports to build the state from the ground up by institutionalizing citizen accountability in service delivery. Yet the CDD model has shown little effect on state building or democracy outcomes in evaluations focused on beneficiaries. I argue that the implementation of participatory service delivery can shore up the state by reshaping informal community leadership, which plays an outsized role and is more sensitive to the procedural requirements of such policies. I test the theory using data from Indonesia’s National Slum Upgrading

Program and survey sampling using matching methods. I use detailed administrative and program monitoring data to design and analyze a survey of 43 East Java urban wards implementing Indonesia’s National Slum Upgrading Program and 43 matched control wards, examining CDD’s impact on formal and informal slum community leaders ($n = 258$) focusing on political efficacy. Findings from the original survey suggest that procedural requirements of participatory development shape governance by filtering grassroots leaders and affecting a narrow set of skills and social views among these community elites.

The third and final paper titled “The Strength of Weak Ties in the Informal Economy? Evidence from Informal Workers’ Voluntary Associations and Compliance Behavior in Urban Indonesia during the Covid-19 Crisis” tests the role of quotidian social groups in informal labor sectors under the political environment of Covid-19’s economic distress and public health urgency. In the Covid-19 pandemic since 2020, urban informal workers are both uniquely vulnerable and consequential. Governments need informal workers’ cooperation more than ever. Yet local governments from Africa to Asia struggle to encourage informal workers to comply with public health measures, including social distancing and economic lockdowns. Often, these unprotected workers are wary of authorities and do not comply with existing labor and urban regulations. A key question concerns the role of social institutions in law enforcement vis-à-vis this population.

Using an original survey of urban informal sector workers across 228 Indonesian cities and popular informal job sectors ranging from petty trade to informal transport, administered online through a mobile phone app in 2020 ($N=1,085$), I ask if and why vulnerable informal workers might comply with costly restrictions on work. Survey experiments randomizing the source and content of information about a hypothetical but realistic regional economic lockdown demonstrate that information endorsement by workers’ membership associations significantly raises voluntary compliance. Priming enforcement by drawing attention to punishments, however, has a null effect by itself and cancels out the association endorsement effect when combined. I draw on pre-pandemic fieldwork and qualitative data to suggest that heterogeneous information-

seeking behavior can explain why some informal workers opt to join associations and why this group is more readily persuaded to follow government rules. The results show novel evidence that “weak” social groups shape urban politics and policy outcomes, but caution is needed before drawing lessons beyond the pandemic context.

Chapter 1

Distinct but Not Marginal: How Informal Housing Shapes Political Behavior in Indonesia

1.1 Introduction and Research Question

Today, the majority of the world's population live in urban environments, a result of ongoing rapid urbanization across low and middle-income economies (UN-Habitat 2020). At the same time, there is insufficient housing. The World Bank estimates that currently there is a housing deficit of 268 million dwelling units affecting 1.26 billion people in a sample of 64 developing countries (Behr et al. 2021).¹ Across Asia, Africa, and Latin America, therefore, the unregulated informal market provision meets the demand for urban shelter, a fact that has led to the near-universal presence of inadequately built and serviced housing and unplanned urban settlements, or slums, typically alongside the formal housing sector in most developing nations (Angel 2000).

In this paper, I ask how the human dwelling conditions of informal housing shape public opinion and political behavior over time. I probe this question in the setting of Indonesia, a large, ethnically diverse, and rapidly urbanizing society, where the official

¹The global urban growth is concentrated. Just five populous countries, Nigeria, Brazil, Pakistan, Indonesia, and India, account for around 49% of the current global housing deficit (Behr et al. 2021).

urban population rose to 57% in 2020 from 31% in 1990 (UN 2019).

1.1.1 Informal housing and formation of shared identity

In countries experiencing urbanization, how formal and informal housing sectors coexist side by side is a jarring social contradiction and perplexing policy challenge (Roy 2005). Increasingly, comparative politics research also regards growing cities characterized by informal sectors as a distinctive, if often problematic, area of politics - one that will grow in relevance as people in Asia and Africa become mostly city dwellers in the coming decades (A. E. Post 2018; Auerbach and Thachil 2018). But does the experience of living in poor housing affect how people engage in politics, and even a country's course of political development? Popular images portray slums or informal housing settlements as extraordinary urban habitat, and their inhabitants as symbols of, confusingly, urban blight and/or raw human ingenuity (e.g. M. Davis 2006; Saunders 2012). An emerging consensus in the literature on class and ethnic politics of public goods maintains that economic informality undermines the public support for tax-funded public goods in developing countries (e.g. Rudra 2008). It finds most evidence in political behavior of electoral clientelism.

In diverse national settings from Argentina (e.g. Murillo, Oliveros, and Zarazaga 2021) to Ghana (Nathan 2016), therefore, scholars find similar conclusions that people living in slum areas or in housing units without title are generally more supportive of clientelism and clientelistic parties. This has been interpreted to mean that people in informal sectors prefer private or collective public goods to those provided by the state (Holland 2016). Cities in countries with clientelistic politics also seem to experience more informal urban growth (Deuskar 2019). Scholars argue that these secular patterns bode ill for state development and human welfare, particularly in democracies because inclusive and high quality (and expensive) national public services require sustained public support in the form of a broad political coalition (Doner and Schneider 2016; Holland and Schneider 2017).

While the new studies describe mechanisms of informal housing's institutional consequences that could hold true in any country with urban inequality and informal

settlements, political behavioral evidence is hitherto focused on iconic cases, and suggestive rather than conclusive. A central assumption in the recent studies is that economic informality creates a narrow form of class identity, which prevents the development of solidaristic coalitions in support of greater welfare states. This may be due to the nature of informal ownership (Holland 2016). In countries with already ethnicized political competition, this class identity can overlap with ethnic affiliations (Nathan 2016). At the most basic level, this means that people living in (or owning) informal housing develop a common awareness and political preferences based on their residential status, compared to people in formal housing situations. In addition, the theoretical framing suggests that such attitudes stem from material interests rather than alternative logics of political participation, such as social norms (Scott 1972) or subjective common identity (Singh 2011).

Surprisingly few works describe if people in informal economic contexts indeed form political opinions different than their peers in the regulated sectors. When a similar assumption of material self-interest is tested on informal employment in Latin America, scholars find that factors such as employment churn and household dynamics work in ways that render the political attitudes of the informally employed indistinguishable from formal employees (Baker and Velasco-Guachalla 2018). In theory, housing is different from employment. As a long-term asset and principal source of household wealth (Ansell 2014) and anchor of social ties and social capital (Glaeser and Sacerdote 2000), informal housing may yet uniquely drive interest-based political behaviors predicted in the recent and earlier literature.

1.1.2 Political behavior across time and space

Competing theories do not always justify the growing scholarly pessimism regarding how people in informal housing impact the development of welfare states through public opinion and mass political behavior. Empirical studies of the relationship should address two issues.

First, analysts need to clarify how they define and measure housing informality. What exactly are the politically relevant conditions of informal housing? Informal

sector is “an exceedingly fuzzy concept” (Peattie 1987). Informal or “slum” housing spans many characteristics (UN-Habitat 2016). Around a quarter of the global urban population are currently housed in informal housing, defined as dwelling units with few or none of the following attributes: infrastructure such as improved water and sanitation facilities, legal rights i.e. security of tenure, and not overcrowded or otherwise in adequate physical shape (UN-Habitat 2016). The UN estimates that Asia is home to around 600 million of the global population affected by slums (UN-ESCAP and UN-Habitat 2015). But global urban statistics reflect national statistical methods using idiosyncratic definition of urban and “slum” (Behr et al. 2021).² Empirically, there is a gap in knowledge around politics of housing in development in terms of infrastructure deficit.

I argue that informality in terms of basic urban infrastructure implies neighborhood-level collective interests, and political actions of lobbying for state interventions in order to overcome collective action problems. Housing informality of ownership, as de Soto argues (1989), implies private interests for state *non-intervention* (Holland 2016). Title can be granted to individual households (Di Tella, Galiani, and Schargrotsky 2007; Galiani and Schargrotsky 2010). Absence of key services, by contrast, requires collective self-production by residents, such as garbage collection and ditch digging, and ongoing maintenance i.e. repeated collective actions. In practice, residential urban infrastructure in lower-income countries is frequently co-produced with the state (Ostrom 1996; Joshi and Sohail Khan 2010). When poor neighborhood infrastructure causes “public bad” in cities, such as pollution, water-borne diseases, and hazards, residents are also likely to lobby for state interventions or contend with the intervening state (e.g. Hummel 2017). Over time, they may come to regard the state as the natural target of resource mobilization for collective problems, leading to attitudes of nationalism (Figure 1-1).

²Research on employment informality faces the same definitional challenge, but benefits from the International Labour Organization (ILO)’s harmonized statistical guidelines, and detailed national labor surveys.

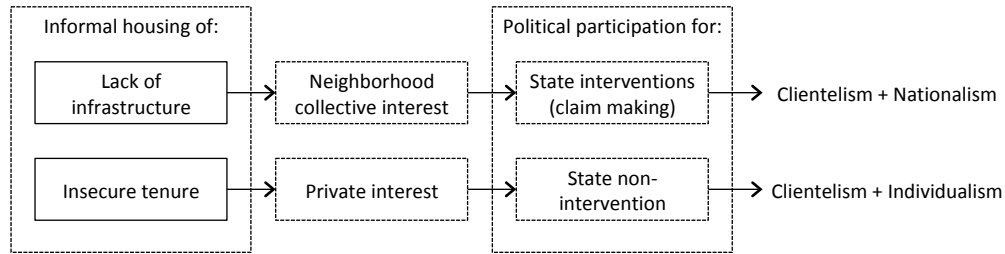


Figure 1-1: Schematic representation of the predicted consequences of housing informality on political behavior

The second empirical challenge is observation across time. Ideally, one would like to observe a set of political attitudes as people move in (or out) of informal housing, and to see such attitudes appear widely across an urbanizing population in a developing country. Because key theories emphasize group comparisons, it is important to examine informal as well as formal housing sectors in a given country (Angel 2000). To date, most studies on the politics of informal economic sectors use cross-sectional or qualitative case study designs, with the important exception of Perlman’s Rio de Janeiro favela surveys (1976, 2010). The popular method of sampling slum neighborhoods makes separating the different forms of housing informality difficult (e.g. Auerbach and Thachil 2018; Jha, Rao, and Woolcock 2007; Nathan 2016); it also implicitly relies on official classifications of areas, and can skew data collection to prime cities.³ Longitudinal data on people in urban developing regions can go a long way in filling the gaps in urban evidence of development (Field and Kremer 2006; Marx, Stoker, and Suri 2013).

1.1.3 Between class, community, and nation

The rising concern over slum dwellers’ political participation is prompted partly by the ongoing unprecedented rapid urbanization. Engaging with the theoretical implications of urbanization, a dynamic context, suggests key larger-scale predictions about political

³When multiple aspects of housing informality are examined in multi-city studies, scholars (mostly of housing economics) find that the distinctions empirically vary, and have effects that contradict the property rights literature (e.g. Lanjouw and Levy 2002; Kim 2004; Monkkonen 2016; Nakamura 2016; McIntosh et al. 2018).

behavior of informal housing, in addition to the class-based theoretical framework. The current urbanization touches more people than earlier waves, such as Latin America's rapid urbanization in the mid-20th century or the urban transformation of Europe and America in the age of industrialization. The urbanization trend will impact 3 billion people globally by 2030, with 90% of growth in Asia and Africa (UN-DESA 2020).⁴ Examination of how urbanization shapes new political identities builds on canonical analyses and conclusions about political and social development in historical Europe and America.

Drawing on earlier works, I contrast three theories of political attitudinal shifts in urbanizing societies, before outlining in the next section the requirements for assessing their predictions. In addition to class, the theories pertain to the (small) community, and the nation. I describe how they imply rival predictions of how housing informality contributes to key mechanisms of society-wide shifts in political attitudes. In political science, these works tend to speak to state building outcomes.

The first tradition focuses on class, and, like the recent studies on political behavior in slums, highlights urban processes of relative material status and segregation. In industrializing Europe, Marxist and other historians contend that living conditions in cities functioned as a social crucible for the emergence of labor-based class movements. In this view, capitalist urban redevelopment and modernization of cities like Paris initially evicted large numbers of low-class workers, and subsequently produced dense and contiguous residential outskirts neighborhoods separated from bourgeois neighborhoods, allowing working-class solidarity to coalesce beyond narrow occupational lines, and ultimately catalyzing radical class struggles including the 1871 Paris Commune uprising (Castells 1983; Harvey 2003).

Following the historical scholarship, research on urban inequality in Latin America views squatters and slum residents as marginalized urban poor, and analyzes the state as the cause of this population segment's economic, political, and social marginalization

⁴Three countries, China, India, and Nigeria, will account for 35% of projected urban population growth between 2018 and 2050 (UN 2019). However, within large countries, urban growth is distributed across urban agglomerations of diverse sizes. Close to 50% of the world's urban dwellers reside in cities and towns with fewer than 500,000 residents. Some of the fastest expanding urban agglomerations are under 1 million in population.

(e.g. Perlman 1976; Holston 2008). But it finds that the modern state's neglect of slum communities worsens racial inequality and increasingly violent local politics, depressing slum residents' political participation (Perlman 2010). (De Soto's property rights theory shares a similar diagnosis that the elite-controlled state creates informal sectors, but imagines the people in squatter settlements as having individualistic and market-oriented political comportment.) Like these political economy studies, recent works on slum dwellers' clientelism stress the mechanism of within-city between-neighborhood inequality and outcome of low redistribution. Rather than focus on social movements, they explain mass electoral political behavior. A key intuition is that the segmented urban housing sectors with uneven protection of property rights, and unequal residential public services, generate self-reinforcing distributional conflicts (Holland 2016; Nathan 2016). Similar to depressed participation, an observable implication is a poverty of access to the state (public goods) among informal housing residents, and vulnerability to recruitment by clientelistic politicians. The result is a kind of exit and misuse of voice in political participation (Hirschman 1970) (as far as support for clientelism is concerned).

Conceptualizing housing informality as class therefore leads to predictions of self-perpetuating interest politics. Other historical theories, however, regard attitudes of people in poor urban housing as transitional. An alternative school of thought focuses on the social world within the community. Like the class literature, the studies emphasize the separateness of informal housing communities from the rest of the city, but analyze the subjective experiences of migrants who typically inhabit slum-like neighborhoods. In *The Urban Villagers*, Gans describes the rich social ties of Italian immigrants in Boston's ethnic quarters. In this vision, the slum is a place of enduring parochialism, where social institutions that have more in common with the immigrants' rural roots continue to thrive (Gans 1962). Numerous urban anthropology, sociology, and earlier political science studies describe slum communities' self-help (e.g. Gay 1994; Singerman 1995) and the residents' day-to-day economic survival and resourceful use of informal social ties (e.g. Jellinek 1991; Simone 2004). Recent studies of India's slum settlements also emphasize the community-by-community

heterogeneity of inhabitants, communities, and political activities [Edelman and Mitra (2006); Jha, Rao, and Woolcock (2007); Auerbach2018]. The body of empirical studies indicates that the worries of “chaos and revolution” in the shantytowns of developing cities are overblown (Nelson 1970). Overall, proliferation of informal settlements is a moderating influence on individuals’ social transformation, with no obvious direct effects on national coalitional politics.

In this framing, housing informality’s effects on people are largely social and inward-looking. Yet, by hosting traditional forms of social participation, it may still prove damaging to welfare state development. This can be through the mechanisms of trade-offs and competition between state and non-state public goods. Migdal suggests that high social participation can have consequences on the state’s public goods since the state in developing countries compete with traditional sources of authority for citizens’ trust and loyalty (1988). Informal settlements could cause people to rely more on each other in the absence of the state’s protection and basic services, or, become urban pockets attracting those who already prefer not to engage with the state (Scott 1998). Banding together to produce club goods such as security and garbage collection may reinforce a habit of self-help. Social extractive institutions may substitute for the state’s services funded through taxation (Lust and Rakner 2018). As observable implications, it is possible that informal housing residents will under-participate in the formal economy and formal arena of politics as a result of the trade-off mechanism - a more social formation of political behavior than that suggested by the literature on class identity development.

A third perspective concerns nationalism and describes urbanization as a driving force of socio-political integration. In this view, informality is not just a transient phase but also a sector with porous barriers, *enabling* greater movement of people. While largely untested on contemporary data, there are plausible political behavioral mechanisms. A large literature holds that nationalism aids welfare state development (Miguel 2004; Singh 2011). Historical urbanization across Europe represented a mass social change leading to the emergence of modern nation-states, together with a handful of factors including the national language, basic education, and interstate

conflict (Anderson 1983; Gellner 1983; Tilly 1990). The movement of rural peasants into cities was a driving force behind France’s national integration and a key correlate to the rise of the powerful centralized state (Weber 1976). Cross-national regressions show robust association between greater urbanization, measured as urban residence and/or non-agricultural work, and declining pro-ethnic attitudes in Africa (Robinson 2014, 2017), a pattern agreeing with the modernization thesis (Lipset 1959).

Being more affordable and adaptable, lightly regulated urban areas and housing options could fuel residential mobility and demographic mixing by inducing migration (Angel and Pornchokchai 1989). This may take the shape of rural-urban migration, or more short-distance residential mobility between urban centers and peripheries, as developing cities physically grow in a “densify and expand (sprawl)” pattern (Angel et al. 2021; Caldeira 2017). Mass migration can strengthen migrants’ attachment to the nation and reliance on the state in newly populated settlements (Bazzi et al. 2019; Charnysh 2019). Exposure to urban economy can also help develop skills and new norms of engagement with the administrative state (Kruks-Wisner 2018b). The last perspective would therefore predict those in informal housing to show greater mobility and supportive attitudes for the national project.

1.2 Indonesia and Its Urban Contexts

I plan to leverage subnational and micro variations to rigorously test a subset of theoretical implications, and select Indonesia as a focus case to do so. Although Latin America is a relevant reference point for empirical inquiry as the region most studied in the theory building literature on urban informality, I intend to look at more recently urbanizing country with high levels of diversity to test key behavioral hypotheses in order to maximize my inquiry’s external validity.

Indonesia is a large, culturally diverse lower middle-income country in Southeast Asia. Like many developing democracies, it struggles with economic inequality under increasing urbanization. Although the government has improved public goods provision over the past decades, notably education and reproductive health services under

Suharto’s authoritarian rule that lasted until 1998, today 22% of urban Indonesians, or around 30 million people, continue to live in slum-like conditions (UN 2015). Recently, the achievement of “cities without slums” has become a stated national policy (Indonesia 2016). In its recent history as well as dating back to the Dutch colonial administration, a variety of informal housing formalization policies have been implemented in the country, making it a little-known testing ground for various relationships between the informal sectors and the government (Kusno 2000, 2010). These cover policy intervention types that were promoted by international development agencies during different eras in the past: e.g. “sites and services” model in the 1970-80s (Werlin 1999), and a generation of pilot programs in co-production, public-private partnerships, and community-based upgrading (Ostrom 1996; A. E. Post 2018; Kooy 2014), along with, as the newest addition, tentative attempts at integrated affordable rental housing schemes more common in developed countries and Singapore (Rukmana 2018).

In addition to its obvious size and relative richness in subnational policy variations, institutional conditions suggest that Indonesia is a suitable place to test my theory. The timing of rapid urbanization in relation to the democratic transition means that, unlike in Latin America where the height of urbanization occurred under dictatorships, the relationship between informal housing and citizen behavior can be examined under both centralized authoritarian as well as decentralized democracy regimes. The “big bang” decentralization reforms in the early years of the new democratic era has entailed a staggered rollout of mayoral direct elections (Skoufias et al. 2014), which offers an interesting as-if random assignment of political institutional change.

The Indonesian society is also a socio-political environment shaped by many informal institutions (Anderson 2001; Geertz 1963; Klinken and Barker 2009). Relatedly, large-scale surveys and census of the country generally keep detailed record of how citizens routinely organize collective action for local public goods, such as rotating savings and credit associations (ROSCA) and mutual help groups and projects, and how the state also exerts indirect authority at the street-level through official informal institutions, such as community associations (*RT/WT*), community clinic (*posyandu*),

and neighborhood security watch. Informal and social institutions in Indonesia have been intensively studied in rural village contexts (Bazzi et al. 2019; Benjamin A. Olken 2007, 2010; Benjamin A. Olken 2009; Tajima 2013), but quantitative study of citizen community groups in urban areas is still scant. The existence of these data sources offers a possibility of comparison of citizen participation in formal public goods vs. informal collective public goods, so as to directly test theories.

1.3 Data

1.3.1 A panel household survey, 1993-2014

Household surveys allow following people across time and space, rather than neighborhoods across time. They offer some analytical advantages. I leverage the Indonesian Family Life Survey (IFLS), a multi-purpose panel survey in Indonesia, to test the theories. Designed to be representative of about 83% of the Indonesian population, with five waves covering two decades, the IFLS contains one of the largest samples of consistently tracked individuals (ca. 30,000) over a long period in a large and diverse developing society. The survey data collection began in 1993/1994, followed by successive waves in 1997/1998, 2000, 2007, and 2014. The survey period includes moments of steady economic growth as well as crisis (the 1998 Asian Financial Crisis, the 2007/2008 global financial crisis). It also shadows Indonesia's transition to the post-Suharto competitive democracy.

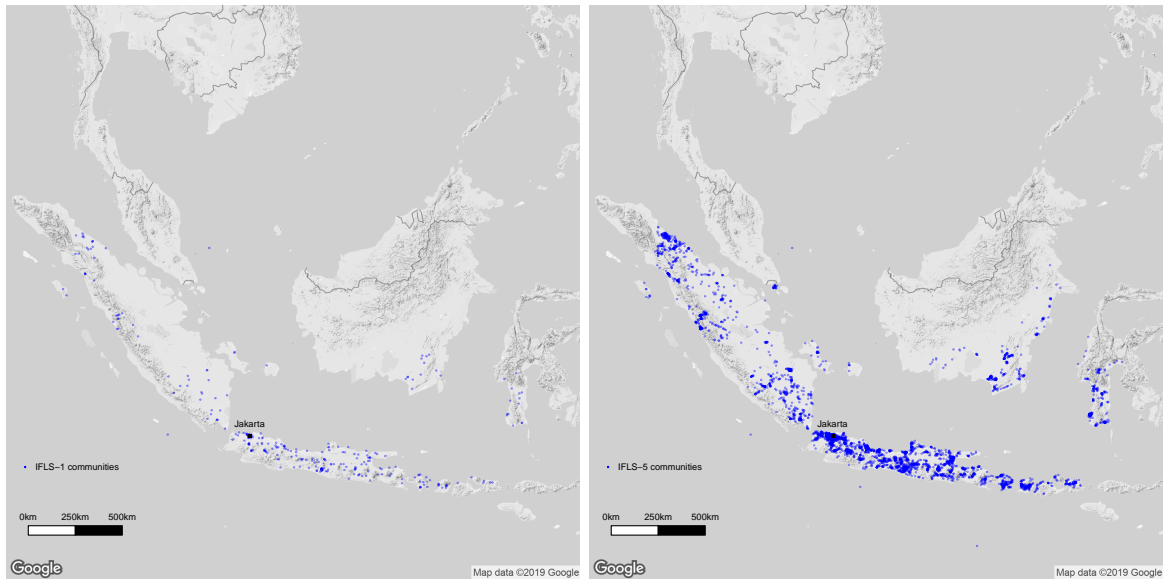


Figure 1-2: Community locations of the IFLS respondent households in 1993 (left map) and in 2014 (right map)

Note: Each blue dot in the maps represents a geolocated village-sized unique enumeration area recorded in the IFLS. The two maps show that household growth and residential moves of Indonesian families for two decades have resulted in a widespread migration pattern, which tended to concentrate toward heavily populated and more urbanized regions but also to spread widely within those regions.

Figure 1-2 reveals the geographic movements of the IFLS survey respondents. The IFLS respondents have fanned out from the 300 original communities (village-level enumeration areas) in 1993/1994 to over 5,000 by 2014, reflecting many household and individual decisions of housing selection, migration, and residential movement. These are recorded in detail. A strength of the IFLS is that the survey was designed to account for residential mobility and migration. Furthermore, field protocols have ensured the successful tracking of migrating households across Indonesia. In each follow-up survey after 1993, the IFLS interviewers typically reach at least one member from 95% of target households (Thomas, Frankenberg, and Smith 2001; Thomas et al. 2012).⁵ For context, Perlman was able to relocate around 41% of the original

⁵The IFLS team employs a multi-pronged strategy for attrition minimization, including extensive initial interviews covering migration history and contact information of various informants for future re-contacting, contact with community institutions such as schools and work places, reaching out to neighbors, teachers and community leaders if a household has moved, detailed mapping of new destinations, and two “sweeps” to contact relocated respondents. The first sweep ensures re-contacting

respondents or their relatives thirty years after the original survey of three favelas (1976, 2010). Household residential mobility – particularly long-distance relocations – is a leading cause of sample attrition for in-person longitudinal surveys in developing regions.⁶ By explicitly accounting for household mobility patterns, the IFLS data contains minimal sample attrition and offers a high quality data to observe people’s connected behaviors of housing choice and shifting political behaviors in a society on the move.

