

Interethnic Proximity, Complementarities, and Politics in Malaysia*

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Abstract

Are there particular social structures that allow ethnic diversity to coexist with political stability and economic prosperity? This paper examines the effects of interethnic proximity on political identity and economic development. We exploit fine-grained spatial variation from a British colonial resettlement policy in Malaysia (1948-1951), which forcibly relocated over half a million ethnic minority Chinese into segregated “Chinese New Villages” (CNVs). We find that ethnic majority Malays residing in polling districts closer to CNVs exhibit lower contemporary electoral support for the ethnonationalist coalition, potentially reflecting a moderation of ethnonationalistic political identity. We also observe moderately positive impacts on contemporary economic prosperity. Positive political effects are stronger in regions with initial, historical interethnic complementarities—even in the absence of persistent economic prosperity. Novel primary survey data reveal that Malays living in closer proximity to CNVs report greater contact with Chinese, higher interethnic trust, and weaker zero-sum beliefs. Suggestively, these effects appear to be reversed in areas with greater interethnic competition. Throughout, broader impacts on social integration remain muted. Our findings highlight the promise and pitfalls of intergroup contact in jointly underpinning political moderation and economic development.

JEL codes: D72, J15, N45, O15, R23.

Keywords: Ethnic Diversity, Interethnic Contact, Political Identity, Economic Complementarities, Forced Resettlement, Colonial Policy, Social Cohesion.

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1 Introduction

People identify with political parties in much the same way they identify with racial, ethnic, or religious groups (Campbell et al., 1960). Relative to these identities, however, political identity tends to be more strongly shaped by socialization and economic conditions (Greene, 2004; Jennings and Niemi, 1974; Stigler, 1973). That is, who we interact with in neighborhoods, schools, and labor markets influences how we perceive other groups, the economic opportunities we derive, and ultimately, how we vote. When aggregated, these individual choices have first-order implications for democratic stability, social cohesion, and economic development (Alesina and La Ferrara, 2005; Glaeser, 2005; Guriev and Papaioannou, 2022; Jha, 2025).

Yet, even as the world grows more diverse, we know little about how routine social and market interactions, tied to settlement patterns, translate into long-run changes in political identity and economic development.¹ This question is especially salient for many developing countries that inherited (extreme) ethnic diversity as independent nation-states in the post-colonial era. In these settings, political elites have often mobilized ethnic interests and enacted discriminatory laws through political and legal institutions (Chandra, 2007; Posner, 2005). However, ethnic diversity has not produced the same outcomes everywhere. While some societies have experienced conflict and political instability; others have remained peaceful and achieved sustained economic growth (Bazzi et al., 2019; Easterly and Levine, 1997; Horowitz, 2000). Are there particular social structures that might account for these starkly different trajectories?

In this paper, we take a historical perspective to answer these questions. Specifically, we study how persistent proximity to an ethnic minority community can influence the co-evolution of political identity and economic prosperity of the ethnic majority group in the long run. To do so, we leverage a 1950s colonial, military resettlement program in British Malaya (now Malaysia) that forcibly resettled over half a million widely dispersed rural ethnic Chinese (squatters) into hundreds of compact, fenced ethnic Chinese settlements (Chinese New Villages or CNVs hereinafter).² The program was implemented to sever the rural support networks of anti-British communist insurgents, who were perceived to be predominantly ethnic Chinese.³ As a result, this program created a dispersed network of sharply demarcated Chinese enclaves surrounding pre-existing Malay villages that significantly reshaped the ethnic geography of Malaysia. Freedom of movement was

¹Similar questions about the long-term economic and political effects of diversity (via immigration) have been explored in the context of high-income countries like the US (Sequeira et al., 2020; Tabellini, 2020), showing positive effects on economic outcomes but mixed effects on political outcomes.

²This was nearly the entire rural Chinese population in British Malaya. I.e. roughly 25% of the total Chinese population and 10% of the country's population. Selective resettlement based on pro-Communist leanings was thus highly unlikely.

³For security reasons, small numbers of ethnic majority Malays were also resettled into compact settlements. In Section 7.3, we use these settlements to test if our baseline results are driven by exposure to newcomers in general, or specifically to ethnic Chinese minorities.

reinstated in 1960, but most CNVs have persisted until today, largely due to the grant of land titles to the resettled Chinese population, who had previously lacked formal land rights (Nyce, 1973).⁴

Exploiting granular variation in interethnic proximity created by the resettlement program, we investigate its long-term impacts on Malay political behavior (measured as support for the ethnonationalist coalition) and on local economic development (measured through spatial patterns of economic activity and public goods provision). We interpret ethnonationalist vote shares as a behavioral proxy for the salience of Malay ethnonationalist identity. We then explore the underlying mechanisms driving these effects, focusing on interethnic economic competition versus complementarities, as well as novel measures of intergroup contact, social capital, and attitudes, including trust, empathy, envy, and zero-sum thinking.

To conduct this analysis, we assemble a rich dataset with three novel features. First, we construct an original dataset on CNV locations by geolocating and manually verifying the location of every CNV across Peninsular Malaysia. This allows us to exploit fine-grained spatial variation in interethnic proximity between CNVs and pre-existing Malay communities. Second, we assemble an exhaustive set of administrative data comprising archival, geospatial, and census data at the finest gradations possible. Importantly, we analyze vote shares using novel, polling-district-level voting data (the most disaggregated level possible). This allows us to include parliament seat fixed effects in all our analyses. Third, we conduct an original, individual-level, in-person survey ($N = 1,990$) to collect rich measures of interethnic contact, attitudes and economic outcomes of ethnic majority Malays. We also conduct a supplementary survey of CNV leaders which allows us to pinpoint pre-resettlement squatter locations. Together, this allows us to provide novel evidence of the largely dispersed nature of original Chinese settlements (that likely limited the extent of pre-resettlement, interethnic contact), and more cleanly disentangle various micro-level mechanisms of persistence.⁵

The Malaysian context offers four advantages. First, we argue that resettlement site criteria were plausibly exogenous to underlying locational fundamentals and unobservable characteristics: the program was implemented rapidly under military exigencies, and locations were chosen primarily for defensibility and ease of reinforcement. Importantly, cost constraints and the lack of pre-existing data on rural Chinese squatter locations, often resulted in CNVs being located in sub-optimal sites.⁶ Second, we geolocate precise locations of CNVs and link them to a rich set of

⁴In 1963, Malaysia became a first-past-the-post democracy, and all Malaysians gained full voting rights.

⁵For this primary survey, no existing census of villages in Malaysia exists. Hence, we hand-digitized the exact location of every named Malay village within the universe of polling districts in our sample states. This enabled us to draw a geographically precise sample of Malay respondents based on proximity to nearby CNVs. We describe our sampling procedure in Section 7.

⁶British military archival documents explicitly outline key site selection criteria, providing a clear framework for understanding the resettlement process: (i) road accessibility and livelihood continuity; (ii) topographical suitability; (iii) exclusion of lands reserved for ethnic Malays; (iv) drainage/soil suitability. Socio-anthropological studies suggest

initial CNV characteristics from an underutilized historical survey by [Malayan Christian Union \(1958\)](#). Variation in initial CNV characteristics allows us to pin down mechanisms behind the exposure effects. Third, because Malaysian voters rarely change their registered voting addresses ([Jomo, 2017](#)), polling district vote shares can plausibly be interpreted as reflecting (i) changes in the political behavior and preferences of Malays who were born there; (ii) the effects of interethnic proximity during a Malay’s formative years; and (iii) the effects of interethnic proximity at later-life migration destinations, if any. Fourth, despite large cultural and linguistic differences between the Malays and Chinese (and comprehensive, race-based affirmative action programs for Malays) there have been no large-scale interethnic conflicts in Malaysia in the past five decades.⁷ The Malaysian context hence provides a promising setting to study the potentially positive role of interethnic proximity in reducing conflict and violence.

For identification, we exploit the plausibly exogenous nature of the resettlement process. Specifically, we implement a spatial randomization inference-style approach, analogous to [Dell and Olken \(2020\)](#).⁸ For each *real* CNV, We generate 1,000 counterfactual (“fake”) village sites using predetermined, British military site selection criteria. This procedure yields a counterfactual, spatial distribution of potential resettlement sites, which allow us to compare the exposure effects of proximity to real CNVs with those of proximity to the counterfactual sites, averaged across the 1,000 spatial configurations. Importantly, rich archival documents attest to the plausibly, quasi-random nature of the original site selection process—eventual CNV sites were often sub-optimal due to cost constraints and the lack of hard data on pre-resettlement locations of rural Chinese (Section 4.2). The constructed counterfactuals achieve balance across a host of pre-treatment geographical and socioeconomic characteristics. The only notable imbalance is on 1947 ethnic Chinese shares. This difference, however, is to be expected given that the resettlement program explicitly targeted rural ethnic Chinese minorities for resettlement.⁹ Accordingly, we control for 1947 ethnic Chinese shares in all our regressions, to ensure that our estimates are conditional on our best available proxy for pre-resettlement, spatial distribution of Chinese populations.

There are two caveats to our use of ethnic Chinese shares from the 1947 Census. Specifically, these shares are (i) available only at the Census District level—a much more aggregated geographical unit relative to polling-districts;¹⁰ and (ii) do not enumerate nor include most rural Chinese

that (iv) was the least adhered to. We formally embed these criteria into our empirical strategy using a randomization inference-style approach described in Section 4.2.

⁷Malaysia has an ethnolinguistic fractionalization index (ELF) of 0.65, making it the country with the 9th highest ELF in a sample of 79 countries ([Desmet et al., 2017](#)). In contrast, Burkina Faso (ELF = 0.66) has had a history of military mutinies, coups, and social unrests ([Englebert, 2018](#)).

⁸This method was later formalized by [Borusyak and Hull \(2023\)](#).

⁹Polling districts within 0–2 km of actual CNVs have 3.5–6.0 percentage points higher Chinese shares than districts located further away (relative to a mean of 39%).

¹⁰Each census district typically contains anywhere between 3-20 polling districts. We construct polling-district level controls by assigning each polling-district the level of ethnic Chinese population based on the geographical area

(squatter) settlements (especially those from which CNV resettlement took place).¹¹ Nonetheless, given that these shares are our best available proxy for the distribution of pre-resettlement Chinese populations, we continue to include it as a key, baseline control in all our analyses.¹²

Throughout, we analyze and present results on the impacts of interethnic proximity by studying the exposure effects of CNVs on ethnic majority Malays in surrounding areas by applying a “doughnut-hole approach,” excluding all polling districts containing initial CNVs. This isolates the exposure effects of proximity to CNVs while accounting for potential spillover effects.¹³

Political behavior: Vote shares. Our primary outcome for political behavior is the vote share for the ethnonationalist coalition, the National Front (*Barisan Nasional*, or BN) in the 2013 and 2018 general elections. Elections in Malaysia are conducted once every 5 years. Vote shares are observed at the polling district level, which is the most disaggregated unit available, with a median area of 10.9 km², roughly 1,519 voters, and 2-3 villages.¹⁴ Importantly, the use of polling-district-level vote shares allows us to control for parliament seat fixed effects. That is, we estimate the effects of proximity to CNVs on Malay communities located *within* the same parliament seat. This allows us to hold political candidate and party identity constant throughout all our regressions.

BN is a ruling coalition of ethnic-based parties that, since independence, governed Malaysia for nearly six decades since independence, and consistently advocated and implemented affirmative, Malay-first policies (Jomo, 2017). We interpret BN vote share as a behavioral proxy for the salience of Malay ethnonationalistic identity. Given that identity is arguably broader than any single electoral outcome, we later support this interpretation with various supporting mechanisms (social distance, trust, zero-sum thinking, etc.) and find strong convergent patterns.

Main results. We find a persistent, localized reduction in BN vote shares near CNVs across both state and federal elections in 2013 and 2018. Polling districts within 0–2 km of CNVs register

of each polling-district, as a share of the total area of each census district. See [B.Data Appendix](#) for details.

¹¹1947 Census documents explicitly note that the focus was to enumerate (semi-)urban towns and large villages. Most rural villages (much less squatter settlements) were omitted due to their dispersed character and small population size: “The practice is to enumerate certain selected towns and villages separately ... Only those villages for which separate statistics are necessary for administrative purposes or which exhibit some definite urban or semi-urban characteristics should be included. This is because the value of information was thought to be so slight that it will not justify the time and money spent in collecting it (from rural villages).”

¹²Despite under-enumeration—the enumerated Chinese population was nonetheless likely geographically correlated with unrecorded squatter belts. Given CNVs were sited where both enumerated and unenumerated Chinese were relatively numerous, a higher 1947 share close to CNVs is to be expected.

¹³Our treatment estimates potentially reflect the effects of both *increased* exposure to Chinese populations around CNVs and *decreased* exposure in depopulated origin areas. While we are unable to disentangle these effects, the latter is likely minimal, as original Chinese settlements were largely dispersed and located near rivers and jungle peripheries (See Section 3.3). Hence, our estimates likely capture the *increased* effects of exposure to a higher concentration of ethnic Chinese.

¹⁴Polling district level vote shares are available only from the 2013 general elections.

3–8 percentage points (pp) (5–18%) lower support for the ethnonationalist coalition relative to polling districts in less proximate distance bins, which is consistent with a long-run shift away from ethnonationalism in areas more proximate to CNVs.¹⁵ In 2018, magnitudes are larger and more precisely estimated, possibly suggesting the strengthening of effects from longer interethnic exposure.¹⁶

Our estimates are possibly conservative, representing a lower bound. Specifically, a subset of “treated” polling districts in our counterfactual assignments (i.e. those located within 2km of a *fake* CNV site) might also be located in close proximity to actual CNVs. If so, this would contaminate our treatment estimates and bias effects toward zero. As a robustness check, we exclude all polling districts within 0–2 km of *actual* CNVs from *all* our counterfactual regressions. Effect sizes become slightly larger and more significant, suggesting that our main estimates may indeed reflect a lower bound.

Quantitatively, we rule out three alternative explanations: differences in turnout, ethnic composition, and selective migration. First, we find that differences in voter turnout are quantitatively small and likely insufficient to explain observed differences in vote shares. Second, differences in vote shares may simply be driven by ethnic compositional effects. Specifically, despite excluding polling districts containing initial CNVs from all our analyses, we cannot rule out the possibility of ethnic Chinese in-migration and the expansion of CNVs over time. Reassuringly, based on full-count electoral rolls, we find small and statistically insignificant differences in the share of registered ethnic Chinese voters between polling districts located within 0–2km of CNVs and less proximate distance bins. In addition, a back-of-the-envelope calculation *à la* Becker and Woessmann (2009); Calderon et al. (2023) shows that, even if all ethnic Chinese voters (unrealistically) voted against the ethnonationalist coalition, implausibly high turnout rates would be required to account for observed differences in vote shares. Third, using original primary survey data on individual-level Malay migration histories, we find little evidence of differential in- or out-migration between Malay villages that are located more or less proximate to CNVs.

Qualitatively, based on key institutional features, we argue that our results are unlikely to arise from (i) gerrymandering of polling district borders by the ruling coalition; (ii) distaste against co-

¹⁵Beyond average effects, we also uncover a notable non-linear pattern in the relationship. We observe an inverted-U relationship between proximity to CNVs and ethnonationalist vote shares, particularly in the 2018 election, often peaking between 2–8 km, implying ethnic-based political preferences are strongest at intermediate distances. We offer three plausible interpretations: (i) “racial threat” is strongest at intermediate distances, whereas close-range direct contact promotes more positive attitudes and distant exposure reduces salience (Allport, 1954; Blalock, 1967; Stein et al., 2000); (ii) a “near-but-excluded” grievance mechanism, whereby visible nearby gains without commensurate local benefits generate frustration, which is consistent with the tunnel effect and local relative comparisons (Hirschman and Rothschild, 1973; Luttmer, 2005); and (iii) ethnic conflict theories predicting peak mobilization at moderate levels of resource competition (Caselli and Coleman, 2013).

¹⁶Anti-ethnonationalist sentiments might also have been boosted by the broader wave of anti-incumbent sentiment that swept Malaysia and resulted in the opposition gaining control of the government for the first time in 60 years.

ercive resettlement policies. First, colonial resettlement of CNVs into the heart of rural Malay enclaves led to the ethnic Chinese constituting a small minority of overall votes in each legislative seat. This suggests that it would have been difficult for the ruling coalition to redraw polling district *and* parliament seat boundaries to selectively isolate Malay voters within 2km of CNVs. Furthermore, Chinese New Villagers have consistently voted *for* BN (up till 2013) given the widespread perception of the Malaysian Chinese Association (a key constituent party of BN) as a key intermediary and benefactor for CNVs in the (post-)resettlement process. Second, resettlement was carried out by the *British*, not by BN. Hence, we argue that it would be unlikely for Malay voters to punish BN at the ballot box, for a policy they did not implement.

Turning to economic effects, we find moderately positive impacts on local economic development near CNVs. While effects on nightlight luminosity are not significant at the polling-district level, population density is about 40% higher at the polling district and more than double at the grid cell-levels. These patterns indicate highly localized densification and economic activity, consistent with agglomeration close to CNVs. Furthermore, primary survey data analysis also consistently reveals that Malays living near CNVs report higher income and wealth.

Given positive economic effects, lower ethno-nationalist vote shares of Malays could simply reflect the possibility that higher Malay income and wealth could have, in itself, led to a (i) weaker preference or need for ethnic patronage ([Aspinall et al., 2022](#)) or (ii) in the 2018 elections, a greater distaste towards widespread corruption scandals. We test and show that all results on vote shares are robust to controlling for nightlight luminosity. This suggests that positive economic effects are unlikely to be the main channel through which changes in political behavior took place. We conduct a similar exercise controlling for contemporaneous income and/or wealth in our primary survey data analyses on interethnic attitudes (detailed below). Our results there further suggest that economic effects are unlikely to be the main mechanism of persistence.

On public goods, we find about 30-40% higher contemporary road density near CNVs, but little to no change in the number of schools or health facilities, and no effect on school quality (measured by student-to-teacher ratios). Given pre-treatment balance on road density, we interpret these results as increases in connectivity-driven development driven by proximity to CNVs, without parallel improvements in service provision or its quality. Importantly, together with our use of parliament seat fixed effects, the lack of meaningful differences in public goods provision suggests that systematic geographical targeting of public goods toward Malay communities closer to CNVs (driven by intra-seat local political competition) is unlikely.

Mechanisms. We explore three potential mechanisms of (i) interethnic contact; (ii) competition and complementarities; and (iii) exposure to newcomers, that might explain the observed changes in the political behavior of Malays.

First, we consider *direct interethnic contact* as a plausible mechanism (Allport, 1954). Proximity to CNVs may have increased casual and formal interactions between Malays and Chinese. In particular, *positive contact* could improve market relationships and inter-ethnic attitudes—potentially explaining observed decreases in ethnonationalistic vote shares. Using rich, primary survey data, we first document balance on proxies for pre-resettlement economic prosperity and interethnic attitudes between respondents in treated (within 0-2km of a real CNV site) and control villages (within 0-2km of a fake CNV site).

Consistent with *positive contact*, we find that Malays living near CNVs report more interactions with Chinese (in villages and workplaces), significantly higher situational trust, less zero-sum thinking, and greater occupational/market overlap.¹⁷ These patterns support a contact-and-complementarities mechanism through which sustained proximity strengthens trust and economic interdependence, weakens zero-sum beliefs. Importantly, we can further control for and show that contemporaneous differences in income and wealth cannot explain the entirety of observed changes in contact and attitudes—suggesting that changes in attitudes and beliefs are unlikely to be driven by greater economic prosperity.

Second, interethnic *competition* and *complementarities* could have countervailing effects on political identity. On one hand, as the Chinese minority became economically established, their growing success may have intensified competition with neighboring Malays over employment, business opportunities, and state resources—strengthening ethno-nationalistic political preferences (Horowitz, 2000). On the other, interethnic proximity may have led to economic complementarities, increasing productivity and promoting more inclusive political attitudes through cooperative relationships (Alesina and La Ferrara, 2005; Jha, 2013).

We find strong evidence for complementarities and suggestive evidence for competition. We present our results in three steps. First, we present heterogeneity analyses based on *contemporary* agricultural versus non-agricultural jobs of Malays. The agricultural sector is the largest source of employment for Malays and hence, where economic competition is likely to be more salient. We find suggestive evidence of competition—Malays working in the agricultural sector consistently report *negative* inter-ethnic attitudes towards the Chinese. We interpret this as suggestive given potential concerns about (self-)selection into contemporary occupations. Second, given the plausibly exogenous collapse of rubber and tin prices in the mid-1980s (Shah, 2019), we exploit variation in proximity to *historical* rubber estates and tin mines—labor-intensive sectors where employers often hired both Malay and Chinese workers (Ross, 2014; Siew, 1953) and hence, where contemporaneous, differential self-selection of Malays into occupations is likely to be less of a concern. We find a decrease in vote shares for the ethnonationalist coalition in areas where historical estates and mines were present but largely null effects on economic prosperity. We hypothesize that these

¹⁷ Additionally, we find limited evidence of heterogeneous effects by cohort. Results available upon request.

results might be driven by *historical* interethnic complementarities that, though no longer present, continue to have persistent effects on political behavior. Third, heterogeneity analyses of interethnic attitudes based on historical occupational shares of Malay villages further support the positive effects of complementarities. In areas where Malays historically worked in rubber and tin sectors, we find *positive* effects on attitudes towards the Chinese.

Finally, observed effects might reflect changes in political behavior from exposure to the ideas, opportunities, and norms of new settlers (regardless of ethnic identity) (Baliotti et al., 2021; Chetty et al., 2016), rather than from exposure to an ethnic minority group. We test this with a falsification exercise using a contemporaneous, forced resettlement program of ethnic Malays that created Malay New Villages (MNVs). The establishment of MNVs took place on a much smaller scale to protect dispersed Malay villagers from communist violence (Dobby, 1952; Humphrey, 1971). If generic exposure to new settlers were driving our results, similar political and economic patterns should also appear near MNVs. We find little evidence of this: vote shares near MNVs are statistically indistinguishable from their counterfactuals, suggesting that observed results are likely driven by interethnic proximity to *ethnic minority Chinese*, and not by generic exposure to new settlers regardless of ethnic identity.

Related literature. This paper speaks to three strands of literature. First, we contribute to the literature on the effects of forced resettlement on nation-building and assimilation (Bazzi et al., 2016), and that on spatial growth and economic development (Peters, 2022).¹⁸ Most studies focus on aggregate economic or political effects, but the interaction between the two and the distributional effects on natives remain less clear.¹⁹ Using granular data, we show that ethnic-majority individuals living closer to resettled ethnic-minority villages enjoy moderately higher economic prosperity and are less likely to vote for the ethnonationalist coalition. We further provide suggestive evidence that changes in political behavior can outlast that of economic effects. Hence, we extend recent studies (e.g. Calderon et al., 2023; Fouka et al., 2022) finding that intergroup contact leads to positive transmission of political attitudes, and downstream political effects. We also contribute to studies on the political and economic effects of immigration (Alesina and Tabellini, 2024;

¹⁸A number of studies have also looked at human capital and labor market outcomes of the forcibly displaced populations, including those in Poland (Becker et al., 2020) and South Africa (Carrillo et al., 2023), as well as the labor market effects of internment of Japanese Americans during World War II (Arellano-Bover, 2022). Separately, Toews and Vézina (2025) study the long-run effects of exposure to Stalin's forced labor camps that targeted intellectuals on the economic development of surrounding communities, while Abel (2019) compares economic and social outcomes of resettled versus surrounding communities under South African apartheid. In contrast, our study focuses on the interaction between economic and political effects on surrounding communities.

¹⁹Alix-Garcia et al. (2018) and Tsuda (2022) exceptionally study the distributional effects of forced displacement on host economies, focusing on impacts across different markets in rural developing economies.

Sequeira et al., 2020; Tabellini, 2020).²⁰ In contrast to Tabellini (2020), who finds economic benefits but political backlash in US cities, we provide novel evidence of how persistent, face-to-face intergroup contact and extensive-margin development in rural areas (e.g., new roads or first-time market access) might have led to a moderation of political behavior, plausibly due to locally salient economic benefits & complementarities.

Second, this paper connects to work on interethnic complementarities (Diaz-Cayeros and Jha, 2022; Jedwab et al., 2019; Jha, 2013; Montalvo and Reynal-Querol, 2021) by providing evidence that historical economic complementarities are associated with persistently more positive interethnic attitudes. Using novel primary survey data, we elucidate micro-level mechanisms: sustained intergroup contact, more inclusive attitudes and beliefs toward the Chinese, and ongoing market complementarities align with long-run shifts in political behavior. Our findings, therefore, provide quasi-experimental evidence for the large and generalizable positive effects of *broad* intergroup contact (Lowe, 2024).²¹ Furthermore, we contribute to studies on the positive impacts of *intra*-community contact (Bazzi et al., 2019; Billings et al., 2021). In particular, Bazzi et al. (2019) studies the effects of contact among multiple ethnic groups on national identity and finds that greater fractionalization (polarization) leads to a stronger (weaker) national identity. In contrast, we study *inter*-village contact between two large ethnic groups and show that interethnic contact, persistent economic interdependence, and shifts in intergroup attitudes and beliefs can jointly explain long-run political moderation even in the context of extreme ethnic polarization.

