Colonial Migration and the Deep Origins of Governance:

Theory and Evidence from Java[*]

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The social exclusion of trading minorities is common across post-colonial states. This paper uses demographic data from the 1930 Census of the Netherlands Indies to study the long term effects of the social exclusion of trading minorities in Java on contemporary economic governance. I show that Javanese districts that were densely settled by Chinese migrants in 1930 have more cooperative business-government relations today. To clarify the importance of social exclusion rather than other factors that may differentiate colonial districts with large Chinese populations, I exploit variation in the settlement patterns of Chinese and Arab trading minorities in Java, which played comparable roles in the island's colonial economy but faced different degrees of social exclusion. These findings contribute to recent work on the colonial origins of development, ethnicity and informal institutions, and the historical origins of democratic performance.

Introduction

It is now commonplace to argue that governance matters for economic development (Kraay et al. 1999), but understanding why quality of government varies so widely remains elusive. Most empirical research on governance targets cross-national variation, yet local governance is equally important for large and diverse emerging economies, where governance varies substantially and has important consequences for local livelihoods. In the past two decades, reforms in countries as diverse as Brazil, China, Indonesia, India, Mexico, Nigeria, Russia, and Vietnam have prioritized local governments as central actors in economic development. Within each of these countries, variation in the quality, impartiality, and responsiveness of local governments is a central concern for policymakers and citizens alike. Explaining local governance in these contexts has been impeded by a messy debate on how to conceptualize and measure governance, along with the challenging problem of measuring many of the potential determinants of contemporary governance.

This paper uses colonial data from the Indonesian island of Java to explore the deep origins of local governance. I refer to these origins as "deep" because they are the results of

colonial era political and social processes which formed the foundations for market development and local political economies. Like many recent contributions, I argue that colonial settlement patterns profoundly affect governance in the post-colonial world. I depart from this literature by focusing on non-European migration, and on the informal networks of elite political and economic relations that emerged under colonial rule.

Colonial governments in the tropics often encouraged migration from third countries. Examples include Lebanese to West Africa, South Asians to East Africa and the Caribbean, Chinese to Southeast Asia, and others. The experience of the Netherlands Indies was typical: the Dutch colonial government allowed large numbers "foreign Easterners," mainly Chinese, Arabs, and South Asians, to settle in the Indies during the colonial period. In the late colonial period, foreign Easterners received special economic protection, and these migrant communities came to form the commercial core of the Indies, one whose influence is still obvious throughout Indonesia today.

There are many reasons why migrant communities may have shaped governance and political-business relations in the contemporary era. Migrants may contribute human capital, or, as Acemoglu et al. (2001) argue in the case of European colonists, these migrants may themselves build the institutions of governance. I focus in this paper on an alternative mechanism: social exclusion, a term that refers to the social distance maintained between native populations and migrant communities who (unlike Europeans) remain excluded from formal politics in the colony. Socially excluded minorities such as the Chinese in the Indies developed cooperative informal political and business relations with local political elites under Dutch colonial rule. Socially excluded migrant communities did this because they faced a continual threat of predation and violence at the hands of the indigenous population. I argue that these

informal relationships under colonial rule formed the foundation for long term cooperative relations between business and political elites, with observable effects that persist today.

Consistent with this argument, I show that districts in Java that were densely settled by Chinese migrants in 1930 score consistently better on a contemporary measure of the accommodativeness of local economic governance. To rule out alternative explanations for this relationship between migrant settlement in 1930 and governance today—such as human capital, or the selective settlement by profit-minded migrant communities—I exploit variation in the level of social exclusion among different migrant communities in colonial Java.

The logic of my argument is as follows. There were several migrant communities in the Netherlands Indies other than the Chinese. Within the category of "other foreign Easterners," Arabs and South Asians predominate, with the former comprising the vast majority. Virtually all Arabs—and a substantial proportion of the remainder too—were Muslims, while almost no Chinese migrants were. Chinese migrants to Java, and to the rest of contemporary Indonesia, have refrained from converting to Islam, choosing instead to follow traditional Chinese religions or to convert to Christianity. The religious differences between Chinese and other migrant communities shaped the extent to which the migrant communities were able to integrate with the majority-Muslim indigenous populations of Java. Because religious similarities with the indigenous population meant that non-Chinese migrants to colonial Java did not face the level of social exclusion that Chinese migrants faced, they did not face a comparable incentive to forge cooperative informal networks with local elites in order to minimize the threat of predation and violence. It is for this reason, for example, that riots targeting the economically dominant Chinese community were a relatively common phenomenon throughout the twentieth century in Java, whereas anti-Arab riots in Java are entirely unknown.

If social exclusion is the only economically or politically significant difference between the Chinese and other foreign Easterners that settled in Java under Dutch rule, then differences in settlement patterns between the two migrant communities can be used to identify the effects of migrant social exclusion on contemporary governance at the local level. Specifically, this argument implies a *positive* relationship between *Chinese* settlement in 1930 and the quality of local governance today, but no relationship (or a negative relationship) between *other foreign Easterner* settlement in 1930 and the quality of local governance today. I construct a dataset on colonial migration to Java using the 1930 Census of the Netherlands Indies (Departement van Economische Zaken 1935), which include fine-grained demographic data on Chinese, European, and other migrant populations across the districts of Java, and establish that these two relationships both hold.

Essential to this empirical strategy is an assumption that Chinese and other foreign Easterners did not differ for other reasons that might explain contemporary governance. I use occupational data from the 1930 census to show that the two communities performed equivalent roles in Java's colonial economy (as traders and middlemen), and that they were both excluded from holding formal political roles in the colonial regime. Moreover, partial overlap in Chinese and other foreign Easterner settlement patterns is inconsistent with the argument that the different relationships between settlement and governance between the two communities is the result of selective settlement choices by profit minded minorities.[1] Additional demographic data from more recent censuses, alongside social and economic data from the post-Soeharto period, help to rule out other alternative explanations for the relationships that I identify.

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[1] Indeed, to maintain the argument that the two migrant communities were selectively making settlement choices on the basis of pre-existing sociopolitical fundamentals—and that this explains the relationship between settlement in 1930 and governance today—one would need to argue that the Chinese choose wisely, but the Arabs and South Asians chose poorly.

The argument in this paper draws together three literatures: the colonial origins of economic development, ethnicity and informal institutions, and the origins of governance.

Recent research on the origins of the modern world income distribution has found that colonial settlement patterns had enduring effects on institutions (Acemoglu et al. 2001; Acemoglu and Johnson 2005). Where colonial settlers were at a high risk of dying from tropical diseases, colonial governments formed extractive political institutions, which in turn persisted into the post-colonial world, hindering long run economic performance. Where settlers survived, colonial governments created inclusive institutions that promoted entrepreneurship, capital accumulation, and as a result, long term economic growth. A key motivation for this paper is the observation that within Indonesia—which has never enjoyed property rights-enhancing or contract-enforcing political institutions at the national level—there is great variation in the quality of economic governance at the local level. In some regions, governments are effective and responsive, and Indonesia's recent decentralization has empowered them to adopt the policies that local businesses demand. But more commonly, governance at the local level is not conducive to long term investment, entrepreneurship, or other determinants of economic performance (Pepinsky and Wihardja 2011). I show that, much as colonial settlement had a profound effect on contemporary institutional quality across *countries*, the informal political networks that developed under Dutch rule explain the contemporary distribution of governance quality *across districts within the same country* today.

Ethnicity and informal networks for cooperation and trade have been studied extensively through the new institutional economics, with the focus on understanding how cooperative exchange relationships emerge when institutional rules and well-defined property rights cannot be assumed (Greif 1989, 1993, 2006). Focusing on Chinese traders and middlemen in Singapore

and West Malaysia, Landa (1978, 1981) details the emergence of stable "particularistic exchange relations," both within the Chinese trading community and between Chinese traders and local non-Chinese producers and smallholders. The conceptual innovations in this paper are two. First, I emphasize that Landa's "ethnically homogenous middleman group" is one extreme on a continuum of exclusion-versus-inclusion of migrant trading communities. In colonial Southeast Asia, Chinese traders coexisted with other trading minorities who performed similar economic functions but without the level of social exclusion experienced by the Chinese migrant community. This paper provides the first evidence that social exclusion, rather than ethnic homogeneity, is the defining feature of these trading minorities. Second, I explore the relationship between migrant trading communities and their local political and economic environments, and argue that the cooperative relationships and networks that emerge in communities with socially excluded trading communities persist over the long run.

I bring these two literatures—the colonial origins of comparative development, and ethnicity and informal institutions—into conversation with a separate literature in political science on the origins of governance. The hallmark contribution is Robert Putnam's *Making Democracy Work* (Putnam 1993), which explored democratic performance across Italian regions. Putnam links government performance in modern Italy to local civic traditions, and argues that civic traditions emerged during Italy's medieval period: closed feudal oligarchies in the south versus city-states with vibrant associational life in the north. Like Putnam, this paper explains local government performance in a diverse modern democracy, focusing on variation across sub-national units and proposing a historical explanation for this variation. However, my argument differs in important ways. In focusing on postcolonial states in the tropics, I highlight the evolution of local governance in a context where European powers had imposed political order

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on indigenous populations. Migrant communities with differentiated economic functions and social positions are a recurring feature of colonial governments in the tropics, and I argue that their presence was consequential for economic governance today. This is neither consistent nor inconsistent with Putnam's treatment of Italy, it is simply different, but it is more germane for postcolonial states whose very existence is a product of colonialism and imperial expansion. Moreover, both my theory and my empirics are purposefully narrower than Putnam's. The causal story that I outline here about colonial migration and social exclusion need not explain every facet of contemporary governance in Java; indeed, one critique of Putnam is that his encompassing scope explains *too much* about politics, economics, and society across Italy's regions (Tarrow 1996). As I will argue, settlement patterns by socially excluded migrants in Java should explain the *accommodativeness of local governments to the demands of local firms*. My results show that Chinese settlement in Java explains just this—and nothing more.