1.3.2 Two measures of informal housing: lack of infrastructure vs. insecure tenure

To capture how housing informality in the form of infrastructural vs. tenure conditions affect people, I look at both types in the IFLS sample. I draw on the survey’s household economic assets module to code two measures of housing informality based on each household’s dwelling unit characteristics.

of local movers. The second sweep takes place after the main survey data collection, wherein teams are reformulated and the best performing interviewers continue to track hard-to-find respondents for several months.

⁶The tendency of respondents to move to a new locale is hard to predict based on observable attributes (Thomas et al. 2012). For example, low and high socioeconomic statuses have both been linked to higher attrition. Refusal to answer follow-up surveys is a smaller issue in developing country contexts (in the IFLS, refusal is typically 0.8-2.5%).

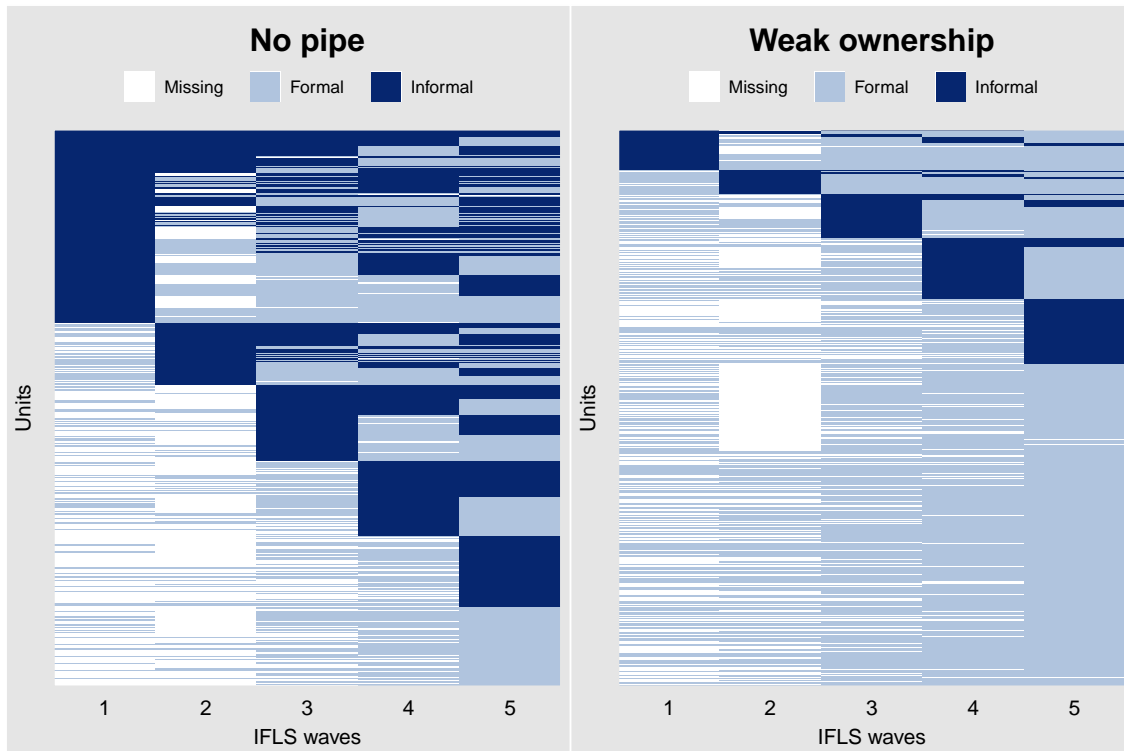


Figure 1-3: Treatment plots

Note: 34,389 unique individual interviewees who were surveyed in the IFLS-5 wave in 2014 (latest round) traced back to the IFLS-1 wave in 1993

The first variable is basic services deficit. I call this variable “no pipe” because I focus on measures of water and sanitation (WASH) services. I use 12 questions in the IFLS that record WASH conditions of the dwelling of respondent households. The questions range from “KR13. What is the main water source for drinking for this household?” to “KR21. Where does this household drain its sewage?”. I use them to create a binary variable of whether the household dwelling has direct connection to piped systems of potable water, toilet in building, and sewage drainage in good conditions. Those who lack these services are coded as “1” (informal), and those with access as “0” (formal) for my “no pipe” variable.

The second concept is tenure insecurity. This is difficult to observe reliably, but is clearly important to economic theories viewing legal property rights as the key to physical and human capital investment (Field 2007; Galiani and Schargrotsky 2010). The IFLS question “KR03. What is the status of this house?” distinguishes household

dwelling situations into self-owned, rented/contracted, occupying (also called “occupy illegal” in early survey waves), and other. I use the question and code respondents in “occupying” and “other” tenure situations as “1” (informal), and those with homes that are “self-owned” or “rented/contracted” as “0” (formal) in my “weak ownership” variable.

It is worth noting that the variable is essentially a subjective claim about housing tenure. This is not equal to objective, legally documented and vetted tenure status. That said, housing economics studies demonstrate that perceived (subjective) tenure security is closely linked to de facto (objective, legal) tenure security as slum residents are able to accurately judge the strength of their de facto tenure (Nakamura 2016; Reerink and Gelder 2010; Lanjouw and Levy 2002). De facto tenure security, in turn, is sufficient for households to make decisions about housing and business investments (Nakamura 2016; Reerink and Gelder 2010).

Figure 1-3 plots the distribution of “no pipe” and “weak ownership” housing informality variables among the IFLS individual samples over time in the five survey waves. Each wave is three to seven years apart. Individuals do indeed switch on and off from housing informality, transitioning into or out of housing situations deemed inadequate by international and national development agenda standards. Comparing the two informality variables in Figure 1-3, the lack of access to adequate infrastructure is a more prevalent and durable situation for Indonesian households. “Weak ownership” informality affects a smaller proportion and rarely lasts for multiple survey waves.

1.3.3 Dependent variable and other measures

My dependent variables mainly come from the IFLS’s community participation module and other modules detailing the lives of adult respondents 15 years and older. The IFLS survey’s module PM asks about awareness of, and participation in (in terms of time or monetary contributions), a slate of community-based associations and groups. These adequately capture the avenues of civil society and social capital that ordinary women and men in Indonesia take part in (Victoria A. Beard 2005). Separately, it also includes questions on participation in rotating savings and credit associations

(ROSCA's - *arisan* in Indonesian), a highly versatile type of informal social institution that Geertz describes as “middle-rung” of institutional development (1962). In the newer waves, the module also asks questions on voting and reasons for voting, including a question directly on vote buying (“transport money” i.e. cash for voting decision).

Household economy modules record detailed information on educational, marital, work, long-run migration histories, asset ownership, and labor and non-labor income conditions. Another outcome variable from the education section is the use of national language (Indonesian) at home. The use of national language in private life indicates subjective nationalism in a multi-ethnic society such as Indonesia (Bazzi et al. 2019). The survey also shows if the household head is employed in informal sector work. Not all variables are available for the whole time series, but most are recorded in at least two waves.

In addition to these main variables of social and political participation, I use additional ones. The most recent 2014 survey asks about the degree of trust of respondents' neighbors, individual religiosity and attitudes of religious tolerance. I use the variables for a cross-sectional analysis of ethnic trust. Household expenses module includes taxes paid and “ritual, charity, and gifts”, which is a category akin to social taxes as it typically means monetary contributions to obligatory ceremonial and religious communal events. These spending habits could reveal trade-offs between the state and community public goods as outlined in my earlier discussion of theories.

1.3.4 Indonesia's urbanization and informal housing trends

As a preview of data, I first describe the two decades of Indonesia's nationwide urbanization and informal housing trends using the IFLS sample characteristics on average. Figures 1-4, 1-5, and 1-7 summarize basic and key variables over time.

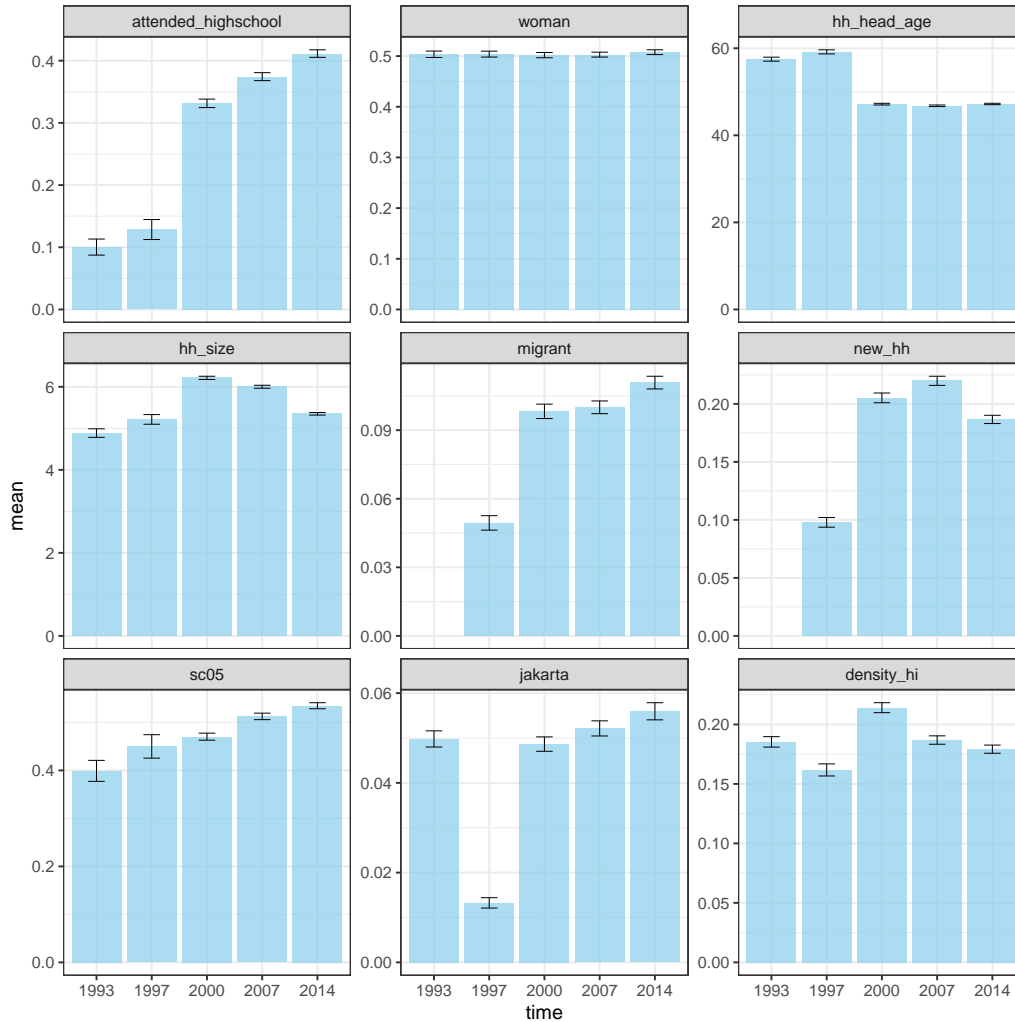


Figure 1-4: Sample demographics over time

Note: The figures summarize weighted means of demographic, household, and geographic characteristics of IFLS respondents over time. The top row shows the sample proportion with at least some high school education, proportion who are women, and average age of household head. The middle row shows the average household size, proportion of households that have moved to another municipality or further since the last survey wave, and proportion of households that were newly formed since the last survey wave. The bottom row shows the sample proportion living in urban administrative area (sc05), proportion living in Jakarta capital region, and proportion living in municipalities with high population density.

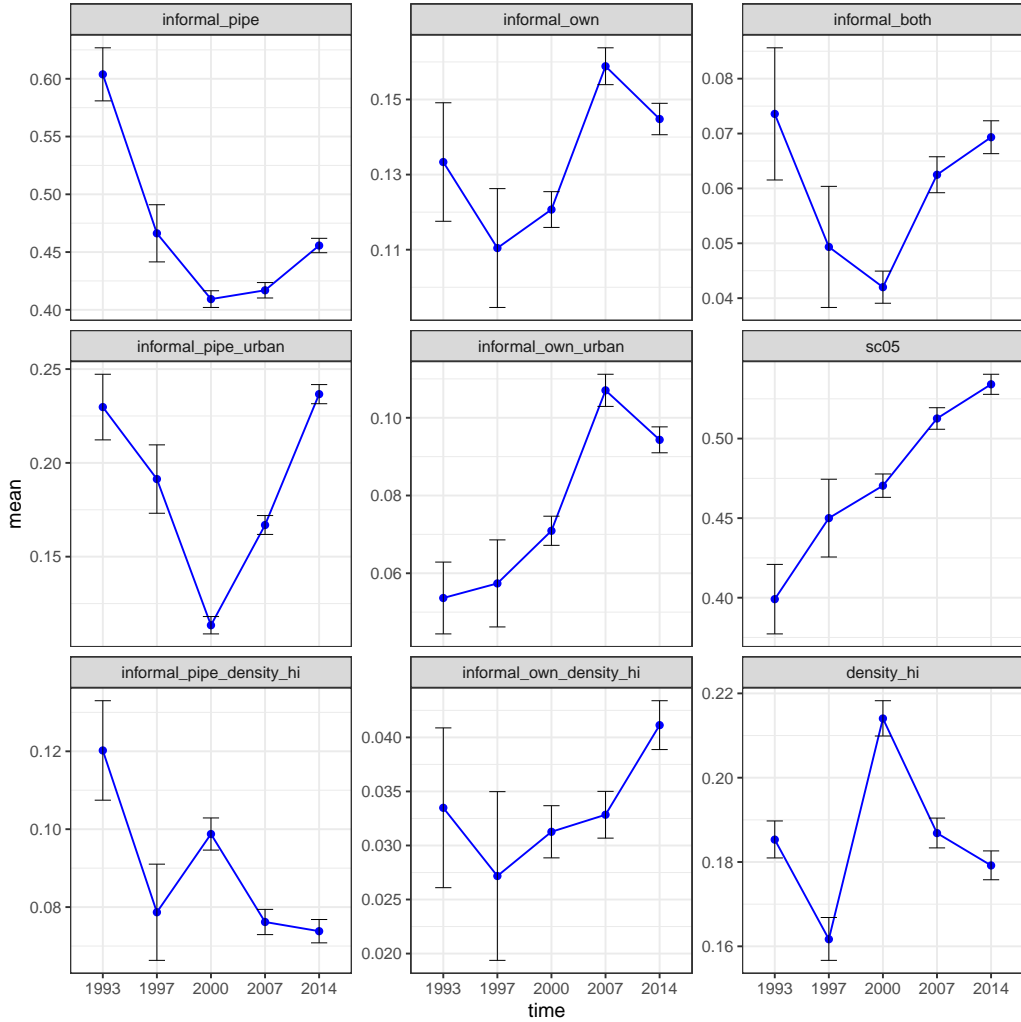


Figure 1-5: Housing informality variables over time

Note: The figures summarize housing informality variables (informal pipe, ownership) over time. The top row shows, for the whole sample, the proportion of households without pipes, proportion with weak tenure, and proportion in both types of housing informality. The middle row shows the proportions living in urban administrative area and without pipe, urban and with weak ownership status, and urban (repeated from Figure 2). The bottom row shows the proportion living in high-density municipalities and lacking pipes, in high-density municipalities and with weak ownership, and proportion living in high-density municipalities (repeated from Figure 2).

In the time between 1993 to 2014, the IFLS respondents as individuals became much more educated on average, as the proportion with at least some high school education steadily rose from 10% to over 40% (Figure 1-4). At the same time, households

remained similar in size, with 5 to 6 persons residing together on average. This is larger than the average family size of 3.9 people per household (2019 data), suggesting that the survey households are somewhat more crowded. The data also confirms that residential mobility is generally high. The design of the surveys is such that household migration and “split-off” new households appear from the second wave (1997) (middle row center and right figure, Figure 1-4). These show the proportion of households that have moved away from the original locations (second wave) or from their locations in the previous wave (subsequent waves), to another municipality or further afield. In a typical wave, around one in ten IFLS households have moved recently, and roughly one in five households are newly formed. Individuals form new households for reasons such as marriage, pursuit of work and education, or other life events (see Appendix).

Figure 1-4 also reveals a low-density and widespread pattern of urbanization during this period in Indonesia. Respondents in urban areas, defined as living in urban administrative areas, increased to 53.5% in 2014 from 40% in 1993 so that the average Indonesian became city dweller during this period (bottom left figure, Figure 1-4). But respondents living in Jakarta capital region remained almost flat at around 5-5.5%. Similarly, the total proportion of respondents living in high density municipalities, defined as more than one standard deviation higher in population density than the average municipality (2020 data), slightly declined to 17.9% in 2014 from 18.5% in 1993. Therefore, the urban population growth was shared widely in urban administrative areas in smaller Indonesian cities and towns. In this way, the panel household survey data demonstrates that Indonesia’s “expand and densify” (Angel et al. 2021) urban population growth has been relatively bigger on the “expand” than densification of already-populous top cities. The 1998 Asian Financial Crisis’ imprint on urban population is also visible in the data. Jakarta’s share of respondents declined sharply in 1997/1998, implying an exodus from the capital as well temporary attrition (most households were re-contacted in the later waves) (see also Figure 1-3). The level of new household formation in 1997 also appears depressed due to the economic crisis (Monkkonen 2013). By contrast, there is no obvious sign of impact from the 2007/2008 global financial crisis. These urban population trends provide backdrop to the patterns

of informal housing experienced by the survey respondents.

The next Figure 1-5 outlines the trends in housing informality according to the panel household data. As mentioned, it shows that infrastructural housing informality is a more commonly reported experience. It has also been declining over time, particularly in high density i.e. more developed cities. In 1993, 64.9% of respondents living in high density municipalities lacked adequate piped services. This figure was 41% in 2014. Only around 14.5% of respondents in 2014 report weak tenure status, but they are 17% of urban respondents. The two kinds of housing informality largely do not overlap (top right figure, Figure 1-5). I also consider the validity of household survey-based informality measures by plotting them against Indonesia's official statistic of "slum population as percentage of urban population" during the period (Figure 1-6). By official account, the proportion of Indonesia's urban inhabitants living in slums has dramatically declined from 51% in 1990 to 22% by 2010, before rapidly reversing the trend to increase again in the 2010's, to 31% by 2016. The trend line for my IFLS "no pipe" variable shows a similar V-shape, though it may be exaggerating or overestimating housing informality in the sample compared to the national statistic. "No pipe" as a proportion of urban respondents starts at 57.4% in 1993, registers its lowest value at 24.0% in 2000, and its latest value at 44.4% in 2014 overshoots the official percentage of urban slum inhabitants in Indonesia. Nevertheless, the trends hint that Indonesia's recent urban growth through expansion may be associated with infrastructure shortage in relatively peripheral urban administrative areas.

Informal housing in urban Indonesia: 1990–2020

Measures in the IFLS surveys compared to national statistic

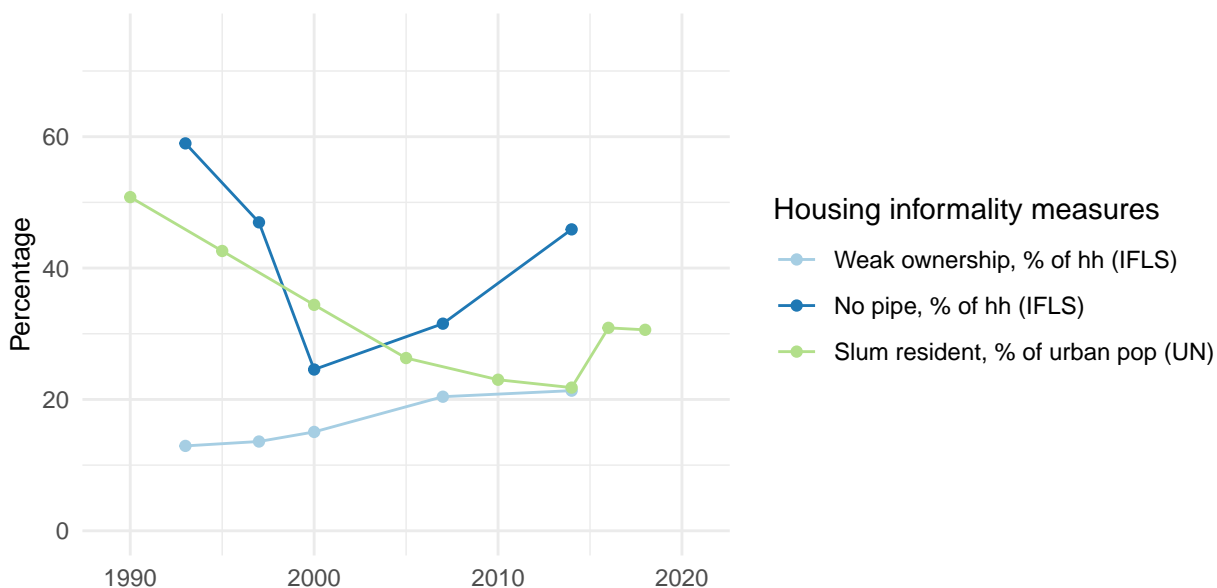


Figure 1-6: Housing informality trends in the IFLS surveys compared with national statistics

Note: The figure plots the housing informality variables based on the IFLS samples alongside Indonesia’s national statistic of slum population as a proportion of urban population.

There is a need to briefly consider who the “weak ownership” respondents are in reality. I find that 99% of households in “weak ownership” (i.e. answering “occupying” or “other” housing tenure situations) claim to pay zero rent or estimated housing cost. There is a negative correlation between the “no pipe” and “weak ownership” variables. In fact “weak ownership” households in the IFLS tend to live in housing units connected to basic services but do not incur cash expenses. They are almost always in urban administrative areas. I speculate that many or some of the “weak ownership” respondents in the IFLS sample are individuals receiving accommodation from their employers or relatives at free of charge.⁷

⁷In a multi-city representative survey of urban areas, the Urban Institute finds that the tenure type “rent-free renter” represents 13.6% of Indonesian households (Struyk, Hoffman, and Katsura 1990, 46). In this earlier survey, “rent-free renter” is the largest category among households who live in insecure tenure, slightly more than the 12.07% who report uncertainty over home and land ownership - the usual definition of weak tenure. The same report finds that room renters in Indonesia are relatively well housed, enjoying more modern buildings and amenities, and there is little difference between paying and non-paying renters in terms of housing stock quality.

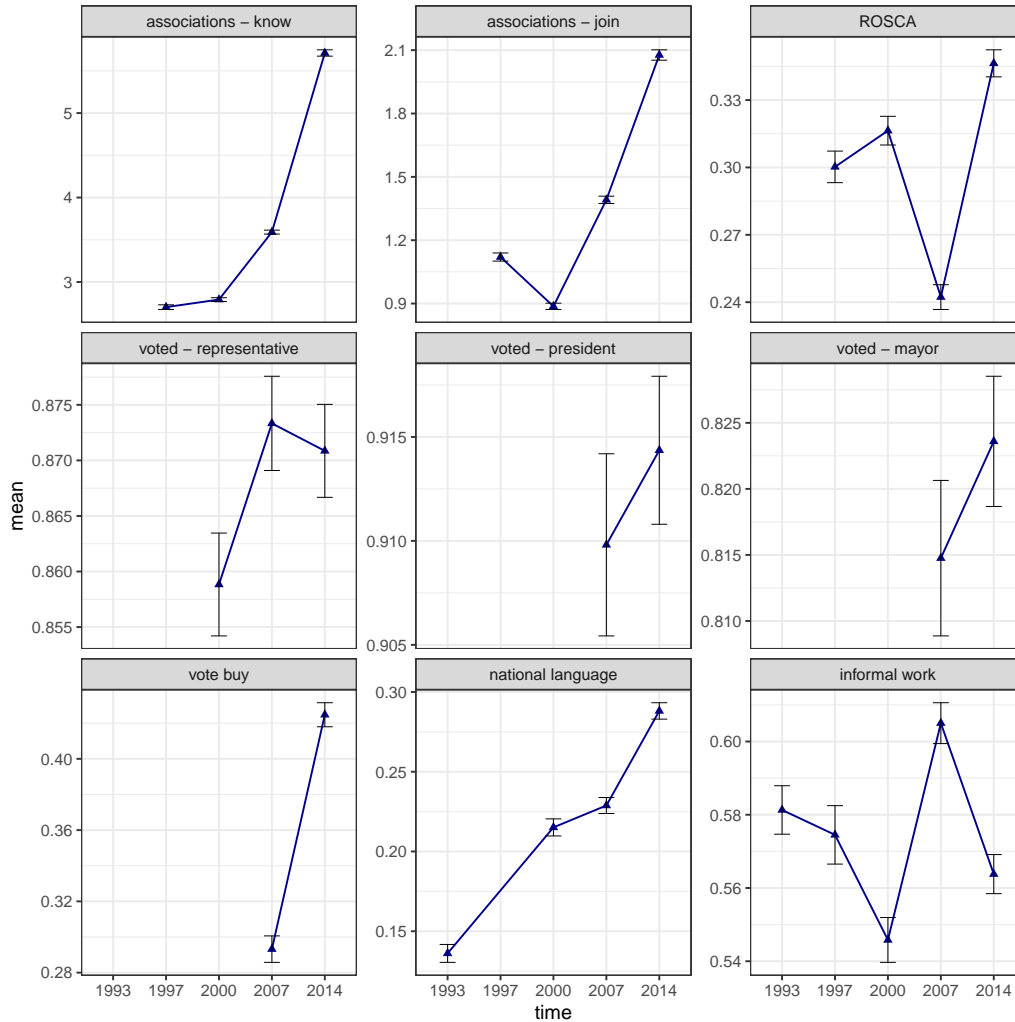


Figure 1-7: Social and political participation variables over time

Note: The figures summarize a selection of social and political participation variables over time. The top row shows the average total number of community associations respondents are aware of in their neighborhood, average total number of community associations they participate in, and sample proportion taking part in one or more rotating savings and credit association (ROSCA). The middle row shows the proportion who have voted in the last election of national legislature representatives, president, and mayor. The bottom row shows the proportion who answered that they would consider transport money (cash) when deciding who to vote for, proportion using Indonesian at home, and proportion of household heads employed in informal work (own account entrepreneur or non-agricultural work without social protection).