Finally, we contribute to the literature on the effects of exposure to diversity on social and political preferences (Algan et al., 2016; Billings et al., 2021; Bursztyn et al., 2024; Enos, 2014; Lowe, 2021; Rao, 2019; Siddique et al., 2024). The closest paper to ours is Schindler and Westcott (2021), which studies the positive exposure effects of Black American GIs stationed in Britain during World War II on racial attitudes and support for far-right politics among British residents today. Relative to a *one-off* shock, we study the effects of a *permanent* program which led to persistent differences in inter-group exposure via routine, everyday interactions. Together with an original survey, we provide novel evidence that intergroup contact, through complementarities, trust, and zero-sum beliefs, can possibly lead to a moderation of ethnonationalistic identity across generations. Furthermore, we offer a nuanced view of the largely positive effects of contact documented in much of the existing literature. Despite half a century of greater interethnic proximity, contact,

²⁰Studies have documented mixed evidence for how immigration affects native voting behavior. These studies, however, largely focus on the effects of exposure to refugees or immigrants who do not have voting rights (e.g., Barone et al., 2016; Dustmann et al., 2019; Halla et al., 2017; Otto and Steinhardt, 2014; Steinmayr, 2021).

²¹This also relates to the growing literature in social sciences that examines how networks affect economic and political outcomes. For instance, studies have shown that social networks influence economic mobility (Chetty et al., 2022; Kling et al., 2007), access to information and opportunities (Jackson, 2008), diffusion of information that can improve economic outcomes of different ethnic groups (Siddique et al., 2024), and political information and voting (Gerber et al., 2009; Kernell and Lamberson, 2023).

and attendant changes in political behavior—greater social integration, as measured by interethnic friendship formation and attitudes on interethnic marriage, remains largely unchanged. Our findings thus provide microfoundations that complement macro-level studies on ethnic segregation and diversity ([Alesina and Zhuravskaya, 2011](#)).

Roadmap. Section 2 outlines the institutional background. Section 3 describes the data. Section 4 describes the empirical strategy. Section 5 reports empirical results of the political effects. Section 6 examines local development effects. Section 7 describes underlying mechanisms behind the results. Section 8 concludes.

2 Institutional Background

2.1 Ethnic Diversity and Interethnic Relations in Malaysia

The British ruled over Peninsular Malaysia from 1786 to 1957—the year in which Malaysia declared independence. The population of Peninsular Malaysia in 2010 comprised of 64.5% ethnic Malays (and a small number of indigenous people), 25.9% ethnic Chinese, and 8.9% ethnic Indians. Ethnic Malays differ substantially from ethnic Chinese in terms of language, religion, appearance, culture, and tradition. Interethnic marriages between Malays and Chinese are very rare ([Nagaraj, 2009](#)).

The in-migration of ethnic Chinese to Malaysia dates back to the 15th century, but a majority of Chinese, especially those that lived in rural areas, arrived in the early 20th century, driven by upheaval in China and drawn to British Malaya’s labor demands ([Kim, 1998](#); [Strauch, 1981](#); [Wang, 1959](#)). Chinese migrants often remained culturally distinct, and, during the Cold War, were increasingly viewed as possibly being aligned with China, raising frequent security concerns among the British authorities ([Suryadinata, 1987](#)).²²

British colonial policy further entrenched ethnic divisions via land-use policies that incentivized the Malays to remain in subsistence farming, and the Chinese to enter lucrative sectors like mining and trade ([Kratoska, 1982](#)). This institutionalized economic disparity laid the groundwork for persistent post-independence tensions, with many Malays perceiving the Chinese as disproportionately rich and economically advantaged.

²²In Southeast Asia, Malaysia hosts the second largest ethnic Chinese population. In 1981, there were as many as 4 million ethnic Chinese living in Malaysia ([Suryadinata, 1987](#)).

2.2 Electoral Politics in Malaysia

In 1969, the economic gap between Malays and Chinese culminated in widespread racial riots, which were driven by economic grievances from ethnic Malays who did not fully participate in the rapidly modernizing economy of the newly independent Malaysia. In response, the ruling coalition, the National Front (*Barisan Nasional*), led by the United Malays National Organization (UMNO), launched the 1970 New Economic Policy (NEP) to reduce Malay poverty and interethnic inequalities. The NEP granted ethnic Malays preferential access to education, public-sector jobs, housing, and corporate equity (Jomo, 2017).²³ These policies, together with the persistent political narrative of Malay ethno-nationalism (Gungwu, 2021), enabled the National Front to maintain political dominance and govern without interruption up till 2018.

In 2013, the opposition People’s Alliance (*Pakatan Rakyat*)—a multi-ethnic coalition of People’s Justice Party (PKR), Democratic Action Party (DAP), and Parti Islam Malaysia (PAS)—made major gains, campaigning on political reform and a more inclusive, multi-ethnic form of governance. In particular, a key policy agenda was that of Malaysia as a multicultural nation which should grant equal rights and representation to all, regardless of ethnicity or religion.²⁴ Though the National Front retained power, it was increasingly dominated by UMNO, which pushed a more assertive pro-Malay agenda, including “Ketuanan Melayu” (Malay Sovereignty) (Ostwald and Oliver, 2020).²⁵

In 2018, PAS exited the opposition over ideological splits, mainly over the implementation of Islamic sharia law, and formed the conservative *Gagasan Sejahtera* (GS) bloc.²⁶ The opposition rebranded itself as the Alliance of Hope (*Pakatan Harapan*), still led by PKR and Anwar Ibrahim.²⁷ The election became a three-way race: reformist (Alliance of Hope), conservative Islamist (GS), and ethno-nationalist (National Front). In a historic result, and amid a wave of corruption episodes, the Alliance of Hope won the popular vote and formed Malaysia’s first non-National Front federal government.

2.3 The Electoral System in Malaysia

Malaysia operates as a first-past-the-post parliamentary democracy. Since 1963, elections have been held every five years at both the federal and state levels. Voters elect representatives to the

²³Ravallion (2020a) finds that post-NEP, all major ethnic groups saw income growth, with Malays gaining most. Ravallion (2020b) later shows that while the NEP reduced poverty, its effect weakened after the initial years.

²⁴PKR, led by Anwar Ibrahim, appealed to urban Malays; DAP to Chinese and Indian voters; and PAS to rural Malays.

²⁵The Malaysian Chinese Association and Malaysian Indian Congress—UMNO’s coalition partners—had become politically marginal by 2013.

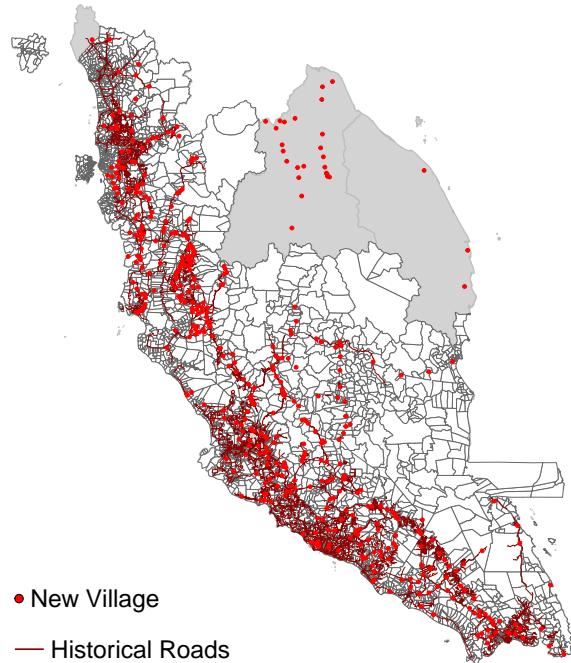
²⁶This schism led to the formation of *Amanah*, a moderate Islamic party that remained in the opposition coalition.

²⁷We refer to the Alliance of Hope as the People’s Alliance throughout for continuity.

federal House of Representatives and to State Legislative Assemblies from single-member constituencies, with each federal parliament seat typically comprising two to six state constituencies. To that end, all our analyses control for federal parliament seat fixed effects and state-party constituency match-ups, where applicable.

Citizens aged 21 and above are automatically registered to vote.²⁸ Voters are generally assigned to polling stations near their registered voting address, which almost always maps directly to a single polling district.²⁹ Notably, Malaysians rarely update their registered voting addresses despite later-life migration, often preferring to vote in their hometowns.³⁰ In Section 3.2, we explain how this informs our interpretation of vote share differences.

Figure 1
Location of New Villages and Historical Roads



Notes: Locations of 452 New Villages are represented by red dots, and the pre-resettlement road network is represented by dark red lines. The white polygons indicate polling district boundaries in 2013. Polygons shaded in grey are the states of Kelantan and Trengganu. We exclude these states from our analyses as they largely contain New Village resettlements of non ethnic Chinese villagers. Source: [Lee \(2012\)](#); [Lim and Song \(2002\)](#), authors' own geo-referencing and HIND1035-series maps from 1947 from the Australian National Library Archives.

²⁸The voting age was lowered to 18 starting from the 2022 General Elections.

²⁹In nearly all cases, there is a 1-to-1 mapping between polling stations and districts.

³⁰This may be due to the high cost of updating registration, opportunities to visit family, or the perception that rural votes carry more weight due to malapportionment ([Jomo, 2017](#)). For example, Kuala Lumpur, despite its large population, has no state legislature and relatively fewer federal seats.

2.4 The Colonial Resettlement of Ethnic Chinese to New Villages

To study the impact of geographic proximity to ethnic Chinese, we exploit a top-down colonial resettlement program implemented by the British military during the Malayan Emergency (1948-1960). The program resulted in the forced resettlement of about 573,000 rural ethnic Chinese (nearly the entire rural Chinese population, which is about 25% of the Chinese population and 10% of the total population of Peninsular Malaysia in 1947) to fenced-up New Villages across Peninsular Malaysia ([Sandhu, 1964](#)). Figure 1 shows the distribution of all CNVs that we successfully geolocated (We describe this process in Section 3). Following military site selection criteria, nearly all CNVs lie along a historical main road for ease of reinforcement. In Section 4.2, we describe how we exploit this feature and other plausibly exogenous characteristics of site selection for identification.

This resettlement was part of the British response to a rising communist insurgency, led by the Malayan Communist Party (MCP), which the British perceived as being chiefly supported by the ethnic Chinese community. As the MCP turned against British rule, communist insurgents began targeting strategic economic assets like rubber estates and tin mines. The British military viewed mass resettlement as essential to severing support to communists and restoring political stability.³¹

The program rapidly displaced rural Chinese (mostly engaged in farming, pig-rearing, and smallholder mining and estate work) into fenced and heavily surveilled compounds located 3.2 to 9.6 km from their original settlements ([Nyce, 1973](#)). The resettlement was rapid and often unexpected, with the bulk of resettlement taking place within the first 3 years of the Emergency. [Humphrey \(1971\)](#) described it as a “laboratory experiment”, because the resettlement imposed strict movement restrictions as CNVs were heavily surveilled, often enclosed by barbed wire, and largely isolated from neighboring communities from 1948-1960.

Freedom of movement returned after the Emergency in 1960, yet most CNVs remained intact. This is largely attributed to the formalization of land tenure: many Chinese had been squatters without legal claims to land. Land titles awarded in CNVs provided newfound security and economic stakes, encouraging settlers to remain despite urban migration opportunities ([Nyce, 1973](#)).

³¹It is worth noting that political stability in Malaya was important to the British because Malaya was one of the largest colonial revenue sources due to high demand and international prices of tin and rubber, the main exports of Malaya throughout the early and mid-20th century.

3 Data

3.1 Sampling Frame

Chinese New Villages. We constructed a baseline sample of 208 CNVs in three steps. First, we obtained a list of 666 CNVs from the historical survey by the [Malayan Christian Union \(1958\)](#). Second, using maps published by the Ministry of Housing and Government ([Lee, 2012](#)), we geolocated 452 CNVs and manually verified their existence today using Google Earth and Google Maps. Figure 1 shows their distribution across Peninsular Malaysia.

Third, we imposed four sample criteria: (i) we kept all CNVs whose primary medium of language was recorded as Mandarin or a Mandarin dialect in 1958.³² In cases where language information was missing, we supplemented the [Malayan Christian Union \(1958\)](#) with data on the name and location of Chinese-medium schools ([Lim and Song, 2002](#)), the presence of which is highly correlated with the presence of a CNV. (ii) We focused on seven West Coast states and excluded CNVs in two East Coast states, where historical Chinese settlement and interethnic contact patterns continue to be markedly different due to their orientation towards the South China Sea and exposure to southern Chinese emigration since the 15th century.³³ (iii) We excluded all CNVs located in 1947 urban census districts.³⁴ (iv) We excluded all CNVs that have fewer than 200 Chinese voters in the 2013 electoral rolls.³⁵ This gives us a total of 208 CNVs in our regression sample. Table A.1 reports the summary statistics of these 208 CNVs and compares them to 244 out-of-sample CNVs. Figure 2 shows the geographical distribution of our baseline sample of CNVs.

Polling districts. We use polling-district-level electoral data from the 2013 and 2018 Malaysian General Elections. Polling districts are the most disaggregated level at which data on vote shares is available. In our sample, there are 939 districts in 2013 and 1,004 in 2018, each averaging 10.9 km² and 1,519 registered voters.³⁶ On average, a federal parliamentary constituency seat contains 18 polling districts (See Figure 3 later).

³²Note that a small number of ethnic Malays were resettled into Malay New Villages. This took place largely in areas where the Communists were deemed to be extremely active (“Black” areas) and was meant to protect the local Malay population from Communist attacks ([dhu Renick, 1965](#)). We use exposure to Malay New Villages as a test for alternative mechanisms in Section 7.

³³Hence, we focus on Johor, Perak, Negeri Sembilan, Selangor, Kedah, Malacca, and Pahang. We exclude CNVs in Kelantan and Trengganu.

³⁴Specifically, we digitize census district polygons from the 1947 Malayan Population Census and classify a census district as urban if it contains a major town.

³⁵Results are qualitatively similar if we use lower thresholds. The most likely reason for the depopulation of these CNVs is a lack of economic viability and/or (natural) disasters that rendered them inhospitable. For example, one such CNV in the state of Johor that we visited no longer had any viable Chinese presence in the old village quarters due to a fire that broke out in the 1970s and burnt down nearly the entire village.

³⁶The number of registered voters is roughly equivalent to an electoral precinct in the US ([Longuet-Marx, 2024](#)).

To obtain this sample, we impose four sampling restrictions. First, to ensure that we are comparing outcomes only across polling districts that could have possibly been candidates for siting a CNV, we restrict our sample to all polling districts located 10 kilometers from a CNV. This is informed by military site selection criteria (see Section 4.2) where Chinese were largely resettled between 3.2 and 9.6 kilometers from their original locations (dhu Renick, 1965).³⁷ Second, to better isolate the effects of exposure to CNVs, we conduct a “doughnut hole” analysis by excluding all polling districts that contain a CNV. Third, we restrict our sample to historically rural polling districts. In this way, we can interpret our results as the effects on areas that started from a similar level of development.³⁸ Last, given our focus on studying the effects of interethnic proximity between ethnic Chinese and Malays, which are the two largest ethnic groups in Malaysia, we exclude all polling districts with an ethnic Indian-majority.³⁹

3.2 Treatment and Primary Outcomes

Interethnic proximity. We define interethnic proximity, which is our treatment variable, as the straight-line (fly-by-crow) distance from the centroid of each polling district to the nearest CNV (Figure 2). We use fly-by-crow distances instead of historical road distances because a substantial number of pre-existing, non-resettlement villages in the pre-resettlement period were (i) not accessible by main roads, and (ii) it is possible that inter-village movement and contact were more likely to occur as a result of villagers traversing unrecorded dirt paths rather than paved roads.

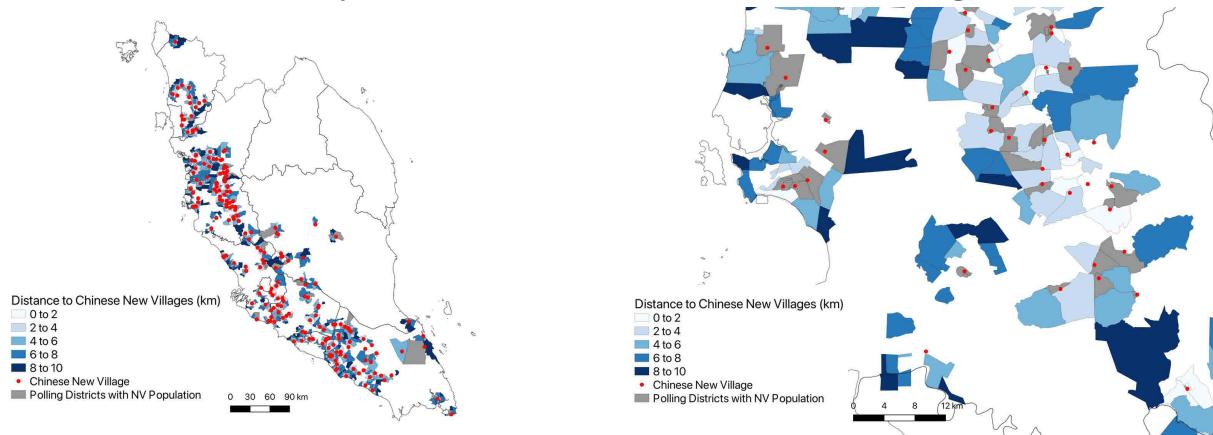
Vote shares (a behavioral proxy for Malay political identity). We use federal and state election vote shares for the National Front (BN) in both the 2013 and 2018 General Elections as our main measure of political preferences for ethno-nationalist policies, and as a behavioral proxy for Malay political identity. BN ran on a Malay-first platform, in contrast to the more inclusive, multi-ethnic coalitions of the opposition, the People’s Alliance (rechristened the Alliance of Hope in 2018).

³⁷Ideally, we would measure the distance between each polling district and the centroid of the closest original ethnic Chinese squatter camp location, but to the best of our knowledge, such granular data does not exist at a systematic level due to the hastiness of the resettlement process.

³⁸Specifically, we digitize census district polygons from the 1947 Malayan Population Census and classify a census district as urban if it contains a major town. A major town is defined by the Census as any town containing a population of more than 10,000 inhabitants. We then overlay contemporary polling district polygons over 1947 census district polygons and define a contemporary polling district as historically rural if more than 50% of its geographical area lies outside a 1947 urban census district polygon.

³⁹Specifically, given the three main ethnic groups, we exclude all polling districts where ethnic Indian shares in 2013 were greater than 66.6%. As mentioned in Section 2, Indians comprise a mere 8.9% of Malaysia’s population. Furthermore, the political economy of these polling districts is extremely different—many were historical plantation lines, where rubber plantation owners constructed purpose-built dormitories and amenities, and where (many descendants of) marginalized Indian coolies and rubber tappers who were brought into colonial Malaysia as indentured labor continue to reside (Kratoska, 1982).

Figure 2
Interethnic Proximity: Distances to the Nearest CNV at the Polling District-Level



Panel A

Panel B

Notes: Panel A shows the location of CNVs in red dots and the distances to the nearest CNVs in the estimating sample. Panel B is an example of an enlarged area for illustrative purposes. Polygons depict polling district boundaries. Polygons shaded in darker colors indicate greater distances to the nearest CNV.

We do not separately analyze contests involving the opposition Islamic party (PAS) for three reasons. First, in Malaysia, ethnicity and religion are closely linked, as nearly all Malays are Muslims by constitutional definition. Second, the BN's main Malay party (UMNO) has historically promoted a conservative Malay-Muslim identity, making its platform broadly similar to PAS. In 2013, PAS ran as part of a multi-ethnic coalition, and our results are robust to excluding such contests. Third, in 2018, PAS shifted further right as part of a separate conservative coalition (GS), but it won only 16.89% of the popular vote, making its impact limited.⁴⁰

Figure 3 shows the polling-district level geographical distribution of vote shares for BN in the 2013 federal elections. Using polling district-level data offers three advantages. First, polling districts are much smaller and more demographically homogenous. An average federal constituency contains 18 polling districts. Second, unlike federal and state constituencies where cases of malapportionment to favor BN coalition have been well-documented (Ostwald, 2017), polling districts largely contain a roughly equal number of voters and have been less subject to political efforts at re-drawing boundaries. Third, the much finer granularity allows us to leverage granular distances to CNVs and control for parliament seat fixed effects.⁴¹ Hence, we use vote shares in the federal elections as our main outcome variable unless otherwise noted.

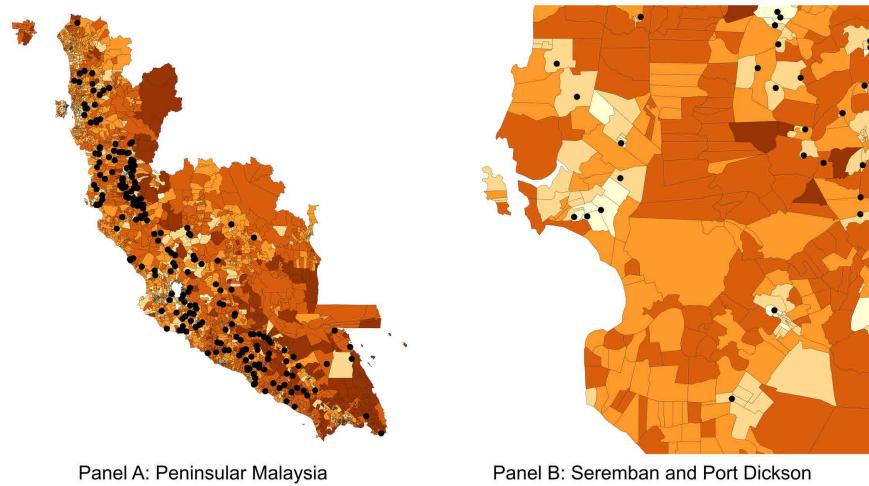
We interpret vote share differences as reflecting both formative and later-life exposure to CNVs.

⁴⁰We can further test for differences in religious identity and/or religiosity using primary survey data.

⁴¹Pre-2013 electoral results are only available at the parliament or state constituency seat level which is too aggregate for exploiting the fine-grained variation of within-parliament seat distance to New Villages.

Figure 3
Vote Shares For the National Front in 2013, Polling District-Level

0 - 20 20 - 40 40 - 60 60 - 80 80 - 100



Notes: This figure displays vote shares for the National Front at the polling district level in 2013. Federal parliament constituency boundaries are outlined in black. Polygons shaded in darker colors indicate greater vote shares for the National Front in 2013. CNVs are represented as black dots. Each parliamentary constituency contains an average of 18 polling districts.

Since Malaysians rarely change their voting addresses, vote shares primarily capture the political *preferences* shaped by growing up near CNVs. However, in areas with more out-migrants who return to vote, preferences may also reflect interethnic exposure at migration destinations. To account for this, all estimations control for proximity to the nearest 1947 urban center.

Voter turnout and registered voters. We calculate turnout rates at the polling-district level. During our sample period, federal and state elections were held simultaneously. Datasets were obtained from the Malaysian Electoral Commission. We construct ethnic shares of registered voters across the entire Peninsular Malaysia using full-count voter rolls from the 2013 General Election. Voter rolls in 2013 record the self-identified ethnicity of each voter in Malaysia. This is, to the best of our knowledge, the most granular and accurate measure of ethnic shares available, as existing data on ethnic shares exists only at higher aggregated census and administrative district levels. We are unable to do so using voter rolls from the 2018 General Election as the self-reported ethnicity variable is missing for a substantial number of voters.

Local economic development, urbanization, and public goods. Contemporary censuses do not provide information at a sufficiently disaggregated level for our analysis. As income per capita data is unavailable at the very local level in this context, we use nighttime luminosity data from satellite images in 2010 as a proxy for local economic activity and development (Hodler and Raschky, 2014; Michalopoulos and Papaioannou, 2013). We also use population data from 2010, from the Global Human Settlement Layer (GHSL). We aggregate these datasets to obtain the average values at the grid cell level of $1\text{km} \times 1\text{km}$ and the polling district level, respectively.

We measure educational public goods by geo-referencing a complete list of all primary and secondary schools in Malaysia in 2010 from the Ministry of Education. These records contain the point coordinates and the number of teachers and students for each school. We measure health public goods by geo-referencing a complete list of all clinics and hospitals in Malaysia in 2022 from the Ministry of Health. Due to the lack of geocoded administrative records prior to 2013, we use the 2022 distribution as a proxy, noting that major public infrastructure investment typically varies little over a single decade. We aggregate both data up to the polling district level. Lastly, we measure contemporary road density at the polling-district level using data from Open Street Maps (OSM). We do so by overlaying the contemporary OSM road network over polling district boundaries and computing the total length of roads within each polling district. We then divide total road length by the area (in square kilometers) of each polling district.

Primary individual-level survey data. To investigate the underlying mechanisms behind the political effects, we use our original primary survey data on attitudes and behaviors of Malays toward Chinese. We describe these at length when presenting results in Section 7.1.

3.3 Pre-Resettlement Chinese Squatter Locations (Original Survey Data)

Our primary survey data includes a retrospective survey administered to a total of approximately ninety ethnic Chinese community leaders from about 30 CNVs (we targeted three per village). Through semi-structured interviews, we identify (i) the geographic location of each Chinese pre-resettlement squatter location and (ii) distance from the CNV.⁴²

Figure A.1 displays the spatial distribution of pre-resettlement locations of Chinese squatters relative to the locations of CNVs. Panels A and B show maps for two districts of Batu Pahat and Kluang (Johor state) and Kinta (Perak state). These maps plot squatter locations (red dots) alongside CNVs (crosses) and illustrate that the pre-resettlement squatter settlements were largely (i) geographically dispersed and (ii) lacked systematic patterns of concentration.