The paper proceeds as follows. In the next section, I describe the colonial economy of Java and the migrant communities that settled there. The following section describes my data in more detail, describing both the construction of the migrant density measures and the conceptualization and operationalization of my measure of local economic governance. The subsequent section presents my empirical results, and discusses possible alternative interpretations of my results. The final section concludes.

Migration and the Colonial Economy in Java

The island of Java was the commercial and political core of the Netherland Indies, and had been so since the mid-1600s when the Dutch East India Company founded a settlement in Batavia (previous called Jayakarta, now Jakarta). The pre-colonial kingdoms of Java had long maintained trade and tributary relations with China, India, and the Arabian peninsula, and

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migration and cultural contact from these regions to Java accordingly has shaped the island's ethnic, cultural, and religious landscape for centuries. Migration from these regions to Java continued under the Dutch. The colonial economy in Java was dominated by agriculture, and the exploitative practices of Dutch rule oriented the island's economic activity around the production of commodities for export (Geertz 1963; Fasseur 1982). The result was what Furnivall (1939) termed a "plural economy" in which Chinese, European, and indigenous Javan communities occupied distinct economic and social niches, with little regular contact outside of the marketplace.[2]

The Dutch colonial records capture the social structure of colonial Java by identifying four kinds of people as residing in the Indies: indigenous peoples of various ethnic backgrounds (*Inlanders*); Europeans and other "assimilated persons", which by the early twentieth century came to include Japanese as well (*Europeanen en gelijkgestelden*); Chinese (*Chineezen*); and a residual category of non-European migrants labeled collectively as "other foreign Easterners" (*andere vreemde Oosterlingen*). As an administrative and legal matter, the Dutch authorities placed Chinese and other foreign Easterners in a single category—foreign Easterners—that was distinct from both Europeans and the indigenous peoples of the Indies. Foreign Easterners enjoyed some favorable legal protections under Dutch, and for a period were forbidden from settling on what were termed "native lands." Fasseur (1997) traces the history of racial classifications in the Netherlands Indies, and emphasizes how colonial agricultural policies and the colonial economy more generally shaped the Dutch understanding of race in the Indies.

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[2] I refer to "native" peoples of the island of Java as "Javan." The term "Javanese" properly denotes one ethnic and linguistic group among several, which include Sundanese, Bantenese, Betawi, Madurese, and others.

The Chinese across Southeast Asia have long attracted interest due to their social visibility and their distinctive economic and political positions (some notable works on the Indonesian case include Moerman 1933; Suryadinata 1976; Coppel 1983; Lohanda 2002; Setiono 2003). Today, outside of Java, there are many communities of ethnic Chinese farmers and fishermen, but in colonial Java the Chinese were predominantly found in cities and towns, occupying an important niche as petty traders and middlemen. In post-independence Indonesia, Chinese economic elites have occupied central positions in the country's, and are variously described as tycoons, cronies, or simply as "Chinese big business" (e.g. Chua 2008). This crony class is not the object of investigation here.[3] Instead, my focus is on Chinese traders under the colonial period, who were no less important for describing the colonial economy but should be treated as an altogether different phenomenon than the crony capitalism of Chinese Indonesian business elites in the post-colonial era.

Analysts of Chinese in Southeast Asia recognize that these communities are internally quite heterogeneous, but highlight that Chinese have come to be seen as a singular, distinct community from the perspective of the indigenous communities in which they settled.[4] Landa's (1978) "ethnically homogenous middleman group" is only "homogenous" in relation to the indigenous population and Dutch colonial regulations. Yet the shared belief of Chinese as fundamentally different from the indigenous population of Java reinforced the legal distinctions

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[3] The crony elite that whose fortunes flourished under Soeharto are actually a different community altogether from the colonial Chinese migrants who are the object of my investigation (see Twang 1998). While both are "Chinese," the former are dominated by a more recent immigrant group, sometime called *totok*, many of whom arrived in Indonesia between the 1930s and 1950s. The latter are known as *peranakan*, and had resided in the Indies for decades or more by the 1930s.
[4] Dimensions of difference within Southeast Asian Chinese communities include region of origin and language group, clan networks, length of settlement (*peranakan* versus *totok*), and orientations toward mainland China (Wang 1993).

between *Inlanders* and *vreemde Oosterlingen*, and together, these helped to characterize the

Chinese in colonial Java as an essentially different community, one whose religion, culture,

language, and history were incompatible with their local counterparts on Java. The result was

social exclusion: Chinese in Java and elsewhere in the Indies did not assimilate into local

populations. Many Chinese themselves in fact came to view themselves in similar terms, as

culturally or racially distinct from local Javan communities.[5] The social exclusion of Chinese

Indonesians reached its apex under the Soeharto regime, which at once attempted to erase the

"Chineseness" of Chinese Indonesians while simultaneously preserving the essential distinction

between them and the *pribumi* (indigenous) majority (Heryanto 1998; Chua 2004). Such

postcolonial anti-Chinese policies, though, are the partial result of historical patterns of Chinese

social exclusion that arose under Dutch colonial rule.

Arabs and Indians in the Indies have been the subject of far less academic attention than

have Chinese in Indonesia (important works include van den Berg 1886; van der Kroef 1953; de

Jonge 1993; Mandal 1994). This is partially a result of their relatively smaller numbers, but it

may also reflect their uncontroversial status as Indonesians in the post-colonial era: there is no

"Arab problem" equivalent to the "Chinese problem" in Indonesia or in Southeast Asia more

generally.[6] De Jonge (1993) places particular emphasis on Islam helping to bridge the social and

economic divide between Arabs and the indigenous populations of Java in the early twentieth

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[5] This represents a change from earlier patterns of Chinese migration to Southeast Asia, when
Chinese migrants to the region assimilated much more readily into local populations, forming
syncretic—but specifically local—cultural identities like the Baba-Nyonya communities in the
Straits Settlements, or the disappearing altogether as distinct communities.

[6] This does *not* imply that Arabs and other foreign Easterners have never faced discrimination or
suspicion in Indonesia. Such a history does exist: see Ahmad (1976). However, it is instructive
that the citizenship of Arab Indonesians was never questioned after Indonesian independence, as
was the case for Chinese Indonesians, and also that during later instances of indigenous/non-
indigenous (*pribumi/non-pribumi*) political conflicts, Indonesians of Arab ancestry are classified
as the former.

century. Arab ancestry has long been a mark of prestige for many Muslims in Java, connoting an imagined personal connection to a religious homeland. The result is that Arab communities in Java and elsewhere in the Indies have integrated into native society much more easily than have Chinese. The same is true for South Asians in Java during the colonial period, although scholarly analysis of Indian communities in Java is limited. However, Indians were a minuscule community on Java during the colonial era, so they can be safely ignored for the purposes of this analysis. By 1930, more than 88% of the individuals classified as *andere vreemde Oosterlingen* in the Netherlands Indies were Arabs,[7] and the majority of the non-Arab community—the South Asians—resided outside of Java (Mani 2006: 49).

In sum, colonial Java was the archetype of a plural society, with a large indigenous majority and small but economically vital trading minorities. Both Arabs and Chinese in Java were visible minorities whose economic function differentiated them from the indigenous communities in which they lived, but whose political status remained separate from the population of Dutch colonists and other Europeans. While both Arab and Chinese communities were internally diverse, relative to the indigenous population they were seen as homogenous, and treated as such. But Arab and Chinese in Java differed in one key respect: the former, as Muslims, faced nowhere near the social exclusion that Chinese in Java faced.

Economic and Political Responses to Social Exclusion

For the Chinese in Java, social exclusion meant that their economic fortunes depended on their ability to forge cooperative relationships with both the Dutch authorities and with the

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[7] This percentage is calculated from 1930 Census of the Netherlands Indies (Departement van Economische Zaken 1935: p. 48), which distinguishes *Chineezen*, *Arabieren*, and *Voor-Indiërs*. Elsewhere in the census, there is mention of a fourth community of overseas Malays (*Overwalsche Maleiers*), of whom there were only 2000 in the entire Netherlands Indies (Departement van Economische Zaken 1935: p. 94).

indigenous communities among whom they lived and worked (Suryadinata 1976). The threat that Chinese traders and middlemen faced was expropriation and violence. Without institutionalized property rights to protect their claims to property, and without contracting institutions to facilitate arms-length exchange between Chinese traders and indigenous producers and consumers, market exchange—the very activity in which traders and middlemen specialize—was only possible when personal connections and informal collaboration emerged between Chinese traders and the local indigenous political elites. In such circumstances, Chinese traders and middlemen could flourish because indigenous elites had internalized the costs of monitoring and enforcing their property rights. In exchange, indigenous elites could levy taxes on Chinese traders, and obtain other selective benefits such as preferential access to scarce commodities or consumer goods. This description of collaborative, self-sustaining exchange relations between Chinese traders and middlemen and indigenous political elites in colonial Java describes an equilibrium of *informally institutionalized exchange* of the type analyzed by Greif (2008) and others and consistent with the logic of Furnivall's (1939) plural economy.

The formation of collaborative political-business relations in colonial period was more likely where socially excluded trading minorities had settled among in local communities. This is the first step linking migrant settlement in the colonial era to contemporary governance. These informal institutions endure, in turn, because market relations are path-dependent once formed. The Dutch colonial period ended with the Japanese occupation during the Second World War, and Chinese trading communities were disrupted during this period and in subsequent decades under subsequent post-independence governments. Markets flourished, and attracted new market entrants, in precisely those communities that had previously featured propitious economic governance. This is because informally institutionalized exchange relations benefited any trading

community, Chinese, Arab, or indigenous. This is the second step in the causal argument that links migrant settlement to contemporary governance, explaining why governance patterns persist even when the specific migrant communities that formed them do not.