Finally, Figure 1-7 shows the time-series trends of a selection of outcome variables. The data implies that community-level civil society activities generally grew in the

post-Suharto era Indonesia. Presence of associations and participation in them are both higher in 2014 compared to 1997 (the first wave to record the questions). The popularity of ROSCA is also shown by the fact that nearly 35% of respondents report taking part in at least one. By one measure, the economic life of IFLS households appears to not have changed significantly, as household heads in 2014 as likely as those in 1993 to be informally employed (56.4% in 2014 compared to 58.1% in 1993). Election participation is universally high at between 80 to 90%. While only the 2007 and 2014 waves included the question on vote buying (“transport money”), the phenomenon is substantial as 42.5% of respondents consider this type of money (among other factors) when deciding who to cast their vote to, a 10% increase between 2007 and 2014. National language use also grew during the twenty years of IFLS data collection. In 1993, 13.6% of respondents spoke Indonesian at home. The figure was 28.8% in 2014.

1.4 Hypotheses

To recap, the theories previewed earlier implied key hypotheses about informal housing conditions’ impacts on people’s connected behaviors of political and social participation. The following outcomes are observable in the IFLS data. While any single outcome does not validate the complex theories of urbanization and mass political identity, patterns and directions of estimated effects can demonstrate the theories’ relative strength of support.

- *H1*: Informality of infrastructure vs. ownership differently affects political behavior (mechanisms).
 - Informality of infrastructure (“no pipe”) causes people to develop neighborhood-based collective interests and *higher* engagement with the state
 - Informality of ownership (“weak tenure”) causes people to develop individualistic interests and *lower* engagement with the state

- *H2*: Living in informal housing causes people to develop clientelistic political participation.
 - Informal housing residents are more willing to exchange political support for private benefits.
 - Informal housing residents are less likely to vote (marginalization).
 - Informal housing residents hold ethnic (including religious) political attitudes.
- *H3*: People living in urban informal housing remain more community-oriented and tied to neighborhood social institutions (urban villagers).
 - Informal housing residents are more active in neighborhood associations.
 - Informal housing residents are more likely to participate in ROSCAs.
 - Living in informal housing causes people to be less productive in the labor market by not working or working in informal employment.
 - Informal housing residents are less likely to use the national language.
- *H4*: Informal housing enables residential mobility and national integration.
 - Informal housing residents are *more* likely to use the national language (nationalism).
 - Informal housing residents *do not* tend to hold ethnic (including religious) political attitudes.
 - Living in informal housing makes people *more* productive in the labor market (modernization hypothesis).

	Class	Community	Nation
Clientelism support	+		
Political participation (voting)	-		
Ethnic political attitudes			-
Associations		+	
ROSCA		+	
Labor market participation	-	-	+
National language use		-	+

Figure 1-8: Predicted direction of effects by theories of political identity development

1.5 Results

1.5.1 Clientelism, voting, and national language

For each dependent variable, I will report coefficient estimates on the two independent variables “no pipe” and “weak ownership” using three model specifications, unless otherwise noted.

For example, in Table 1 looking at clientelism support, I start by analyzing data from the pooled IFLS for correlation to provide an overview of the association between the outcome behavior or attitude and informal housing conditions. Model (1) controls only the time effects of IFLS waves. The next Model (2) controls for geographic variables of region (to account for unobserved variation by regions, such as different political traditions) and urbanicity (urban administrative area). The Model (3) introduces time-varying individual demographic controls. The basic individual covariates are age, education attainment (measured as high school education), household size, and number of children in household. Household demographic compositions are viewed as key determinants of housing choice in housing economics. In addition, Model (3) also controls for recent migration and household formation statuses. Household formation and migration are life events that can create short-term disruptions on individual and household outcomes. By removing this source of variation, the model effectively compares only respondents in similar life situations in terms of migration (stay, short-distance mover, long-distance mover) and household formation status (newly formed household, existing household) in the same region.

Many studies have found informal housing residents’ willing participation in electoral clientelism using cross-sectional surveys. Using time-series data, I confirm the same finding, but only among people affected by a lack of basic services. Informal housing residents in “no pipe” housing are significantly more likely to say they consider monetary “gift” when choosing political candidates in municipal elections. Among those with weak tenure, I find that there is *less* likelihood of expressed support for electoral clientelism of this kind. The results indicate that informal housing in terms of infrastructure deficit is evidently associated with clientelism support, and that weak

tenure is negatively associated with this measure of clientelism (Table 1 Model (1)). Comparing Models (1) and (2) tells us to what extent a naïve correlation shown in Model (1) may be due to regional variations. Comparing Model (3) to (2) suggests the extent of demographic sorting and housing selection effects in the influence of informal housing on political behavior outcomes. The disapproval of clientelism among the “weak ownership” survey respondents stops being significant after effects of education (demographic controls) and recent migration are included. Subsetting the sample to remove rural respondents largely do not change results.

Class-based theories of slum dwellers’ political behavior suggest lower turnout as a result of marginalization. Table 2 Models 1-3 again indicates divergent effects by the type of housing informality on this key prediction. Informal housing residents in terms of weak tenure report significantly and substantially lower voting, but some effects are due to recent migration and demographic differences. Those affected by lack of infrastructure at home (who represent most Indonesian informal housing residents) likely do not vote at a lower rate than their peers in better housing. On the whole, evidence is weak on informal housing’s effect on people’s political behavioral exclusion from the state. While informal housing residents as a group are significantly and somewhat substantially less likely to turn out to vote in naive estimates, this pattern is largely compositional for those in infrastructural informality, i.e. individuals with education, economic and other demographic characteristics of low propensity to vote tend to find themselves in informal housing conditions.

Similarly effects were null on national election turnout (Appendix), and little evidence of informal housing households paying fewer taxes or paying more into social institutions could be found in the IFLS data. The strongest evidence in favor of alternative interpretations of informal housing’s effect(s) on political attitudes is shown in the results on national language use. I find large and robust positive effects of informal housing conditions on inhabitants’ use of the Indonesian language at home, implying significantly stronger feelings or practice of nationalism among this population, compared to people in formal housing conditions. The effects are also strong in both infrastructural and ownership types of housing informality.

The preliminary results here on clientelism and national language use suggest that housing informality does not necessarily turn voters in new democracies away from engagement with the (status quo) state. In this way, behaviors of clientelism can coexist with demands for the administrative state. The reasons for this pattern need more probing, but may be speculated as having something to do with people's decisions to move, how housing selection occurs in co-dependent decision structures related to opportunity seeking in jobs and migration, and the social milieu of informal residential neighborhoods, which tend to be lower density and peripheral in Indonesia. In short, while I find informal housing's partial links with clientelism and lower turnout, the results on national language use suggest that the empirical support is relatively strong on the little tested prospect of informal housing sector as conduit, or at least a corollary, of national integration.

Table 1.1: Estimated relationships between housing informality and electoral clientelism

	Gifts or transport money when electing a mayor		
	(1)	(2)	(3)
no pipe	0.0913** (0.0431)	0.0557* (0.0337)	0.0662** (0.0301)
weak ownership	-0.1211*** (0.0355)	-0.0814*** (0.0099)	-0.0307 (0.0579)
demographic controls	no	no	yes
IFLS wave FE	✓	✓	✓
urban FE		✓	✓
region FE		✓	✓
migration & hh formation FE			✓
AIC	75,245.0	74,433.5	64,851.9
Observations	59,395	59,395	53,417

Notes: Logistic regression models. Demographic controls are: age, high school education, household size and number of children under 15. Standard errors are clustered by IFLS wave, municipality, and household.

Table 1.2: Estimated relationships between housing informality and electoral participation

	Voted in last mayoral election			
	(1)	(2)	(3)	
no pipe	-0.1152*** (0.0244)	-0.1414 (0.0898)	-0.0558 (0.0391)	
weak ownership	-0.2454** (0.1155)	-0.1937*** (0.0717)	-0.1207*** (0.0161)	
demographic controls	no	no	yes	<i>Notes:</i> Logistic
IFLS wave FE	✓	✓	✓	
urban FE		✓	✓	
region FE		✓	✓	
migration & hh formation FE			✓	
AIC	45,870.4	45,558.4	37,350.5	
Observations	45,143	45,143	40,485	

regression models. Demographic controls are: age, high school education, household size and number of children under 15. Standard errors are clustered by IFLS wave, municipality, and household.

Table 1.3: Estimated relationships between housing informality and national language use

	Speak Indonesian at home			
	(1)	(2)	(3)	
no pipe	0.0739*** (0.0227)	0.2002*** (0.0519)	0.1468*** (0.0393)	
weak ownership	0.2703*** (0.0883)	0.1781** (0.0721)	0.1257*** (0.0339)	
demographic controls	no	no	yes	<i>Notes:</i> Logistic
IFLS wave FE	✓	✓	✓	
urban FE		✓	✓	
region FE		✓	✓	
migration & hh formation FE			✓	
AIC	117,990.0	112,840.5	84,253.6	
Observations	101,009	101,009	79,098	

regression models. Demographic controls are: age, high school education, household size, number of children under 15, and Javanese speaker. Standard errors are clustered by IFLS wave, municipality, and household.

1.5.2 Social and labor market participation

The results from clientelism suggest that the interests of people in informal housing in the recent decades in Indonesia are shaped by the collective experience of the need for residential services, more than by the individual interests around legal property rights. However, the collective forms of politics may be inward-looking and focused on the community, or more broadly aligned with the wider world. The story of national integration through urbanization and housing informality's role in facilitating people's movements suggests that those in informality should be active in labor market. By contrast, the story of "urban villagers" leads to predictions of rich but small and insular social world of the community, and relatively low participation in the broader labor market by those in informal housing.

Another important theory about informal housing to emerge over the decades of research was the notion that slum communities engage in self-help collective actions and foster strong social mobilization. However, I find mostly null evidence on this set of hypotheses. Informal housing residents are no more (or less) likely to participate in neighborhood-level community associations. That slum residents are on average as participatory as their counterparts in better housing may be itself surprising when considering the robust findings from the rich world that show homeowners to reliably participate more in everything from elections to community hobby groups.

On the other hand, I find that residents with insecure tenure (weak ownership) are significantly less likely to take part in a ROSCA, a specific (but one of the most versatile) type of informal collective action tool. This is consistent with the prediction that informality of ownership produces individualistic political attitudes. Unlike voluntary association participation or contribution to rituals and charity (Victoria A. Beard and Dasgupta 2006), ROSCA is a social institution where all members benefit equally and the monetary contribution is guaranteed to come back as a lump sum. It is a useful tool as a source of credit especially when banking access is limited. A common thread between this result and the earlier result of support for quid pro quo voting (clientelism) among informal housing residents is willingness or preference for

equal transactions. In other words, in ROSCA, there is no uncertainty in reciprocity and the social interaction is structured to benefit all parties.

Titling policy interventions in Latin America find support that housing informality may cause labor market under-participation because formalized squatter settlements result in higher employment. This relates to the class-based predictions of lower (and lower quality) labor market outcomes among the informally housed. Contrary to the expectation, I find no naive association between informal housing and lower labor market participation. Neither is informal housing associated with substantially lower quality employment for families, as household heads are less or no more likely to be informally employed when living in informal housing conditions. These results are suggestive of individuals and families moving into opportunity afforded by informal housing, where housing conditions may be inadequate but other types of public and private goods are accessible.

Table 1.4: Estimated relationships between housing informality and ROSCA participation

	ROSCA participation			
	(1)	(2)	(3)	
no pipe	-0.0839 (0.0561)	-0.0367 (0.0612)	-0.0457 (0.0470)	
weak ownership	-0.0689** (0.0331)	-0.0912** (0.0377)	-0.1217** (0.0573)	
demographic controls	no	no	yes	<i>Notes:</i> Logistic
IFLS wave FE	✓	✓	✓	
urban FE		✓	✓	
region FE		✓	✓	
migration & hh formation FE			✓	
AIC	120,183.8	118,700.7	89,555.2	
Observations	100,813	100,809	77,891	

regression models. Demographic controls are: age, high school education, household size and number of children under 15. Standard errors are clustered by IFLS wave, municipality, and household.

Table 1.5: Estimated relationships between housing informality and informal labor

	Household head is informally employed			
	(1)	(2)	(3)	
no pipe	0.0058 (0.0312)	-0.0770*** (0.0151)	-0.0431*** (0.0163)	
weak ownership	-0.1938 (0.1463)	-0.1420 (0.1342)	-0.1400 (0.0973)	
demographic controls	no	no	yes	<i>Notes:</i>
IFLS wave FE	✓	✓	✓	
urban FE		✓	✓	
region FE		✓	✓	
migration & hh formation FE			✓	
AIC	266,575.4	261,833.0	84,516.7	
Observations	195,229	195,220	66,424	

Logistic regression models. Demographic controls are: age, high school education, household size and number of children under 15. Standard errors are clustered by IFLS wave, municipality, and household.

1.5.3 Trust, migration, and residential mobility

The development of stronger identification with the nation often implies declining traditional political identities. Next, I present results on whether informal housing residents hold stronger pro-ethnic political attitudes (including pro co-religious political attitudes) using answers from the 2014 wave of the IFLS only. The questions on trust are only in the latest IFLS-5 wave, and thus the data for these results are cross-sectional. I include additional individual-level controls in order to remove more unobserved selection bias (religion, ethnicity, childhood education and economic background). In a common pattern as in the previous section on social participation, I find null effects of informal housing on neighborhood trust (willing to help people in this community) or mistrust (must be alert or I will be taken advantage). Thus, again, I fail to find obvious support for the urban villagers theory of high internal trust among people who are informally housed (either in infrastructural or ownership terms). On the more politically charged questions of in-group trust premium (trust people of same ethnicity/religion more), the estimated relationships are negative, although they fall short of statistical significance at 95% confidence.

In Indonesia, political tolerance of the Muslim majority toward minority religions is a particularly salient political issue, and increasingly so in recent years. The negative estimate of the association between informal housing and religious in-group trust is therefore particularly intriguing, even if shy of statistical significance. Recent historical political economy literature connects migration, diverse communities, and public goods attitudes including nationalism. In this light, I look into the heterogeneous effects of informal housing on trust attitudes by migration status. I divide the sample into stayers, short-distance movers defined as moving within a municipality, and long-distance movers as moving across municipalities and beyond. I find that the decreased preference for co-religious (or co-ethnic) people is strongest among within-city movers, suggesting residential selection.

Y = predicted probabilities of affirmative attitude on trust measures A–D

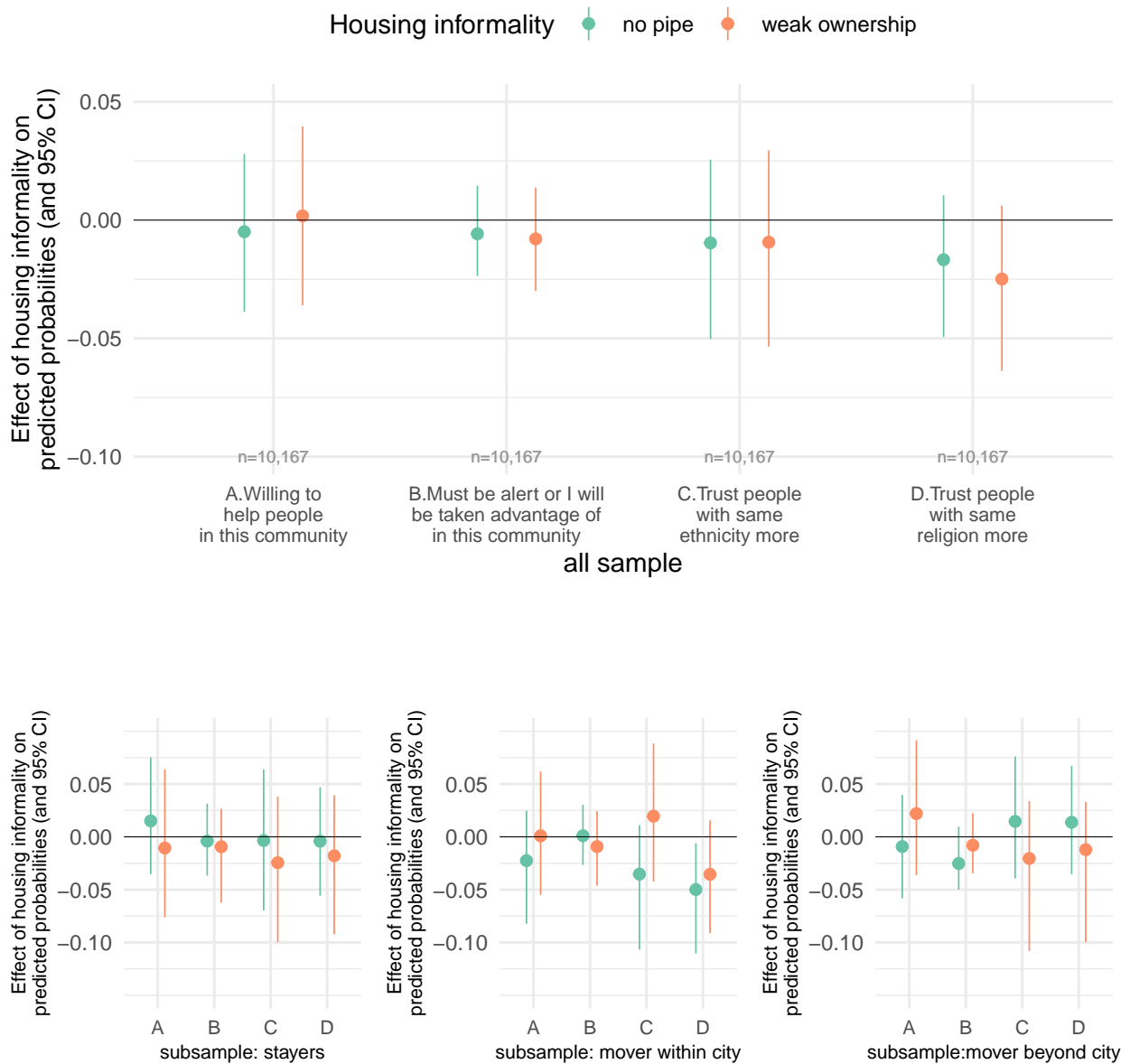


Figure 1-9: Housing informality and trust, by different measures and by household migration status

Note: IFLS-5 sample. Logistic regression coefficient estimates converted to probabilities. Regression controls for municipality-level location fixed-effects and individual-level plausible pretreatment covariates: gender, age, high school education, religion, ethnicity, childhood education background, and childhood economic background. Outcomes A and B are measures of generalized trust, outcome C is a measure of co-ethnic trust premium, and outcome D is a measure of co-religious trust premium. The upper figure shows results for the whole sample. The three lower figures show results for stayers (non-movers), movers within city (recent short-distance movers), and movers beyond city (recent long-distance movers).

The results show that those who live in informal housing are *less* likely to hold identity-based in-group trust, and that this correlation is concentrated among movers.

1.6 Chapter 1: Conclusion

This paper has tested the major hypothesized effects of slum housing on political and social participation in development with panel data from the Indonesian Family Life Survey (IFLS), a representative survey of a large and diverse developing society for 20 years. Together, the results imply no strong support for unconditional theories of political or economic marginalization. Correlation analyses suggested that electoral turnout was lower among those whose residence lacked piped basic services or secure tenure, but this was more due to compositional and selection effects. There is no indication that living in inadequate housing situations causes otherwise similar Indonesian voters to not participate in formal politics. Similarly, tax compliance and contribution to social institutions that potentially compete with the state showed no difference between formal and informal housing residents.

For future research, then, where results are most intriguing and merit further inspection seems to be at the intersection between clientelism and community institutions, and particularly attitudinal outcomes. Clientelism and identity politics are sometimes assumed to share an affinity, particularly where political parties and electoral appeals based on ethnicity or religion are common. Growing research is conducted in parts of Africa and Indonesia, where religious cleavage and political polarization are related. Against this backdrop, it is intriguing to find relatively robust effects in the IFLS data that (i) informal housing residents (no pipe) are substantially and significantly more accepting of clientelism (“transport money”), and (ii) informal housing residents (no pipe, weak ownership) are less likely to say that they trust people of same religion more. Perhaps relatedly, informal housing (no pipe) leads to significantly and substantially greater likelihood of using the national language at home.

Putting together these disparate but strong signs of evidence at large from Indonesia, it may be possible to start generating a new hypothesis centered on how informal housing conditions, especially basic services access, shape subjective interpretation of the meaning of participation in ways that both encourage and subvert democratic

development.

Chapter 2

Participatory Development and Political Leaders in Urban Informal Settlements: Evidence from Indonesia's National Slum Upgrading

2.1 Introduction and Research Question

“Participatory” or “community-driven” infrastructure and service delivery projects have become a new mainstream in development aid. Since the 2000s, major donors promote and implement ambitious programs aimed at community capacity building in poorer communities around the world, and many developing country governments have institutionalized the approach as a pillar of domestic poverty reduction strategies (Banerjee 2019). In recent two decades, the World Bank has allocated roughly 5-10% of its lending portfolio to community-driven development (CDD) projects in more than 78 countries (Wong 2012; Wong and Guggenheim 2018). I will use the World Bank’s term to denote this family of policies of highly decentralized delivery and bottom-up

capacity building in development. While “aided self-help” (Joshi and Sohail Khan 2010) and coproduction (Ostrom 1996) have a longer history, the present wave of CDD projects is unique both in scale, diverse contexts to which it is applied, and the normative objective of empowering the poor (Li 2007; Woolcock 2010).

In this paper, I draw attention to how CDD’s institutional designs create new points of interaction between the administrative state and informally organized institutions of the grassroots community. CDD projects typically feature a central (or external) funding source providing financing for large numbers of small community grants often in the tens of thousands across large geographies. This is coupled with explicit requirements of, and resources set aside for the support of, increased community decision making in project selection and implementation. CDD programs often prescribe establishing new community associations, mandatory consultative meetings, technical training sessions, and other steps. These frequently rely on community facilitators and other low-level professional staff closely supporting community-based activities (Mansuri and Rao 2004, 2013).

I explore whether CDD’s policy-induced relations and influence may in turn create new avenues and opportunities of political exchanges with lasting effects. Informal authorities and other types of community elites and influential individuals are likely to take up key roles during implementation to organize and mobilize community resources to meet policy requirements (Rao and Ibáñez 2005). Consequently, large-scale CDD programs may make community social structures systematically legible to the state (Scott 1998) and even formalize some. Cooperation and blurred responsibility between agents of the state and civil society at the grassroots level can be a source of policy effectiveness (Tendler 1997). But revealing community social structures to the state may also invite political recruitment and electoral clientelism down the road (Cruz 2019). In this scenario, CDD may reshape bottom-up governance without needing to fundamentally alter either the capacity of the state or the community’s underlying collective action potentials. Instead, the policy could leave a legacy by subtly affecting the mode and efficiency of state-society contact and coordination.

This paper focuses on community leaders in the context of CDD intervention,

and uses an original survey to document how community leaders in urban Indonesia experience CDD programs. Could participatory policy processes lead to the development of complementary links between the formal state bureaucracies and informal community authorities in urban informal settlement contexts, where the presence of the state is thought to be tenuous? The survey research seeks to isolate the effects of participatory program on leaders by sampling community leaders in urban wards that have implemented projects under Indonesia's ongoing National Slum Upgrading Program (NSUP, 2016-2022) and an otherwise comparable cohort of leaders, creating an "as-if random" setup.

Community leaders represent a subpopulation who are more likely to intensively experience CDD programs and also be consequential. The ability of streamlined CDD financing mechanisms to move funds quickly and flexibly to poorer areas in need is well documented (Banerjee 2019; White, Menon, and Waddington 2018), an advantage that is likely to have increased their usefulness in the development policy toolkit in the Covid-19 emergency and recovery. However, analysts disagree over the consequences of community capacity building. Supporters contend that CDD's mechanisms of institution building are still under-specified, with urban programs as an area where empirical data is largely missing (Wong and Guggenheim 2018; White, Menon, and Waddington 2018). Evidence synthesis hitherto has shown little support that CDD projects create measurable outcomes of citizen accountability and bottom-up power emphasized in social capital theories (White, Menon, and Waddington 2018; King and Samii 2014). Prior impact studies have focused on within-community dynamics, horizontal ties, and issues of elite capture in CDD's (e.g. Dasgupta and Beard 2007; Barron, Diprose, and Woolcock 2011; Mansuri and Rao 2013); limited studies examine how those working for the program subjectively experience these ambitious programs. In the case of the NSUP in Indonesia, it employs around 6,000 dedicated program facilitators and dozens of representatives in each of the approximately 11,000 targeted wards.