⁴²To minimize recall bias, trained enumerators from the local community engaged leaders using high-resolution satellite imagery (Google Maps). Respondents identified landmarks associated with former settlements, which were then geolocated to the highest degree of precision possible.

The spatial dispersion of pre-resettlement squatter locations corroborates historical accounts (dhu Renick, 1965), and suggests that any potential effects from decreased exposure or depopulation in the origin areas on existing Malay settlements were likely to have been minimal. Specifically, Malay communities residing across different distance bins would have had some degree of pre-resettlement exposure to Chinese squatters, but the remote, dispersed nature of these squatter locations is likely to have limited inter-settlement connectivity and resulted in a much lower intensity of pre-resettlement exposure to ethnic Chinese, vis-à-vis sustained differences in post-resettlement contact.

Panel C plots the distance between each real CNV and initial Chinese squatter locations from which CNV villagers were relocated from.⁴³ The highest pre-resettlement exposure appears to be for Malay communities located within the 4-6km distance bin. This will be important for interpreting potential differences in treatment estimates across distance bins in Section 5.

4 Empirical Strategy

4.1 Ordinary Least Squares Estimation

We estimate the effects of distances to the nearest CNV on polling-district level political and economic outcomes via OLS:

$$Y_{d,p} = \alpha + \sum_{k=1}^4 \beta_k distCNV_d^k + \gamma_d \mathbf{X}_d + \theta_p + \epsilon_{d,p} \quad (1)$$

where $Y_{d,p}$ is an outcome of interest in polling district d of federal parliamentary constituency p . $distCNV_d^k$ are indicators equal to 1 if the geodesic distance from the centroid of polling district d to the nearest CNV is 2-4km ($k=1$), 4-6km ($k=2$), 6-8km ($k=3$), and 8-10km ($k=4$). The omitted bin is 0-2km. \mathbf{X}_d is a vector of polling-district level controls that includes slope, elevation, percentage of east-facing grids, percentage of topsoil organic carbon, percentage of topsoil sodicity, an indicator for drainage being very poor, an indicator for soil being coarse, an indicator for soil being medium, distance to the nearest coast, distance to the nearest urban center in 1947, the natural logarithm of population density in 1947, and ethnic Chinese shares in 1947. Controlling for ethnic Chinese shares and population density in 1947 ensures that we compare areas with similar levels of pre-treatment diversity and economic prosperity.⁴⁴ We cluster standard errors at the federal parliament seat level.

⁴³For more than 80% of the observed CNVs, ethnic Chinese squatters were relocated from distances within 10km—we omit the remaining 20% for presentation purposes.

⁴⁴Regressions using state legislative seat election results further control for indicators for every possible combination of party match-ups at the state constituency level.

There are two important points to our empirical strategy. First, θ_p is a vector of federal parliament seat fixed effects. This ensures that our analysis compares voting outcomes across polling districts in which voters are voting for both the same party and candidate. Second, we focus on exposure effects on surrounding Malay communities by conducting a “doughnut hole” analysis, whereby we exclude all polling districts that contain CNVs.

However, the potentially endogenous placement of CNVs raises concerns that OLS estimates of β_k in Equation 1 may be biased. For instance, since British authorities prioritized road access for military logistics (dhu Renick, 1965), proximity to CNVs may correlate with proximity to roads and hence better long-run market access, confounding the estimated effects. Similarly, if CNVs were placed in areas where locals were already more accepting of Chinese settlers, observed voting patterns may reflect pre-existing attitudes rather than the effects of interethnic proximity.⁴⁵ To address this concern, we implement counterfactual analyses, leveraging plausibly exogenous British site selection criteria to better isolate the causal effects of proximity to Chinese resettlement sites.

4.2 Counterfactual Site Selection Using British Military Criteria

To address concerns about the potential endogeneity of CNV locations, we implement a counterfactual analysis inspired by Dell and Olken (2020). The approach leverages the fact that CNV sites were selected rapidly under military duress during the Malayan Emergency—when over half a million ethnic Chinese were resettled into nearly 500 villages in just three years under the Briggs Plan. This urgency meant that site selection followed a set of over-arching military criteria, rather than pre-existing economic or political conditions. This section is based on archival documents from the Johor State Archives; the Malaysian National Archives; The Imperial War Museum, London; and the National Archives of Singapore.

Importantly, our counterfactual analyses would be valid only if eventual, real CNV sites were not necessarily located at the most optimal locations—especially with regards to pre-existing interethnic proximity. I.e. it would have to be the case that the relocation process involved a certain degree of quasi-randomness and equally suitable candidate sites existed. Below, we summarize key insights from rich archival documents suggesting that, absent intervening factors, the British might indeed have placed CNVs at alternative locations. Furthermore, proximity to pre-existing Malay villages was unlikely to have been a priority nor possibility.⁴⁶

⁴⁵ Balance tests using our survey data provides some evidence against this (See Section 7.1, Table A.4).

⁴⁶ Given the Malayan Census of 1947 (Del Tufo, 1949), one might be worried that the British must have had rich, granular data on the population and location of ethnic Chinese (and Malay) settlements that would have allowed them to fine-tune CNV site locations. Three historical facts suggest that this was unlikely: (i) the 1947 Census was conducted immediately after the British had regained control of Malaya after the end of World War II and 3 years of Japanese Occupation in 1945. Anthropological and historical accounts suggest that, both before and after World

While it is broadly agreed that the British chose sites to adhere to a set of over-arching military criteria (specified below), it is also clear, however, that optimal site selection decisions were often hindered by on-the-ground realities that the British were unable to foresee. Specifically, for each CNV, the British would choose 3-4 candidate sites but the eventual, real CNV site was often sub-optimal due to (i) private land acquisition costs (due to the need to minimize dislocation of Chinese from work sites); and (ii) minimal, prior local knowledge (the lack of granular data on the location and number of pre-resettlement Chinese squatter settlements and rural Malay villages).⁴⁷

First, sub-optimal CNV sites were often chosen due to unexpectedly high costs of acquiring private land.⁴⁸ This was a consequence of the need to minimize the distance of CNVs from rubber estates and tin mines in which Chinese squatters worked.⁴⁹ Hence, the only suitable candidate CNV sites, were almost always under private ownership/lease and site choice was often determined by (i) which private entity was willing to sell their land at short notice and (ii) the land-sale price. For instance, in the resettlement of Sungei Way New Village (Selangor), the eventual CNV site was chosen because it was found to contain mostly old rubber trees (which authorities could reacquisition at a low enough cost). In comparison, two other candidate sites that were strictly preferable in terms of minimizing labor dislocation, were under mining titles and had “just been diverted by the (mining) Company at a cost of over half a million dollars”.⁵⁰

Second, and most importantly, the British possessed extremely limited knowledge of Chinese squatter locations (and rural Malay villagers), forcing them to conduct fresh “squatter” censuses under severe time pressure and at substantial time and manpower cost. Officials frequently ”discovered” previously unknown settlements during the resettlement process.⁵¹ Furthermore, the 1947

War II, large-scale in/out-migration flows of the ethnic Chinese, which the British were entirely unable to keep track of, were exceedingly common given Japanese discrimination and (mass-)killings of ethnic Chinese as retaliation for their (perceived) support of China (Gungwu, 2021; Sandhu, 1964); (ii) 1947 Census documents explicitly note that, given limited post-war state capacity, the census only enumerated (semi-)urban towns and large villages. Hence, most rural villages and squatter settlements were left out due to their dispersed character and small population size; (iii) This is underscored by various federal and state “Squatter Committee” reports that repeatedly emphasized the need to conduct squatter censuses to more clearly ascertain the exact number of individuals to be resettled (See e.g. “The Squatter Problem in the Federation in 1950”, National Archives of Malaysia.)

⁴⁷“Federation of Malaya: Report on the emergency in Malaya from April 1950 to November 1951 by Lieut-General Sir Harold Briggs, Director of Operations. Kuala Lumpur Government Press 1951 (National Archives of Singapore, pp3)” writes: “These Chinese squatters were (a relic of the Japanese occupation) *numbering anything* up to 500,000 spread over the country and *beyond effective administration by the Government*” (Appendix A”). These reports, and various archival documents documenting a myriad of pre-resettlement squatter censuses, strongly suggest that the British often did not know the location nor population sizes of squatter settlements.

⁴⁸Revenue from rubber sales owing to the Korean War enabled the British to finance much of the resettlement process, but estimated projections for the resettlement of each New Village eventually amounted to hundreds of thousands of British pounds each, far exceeding what the British had planned for.

⁴⁹It is important to note that not all villagers in CNVs worked in rubber estates or tin mines, we leverage this variation to study interethnic complementarities in Section 7.

⁵⁰Similarly, in Seremban district (Negeri Sembilan) a mining company outright refused to sell their land despite their mining dredge having been closed down and the pending expiry of their mining lease.

⁵¹For instance, [Markandan \(1954\)](#) (pp7) writes that a resettlement officer was told to expect 8,000 squatters. Sub-

Census excluded the enumeration of many small Malay villages in rural environs. Given military expediencies and cost constraints, this made it unlikely that the British could have strategically chosen sites based on pre-existing locations and sentiments of local Malay communities.⁵²

Together, the historical record suggests that eventual CNV locations were largely determined by the extent of low-cost, private land that happened to be available at short notice, and the little local knowledge that authorities could muster (within months) in a hostile, foreign environment (in which they did not speak the local language and had to rely largely on local intermediaries), rather than by targeted, strategic concerns.

Hence, using declassified British military planning documents, we reconstruct the set of feasible counterfactual CNV locations. Specifically, we generate 1,000 sets of counterfactual CNVs, each satisfying the following plausibly exogenous site selection rules:⁵³

1. *Road accessibility and livelihood continuity*: Counterfactual resettlement sites must be located along a main road and within 2.5–10 km of the original CNV site via the pre-resettlement road network.⁵⁴

2. *Topographical suitability*: Sites must have elevation and slope below the 90th percentile of actual CNVs and contain, at least as much topographically-suitable land within 2.5km radius (the average size of a CNV ([Nyce, 1973](#))) as the 10th percentile of actual CNVs.

In addition, we impose two additional constraints that closely adhere to local conditions that the British faced:

3. *Exclusion of Malay reservations*: Malay Reservations are large tracts of federal and state lands created by the British to “safeguard” the heritage and land of the native, ethnic Malays. Accordingly, the British could not resettle Chinese communities on these lands, and we constrain all counterfactual sites to lie outside designated Malay reservations ([Kratoska, 1982, 1983](#)).

4. *Spatial balancing*: To ensure geographic comparability, each set of counterfactual CNVs is constructed by randomly shifting actual CNV locations while maintaining balance in the north–south and east–west directions. We implement a simulated annealing procedure to minimize discrepancies in the distribution of distances between actual CNVs and each set of counterfactual CNVs (following [Dell and Olken \(2020\)](#)). This procedure ensures that the relative distances between counterfactual CNV sites mirror those between actual CNVs. This is important for two reasons.

sequent investigations, however, revealed nearly 29,000 squatters in an area of nine square miles.

⁵²This lack of prior knowledge is detailed in various state-level “Squatter Committee” reports as well as “The Squatter Problem in the Federation in 1950” (Johor State Archives and National Archives of Malaysia.) In fact, the British had to rapidly train hundreds of local Chinese to serve as District Liaison officers at extremely short notice and there was an extreme shortage of such officers in the early years (Source: District Liaison Office Accounts, National War Museum, London, United Kingdom).

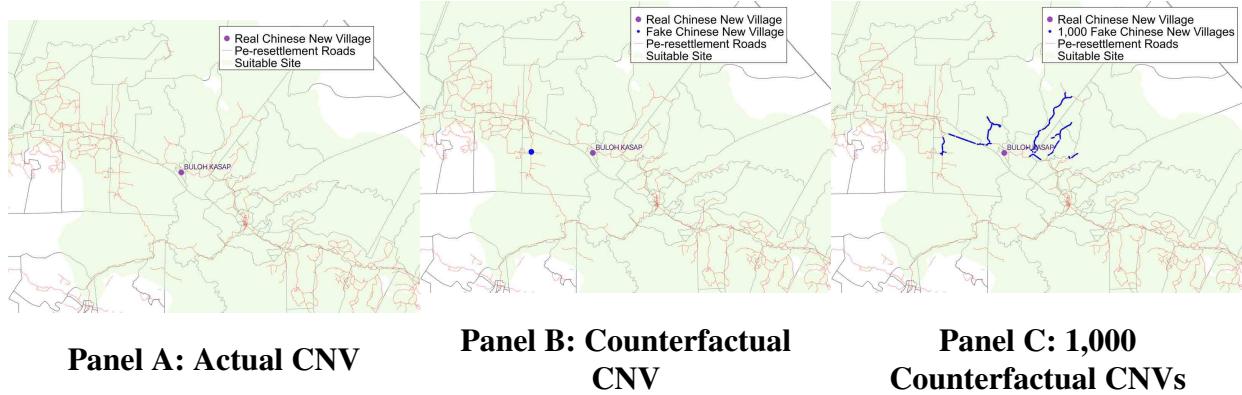
⁵³See Appendix A: Site Selection Criteria for more details on the military rationale for the first two criteria.

⁵⁴Importantly, however, market access measures ([Donaldson and Hornbeck, 2016](#)) constructed using our complete network of 1947 pre-resettlement roads suggest not all CNVs were located at sites that had the highest market access, suggesting that, as detailed above, substantial deviations from optimal site locations often occurred.

First, the British military likely maintained minimum distances between CNVs to prevent coordination among resettled Chinese villagers that might support communist insurgency. Second, although granular data on pre-resettlement Chinese settlements is largely unavailable, spatial balancing helps replicate the distribution of actual CNVs, which were likely sited to minimize disruption to villagers' economic activities ([dhu Renick, 1965](#)).

Data. To measure road accessibility and exclude sites within Malay Reservations, we digitize the full universe of 1947 pre-resettlement roads and Malay Reservation boundaries across Peninsular Malaysia using the high-resolution HIND1035 map series (scale: 1:63,360 or 1 inch to a mile) from the Australian National Library archives. To our knowledge, this is the most detailed mapping source available for capturing local-level variation in the pre-resettlement period. Figure A.2 presents an example of these historical maps.

Figure 4
Counterfactual Chinese New Villages Example



Notes: This figure illustrates the construction of the counterfactual CNVs, as described in Section 4.2.

Figure 4 illustrates this procedure. Panel A shows an actual CNV (Buloh Kasap) in purple dot, pre-resettlement roads (red lines), and suitable polygons shaded in green. Panel B shows a suitable counterfactual site (blue dot), and Panel C displays a full set of counterfactual sites that meet all four conditions, including spatial balancing.

Estimating equation. The polling district-level ‘counterfactual’ estimating equation takes the following form, controlling for the same set of covariates and parliament fixed effects, θ_p , as before in OLS Equation (1):⁵⁵

⁵⁵In addition, we further estimate economic outcomes at both the polling district and grid-cell level. The grid-cell level ‘counterfactual’ estimating equation is analogous.

$$Y_{d,p} = \alpha + \sum_{k=1}^4 \beta_{k,real(fake)} distCNV_d^{k,real(fake)} + \gamma_d X_d + \theta_p + \epsilon_{d,p} \quad (2)$$

The key difference with Equation 1 is that, for every outcome, Equation 2 is estimated twice. Once for the real CNVs and then for the 1,000 sets of counterfactual/fake CNVs. Hence, the point estimate of the effect of being distance k away from a CNV is given by the difference between the coefficient of $distCNV_d^{k,real}$ and the average of the coefficients of 1,000 $distCNV_d^{k,fake}$ from 1,000 sets of counterfactual regressions. The key advantage over the simple OLS in Equation 1 is that here, we purge the effects of any unobserved factors that might be correlated with British military site suitability criteria. We also continue to control for \mathbf{X}_d , a vector of pre-determined controls, that include 1947, pre-treatment population density, and ethnic Chinese shares. As before, θ_p is a vector of federal parliamentary constituency fixed effects—this ensures that we continue to compare voting outcomes across polling districts in which voters are voting for both the same party and candidate.

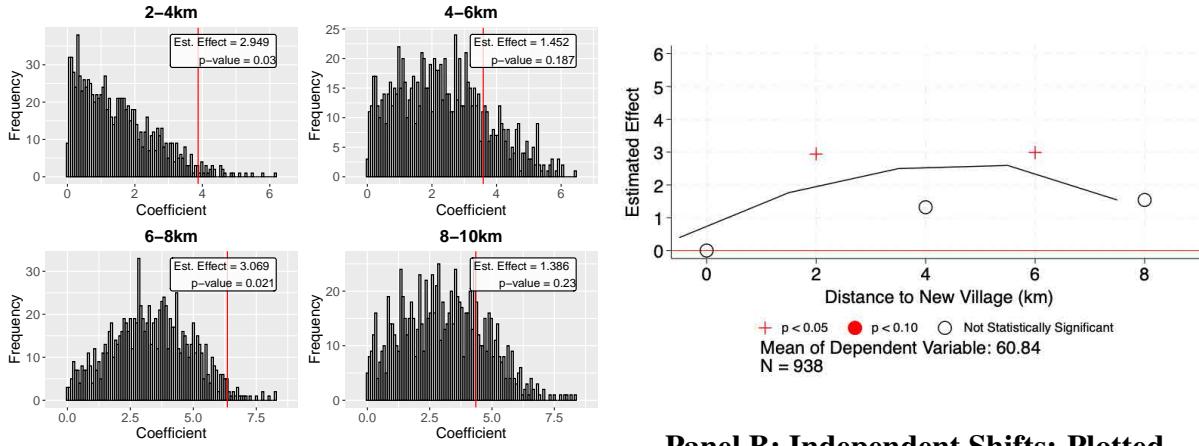
Importantly, throughout all our analyses, we continue to focus on exposure effects on surrounding Malay communities by conducting a “doughnut hole” analysis, whereby we exclude all polling districts that contain CNVs.

To illustrate this, consider a stylized example with only one criterion: proximity to roads. Given this criterion and that nearly all CNVs are located along main roads (Figure 1), the coefficients in Equation 1 implicitly compare outcomes of places that are progressively located further away from main roads to that of CNVs sites located right next to a main road. In contrast, the estimation of the coefficients in Equation 2 is analogous to taking a double difference. Specifically, the subtraction allows us to compare the effects of a real CNV, located next to a main road, on surrounding areas located 0-2km away vis-a-vis the effects of a fake CNV, that is similarly located next to a main road, on surrounding areas located 0-2km away: allowing us to directly purge the effects of proximity to roads (i.e., any pre-existing locational advantages).

Figure 5 provides a graphical illustration of the key steps we take for inference. To compute statistical significance, we follow the randomized inference literature to compare the actual coefficients in Equation 2 to the empirical distribution of the coefficients of 1,000 counterfactual regressions. Specifically, we compute p -values by comparing the position of the $distCNV_d^{k,real}$ coefficient to that of the distribution of absolute values of the 1,000 counterfactual $distCNV_d^{k,fake}$ coefficients. A small p -value implies that patterns near the actual CNVs would have been unlikely to arise in the absence of resettlement. Panel A of Figure 5 illustrates this procedure.

Balance checks. We check whether polling districts located at varying distances to real and counterfactual CNV sites are balanced on key geographic, topographical, and pre-treatment demo-

Figure 5
**Illustration of Methodology: Effects of Proximity to CNVs
on Ethno-nationalist Vote Share at the Federal Election (2013)**



Panel A: Independent Shifts: Counterfactuals

Notes: Figures plot coefficients from regressing the outcome variable on 2-km bins of distance to the nearest Chinese New Village, controlling for federal parliamentary constituency fixed effects, geographical and pre-treatment controls. The means of analogous estimates computed from 1,000 counterfactual New Village configurations are subtracted from each actual coefficient. The points are fit with a linear spline. *p*-values compare the effect of distance to the nearest actual New Village to the effects of distance to the nearest counterfactual New Village, computed from 1,000 counterfactual New Village configurations.

graphic characteristics. Ideally, if our approach is valid, we should observe few differences across these variables.

Figure A.3 plots the difference between distance-to-real CNV distance coefficients and the average of 1,000 distance-to-counterfactual CNV coefficients relative to the 0-2km distance bin. Significance is denoted by crosses (above 95th percentile), solid dots (above 90th), and hollow dots (below 90th). Variables include slope, elevation, soil quality indicators, and pre-treatment characteristics such as distance to urban centers, ethnic Chinese shares, and population density—the latter three are all measured just before resettlement in 1947.

Reassuringly, relative to the 0-2km distance bin, we find no statistically significant differences across all variables except for a slight difference in distance to urban centers in 1947 (polling districts located in the 4-6km and 6-8km distance bins are 2-2.5km further from an urban center, relative to the sample mean of 26km) and the percentage share of Chinese in 1947 (polling districts located in further distance bins had 3.5-6p.p. lower share of ethnic Chinese, relative to the sample mean of 39%). To that end, in all our regressions, we control for these two variables and all other covariates in Figure A.3. Hence, all regression estimates presented are *conditional on the*

*pre-resettlement distribution of ethnic Chinese in 1947.*⁵⁶

5 Interethnic Proximity and Vote Shares for the Ethnonationalist Coalition

5.1 Main Results

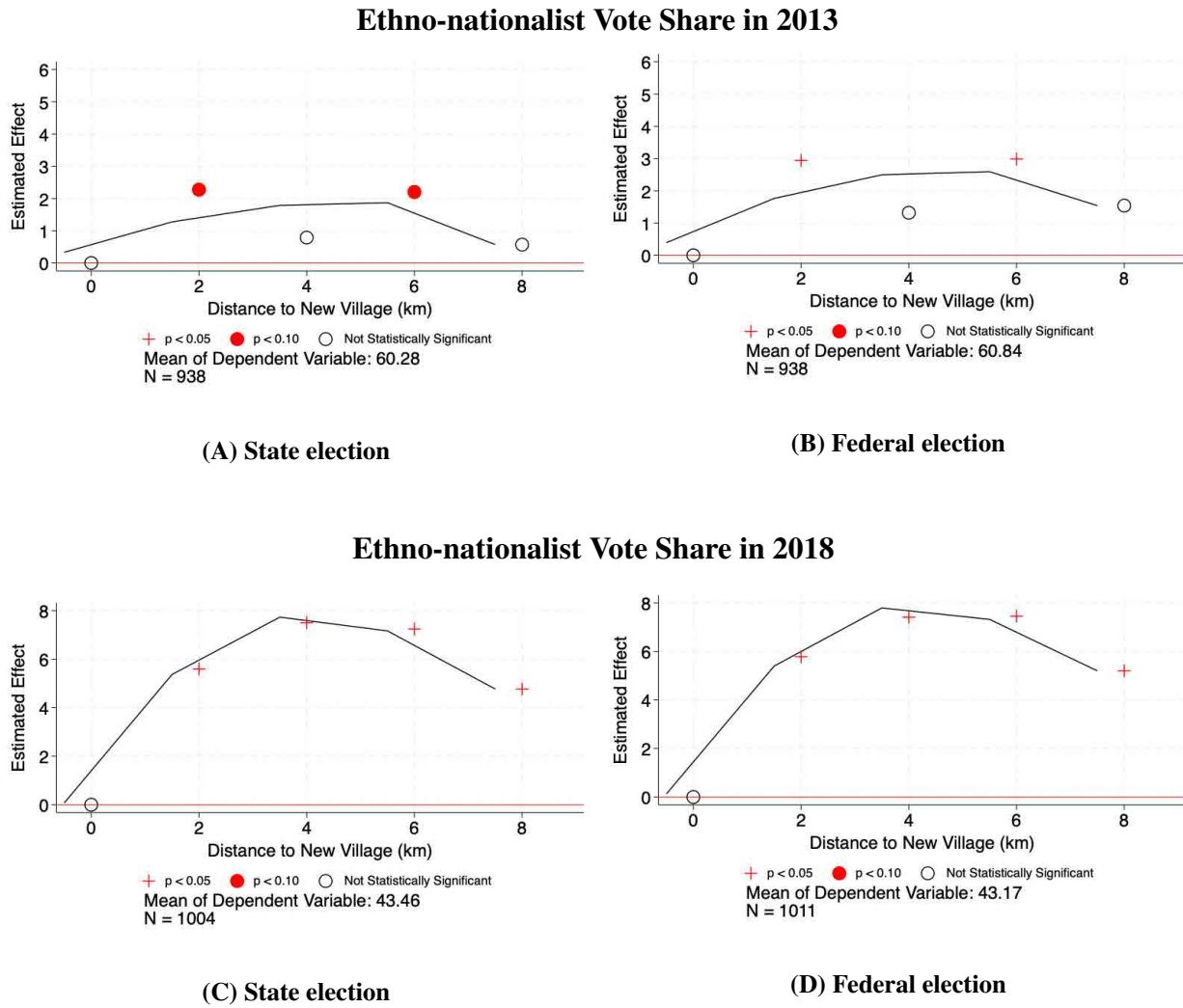
OLS analysis. We begin by examining OLS estimates in Table A.2, which reports the relationship between proximity to CNVs and vote shares for the ethnonationalist coalition (National Front, BN) in the 2013 and 2018 elections. We run these regressions at the polling district level for both state and federal legislative seat elections. Our key independent variables of interest are five indicators that each take the value of 1, if a polling district is located within 0-2; 2-4; 4-6; 6-8; or 8-10 km from a CNV. Throughout, we omit the 0-2 km indicator so that coefficients on each of the subsequent distance bin indicators denotes the difference between vote shares in polling districts located at greater distances from a CNV, vis-a-vis polling districts that are the most proximate (within 0-2 km) to a CNV. We find that in the 2013 election (Panel A, columns 3 and 6 with full set of controls), polling districts 2–10 km from CNVs had 3–6pp higher support for the ethnonationalist coalition than those within 0–2km, representing a 5–10% increase relative to the 60% mean. We interpret this as possibly reflecting weaker ethnonationalist sentiments in areas located closest to CNVs. The 2018 election (Panel B) shows similar but much stronger spatial patterns, despite a overall national-level drop in support for the ethnonationalist coalition (from 60% to 43%): vote shares in 2–10 km bins were still 7–12pp (or 16–28%) higher.