As a result, collaborative political business-relations in the colonial era have had long-lasting consequences for local political economies. They persisted in the postcolonial era because they support an equilibrium in which both local political elites and local business elites profit from cooperation, despite changing national political conditions or changes in the structure of the local economy or the ethnic composition of the local business community. This argument predicts that Chinese social exclusion in the colonial era generated a trajectory of accommodative local economic governance that affects contemporary business-political relations. The implication is that the localities where the social exclusion of Chinese trading communities in the colonial era had forced settlers to forge informal ties to local indigenous elites should be those in which business-government relations are most accommodative today.

It is not possible to characterize the conditions under which such cooperative relations between Chinese and indigenous elites could emerge in the first place. Even if it were possible to do so, many of the determinants of informal Chinese-elite connections in the colonial era are unobservable today. This issue will prove critical for the empirical analysis below; I outline it here because there are at least two ways to explain the distribution of Chinese settlers in the colonial era. One is that Chinese settlement was as-if random, or conditionally independent of local political-business relations in the colonial era, and that personal connections and informal collaboration between Chinese traders and the local indigenous political elites emerged where Chinese settlers happened to be most concentrated. The other is that Chinese settled precisely in those localities where collaborative or accommodative political-business relations were most

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feasible *ex ante*, meaning that Chinese communities were sorting into politically accommodative localities rather than catalyzing the formation of accommodative political-business relations. Both explanations would generate a correlation between Chinese settlement in 1930 and governance today, but the latter explanation implies that Chinese settlement simply reflects political fundamentals rather than independently shaping them.

There is no doubt that individual traders arriving in Java during the colonial period must have been sensitive to the existing social and political conditions in there localities where they planned to settle. But settlement by Arabs in Java helps to strengthen the case of an independent effect of Chinese settlement on contemporary governance. As I will show below, there is substantial overlap between the settlement patterns of Chinese and other foreign Easterners in Java, yet there is no evidence of a link between Arab settlement in 1930 and contemporary business-political relations, which would be true if trading minorities settle into those localities that are *ex ante* more accommodative.

My argument relies on a strong assumption that Chinese and other foreign Easterners played a comparable role in the colonial economy of Java. This claim will seem uncontroversial from the perspective of existing studies of Arabs in Java in the late colonial period, but it is possible to use occupational data from the 1930 Census of the Netherlands Indies to characterize the economic positions with greater precision. Table 1 shows the distribution of occupational types between the two migrant populations.

*** Table 1 here ***

The critical finding from these data is that the majority of all employed Chinese and other foreign Easterners were traders. Chinese were relatively more involved in farming and industry than were others foreign Easterners, but these were still relatively small fractions of total

employment. Also notable is the near absence of both Chinese and other foreign Easterners from the public sector. It is also possible to examine differences between the Chinese and other foreign Easterners who were employed in the trading professions, as shown in Table 2.

*** Table 2 here ***

Among the trading professions, most Chinese concentrated in foods and small trading. By contrast, other foreign Easterners concentrated in the textile trade. I am unaware of an argument that would link this difference to contemporary governance patterns. Note, however, that banking and finance were of equal interest as trades for Chinese and other foreign Easterners. This observation is inconsistent with the supposition that Chinese migrants in Java were disproportionately represented in the financial sector, which (if it were true) might suggest an alternate causal mechanism than social exclusion for their ability to shape local governance over the long term.

The Data

My primary source on the colonial social structure of Java is the 1930 Census of the Netherlands Indies, the *Volkstelling 1930*. This was the first modern census of the islands which today comprise Indonesia, and the only one conducted under Dutch rule. Previous censuses had been conducted at irregular intervals, and using informal methods such as asking local notables to estimate the population of their villages. The *Volkstelling 1930* data are considered reliable enough to be used in longitudinal research on Indonesian population dynamics by country specialists and applied researchers alike (van der Eng 2002; van Lottum and Marks 2012). While the census covers the entire archipelago, in this paper I use data from Java only, for three reasons. First, as Java was the social and economic core of the Netherlands Indies, data are available at a more fine-grained level than are data for the other islands. Second, Java is an

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important context in its own right: with a population excess of 135 million people in 2010, Java would be the world's tenth most populous country—ahead of Japan and Mexico, and just behind Russia—if it were an independent country. With such a large population, it should be unsurprising that within Java there is substantial variation in the quality and effectiveness of local economic governance. And third, using the *Volkstelling 1930* data to study contemporary Indonesian political economy requires a mapping of colonial administrative divisions to contemporary administrative divisions, and this is only feasible in the case of Java.

I construct the dataset as follows. In contemporary Indonesia, the most important level of administration at the subnational level is the "Tier 2" level (*kabupaten* or *kota*, county or city). This is also the level for which governance data are available. Tier 2 divisions correspond in most cases to the Dutch administrative division of the *Regentschaap* (regency); see Table 3.

*** Table 3 here ***

Using GIS, I overlay maps of colonial administrative divisions with a map of contemporary Tier 2 administrative borders. I then assign 1930 population data to Tier 2 administrations using the following procedure. Here and throughout the remainder of the paper, I refer to modern Tier 2 administrations (*kabupaten* and *kota*) as "regencies."

1. Where the *Regentschaap* and *kabupaten* borders overlap perfectly, I simply assign 1930 population data to the *Regentschaap*'s modern counterpart. This is the majority of cases.

2. Where new Tier 2 divisions have been created, I use the *District* boundaries which most closely match current boundaries, and use *District*-level data to create population data for modern regencies. For example, from the parent *Regentschaap* of Krawang in West Java, I assign data to its three child *kabupaten* using the *Districts* Krawang, Rengasdengklok, and Tjikampek for *kabupaten* Karawang; the *Districts* Pamanoekan, Pagaden, Soebang, and Sagalaherang for *kabupaten* Subang; and the *District* Poerwakarta for *kabupaten* Purwakarta.

3. Where borders have moved, I examine *District* boundaries again, and use those which most closely match current boundaries. For example, the *kabupaten* of Gresik in East Java includes the entire *Regentschaap* of Grisée as well as the *Districts* of

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Goenoengkendeng and Bawean from the *Regentschaap* of Soerabaia. The remaining two *Districts* of Soerabaia *Regentschaap* (Djaba Kotta and Soerabaia) form Kota Surabaya.

4. In one case, a *District* under the Dutch became a *kabupaten* after independence, and its urban core later separated to become a *kota*. In this instance I assign 1930 data the *District* of Bekasi to both *kabupaten* Bekasi and Kota Bekasi.[8]

5. The Jakarta capital region is excluded from this analysis because it is not possible to obtain reliable geographic coordinates for colonial administrative borders in this small and densely settled region. But because the governance data used as my dependent variable (described below) do not cover the Jakarta capital region either, this has no impact on my findings.

This procedure is possible because (1) most changes in *kabupaten* borders have followed the boundaries of Dutch *Districts* and (2) the *Volkstelling* data are available at the *District* level. Together, this minimizes the possibility of error when merging colonial census data with contemporary administrative data, even accounting for the changing regency boundaries in the post-colonial era.

The main explanatory variables of interest are the density of Chinese and other foreign Easterner settlement at the regency level. I calculate these directly from the *Volkstelling* data, and operationalize them as the number of Chinese or other foreign Easterners per 1000 inhabitants. In Figure 1 I illustrate the spatial distribution of Chinese and other foreign Easterner settlement, using the 1930 data mapped to contemporary regencies via the procedure above.

*** Figure 1 here ***

There is clear evidence of regional variation in settlement patterns. Chinese clustered around Jakarta, the gray area on Java's northwestern coast, and were spread relatively evenly through central and eastern Java. Other foreign Easterners were found primarily on the north coast of west Java and in the east of Java, especially near Surabaya, an important trading hub and Java's

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[8] This is also the case in Tangerang in the far western province of Banten, but because Banten is excluded from the governance data I do not address it here.

second-most populous city which appears as the darkest green region in the northeastern corner

of Java. Both Chinese and other foreign Easterners were common in urban areas, the smallest

administrative divisions in the map, but other foreign Easterners were relatively more

concentrated in urban areas than were Chinese; the former are largely absent from rural west and

central Java.

The two maps provide good illustrations of the spatial distribution of each group, but it is

difficult to compare them from the maps. To facilitate comparison, Figure 2 is a scatterplot of the

two, on log scales.

*** Figure 2 here ***

Figure 2 illustrates a key result: there is a strong relationship between settlement by Chinese and

settlement by other foreign Easterners ($\rho = .582$, $p < .0001$), but this relationship is imperfect. At

any given level of Chinese settlement there is variation in other foreign Easterner settlement, and

vice versa. This is the variation that enables me to isolate the effects of social exclusion from

migrant settlement.

Local Economic Governance: Conceptualization and Measurement

Governance is a contested concept in modern political economy (see discussions in Kurtz

and Schrank 2007; Rothstein and Teorell 2008). There is a normative conception of "good

governance" in the contemporary theoretical literature on economic governance, where good

governance corresponds to "the norms of limited government that protect private property from

predation by the state" (Kaufmann et al. 2007: 555) or "impartiality in the exercise of public

authority" (Rothstein and Teorell 2008: 166). However, this notion of impartiality or limited

government does not comport with this paper's theoretical expectations about what socially

excluded trading minorities should expect from local governments. Rather than seeking impartial

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or limited government, trading minorities thrive when local governments are *partial and accommodating* of their specific interests. That is, they should demand local governments which are able to provide the physical security and informal legal protections that facilitate firms' profit-making activities, whatever they happen to be.

There is no reason to believe that partial and accommodative economic governance corresponds to the abstract conception of good governance that has animated development policy debates over the past twenty years. We may believe that local governments in Java should build roads and rails because an impartial government should strive to ensure that isolated farming communities have access to regional market centers, and even if dominant local business elites object because they enjoy rents from the underprovision of public goods. But as an analytical point, the conceptualization of governance as "accommodative to firm profitability" is precisely what the causal argument about socially excluded trading communities predicts. Trading minorities in Java and elsewhere sought from *accommodative, not impartial* local politics. The informal networks forged by socially excluded trading communities were obviously partial, and they were so by their very nature, because they were designed to ensure that the traders' activities were profitable and their livelihood secure against what was understood to be a threat of expropriation from the indigenous majority. I return to this point below when I discuss my findings in more detail.