Studies of slum communities from Brazil to India find that varied informal social and political organizations, headed by community leaders who are also political

entrepreneurs of varying skills and backgrounds, attract residents' support (Auerbach and Thachil 2018; Gay 1994; Jha, Rao, and Woolcock 2007). Similarly in urban Indonesia, informal settlement leaders tend to perform highly salient roles solving their neighbors' collective problems, in part because of the insular nature of poorer (and poorly located) settlements wherein leaders possess rare education, employment, and other critical ties with the outside world (Logsdon 1975; Winayanti and Lang 2004; Guinness 2009; Kurasawa 2009).

The requirement of community-bureaucracy interactions and the degree of interaction vary by how each CDD program is designed and set up institutionally. Within the spectrum, the present NSUP can be considered a moderate and representative case. On the one end are social funds or social investment funds, popularized in Latin America in the 1990's - e.g. the Bolivian Social Investment Fund (SIF), Jamaica Social Investment Fund, etc. -, which are founded as an independent financial institution or otherwise unique legal entity, wherein community engagement is encouraged but accountability is uncertain (Tendler 2000). Another type of CDD programs may be highly complex multi-sector poverty reduction programs - e.g. Andhra Pradesh District Poverty Initiatives Project for India - aiming to build up community as well as civil society organizations through diverse pilot programs, including partnerships with the private sector, wherein evaluation becomes challenging.

More commonly, since the 2000's, many CDD programs are national programs of fiscal decentralization, channeling national government budget to local government arms through a series of coordination to ultimately produce community block grants, typically for building community-managed small infrastructure. This type of CDD programs, including national rural and urban programs implemented in Indonesia, may be considered systematic extension of the official bureaucracy into the community. Within this type, there are variations in how the community's receptacle is set up. In cases such as Afghanistan's National Solidarity Program and the *Twungane* in the DRC, new institutions are elected. Some do not set up new community bodies but work through the lowest level of official administrative units - e.g. Cambodia's Commune and Sangkat Fund, Kapit-bisig Laban sa Kahirapan-Comprehensive Delivery

of Social Services in the Philippines. Indonesia's CDD programs stipulate hybrid community participation models, combining new responsibility for existing lower level administrative units with semi-formal village (and neighborhood) consultative bodies (Guggenheim 2004). Other hybrid examples include Sierra Leone's *GoBifo*.

I hypothesize that procedural steps typically required of CDD projects may increase community leaders' political efficacy objectively and subjectively. I predict that political efficacy improvements on the part of the leaders may occur through the channels of i) greater political networks, ii) new skills and learning (individual efficacy), and iii) changed subjective perceptions about community collective action (collective efficacy).

Results from an original survey of 258 community leaders suggest modest effects. Broad political efficacy measures and attitudes such as support for democracy and belief about government responsiveness are unchanged by leaders' involvement in the NSUP projects. Leaders in treated communities report increased political contacts and public finance knowledge along with a substantial reduction in gender bias. There is suggestive evidence that increased vertical political contacts benefit highly educated leaders, while attitude change occurs in less educated leaders. Nevertheless, the differences are relatively small - urban community leaders in the sample are a highly educated group, have a high starting point in efficacy measures, and are universally relied upon by community members for daily problems. Interestingly, treated community leaders express greater neighborhood trust and enjoy substantially larger horizontal ties. In addition, with most of the treated leaders' increased political contacts concentrated on technocratic bureaucrats, and no effect on electoral officials or candidates, the concern for additional electoral clientelism appears low.

Overall, the findings suggest that procedural requirements of participatory development can help program effectiveness by filtering in already highly capable grassroots leaders and affecting a narrow set of skills and social views among these community elites, in effect improving public goods at the point of service delivery.

2.2 Hypotheses

I expect that CDD interventions such as the NSUP can affect community leaders' individual and collective, and objective and subjective, measures of political efficacy. The following exploratory hypotheses are examined:

H1: Participatory slum upgrading increases community leaders' sense of political efficacy.

H1_a: Participatory slum upgrading results in greater vertical political coordination. (Efficiency through bureaucratic and political access improvement at the lowest or informal level of governance)

It may be that CDD leaves only temporary and limited imprint on ordinary residents, but produces an enabling condition for better services by creating new access and linkages through community leaders to higher levels of government. Such vertical ties could endure beyond the intervention, and facilitate claim making on behalf of the community in the future. In urban informal contexts, CDD's main benefits may then be in bringing the formal state into informal settlements, initiating or strengthening the connection with leaders of self-organized groups based in slums and creating a pattern of channeling official resources through them. This hypothesis (*H1_a*) focuses on the fact that CDD may add to the key function of slum leaders scholars have identified, namely their connection to the external world (Auerbach and Thachil 2018; Winayanti and Lang 2004). Evidence supportive of this hypothesis may be observed if there are greater governmental contacts among community leaders after involvement in CDD projects.

Alternatively, it may be that CDD confers valuable objective skills to community leaders as an individual, boosting their sense of efficacy in how they see themselves as a capable representative and organizer of the community. In particular, CDD projects may provide rare hands-on learning opportunities for community leaders to become versed in the technical aspects of participatory project making, affecting their self-evaluation as a within-community expert on the relevant tasks.

H_{1b}: Participatory slum upgrading leads to learning of objective leadership skills by community leaders. (Individual political efficacy of community leaders)

Put differently, this hypothesis (*H_{1b}*) suggests that CDD is a field of learning by doing - a civic training ground, particularly for informal leaders. Research shows that exposure to diverse social environments through urban migration or labor market participation can turn low-resourced citizens into being more active and daring in interacting with the state (Kruks-Wisner 2018a). In urban policy, observers of an earlier generation of large-scale participatory slum upgrading programs such as Sri Lanka's Million Houses Programmes and Thailand's Baan Mankong city-wide upgrading have claimed that these programs distilled in community organizations a legacy of bottom-up engagement with the government through "learning by doing" (Boonyabancha 2005; Joshi and Sohail Khan 2010; Yap 2016). Such observations could be assessed more systematically by comparing leaders who are "treated" against a plausible cohort of "control" leaders.

CDD's effect on leaders' political efficacy could also be primarily subjective and indirect. Collective efficacy is a sense of one's capability arising from judgments about one's group's collective action capacity (Bandura 2000; Sampson, Raudenbush, and Earls 1997). Some of community leaders' sense of political efficacy may be contingent on what they see in the community, and CDD may change that perception.

H_{1c}: Participatory slum upgrading increases perceptions of broad-based community collective action capacity (collective political efficacy).

This may be observed by survey questions covering social cohesion measures such as trust in neighbors, frequency of personal everyday interactions, and situational efficacy questions that center on the community and expectations about how it will act. While CDD evaluations have shown null effects when measuring social cohesion outcomes about average or poor community members (White, Menon, and Waddington 2018; King and Samii 2014), this hypothesis (*H_{1c}*) posits that community leaders, by their intensive involvement, may experience a change of perspective or relations with regards to their fellow community members, implying that the reshaping of social capital by

CDD can occur among the leaders who are also community elites.

Lastly, community leaders are not a homogeneous group. There are differences in the degree of formal involvement with the government. In many developing societies, a cadre of community leaders are actually a standardized formal institution, playing a role alongside other grassroots leaders outside of the system (Rao 2005). Urban communities can host various leaders/active local citizens who play a leading role in community-based associational life and other civic activities. However, only formal community officials (urban ward head) and semi-formal leaders (members of the NSUP's citizen board of trustees) are regularly and heavily involved in the delivery of projects through the NSUP's participatory procedures. Therefore, I expect CDD's efficacy effects to be stronger among the types of leaders officially included, i.e. formal and semi-formal leaders.

H2: Participatory slum upgrading's effect(s) depends on the type of community leader, with formal and semi-formal leaders more affected.

2.3 Case: CDD and Slum Upgrading in Indonesia

CDD in Indonesia

KDP is not about how to help government agencies bring development to villages, nor is it a way to simply give resources to village organizations. The project focuses on the relationship between villagers and the state, and it uses the institutions of both. (Guggenheim 2004, 29)

The CDD model has been implemented in widely different and diverse development contexts globally and across Indonesia. Early development and impact documentation of the Kecamatan Development Project (KDP), Indonesia's rural block grants, was instrumental when the World Bank mainstreamed the CDD model (G. Davis 2004; Guggenheim 2021). The KDP in Indonesia started in 1998, and offered a proof of concept, runaway success case in terms of lending volume and knowledge output, and a fertile testing ground for various add-ons for the designs of CDD programming as a

pillar of the World Bank’s poverty reduction practice in recent decades (Guggenheim 2004; Li 2007). Starting from 600 *kecamatan* subdistricts initially, the KDP portfolio in Indonesia grew rapidly to over 25,000 *kecamatan*s by 2007. KDP also generated uncommonly influential studies (Pollock et al. 2015), particularly around government accountability in decentralized service delivery (Benjamin A. Olken 2010, 2007).

The large-scale KDP and its extensions across the diverse landscape of Indonesia, including in post-disaster and conflict areas, provided justification for the diffusion of similar projects across Asia and beyond (Banerjee 2019). Subsequently, by the 2010’s, CDD and CDD-like participatory model of community grants were often national governments’ flagship poverty reduction policy in countries from Afghanistan to Zambia, as well as a mainstay of governance programming by international aid donors. While Indonesia simultaneously implemented urban CDD programs albeit in more limited areas, open research was not conducted on the urban programs until recently (Schuler and Dwiyani 2012).

National Slum Upgrading Program (NSUP)

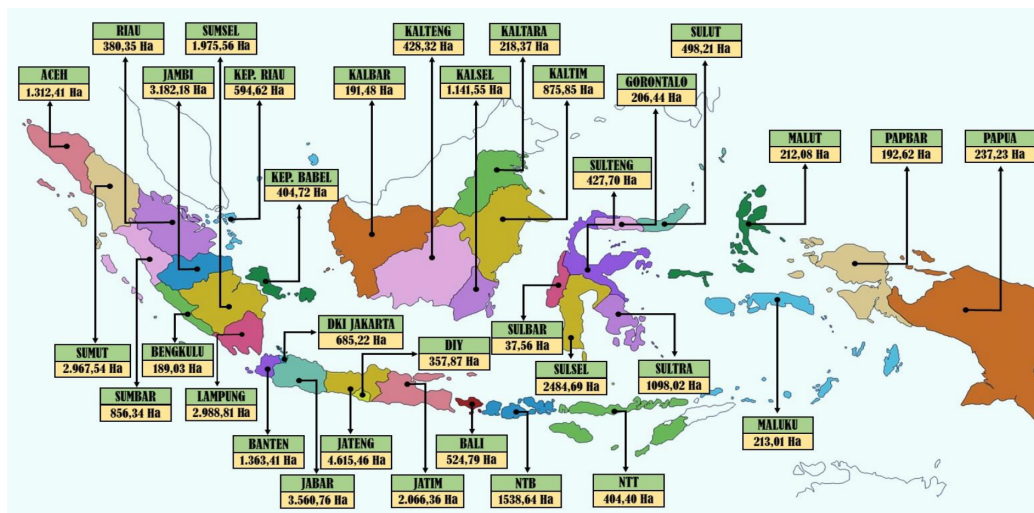


Figure 2-1: The NSUP Locations

Source: World Bank 2021

Note: The figure shows the breakdown of Indonesia’s slum area alleviation target of 38,431 Ha (National Mid-term Development Plan 2014-2019) and 10,000 Ha (2020-2024) across 34 provinces.

With approximately 8 million beneficiaries, the National Slum Upgrading Program (NSUP) is one of the largest urban CDD programs (Bank 2016). The NSUP is a policy and system of delivering urban infrastructure to “slum” settlement areas while building capacity in local governments and slum-affected communities. In 2016-2022, it plans to cover 11,000 wards in 269 Indonesian municipalities (out of 508 total). The NSUP is a prime contemporary example of a nationwide urban intervention with standardized participatory procedures and capacity building steps. It is also a “big push” policy to root out slums (Marx, Stoker, and Suri 2013) potentially generating lasting effects.¹

The NSUP’s uniformity and scale enable comparative studies of a set of informal settlement communities and comparable “control” communities focused on leaders. The implementation of NSUP combines community-level capacity building with public works through multi-level but ultimately simple and fast policy processes. The administrative level of target geographic units is *kelurahan*, the village-level (i.e. the lowest level) administrative areas usually translated as urban wards. Two types of community leaders in urban wards are required to play a role in the implementation of NSUP projects. First, urban ward heads are required to participate. Second, volunteer leaders form a new community group and are responsible for implementation. The NSUP’s community mechanisms requires the creation of a community board of trustees in target cities to start the community planning process. The members of the volunteer board may be considered semi-formal leaders since they play an officially recognized role but not as a bureaucrat and only in the limited scope of the NSUP and not other activities of the state in the community. In total, across Indonesia the NSUP involves more than 11,000 urban ward heads, approximately 100,000 persons volunteering as community trustees, and around 6,000 community facilitators employed by the provincial offices of the Ministry of Public Works and Housing who are responsible for

¹In 2016-2022, the Jokowi administration has set out a goal to eradicate slum housing conditions through a national plan of infrastructure investments. The broader policy objective is coined the “program 100-0-100” for the triple goals of 100% potable water access, zero hectare slum areas, and 100% sanitation access. “Slum” is defined as basic infrastructure deficit using set metrics. The NSUP is the main mechanism of delivery. 30.6% of Indonesian urban population live in slums – 45.3 million people (2018 estimates).

supporting the community leaders.

There are variations within the NSUP. As of June 2021, monitoring data indicates that the program has provided infrastructure to 7.2 million people across all of Indonesia's 34 provinces and given temporary work to 80,000 people in targeted slum communities, and resulted in the creation of slum task force in 80% of targeted local governments (World Bank 2021). But this is concentrated in around 30% of the more than 6,000 *kelurahan* urban wards for which the data is publicly available. In other words, while all communities in target cities have nominally set up community board of trustees, only 30% have actively completed the process of implementing at least one NSUP project in the implementation period of 2017 to early 2022 (time of survey data collection). Projects themselves tend to be modest in size, and are mostly road improvements, solid waste management systems, and water and sanitation systems.

Slums in East Java Province

Located in Java Island's eastern end, East Java is the second most populous province (population: ca. 40 million), hosting an equally large representation of NSUP target communities. Around 55% of people in East Java live in cities. Poverty rate of East Java is 11%, slightly higher than the national average of 9.8%. In 2018, 53% of East Java households in the bottom income quintile lacked access to adequate sanitation. Also in 2018, 13% of households in the regional capital of Surabaya did not have access to adequate sanitation.

East Java contains ten municipality-level districts that are either administratively classified as a city (*kota*) or more than 90% urbanized as of 2020. The largest city is Surabaya (population: 2.9 million), the regional capital, with its adjacent suburban regency of Sidoarjo (population: 2 million). I sample Surabaya and Sidoarjo municipalities in the survey of community leaders. Within the greater Surabaya region, there are diverse types of slum-affected communities in terms of light, moderate, and heavy degrees of slum and high to low density urban locations (Figure 2-2). The demographic and higher level political conditions of East Java is relatively homogeneous and stable, providing for relatively similar external political conditions for communities.

Regional political and social institutions are also well established and stable, reducing potential confounders.²

Three types of community-based leaders are relevant to this study: formal, semi-formal, and informal/religious leaders. For formal leaders, the focus will be on urban ward head (*lurah*), who is an official on employment with, and assigned by, the municipal government to the urban ward (*kelurahan*). They are career bureaucrats, and expected to have a modern bureaucrat's credentials such as education attainment and knowledge of government policies. What I call semi-formal leaders are community members elected to the community board of trustees, a voluntary but required body in the NSUP. Together with urban ward head, they are responsible for organizing community participation and input, including labor, throughout the project life cycle under the program design. Finally, informal community leaders in East Java are typically local religious leader/authority. They are neither elected nor selected, but may be a teacher (*Kyai*) in charge of nearby traditional religious boarding schools or other persons of religious knowledge (*Ustadz*) who may host reading groups. In this context, informal leaders also tend to be highly educated, owing to their extensive (religious) studies. They are in a position to teach and guide others on the matters of religious affairs, whether as a job or as a service to the community. As a respected voice in the community, they are also likely to have an outsized presence in CDD initiatives in the community.

²The political party PDIP (the party of President Jokowi) is considered a dominant political party in cities across East Java. The province is also the birthplace and stronghold of the Islamic social educational organization Nahdlatul Ulama (NU), which dominates rural constituencies in elections through its party PKB (Hefner 2000). PDIP and PKB are coalition partners, providing for stability (and lack of competition) in local electoral politics.

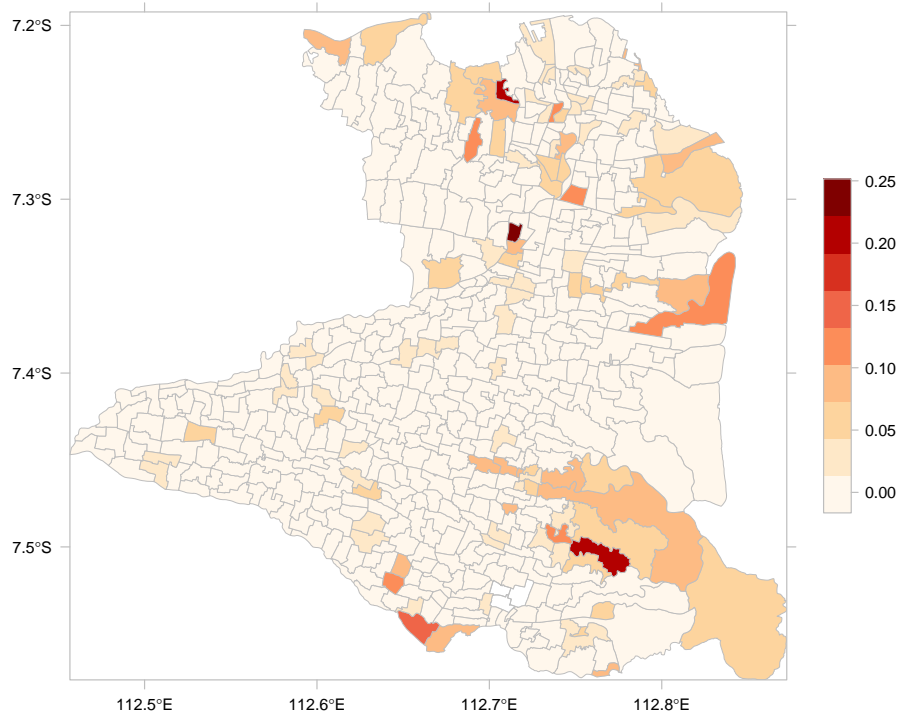


Figure 2-2: Slum Households Ratio in Baseline Administrative Data in Research Sites (Surabaya and Sidoarjo Municipalities, East Java, Indonesia)

Note: The figure shows the ratio of slum households as a proportion of total households across urban wards in Surabaya and Sidoarjo, the two municipalities in East Java and the survey research sites for this study.

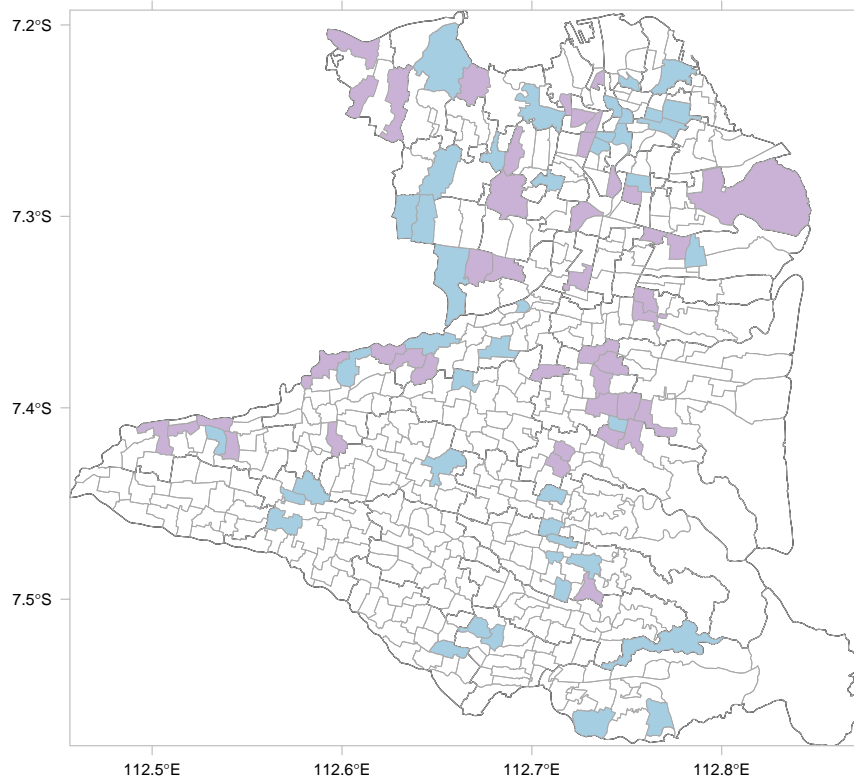


Figure 2-3: Community Sampling (n = 86, Surabaya and Sidoarjo Municipalities, East Java, Indonesia)

Note: The figure shows 43 treated communities that have received at least one NSUP upgrading infrastructure (in purple) and 43 control communities identified through a predictive modeling and matching approach (in blue).

2.4 Data

Survey design and sampling

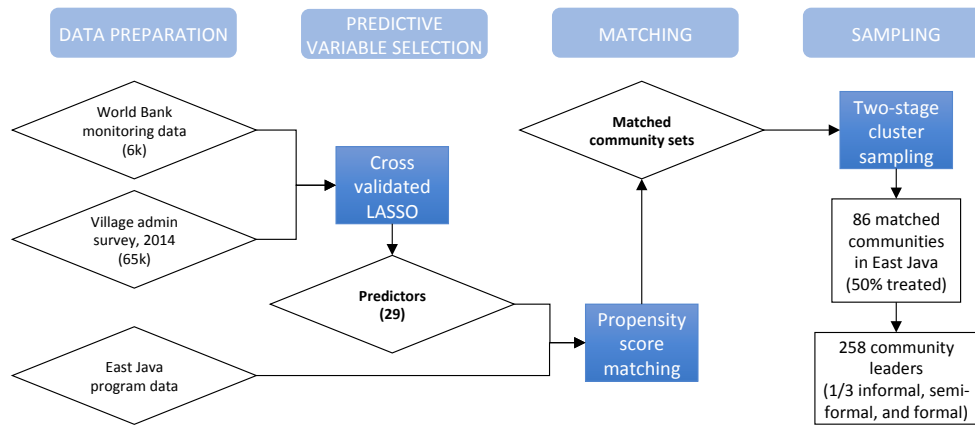


Figure 2-4: From Treatment Prediction to Survey Sampling

Note: The figure shows a visual representation of the steps using observational data and predictive modeling to identify a set of control communities for survey sampling

I test the theory using an original survey of community leaders in matched slum communities in the context of NSUP. I define “treatment” as infrastructure upgrading investment in the NSUP. This means that a “treated” community has received at least one physical infrastructure project in the NSUP participatory process, at a point during the program implementation years of 2017-2021. Therefore, in treated communities, community leaders have engaged in the implementation of participatory slum upgrading recently. Around 39.6% in the World Bank’s 6,193 communities are “treated” thus defined. In East Java, my focus and the most populous province in this dataset, 541 (28.8%) of the 1,883 sub-districts are “treated” units. Within Surabaya and Sidoarjo municipalities, the research sites, the program has 56 “treated” units (12.6%) out of 443 communities in total. Otherwise similar communities in the same city receiving or not yet receiving NSUP projects constitute the “treated” and “control” groups.

Comparing the baseline Figure 2-2 and 2-3 shows that communities that are both lightly and more heavily affected by baseline levels of slum characteristics have received NSUP projects. It is impossible to recover the treatment assignment process

with certainty. Using rich observational data on the pre-NSUP conditions of the communities, I combine predictive modeling and matching to find a compelling set of NSUP treated communities and their counterfactual “control” communities.

First, I leverage the 2014 village administrative data (“Village Potential” survey: PODES) and project datasets obtained from the World Bank to predict which targeted communities actually receive the upgrading infrastructure. I use cross validated LASSO for variable selection.

Second, I use a propensity score matching approach and the selected predictors to identify plausible control communities for every treated community in the research municipalities in East Java, and randomly select 86 matched slum communities where half has had infrastructure delivery. This results in relatively balanced treatment and control groups of communities on community characteristics including the baseline level of slum household prevalence in administrative data.

Finally, I conduct an original survey of diverse leaders in these communities by sampling three types of leaders: formal ward cadres, informal religious leaders, and semi-formal leaders i.e. member of the local community board of trustees established by the NSUP program. I develop a survey instrument to measure the political efficacy and experience of community leaders across areas directly and less related to slum upgrading to test my hypotheses, and also include benchmarked questions from established surveys. Figure 2-3 shows the 43 treated communities and 43 matched control communities wherein the community leaders were sampled and recruited to respond to the survey.

Who are the community leaders in Indonesia’s slum-affected communities?

Before presenting outcomes, I discuss the observed characteristics and general facts about sample community leaders. The next table summarizes the descriptive statistics of community leaders by treated and matched control groups. Leaders of a community that has received CDD delivery are “treated” and leaders of a community that has not yet received CDD delivery are “control”. The two groups of leader are similar across basic demographic characteristics. These urban leaders are similarly middle

aged (average ca. 50), predominantly male (82-88%), and highly educated (nearly 50% have a bachelor's degree). Reflecting the region of East Java, they are also an ethnically and religiously homogeneous cohort (overwhelmingly Javanese and Muslim).