Counterfactual analysis. To account for potential biases arising from the possibly endogenous placement of CNVs, we now turn to results from our counterfactual analyses. As outlined in Section 4.2, we closely follow British military site-selection criteria to generate 1,000 sets of hypothetical resettlement sites such that the point estimate of the effect of being distance k away from a CNV is now given by the difference between the coefficient of $distCNV_d^{k,real}$ and the average of the coefficients of 1,000 $distCNV_d^{k,fake}$.

Figure 6 presents results for vote shares, plotting estimated coefficients for each distance bin (fitted with a linear spline). Graphs A and B (C and D) show results for the 2013 (2018) elections.

⁵⁶Given that many ethnic Chinese migrants arrived in rural Peninsular Malaysia from the early 1920s and largely lived in poorly connected, highly dispersed settlements, our treatment estimates might also be interpreted as the effects of both resettlement and *re-concentration* of the ethnic Chinese population. Furthermore, interethnic contact over the 20-30 years prior to resettlement might have been conceivably lower relative to the 50-60 year post-resettlement period, after the end of the Malayan Emergency (1962) and the rapid, post-independence industrialization and development of the Malaysian economy.

Figure 6
Effects of Proximity to CNVs on Ethno-nationalist Electoral Support



Notes: Figures plot coefficients from regressing the outcome variable on 2-km bins of distance to the nearest Chinese New Village, controlling for federal parliamentary constituency fixed effects, geographical and pre-treatment controls. In addition, regressions of state election results include indicators for all possible combinations of party match-ups at the state constituency level. The means of analogous estimates computed from 1,000 counterfactual New Village configurations are subtracted from each actual coefficient. The points are fit with a linear spline. P-values compare the effect of distance to the nearest actual New Village to the effects of distance to the nearest counterfactual New Village, computed from 1,000 counterfactual New Village configurations.

These results broadly align with OLS estimates in Table A.2, attesting to the possibility that greater proximity to CNVs appears to be associated with a reduction in support for the ethnonationalist coalition. Throughout, the magnitude of the effects appear to be consistently smaller than OLS estimates. This is to be expected since OLS results likely capture upward bias from unobservables behind original siting decisions, such as better market access, economic fundamentals, or pre-existing political attitudes in areas located further away from CNVs.

Specifically, in the 2013 election, polling districts 2–4km from CNVs show about 2-3pp higher support for the ethnonationalist coalition relative to the 0–2km bin, with effects generally attenuating with distance. For both state and federal elections, the 2–4km and 6–8km bins are statistically different from 0–2km at conventional levels, while effects in the 4–6km bins are positive but not statistically significant.

In 2018, magnitudes are stronger: relative to 0–2km, support is 5–8pp higher across the 2–10km bins, and all estimates are significant at the 5% level.⁵⁷ Relative to the 0–2km bin, areas in 4–6km and 6–8km bins are about 8pp *more* likely to vote for BN; whereas areas in 2–4km and 8–10km bins are about 6pp *more* likely to do so, showing a clear hump-shaped relationship in ethnonationalist support by distance to CNVs. These findings reveal the localized nature of political preference shifts induced by proximity to CNVs. The attenuation of effects at greater distances suggests that the mechanisms driving changes in political preferences—whether economic, social, or a combination of both—are strongest in areas immediately adjacent to CNVs. The fact that effects persist across two election cycles and strengthen by 2018 is consistent with slow-moving changes in Malay ethnopolitical identity that are accumulating through continued contact and cohort replacement rather than election-specific shocks or short-run campaign factors.

The long-term political effects are likely explained by the continued presence of CNVs after the Malayan Emergency. Their persistence stems from the post-1960 formalization of CNVs through the grant of land titles to resettled Chinese populations (Nyce, 1973). While the initial purpose of resettlement was to weaken communist support networks, land ownership was also used strategically to encourage settlers to establish permanent roots and loyalty to the state (Strauch, 1981). Over time, the Chinese population remained in these villages due to the strong social and economic foundations they built, as CNVs evolved into self-sufficient communities (Strauch, 1981).

Non-monotonocities in distance to CNVs. In the 2013 elections (Panels A and B of Figure 6), we observe significant voting effects in the 2–4km and 6–8km distance bins, and positive but insignificant effects in the 4–6km and 8–10km bins. In the 2018 election, the inverted-U relationship between ethnonationalist support and distance to CNVs becomes much clearer, with larger and more precisely estimated effects across the 2–10km range. We present three interpretations.

First, this could be due to “racial threat” being more salient in intermediate distances (Blalock, 1967), as such perceptions could be weaker closest to CNVs (0–2 km) (Allport, 1954) and in distant

⁵⁷There may also be potential bias based on counterfactual CNV locations as some fake CNV locations may be close enough in proximity to the corresponding actual CNVs. In particular, if some “control” polling districts in the fake regressions (i.e., polling districts within 2–10 km from a fake village) are located near the real CNVs, the estimated effects in the main specification above may be underestimating the true treatment effects. Therefore, while the reported estimates above are conservative, as these might represent the lower bound, we also check that the results are robust to running the counterfactual regressions in which we exclude polling districts that are 0–2 km from real CNVs for the fake regressions. These results are available upon request.

areas (8–10 km), where the outgroup’s presence is minimal. Similarly, at close distances, direct intergroup contact can promote positive attitudes through everyday interactions (Allport, 1954). However, at intermediate distances, Malays may be indirectly exposed to the Chinese community (e.g., through visible institutions, shared spaces, or reputational knowledge) without actual contact. This form of contextual contact (Stein et al., 2000) can raise ethnic awareness or perceptions of competition, especially in the absence of personal relationships. At further distances, this contextual exposure likely fades, reducing the relevance of ethnic identity in political choices. Consistent with this interpretation, we later show using primary survey data that attitudes toward the Chinese are indeed relatively more positive among Malays living closest to CNVs.

Our second interpretation is related to higher grievances among Malays in the 4–6km bin. Our retrospective data on pre-resettlement Chinese squatter locations indicate a spatially uneven distribution of gains from the policy: most original squatter sites lay roughly 4–6km from the eventual CNV locations (see Section 3.3 and Figure A.1). Malays in this mid-distance bin were historically close to, and possibly benefited from, Chinese economic activity; after 1948, however, new roads, markets, and CNV-centered opportunities concentrated nearer the CNVs. Consistent with Hirschman and Rothschild (1973), initially, these Malays may have expected continued benefits after Chinese resettlement, but as opportunities remained concentrated closer to CNVs, while mid-distance areas experienced fewer direct gains with respect to employment and businesses, the resulting “near-but-excluded” position plausibly bred grievances. In the 8–10km bin, limited exposure to pre-resettlement Chinese meant few Chinese-centered opportunities to forgo; with fewer perceived losses, grievances were low, and support for ethnonationalist parties declined relative to 4–6km bins. In addition, visible improvements among Malays close to CNVs without commensurate own gains could have heightened discontent among Malays in 4–6km (Luttmer, 2005) (something not easily observed by those in 8–10km) and, in turn, strengthened their support for ethnonationalist politics.

The third interpretation draws from theories of ethnic conflict (Caselli and Coleman, 2013), which predict that conflict is most likely at intermediate levels of resource competition where the perceived benefits of exclusion outweigh the costs. If proximity to CNVs is associated with perceived competition over economic or social resources, then those living at intermediate distances may feel the strongest need to support ethnic-based politics, because they see the Chinese as close enough to be a threat. However, we are unable to empirically test this interpretation due to data limitations.

Distaste for coercive resettlement policies? We interpret differences in vote shares as possibly reflecting a shift in political identity among the ethnic Malay majority, driven by proximity to CNVs. A plausible alternative explanation could be that lower vote shares for BN may instead

reflect a greater distaste for coercive policies, given that Malay communities living closer to CNVs might have had greater indirect exposure to coercive policies targeted at the resettled. This explanation is unlikely for two reasons. First, resettlement was carried out by the British colonial government and not by BN. Hence, it would be unlikely for Malay voters to punish BN at the ballot box for a policy they did not implement. Second, in Section 7.3, we present results from a placebo test exploiting a nearly identical forced resettlement program targeting Malays (instead of Chinese) and creation of Malay New Villages (MNVs), which shows no impact of MNVs on exposed Malays' political behavior. This further suggests that our results are unlikely to be driven by a backlash against coercive resettlement policies.

5.2 Alternative Explanations and Robustness Checks

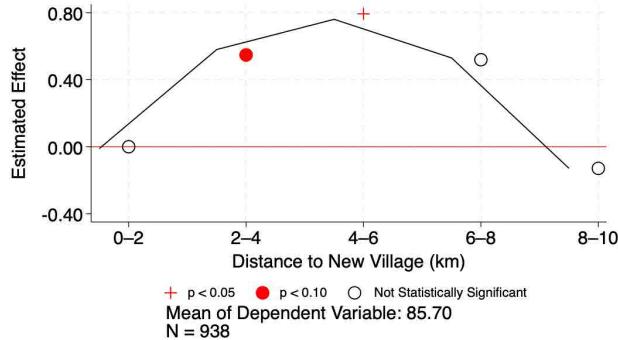
Our results suggest that Malays living closer to CNVs are less likely to vote for the ethno-nationalist coalition. We interpret this result as possibly reflecting a shift in political identity and preferences among the ethnic Malay majority. Here, we address four alternative explanations based on differential turnout, ethnic composition, selective migration, and contamination bias from any potential overlap between counterfactual and treated polling districts. Specifically, lower vote shares near CNVs could reflect higher turnout driven by racial threat or ethnonationalist mobilization, rather than genuine changes in voter preferences (Enos, 2014). In addition, differences in vote shares might simply reflect differences in ethnic composition if, over time, a greater share of ethnic Chinese chose to reside around CNVs. That is, while our doughnut-hole design explicitly excludes polling districts containing initial CNVs, qualitative fieldwork indicates that the children of initial Chinese New Villagers tend to settle in areas adjacent to CNVs after marriage. If this was systematically the case, observed lower vote shares near CNVs might simply reflect higher ethnic Chinese shares rather than actual shifts in Malays' voting preferences.

Turnout. We examine the effects of distances to CNVs on voter turnout in the 2013 elections. In Graph A of Figure 7, effects are statistically significant but quantitatively small. That is, differences in turnout range from 0.5-0.8pp across the 2-6km bins. Given that we observe differences in vote shares of 3pp, our results are unlikely to be driven solely by differential turnout rates.

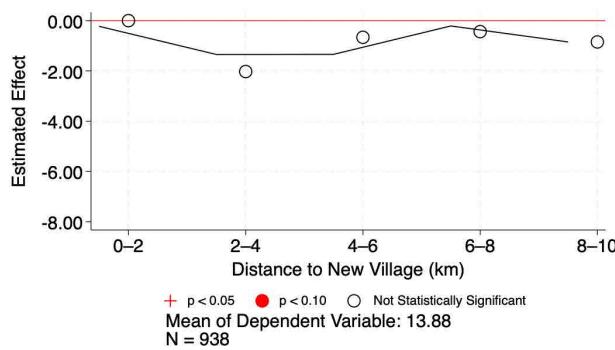
Addressing differences in ethnic composition. We construct the ethnic Chinese and ethnic Malay shares of registered voters across the entire Peninsular Malaysia using full-count voter rolls from the 2013 General Election. Voter rolls in 2013 record the self-identified ethnicity of every registered voter in Malaysia. Reassuringly, Panels B and C of Figure 7 test and show that there are few differences in the ethnic composition of registered voters across the distance bins. This

suggests that any differences in ethnic composition are unlikely to explain our observed results, and lower ethnonationalist vote shares in less proximate distance bins are possibly a reflection of changes in Malay political behavior.

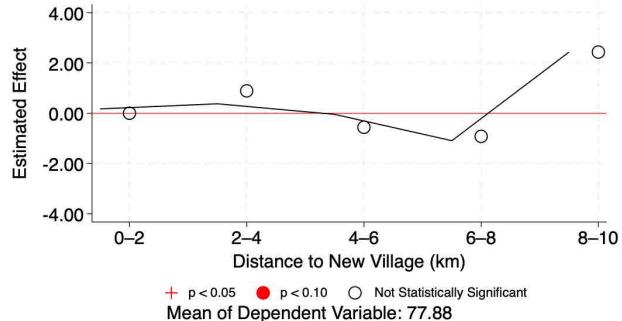
Figure 7
Effects of Proximity to CNVs on Voter Turnout and Ethnic Composition



(A) Turnout in 2013



(B) Share of Registered Ethnic Chinese Voters in 2013



(C) Share of Registered Ethnic Malay Voters in 2013

Notes: Figures plot coefficients from regressing the outcome variable on 2-km bins of distance to the nearest Chinese New Village, controlling for federal parliamentary constituency fixed effects, geographical and pre-treatment controls. The means of analogous estimates computed from 1,000 counterfactual New Village configurations are subtracted from each actual coefficient. The points are fit with a linear spline. *p*-values compare the effect of distance to the nearest actual New Village to the effects of distance to the nearest counterfactual New Village, computed from 1,000 counterfactual New Village configurations.

Quantifying Malay voting behavior. To further quantify the role of ethnic Malay voters in driving the decreases in ethnonationalist vote share, we would need disaggregated data on vote shares by ethnicity. To the best of our knowledge, such data does not exist. Instead, we perform a back-of-the-envelope calculation *à la* Becker and Woessmann (2009); Calderon et al. (2023) to estimate the share of ethnic Chinese voters that would have had to turnout to vote, to explain

away the observed lower vote shares for the National Front (*BN*). In so doing, we (unrealistically) assume that all Chinese voters voted *against* the ethnonationalist coalition and show that the range of ethnic Chinese voter turnout rates would have to be implausibly high for Chinese voters alone to explain the entirety of negative ethnonationalist vote shares.⁵⁸

To that end, we estimate Equation (1) via OLS using ethnonationalistic vote shares constructed from the division of $\text{Vote}_{\text{byNonBN}} - \text{ChiVoters}_{d,p}$ by total votes cast in polling district d . The numerator measures the difference between the number of votes received by the opposition coalition (non-*BN*) and the estimated number of ethnic Chinese who would have voted for the opposition coalition in polling district d of parliamentary constituency p . The latter is computed under the extreme assumption that all ethnic Chinese voted against the National Front. Figure A.4 presents results on vote shares where, panel-by-panel, we vary ethnic Chinese voter turnout rates from 0.1 to 1 and show that, even under the extreme (and implausible assumption) that all ethnic Chinese voters voted *against BN*, observed vote share differences persist unless turnout exceeds 50–60%. Given that typical Chinese turnout rates rarely surpass 50% (Malay Mail, 2024), this suggests that neither changes in ethnic Chinese turnout nor ethnic composition are sufficient to explain the full decline in *BN* support.

Selective migration. Next, we rule out selective migration as an alternative mechanism. Using primary survey data on the migration histories of Malays residing in villages near CNVs, collected through our primary survey on about 288 Malay village leaders and 1,990 non-leaders, we examine whether there was selective in- or out-migration of Malays in response to the resettlement program.⁵⁹ Understanding selection and attrition is important, as systematic differences in who moved into or out of areas near CNVs following the resettlement program could alternatively explain observed differences in political outcomes.

Figure A.5 shows that only around 1% of villagers have ever moved out of (and very few have sold their houses and permanently left) Malay villages since 1960, and there are little to no differences in in or out-migration rates across Malay villages located closer to (treated) vis-a-vis further from (control) CNVs (Panels A and B).⁶⁰ Moreover, 78% of respondents were themselves born in their village of residence (Panel C). These figures are similar across both treatment and control Malay villages (all $p > 0.10$), implying near identical in- or out-migration of Malays in

⁵⁸We focus on polling-district level vote shares for 2013 federal constituency seats. Results using vote shares for 2013 state constituency seats are largely similar. Note that it is both extremely unlikely that (i) *all* registered ethnic Chinese voters turned out to vote in the 2013 elections and (ii) that *all* ethnic Chinese voters voted against the National Front (Jomo, 2017; Ostwald, 2017; Ostwald and Oliver, 2020).

⁵⁹See Section 7.1 for more details about the primary survey we conducted.

⁶⁰In our survey, we used 1960 as a cutoff date as pilot surveys suggested that respondents were more likely to recall events from the 1960s onwards as opposed to using 1949/1950s as a benchmark. Furthermore, free movement was severely curtailed up till the end of the Malayan Emergency in 1962. Hence, substantial in/out-migration was likely to have occurred only beginning from the 1960s.

response to Chinese resettlement.⁶¹

6 Interethnic Proximity and Contemporary Local Development

In this section, we examine the effects of CNVs on contemporary local development and public goods provision, recognizing that economic and political development may be interlinked.

We find moderately positive effects on local development and contemporary roads. Importantly, results on vote shares are robust to controlling for nighttime light intensity, suggesting that changes in economic prosperity are unlikely to fully explain differences in political behavior.

6.1 Contemporary Economic Development and Urbanization

Contemporary economic development and urbanization around CNVs could have shifted political preferences by creating new economic opportunities. Agglomeration benefits resulting from increased population density and localized economic activity could increase productivity and generate economic spillovers (Duranton and Puga, 2004, 2020), creating shared economic interests across ethnic groups.⁶² Here, we discuss the results of the counterfactual exercise.⁶³

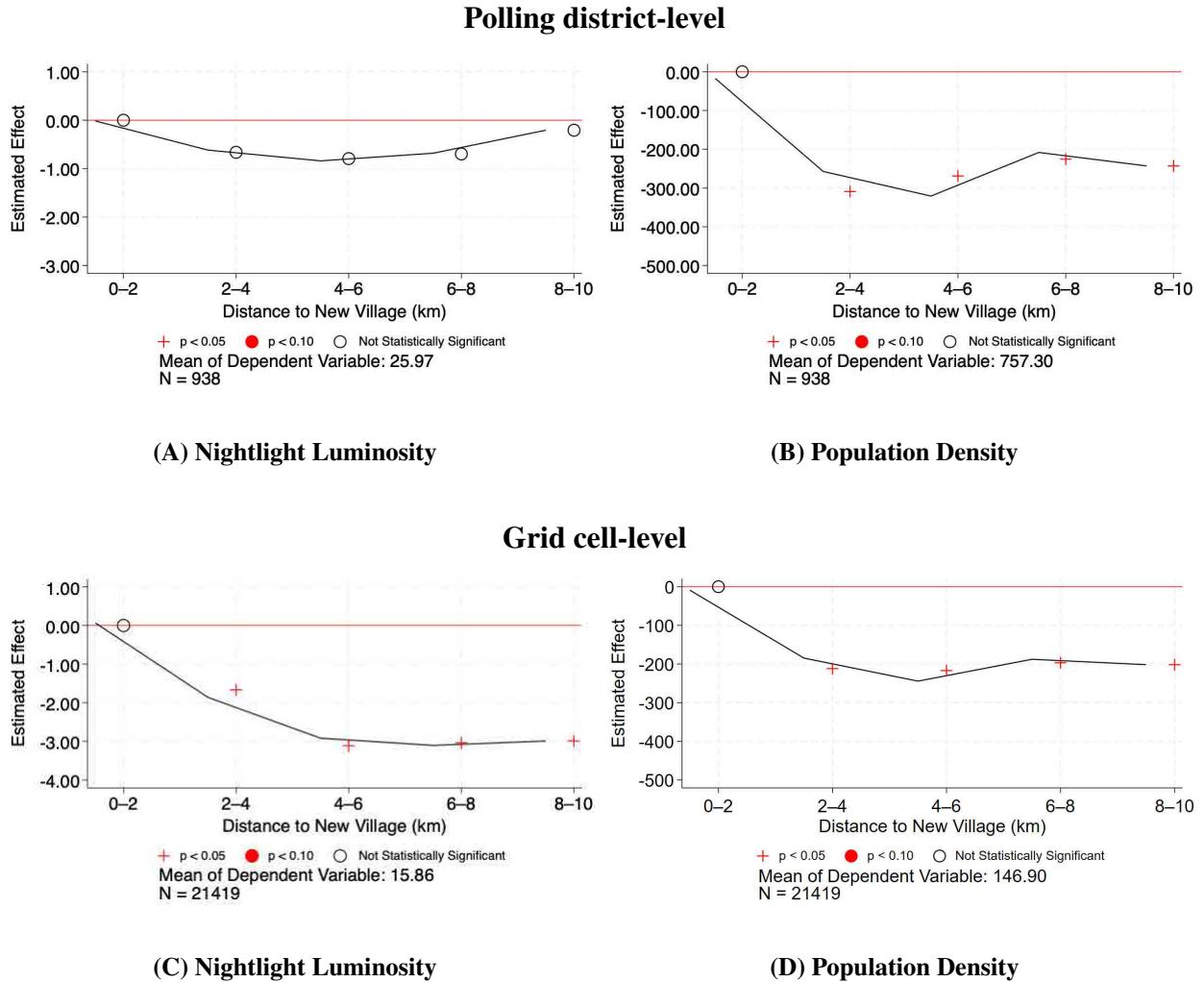
Polling-district level. We begin with the analysis of economic outcomes at the polling district-level. This allows us to directly compare effects with that on vote shares. Figure 8, Graphs A-B, presents results. Graph A shows that the effects on 2010 nightlight luminosity are statistically insignificant at the polling district level, while the negative coefficient sign indicates that polling districts in 2-10km bins have lower luminosity on average. Graph B reports the effects on population density, a key indicator of economic activity and urbanization. In contrast to the nightlight luminosity result, we find a significant decrease in all the 2-10km distance bins (all $p < 0.05$). Compared to polling districts within 0-2 km of a CNV, population density in those within the 2-4

⁶¹Given our primary interest in studying exposure effects on Malays, we are less concerned about selective in- and out-migration of Chinese villagers across time. Nonetheless, selection on the Chinese side is also likely minimal: the total ethnic Chinese population in Malaya in the 1940s was about 1.8 million, of which roughly one-third lived in rural areas (Sandhu, 1964). Since about 573,000 rural Chinese were forcibly resettled into CNVs within a short span of three years, it is most likely that nearly all rural ethnic Chinese were relocated, leaving little scope for selective inclusion.

⁶²While agglomeration has often been discussed in urban settings, our focus is the rural resettlement program. Agglomeration in rural areas is also plausible, even in the agricultural sector, as empirically illustrated by Tsuda et al. (2023). Hsu (2025) focuses on the economic effects in the same setting but with urban areas, finding agglomeration benefits for Chinese with limited positive spillovers to Malays.

⁶³OLS results in Table A.3 present significant associations with nightlight luminosity, and population density in all distance bins and in both polling district-level and grid cell-level analyses. In the following counterfactual exercise, we focus on nightlight luminosity and population density. Results for NDVI are also consistent with the main findings and available upon request.

Figure 8
Effects of Proximity to CNVs on Economic Outcomes



Notes: These figures plot coefficients estimated from regressing the outcome variable on 2-km bins of distance to the nearest Chinese New Village, controlling for federal parliamentary constituency fixed effects and geographical and pre-treatment controls. The means of analogous estimates computed from 1,000 counterfactual New Village configurations are subtracted from each actual coefficient. The points are fit with a linear spline. P-values compare the effect of distance to the nearest actual New Village to the effects of distance to the nearest counterfactual New Village, computed from 1,000 counterfactual New Village configurations.

km range is reduced by approximately 300 ($p < 0.05$), about 40% of the sample mean. Polling districts 4–10 km away also have significantly lower population density, with approximately 250 fewer people on average.

Grid-cell level. We can further observe economic outcomes at the grid cell level ($1 \times 1 \text{ km}^2$). Figure 8, Graphs C–D, presents these results. In contrast to the polling-district-level result, this grid cell-level analysis reveals significant impacts on the nightlight luminosity. Graph C shows

that, compared to those within 0–2km, nightlight luminosity in polling districts located within 2–4 km of a CNV is lower by approximately 1.8 units or 11% ($p < 0.05$). These effects persist across 4–10 km ranges with larger magnitudes of 3 units or 19% (all $p < 0.05$). Graph D reports that areas 2–10km away from the 0–2 km radius have significantly lower population density, with approximately 200 fewer people on average, all statistically significant at the $p < 0.05$ level.

Scale effects. To further investigate the role and degree of the agglomeration externality, we examine heterogeneous effects by below vs above-median *initial* population size of CNV villagers in 1958, using data from [Malayan Christian Union \(1958\)](#). We present the results of the counterfactual analysis. Notably, the effects are comparable across below- and above-median samples. At the polling-district level, Graphs A and D of Figure A.6 show that the impacts on vote share are largely similar, except for the difference that the below-median sample shows a significant effect in the 6-8 km bin while the above-median sample shows a significant effect in the 8-10 km bin. Turning to the economic effects, Graphs B, C, E, and F of the same figure show significant effects on the nightlight luminosity and population density only in the *below*-median sample (B and C). Figure A.7 reports the economic effects at the grid cell level. The economic effects appear stronger in the above-median sample (Graphs C and D), while remaining statistically significant in the below-median sample: the nightlight luminosity in 4-10 km bins (Graph A) and for the population density across all distance bins (Graph B).