My source for indicators of economic governance is the Indonesian Sub-National Governance and Growth dataset produced by the Asia Foundation and the Indonesian Regional Autonomy Watch (McCulloch 2011). The dataset contains more than four dozen indicators that have been combined in an index used in recent studies of the origins and consequences of local economic governance in Indonesia (see e.g. McCulloch and Malesky 2011). A full list of the

governance indicators is available in McCulloch (2011): they capture both objective and subjective aspects of economic governance, from survey respondents' beliefs about the impact of various facets of governance on firm performance, to the existence of business development programs, to the existence of charges and fees for basic services, to judgments about the competence and responsiveness of local executives and administrations. My focus on accommodative governance requires an index which is more narrowly conceptualized, ideally one that captures *firms' beliefs about how various aspects of governance affect their performance*. Eight of the indicators are measures of exactly this: firm-level responses about how various aspects of local economic governance affect their performance. These appear in Table 4.

*** Table 4 here ***

It is reasonable to worry that I have selected these indicators because they produce significant results. Importantly, an exploratory factor analysis of the full complement of governance indicators also reveals that these eight indicators form a natural cluster. This cluster loads onto the first component of the index with a weight of greater than 0.24 (after this, the next strongest loading is .18; see Table 4). This suggests that the first principal component is not capturing objective facets of local government programs or policies, but something more subjective and elusive: whether firms believe that the local economic governance "works." Not whether or not land access policies or regulations are objectively problematic, for example, but rather whether or not firms report that these policies and regulations harm them. I define the main independent variable, *EGI*, as the first principal component of the full complement of individual indicators.[9]

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[9] I am able to recreate McCulloch and Malesky's index from the raw data, and the two indices are highly correlated ($\rho = .749$, $p < .0001$).

To reiterate, the *EGI* index follows a conceptualization of governance which is distinct from normative discussions of good economic governance but which is appropriate for my causal argument in this paper. It may be the case, in fact, that regencies that score highly on the *EGI* measure do so precisely because their governments are partial in a way that local firms support. More generally, it may be that the regencies that score highly on *EGI* have governments that are doing very different things, in some contexts working on local infrastructure, and in other cases simplifying and expediting the permit process. What unites them is that they are behaving in ways that local firms' find to be compatible with their own performance, which will naturally vary according to the specific characteristics of local political economies.

Figure 3 provides a sense of the spatial distribution of *EGI* across Java.

*** Figure 3 here ***

Two observations stand out. First, cities (the smallest administrative divisions in the map) tend to be lighter in color, signifying lower scores on *EGI*. Second, colors tend to be darker in the eastern portion of the map, and lighter in the west and in a cluster on the south-central coast. This spatial pattern overlaps quite well with contemporary provincial boundaries: the darker areas in the east correspond roughly to the province of East Java, the light cluster in the south-central coast picks out the Special Region of Yogyakarta, and the lighter colors in the west correspond roughly to the province of West Java. These results suggest that the empirical analysis must take into account both city and province-level effects when examining the relationship between migrant settlement and contemporary governance.

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Methods and Results

As an initial exploration of the relationship between colonial settlement and contemporary governance, Figure 4 plots *EGI* versus the difference in settlement Chinese and other foreign Easterners by province.

*** Figure 4 here ***

Overall, there is a slight negative relationship between the two, but as the figure makes clear, this masks the heterogeneity across provinces in average level of *EGI*. Within provinces (with the exception of West Java), the expected relationship holds: greater settlement by Chinese relative to other foreign Easterners is associated with higher values on the economic governance index. These preliminary results are the first piece of evidence in favor of my argument about the long term effects of social exclusion in the colonial era on contemporary economic governance.

To probe the relationship between colonial migration and contemporary governance further, I estimate a series of OLS regressions of the following form:

$$EGI_{2007} = \alpha + \beta_1 CHI_{1930} + \beta_2 OFE_{1930} + \beta_3 EUR_{1930} + \gamma \mathbf{X} + \delta \mathbf{D} + \varepsilon$$

The variables *CHI*, *OFE*, and *EUR* are the natural log of Chinese, other foreign Easterners, and Europeans as a percentage of the total local population in 1930. **X** contains a set of control variables, and **D** are province fixed effects. My argument predicts that the coefficient β_1 is positive, and that the coefficient β_2 is either zero or negative. I include the measure of European settlement as an additional control as a simple way to ensure that European settlement (following Acemoglu et al. 2001) is not responsible for the long run effects that I am attributing to Chinese, Arabs, and other migrant communities.[10] Because *EGI* is an index and the sample size is small, I

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[10] Note that this is not a "subnational test" of Acemoglu et al.'s argument. Theirs is about colonial settlement and national political institutions, and nothing in their account predicts variation in firm-favorable local policies within countries.

follow Lewis and Linzer (2005) and calculate bootstrapped standard errors (Efron and Tibshirani 1986).

The components of **X** vary across specifications. In the baseline specification, I include only measures of secondary school enrollment and a dummy variable capturing whether the regency is a city or not. An extended specification includes additional controls for the local ethnic composition in 2000, logged per capita regional GDP in 2001 (the year in which decentralization was implemented across Indonesia), and growth in regional GDP from 2001 to 2007 (when the *EGI* data were collected). A second extended specification includes mining share of GDP and logged regional GDP in 2001 as well.

The main results appear in Table 5.

*** Table 5 here ***

Two results stand out. First, as expected, the relationship between Chinese settlement in 1930 and *EGI* is positive and significant in each model. Second, there is no positive relationship between other foreign Easterners in 1930 and *EGI*: the estimate is negative, and in fact it is statistically significant. I return to this statistical significance of other foreign Easterner settlement below; for now I concentrate on interpreting the main results.

One obvious question is whether migrant settlement in 1930 is relevant: Chinese Indonesians today continue to face a similar kind of social exclusion as they faced in the past, and Arab Indonesians and others of Middle Eastern or South Asian origins are even more integrated into the *pribumi* social fabric today. Activist Soe Tjen Marching has illustrated the continuing social differentiation between the two communities by comparing two candidates for Vice Governorships in Java in the post-Soeharto era: Marissa Haque and Basuki Tjahaja Purnama (Tjong Ban Hok):

What are the differences between Marissa Haque and Basuki Tjahaja Purnama, a.k.a. Ahok? … They both are candidates to be Vice Governor (Banten and Jakarta). Marissa openly notes that her grandfather, Siraj Ul Haque, comes from Uttar Pradesh. In fact, in a blog post, it was revealed that her grandfather was an Indian, while dad was Pakistani. But no problem. Marissa Haque is still an Indonesian. Compare Marissa with Ahok. Over and over again, Ahok emphasizes that he is an Indonesian. He has to struggle even to get people to recognize that. This type of PR wasn't necessary for Marissa as she campaigned to be Vice Governor (Marching 2012, translation mine).

If regencies that were densely settled by Chinese in 1930 are also densely settled by Chinese in 2000, then the colonial history of Chinese settlement may be irrelevant: what matters is simply the presence of a large Chinese community, which may reflect something particular about overseas Chinese migrants.

Data on contemporary ethnic structure are available from the 2000 Census of Indonesia, (Badan Pusat Statistik 2000). Using that census, I create comparable measures of Chinese, Other Easterner, and European population stocks in 2000. Figure 5 compares Chinese settlement in 1930 and 2000, again in log terms.

*** Figure 5 here ***

The two are correlated ($\rho = .652$, $p < .0001$), but the correlation is not as strong as an argument about contemporary social structure rather than colonial social structure explaining contemporary governance might suggest. More importantly, Model 2 in Table 5 shows that the relationship between Chinese settlement in 1930 and contemporary governance holds even when controlling for Chinese (and other, and European) settlement in 2000—and the latter is far from significant at conventional levels.[11]

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[11] In separate results, I can show that there is no relationship between Chinese (and other, and European) settlement in 2000 and contemporary governance even when omitting the settlement variables from the 1930s.

On one hand, these results comport with my argument that it is specifically colonial settlement that determines contemporary governance. On the other hand, it might seem puzzling that social exclusion of Chinese migrant communities has causal influence over contemporary governance in the colonial period, but not today. Two factors may explain this difference. First, migrant settlement in the late colonial period coincides with the development of modern market relations outside of Batavia and a select few other urban centers, and as such, the foundational moment for modern local political economies in Java. Second, the mechanisms through which social exclusion shaped governance during the colonial period depend on the absence of any formal channel through which excluded minorities can affect politics, such as by running for office themselves. As the case of Basuki Tjahaja Purnama—elected as Vice Governor of Jakarta in 2012—illustrates, ethnic Chinese can participate in contemporary Indonesian politics in ways that Chinese in the late colonial period never could.

Turning to the issue of selective settlement in the colonial era, the differing results for Chinese and other foreign Easterners—in addition to helping to isolate the effect of social exclusion from the other features, such as human capital or cultural predisposition towards entrepreneurship, that trading minorities may have—are inconsistent with the idea that settler minorities were concentrated in the regencies that were *ex ante* more likely to be accommodating to their needs (which, if true, might explain why these regencies also score more highly on the *EGI* index today). Additional evidence against purposive settlement comes from the results for the *URBAN* variable: urban localities score lower on *EGI* than do rural areas. Yet both Chinese and other foreign Easterners settled predominantly in urban areas: in bivariate regressions, the *URBAN* variable explains over half of the variation in Chinese settlement ($R^2 = .53$) and one quarter of the variation in other foreign Easterner settlement ($R^2 = .25$). While these results

cannot rule out selective settlement by Chinese migrants, they are inconsistent with the argument that the strong relationship between Chinese settlement in 1930 and contemporary governance that I have uncovered simply reflects pre-existing social or political fundamentals in the localities where Chinese tended to concentrate.