The CDD and control group of leaders are, however, significantly different in characteristics that are not typically asked in evaluation survey questions. The differences seem to suggest that CDD leaders are more economically active/entrepreneurial, and more likely to be migrant. In the hard-to-observe characteristics of “bornhere” (native of the local community) and “secondjob” (have at least two income generating jobs), the two groups diverge. CDD community leaders are significantly less likely to be native of the community, and more likely to hold second jobs. Around four out of ten leaders in CDD communities were originally born in the same urban ward, while nearly six out of ten “control” community leaders were native. 41% of CDD community leaders said that they held additional sources of income than their primary job. The same figure was only 28% for the control group of leaders. Although not statistically significant, CDD community leaders were also somewhat more likely to have better housing assets. They were more likely than control group leaders to report having piped water access at home (22% vs. 16%), and own another home within the neighborhood for renting or other purposes (27% vs. 21%). It is possible that these assets create self-interested motivation for semi-formal leaders to volunteer time, efforts, and other personal resources into infrastructure upgrading. But such a dynamic does not explain the difference between treatment and control groups.

Comparing my urban leader sample with nationwide statistics of village level (formal) leaders across Indonesia, the urban leaders are somewhat older and more female than their rural compatriots. Urban community leaders' education level is also far higher than average Indonesian citizens (less than 10% have university education), a fact other scholars of slum leaders have also reported in the past (Auerbach and Thachil 2018; Kurasawa 2009). These facts imply a high starting point in terms of baseline skills for capacity building in urban programs affecting elites, even in neighborhoods with concentrated poverty.

Table 2.1: Descriptive Statistics of Leaders in Control and Treated Sample Communities

	mean_control	mean_treated	difference	t	p
Basic demographics					
age	52.87	50.88	-1.99	-1.87635	0.06412
female	0.12	0.18	0.05	1.24939	0.21503
married	0.97	0.91	-0.05	-2.02308	0.04628
islam	0.99	0.98	-0.01	-0.58529	0.55994
javanese	0.95	0.93	-0.02	-0.48646	0.62792
educ_college	0.47	0.50	0.03	0.50209	0.61694
Additional background					
bornhere	0.57	0.43	-0.15	-2.29415	0.02431
working	0.87	0.84	-0.03	-0.70565	0.48238
govtjob	0.39	0.36	-0.03	-0.91943	0.36053
secondjob	0.28	0.41	0.13	2.39205	0.01901
homeowner	0.84	0.85	0.02	0.30708	0.75955
secondhouse	0.21	0.27	0.06	1.19769	0.23445
pipewater	0.16	0.22	0.06	1.03504	0.30366

Note:

What do community leaders in Indonesia’s slum-affected communities do?

What role does a community leader in Indonesian slum-affected areas usually play, particularly for those in the community seeking aid? I asked an open-ended question “Sometimes people face problems that they cannot solve by themselves, and they take these problems to community leaders such as yourself. In the last 12 months, what problems or issues did community members most often come to you for?” Respondents could freely mention three items in the order of most often to the third most often. Food (including subsidy and food aid) and cash were by far the most common help sample community leaders gave to community members, followed by job access. Beyond these, diverse items were asked of community leaders, including disaster aid, solution to trash collection issues, obtaining government documents and benefits, and medical access. But request for help with disputes, both within family or between households, rarely happened. The image emerging is a relationship between leaders and community members that are largely involving material and pragmatic needs and concerns, rather

than the more traditional multi-faceted patronage relations (Scott 1972).

2.5 Results and Discussion

Political efficacy and attitudes

Now I return to main results estimating CDD's effects on urban community leaders. Figure 2-5 estimates how being community leaders in communities that recently implemented at least one CDD project affects the likelihood of affirmative response to survey questions of individual political efficacy and attitudes. The same figure 2-5 also shows estimated heterogeneous effects by leader types by showing the estimates of interaction terms between leader type (semi-formal, formal) and CDD treatment. All estimates control for basic demographic and additional controls of being born in the ward and having a second job.

Broad measures of individual political efficacy and key attitudes do not appear to change. The only individual attitude with almost significant difference concerns gender and politics, where there appears to be a reduction in bias. Namely, CDD is associated with a reduction in leaders who say gender is a factor to consider when evaluating political candidates. Apart from gender attitude, CDD does not appear to affect commonly used political efficacy and attitude measures, from political interest (e.g. "I understand most important issues"), democracy support ("Democracy is the best form of government"), to trust in incumbent ("I trust President").

Like other CDD programs (Beath, Christia, and Enikolopov 2013), the NSUP promotes gender inclusivity as a key normative pillar. That women should play a fair role in public leadership, express their own concerns, and be taken seriously, is an idea integral to the program. Although the NSUP does not impose gender quotas on its citizen trustees (semi-formal leaders) or meeting participants, program rhetoric, documentation, and, perhaps most importantly, community facilitators all encourage equal participation while emphasizing program benefits for women. The finding here conforms to what has already been found to be a pattern in CDD evaluations from around the world (White, Menon, and Waddington 2018). Being an independent

survey, the result present less of a concern for social desirability when respondents may tell project implementers what they want to hear (Mansuri and Rao 2013).

In general political efficacy terms, CDD is clearly not a transformative political experience for community leaders involved. However, the absence of broader effects may not be surprising given that political efficacy does not shift quickly in normal circumstances, and also that community leaders' efficacy measures begin from an already high starting point, limiting the scope of possible change. For example, support for democracy is at above 90%. Incumbent support is also high in East Java (President Jokowi won the province by 70% in 2019). In line with their high education attainment, answers to political interest and other measures of efficacy are also high regardless of treatment status.

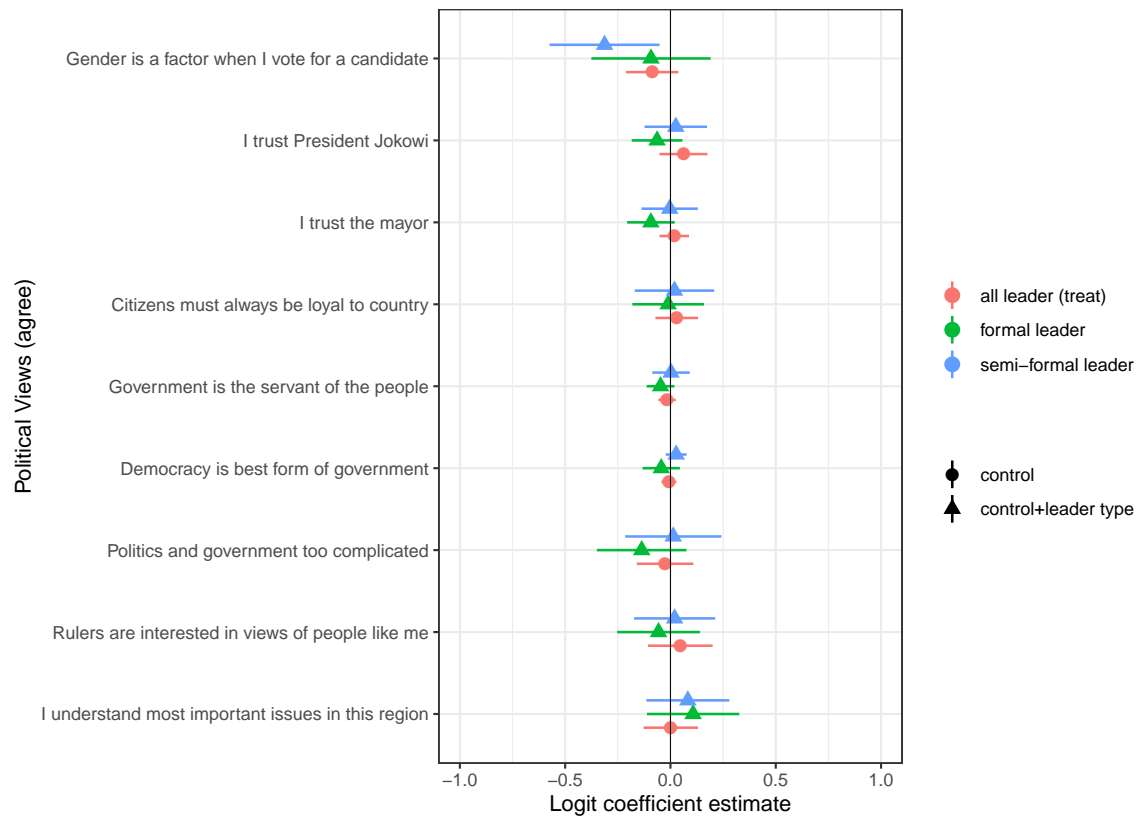


Figure 2-5: CDD’s Effects on Community Leaders’ Political Attitudes (Individual Political Efficacy)

Note: The figure summarizes estimates of CDD’s effects on whether community leader respondents agree with statements of positive political interest, preferences and trust in government. It also shows heterogeneous effects by leader types (formal and semi-formal leaders, with informal leaders as the reference category). Estimates are based on a logistic regression model with standard errors clustered by community and leader type; bars represent 95 percent confidence intervals.

Political networks

Next, I assess whether the NSUP increases political efficacy of community leaders by improving their vertical political contacts and connections. Figure 2-6 presents limited support for Hypothesis $H1_a$ (Participatory slum upgrading results in greater vertical political coordination). The figure reports logistic regression estimates of CDD's effects on whether a community leader has had regular (at least monthly) contacts with government officials in bureaucracy, elected offices, or other agents. It shows increased contacts of CDD community leaders with bureaucratic agents but not other types of political resources.

Over the prior 12 months, community leaders in treatment groups are significantly more likely to have had regular contacts with CDD implementers such as community facilitator (CDD program facilitator), staff of the Ministry of Public Works (chief implementing agency), and public works contractor. There is also a slight increase in contact with elected representatives (local and regional legislative representatives), and a possible reduction in contact with the mayor.

The increased contacts with formal government representatives tend to be more pronounced among formal and semi-formal leaders, as expected in $H2$ (Participatory slum upgrading's effect depends on the type of community leader, with formal and semi-formal leaders more affected). Formal and semi-formal leaders in treatment group also report significantly higher frequent contact with subdistrict heads, another bureaucratic level. There is no effect on contacts with political candidates. These results paint a picture of mostly bureaucratic and technocratic program implementation, unaffected by local electoral politics, but also not necessarily strengthening the coordination between city governments and communities. In the case of Indonesia's slum upgrading, CDD creates new contacts with public works bureaucracy

An interesting consideration is the role of community facilitators. More than a third of community leaders in treatment group report being in contact with or meeting the community facilitator employed by the NSUP at least once a month regularly. What to make of these frequent interactions? One interpretation is to speculate that

the frequent exchanges with program facilitator can explain the program's effect on gender attitudes. Review of CDD programs around the world suggest that facilitator quality separates well designed programs from those that do not fit local contexts as well, something that demands further investigation.³

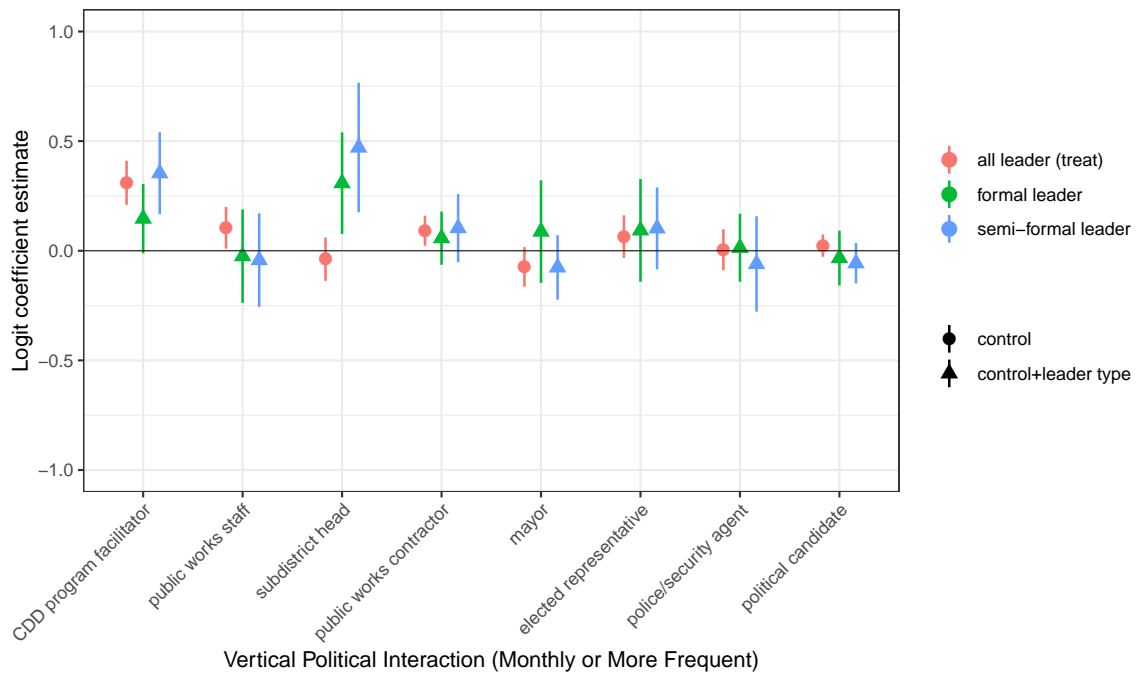


Figure 2-6: CDD's Effects on Community Leaders' Political Connections
 Note: The figure summarizes estimates of CDD's effects on whether community leader respondents has regular contact with government officials in bureaucracy, elected offices, or other agents. It also shows heterogeneous effects by leader types (formal and semi-formal leaders, with informal leaders as the reference category). Estimates are based on a logistic regression model with standard errors clustered by community and leader type; bars represent 95 percent confidence intervals.

³Observers remark that "These trainers, anthropologists, engineers, economists, and accountants must be culturally and politically sensitive charismatic leaders" but are also the most junior and worst paid member of staff (Mansuri and Rao 2013, 97-98).

Skills and learning

The next set of results concern objective skills that CDD may train community leaders in and enhance their sense of political efficacy. Figure 2-7 examines if, and what kinds of, community leaders' skills are impacted by participation in CDD implementation. Similar to previous results, CDD's influence is narrow and specific to the program's emphasis. The skills highlighted in CDD policy processes are mainly about facilitation and knowledge concerning program processes.

Survey questions asked to what degree leaders agreed with statements about their own capacity across nine dimensions. Statements typically started with "I am good at..." or "I know how to...", and asked respondents whether they agreed strongly, agreed, disagreed, or disagreed strongly. These skill areas ranged from public finances ("I feel that I have a good understanding of how local government budgeting works") to a grasp of the community's needs and vulnerability ("I understand the needs of everyone in my community, such as who is in need of economic assistance, mental health help, etc."). Two other statements sought to measure (high) self-evaluation of personal capability by asking about career ambitions. These concerned whether the community leader respondent had an interest in running for an elected office, or believed they would like to start a business because they had what it took to be successful.

These measures of program-relevant practical skills were often correlated with college education, an indication of pre-existing high general skills. Community leaders also tended to consider themselves at least somewhat skilled across all skill areas asked. Variations arose nevertheless when looking only at "strongly agree" responses, which I interpreted as highly skilled (Figure 2-7 right side). Overall, CDD's role as a driver of capacity building and a training ground of pragmatic political skills is not clearcut. There is suggestive indication that skills effects are more pronounced among formal leaders (urban ward heads). Urban ward heads in treatment communities are likely to be more confident (strongly agree) that they are capable of public speaking, mediating disagreements over what the community wants, and who to request assistance from

at the city level when the community is in need. Being in a community with recent CDD implementation also appears to slightly diminish grassroots leaders' interest in running for elected political offices. On the whole, results suggest that the NSUP does not make leaders significantly more capable (by self-assessment) in many skill areas that they may have "practiced" through involvement in the program, except in the narrow domains of public finances and their own community's needs.

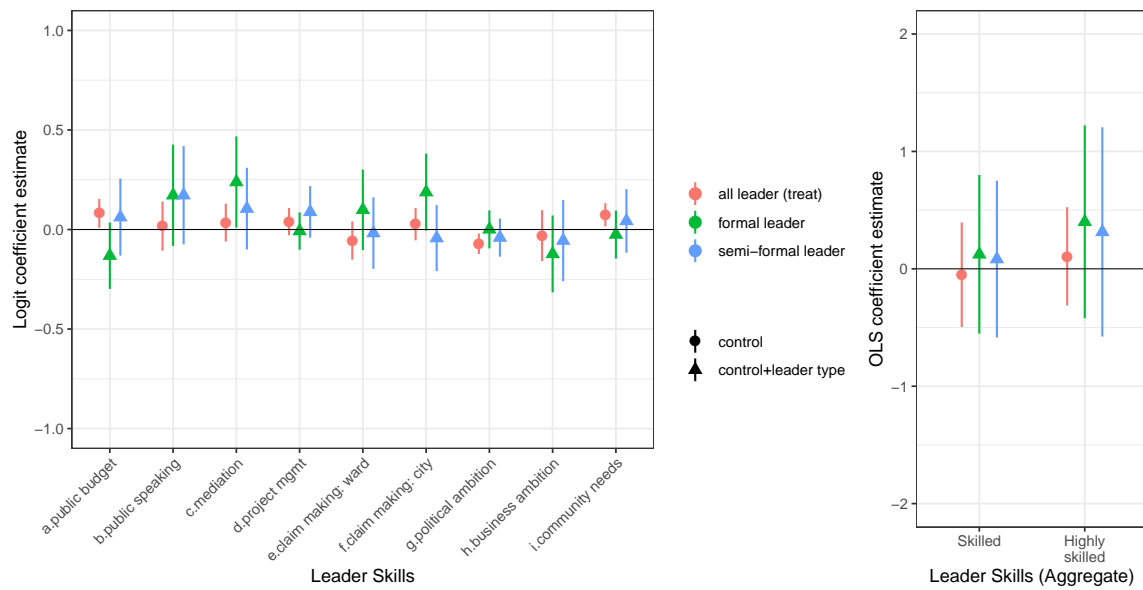


Figure 2-7: CDD's Effects on Community Leaders' Skills

Note: The left figure summarizes estimates of CDD's effects on program-relevant skills based on responses of "strongly agree" to skills statements. Estimates are based on a logistic regression model with standard errors clustered by community and leader type; bars represent 95 percent confidence intervals. The right figure shows estimates of CDD's effects on an index aggregating all the program-relevant skills, based on the number that respondent leaders answered "agree" (Skilled) or "strongly agree" (Highly Skilled), based on an OLS model. Both figures also show heterogeneous effects by leader types (formal and semi-formal leaders, with informal leaders as the reference category).

Social cohesion and collective belonging

I find more consistent support that participatory slum upgrading is associated with higher social cohesion among treated community leaders in the context of Indonesia's NSUP. Figure 2-8 demonstrates that community leaders in treatment group report higher survey responses on neighborhood trust, a sense of shared values, as well as social cohesion as measured by frequent daily contacts with people (more than 10 daily).

Another question looked at community leaders' horizontal ties in terms of digital social networks, an increasingly important and integral part of people's everyday lives. Many neighborhood and block associations in Indonesia operate WhatsApp groups for routine communication. Virtually all sample community leaders used WhatsApp, the dominant messaging app in Indonesia. Figure 2-9 shows that community leaders in CDD communities were likely to report significantly larger online networks measured as the size of the largest WhatsApp group they were members of. The reported difference in average largest WhatsApp group size was nearly 30.

The key question may be if the larger horizontal ties are caused by the CDD intervention, or a pre-existing characteristic resulting from the sorting that occurs by some leaders voluntarily engaging with the program. Available information is more supportive of the latter interpretation. CDD and matched control community leaders are different in non-obvious characteristics, such as being born in the community or being busier/more active economically by having a second job. The role of semi-formal leaders (members of the citizen board of trustees in each community) in the NSUP is deliberately voluntary and without financial remuneration in order to motivate more altruistic individuals to join.⁴ The survey results on social cohesion and horizontal ties strikingly support that the NSUP engages community leaders who are optimistic about their neighbors.

While citizen boards were set up across all target communities for baseline assessment, the variations in the implementation of project delivery and other delays may have caused community leaders in control communities (which never saw a project

⁴Author interview, 25 August 2021.

up until the time of survey data collection) to drop off, creating a difference with the treatment communities.

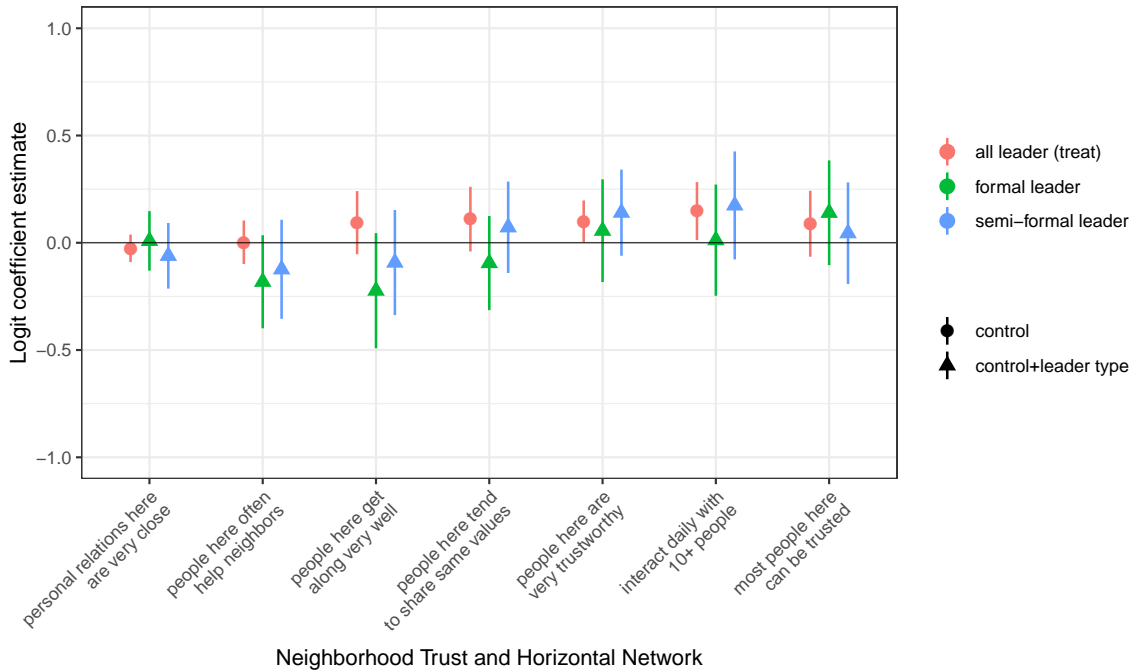


Figure 2-8: CDD's Effects on Community Leaders' Social Cohesion Measures

Note: The figure summarizes estimates of CDD's effects on whether community leader respondents affirms positive statements about social cohesion, including trust toward fellow community members, a subjective sense of shared values, and having highly frequent everyday interactions with people (more than 10 people daily). It also shows heterogeneous effects by leader types (formal and semi-formal leaders, with informal leaders as the reference category). Estimates are based on a logistic regression model with standard errors clustered by community and leader type; bars represent 95 percent confidence intervals.

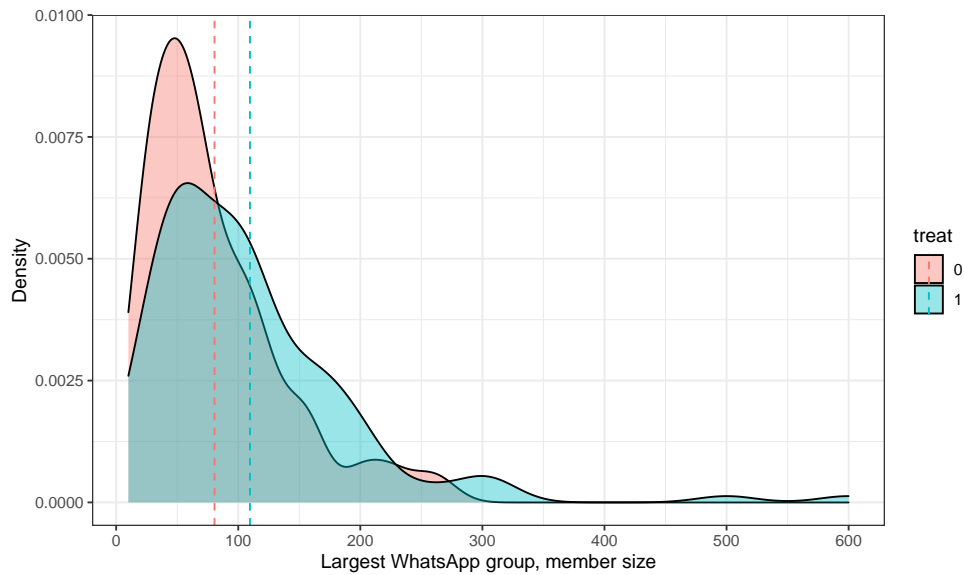


Figure 2-9: Community Leaders' Online Personal Network Size
 Note: The figure shows the distribution of leaders' responses to the question "How many members are in the largest WhatsApp group that you belong to?" by CDD treatment status. It suggests that community leaders in communities with CDD implementation belong to online networks with significantly larger membership (avg. 109.6), compared to leaders from matched control communities (avg. 80.6).