Takeaways. There are two takeaways from these results. First, the difference between polling district- and grid cell-level results suggests that modest, highly localized agglomeration benefits, coupled with spatial reallocation, might best explain the observed spatial patterns in the CNV exposure effects on economic outcomes. The insignificant economic effects at the polling-district level do not completely rule out economic development as a mechanism for political changes; rather, they point to a nuanced relationship between interethnic proximity and economic development that depends on how development is distributed across and experienced by Malays *within* polling districts.

Second, significant effects in the *below*-median initial Chinese population sample suggest that the mere presence of CNVs consistently benefits nearby Malay populations. Hence, these findings suggest that mechanisms beyond localized agglomeration—such as interethnic complementarities—might underpin observed political effects. We explore leading alternative explanations in Section 7.2.

6.2 Public Goods Provision

As another plausible explanation for differences in political behavior, we explore the impacts of CNVs on contemporary public goods provision, focusing on schools and teachers, roads, and health facilities at the polling district level, offering a comparable analysis that aligns with the vote share changes discussed in Section 5. Public goods play an important role in improving access to essential services, neighborhood quality, and overall standard of living. In turn, political preferences could depend on the availability of public goods where voters reside (Calabrese et al., 2006). Hence, expanded access to public goods could promote support for parties favoring interethnic collaboration and inclusion.

With regards to local electoral competition and the targeted funding and construction of public goods: nearly all public goods in Malaysia are funded directly by the federal government and the availability of funds at the state and local government (municipal and village) level is extremely limited (Aspinall et al., 2022). Furthermore, given the extreme ethnic segregation of villages, the provision of public goods at the village-level is largely top-down and undertaken by two separate local government bodies—one for ethnic Malay villages, and another for ethnic Chinese villages.⁶⁴ In any case, our estimation strategy always controls for parliament seat fixed effects so as to abstract from any possible differences in the strategic targeting of public goods towards Malay villages located within 0-2km of a CNV.

Panel A of Figure A.8 shows that the only marginal difference in the number of schools appears in the 2-4km bin, while coefficients in all the other distance bins are insignificant. In terms of school quality, we find few differences as proxied by average student-teacher ratio (Panel B). In theory, improved human capital through better access to education could have reshaped the political attitudes of Malays, encouraging more inclusive political behavior (Glaeser et al., 2007). However, these results suggest that increases in educational public goods are unlikely to explain differences in political behavior.⁶⁵

Panel C of Figure A.8 indicates significantly higher road density near CNVs (the 0-2 km bin) compared to surrounding areas ($p < 0.05$ for the 2-10 km bins). This increased connectivity through more road infrastructure near CNVs may have influenced political preferences by lowering transport costs and improving market access. In this way, roads could have facilitated localized economic growth and integration, consistent with findings in Section 6.1.

Panel D of Figure A.8 indicates no significant impacts on the presence of health clinics in any distance bins (all $p > 0.10$). However, as this data is from 2022, well after the elections studied,

⁶⁴Based on primary survey data, the bottom-up provision of public goods within Malay villages also appears to be extremely rare.

⁶⁵Section 7 further provides survey evidence of few individual-level differences in the education of Malays residing close to and further from CNVs.

we cannot definitively assess the role of health facilities in shaping political preferences.

Overall, we see more roads but little change in public-service provision or quality, which is consistent with development driven by transport connectivity rather than by service provision or targeted local political competition within electoral seats.

7 Potential Mechanisms for Political Behavior

To further understand the underlying mechanisms through which interethnic proximity continues to influence contemporary political behavior, we investigate three potential channels. First, we explore whether proximity led to meaningful changes in intergroup contact, attitudinal changes, and economic interdependence using a novel, individual-level primary survey data focusing on attitudes and behaviors of Malays. We present suggestive evidence on heterogeneous effects from contemporary economic competition. Second, we examine the role of historical interethnic competition versus productive complementarities. Last, we disentangle exposure effects to ethnic minorities from generic resettlement effects by leveraging a concomitant resettlement program that only resettled ethnic Malays.

We find that greater interethnic proximity led to positive effects on interethnic contact; situational trust; economic outcomes; and weaker zero-sum beliefs.⁶⁶ Suggestively, the presence of economic competition reverses these results. Conversely, the presence of economic complementarities appears to amplify the positive effects of proximity.

7.1 Interethnic Contact: Attitudes, Behaviors, and Economic Outcomes

We begin with micro-level mechanisms, drawing on our novel primary survey data to examine how proximity to CNVs affected interethnic attitudes, behaviors, and economic outcomes of Malays. Understanding these mechanisms is important for interpreting the observed political effects, which may reflect differences in interethnic exposure across locations.

Primary survey on micro-level contact and attitudes: Sampling and variable description. We conducted a novel, in-person survey in partnership with one of Malaysia’s leading survey firms, *Ilham*. We do so as there are no existing datasets that capture micro-level measures of interethnic contact or attitudes in this context. We collected individual-level data from December 2024 to June 2025 in both ‘treated’ and ‘control’ villages (defined as being located within 2km of a real and fake CNV site, respectively) across the states of Johor and Perak—the two states with the

⁶⁶Effects on interethnic attitudes and behaviors are robust to controlling for contemporaneous economic outcomes, suggesting that economic prosperity is unlikely to be the main mechanism of persistence.

largest number of resettled ethnic Chinese. Our survey targeted 1,990 randomly selected Malay males, aged 18 and above, from 75 Malay villages.⁶⁷ The sample was stratified by age to ensure representation of both older (60+) and younger (under 60) Malays.⁶⁸ To minimize concerns around selection (Section 5.2), our analysis focuses only on respondents who were born in the surveyed villages (about 78% or 1,562 respondents).

The survey captured several dimensions; we focus on seven key dimensions that are likely to be the most relevant to our hypothesized mechanisms—(A) *Direct contact/interactions*: frequency of contact with Chinese peers in villages, schools, and workplaces. (B) *Social capital*: presence of close Chinese friends, number of Chinese contacts in one’s phone, and acceptance of intermarriage within the family. (C) *Trust*: general trust in Chinese, and willingness to entrust a Chinese person with childcare. (D) *Emotions*: seeing Chinese being treated disrespectfully makes Malay feel bad, and seeing Chinese wealth makes Malay feel jealous. (E) *Economic status*: self-reported monthly income and educational attainment, and enumerators’ visual assessment of respondents’ wealth. (F) *Zero-sum thinking*: whether Chinese take away jobs and business opportunities from Malays, and the Chinese become richer at the expense of the Malays. (G) *Business and labor market situation*: whether the presence of Chinese affects Malays’ wage and business profits, and whether both ethnic groups work in the same occupation.

Empirical strategy. There are three key steps in our empirical strategy. First, for each actual CNV resettlement site, we use 1:1 nearest-neighbor propensity score matching on four key military criteria of elevation, slope, market access to pre-existing villages, and distance to the nearest pre-existing Malay village, to select a single, counterfactual resettlement site.⁶⁹ These four variables are our best available proxies for CNV site selection following the extant literature and archival documents that described the key role of the British military in carrying out the mass resettlement program (Section 2.4).⁷⁰ In addition, just as in our counterfactual exercise, we continue to restrict the set of possible counterfactual sites only to grid-cells that were located along (historical) roads. Second, we select a maximum of two treated and two control Malay villages based on proximity to, respectively, an actual or counterfactual CNV resettlement site. Specifically, we define a treated

⁶⁷We do not have female respondents because the pilot revealed major logistical challenges in recruiting female respondents, given our predominantly Muslim survey sample.

⁶⁸Specifically, enumerators were instructed to conduct stratified random sampling at the village-level. Before beginning surveys, enumerators would visit the village chief to understand the various lanes and neighborhoods in each village. Each enumerator pair would then begin from a representative neighborhood of the village, from a randomly chosen house, and select survey participants by skipping every 3 doors.

⁶⁹We perform matching at the 1 km × 1 km grid-cell level, the lowest-level of disaggregation for which we can measure these variables.

⁷⁰Elevation and slope measure defensibility; market access measures ease of sending military reinforcements; and distance to the nearest Malay village takes into account the possibility that the colonial government was concerned with local Malay majority sentiments towards ethnic Chinese settlements. See Appendix A for details.

(control) Malay village as a village that is located within 2km of an actual (counterfactual) CNV resettlement site. Third, we collected individual-level data using in-person, door-to-door surveys in these treatment and control villages.

Qualitatively, we have argued that the British were unlikely to have been able to locate real CNV sites based on pre-existing, local economic and political conditions. Table A.4 presents balance tests for the primary survey data to assess whether surveyed Malay villages located within 2km of an *actual* CNV site (treated) differ systematically from those located within 2km of a *counterfactual* CNV site (control). Panel A compares respondents' individual-level characteristics and pre-resettlement, interethnic attitudes based on recollections of their grandparents' attitudes and behavior when they were young.⁷¹ We find balance across individual demographics of age, marital status and the pre-resettlement economic status of a respondent's family ("Family was rich before Chinese resettlement"). Importantly, we largely find balance across a host of pre-resettlement interethnic attitudes such as grandfathers interactions with Chinese, trust of Chinese and perceived incidence of intergroup conflict, across treatment and control villages. Furthermore, in line with historical evidence, it does not appear that the British located actual CNV sites in areas where Malays had pre-existing, positive sentiments towards the Chinese ("Grandfather would have been (un-)happy to be near Chinese due to fears, worries or insecurities.").⁷²

Panel B compares village-level geographical characteristics, including those used for matching, such as elevation and market access, and pre-resettlement population measures. There are missing observations for the last three variables, as some village leaders were unable to recall specific historical details. Again, we do not find significant differences between the treated and control areas. Overall, the treated and control groups appear well balanced.

To estimate the effects of proximity on the seven key dimensions listed above, we estimate the following equation using OLS:

$$Y_{iv} = \alpha + \beta_1 Treat_{iv} + \theta_{enum} + \theta_c + \epsilon_{iv} \quad (3)$$

where Y_{iv} is the outcome of Malay i in village v ; $Treat_{iv}$ is the treatment variable that takes the value of 1 if a Malay lives in a Malay village whose centroid lies within 2km of a *real* CNV, otherwise the treatment variable takes the value of 0 when a Malay lives within 2km of a *fake*

⁷¹ Specifically, we asked these questions only to respondents that were aged 35 and above at the time of our survey. Respondents were asked to answer these questions based on what they knew about their grandfather and any recollections of stories that their grandfather might have told them about the pre-resettlement period, while he was still alive.

⁷²The only statistically significant imbalance is that grandfathers in control villages were more willing to accept marriage with Chinese than those in treated villages. Since control areas appear slightly more open to Chinese at baseline, any observed treatment effect that treated Malays today hold more moderate or positive attitudes would likely be a conservative estimate of the true effect.

CNV; θ_{enum} takes the value of 1 if an enumerator was from Peninsular Malaysia (East Malaysia); θ_c denotes nearest CNV fixed effects. We cluster standard errors in two ways: by whether an individual is aged greater than 60 and the village in which an individual resides.⁷³

Results: Attitudes and behaviors towards Chinese. Table 1 reports our main survey results on Malays' interactions with, and attitudes and behaviors toward the Chinese. Note that the final sample size is reduced by about 200 observations due to missing data on specific control variables. We find that Malays living near a real CNV report significantly more interethnic interactions compared to those in control areas: in terms of visiting the CNVs (column 1, $p < 0.01$) and in workplaces (column 4, $p < 0.01$). Interactions in primary and secondary schools are, however, not statistically significant at conventional levels, possibly because Chinese children primarily study in Chinese-medium schools.

Increased social interactions observed do not, however, appear to translate into deeper social integration. We find no significant differences in friendship formation nor attitudes towards inter-ethnic marriage (columns 5-7, $p > 0.10$). On trust, general trust toward the Chinese is statistically insignificant (column 8, $p > 0.10$), but we observe significantly more situational trust among Malays close to CNVs (column 9, $p < 0.01$). While both trust measures are attitudinal, situational trust possibly captures behavioral intention more directly than general trust, giving better insight into how Malays might trust Chinese in real-life situations. This pattern aligns with Allport (1954), suggesting that repeated contact can reduce bias and improve intergroup attitudes and behaviors.

We also examine empathy-related outcomes. Malays living near CNVs are slightly more likely to feel sad when Chinese are treated unfairly, but this effect is statistically insignificant (column 10, $p > 0.10$). Interestingly, envy emerges as a salient emotional response: Malays are significantly more likely to report feeling jealous when Chinese people have larger homes (column 11, $p < 0.05$). Given the positive impacts on several attitudinal and behavioral dimensions, this result may reflect benign envy, which is a motivational response to upward comparison, rather than a negative reaction. Benign envy can encourage effort and economic aspiration when the higher status appears attainable through one's own means (Van de Ven et al., 2009). Alternatively, this might partially reflect persistence in the anecdotal perception that CNVs were awarded a larger number of development projects from their inception by the British Colonial government.⁷⁴

Results: Economic outcomes and zero-sum beliefs. Next, we report micro-level economic impacts in Table 2. Malays living near a real CNV report significantly higher monthly income

⁷³Results are largely similar when we control for pre-determined Malay village-level controls.

⁷⁴Primary survey data analysis, however, suggests that there are few, if any, differences in these perceptions across our treated and control villages. Results available upon request.

Table 1
The Effects of Proximity to CNVs on Malay Attitudes and Behaviors toward Chinese

	Interactions				Social Integration				Trust		Emotions	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
= 1 if ever visited CNV	= 1 if ≥ some Chinese pri school	= 1 if ≥ some Chinese sec school	= 1 if ≥ some Chinese colleagues	= 1 if ≥ 10% Chinese phone contacts	= 1 if have good Chinese friend	≥ somewhat willing Chinese marriage	≥ 1 if ≥ somewhat trust	≥ 1 if ≥ somewhat entrust kid	= 1 if sad if Chinese treated unfairly	= 1 if feel bad if Chinese have bigger houses		
Treat	0.080*** (0.026)	0.011 (0.007)	-0.027 (0.018)	0.048*** (0.017)	0.017 (0.028)	-0.023 (0.017)	0.020 (0.018)	-0.022 (0.021)	0.030*** (0.010)	0.019 (0.022)	0.022** (0.010)	
R ²	0.052	0.020	0.100	0.036	0.085	0.134	0.070	0.097	0.107	0.068	0.140	
Mean Dep. Var. (Control)	0.161	0.007	0.135	0.097	0.214	0.158	0.699	0.317	0.134	0.739	0.056	
Std. Dev. Var. (Control)	0.368	0.084	0.342	0.296	0.411	0.365	0.459	0.466	0.341	0.440	0.229	
Observations	1335	1316	1084	1045	1354	1354	1357	1315	1357	1351	1352	
Cluster	Cohort × Nearest Chinese New Village											
FE	Nearest Chinese New Village											

Notes: This table reports OLS estimates using the primary survey data. The sample consists of individuals who were born in the surveyed village. The dependent variables in columns 1 through 11 are indicator variables that take the value of 1 when a Malay: has ever visited the nearest Chinese New Village (col 1); had at least some ($\geq 10\%$ to more than half) Chinese primary school classmates (col 2); had at least some ($\geq 10\%$ to more than half) Chinese secondary school classmates (col 3); has at least some ($\geq 10\%$ to more than half) Chinese colleagues (col 4); has at least 10% Chinese cell phone contacts (col 5); has at least one good friend who is Chinese (col 6); is somewhat willing or very willing to have a family member marry a Chinese (col 7); somewhat trusts or trusts a Chinese a lot (col 8); somewhat trusts or trusts a lot, a Chinese neighbor to take care of their child (col 9); feels bad when Chinese are treated unfairly (col 10); and feels bad if Chinese have bigger houses (col 11). All regressions include nearest Chinese New Village fixed effects and two-way clustered standard errors at the cohort and nearest new village-level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

compared to those living farther away (column 1, $p < 0.05$).⁷⁵ This finding is corroborated by enumerator assessments of respondents' visible wealth, which is based on house size, quality, and plot size (column 2, $p < 0.05$). This also indicates that Malays closer to real CNVs appear to be economically better off. On the other hand, we find no statistically significant difference in years of education (column 3), suggesting that these economic gains are unlikely to be driven by human capital accumulation.

We also examine zero-sum beliefs among Malays, which is the belief that one group's gains come at the expense of another (Foster, 1965). We find that Malays living in close proximity to Chinese communities are significantly less likely to agree with statements suggesting that Chinese people take away jobs (column 4, $p < 0.05$) or business and trade opportunities (column 5, $p < 0.10$) from Malays. Notably, however, we find no statistically significant difference in respondents' agreement with the statement that: "Chinese becoming rich means Malays becoming poor" (column 6), though the coefficient is also negative.⁷⁶ These shifts in zero-sum perceptions might be an important explanation for the decline in support for the ethnonationalist coalition we observe, as zero-sum beliefs have been shown to influence political preferences and support for exclusionary policies (Chinoy et al., 2025).

Business owners & self-employed Finally, we assess perceived contemporary economic complementarities by exploring whether Malays perceive their economic outcomes to be affected by the presence of Chinese. Specifically, we ask whether Malays believe the absence of Chinese would affect their business profits or personal income, and whether they tend to work in the same occupations. In column 7, we focus specifically on the subset of Malays who own a business or are self-employed. We find that living near real CNVs increases their agreement that business profits would decline without the presence of Chinese (column 7, $p < 0.10$), indicating perceived complementarity at the extensive margin, potentially through supply chains, partnerships, or market access.

Employees In columns 8-9, we examine the subset of Malays working as employees. Here, we find that Malays living near real CNVs are more likely to report being in the same occupations as the Chinese (column 8, $p < 0.05$), and are less likely to believe that their own wages or incomes would be lower in the absence of Chinese workers (column 9, $p < 0.01$). The latter suggests that proximity increases economic overlap and there is some degree of perceived labor market compe-

⁷⁵This result is robust to using different thresholds of RM3,000, RM4,000, RM4,500, and RM5,000. We use RM3,500 as it reflects the average monthly earnings in rural Malaysia.

⁷⁶Based on our discussions with enumerators, one possibility is the possibly more abstract nature of the question "If one ethnic group (Chinese) becomes richer, other ethnic groups typically become poorer" that rural Malays with lower education might have been less likely to comprehend fully.

Table 2
The Effects of Proximity to CNVs on Economic Outcomes and Zero-Sum Beliefs of Malay Villagers

	Economic status			Zero-sum thinking			Business & Labor market		
	(1)	(2) Wealth class (1=lower, 2=lower middle, 3=upper middle 4=top)	(3) Years of education	(4)	(5) Chinese take away business/trade opportunities of Malays	(6) If Chinese richer, other ethnic groups poorer	(7)	(8)	(9) = 1 if lower wage/income without Chinese
Treat	0.045** (0.018)	0.053** (0.025)	0.077 (0.155)	-0.060** (0.025)	-0.059* (0.033)	-0.018 (0.038)	0.049* (0.028)	0.065** (0.026)	-0.056*** (0.018)
R ²	0.038	0.076	0.053	0.165	0.106	0.113	0.267	0.044	0.082
Mean Dep. Var. (Control)	0.134	1.608	10.066	2.766	2.833	2.760	0.104	0.206	0.140
Std. Dev. Var. (Control)	0.341	0.641	2.610	0.780	0.792	0.854	0.307	0.405	0.347
Observations	1237	1342	1293	1338	1321	1321	350	1036	1030
Cluster	Cohort × Nearest Chinese New Village								
FE	Nearest Chinese New Village								

Notes: This table reports OLS estimates using the primary survey data. The sample consists of individuals who were born in the surveyed village. The dependent variables are defined as follows: monthly income higher than or equal to RM3,001 - RM3,500 (col 1); the categorical wealth class based on enumerators' assessment (col 2); years of education (col 3); in this country, the Chinese frequently take away Malay jobs (Strongly disagree=1 to Strongly agree=4) (col 4); in this country, the Chinese frequently take away business/trade opportunities of Malays (Strongly disagree=1 to Strongly agree=4) (col 5); in this country, if one ethnic group becomes richer, other ethnic groups typically become poorer (col 6); =1 if answering to the question: if there were no Chinese villages nearby, how much do you think your profits would have changed? (col 7); if answering more than to the question in your area, excluding your colleagues, how many Chinese are typically in the same occupation as you? (col 8); =1 if answering to the question: if there were no Chinese working in the same occupation as you, in the region where your job is located, how much would your wage or income be changed? (col 9). The sample size varies across specifications because each outcome variable has a different number of missing observations. Note also that the sample size in column 7 is substantially smaller because this question is answered only by respondents who operate their own business. All regressions include nearest Chinese New Village fixed effects and two-way clustered standard errors at the cohort and nearest new village-level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

tition at the intensive margin (i.e., within shared occupations). These results are not contradictory because Malays may see the Chinese as economically beneficial in broader business contexts, while also feeling competitive pressure in day-to-day wage work. Such perceptions may still shift political preferences away from ethnonationalist appeals, as the economic benefits of coexistence become more tangible and the costs of exclusion more salient (Bursztyn et al., 2024).

Contemporary economic competition vs. complementarities. Naturally, the presence of economic competition and complementarities might mediate the effects of proximity and contact. For instance, economic competition might lead to negative effects on attitudes and outcomes (Horowitz, 2000). To test for this, Figure 9 presents suggestive evidence on heterogeneity in attitudes and economic outcomes among Malays working in contemporary agricultural (red dots) versus non-agricultural jobs (blue dots). The motivation is that inter-ethnic competition (complementarities) might have been more (less) salient for Malays in agricultural work, given that the agricultural sector is typically perceived as the main source of employment for Malays.⁷⁷

We note, however, that contemporary occupational choice might itself be an endogenous outcome of past differences in attitudes and economic prosperity. For instance, Malays with more negative attitudes towards the Chinese might self-select into agricultural jobs. To that end, we view these results as exploratory, and further investigate the role of economic competition and complementarities based on differences in *historical* occupational shares in the next subsection.

Agricultural sector Within Malays in the agricultural sector (red dots), our results are suggestive of economic competition. Treated Malays (within 2km of a real CNV site) are *more* likely to report having Chinese colleagues relative to control Malays (within 2km of a fake CNV site). Yet, greater proximity here translates into significantly *lower* trust and empathy (rows 8 and 10, Panel A) and is linked to a heightened perception that Chinese businesses pose a competitive threat (rows 5 and 7, Panel B).

Non-agricultural sector Conversely, within Malays in the non-agricultural sector (blue dots), the evidence points towards the presence of economic complementarities. Despite not having more Chinese colleagues, treated Malays report higher situational trust and empathy (rows 9 and 10, Panel A). Economically, these individuals report higher incomes and are significantly *less* likely to view the economic landscape through a zero-sum lens, perceiving less competition for jobs and business opportunities (rows 4 and 5, Panel B). These contrasting findings, though admittedly

⁷⁷The likelihood of engaging in agricultural versus non-agricultural jobs is broadly balanced across treatment and control villages. Results are available upon request. For individuals who are not currently working, we use information on their most recent job.

suggestive, point to interethnic economic competition and complementarities as a potentially important mechanism for translating proximity into improved social cohesion and shared economic sentiments. We provide further evidence of this below.

7.2 Historical Economic Competition vs Complementarities

Interethnic proximity can promote either negative political attitudes through economic competition (Becker and Pascali, 2019; Horowitz, 2000) or positive attitudes through complementarities and specialization. This could, in turn, affect productivity, social cohesion, and tolerance toward out-groups (Alesina and La Ferrara, 2005; Jha, 2013). At the time of CNV resettlement, nearly 70% of Malays were employed in (non-cash-crop) agriculture (Del Tufo, 1949). If competition over agricultural resources, such as land and water, led to greater economic strain for local Malays, we would expect higher support for ethnonationalist parties in areas immediately surrounding agricultural CNVs relative to more distant areas. Conversely, non-agricultural CNVs (particularly, those engaged in rubber tapping or tin mining) may have generated economic complementarities given that these labor-intensive industries were more likely to employ both Malays and Chinese (Ross, 2014; Siew, 1953), potentially promoting positive, downstream economic interactions.⁷⁸ In this case, we would expect lower ethnonationalist vote shares near CNVs associated with these sectors, as economic benefits and/or intergroup contact facilitated better interethnic relations and more moderate political attitudes.

