October 2019

PLACE-BASED POLICIES IN INDONESIA: A CRITICAL REVIEW

Alexander D. Rothenberg and Della Temenggung

BACKGROUND PAPER

Urbanization Flagship Report

Time to ACT:

Realizing Indonesia's Urban Potential

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
State Secretariat for Economic Affairs SECO

WORLD BANK GROUP

Place-Based Policies in Indonesia
A Critical Review[1]

Alexander D. Rothenberg and Della Temenggung

July 2019

Abstract

Place-based policies target specific geographic areas for special treatment. They attempt to stimulate growth and development in lagging regions by (1) attracting firms, (2) attracting workers and human capital, and (3) improving local public goods. This report conducts a critical review of place-based policies that have been implemented in Indonesia since Suharto's presidency. It examines the evolution of different policies and programs, aiming to understand whether these programs have increased prosperity, improved livability, or promoted greater inclusiveness for lagging regions. We begin by describing the evolution of central and local policymaking in Indonesia, providing the context through which place-based policies operate. We then review place-based policies that affect firm location choices, improve schooling and health for workers, and provide social assistance for people in lagging areas, evaluating their strengths and weaknesses. We conclude by offering recommendations to improve and redirect place-based policymaking in the future.

[1] This paper has been prepared as a background paper to the World Bank's Indonesia Urbanization Flagship report, *Time to ACT: Realizing Indonesia's Urban Potential*. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent. The work received financial support from the Swiss State Secretariat for Economic Affairs (SECO) through the Indonesia Sustainable Urbanization Multi-Donor Trust Fund (IDSUN MDTF).

Table of Contents

List of Figures

List of Tables

1. Introduction

Regional differences in population density, economic activity, and employment have been a feature of Indonesia's economy for centuries. Although it is difficult to estimate the extent of these spatial differences before the colonial period, spatial inequalities almost certainly increased under Dutch rule (Hill, 2000). When the Dutch East India Company (VOC) arrived in Indonesia in the early 17th century, the regime practiced an uneven development strategy in ruling the archipelago. The Dutch established plantations, mines, and extractive enclaves on Sumatra, Sulawesi, and Kalimantan, while simultaneously encouraging more balanced growth in West Java.

Possibly as a consequence of these initial conditions and path dependence, economic activity today tends to be more diversified on the island of Java. In 2010, Java was home to 53 percent of Indonesia's population and was responsible for about 75 percent of non-oil and gas manufacturing. Within Java, manufacturing tends to be concentrated in 3 main urban centers: Greater Jakarta, Surabaya, and Bandung. Although Sumatra, Sulawesi, and Kalimantan also contain their own centers of manufacturing, there is little manufacturing activity in the eastern Islands. As an archipelago, Indonesia's physical geography imposes substantial internal trade costs, and these costs shape the country's spatial patterns of activity (Amiti and Cameron, 2007).

Despite these large differences in economic activity across space, Hill (1998) argues that after independence, and during the three decades of Suharto's New Order government (1966-1996), regional inequalities remained stable and showed no discernable increase. This was surprising given the "powerful centrifugal forces inherent in the country's geography, its heavily centralized and authoritarian political structure, and the region-specific impact of variables ranging from resource booms to foreign investment flows" (Hill 1998, p. 23).

To illustrate the stability in regional income differences, Table 1.1 reports the distribution of regional GDP and regional GDP per capita relative to the Indonesian national average, by major island groups. From 1971 to 1990, by and large, there was no significant redistribution of regional GDP or regional GDP per capita across the major island groups (Mahi and Nazara, 2012). However, the growth of GDP per capita in Jakarta, relative to the national average, is large and significant; by 2016, output per capita in Jakarta was more than 4 times the national average.