2.6 Chapter 2: Conclusion

While CDD projects are an effective and increasingly popular method of service delivery in development, scholars disagree over the consequences of community capacity building. Focusing on underserved urban informal areas in Indonesia, I use an original survey to probe community leaders as a consequential group and an overlooked avenue of CDD impact. In the context of Indonesia's NSUP, whether community leadership in poor urban areas not only affect program outcomes, but is itself changed by CDD program designs is this study's main question. Survey results suggest limited evidence that CDD may leave lasting impacts when the elite segment of the beneficiary community experiences capacity building.

Beyond the specific policy context of Indonesia's NSUP, the findings of this paper are relevant to three research extensions for the future. First, it further confirms limited

impacts of international aid programs that explicitly use training and facilitation to empower poor communities aiming to build civil society from the ground up. Community leaders represent a subpopulation who are more sensitive to the CDD intervention, even as their transformation may be more consequential to a political system. Intensively involved in the delivery of CDD projects, community leaders/elites are well positioned to gain skills and intangible resources from what the program has to offer. Nevertheless, the picture that emerges is that of marginal capacity building effects, with the program drawing on existing strength of social capital in the community as embodied by leaders. Future research may turn toward beyond the scope of communities to examine alternative avenues of policy-induced institutional change. For example, such research may investigate inside the bureaucracy (Mansuri and Rao 2013), examining topics such as whether facilitators trained in the (repeated) CDD programs may differently develop career, or CDD may facilitate within-government coordination gains, and whether there may be more optimal policy designs to create within-government spillover effects through modes of development implementation.

Second, in addition to being more resourceful individuals, community leaders act as a nexus connecting the administrative state with organized elements of grassroots urban society, one that can evolve and become more (or less) democratic over time (Read 2012; Kurasawa 2009). Their role as gatekeepers and intermediary suggests both opportunities and risks. If community leaders are empowered by CDD projects, promoting the CDD approach in development may be enhancing, or enabling, a convergent relationship (Helmke and Levitsky 2004) between the formal state's (public goods provision) apparatus and communities' informal collective actions, thereby strengthening both institutions. Yet revealing community social structures may invite clientelism and other illegal political recruitment down the road (Cruz 2019). Results from this research suggest that worries of additional clientelism are relatively unwarranted, and that better understanding is needed around when and how nonpolitical bureaucrat-citizen cooperation develops, particularly in contexts of public goods in poorly serviced areas and how the competitive and fluid nature of urban political leadership intersects with this dynamic.

The third and related further area of research is in describing the plural nature of political networks and resources in lower-income urban communities in developing societies and their consequences. In “slums”, informal and formal leaders of varied skills act as political entrepreneurs vying for citizens’ support and respect. While much of the growing literature in comparative politics focuses on slum leaders’ role in electoral politics and clienelism, they are involved in more varied activities both public and private, including public service delivery, pandemic control, enforcing social control, and provision of informal credit and social safety net. The policy context of the NSUP in this study’s instance appears to be able to encourage participation of heterogeneous leader types and allow them to sit at the same table, but other policies may not. Additional research should uncover how policy implementation is shaped and shaping the incentives and conditions of competition and cooperation operating through urban informal political and social networks of increasing importance in developing regions.

Chapter 3

The Strength of Weak Ties in the Informal Economy? Evidence from Informal Workers' Voluntary Associations and Compliance Behavior in Urban Indonesia during the Covid-19 Crisis

3.1 Introduction and Research Question

Earning livelihoods in jobs without the benefits of labor regulations or employment-based social insurance, informal workers are a precarious category of workers. They total around 2 billion people globally and represent the majority of working population (ILO 2018). They also embody a challenging area of citizen-state relations in development. Often, these unprotected workers are wary of authorities, and do not comply with existing labor and urban regulations.

Across Asia, Africa, and Latin America, lower-income governments have long

struggled to obtain compliance to laws and rules governing everything from public space usage to taxation from their citizens increasingly toiling beyond the state's reach in dense urban streets, homes, and markets. Since 2020, the Covid-19 pandemic has heightened governments' dilemma over how to win compliance from informal workers on public policies that require citizens to change their behaviors at personal costs.

A promising avenue of interventions in this context is to examine if social levers within the informal economy can effect pro-public health behavior changes, instead of, or in combination with, blunt enforcement tools such as fines and punishment vis-à-vis this critical category of workers caught in the global pandemic. In this paper, I ask whether informal workers' voluntary associations - relatively weak, dispersed, and small membership groups organized around particularistic interests in specific informal trades, often in urban street corners and neighborhoods, or virtually as WhatsApp groups - can mediate compliance to a pandemic lockdown policy.

Unregistered informal workers are an especially difficult target of the state's outreach at encouraging voluntary compliance to controversial public health measures, including economic lockdowns and social distancing. To start, accurate data for monitoring and effective incentives both tend to be missing vis-à-vis this population. By definition, individuals untethered to employment-based public benefits have more reasons as well as the means for noncompliance to restrictive rules on their economic activities, compared to formal workers who are already in the system, compliant with existing rules, and can access pandemic relief benefits readily and even electronically (Hummel et al. 2021).

Economic hardship may be making individual informal workers even more likely to defy restrictions and continue working if they can. In the current pandemic, the world has witnessed devastating disruptions in predominantly informal job sectors like petty services and retail (ILO 2020a). This has made families reliant on unstable incomes from such activities desperately poor and vulnerable (The Lancet 2020). Authorities in developing nations, for their part, do not have the capacity or political will to achieve a high level of enforcement regarding their citizens' micro economic activities. When it comes to regulating the informal economy, imperfect enforcement is the norm

rather than the exception (Kanbur 2009; Holland 2016).

Existing scholarship on the politics of informal economic sectors emphasizes the lack of strong (formal) labor movements such as trade unions and groups, and interprets this as absence of organized collective action that can otherwise facilitate effective engagement with the state. The literature's characterization of informal workers' interests as disorganized and fragmented leads to pessimistic predictions for socially promoting compliance in the pandemic context. But formal labor organizations need not be the only social institutions to wield influence over the informally employed.

In contrast, Granovetter's theory of weak ties demonstrates that weak social networks can confer informational advantage and shape individual and collective decisions, suggesting the overlooked influence and efficacy of loosely organized and fragmented but cross-cutting connections (Granovetter 1973, 1974, 1982). In Boston's ethnic neighborhoods of the past as in today's rapidly developing cities, low-resourced individuals and families often can tap into varied social networks that structure information availability and behavior choices. Such granular but patterned social interactions in informal economic sectors could determine group-level and larger outcomes, and may shape policy outcomes in the course of a pandemic. This is what I test in this paper.

Encouraged by Granovetter's principle and empirical ethnographic observations, I hypothesize that messages passed in small informal work-based voluntary associations enjoy the members' endorsement effect, which signal that information is of high quality. I predict that this endorsement effect can translate into greater voluntary compliance even among workers in the developing world who are skeptical of authorities. Using an original mobile app-based survey and embedded survey experiment varying the source and substance of information about local pandemic rules on a diverse sample of 1,085 Indonesian informal workers, I show quantitative support for my theory. I then use qualitative evidence to interpret the results and describe the nature of voluntary associations in contemporary Indonesian informal labor sectors, and examine the sources of sectoral and individual heterogeneity in "weak tie" collective actions. Finally, I discuss future research on the political role of these informal labor-based

collective action groups and their limitations on government effectiveness in urban contexts of development.

Political economy of informal workers' collective action and social ties

Established views in political economy of development tend to focus on informal workers' lack of representation in formal labor movements and organizations. The mainstream theory sees low collective action capacity of the large informal labor force as an institutional obstacle to effective state development in many middle-income economies. While this scholarship emphasizes the role of trade unions as highly institutionalized mass interest groups that have contributed to the development of the national state in many rich democracies, the research agenda overlooks alternative forms of social organizations observed in the informal economy, and under-explores situations in which these alternative and smaller economically oriented collective action institutions may determine political outcomes in today's developing economies.

Looking at state development outcomes (including welfare state expansion), existing research argues that the heterogeneous interests of informal workers and their lower capacity to organize collective actions, relative to the better educated employees in formal sector jobs and large firms, undermine the overall labor mobilization (as evidenced by the low union coverage ratios in developing economies). As a result of thus weakly institutionalized coalitional politics, ultimately the welfare state and the regulatory state in developing regions remain underdeveloped (Rudra 2002; Doner and Schneider 2016).

Empirical evidence is also lacking in the literature for different reasons. A growing set of recent empirical political behavior research explains cases in which groups of informal workers are already organized in more formal types of organizations, such as large (often government-sanctioned) markets in urban centers, or by being connected to populist political parties. Data collection and hypotheses are disproportionately oriented toward formal and strong ties, and the findings often confirm the importance of top-down interventions. This political behavior research have asked: when and under what conditions may coherent collective behavior and institutions develop in

informal economic sectors? It finds that top-down enforcement and other forms of external, often coercive, political intervention by the state and those connected to the state to be the necessary ingredient for orderly collective action institutions to emerge in informal sectors. These unique situations arise when the state intervenes to regulate (Goodfellow 2015) or manage a polluting and problematic informal trade (Hummel 2017), when corrupt politicians attempt to shake down market traders (thereby provoking a collective reaction for self-governance) (Grossman 2020), or when clientelistic political parties systematically incorporate or coopt those in the informal economy for electoral gains (Levitsky 2001; Holland 2016).

Hence, the new line of research and evidence often sheds light on already highly politicized settings. It has relatively little to say about the existence of more autonomous and low-key varieties of self-organized groups of informal workers, which may be found more widely, outside of top-tier cities or geographically concentrated economic sectors (e.g. domestic help and home-based micro manufacturing, rather than wholesale market retail or street vending in touristic urban centers). The underlying, and perhaps untested, assumption shared with the political economy view is that informal economic activities tend to be chaotic, and that informal workers are weakly organized and not very successful at sustaining collective actions at the baseline, absent external shocks.

A broader understanding of the political effects of the informal work force's social organizations is needed to inform not only political science theory but also policy making. Added to the long-term concern of state capacity and institutional development, the current pandemic has injected new urgency to the notion that the social organization within the informal economy spells trouble for state capacity. It became obvious as soon as Covid-19 arrived in poorer countries in early 2020 that national governments and their health authorities needed to be able to convince informal workers if they were to succeed at the immediate policy goal of pandemic containment.

The nature of social ties and social institutions among informal workers is a policy concern in this context as it could shape the high stakes state-citizen public health

policy communications. Indeed from Europe to North America, research shows that variations in social capital and the types of social capital found in local communities are associated with citizens' differential compliance to Covid-19 mitigation rules (Barrios et al. 2021; Ding et al. 2020). Public health policy research in weak state contexts also shows that trust in information source facilitates compliance to costly policies, where the trusted sources may be local informal authorities rather than the government (Tsai, Morse, and Blair 2020). Yet, in the informal economy, where scholars have linked the fragmented and heterogeneous characteristics of the economic sectors with the absence of established labor-based collective action institutions (as mentioned), existing literature fails to suggest obvious sources of trusted non-state messenger on restrictions on livelihoods.

I argue that, not labor unions, but alternative forms of social networks and informal collective action groups around economic interests in informal job sectors could, and frequently do, shape state-society relations around de facto regulations and quotidian interactions of street-level enforcement. Classic sociology scholarship by Granovetter demonstrates that weak social networks can surprisingly drive key individual and collective decision-making in the labor market and other contexts by conferring informational advantage (Granovetter 1973, 1974, 1982). The presence of weak tie networks is empirically observed in today's developing world. A rich body of anthropology research from cities around the developing regions - from Beijing to Bangkok, and from Cairo to Jakarta - describe the everyday economic life of many citizens who are poor, migrant, or in adjacent social situations; these studies argue that what seem like ad hoc and transient networks to outside observers are in fact the vital social fabric and resources on which informal urban livelihoods are built (Singerman 1995; Zhang 2001; Simone 2004, 2014; Sopranzetti 2017). Relatedly, the diverse social networks of migrant and informal workers are compatible with the savvy use of low-cost communication technologies increasingly popular in the same demographic group (Qiu 2009). All of this suggests that collective actions around weak ties may be becoming more influential in today's informal economic sectors, not less, which should motivate an investigation of their role in the current pandemic.

In this paper, therefore, I extend Granovetter and others' principle to an analysis of social relationships in the informal economy, looking at the effects of informal workers' "weak" voluntary associations on policy effectiveness as measured by compliance to the costly policy of Covid-19 lockdowns.

First, I hypothesize that information passed along via these groups, rather than directly from the government, enjoys greater trust because group members generally transmit useful and relevant i.e. high quality information to each other. Indeed, the groups tend to form around the purposes of sharing occupation and location-specific information and reliably solving small collective action problems with limited time horizons, such as learning the use of tools of the trade, safeguarding the informal use of street space, or policing a queuing norm. I posit that the informational advantage tied to employment interests could induce favorable compliance behaviors from groups of citizens mistrustful of the government.

Second, I assess and test this endorsement effect against the direct influence of state enforcement (enforcement effect). Increasing enforcement is still the most obvious public policy action that governments attempt to apply to the informal economy (Floridi, Demena, and Wagner 2020). In the short term (as in the Covid-19 pandemic), a government may resort to actual enforcement campaign and punitive example setting, or create an impression of stronger enforcement by signaling the legal consequences of noncompliance. Informal workers' weak ties may be a conduit to such messages of the state's top-down enforcement. Alternatively, the nature of small groups predicated on horizontal and voluntary information sharing based on particularistic interests may not straightforwardly combine with top-down coercion by the authority.

Third, I assess qualitatively whether and under what conditions the endorsement effect may be understood as a different and distinct mechanism from social control and monitoring in small communities that are more often highlighted in studies of informal authorities in development.

Indonesia’s informal workers and public policies in the time of Covid-19

In this section, I describe my empirical case. Indonesia is an upper middle-income economy with a population the fourth largest in the world, highly diverse, and fast urbanizing. Indonesia’s key characteristics, including the prevalence of informal employment among its large working age population, the position of urban informal workers as a consequential group in the pandemic context, and within-country policy variations during the early phase of the crisis (in contrast to more centralized pandemic control initiatives in China, India, etc.), make it an ideal empirical environment in which to test my theory.

Like many developing economies where low-skilled service jobs increasingly dominate in cities (e.g. Kuruvilla, Lee, and Gallagher 2011), informal workers, especially own account entrepreneurs, represent a sizable and resurgent portion of Indonesia’s workforce. Today, around 86 million Indonesian workers are relatively low skilled (secondary or lower education attainment), and half of them reside in urban areas (BPS 2020). The ILO estimates that 67.5% of overall employment in Indonesia takes place in the informal economy (ILO 2018). Employment informality in non-agriculture urban sectors is lower than this national aggregate figure, yet still substantial. In Jakarta, the capital and most developed region, roughly 30% of employment remained informal in 2005-2010, impervious to the global financial crisis or the recovery from it (Mulyana 2012). These jobs are typically day laborer, server, domestic help, food and beverage vendor, informal taxi driver, waste picker, home-based retailer and manufacturer. As a recent trend since around 2015, a few of these activities have become digitized by “gig” platforms on mobile apps, but legally remain informal.

Historically, “traditional” productive sectors (Geertz 1963) in Indonesia had appeared to be gradually transitioning to formal manufacturing and service jobs, especially in the heady growth years of the 1970-1980s. The 1998 financial crisis halted and reversed the formal sector job expansion. From that point on, the share of formal/informal jobs has remained little changed (Mehrotra 2020), a stagnant pattern familiar to many middle-income economies (Doner and Schneider 2016). Microdata

evidence suggests that individual workers/entrepreneurs' motivated behaviors to evade enforcement at least partly account for this pattern of persistent informality, as research shows that Indonesian micro and own account entrepreneurs shun "formalization" even when the government lowers registration costs and make the process easy (Rothenberg et al. 2016).

Because of these labor market trends, improving the lot of urban informal workers was a pressing issue even before the pandemic. In the current national government's priority of human capital and creative economy development, these (mostly) young workers symbolize the country's large "aspiring middle-class" who enjoy some trappings of the middle-class lifestyle when the economy is prosperous but are far from attaining economic security, and can quickly fall back into poverty (Bank 2019). Policies aimed at up-skilling this segment of the labor force was declared a political priority and top election agenda item in the 2019 presidential race.

The Covid-19 pandemic has posed multifaceted challenges to this longer term national development plan, but has not fundamentally changed the need of the government to reach out to informal workers in all of their diversity to elicit desired behavioral responses, from signing up to e-training programs and paying for licenses, to complying with temporary work bans. More than ever, the pandemic has brought home the idea that communicating effectively and securing the compliance regarding this population is critical for achieving overall citizen welfare goals for the world's third most populous democracy.

As for the pandemic's economic repercussions and unintended consequences of the government's countermeasures, Indonesian informal workers bear the brunt of the shocks, mirroring again a global pattern across the developing regions (ILO 2020a). A collapse of domestic consumption, the source of informal sectors' income resilience in previous recessions, meant that informal workers instantly became extremely vulnerable, while the nature of their jobs in dense urban settings like crowded markets and informal settlements meant that they could also be key vectors in the spread of Covid-19 (Octavia 2020; Soeriaatmadja 2020; Widyaningrum 2020; ILO 2020b).

To contain the early spread of Covid-19 in 2020 (the period of this research -

before the Delta variant surge in mid-2021), Indonesia implemented a decentralized framework allowing for regional variations. This has resulted in subtle and staggered policy variations across Indonesia’s numerous local government jurisdictions while avoiding a mass exodus of poor workers from cities (i.e. what was observed during India’s earliest wave). According to the rules, provincial and municipal governments were to obtain national government permission but take lead in issuing local “large-scale social restriction” (PSBB) policies, i.e. customized social distancing policies mandated for a limited area for a limited time period. Restrictions were stipulated for periods of weeks, not months, and contained detailed modifications for specific job sectors.

On the one hand, some Indonesian local governments have sought to restrict particular informal economic activities, such as bans on motorcycle passenger transport. They have sometimes followed up with enforcement efforts, for example by enlisting technology firms to disable the online bookings of the service in question.¹ On the other hand, there were also instances of Indonesian local authorities engaging with organized elements in the informal economy to help with policy compliance. For example, police authorities in Jakarta, East Java, and West Java provinces enlisted local associations of motorcycle taxi drivers via their informal representatives to act as a community watch against health rule violations (T. J. Post 2020). These local strategies ranging from more stringent enforcement to more informally collaborative approaches are reflected in the survey design of this research, described in the next section.

3.2 Research Design and Experiment

Mobile survey of Indonesian urban informal workers

This paper’s empirical contribution is based on a national survey research of Indonesian urban informal workers conducted online using a mobile app between August 7 and September 21, 2020. A preceding qualitative fieldwork under a narrower scope focused

¹Interview, online, August 11, 2020.

on the Greater Jakarta metro region was completed in 2017. The qualitative data collected involved participant observation activities at a selection of varied urban locations in two provinces and more than 60 semi-structured interviews with informal workers mainly in the transportation sector, as well as expert interviews. This earlier qualitative data was updated with virtual expert interviews in early 2020 to inform the mobile survey's design.

Urban informal workers can be considered a hidden population, people hiding in plain sight and difficult to survey reliably due to a lack of well-defined sampling frame. Members of this population are hard to separate from the general population based on standard demographic variables, yet may be systematically different from formal workers. They may also be sensitive to legalistic survey questions on their employment status, an additional concern for sampling bias. The typical method of in-person field survey was not an option for this research period due to Covid-19 restrictions.

To address these concerns, survey data collection took advantage of a large opt-in panel (containing more than half a million users) from a popular consumer survey application in Indonesia, and implemented fuzzy quota sampling combined with contextually informed screening question on employment. Steps were taken to mitigate potential drawbacks of a nonrepresentative panel and self-administered survey. The sample design, sampling procedures, and discussions of sample balance are described in Appendix.

Over a period of four weeks in an early phase of the Covid-19 pandemic (August-September 2020), 3,757 panel respondents were randomly screened for employment situations, yielding a sample of 1,085 Indonesian urban informal workers. This informal workers' sample covered four major sectors of predominantly informal and labor-intensive urban job families found in Indonesia (informal transport, informal/domestic services, informal/micro manufacturing and day labor, informal/micro/street retail). In one of the categories (informal transport), the sample also included 197 drivers who were primarily digital ("gig") informal workers i.e. mobile app motorcycle taxi drivers, which offered a window into the digitalization of informal work.

The mobile survey strategy yielded a highly diverse and arguably more nationally

representative original sample of target population (urban informal workers) across the dimensions of geography and job sectors, compared to conventional in-person original surveys of urban informal worker population in developing economies usually limited to a single sector or a handful of cities. The 1,085 informal worker respondents hailed from across Indonesia, covering 32 provinces out of 34 in total, and 228 municipalities of all sizes and local economic and pandemic conditions - just shy of half of all Indonesian municipalities. Somewhat more male and educated, the geographic and demographic balance of the mobile sample compares favorably to Indonesian national labor statistics and particularly resembles the urban work force (Appendix).



Figure 3-1: Sampling frame composition by labor market participation and gender

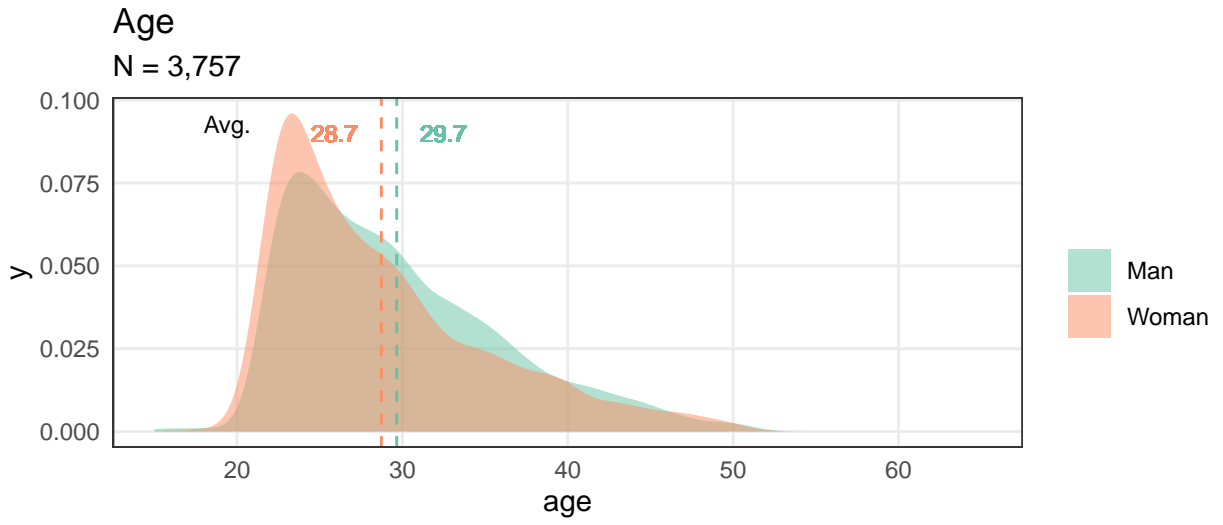


Figure 3-2: Sampling frame age distribution

Survey experiment on endorsement vs. enforcement effects

Expected causal effects of informal workers' social ties were tested with a survey experiment using brief informational vignettes embedded midway in the survey. I hypothesized that relatively weak institutions of collective action, embodied by small voluntary associations and groups formed around informal work, could affect informal workers' pandemic compliance through information endorsement (Hypothesis 1) or by transmitting impressions of state enforcement (Hypothesis 2), or both (Hypothesis 3).

First, I test Hypothesis 1 by experimentally manipulating whether information about a temporary local partial economic lockdown comes from informal association leaders (treatment), or from the television (control). Television is the traditional mass medium of the Indonesian government, and therefore was chosen as the control category. Second, for the enforcement effect, I manipulated whether the vignette included additional information content about the fact that there would be government fines and confiscation of business goods for violations. These two experimental treatments about the information source (association vs. television/government) and content (sanctions of enforcement mentioned vs. sanctions of enforcement not mentioned) were cross-randomized to create four versions of the vignette that respondents saw, and corresponded to control and Hypotheses 1-3 treatments. As outcome measure, respondents were then asked to rate on a scale from 1 to 7 the degree to which they believed they and their fellow workers were likely to comply with the lockdown policy and refrain from working for the duration of the restriction.

Below summarizes my lockdown informational message vignette experiment:

1. **Message:** "In the upcoming holidays, motorcycle taxis / taxis and street vendors are prohibited from serving passengers / customers for one week. The goal is to slow down the transmission of Covid-19 in our city. If you hear this kind of information from [A-D]... Do you believe that people you know who work in this sector will follow these rules and will stop working?"
 - A. Control (baseline category): Message on television ($N = 223$)
 - B. Endorsement: Message from the leader of your work group / community

- (e.g. base camp, market associations, workers' association, etc.) (endorsement only) ($N = 215$)
- C. Enforcement: Message on television and mention sanctions i.e. heavy enforcement and fines ($N = 215$)
- D. Endorsement and enforcement: Message from the leader of your work group / community (e.g. base camp, market associations, labor unions, etc.) and mention sanctions i.e. heavy enforcement and fines ($N = 207$)

Social capital and other descriptive measures

The rest of survey asked questions on the following themes: employment situation and history, social capital, Covid-19 knowledge, Covid-19 economic impact and social assistance access, Covid-19 policy attitudes, political attitudes, housing and neighborhood characteristics, and control variables. See Appendix for a full list of questions.