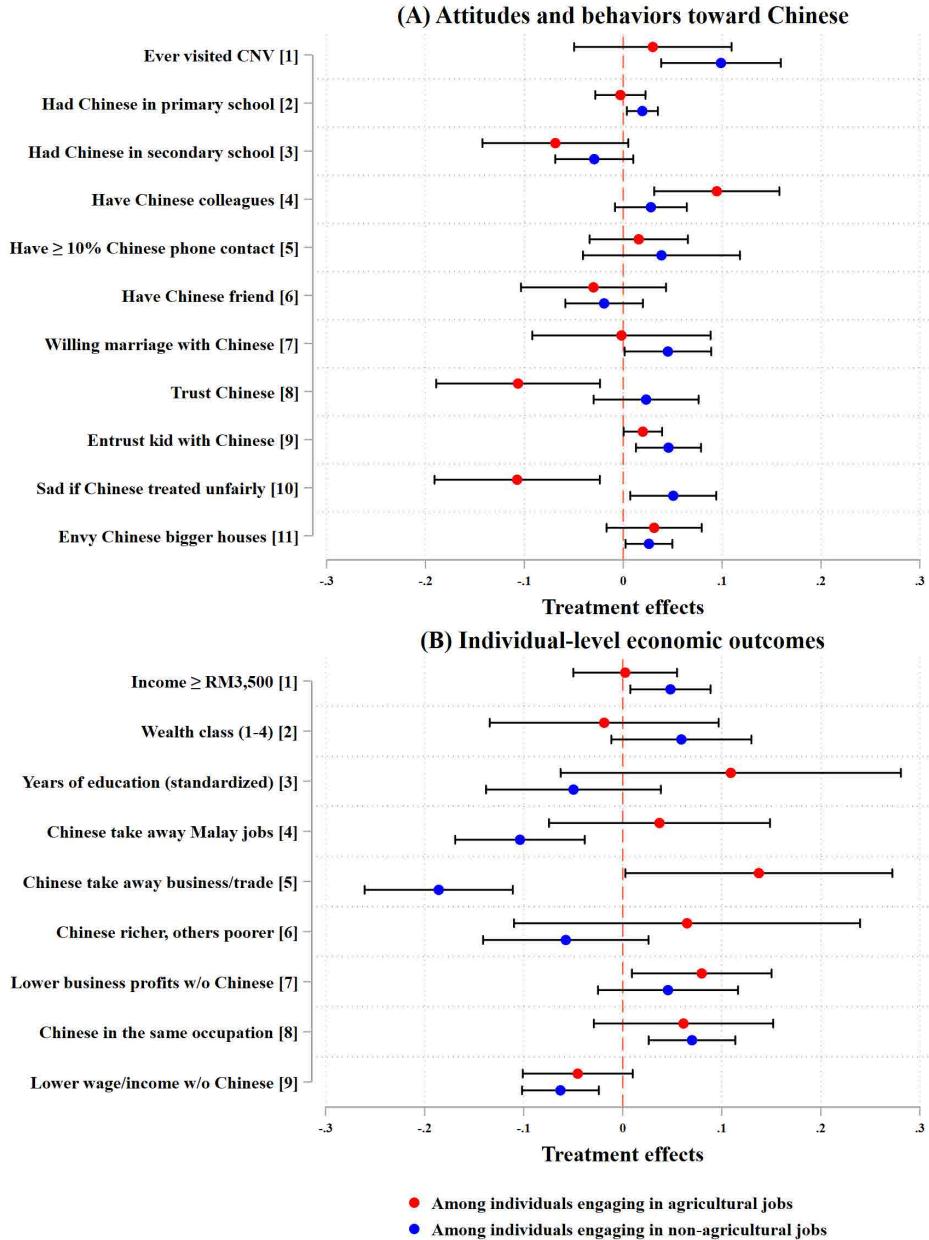
To test these hypotheses, we use two separate datasets. First, we conduct a macro-level analysis (polling district-level) by digitizing pre-resettlement rubber estate polygons and tin mines from the high-resolution HIND1035 map series (Australian National University Library archives) and the Map of the Malayan Peninsula 1891 (National Library of Australia). We then compute fly-by-crow distance from each CNV to the nearest rubber estate or tin mine and test for heterogeneous exposure effects by comparing polling districts exposed to CNVs located within 5 km of a rubber estate or tin mine with those that do not have any rubber estates or tin mines located within 5km of a CNV.⁷⁹ We focus on rubber estates and tin mines as these were two of the largest non-farm economic sectors, both for CNV and Malay villagers. Throughout, we focus on polling-district-level economic outcomes to ensure direct comparability with voting results.⁸⁰ Second, we conduct an individual, micro-level analysis using primary survey data. For each *Malay* village in our survey sample, we asked *Malay* village leaders to list 2-3 job sectors with the highest employment shares

⁷⁸Similarly, the presence of a large pool of ethnic Chinese laborers on rubber estates and tin mines might also have led to higher demand for agricultural products produced by Malay farmers.

⁷⁹The motivation behind this analysis is based on historical records suggesting that CNVs were relocated between 6-9km and a primary reason for doing so was to minimize dislocation of ethnic Chinese laborers from their pre-resettlement occupational sites (dhu Renick, 1965).

⁸⁰Grid-cell level results are largely consistent with polling district level findings and are available upon request.

Figure 9
Contemporary Interethnic Competition vs Complementarities:
Heterogeneity based on Malay Agricultural vs Non-Agricultural Jobs



Notes: This figure reports OLS estimates using the primary survey data, where colored dots represent point estimates and black lines represent 90% confidence intervals. The sample consists of individuals who were born in the surveyed village. The sample split is based on whether a respondent's current primary job is agricultural or non-agricultural ($n = 360$ and 848, respectively). For respondents who are currently unemployed, we classify occupations based on their most recent job. The dependent variables in Panel (A) are the same as those reported in Table 1 and their definitions are found in the table notes. The dependent variables in Panel (B) are the same as those reported in Table 2 and their definitions are found in the table notes. All regressions include nearest CNV fixed effects and two-way clustered standard errors at the cohort and nearest CNV-level.

in 1960. Based on this information, we split our sample into two: (i) villages where the rubber and tin sector accounted for the largest employment shares in 1960; (ii) villages where the two sectors did not account for the largest employment shares in 1960.

Importantly, there has been a marked change in the contemporary participation of ethnic Chinese New Villagers across economic sectors. Today, the tin mining industry has collapsed and there has been a significant reduction in the number of rubber plantations ([Shah, 2019](#)). Hence, most ethnic Chinese New Villagers have shifted away from these sectors to commerce and trade, with a sizeable minority engaged in the medium-scale, agricultural production of vegetables, fruits and palm oil. There is also a well-documented trend of ethnic Chinese New Villagers out-migrating to towns and cities given limited economic opportunities in and around CNVs ([Strauch, 1981, 2013](#)).⁸¹ This will be important for interpreting results.

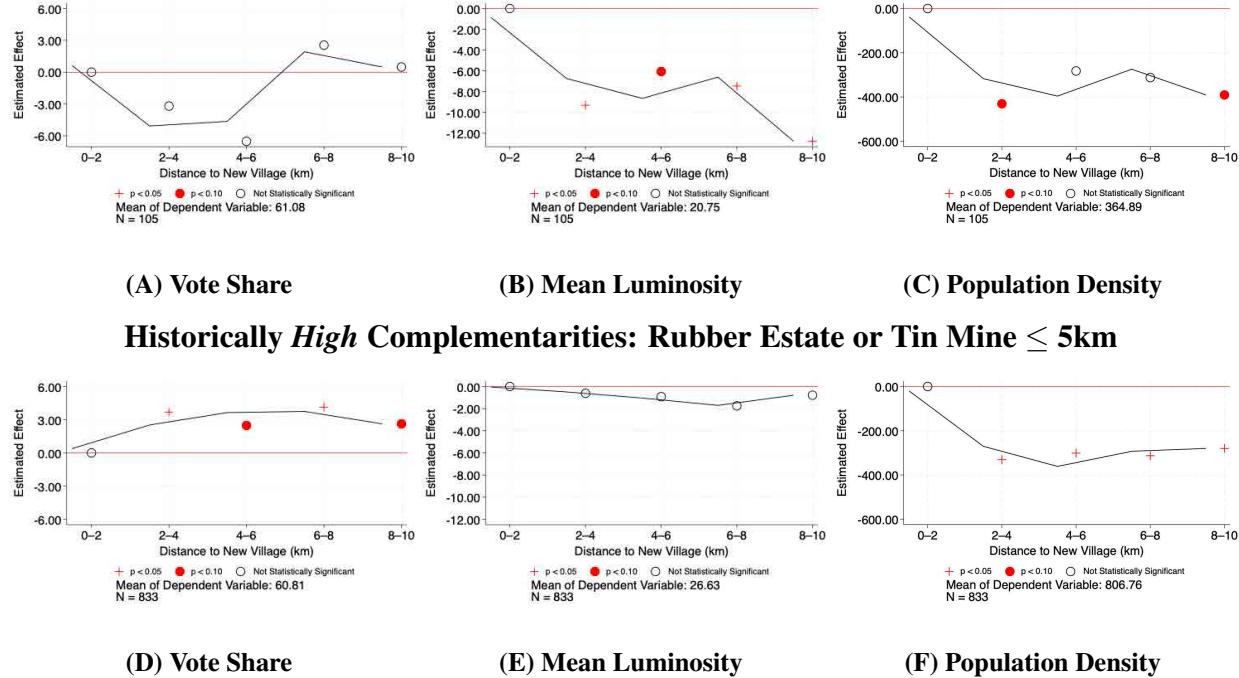
Macro-level results: Proximity of CNVs to historical rubber estates and tin mines. Figure 10 presents results from our counterfactual analyses. Throughout, we continue to control for the same set of controls, including pre-determined agroclimatic, geographic characteristics, and pre-resettlement characteristics such as distance to 1947 urban centers.⁸² Graphs A-C displays results for polling districts located at varying distances from CNVs that *did not* have a historical rubber estate or tin min located within 5km (*low complementarities*). Graphs D-F displays results for polling districts at varying distances from CNVs that *had* a historical rubber estate or tin min located within 5km (*high complementarities*).

Political effects Graph A (D) displays results for vote shares in the *low (high)* complementarities sample. We find statistically insignificant differences across all distance bins in the *low* complementarities sample (Graph A). In contrast, in the *high* complementarities sample, we find a negative and statistically significant impact on ethno-nationalist vote shares in polling districts immediately adjacent to CNVs ($p < 0.05$, Graph D). Specifically, we observe a 4p.p. lower vote share for the ethnonationalist coalition in polling districts located within the 0-2 km distance bin, relative to the 2-4km bin (and comparable effects relative to the 4-10km bins). Notably, this effect size is larger than that of the pooled sample (3p.p. in Graph B of Figure 6).

⁸¹This is the primary reason as to why we do not focus on ethnic Chinese in all our analyses. In contrast, as documented in Section 5.2. “Selective Migration”, ethnic Malays remain much more “rooted to the soil” and relatively fewer, if any, choose to out-migrate.

⁸²In a separate, secondary analysis, we leverage a historical CNV-level dataset ([Malayan Christian Union \(1958\)](#)), which records CNV-level population and occupational data collected 6–8 years after resettlement, during persistently strict restrictions on movement and migration. Using this information, we also test for heterogeneous exposure effects with respect to CNVs with below- and above-median employment shares of ethnic Chinese in rubber and tin employment. Figure A.9 reports that the findings remain robust. However, due to historical data limitations, we have about 43% missing observations and these results should be interpreted with caution.

Figure 10
Effects of Proximity to CNVs with Low vs High Interethnic Complementarities
Historically *Low* Complementarities: No Rubber Estate or Tin Mine $\leq 5\text{km}$



Notes: The outcome variables for (A) and (D) are the vote share for the ethno-nationalistic coalition at the federal elections in 2013. These figures plot coefficients estimated from regressing the outcome variable on 2-km bins of distance to the nearest Chinese New Village, controlling for federal parliamentary constituency fixed effects and geographical and pre-treatment controls. The means of analogous estimates computed from 1,000 counterfactual New Village configurations are subtracted from each actual coefficient. The points are fit with a linear spline. P-values compare the effect of distance to the nearest actual New Village to the effects of distance to the nearest counterfactual New Village, computed from 1,000 counterfactual New Village configurations.

Economic effects (*low complementarities*) Graphs B-C displays results for economic development in the *low complementarities* sample. In contrast to null effects on vote shares, we find large, positive effects on nighttime light intensity and population density for polling districts located within the 0-2km distance bin.⁸³ One explanation could be that the ethnic Chinese in these CNVs have largely shifted from small to medium and large-scale agricultural production—many of which employ a large number of international migrant workers. In turn, labor expansion may have generated demand for non-agricultural services, contributing to the observed increases in nighttime luminosity.⁸⁴

⁸³ Albeit, effects in the 4-8km distance bin for population density are largely similar in magnitude but statistically insignificant.

⁸⁴ Consistent with this, our survey data show that Malay villagers residing in areas where mining was not historically dominant (*low complementarities*) are somewhat more likely to be engaged in non-agricultural employment today. Results are available upon request.

Why did contemporary economic benefits, experienced by Malays—in areas of *historically low complementarities*—*not* lead to positive political effects? One possible explanation is that changes in political behavior may respond more slowly than changes in economic activity. Another possibility is that the *type* of contact matters in reducing prejudice (Allport, 1954)—Malays in areas of *historically low complementarities*, that have transitioned to service sector jobs (e.g. food & beverage, and hospitality) might be less likely to experience *cooperation* with ethnic Chinese given their *unequal status* in these occupations.⁸⁵ This is in contrast to areas with *historically high complementarities*, where a larger proportion of ethnic Malays and Chinese might have been historically more likely to work side-by-side in *equal status* occupations (Ross, 2014; Siew, 1953). Indeed, our next set of results in the *historically high complementarities* sample is consistent with this explanation.

Economic effects (high complementarities) Graphs E-F displays results for economic development in the *high complementarities* sample. In contrast to negative effects on vote shares, effects on nightlight light intensity are insignificant across all distance bins (Graph E). Effects on population density are positive and statistically significant (Graph F) for polling districts located within 0-2km. Together, these results suggest that contemporary economic prosperity has attenuated in these areas over time. A likely explanation, consistent with the historical context, was the mid-late 20th century decline of the rubber and tin industries (Shah, 2019), which, in turn, led to the gradual out-migration among ethnic Chinese from former rubber tapping and tin mining CNVs (Strauch, 1981, 2013).

Taken together, negative effects on vote shares together with muted effects on economic prosperity (in areas of *historically high complementarities*), suggest a potential role for *historical* interethnic complementarities in driving observed results on voting behavior. Historical complementarities might have led to past, shared economic agglomeration effects and prosperity with proximate Malay villages. Although these gains have largely faded (as reflected in null effects on nighttime light intensity), positive effects on political attitudes appear to have persisted over time. These results, however, might not fully capture individual-level differences in Malay attitudes. We next turn to heterogeneity analyses of attitudinal and economic measures, based on historical occupational shares of Malay villages (all from primary survey data).

⁸⁵This does not necessarily contradict earlier, positive attitudinal effects in our sub-sample of Malays working in contemporary non-agricultural jobs. The reason being that, as previously acknowledged, results based on contemporary jobs might be confounded by selection effects, *regardless* of initial complementarities. Alternatively, these areas might have experienced largely offsetting effects of competition *and* complementarities on political behavior. Competition and agricultural expansion might have led to *negative* effects; while any associated growth in non-agricultural employment and complementarities might have led to *positive* effects.

Micro-level results: Malay villages with high vs low employment in rubber and tin. Figure 11 plots survey outcomes separately for Malay villages with *low* (red) versus *high* (blue) historical employment in rubber estates and tin mines (i.e. *low* versus *high* complementarities). Overall, we do not observe any statistically significant differences in effects *across* both sub-samples. For a subset of outcomes, the small sample size in the *low* sub-sample prevents the estimation of standard errors (and confidence intervals) (e.g., Panel A rows 2, 3, 7, 11; Panel B row 7).⁸⁶ We therefore treat the results in this figure as largely exploratory and mainly describe specific patterns across treated and control villages *within* each subsample.

Within areas of *low complementarities*, proximity to a real CNV leads to higher income and wealth (Panel B: Rows 1-2)—potentially consistent with higher demand effects from proximate CNVs (as noted in our macro-level results above). Effects on zero-sum beliefs, however, appear to be small and are largely statistically insignificant (Panel B: Rows 4-6).⁸⁷ In contrast, within areas of *high complementarities*, proximity to real CNVs leads to *weaker* zero-sum beliefs about jobs, business, and in-group gains (Panel B: Rows 4-6); higher situational trust (Panel A: Row 9); and envy (Panel A: Row 11).

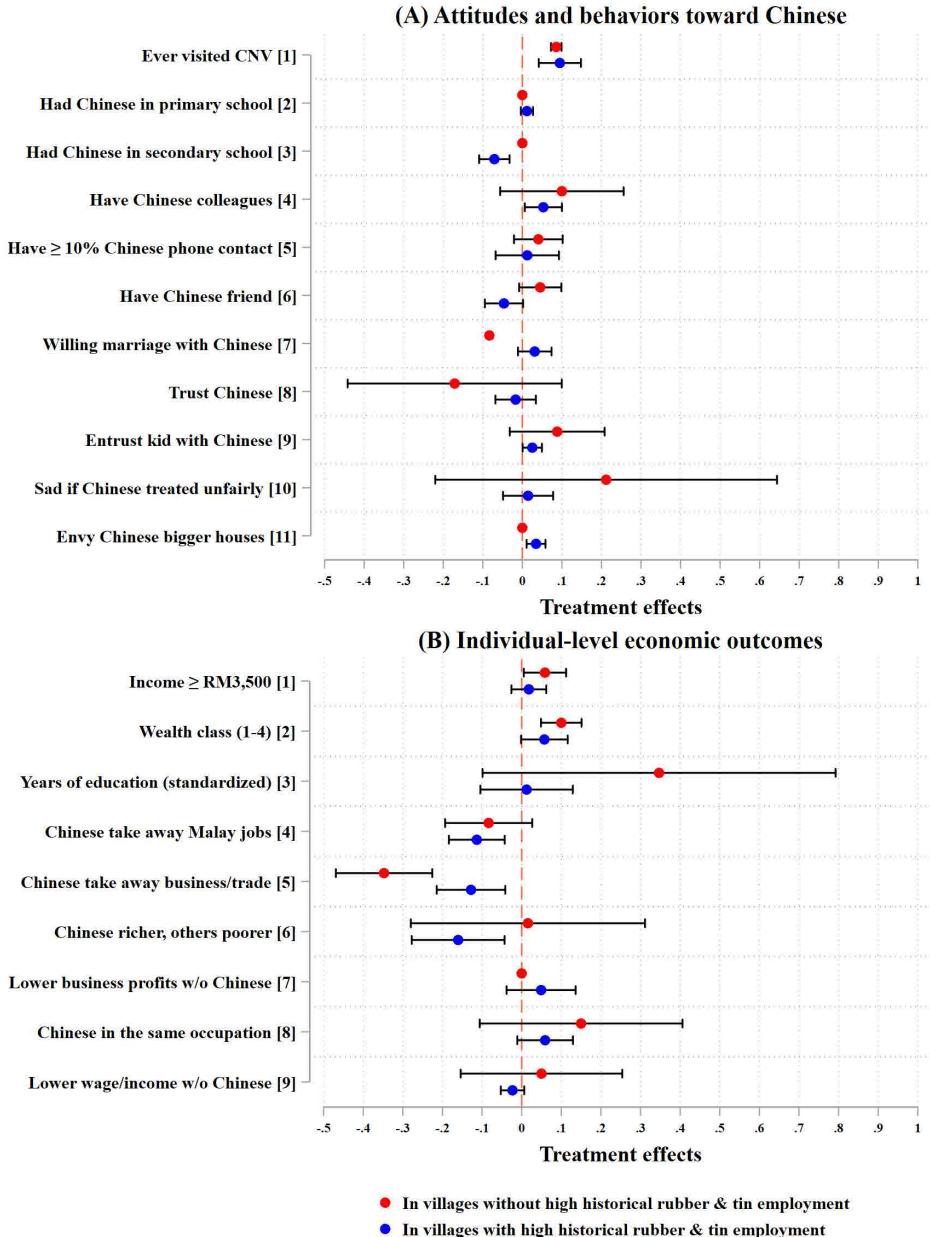
Taken together, these results largely align with patterns observed in our macro-level, polling district analyses. While admittedly more speculative, we view these findings as a complementary piece of micro-level evidence that points to the potential role of inter-group production links in fostering positive, inter-ethnic attitudes ([Ghosh, 2025](#)).

Takeaways. We interpret these results as evidence that Malays living in close proximity to CNVs might have experienced *initial* economic benefits from employment in rubber estates and tin mines. These economic benefits led to positive interethnic attitudes that persisted over time and which are reflected in differences in contemporary voting behavior (see Section 5). Economic benefits, however, might have faded over time given that many ethnic Chinese New Villagers have out-migrated to towns and cities due to widely perceived, limited economic opportunities around CNVs ([Strauch, 1981, 2013](#)). Altogether, these results imply that sustained, localized interethnic exposure can result in persistent changes in political and interethnic attitudes, through initial economic interdependence, and even in the absence of persistent economic gains.

⁸⁶The small sample size of the low group is to be expected, given that, as mentioned, more than 70% of Malays were historically employed in (non cash-crop) agriculture ([Del Tufo, 1949](#))

⁸⁷Notably, results on the binary indicator for "Chinese take away business/trade" are negative and statistically significantly larger in the low complementarities vis-a-vis the high complementarities subsample. This, however, is possibly consistent with the possibility that, in the low complementarities subsample, Malays living near real CNVs might have had little (differential) contact with ethnic Chinese that were, historically, largely engaged in small-scale agriculture and family farms (vis-a-vis Malays living near fake CNVs). Hence, these Malays might be less likely to hold any prior stereotypes of ethnic Chinese.

Figure 11
Historical Interethnic Complementarities:
Heterogeneity of Survey Results using Malay Occupational Shares in Rubber/Tin (1960)



Notes: This figure reports OLS estimates using the primary survey data, where colored dots represent point estimates and black lines represent 90% confidence intervals. The sample consists of individuals who were born in the surveyed village. The sample split is based on whether rubber or tin mining had the highest employment share in a village in 1960 or not ($n = 945$ and 247, respectively). We classify a village as “mining” if more than half of the village leaders report it as having the largest share. The dependent variables in Panel (A) are the same as those reported in Table 1 and their definitions are found in the table notes. The dependent variables in Panel (B) are the same as those reported in Table 2 and their definitions are found in the table notes. The absence of confidence intervals for some coefficients in the non-mining sample reflects extremely small standard errors or insufficient variation due to limited sample size. All regressions include nearest Chinese New Village fixed effects and two-way clustered standard errors at the cohort and nearest new village-level.

7.3 Ethnic vs Resettlement Effects

The observed effects in Section 5 may not be driven by exposure to the ethnic Chinese community per se, but by exposure to new people through resettlement (i.e., generic resettlement effects), which could bring new ideas, opportunities, or norms that shape political identity and preferences (Balietti et al., 2021; Chetty et al., 2016). To test this, we conduct a placebo-style analysis using Malay New Villages (MNVs). Like CNVs, MNVs were created during the Malayan Emergency and involved the resettlement of rural Malay populations into fortified villages (Dobby, 1952; Humphrey, 1971). The British colonial administration implemented this policy, also part of the Briggs Plan, in regions considered to be high-risk for Communist insurgency activities, where ethnic Malays were believed to be vulnerable to influence or violence from the Malayan Communist Party. Because the resettlement of Malays was at a much smaller scale, our sample includes 51 MNVs only. Note that MNVs were largely provided with the same amenities as CNVs.

Importantly, since MNVs were created under similar conditions and in comparable rural Malay-majority settings, they serve as a useful placebo group for isolating the ethnic-specific effects of CNVs. If the effects arose from exposure to new people rather than exposure to Chinese communities, we would expect effects of MNVs to be similar to those of CNVs. In our counterfactual analysis (Figure A.10), differences in ethnonationalist vote shares remain largely flat and statistically insignificant.⁸⁸ Therefore, in contrast to ethnic minority exposure (from CNVs), exposure to individuals from the same, ethnic majority group appears to have had relatively little, long-run effects on the political behavior of ethnic majority Malays.

8 Conclusion

In this paper, we leverage a forced resettlement program to study how persistent interethnic proximity shapes long-run political and economic development in Malaysia. Exploiting the sharp and persistent variation in interethnic proximity, created by the relocation of nearly half a million rural ethnic Chinese into newly created villages, we examine how the spatial reconstruction of ethnic geography continues to affect the political behavior of the ethnic Malay majority, local economic development, and intergroup relations across Malaysia today.

We present novel evidence that, more than seven decades later, Malays living closer to Chinese resettlement sites show lower support for the ethnonationalist coalition (that prioritizes the interests of the Malay majority over those of ethnic minorities such as the Chinese). We also observe moderately positive impacts on economic development near CNVs. We show that economic

⁸⁸The large (but statistically insignificant) effect sizes in the 2-4km distance bins are plausibly consistent with some degree of localized economic benefits from proximity to MNVs.

effects, however, are insufficient to explain the entirety of differences in political behavior. It is generally challenging to pinpoint mechanisms in such rural settings because actions and attitudes are often difficult to observe in sufficient detail across such a long period of time. We gather and use data from a large-scale, in-person, retrospective, mixed-methods survey of ethnic Malays, to examine whether and how proximity shapes contact and political behavior across generations.

Malays living in areas closer to CNVs show increased interethnic contact, higher trust, lower zero-sum beliefs, and better economic outcomes. Much of these effects are, in turn, attenuated (amplified) by economic competition (complementarities). Overall, however, effects on broader social integration and attitudes remain muted, underscoring the limitations of interethnic contact in fostering broader social cohesion.