Another complication of the argument lies in the difference scale of Chinese migration to Java as compared to other foreign Easterners. Figure 1 and Figure 2 illustrate the issue: the maximum ratio of Chinese to total district population in 1930 is 125.9 per 1000 residents, whereas other foreign Easterners never exceed 19.3 out of 1000 residents. This raises both theoretical and inferential challenges. Theoretically, it suggests that the scale of migrant settlement rather than social exclusion is what differentiates Chinese from Arabs in Java, although is compatible with my argument about social exclusion insofar as Chinese migrants were socially excluded precisely because they were more of a threat to indigenous majorities. It also raises the possibility that Chinese are clustering to a much larger degree in the most propitious local governance environments, reflecting a purposive selection of local economic environments whose economic or political fundamentals are more accommodative to specifically Chinese interests.

One simple way to allay these concerns is to trim the analysis sample, comparing only districts where Chinese and Arab settlement are on similar scales. I present the results of such an analysis in Table 6. As part of this exercise, I also estimate models in which the variables capturing Chinese, other foreign Easterner, and European settlement are not log transformed.
*** Table 6 here ***
The substantive results for the migrant settlement variables are unchanged, and in fact, the estimates for Chinese settlement are estimated with somewhat greater precision. By discarding

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the approximately 20% of the districts in Java whose Chinese settlement density exceeds the maximum of other foreign Easterner settlement density, this analysis highlights more clearly the contrast between Chinese and Arab settlement, and subsequent governance relations. Note also in these results that the statistical significance of the negative relationship between other foreign Easterners in 1930 and contemporary governance declines markedly in Models 4-6.

As discussed in the Introduction, my argument in this paper is purposefully narrow: if I am correct that Chinese traders and middlemen sought cooperative informal relations with local indigenous elites in the colonial era, and that these have shaped business-political interactions over the long term, then Chinese settlement should be associated with policies that are accommodative from the perspective of firms. I should not find that Chinese settlement explains other aspects of local economic governance that are more conceptually distant from firms' perspective on the policies and regulations imposed by their local governments. This suggests a falsification test, also using the governance indicators from McCulloch (2011). Recalling that *EGI* is the first principal component of several dozen governance indictors, Figure 6 shows a scree plot of the eigenvalues of the first twenty components.

*** Figure 6 ***

A second component is quite apparent in the figure. Unlike *EGI*, there is no obvious logic to the components that load most strongly on this second component: they include firms' views of whether or not regents or mayors give solutions to business problems, the absence of collusion in the provision of licensing fees, views about individual regents and mayors, and others. I define this second principal component as a new dependent variable, *EGI2*, and repeat the analysis that produced Table 5.

The results of this falsification exercise appear Table 7.

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*** Table 7 here ***

As expected, there is no relationship between Chinese settlement in 1930 and this second, less conceptually relevant index of local economic governance.[12] This is a positive result from the perspective of my specific causal argument, which links migrant social exclusion to firms' perspectives on the accommodativeness of local policies and regulations, and not to any more normatively consistent measure of "good" local economic governance.

Because my results depend heavily on the measure of economic governance that I use, as a final empirical exercise I extract the eight indicators—those listed in Table 4—that I have identified as reflecting most closely the appropriate conceptualization of governance for my argument (and which also load most strongly onto *EGI*). Using these, I create one more dependent variable, *EGI-SHORT*, which is the first principal component of these eight indicators alone,[13] and repeat the empirical analysis again using this final index as the dependent variable. The results are in Table 8.

*** Table 8 ***

These results are further empirical support for my argument about the effects of Chinese settlement. And again, the statistical significance of the negative relationship between other foreign Easterners in 1930 and contemporary governance declines markedly from the results in Table 5. Together with the results from Table 6, these results indicate that the negative relationship between non-Chinese settlement in the colonial era is not a particularly robust one. Most important for the argument in this paper is the absence of any positive relationship between

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[12] I am also unable to find a consistent relationship between the sub-indices created by McCulloch and Malesky (2011), which combine firm perceptions with various more objective indicators of "good" economic governance. These null findings reflect the pollution of McCulloch and Malesky's sub-indices by other facets of economic governance that should not reflect the long term consequences of migrant social exclusion in the colonial era.
[13] The eight indicators all load onto the first component, with little variance remaining.

other foreign Easterners in 1930 and governance today, which highlights social exclusion as the mechanism explaining how colonial settlement shapes contemporary governance.

Conclusion

Trading minorities are common across the post-colonial world. Their economic and political positions have been subject to rich analysis by country experts, but as objects of formal economic and political analysis, they have been largely been treated as tools for understanding the mechanisms of exchange in the absence of well-defined property rights. This paper builds on the theoretical insights of economic analyses of trading minorities and the nuanced historical literature on migrant communities in colonial Java to explain economic governance in one of the world's most diverse national contexts. I have argued that the social exclusion of trading minorities in the absence of well-defined property rights generates incentives for the trading minorities to forge cooperative informal relationships with local political elites. These informal institutions from the colonial era have long term consequences for economic governance. Because non-Chinese trading minorities in Java did not face the same level of social exclusion that Chinese minorities did in the colonial area, variation in settlement patterns between the two illuminates the importance of social exclusion in explaining contemporary governance.

Throughout this paper I have been careful not to describe my argument as a theory of the origins of "good" governance, or to describe the governance index *EGI* as a measure of "good" economic governance. Rather, this paper provides a historical explanation for what might be termed "accommodative" economic governance. The conceptual distinction is critical: socially excluded migrant communities demand accommodation, rather than impartiality. This approach has implications more broadly for the study of governance in the contemporary world. Greater precision in the conceptualization of economic governance and how it can vary should produce

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more precise theoretical expectations about how economic and social fundamentals might shape the various facets of governance. Stripping away some of the normative concerns about what counts as "good" governance will also help to produce better measurement of economic governance, allowing analysts to focus on how actually varies rather than cataloguing the distance between local conditions and a normative ideal.

Beyond a more nuanced conceptual focus on local economic governance and a new empirical domain for ethnicity and informal economic institutions, this paper also pushes forward the contemporary literature on the political origins of long run comparative economic development. My argument helps to understand the everyday political economy of markets under extractive institutions (Acemoglu and Robinson 2012), broadly defined, by examining how local market actors respond to bad institutions. The strategy that supports long-term exchange for socially excluded minorities has long term consequences for local political economies. Whether or not such relations promote local economic prosperity or widely shared economic development over the long run—or, alternatively, simply stability and economic security for local political and economic elites—remains an open question.

Of course, the specifics of social exclusion in Java's colonial economy may not travel to other contexts, but the broader insights do. Understanding local political economies in the postcolonial states that have inherited extractive institutions requires attention to the informal institutions, norms, and practices that supported exchange when modern market relations were first established. Effective strategies to reform local economies, in turn, will depend on the informal institutions that they have inherited from the colonial era.

Tables

Table 1: Occupations for Chinese and Other Foreign Easterners

Occupational Group	Description	Chinese	Others
I. *Oerproductie*	Farming, fishing, mining, etc.	9.1	2.8
II. *Nijverheid*	Industry	20.8	10.6
III. *Verkeerswezen*	Transportation	2.8	3.6
IV. *Handel*	Trade	57.7	72.6
V. *Vrije beroepen*	Medicine, law, religion, education	2.1	3.5
VI. *Overheidsdienst*	Public or government service	0.5	0.9
VII. *Overige beroepen*	Other	6.9	5.9

Source: Author's calculations from Departement van Economische Zaken (1935), Table 14.

Table 2: Trading Professions for Chinese and Other Foreign Easterners

Occupational Subgroup	Description	Chinese	Others
In voedings- en negotmiddelen	Foodstuffs	22.3	4.3
In textiele stiffen	Textiles	16.0	48.8
In ceramiek	Ceramics	0.5	0.3
In hout, bamboe en voorwerpen daarvan	Wood and bamboo products	0.7	1.3
In vervoermiddelen	Vehicles	1.0	0.5
In kleeding en lederwaren	Clothing	0.8	2.5
Gemengde kleinhandel	Miscellaneous small trading	46.8	27.5
Groot- en tusschenhandel	Wholesale and distribution	1.8	0.3
Overige handel	Other trade	5.1	8.6
Credietwezen	Banking and finance	5.1	5.8

Source: Author's calculations from Departement van Economische Zaken (1935), Table 14.

Table 3: Administrative Divisions in Java

Dutch Divisions	Indonesian Divisions	U.S. Equivalent
Provincie or *Gouvernement*	*Propinsi*	State
Residentie	--	--
Regentschaap	*Kabupaten* or *Kota*	County
District	*Kecamatan*	Township

Table 4: Key Loadings on the Economic Governance Index (EGI)

Indicator	Loading
Interaction Obstacle Impact on Firm Performance	0.24
Impact of Information Access to Firm Performance	0.25
Regent/Mayor Integrity Impact on Firm Performance	0.25
Infrastructure Obstacle on Firm Performance	0.26
Land Access Obstacle Impact on Firm Performance	0.26
Security and Problem Solving Impact on Firm Performance	0.26
Transaction Cost Impact on Firm Performance	0.28
License Obstacle Impact on Firm Performance	0.28

Source: Author's calculations from McCulloch (2011).