The survey measured social capital in three distinct forms. The first was association participation, recording associational life and social ties formed as collective groups for a variety of purposes, as emphasized by Putnam in conceptualizing social capital (Putnam 1994, 2000). This is also the main independent variable of interest. To capture a wider range of possible associational belonging by informal workers, the survey question included community group options documented in long-running Indonesian household and community surveys PODES and IFLS surveys, such as *gotong royong* (usually translated as grassroots mutual aid or voluntary labor), *arisan* (rotating savings and credit unions - ROSCA), neighborhood watch, religious groups, and so forth (Victoria A. Beard 2005). Alongside these, the list included employment-based groups such as labor union and shop owners' groups, and explicitly political organizations such as political parties. Both individual and household participation were asked.

The second measure of social capital was generalized trust, captured using the standard survey question, "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". The third

was voting, as a common measure of more public oriented civic behavior. The act of voting, and democratic participation generally, is exemplary sign of social and civic capital because little direct change can be expected from a single secret ballot (Barrios et al. 2021).

For Covid-19 awareness and knowledge, I consulted rapid surveys conducted earlier or simultaneously in developing countries (e.g. Tsai et al. 2020). For knowledge-based parts, e.g. symptoms of Covid-19, the survey question reflected official information available on the Indonesian Ministry of Health website at the time of survey design in mid-2020. Questions on Covid-19 economic impact and social assistance access reflected feedback from local expert interviews.²

The survey also recorded informal workers' subjective political attitudes in the Covid-19 era, especially support of Covid-19 policies being implemented by various local governments in Indonesia at the time. In order for results to be benchmarkable against survey data from other sources, I adapted the question setup from an earlier, high quality survey on nationally representative sample of Indonesian voters conducted by a reputable political polling firm. This used eight common partial lockdown policies that were proposed or implemented at the time, ranging from school closure and reduced passenger capacity for public transportation, to limiting religious gathering and public activities (SMRC 2020). For each restriction, the respondent was asked whether s/he agreed with it. Based on the number of policies supported, an additive index of lockdown policy support was constructed to take values from 0 to 8.

Besides pandemic policies, the survey recorded broader political attitudes using standard questions on participation and political efficacy from Asian Barometer wave 4, again to be able to benchmark this research's informal worker sample's responses against population representative surveys in Indonesia. Usual demographic controls were collected, including age, gender, education attainment, location (province, municipality, urban), and consumption-based socioeconomic status. In addition, the survey asked household size, residential neighborhood condition, housing tenure status, and occupant per room - a measure of within-household residential crowding - relevant

²Interview, online, June 17, 2020.

to the topic of pandemic and social capital. Additional, open-ended questions were posed throughout the survey to collect data for inductive interpretation of survey outcomes. For example, an open-ended question asked respondents to describe work-related association or group membership along with the costs and benefits of participation, while another asked their evaluation of the relative success of the government vs. local community's Covid-19 prevention activities.

3.3 Results

Survey experiment results

Figure 3-3 presents average treatment effects derived from ordinary least squares (OLS) regressions on the dependent variable (DV). The DV measured the likelihood of self-reported compliance to the economic lockdown policy in the vignette from least likely to most likely (scaled between 1 to 7) after respondents were shown the randomly varied versions of the lockdown message.

First, the positive and significant coefficient in Figure 3-3. This supports the endorsement hypothesis (Hypothesis 1) that information sharing by informal workers' voluntary groups and associations, which are relatively weakly organized, can act as a channel of information transmission to increase compliance with a government policy that is costly to individual informal workers.

Strikingly, the effect size of message from association leaders on lockdown compliance is greater in magnitude than the correlation with income loss from Covid-19 (Figure 3-3). That income loss is correlated negatively (more noncompliance) with economic lockdowns shows that behaviors observed in this experiment adequately capture respondents' actual Covid-19 experiences. That Indonesian informal workers with household income loss should feel compelled to continue working implies that levels of social assistance and alternative support are not currently sufficient to achieve high voluntary compliance with restrictive policies.

Second, and to complicate the picture, when strict sanctions are mentioned to bring attention to material (negative) costs of noncompliance, whether through the

channel of normal government communication via television or through the connection with work-based association leaders, treatment effects are null in both cases. Thus, informational communication from informal workers' association significantly raises compliance among these workers in urban Indonesia. But this appears to be a "soft" effect or influence, as it does not appear to work in combination with harsh enforcement threats from the authorities when it comes to Covid-19 lockdown policies in Indonesia.

The results confirm that there is a role for informal workers' self-organized associations in shaping critical policy behaviors through information transmission where governments may have difficulties during the pandemic. But the mixed results imply contingent circumstances that need further probing. I show in descriptive analysis that work-related association and group membership is not universal among informal workers, varying by informal economic sector, but not by underlying levels of an individual's generalized trust.

Informal workers likely to comply with lockdown?

N = 1,085

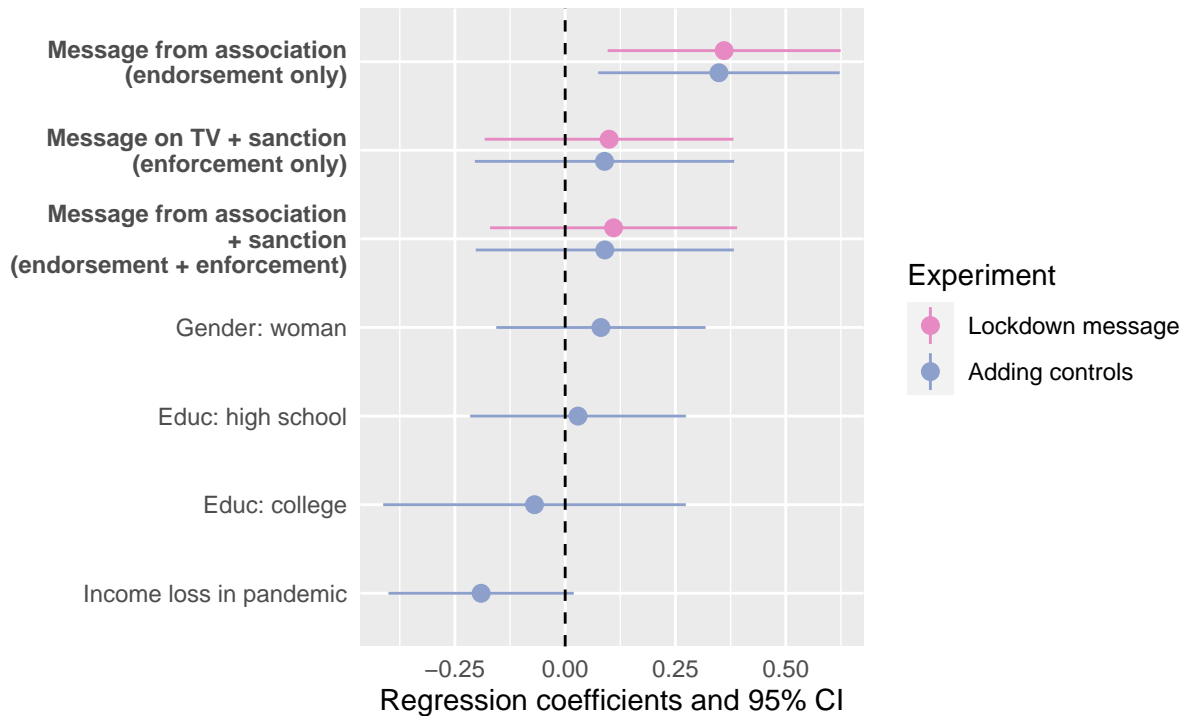


Figure 3-3: Lockdown message treatment effects on informal workers' self-reported likelihood of compliance

Note: The figure shows pooled average treatment effects, with another set estimating the same effects with additional model specifications. The additional specifications are individual-level control variables (gender, high school education, college education, and pandemic income loss) and location variables (province fixed effects, dummy variable of urbanity measured as residing in metropolitan center municipality, and interaction terms between the two). Standard errors are clustered by municipalities.

Heterogeneous effects

Survey experiment results thus demonstrate that informal workers can be significantly influenced by weak employment-based associations to comply even with the costly public health policy of economic lockdowns. What I find also is that the association's endorsement is effective where the messaging around state enforcement is not.

But do informal workers across different job types and situations widely share this behavioral effect of association endorsement, and null response of the enforcement cue, on lockdown attitude? Or, is this a phenomenon confined exclusively to a minority and self-selected segment of informal workers who profess to belonging to work-based associations already in reality? The second story would imply limitations of leveraging informal workers' weak associations for driving *broader* public compliance. Separately, does working in the new gig economy while being an informal worker constitute another source of heterogeneity? The digitized informal workers represent a group who are easier to be contacted by digital communication campaign as opposed to traditional methods of contact, and thus we might care about their response as the most likely audience of communication interventions by health authorities or the government.

To investigate these concerns, Figure 3-4 presents the estimated effects of the treatments across two dimensions of within-sample heterogeneity: informal workers who participate in at least one work-related association (members) vs. who work alone or only with family members (non-members), and digitized informal workers on app platforms (app motorcycle taxi drivers) vs. the rest (traditional informal workers).

To start, one would expect to see a larger effect size of association endorsement message on those who participate in such groups in reality, compared to those who don't take part. The top left box in Figure 3-4 confirms this expectation, as the "members" subsample shows a greater self-reported compliance response to the lockdown association message treatment. Yet it is also notable that the impact of association endorsement treatment extends a small effect beyond the members, to informal workers who say they work alone without (bothering to) join work-specific groups in reality. Thus there is positive and almost significant effects from the endorsement treatment on

all subsample groups. This result suggests a somewhat diffuse credibility of informal workers' weak associations that cut across the informal economy's many dimensions of inequality and sectoral differences, at least when transmitting certain kinds of information as in the design of this experiment, and in the context of short-term economic decision making contingent on that information.

However, I find stark contrasts of compliance and null effect by subsamples in the enforcement only treatment: informal workers who are "members" in reality respond with increased compliance just like in the endorsement (only) treatment. Elsewhere, the enforcement treatment is met with largely null effect by other types of informal workers, resulting in an overall average null effect (the bottom left box in Figure 3-4). The result seems to imply a great deal of sensitivity on the part of informal workers who are "members" to not only information source but also to information content in this experimental setting. The enforcement only treatment appears to be not credible to the majority of informal workers. Sectoral divergence is also evident in this enforcement treatment. App motorcycle taxi drivers, who, like their peers in the traditional informal transport sector, frequently belong to work-based associations in reality, are nevertheless on average unconvinced by the information of top-down punishment for lockdown noncompliance.

Informal workers likely to comply with lockdown?

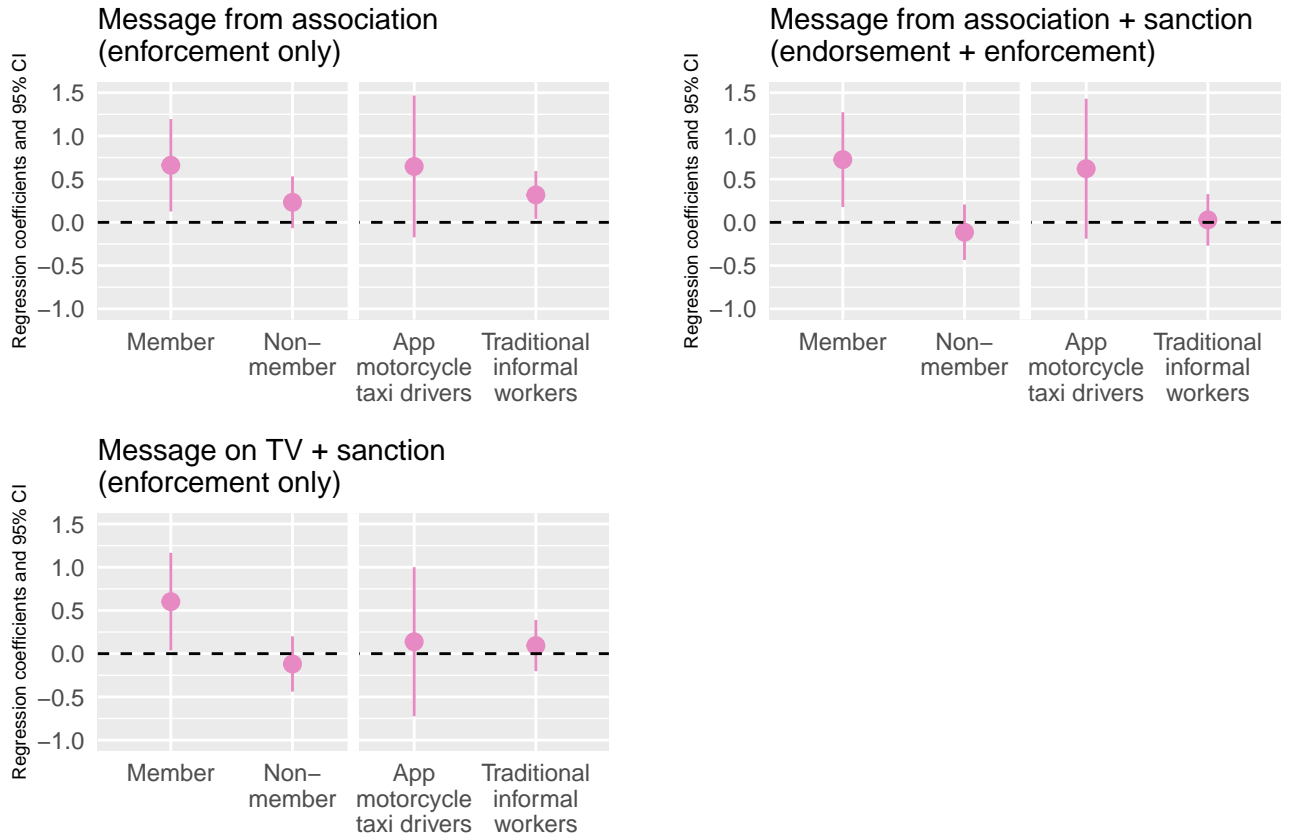


Figure 3-4: Heterogeneous effects of lockdown message treatments on informal workers' self-reported likelihood of compliance, by work-based association membership (left boxes: Member vs. Non-member) and by digitalization (right boxes: App motorcycle taxi drivers vs. Traditional informal workers). Standard errors are clustered by municipalities.

Finally, the combined treatment of association endorsement *and* state enforcement (the top right box in Figure 3-4) shows another set of mixed effects across the subsamples. Here it is evident that the subsample of app motorcycle taxi drivers are just shy of significant compliance. In other words, they tend to respond with greater compliance when work associations transmit information about tough sanctions from the government for an upcoming economic lockdown, even though when the same information alone (via TV) would not convince them to change behavior to more likely compliance.

Overall, looking at the heterogeneous treatment effects by these subsample groups

makes clear the extent and limitations of informal workers' associations' endorsement effect. "Members" come across as always complying, responsive to endorsement (as expected) as well as enforcement treatments. Among this subgroup who actually participate in associations, both endorsement and enforcement treatments are effective individually, and in combo, although combining the two interventions do not make the treatment effect larger. These informal workers who belong to voluntary groups and associations organized around occupational interests in reality constitute about 30% of the sample. They drive the positive effects in my experiment. The other, roughly 70% non-members display differentiated behaviors belying the potential trade-offs between the diffuse influence of social messaging based on voluntary groups of weak ties and the top-down coercive message content of tough enforcement by the authorities during a pandemic. The trade-off is more clearly evident in app-based motorcycle taxi drivers, who represents a digitally savvy segment of the informal work force. They are not responsive to government television message with information about government sanctions for noncompliance, but perceive the same message content to be credible, or at least comply at higher rates, when association leaders share lockdown information including sanctions.

3.4 Discussion

From the average effects and heterogeneous effects of the experiment, we learn that informal workers' associations are influential in triggering compliance behavior through endorsement as well as enforcement effects on their own members. In addition, the informal work associations are also able to extend endorsement effect beyond its (small) membership base, so that they appear to persuade informal workers at large into compliance to a degree. However, this broader endorsement effect seems contingent on the information not being overtly tied to coercive government policies or actions. Why and under what circumstances the experiment's endorsement effect is contradicted by enforcement messaging is puzzling.

These results hint at joint variations in how informal workers relate to one another

and to state authorities, calling for further exploration of the dependent behavioral patterns. The varied patterns could be due to multiple social mechanisms at work. They also likely intersect with the differences across informal economic sectors and how individuals sort into divergent associational behaviors in their work life. These are pre-treatment conditions, making it difficult to observe a causal process directly.

Below I use descriptive survey data and qualitative fieldwork as correlational evidence to assess key plausible competing causal mechanisms that could explain the observed behavior patterns. I consider the following factors: within-group social control, *de facto* state control, low (or high) social capital, differential information-seeking behavior, and economic vulnerability caused by the pandemic. I stress the role of differential information-seeking behavior as a previously neglected mechanism in the literature on the causes and consequences of grassroots collective action in development.

Within-group social control

An overall finding in the survey experiment was informal worker association members' highly compliant response across the treatments. Could this be a story of within-group social monitoring and control inside the work associations, which regulate members' behaviors, and, when policies are concerned, substitute for top-down state enforcement with horizontal pressures that compel compliance? Many studies of communities and groups in developing countries, particularly in rural settings, document social monitoring and control mechanisms that are highly effective through a combination of shared norms, pooled resources, and long-term relationships. However, in this case of urban informal work setting, within-group social control is likely only partial explanation of the compliance behavior mediated by work associations, which are tied together with weak personal connections.

To start, the average rate of participation in work-based associations, even the informal kinds that are my focus here, is modest at under 30%. While this rate is far higher than the official union density rate of Indonesian formal employees at around 7%, clearly it is not necessary for the Indonesian worker to belong to one of these

collective groups in order to viably earn an informal livelihood. A large majority of respondents indeed report working alone or only with family members, indicating that any participation in the associations is of voluntary nature and by choice rather than lack of choice. Figure 3-5 shows the prevalence of informal work association membership by the four major informal work sectors.

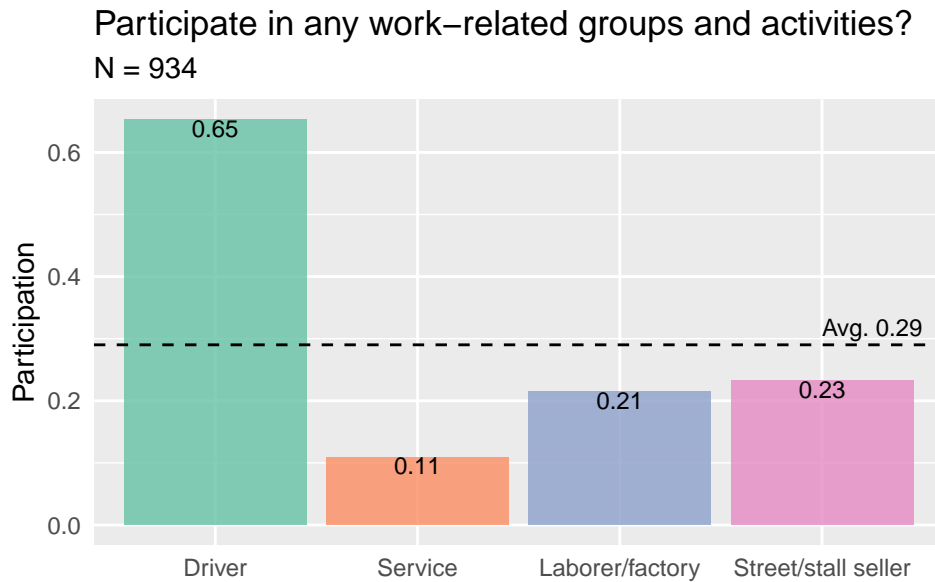


Figure 3-5: Work-related group participation by informal work sectors

The specialization by sector and extreme localization of these groups also show the circumscribed and narrow scope of collective action sustained in these membership associations, being based in small urban streets and neighborhoods. It contrasts with the multifaceted social links that cut across multiple spheres of activities such as work and family that may dominate in rural village communities, or broad interests represented in mass labor organizations that may transcend particularistic concerns of the daily toil. Consequently, both the functional usefulness and members' dependence on these associations are limited.

Nevertheless, conditional on informal workers having self-selected into joining an association, could social control mechanism still be making all the difference to drive higher compliance? Descriptive evidence is mixed. It suggests that social control is operating within the groups in question, but not strongly. Looking at fieldwork and descriptive survey responses together paints a picture of relatively temporary modes

of belonging and moderate to no punitive social monitoring.

In my ethnographic fieldwork in Jakarta observing informal transport workers' street communities, referred to locally as the "base camp", with functions similar to taxi pools, I often heard first-hand accounts of drivers expressing solidarity with one another and organizing mutual aid, such as collecting donations to colleagues who were victims of traffic accidents or for organizing recreational gatherings. Informal transport workers represent the only sector in my survey where a majority (65%) report belonging to at least one group or association specifically around work interests (Figure 3-5), and the social dynamics within the informal work associations in this sector merit a closer examination. Open-ended responses in the survey asking respondents to describe functions, costs, and benefits of any work groups or associations they belonged to also provide similar comments on solidarity including the ones below.

"Solidarity with my fellow drivers, to help fellow drivers and people around here who need help. . ."

"Because there is no telling that I won't have problems on the road. . . there are many benefits [of association] when there are many other members. . ."

"WhatsApp and Facebook groups enable sharing with other drivers. *Pen-guyuban* [a local form of informal social circle] enables building connections and growing friendship. . ."

Aided by frequent activities involving not only the workers but also occasionally family members, these groups can nurture mutual camaraderie and an apparent desire for conformity. This seemed to be true especially for more recently created base camps, which are typically located in busy regional transport hubs, where business was brisk. However, a more relevant characteristic of the associations may be how relatively open and transient membership could be. The cost of joining as well as leaving is modest, based on daily or weekly membership fees, i.e. which seemed to be no more than 5% of a driver's daily income. Even as pro-social attitudes, good will, and some social monitoring or conformity to peers exists, it is relatively easy to escape from.

The larger and more nationally representative survey also moderates this qualitative evidence. Figure 3-6 reveals the types of work-related groups joined by informal transport workers, where only 10% belong to the traditional base camp. The top two most common groups are virtual - SNS groups that are mostly WhatsApp communities, and recently established online drivers' advocacy groups, which also conduct most advocacy outreach via social media. These have little to no consequences in terms of social control, yet represent the bulk of self-reported associational belonging around informal work.

These observations suggest that it is appropriate to characterize informal workers' associations captured in this paper as a social institution created from relatively "weak" ties, and an example of weak organizations of labor-based collective action in development contexts. But the generally modest within-group social control mechanism fails to explain the starkly different reaction to the enforcement treatment.

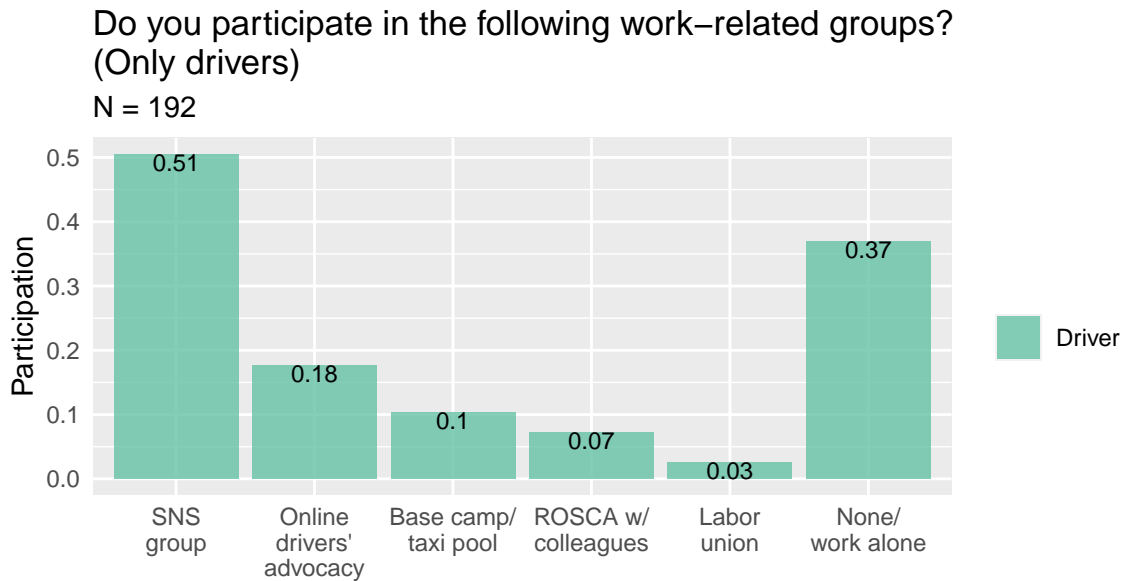


Figure 3-6: Work-related group participation by type of association or group (drivers only)

***De facto* control by the state**

Another possibility is that informal workers' associations are in fact indirectly controlled by state agents, such as local politicians and street-level bureaucrats. This may make

their members comply with authoritarian pandemic rules out of rational fear of punishment.

As mentioned, a minority of informal workers in Indonesia are organized based on their informal employment, and such groups are substantially more common among informal transportation workers (Figure 3-5). Small business associations like shop owners' groups are common among street/stall sellers (23%). Certain own-account workers, by virtues of owning one's assets and fruits of labor, as well as enjoying agglomeration economies at a very local level, may be motivated to produce public/club goods. For instance, one can imagine transportation drivers in crowded intersections and street vendors in markets, even unofficial ones, to have incentives to establish norms on the use of space, queuing rules, and the like. These economic interests may attract clientelistic political agents to seek rent, leading to indirect top-down political control of informal workers' collective action groups by the state. Existing research from Uganda and Rwanda (Goodfellow 2015) to Thailand (Sopranzetti 2017) tend to confirm this, albeit with limitations of selective sample in primal cities.