The shift in observed political behavior does not appear to have relied on explicit, formal integration policies but rather, emerged from routine exposure, shared institutions, and historical interethnic economic complementarities. Naturally, these results raise the question of *which* contexts might lend themselves more readily to positive, complementary interethnic relationships. We cannot conclusively answer this question, but we note that the conditions in our setting, like localized economic complementarities, institutional neutrality, and the opportunity for repeated, equal status interactions (Allport, 1954), may be absent but potentially replicable, policy-wise, in highly segregated urban environs.⁸⁹

As forced displacement continues to rise, our findings carry renewed relevance. Understanding how spatial integration, even under adverse beginnings, can recalibrate identity and political behavior is important for policies aimed at promoting social cohesion. More research is needed to unpack the full complexity of the social, psychological, and institutional mechanisms at play. For instance, comparative work across different resettlement contexts can help clarify when, how, and for whom proximity promotes integration. Investigating the role of local governance, civic institutions, and exposure across different stages of an individual's life cycle may also shed light on the durability and replicability of our findings.

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⁸⁹For instance, Wong (2013) studies an explicit ethnic integration policy in Singapore that mandates apartment-block level ethnic quotas in public housing estates.

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ONLINE APPENDIX

Chun Chee Kok, Gedeon Lim, Danial Shariat, Abu Siddique, and Shunsuke Tsuda

A Site Selection Criteria

Based on the Report on Squatter Resettlement in Various States, File No: B.A. Selangor 119/50, the British produced a set of plans and procedures for site selection. These criteria are:

1. Resettlement villages were to be located on a main road or other major transportation artery.
2. Villages were to be relocated, wherever possible, on rolling terrain to promote drainage.
3. Squatters were to be concentrated into compact villages that were fenced in and protected by a police post capable of commanding the entire village, most importantly the village gate.
4. Villages were to be sited in such a manner as to minimize squatter dislocation.
5. Sufficient water was to be supplied, either from adjacent towns or from wells within the village. Health and fire regulations were expected to be observed.
6. Amenities such as schools, dispensaries, and community centers had to be provided as quickly as possible.
7. Sufficient agricultural land of good quality was to be provided for all agriculturalists forced to abandon their previous holdings.

The site selection criteria were driven primarily by military expediency rather than the economic and social well-being of the resettled population. Hence, some criteria were followed through completely but not all. The criteria that were followed through are the following. Chinese New Villages (CNVs) were located close to a main road or transportation artery to increase accessibility by the British military to these villages in case of communist attacks.⁹⁰ Second, CNVs were on high ground to improve defensibility from the communists. The resettled often lived under the surveillance regime during the Malayan Emergency.⁹¹ In theory, according to the full site selection criteria, a New Village was to possess basic amenities and sufficient agricultural land. In practice, however, the rapid strategic demands of resettlement resulted in the non-compliance of many criteria that were more tangential to military objectives ([Phee, 2012](#)).

⁹⁰In Figure 1, we plot the location of CNVs and historical roads. We observe that there is a high correlation between the location of 452 CNVs and historical roads in our sample.

⁹¹This entailed curfews, body searches at checkpoints, communal kitchen arrangements, food restrictions, and identity certificate registration. There were fortified sentry boxes and watch towers with floodlights to “guard” the CNVs. A police station was located either near the main gate of the village or placed at a high point for surveillance.

B Data Appendix

In this section, we provide further description of key variables, data sources and the detailed steps we took to construct them.

B.1 Chinese New Villages

The main source of information on the location of Chinese New Villages is *A Survey of the New Villages in Malaya* published by the [Malayan Christian Union \(1958\)](#). The census contains information on the names of the New Villages, their prevailing Chinese dialect spoken, their estimated population, whether there was evangelistic work performed in the village, whether medical facilities and amenities were available. To identify the exact location of these New Villages, we manually matched the village names listed by the [Malayan Christian Union \(1958\)](#) with the maps from the Ministry of Housing and Local Government, Malaysia in 2012 ([Lee, 2012](#)). We successfully identify and geolocate a total of 452 New Villages.

B.2 Voting Variables: Malaysian General Elections in 2013 and 2018

The data include polling district identifiers, vote counts of each coalition in 2013 and 2018, and the number of registered voters by ethnic groups in 2013. We construct measures of the vote share of *Barisan Nasional*, which is the total votes received by Barisan Nasional over the total number of votes cast in each polling district in both 2013 and 2018. We construct ethnic share by dividing the number of registered Chinese or Malay voters over the total number of registered voters in each polling district in 2013. We construct voter turnout, which is the total number of votes cast over the total number of registered voters in each polling district in 2013.

B.3 Spatial Variables

Nighttime luminosity. We construct measures of local economic activity using remotely sensed nighttime lights data from NASA's Black Marble product (VNP46A3), which provides monthly cloud-free radiance composites. The data are downloaded using the `blackmarbler` R package, which accesses NASA's Black Marble archive through authenticated API queries. We specify Malaysia as the region of interest using Level-2 administrative boundaries from the GADM database and extract monthly raster layers for the year 2014. The downloaded rasters represent All-Angle Snow-Free Composites, filtered to remove low-quality observations based on quality flags. To compute average luminosity for each polling district in both 2013 and 2018 boundaries, as well as grid cells, for each month, we calculate the mean radiance within the spatial boundary

of each polling district, then average across all twelve months of 2014 to obtain a single measure of mean annual luminosity in 2014.

Population density. We measure local population density using gridded population estimates from the 2010 Global Human Settlement Layer (GHSL), which provides population counts at approximately 1 km resolution. For each polling district, we calculate the total population by summing the raster values that fall within its boundaries using the `exactextractr` package. To compute density, we divide this population sum by the land area of the polling district, calculated in square kilometres. The resulting measure represents the number of persons per square kilometre in each polling district in 2010. This variable serves as a proxy for local settlement intensity.

Other controls. We include a wide range of geographical variables to construct the controls in the regressions. These include measures of: (i) topography (elevation, slope, aspect, coastlines, (ii) soil quality (% of topsoil carbon, % of topsoil sodicity, type of soil, and class of drainage), and (iii) pre-resettlement variables (nearest urban centre in 1947, population density in 1947, Chinese share in 1947). Below, we briefly discuss the construction and sources of these variables.

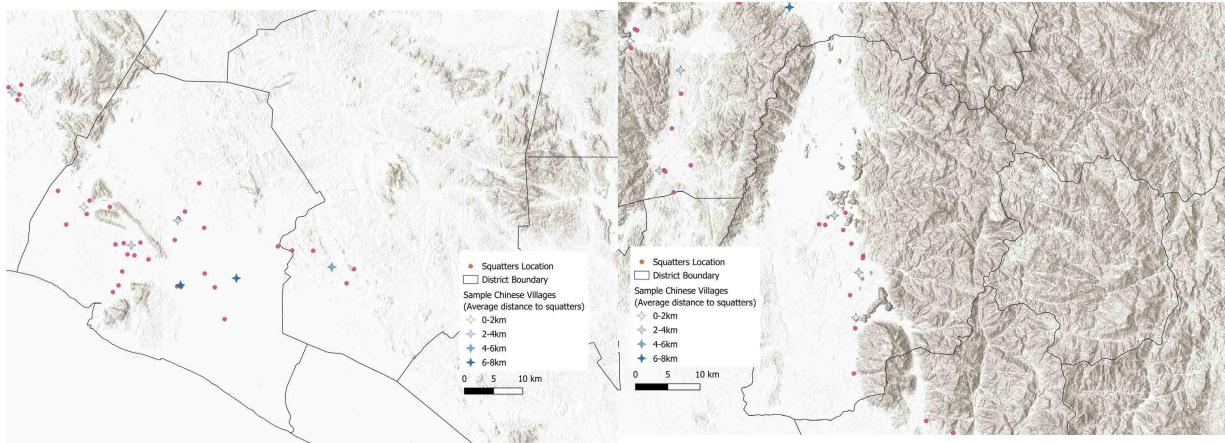
Elevation, slope, aspect. Topographical variables were created using raster data from the *Harmonized World Soil Database* (HWSD). The raster files are compiled from high-resolution source data and aggregated to 30-arc-second grids. We compute elevation for each polling district as the average elevation over the entire polling district polygon, using raster data from HWSD. Slope and aspect data were also computed for each polling district similarly. For aspect data, the variables equal to the average share of 30-arc-second grids that are north-, south-, east-, and west-facing grids of each polling district. We compute fly-by-crow distances from the polling district centroids to the nearest coastlines.

Soil quality measures. We make use of the FAO GAEZ V4 data for soil quality measures. HWSD provides detailed information on different soil types across the world. We compute the average raster values within each polling district polygon for continuous variables, including the % of topsoil organic carbon and % of topsoil sodicity. These variables proxy soil fertility and salinity. For categorical soil attributes including drainage class and soil texture, we extract the majority pixel value within each polygon using nearest-neighbor resampling to preserve class integrity.

Pre-resettlement variables. We use the population census in 1947 to construct pre-treatment demographic variables ([Del Tufo, 1949](#)). We digitized the list of urban centers with at least 10,000 inhabitants and geolocated each of them. We compute fly-by-crow distances from the polling district centroids to the nearest urban centers. Moreover, we digitized the count of population by ethnic groups at the Census District level (*mukim*). We then assign population statistics of subdistricts to the polling districts (which are more disaggregated than subdistricts) based on the share of intersected areas between a subdistrict and a polling district.

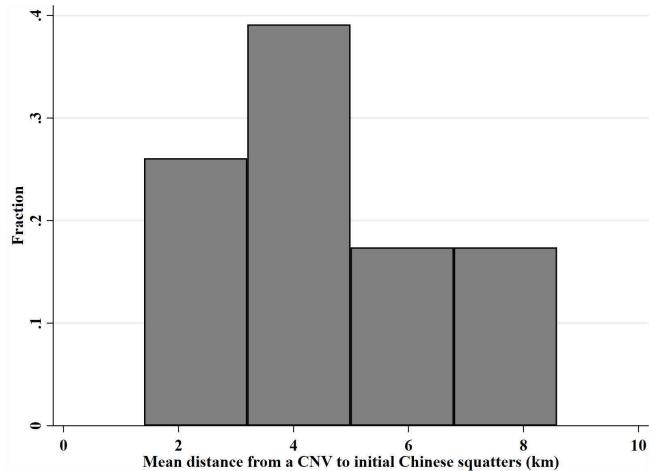
Appendix Figures and Tables

Figure A.1
The Spatial Distribution of Pre-Resettlement Chinese Squatters



Panel A: Batu Pahat and Kluang

Panel B: Kinta



Panel C: CNV-level distance

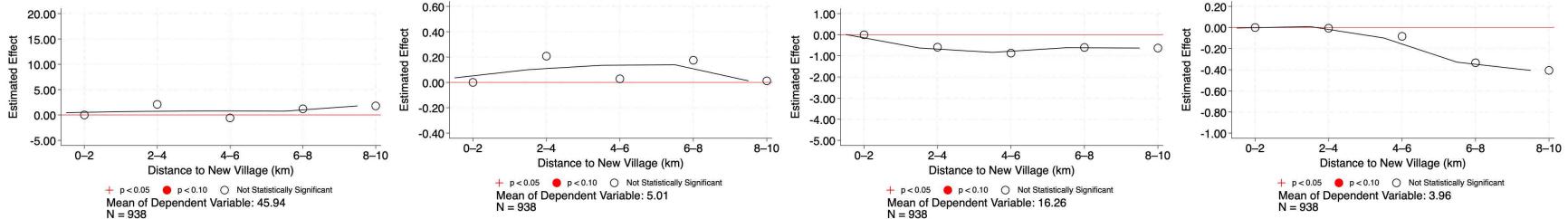
Notes: Panels A and B plot the pre-resettlement distribution of Chinese squatter locations (red dots) in relation to the actual Chinese New Village (CNV) locations to which ethnic Chinese minorities were resettled (blue crosses). The shade of the blue crosses correspond to the average distance between each CNV location and all-known squatter locations from which the CNV population was resettled from. Darker shades correspond to greater average distances. District boundaries (black lines) and topographical features are mapped in the background. Panel C plots, at the CNV level, the average distance from each CNV to initial (pre-resettlement) Chinese squatter locations. Source: Authors' primary survey data from retrospective surveys with Chinese New Village leaders.

Figure A.2
Digitizing Historical Roads and Malay Reservation Polygons:
Extract from HIND1035 1947 Map (State of Perak)



Notes: The orange lines indicate main roads and the red box indicates an example of a Malay Reservation Area.
Source: HIND 1035, Sheet 2N/14

Figure A.3
Geographic, Soil, and Pre-Resettlement Balance

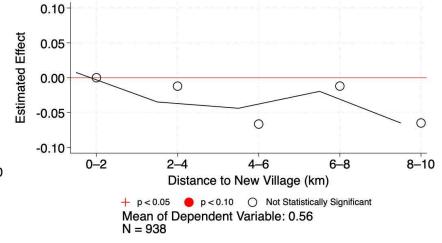
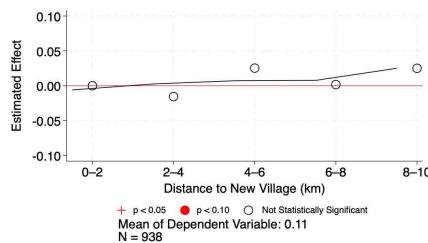
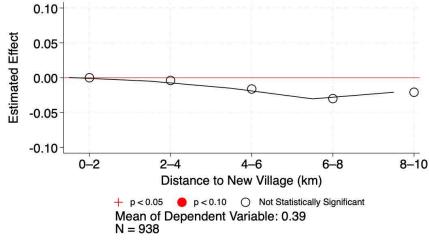
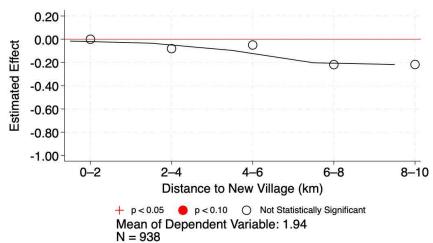


(A) Elevation

(B) Slope

(C) % of East-facing Grids

(D) % of Topsoil Organic Carbon

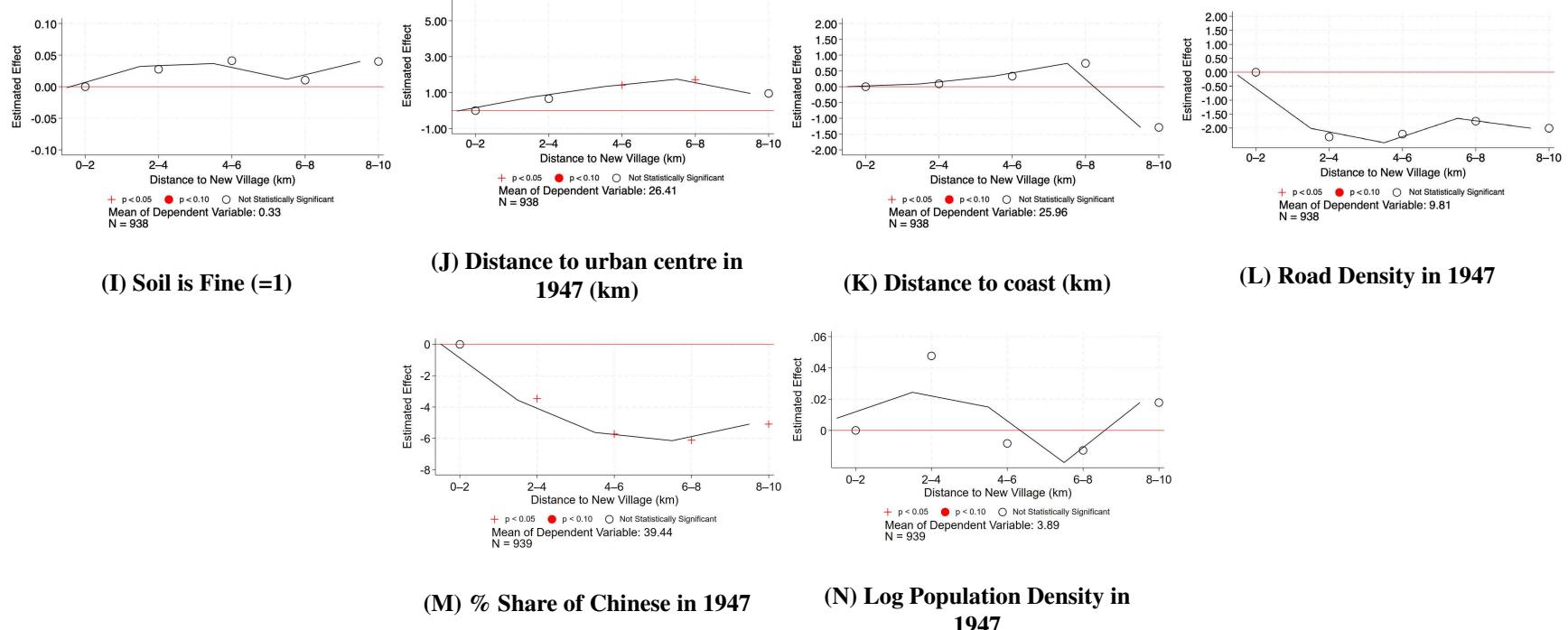


(E) % of Topsoil Sodicity

(F) Drainage is very poor (=1)

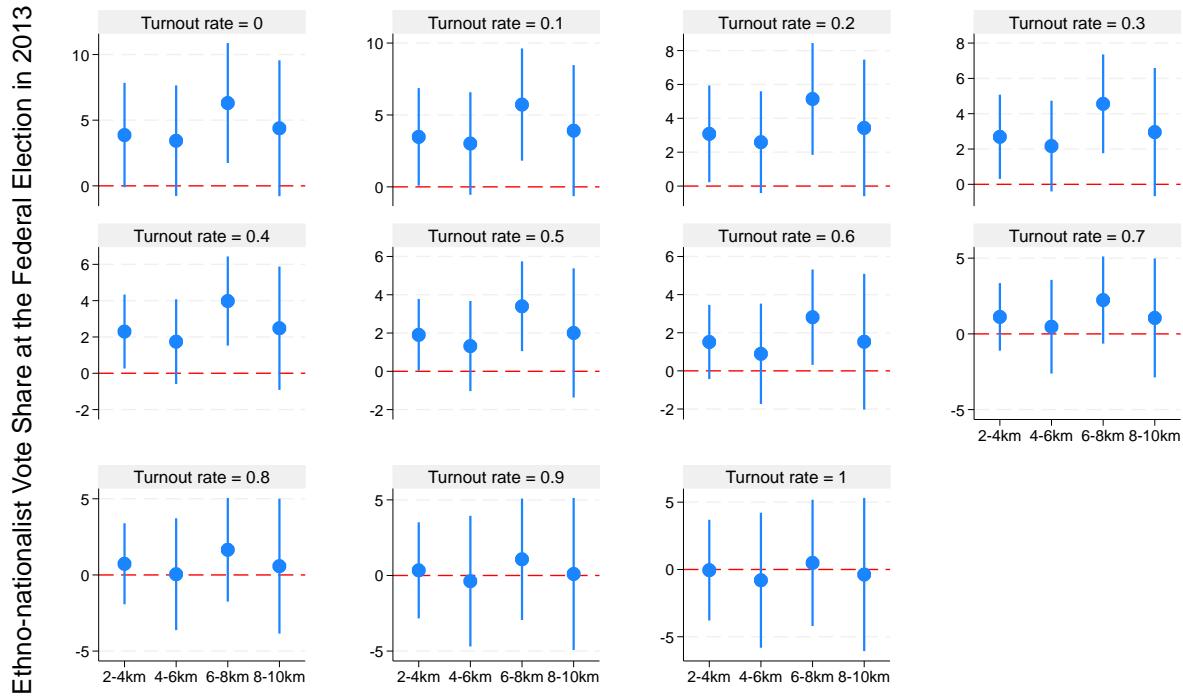
(G) Soil is Coarse (=1)

(H) Soil is Medium (=1)



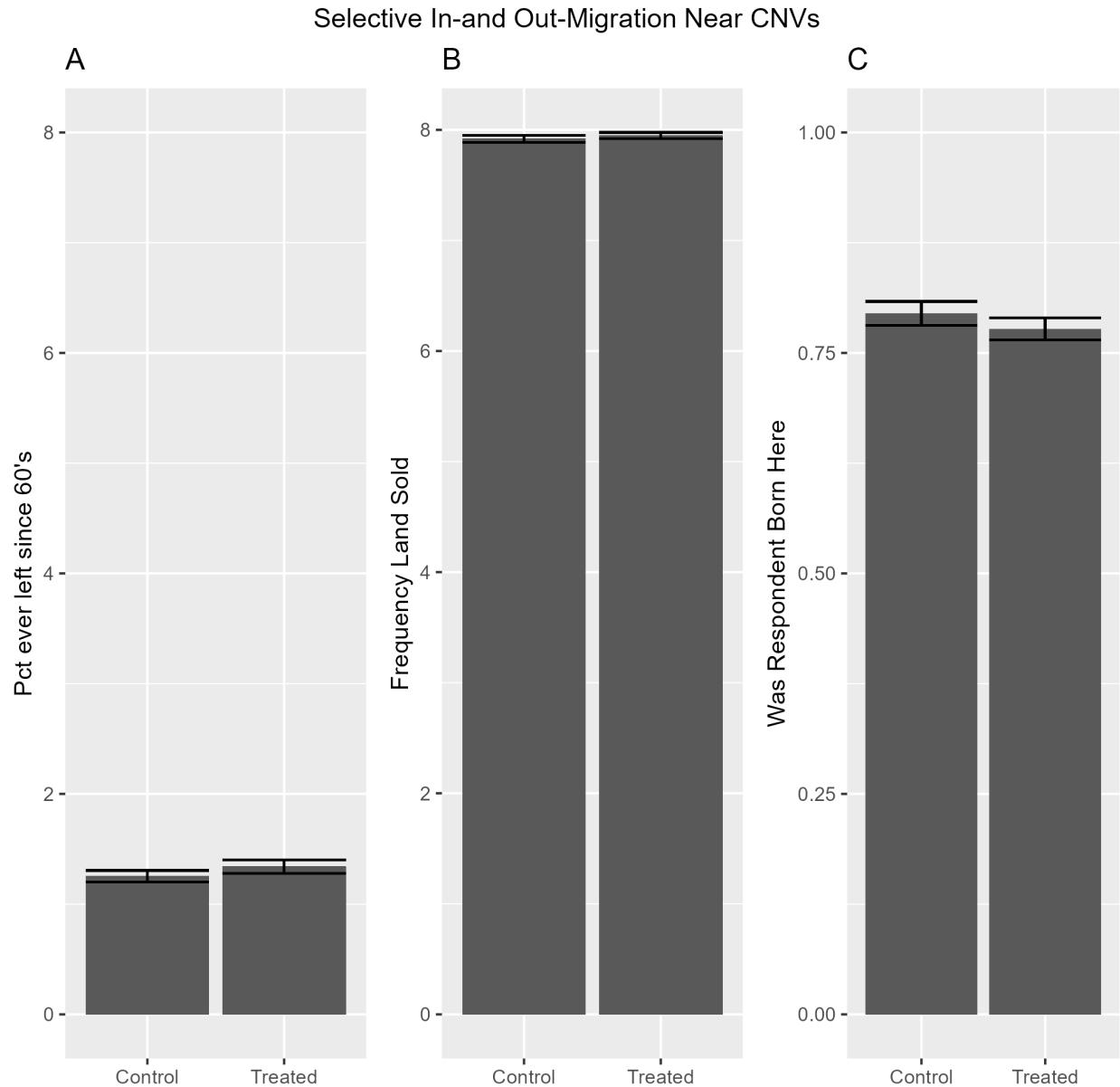
Notes: We normalized each dependent variable so that it always ranges from -1 to 1. Points plot coefficients estimated from regressing the outcome variable on 2-km bins of distance to the nearest New Village, controlling for federal parliamentary constituency fixed effects. The means of analogous estimates computed from 1,000 counterfactual New Village configurations are subtracted from each coefficient. The points are fit with a linear spline. P-values compare the effect of proximity to the nearest actual New Village to the effects of proximity to the nearest counterfactual New Village, computed from 1,000 counterfactual New Village configurations.

Figure A.4
Quantifying Malay Voting Behavior: The Effects of Varying Ethnic Chinese Voter Turnout Rates on Ethno-Nationalist Vote Shares: Polling District Level



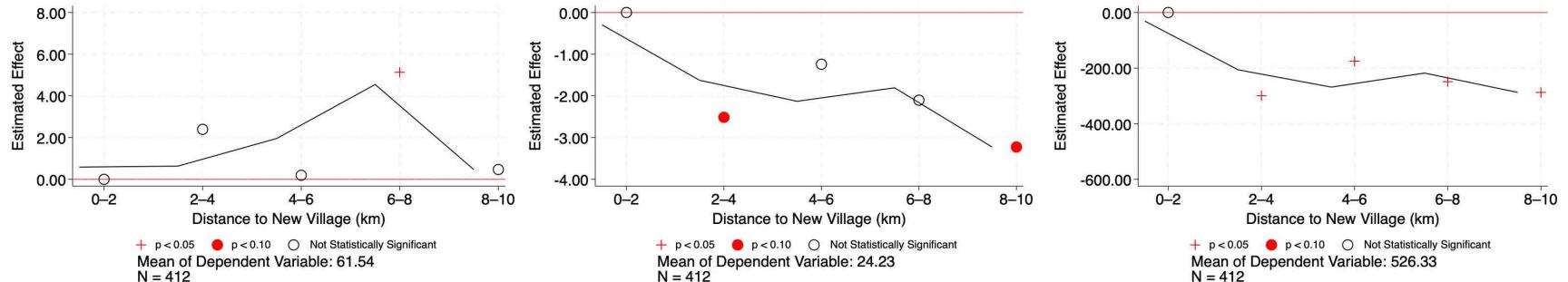
Notes: This figure plots OLS estimates of Equation 1. The outcome variable is vote share for ethno-nationalistic coalition at the polling district level in federal parliament constituency contests. These figures plot coefficients estimated from regressing the outcome variable on 2-km bins of distance to the nearest Chinese New Village, controlling for federal parliamentary constituency fixed effects and geographical and pre-treatment controls. Each subfigure represents different turnout rates applied to estimate the number of ethnic Chinese who cast their votes, ranging from 0 to 1, under the (implausible) assumption that all ethnic Chinese voters voted against the ethno-nationalist coalition. The sample comprises polling districts in Johor, Kedah, Melaka, Negeri Sembilan, Perak, Selangor, and Pahang, after excluding polling districts that contain New Village population, polling districts in historically urban areas and polling districts beyond 10km of a New Village.