Table 5: Main Results

Independent Variables	Model 1	Model 2	Model 3
OTHER ASIANS PER 1000 CITIZENS (1930)	-0.51	-0.57	-0.59
	(-2.88)	(-2.65)	(-2.57)
EUROPEANS PER 1000 CITIZENS (1930)	0.02	0.003	0.04
	(0.11)	(0.01)	(0.10)
CHINESE PER 1000 CITIZENS (1930)	0.85	1.03	1.34
	(2.02)	(2.13)	(2.24)
SEC. ENROL. RATE (2001)	-4.56	-3.72	-4.34
	(-3.30)	(-2.37)	(-2.71)
URBAN	-1.53	-1.96	-4.57
	(-1.91)	(-2.24)	(-3.39)
OTHER ASIANS PER 1000 CITIZENS (2000)		0.15	0.092
		(0.97)	(0.52)
FOREIGNERS PER 1000 CITIZENS (2000)		0.039	0.11
		(0.15)	(0.42)
CHINESE PER 1000 CITIZENS (2000)		-0.006	-0.042
		(-0.03)	(-0.16)
LN GRDP PER CAPITA (2001)		-0.50	1.12
		(-0.88)	(1.23)
GROWTH (2001-7)		-25.9	-17.4
		(-1.31)	(-0.62)
LN GRDP (2001)			-1.26
			(-2.59)
MINING/GRDP (2001)			-0.40
			(-0.06)
CONSTANT	-0.83	6.93	18.90
	(-0.73)	(0.81)	(1.96)
Province Fixed Effects	Yes	Yes	Yes
Observations	98	98	89

Each model is an OLS regression with bootstrapped standard errors. The dependent variable for each model is *EGI* (see the text for a description). The parentheses contain Z statistics.

Table 6: Trimmed Sample

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
OTHER ASIANS PER 1000 CITIZENS (1930)	-0.53	-0.71	-0.67	-0.18	-0.15	-0.24
	(-2.80)	(-2.83)	(-2.73)	(-0.61)	(-0.37)	(-0.63)
EUROPEANS PER 1000 CITIZENS (1930)	-0.18	-0.34	-0.34	-0.22	-0.22	-0.15
	(-0.64)	(-1.07)	(-0.98)	(-0.93)	(-0.81)	(-0.48)
CHINESE PER 1000 CITIZENS (1930)	1.38	1.79	1.84	0.14	0.16	0.17
	(2.89)	(2.90)	(2.81)	(2.50)	(2.11)	(2.06)
SEC. ENROL. RATE (2001)	-4.20	-4.06	-4.49	-2.52	-2.32	-2.96
	(-3.19)	(-2.48)	(-2.61)	(-1.95)	(-1.43)	(-1.70)
URBAN	0.21	-0.49	-2.35	1.91	1.71	-1.46
	(0.27)	(-0.41)	(-1.39)	(0.59)	(0.48)	(-0.32)
OTHER ASIANS PER 1000 CITIZENS (2000)		0.16	0.11		-0.040	-0.054
		(0.75)	(0.53)		(-0.18)	(-0.24)
FOREIGNERS PER 1000 CITIZENS (2000)		0.24	0.31		0.20	0.25
		(0.85)	(1.11)		(0.70)	(0.89)
CHINESE PER 1000 CITIZENS (2000)		-0.29	-0.25		-0.10	-0.069
		(-1.07)	(-0.89)		(-0.41)	(-0.27)
LN GRDP PER CAPITA (2001)		0.053	1.28		-0.41	0.97
		(0.070)	(1.30)		(-0.50)	(0.87)
GROWTH (2001-7)		-19.6	-13.6		-10.6	-4.06
		(-0.76)	(-0.44)		(-0.40)	(-0.13)
LN GRDP (2001)			-1.02			-1.18
			(-1.40)			(-1.56)
MINING/GRDP (2001)			-1.59			-1.34
			(-0.23)			(-0.18)
CONSTANT	-2.30	-3.17	8.48	-0.96	5.20	19.5
	(-1.87)	(-0.28)	(0.52)	(-0.96)	(0.42)	(1.16)
Province Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	76	76	76	76	76	76

Each model is an OLS regression with bootstrapped standard errors. The dependent variable for each model is *EGI* (see the text for a description). The variables *OTHER ASIANS PER 1000 CITIZENS (1930)*, *EUROPEANS PER 1000 CITIZENS (1930)*, and *CHINESE PER 1000 CITIZENS (1930)* are log-transformed in Models 1-3, and un-transformed in Models 4-6. The parentheses contain Z statistics.

Table 7: A Falsification Exercise

Independent Variables	Model 1	Model 2	Model 3
OTHER ASIANS PER 1000 CITIZENS (1930)	-0.47	-0.44	-0.52
	(-2.28)	(-1.80)	(-1.93)
EUROPEANS PER 1000 CITIZENS (1930)	-0.12	-0.11	-0.40
	(-0.39)	(-0.32)	(-1.08)
CHINESE PER 1000 CITIZENS (1930)	-0.11	-0.14	0.53
	(-0.24)	(-0.23)	(0.82)
SEC. ENROL. RATE (2001)	0.53	0.77	0.54
	(0.31)	(0.38)	(0.26)
URBAN	1.93	1.68	-0.22
	(1.61)	(1.29)	(-0.14)
OTHER ASIANS PER 1000 CITIZENS (2000)		-0.076	-0.081
		(-0.36)	(-0.34)
FOREIGNERS PER 1000 CITIZENS (2000)		-0.020	0.20
		(-0.058)	(0.59)
CHINESE PER 1000 CITIZENS (2000)		0.13	-0.0012
		(0.52)	(-0.0041)
LN GRDP PER CAPITA (2001)		-0.065	1.59
		(-0.12)	(1.60)
GROWTH (2001-7)		-20.9	-20.2
		(-1.12)	(-0.83)
LN GRDP (2001)			-1.55
			(-2.47)
MINING/GRDP (2001)			-0.45
			(-0.041)
CONSTANT	-2.70	-1.38	18.5
	(-1.68)	(-0.19)	(1.62)
Province Fixed Effects	Yes	Yes	Yes
Observations	98	98	89

Each model is an OLS regression with bootstrapped standard errors. The dependent variable for each model is *EGI2* (see the text for a description). The parentheses contain Z statistics.
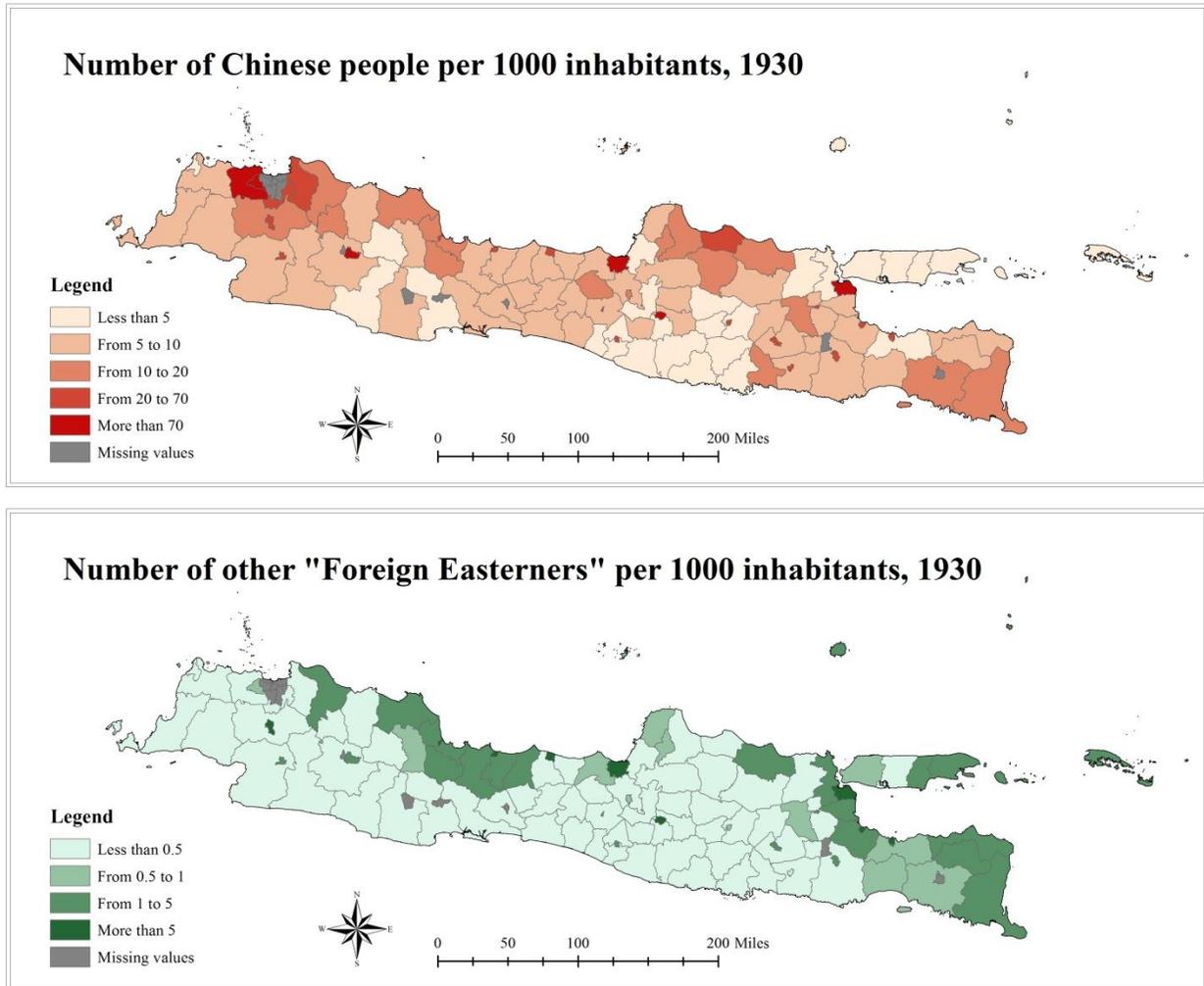
Table 8: Alternate Construction of EGI

Independent Variables	Model 1	Model 2	Model 3
OTHER ASIANS PER 1000 CITIZENS (1930)	-0.21	-0.19	-0.24
	(-1.37)	(-1.03)	(-1.20)
EUROPEANS PER 1000 CITIZENS (1930)	0.20	0.17	0.36
	(1.13)	(0.90)	(1.44)
CHINESE PER 1000 CITIZENS (1930)	0.69	0.74	0.89
	(2.16)	(1.93)	(2.02)
SEC. ENROL. RATE (2001)	-3.61	-3.22	-3.85
	(-3.41)	(-2.73)	(-3.00)
URBAN	-1.31	-1.57	-3.45
	(-1.99)	(-2.08)	(-3.00)
OTHER ASIANS PER 1000 CITIZENS (2000)		-0.015	-0.053
		(-0.11)	(-0.33)
FOREIGNERS PER 1000 CITIZENS (2000)		0.093	0.11
		(0.44)	(0.49)
CHINESE PER 1000 CITIZENS (2000)		0.069	0.060
		(0.33)	(0.27)
LN GRDP PER CAPITA (2001)		-0.34	0.62
		(-0.75)	(0.79)
GROWTH (2001-7)		-19.4	-11.0
		(-1.22)	(-0.50)
LN GRDP (2001)			-0.81
			(-1.74)
MINING/GRDP (2001)			3.10
			(0.64)
CONSTANT	-0.20	5.20	14.0
	(-0.21)	(0.77)	(1.77)
Province Fixed Effects	Yes	Yes	Yes
Observations	98	98	89

Each model is an OLS regression with bootstrapped standard errors. The dependent variable for each model is *EGI-SHORT* (see the text for a description). The parentheses contain Z statistics.