Observing drivers' associations that are typical in Indonesia's informal transportation sector, wherein own account motorcycle taxi drivers are the dominant worker, suggests that this type of hidden relationship with state agents indeed exist. Even as direct evidence of bribes is hard to come by, individual police representatives not infrequently establish connections with, and in some cases, actively encourage motorcycle taxi drivers to self-organize to promote order in streets (Gao 2017). Responses to my survey question "Does your association or group have relationship with political actor(s)?" provide additional if mixed insights into how informal drivers regard the presence of such political sponsors:

"Yes, to counterbalance the link that other communities already have."

"Yes, we 'back up' security forces. They guarantee that the road is always safe."

"No. We are independent."

“Yes, it’s a must for every *pangkalan* [base camp] to have something to do with those mentioned.”

“[We are] the only community registered at the Bandung Police. . . which uses the symbol of state security forces on our vests. . . [but we have] nothing to do with politicians. . .”

However, this mechanism is unlikely to be the dominant mechanism for the same reason as social control does not seem to be very strong within the associations. As groups tend to form around limited and relatively temporary membership conditions, the top-down control of the informal work associations by state agents, to the extent that it exists, is also likely to be limited and avoidable.

Low (or high) social capital

A correlate to the first story of social control conditional on selection into association membership is that association members may simply be “joiners” in everything by virtue of unobserved pre-treatment characteristics. In other words, there may be something in individual-level temperament making this group both more likely to join all manner of groups and conform to many rules in society. Higher pro-social attitudes at the baseline, lower risk tolerance or longer time horizons may drive such individual preferences for banding together with fellow workers, and also avoid conflict with authorities. If so, one should expect to see similarly differential participation patterns in other types of associations not specific to informal livelihoods, but also, for example, in community and neighborhood problem solving.

A related explanation is that the experimental results simply re-express a broad and highly generalized correlation between levels of social capital an individual has and the likelihood of their participation in any social activity. If this were the case, one would expect to see compliance resulting not specifically from associational cues and activities, but also moving together with other measures of social capital such as generalized trust and voting.

Do you or your household participate in the following groups and activities?

N = 934

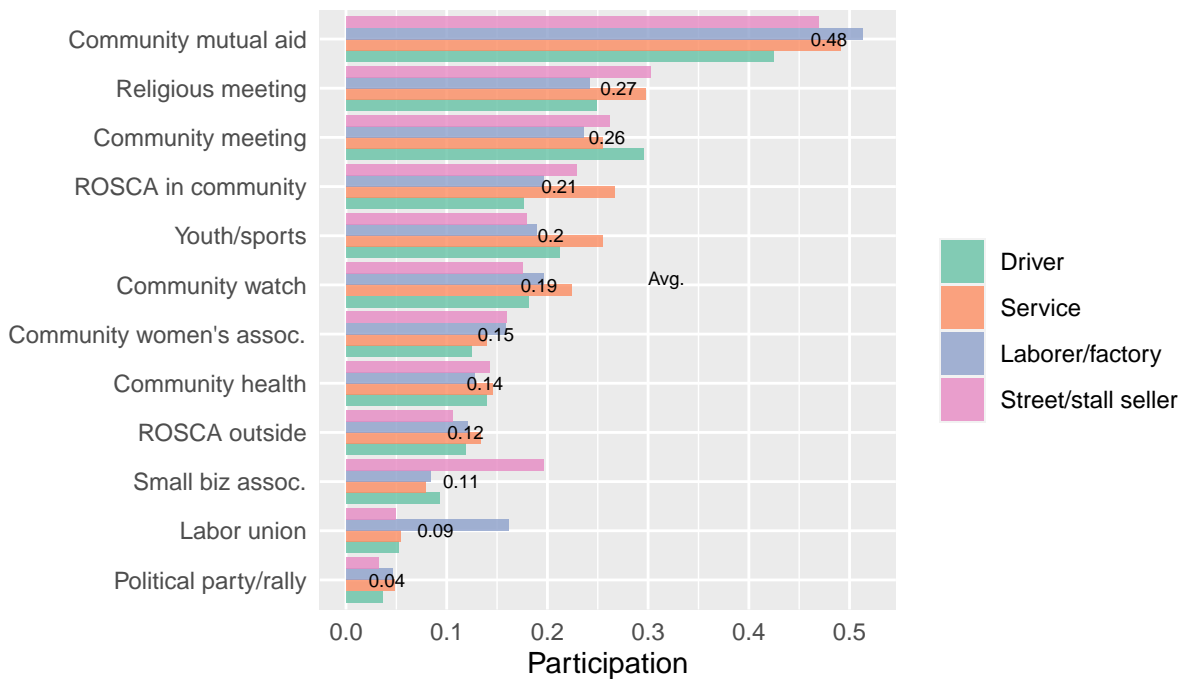


Figure 3-7: Civil society and association participation by informal workers

Yet there is little evidence of correlation between informal work-based association participation and more participatory associational life in general in my survey. Instead, it reveals that to join or not to join an association around one’s informal work is a distinct and separate decision from the more multifaceted and rich forms of voluntary groups of cooperation often based in one’s residential communities. Non work social participation among Indonesian informal workers shows no obvious differentiation that mirrors the sectoral differences in work-related association participation. Participation is evidently high in community mutual aid (*gotong royong*) (48%), religious meetings (typically community mosques and reading groups), ROSCA with neighbors, and community meetings at semi-official community associations. Household involvement in these local communities is common and not directly correlated with a respondent’s membership in occupational groups (Figure 3-7).

On trust, informal workers express substantially lower levels of generalized trust,

compared to the population average. Compared to Asian Barometer wave 4 Indonesia national sample in the same age cohorts, the informal workers sampled in my survey showed approximately 10% lower levels in trust (Figure 3-8). Only one in ten informal workers, as opposed to two in ten in the population representative sample, reports believing that “most people can be trusted.” Yet in this low trust setting, I do not find significant differences in levels of trust between informal workers participating in work-based associations and those who work alone. Thus, trusting attitudes do not explain who among informal workers joins collective groups around work interests, and also do not explain the related differences in attitudes toward the costly policies of the government.

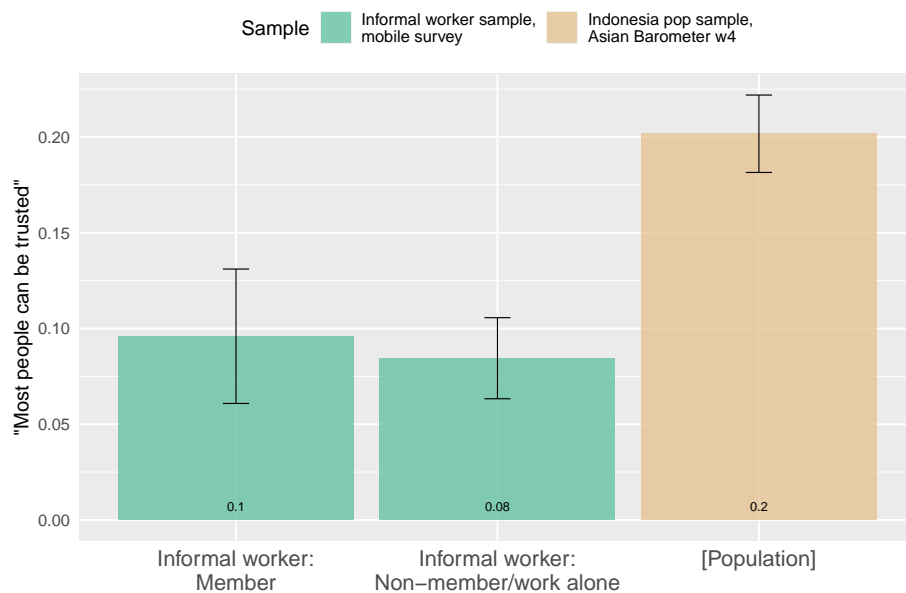


Figure 3-8: Generalized trust among mobile survey informal worker sample (by association membership status) and probability population sample

Table 3.1 reports the estimates from generalized linear model (GLM) of pandemic rule compliance on these common measures of social capital not particular to work or occupational interests. Here I examine correlations between the support for various real life Covid-19 restriction policies in Indonesia and informal worker respondents’

social capital in my survey data. In model (1), Association index, a value representing the number of (any type of) associations and local groups a respondent and household members participate in, shows a modest but statistically significant and robust, positive effect on policy support. However, models (2) through (3), which account for all three social capital measures (associations, trust, voting), reveal that social capital measured as generalized trust or voting in presidential election do not have significant effect on informal workers' support for pandemic rules. On voting, model (3) shows that partisanship confounds the effect of voting. Opposition voting has a predictably negative effect on supporting government rules in this sample.

Overall, neither generic patterns of associational life nor levels of trust/social capital explains well the differences between members and non-members.

Differential information-seeking behavior

The differences among the members vs. “work alone” groups of respondents beg the question of what is motivating some informal workers toward these weak occupation-specific groups, and not others. Thus a large part of unanswered puzzle concerns selection effects. It may be that a subset of informal workers are driven by underlying demographic characteristics, or certain unobserved individual tendencies, to both join associations around their work and hold more compliant attitudes toward the government. So far, however, informal workers who join and do not join work-related associations do not seem to hold obvious underlying characteristics that separate them. For example, Figure 3-8 showed that trust is not different between workers who participate in associations and those who do not.

What motivates informal workers who could work alone as free agents to nevertheless submit to collective groups, even though these associations that pool relatively little resource and hold limited power - either horizontal social monitoring or top-down indirect state control - over their members? Information-seeking motivation and different preferences in strategizing about gaining new information may help explain.

A potential mechanism is that the informal associations offer learning effect or benefits of skills improvement, owing to frequent and low-cost access to useful, highly

Table 3.1: Covid-19 Policy Support and Social Capital Measures among Informal Workers

	Lockdown policy support index		
	(1)	(2)	(3)
Association index	0.098*** (0.035)	0.093*** (0.035)	0.090*** (0.035)
General trust		0.255 (0.264)	0.214 (0.261)
Voted		0.349 (0.268)	0.503* (0.275)
Voted: opposition			-0.417** (0.178)
age	0.018 (0.013)	0.017 (0.013)	0.017 (0.013)
gender	0.401** (0.183)	0.385** (0.183)	0.365** (0.183)
hhsz	-0.028 (0.041)	-0.029 (0.041)	-0.028 (0.041)
educ: highschool	0.078 (0.198)	0.087 (0.198)	0.122 (0.198)
educ: bachelor	0.527** (0.246)	0.537** (0.245)	0.581** (0.244)
N	913	913	913
Log Likelihood	-2,049.760	-2,048.219	-2,045.626
AIC	4,237.520	4,238.438	4,235.253

*p < .1; **p < .05; ***p < .01

Control variables not shown are socio-economic status, religion, urbanity measured as residing in metro center, province FE, and interaction between province FE and metro center residence.

specialized information, which are particular to the type of informal trade and small area in which a given worker operates. Moreover, by individual-level preferences and orientations that are difficult to measure, some workers may prefer to acquire information through face-to-face interactions, while others may be more confident in working through new information alone.

For informal workers in transportation sector, a sector deeply transformed by the gig economy platforms, I find that informal workers' membership associations extend online to WhatsApp and other social networks. The most common type of driver associations was online groups like WhatsApp or Telegram communities. My fieldwork in 2017 already showed that these online groups tended to be small, and in fact often have a face-to-face component and physical footprint, with membership restricted to drivers routinely working in the same neighborhood or pick up spot.³ Recently established advocacy organizations claiming to represent platform-based drivers on a national level also enjoyed membership at a relatively high rate (Figure 3-6). That these are new types of jobs and organizations, coupled with job history answers in my survey, suggests job-specific information and skills acquisition as potentially important reasons for joining, or even founding, these associations.

Yet the need for information and knowledge is not limited to informal economic sectors that are facing digitalization, but widespread in the highly opaque job markets of informal labor. The need to work long hours in order to make decent livelihoods restricts the time that each worker can devote to learning and skills improvement. This informational challenge is only exacerbated during the Covid-19 crisis.

Suggestive evidence emerge from my survey to support that divergent information-seeking behavior may explain why some informal workers join associations but others do not, and why that may be correlated with differential responses to information experiments. Informal workers who are association members are somewhat significantly more likely to express a lower subjective sense of political knowledge, saying that “sometimes politics seems so complicated” for them to understand. They are also less interested in politics, but more likely to say that they have gotten together with

³Interviews, South Jakarta, July 2017.

their neighbors to solve a problem in their community during the pandemic. In addition, even though informal workers who are association members seem to express less confidence in (political) knowledge than those who work alone, there is some indication that they nevertheless obtain needed information. The best evidence of this is in their response to questions about Covid-19 symptoms. The question about whether Covid-19 could be transmitted asymptotically proved to be confusing to 19% of respondents, who were unsure whether this was true. But among members, only 15% were in the confused group.

Hence, there is suggestive evidence that in both pre-Covid and Covid context, informal workers' association members are accessing valuable information that they may otherwise not possess individually, or may simply prefer to obtain from social interactions, from the communication afforded in the groups.

Economic vulnerability caused by the pandemic

A final explanation worth exploring is the time sensitive impact from the pandemic. It may be that informal economic sectors that happen to be more organized are also more (or less) vulnerable to the pandemic or its control policies.

So how did Indonesian urban informal workers and their household members experience the Covid-19 pandemic overall and by subgroups? Figure 3-9 shows that in most dimensions of experience respondents' answers echo one another, and a picture of universal hardship across the informal economy emerges. It does not explain the differential compliance responses.

All but under 4% of informal worker respondents said they experienced some impact of the pandemic. Declining household income was the most prevalent (65%). There were also signs of distress, such as borrowing debt for basic needs (35%) and reducing meals that the family eats (20%). Given that 35% of respondents said they had to borrow money to meet basic needs during this period, and given also some open-ended comments, government assistance appears to be insufficient. In open-ended comments, respondents said for example there was only a single distribution of food aid by the local government during the pandemic, or they needed but did not know

how to access public assistance. The Covid-19 pandemic's economic and social impact has been devastating no matter which specific informal job sector, with or without the government's explicit bans.

Still, more organized informal workers in the same informal sector may face differential exposure to the pandemic and its public health mitigation measures, causing them to respond differently than informal workers who work alone. It may be the case that informal transport workers and others in organized locations of work are harder hit than the rest of the informal economy. The work environments of the two groups may be systematically different. In particular, informal workers' associations may be concentrated in urban areas of high density. targeted bans by local governments, and translating into sensitivity to the survey experiment treatments. Yet I also do not find support for this possibility in my survey. For example, indicators of urban density such as household crowding, measured as household member per room, or housing informality, measured as self-reported infrastructure access, are not different between members and those who work alone.

Has the following happened to you or your household since March 2020?

N = 934

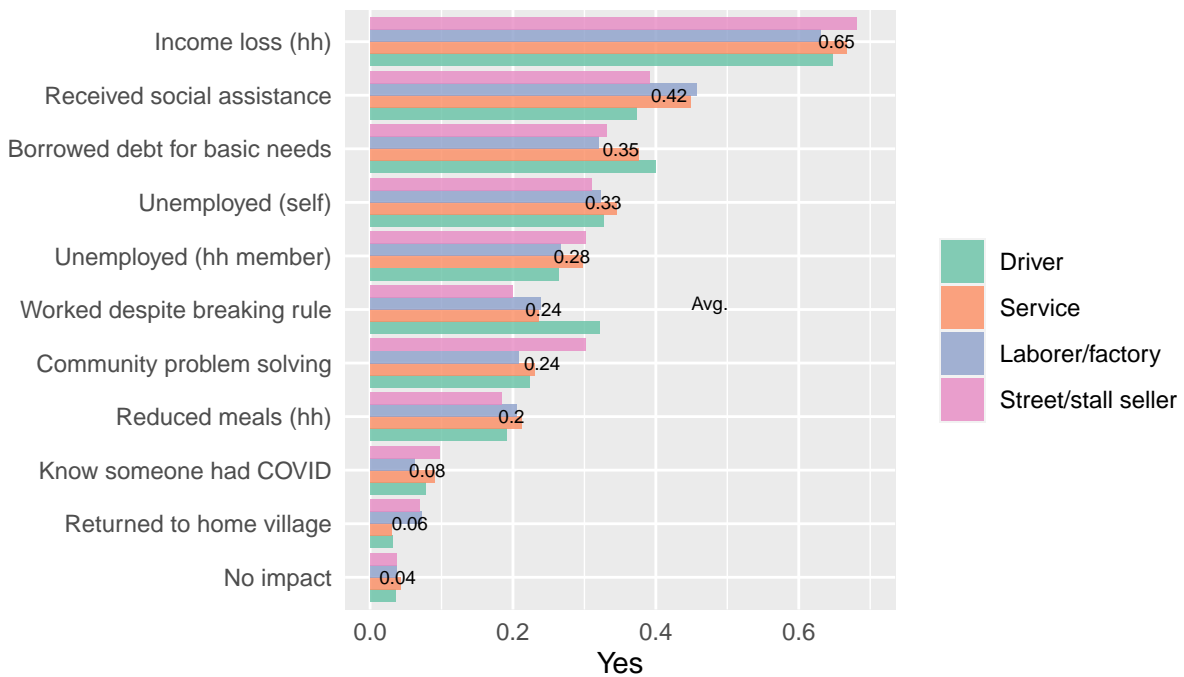


Figure 3-9: Covid-19 and economic hardship experience by informal workers

3.5 Chapter 3: Conclusion

This paper used an original mobile survey and novel sampling strategy to understand compliance behavior among informal workers in Indonesia during the Covid-19 pandemic. Using survey experiment, it finds that informal workers' voluntarily organized associations, despite being based on relatively weak and transient ties, can significantly increase compliance to costly public policies such as restrictive public health measures mainly through endorsement effect. Results apply across heterogeneous groups of informal workers, but are markedly stronger among informal workers who partake in associations in reality.

A puzzling experimental finding was that endorsement and enforcement treatments do not combine to have greater positive influence on informal workers' compliance. Rather, enforcement cue was ineffectual except on informal workers already partici-

pating in associations, with informal drivers over-representing. Using qualitative and descriptive survey evidence, I consider the mechanisms of within-group social control, *de facto* state control, low (or high) social capital, differential information-seeking behavior, and economic vulnerability caused by the pandemic. I argue that differential information-seeking behavior is a previously neglected but key mechanism to explain the divergent compliance behavior within the informal economy, using suggestive evidence that information-seeking is the key motivation of joining associations in ways that correlate with subjective evaluations of the state and its policy communications.

Several limitations regarding the survey data must be noted. The mobile survey sample is more homogeneous in age and skills – almost all respondents are prime working age (Figure 3-2) and self-report as having attained secondary education - than in in-person probability samples. As a result, poor and otherwise extreme segments of informal worker population are likely missing from the sample. For example, poor informal workers are much more likely to be elderly, lack mobile phones, and/or live in rural places. This research does not speak to such vulnerable subsets of informal workers. However, the relative demographic homogeneity of the sample also makes for an advantage for comparative analysis as the differences that do emerge among the groups of informal workers in this sample are likely to underestimate such effects, respondents being otherwise similar.

That Indonesian informal workers are substantially more organized than they appear in cross-national statistics, as evidenced in these weak associations, and may be even more solidaristic in terms of diffuse subjective sentiments, as shown in the associations' influence beyond their members, is relevant information for those interested in whether informal workers are inherently less capable of labor-based collective action and demanding welfare from the state.

The mainstream political economy predictions of compliance being dependent on the state and other coercive interventions, and evidence that instances of well-organized groups are relatively rare, bode ill for policy interventions being promoted by leading aid agencies. By contrast, the findings in this paper implies a picture of more malleable relationships between the state's policies and growing hosts of urban informal

workers even in a high-stakes environment under the pandemic. Global development agencies such as the International Labour Organization (ILO) and the UN Development Programme (UNDP) are keen to address the issue of economic informality. Indeed, policy frameworks such as “social dialogue”, “social partnership”, and “participatory governance” proclaim it essential to bring at least some self-organized groups of informal workers to the table of labor policy making and democratic consultation (ILO 2002). The ILO especially has emphasized in recent years the concept of “social dialogue” as part of long-term policy packages for the formalization of informal employment and firms across the developing world (ILO 2020c).

Such “participatory” programs require the existence of self-organized groups within the informal economy. In some cases, non-union “membership organizations of the poor”, such as Self Employed Women’s Association (SEWA) of India and a number of citywide waste pickers’ associations in Latin America, have been able to fit the bill (Chen, Jhabvala, and Kanbur 2007; Chen, Bonner, and Carré 2015). The results in this paper suggests a more expansive scope of policy interventions because it is possible that even informal workers in many sectors, who generally do not engage in formal collective coordination, can be positively influenced by informal leaders and voices of their fellow informal workers’ groups. Thus, the scalability of the social dialogue framework may be greater than assumed. Yet policymakers should also pay careful attention to the fundamental motivation of informal workers in seeking to join or opting not to join these associations, and reflect such insights into the design of “formalization” policies by offering valuable information or limiting mixing interventions with punitive enforcement measures.

Future research should examine not only responses to existing short-term rules or enforcement policies, as I did in this paper, but also policy preferences of informal workers taking into account their heterogeneity, among other potential extensions.

Conclusion

Research agenda on economic informality including its political determinants and consequences is a field moved equally by empirical puzzles as well as by the demand to do something about them, namely the need of policymakers to engage in dialogues across disciplines and local contexts using relatable concepts and reliable measures (Peattie 1987). My work speaks to several emerging intersections in this inherently hybrid literature. Taken together, the three papers in this dissertation make connected contributions and anticipate greater future scholarship in a few key areas. In lieu of a conclusion for the overall dissertation, I describe these research directions in the following final pages.

The state and informality: I start with a view that questions the assumptions about the state's role in informal urban sectors. In political economy and comparative politics literature, informality is seen as an absence of the state. It is common in political science to define urban informality as the state's absence, a state of non-presence, or non-enforcement. It is also common in economics to regard economic informality as a poverty trap, where the defining feature is the absence of formal property rights regimes backed by the state.

The works presented in this dissertation revise these common assumptions. All three papers describe synergistic routine interactions between the state and ordinary people in urban informal contexts and therefore depart from a picture of pessimism around the prospects of rapid urbanization across the developing world. This dissertation's core argument is that economic informality can strengthen the role of the state in public goods provision in an urbanizing society. This can happen indirectly due to a confluence of secular trends such as urban migration of an educated workforce, a

diversified economy, and availability of land for informal development. It can also occur directly if the state's public goods provision mechanisms and policy designs are attuned to the particular social organizations that structure the quotidian life in the local informal residential community and informal employment sectors.

These perspectives speak to the old and new studies on state capacity's micro-foundations. In particular, this dissertation joins a growing body of research observing and explaining state capacity variations in terms of the relative appeal of state and social institutions assuming that both are an option. Novel studies focused on informal markets, for example, suggest that extension of the state occurs partly through social demands but tend to view such situations as exceptional (Hummel 2017; Grossman 2020). This dissertation expands our understanding by implying that even when the state is seemingly absent such as when it is not supplying a basic service, the everyday life of people in informality can be oriented toward the state through subjective political attitudes and indirect access.

Historical origins of urban state-society relations: The analyses in this dissertation do not answer (and do not explicitly ask) the question "Where does a tradition of complementary interactions between the state and people in informality come from?," but it is an important question that is likely to be pursued in the future. I describe participatory policies and existing ties between agents of the state and informal communities and workers' voluntary associations to imply that legacies of past policies may be the key.

A fruitful line of future research concerns the historical origins of different state-informal economy relationships. While existing research identifies historical industrial policy/macroeconomic policy as contributing to the growth of informal sectors and their entrenchment, future research may investigate subnational variations to isolate plausible causal pathways. While Indonesia, this dissertation's focus case, represents an ideal case with considerable internal diversity, it also has unique historical characteristics including what may be deemed slum upgrading policies dating back to the Dutch colonial era (Kusno 2000) and a more recent history of authoritarian neighborhood organizations (Kurasawa 2009). Other research suggests, for example,

that the subjective value of formal housing tenure varies by city and region in the same country (e.g. Kim 2004; Monkkonen 2016). A historical political economy inquiry could probe the origins of these subnational variations by scrutinizing factors such as past migration patterns, geographic constraints, colonial urban and labor management practices, and historical land use, among other variables.

Theorizing heterogeneity: Despite many policy experiments aimed at reducing or formalizing the informal economy, policy diagnosis and learning are hampered by a lack of detailed understanding of the diverse realities of economic informality. In particular, what constitutes the key sources of divergent baseline behavior to guide policy design and evaluation planning? In describing and pointing out the consequences of these different segments inside the informal economy, this dissertation adds to the literature that increasingly pays attention to the intersection between heterogeneity of institutions and demography. I identify and contrast several politically relevant axes of heterogeneity within informality. These are the sources of housing informality (tenure insecurity vs. lack of infrastructure access, Chapter 1), types of political leaders (formal, informal, semi-formal, Chapter 2), and informal employment sectors (Chapter 3). A growing body of comparative politics research also identifies the sources of the plural and competitive nature of political networks in the informal economy or in slum settlements. Assessing the relative importance of the informal economy's sources of heterogeneity and connecting it with responsiveness to formalization and other interventions will readily inform policies.

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