Figure A.5



Notes: *Treated (Control)* Malay villages are located 0-2km from a real (fake) CNV. See Section 7 for details on our empirical strategy and matching procedure. Sub-figure A plots categorical responses to the question: “What percentage of residents since the 1960s have sold their house and never returned?” 1 = < 1%; 2 = 1-5%; 3 = 5-10%; 4 = 11-20%; 5 = 21-30%; 6 = 31-40%; 7 = 41-50%; 8 = 51-100%. Sub-figure B plots the frequency with which villagers have ever sold their land in the village, to someone not from the village. 1 = everyday; 2 = weekly; 3 = every two weeks; 4 = every month; 5 = every 3 months; 6 = every 6 months; 7 = every year; 8 = not even yearly. Sub-figure C plots individual-level responses to: “Were you born in the village”. 1 = Yes, 0 = No. Responses in A and B are from village leader surveys. Responses in C are from non-leader surveys. P-values of difference-in-means are 0.272, 0.492, and 0.342 for A, B, and C, respectively. $N = 288$ (A and B) and $N = 1990$ (C).

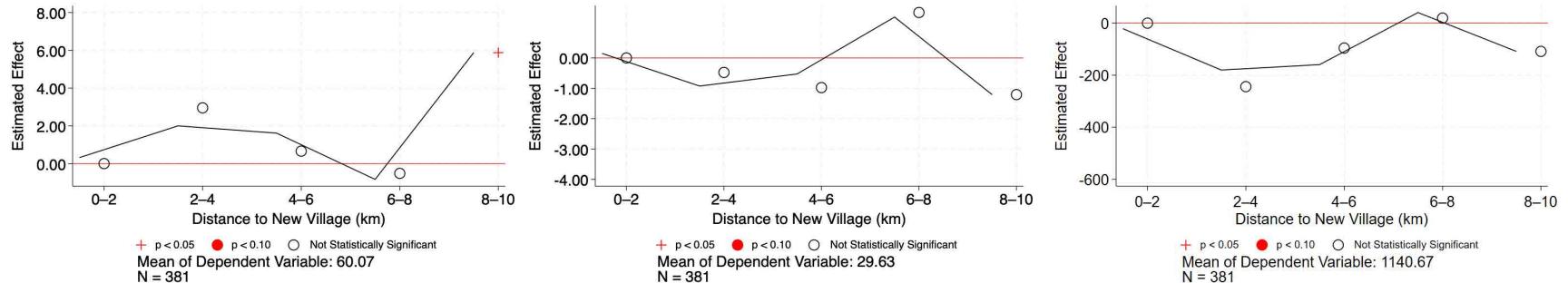
Figure A.6
Polling district-level: Initial Population Size of Chinese New Villages
Below Median Sample



(A) Vote Share

(B) Mean Luminosity

(C) Population Density



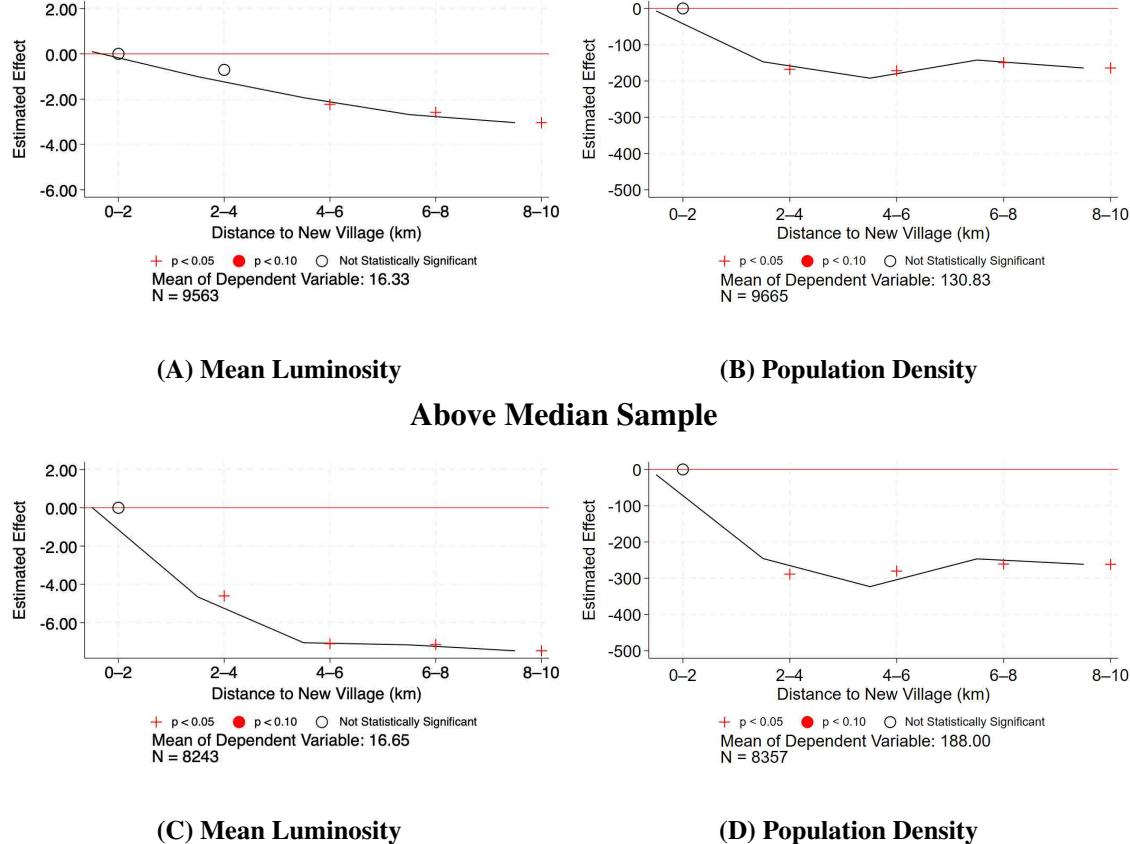
(D) Vote Share

(E) Mean Luminosity

(F) Population Density

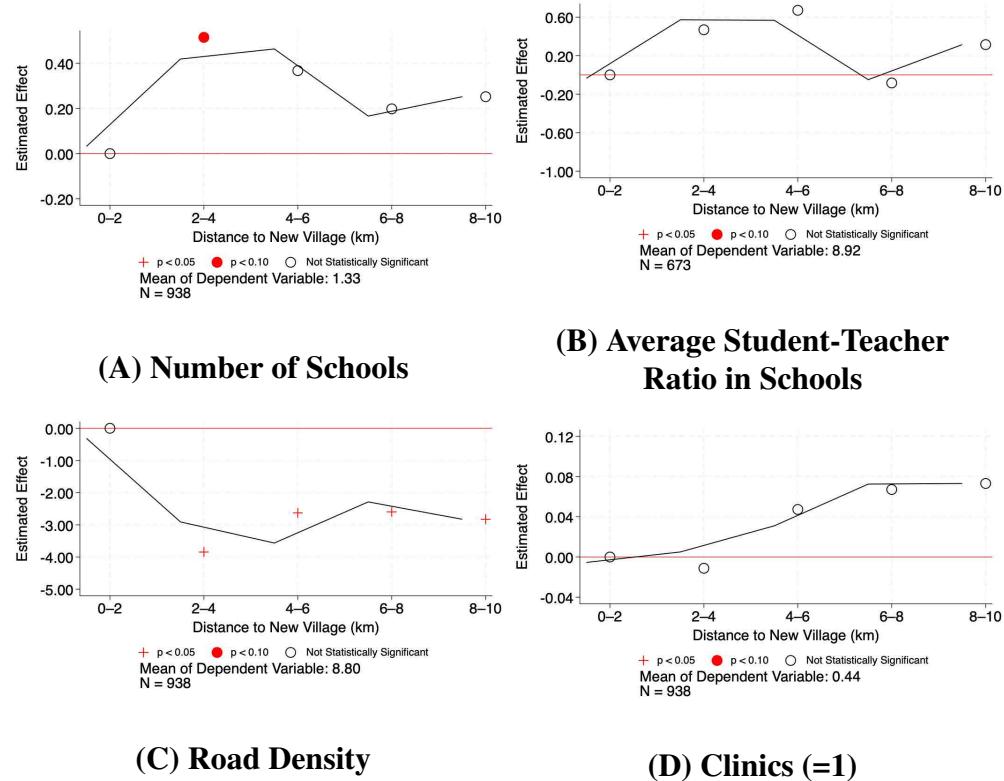
Notes: The outcome variables for (A) and (D) are the vote share for ethno-nationalistic coalition at the polling district level in federal parliament constituency contests. There are 145 (15.4%) missing observations due to incomplete data on the initial population size of Chinese New Villages. These figures plot coefficients estimated from regressing the outcome variable on 2-km bins of distance to the nearest Chinese New Village, controlling for federal parliamentary constituency fixed effects and geographical and pre-treatment controls. The means of analogous estimates computed from 1,000 counterfactual New Village configurations are subtracted from each actual coefficient. The points are fit with a linear spline. P-values compare the effect of distance to the nearest actual New Village to the effects of distance to the nearest counterfactual New Village, computed from 1,000 counterfactual New Village configurations.

Figure A.7
Grid cell-level: Initial Population Size of Chinese New Villages
Below Median Sample



Notes: These figures plot coefficients estimated from regressing the outcome variable on 2-km bins of distance to the nearest Chinese New Village, controlling for federal parliamentary constituency fixed effects and geographical and pre-treatment controls. There are 3,398 (15.8%) missing observations due to incomplete data on the initial population size of Chinese New Villages. The means of analogous estimates computed from 1,000 counterfactual New Village configurations are subtracted from each actual coefficient. The points are fit with a linear spline. P-values compare the effect of distance to the nearest actual New Village to the effects of distance to the nearest counterfactual New Village, computed from 1,000 counterfactual New Village configurations.

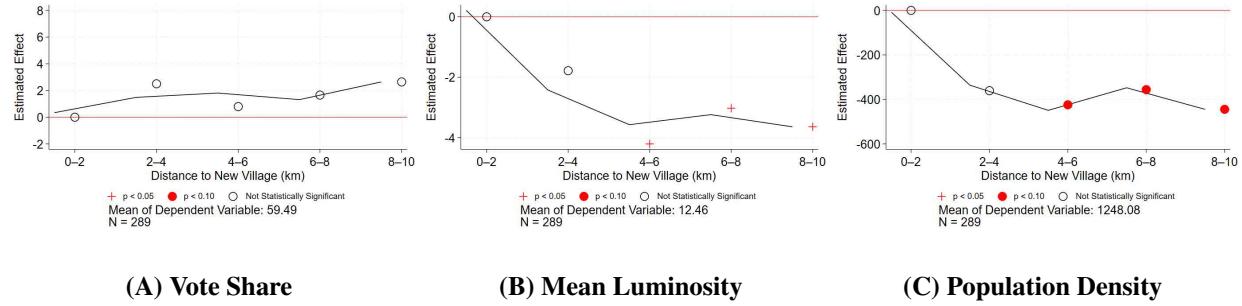
Figure A.8
Effects of Chinese New Villages on Public Goods Provision



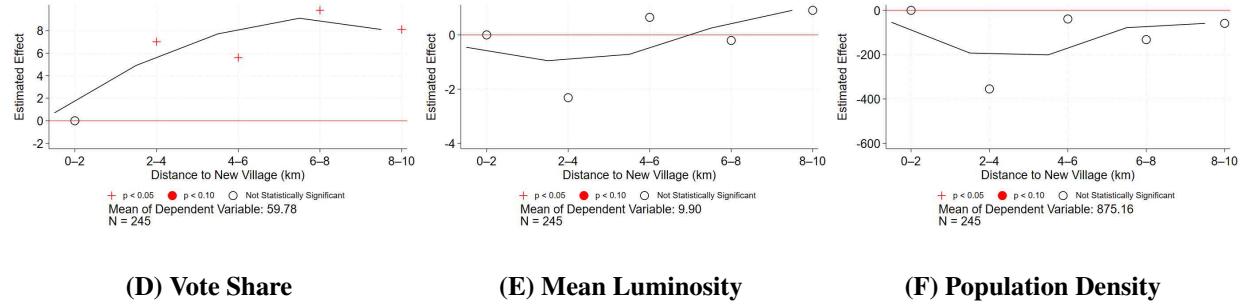
Notes: Points plot coefficients estimated from regression the outcome variable on 2-km bins of distance to the nearest New Village, controlling for federal parliamentary constituency fixed effects and geographical and pre-treatment controls. The means of analogous estimates computed from 1,000 counterfactual New Village configurations are subtracted from each coefficient. The points are fit with a linear spline. p-values compare the effect of proximity to the nearest actual New Village to the effects of proximity to the nearest counterfactual New Village, computed from 1,000 counterfactual New Village configurations.

Figure A.9
Interethnic Complementarities (Polling-District Level)

Effect of Proximity to CNVs: Below Median Historical Rubber & Tin Employment Shares

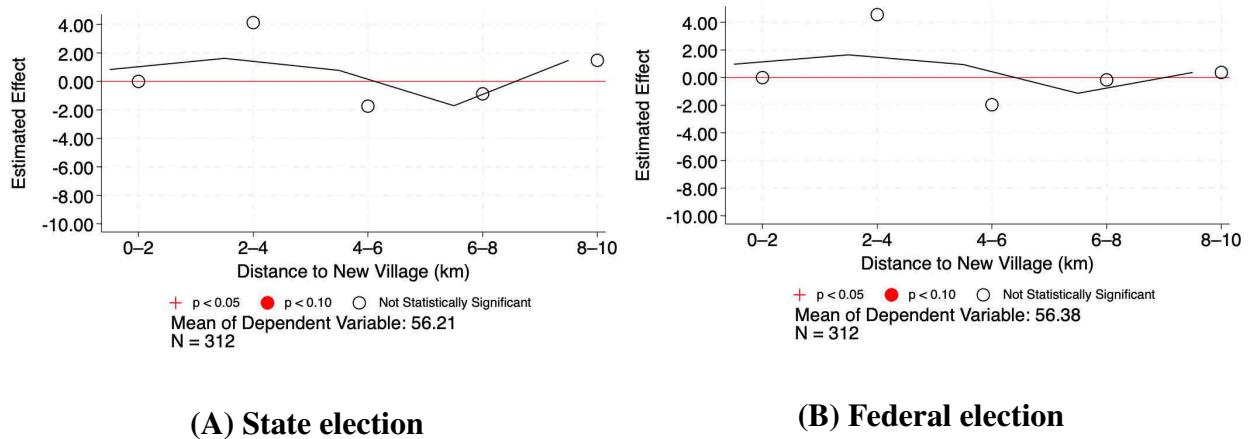


Effect of Proximity to CNVs: Above Median Historical Rubber & Tin Employment Shares



Notes: There are 405 (43.1%) missing observations due to incomplete data on employment of Chinese in Chinese New Villages. The outcome variables for (A) and (D) are the vote share for the ethno-nationalistic coalition at the federal elections in 2013. These figures plot coefficients estimated from regressing the outcome variable on 2-km bins of distance to the nearest Chinese New Village, controlling for federal parliamentary constituency fixed effects and geographical and pre-treatment controls. The means of analogous estimates computed from 1,000 counterfactual New Village configurations are subtracted from each actual coefficient. The points are fit with a linear spline. P-values compare the effect of distance to the nearest actual New Village to the effects of distance to the nearest counterfactual New Village, computed from 1,000 counterfactual New Village configurations.

Figure A.10
Effects of Malay New Villages on Ethno-nationalist Electoral Support
Ethno-nationalist Coalition Vote Share in 2013



Notes: Figures plot coefficients from regressing the outcome variable on 2-km bins of distance to the nearest Malay New Village, controlling for federal parliamentary constituency fixed effects, geographical and pre-treatment controls. In addition, regressions of state election results include indicators for all possible combinations of party match-ups at the state constituency level. The means of analogous estimates computed from 1,000 counterfactual New Village configurations are subtracted from each actual coefficient. The points are fit with a linear spline. P-values compare the effect of distance to the nearest actual New Village to the effects of distance to the nearest counterfactual New Village, computed from 1,000 counterfactual New Village configurations.

Table A.1
Summary Statistics of New Villages

Variable	(1) Sampled villages	(2) Non-sampled villages	(3) Diff (1)-(2)	(4) P-value
Transportation Access				
Main highway (=1)	0.692	0.566	0.127	0.005
Railroad (=1)	0.005	0.012	-0.007	0.398
Distance to Urban Center				
Distance within 5 miles (=1)	0.125	0.115	0.010	0.739
Distance within 5-10 miles (=1)	0.144	0.148	-0.003	0.921
Distance within 10-15 miles (=1)	0.144	0.119	0.025	0.426
Type of Government				
District council (=1)	0.466	0.434	0.032	0.498
Municipal council (=1)	0.457	0.484	-0.027	0.569
Self governance (=1)	0.058	0.037	0.021	0.296
Medical Facilities				
None (=1)	0.072	0.090	-0.018	0.487
Settlement Type				
Assimilated to existing and attached settlement (=1)	0.433	0.398	0.035	0.451
New settlement (=1)	0.413	0.381	0.032	0.485
Dominant Language Spoken				
Chinese dialects (=1)	0.832	0.643	0.188	0.000
Observations	208	244	452	

Notes: Sampled villages refer to the 208 CNVs included in our analysis out of the 452 CNVs that we were able to geolocate and verify. Non-sampled Villages are the remaining 244 CNVs that we exclude after applying our sample selection criteria (Section 3). 83/452 (18.4%) villages are missing settlement type. For transport, urban centre, medical facilities and linguistic variables, 85/452 (18.8%) observations have missing values. For type of government, 12/452 (2.65%) observations have missing values.

Table A.2
OLS: Chinese New Villages and Ethno-nationalist Support

Panel (A)	Dep. Var.: Ethno-nationalist Coalition Vote Share 2013					
	State Election			Federal Election		
	(1)	(2)	(3)	(4)	(5)	(6)
2-4km	4.611** (1.880)	3.873** (1.914)	3.451* (1.935)	4.706** (2.098)	4.379** (2.066)	3.868* (1.996)
4-6km	6.866*** (1.975)	3.944** (1.957)	3.273* (1.869)	6.800*** (2.457)	4.234* (2.263)	3.439 (2.114)
6-8km	11.725*** (1.867)	7.135*** (2.127)	5.893*** (2.174)	12.118*** (2.305)	7.747*** (2.355)	6.305*** (2.294)
8-10km	7.356*** (2.175)	4.637* (2.502)	3.692 (2.551)	8.176*** (2.556)	5.467** (2.660)	4.386* (2.599)
Observations	939	939	938	939	939	938
Adjusted R ²	0.088	0.462	0.474	0.046	0.461	0.474
Mean (Dep. Var.)	60.301	60.301	60.283	60.863	60.863	60.843
SD (Dep. Var.)	16.338	16.338	16.338	16.358	16.358	16.355
Parliamentary Constituency FE	No	Yes	Yes	No	Yes	Yes
Controls	No	No	Yes	No	No	Yes

Panel (B)	Dep. Var.: Ethno-nationalist Coalition Vote Share 2018					
	State Election			Federal Election		
	(1)	(2)	(3)	(4)	(5)	(6)
2-4km	8.950*** (1.858)	8.395*** (2.020)	7.682*** (1.941)	8.608*** (2.118)	8.067*** (1.973)	7.446*** (1.880)
4-6km	14.357*** (2.311)	12.011*** (2.032)	11.100*** (2.049)	14.353*** (2.879)	11.648*** (1.976)	10.800*** (1.960)
6-8km	17.643*** (2.445)	14.089*** (2.376)	12.922*** (2.429)	19.734*** (2.473)	14.052*** (2.241)	12.884*** (2.234)
8-10km	12.797*** (2.657)	11.403*** (2.427)	10.248*** (2.381)	16.999*** (2.664)	12.012*** (2.343)	10.878*** (2.356)
Observations	957	957	957	964	964	964
Adjusted R ²	0.265	0.541	0.563	0.136	0.554	0.570
Mean (Dep. Var.)	43.505	43.505	43.505	43.213	43.213	43.213
SD (Dep. Var.)	16.680	16.680	16.680	16.835	16.835	16.835
Parliamentary Constituency FE	No	Yes	Yes	No	Yes	Yes
Controls	No	No	Yes	No	No	Yes

Notes: This table reports OLS estimates of Equation 1. In Panel (A), the sample comprises polling districts in Johor, Kedah, Melaka, Negeri Sembilan, Perak, Selangor, and Pahang, after excluding polling districts that contain Chinese New Village population, polling districts in historically urban areas, and polling districts beyond 10km of a Chinese New Village. In Panel (B), the sample restriction is the same as Panel A. Regressions of state election results additionally include indicators for all possible combinations of party match-ups at the state constituency-level. Standard errors are clustered at the federal parliamentary constituency-level.

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

Table A.3
OLS: Chinese New Villages and Economic Effects

Panel (A)	Nightlight Luminosity	Population Density
	Grid cell-level	
	(1)	(2)
2-4km	-4.366*** (0.649)	-296.663*** (35.039)
4-6km	-8.480*** (1.081)	-348.714*** (43.021)
6-8km	-9.894*** (1.181)	-346.812*** (43.154)
8-10km	-10.714*** (1.203)	-355.305*** (42.803)
Observations	21419	21419
Adjusted R ²	0.603	0.468
Mean (Dep. Var.)	15.862	146.896
SD (Dep. Var.)	14.868	464.318
Parliamentary Constituency FE	Yes	Yes
Controls	Yes	Yes

Panel (B)	Nightlight Luminosity	Population Density
	Polling district-level	
	(1)	(2)
2-4km	-3.544** (1.578)	-391.846*** (122.921)
4-6km	-6.864*** (1.739)	-484.180*** (127.003)
6-8km	-8.455*** (2.022)	-469.435*** (126.397)
8-10km	-9.120*** (2.165)	-502.341*** (110.524)
Observations	938	938
Adjusted R ²	0.710	0.794
Mean (Dep. Var.)	25.968	757.297
SD (Dep. Var.)	19.482	1518.582
Parliamentary Constituency FE	Yes	Yes
Controls	Yes	Yes

Notes: This table reports OLS estimates of Equation 1. In Panel (A), the sample comprises grid cells in Johor, Kedah, Melaka, Negeri Sembilan, Perak, Selangor, and Pahang, after excluding grid cells that contain Chinese New Village population, grid cells in historically urban areas, and grid cells beyond 10km of a Chinese New Village. In Panel (B), the sample comprises polling districts in Johor, Kedah, Melaka, Negeri Sembilan, Perak, Selangor, and Pahang, after excluding polling districts that contain Chinese New Village population, polling districts in historically urban areas, and polling districts beyond 10km of a Chinese New Village. Standard errors are clustered, at the federal parliamentary constituency-level.

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

Table A.4
Balance Tests Between Treated and Control Villages (Primary Survey Data)

(A) Individual-level variables	Control (C)		Treated (T)		<i>t</i> -test (T=C) <i>p</i> -value
	Mean	N	Mean	N	
Respondent's age	49.01	731	49.45	1027	0.63
Respondent is married	0.68	732	0.69	1028	0.76
Grandfather interacted with Chinese	0.50	395	0.48	549	0.52
Grandfather trusted Chinese	0.52	387	0.47	534	0.16
Grandfather would have accepted marriage with Chinese	0.46	420	0.38	594	0.01**
Grandfather would have been happy to be near Chinese	0.45	409	0.42	582	0.40
Grandfather mentioned conflicts with Chinese	0.36	526	0.33	735	0.32
Family was rich (> 50%) before Chinese resettlement	0.03	526	0.03	732	0.90
(B) Village-level variables	Control (C)		Treated (T)		<i>t</i> -test (T=C) <i>p</i> -value
	Mean	N	Mean	N	
Elevation	37.55	43	36.48	58	0.84
Slope	4.25	43	3.69	58	0.15
Market Access to pre-existing villages	12.20	43	12.24	58	0.97
Distance to the nearest Chinese town in 1947 (km)	4.89	43	4.61	58	0.67
Year of village establishment	1919.15	32	1920.53	44	0.83
Village population (post-1945, pre-1947)	110.32	32	133.76	44	0.39
Number of houses (post-1945, pre-1947)	41.67	32	45.05	44	0.71

Notes: This table reports balance test results from the survey data. Panel (A) presents balance tests using individual-level information from the survey, including retrospective data on the older generation. Panel (B) presents balance tests using village-level information for surveyed villages. The first four rows use geographical characteristics measured at the grid cell in which each surveyed village is located, while the last three rows use village characteristics reported by Malay village leaders from primary survey data (aggregating responses from multiple village leaders into the village level). * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.