Figure 1: Migrant Settlement in Java (1930)

**Number of Chinese people per 1000 inhabitants, 1930**

Legend
- Less than 5
- From 5 to 10
- From 10 to 20
- From 20 to 70
- More than 70
- Missing values

Number of other "Foreign Easterners" per 1000 inhabitants, 1930

Legend
- Less than 0.5
- From 0.5 to 1
- From 1 to 5
- More than 5
- Missing values

Source: Author's calculations from the *Volkstelling 1930*.
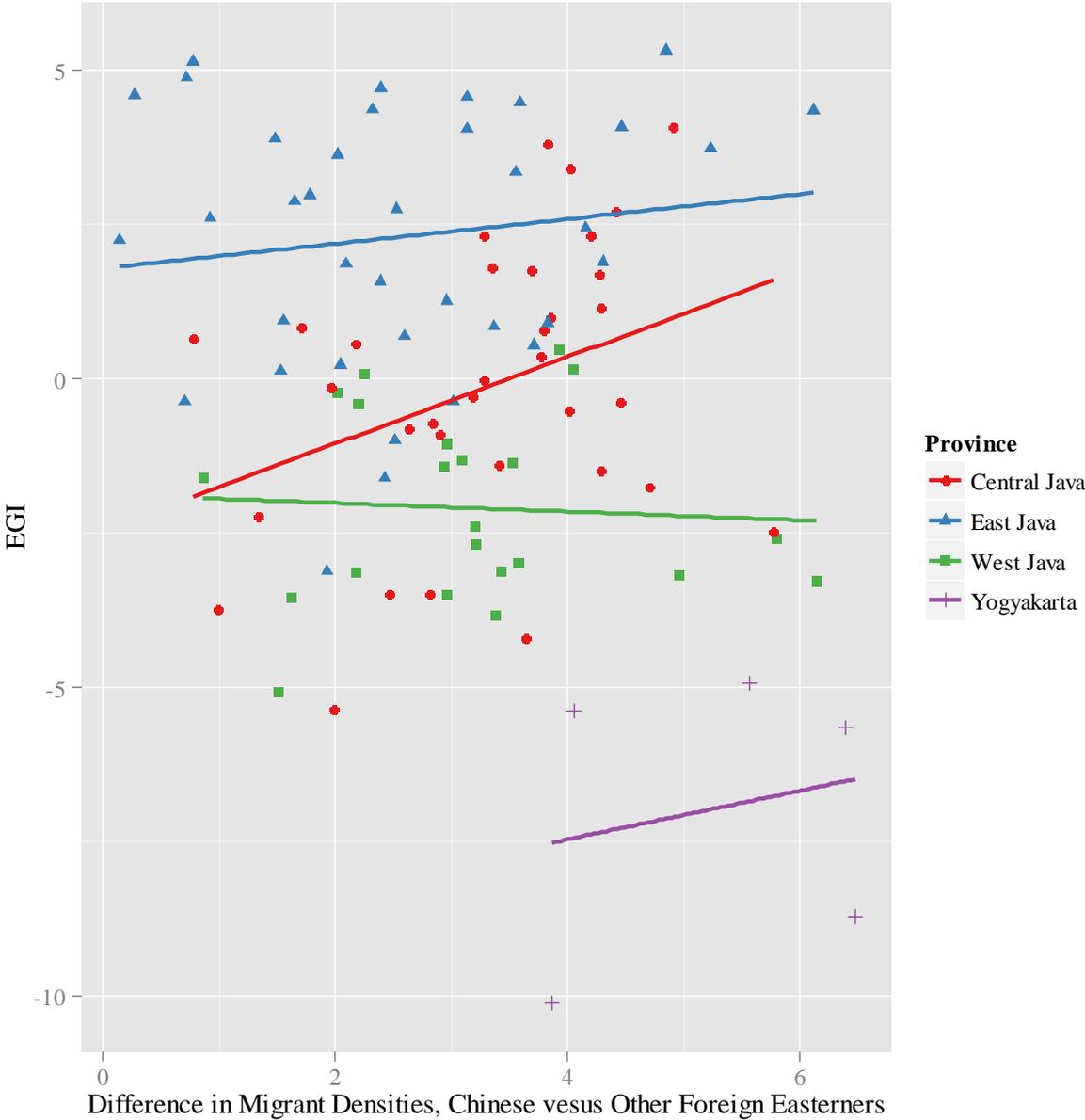
Figure 2: Comparing Chinese and Other Foreign Easterner Settlement
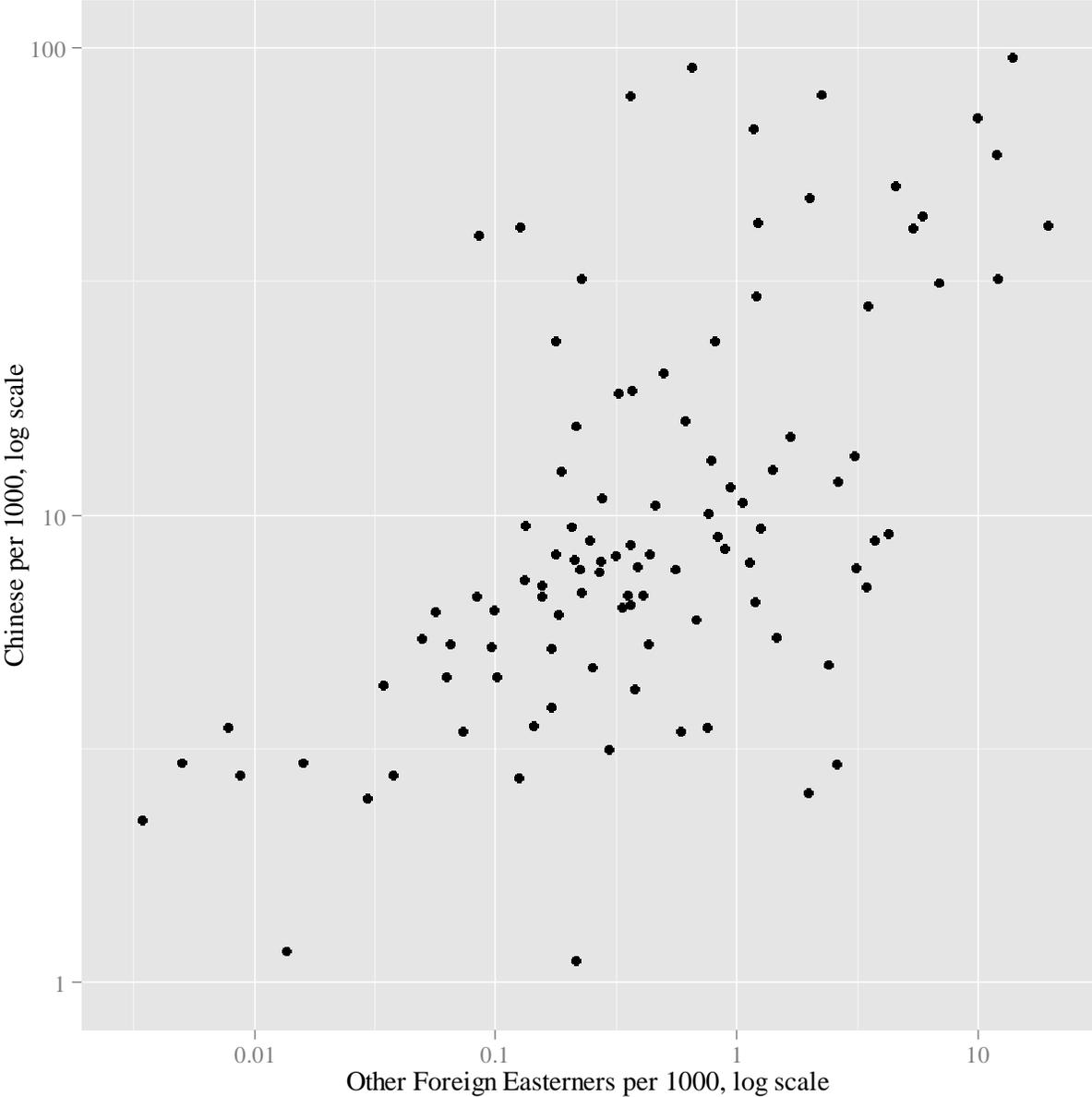
Source: Author's calculations from the *Volkstelling 1930*.

Figure 3: The Economic Governance Index (*EGI*) in Java
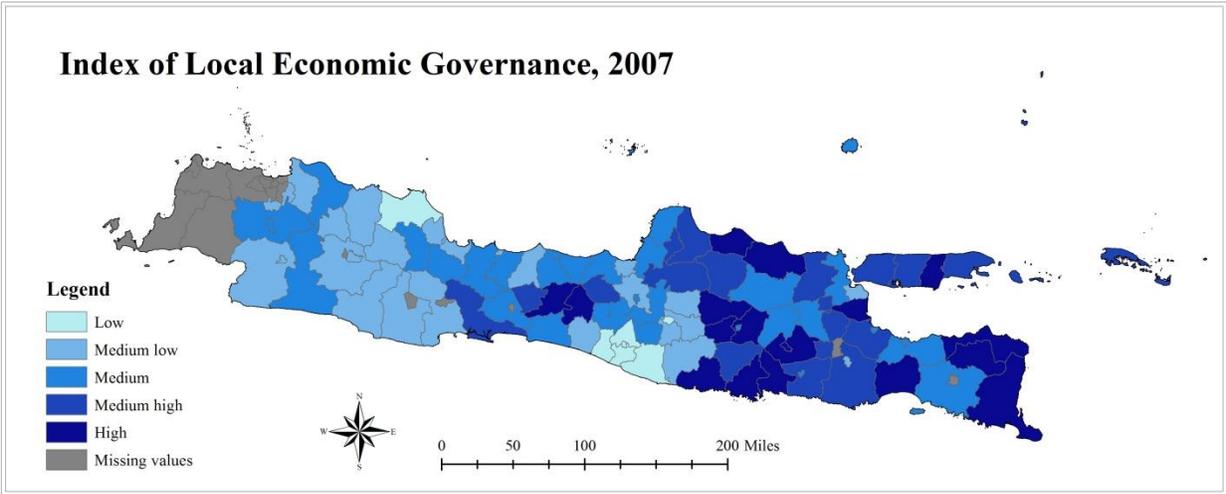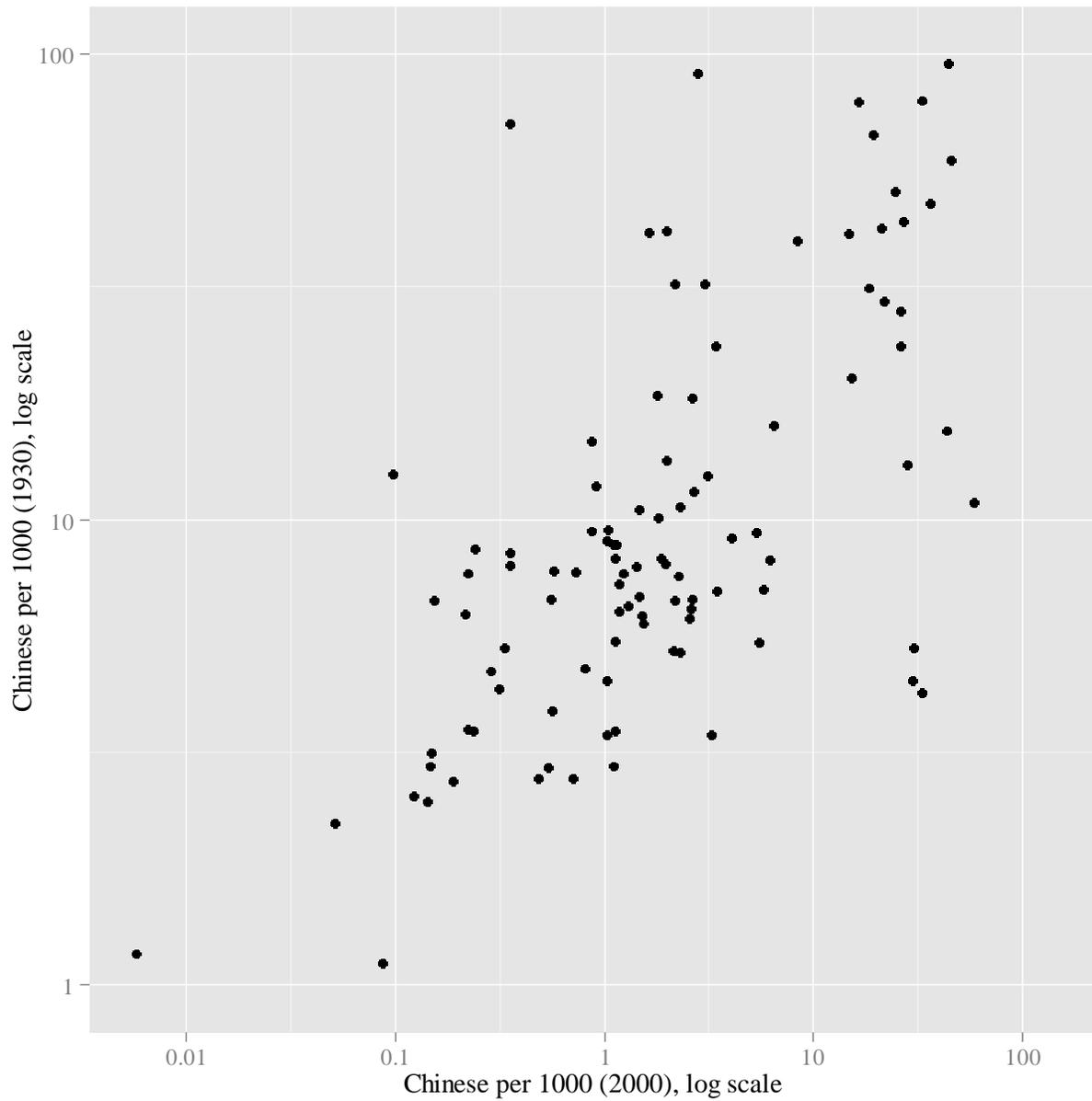

Source: Author's calculations from McCulloch (2011).

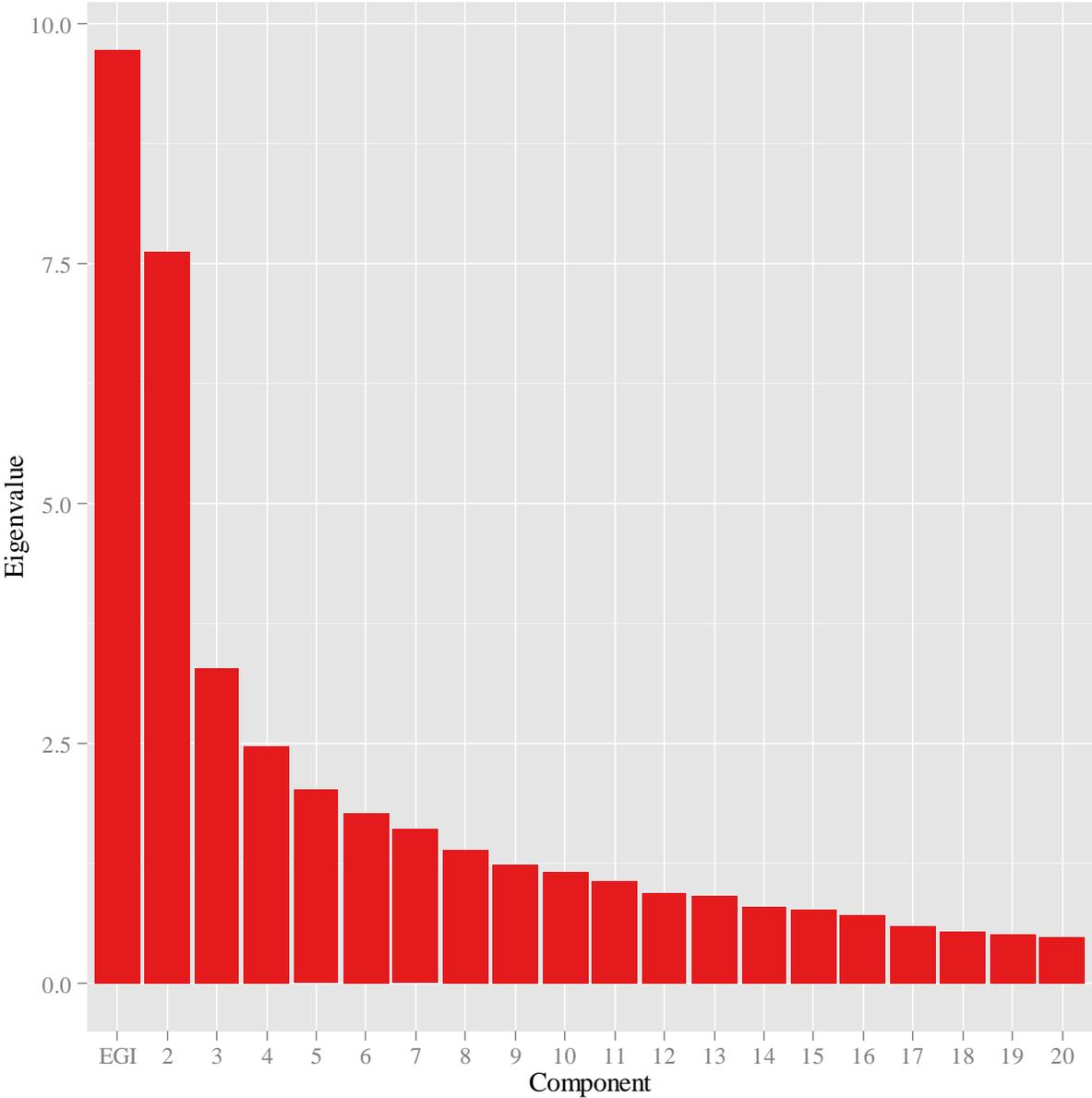**Figure 4: EGI versus Colonial Settlement by Province**

Source: Author's calculations from the *Volkstelling 1930* and McCulloch (2011).

Figure 5: Chinese in Java, 1930 versus 2000

Source: Author's calculations from the *Volkstelling 1930* and *Sensus 2000*.

Figure 6: Scree Plot of Individual Governance Indicators

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