Several researchers have confirmed that during Suharto's New Order government (1968-1998), regional per-capita incomes showed signs of conditional convergence (e.g. Garcia and Soelistianingsih, 1998; Nazara, 1999). However, after the crisis and the subsequent political upheaval, which saw the resignation of Suharto, a transition to democracy, and rapid decentralization, regional incomes appeared to be converging at a slower rate (Resosudarmo and Vidyattama, 2006).[2]

Table 1.1. Distribution of Regional GDP, and Regional GDP per Capita Relative to Indonesia, by Major Island Groups (percent)

	Regional GDP Distribution				Regional GDP per Capita Relative to Indonesian Average			
	1971	**1990**	**2010**	**2016**	**1971**	**1990**	**2010**	**2016**
Sumatra	29.1	25.3	23.0	22.0	1.7	1.3	1.1	1.0
Jakarta	8.7	12.1	16.3	17.2	2.4	2.7	4.2	4.4
Java (excluding Jakarta) and Bali	47.7	46.2	43.1	42.8	0.8	0.8	0.8	0.8
Nusa Tenggara	1.7	1.3	1.5	1.6	0.5	0.4	0.4	0.4
Kalimantan	5.2	9.1	9.1	7.9	1.3	1.9	1.6	1.3
Sulawesi	5.8	4.1	4.6	6.0	0.8	0.6	0.7	0.8
Maluku and Papua	1.8	1.9	2.4	2.5	1.1	1.0	0.9	0.9

Source: Data for 1971, 1990, and 2010 are reproduced from Mahi and Nazara (2012), Table 2. Data for 2016 is from BPS.

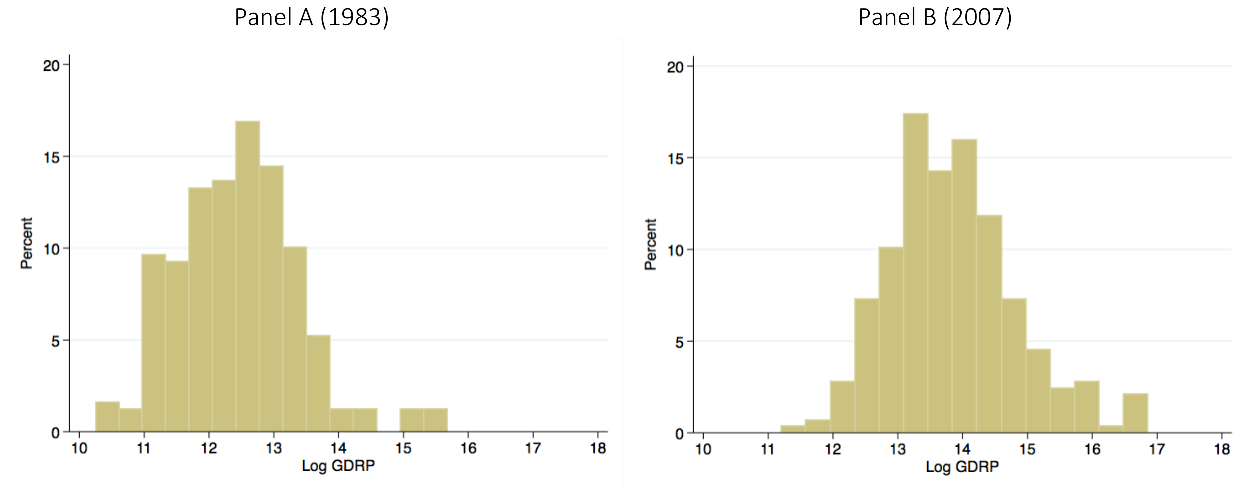
The previous table focuses on output differences across broad island groups, masking significant variation between provinces and districts within those island groups. In Figure 1.1, we report a histogram of log regional gross domestic product across Indonesia's districts (*kabupaten*).[3] This figure uses data on real non-oil gross domestic regional product (GDRP), published by Indonesia's national statistical agency (*Badan Pusat Statistik*, or BPS). To achieve a consistent spatial unit of analysis in this figure, we aggregate district output and population data back to their 1990 district definitions.[4]

[2] Hill (1992) examines regional inequalities of social indicators in the 1970s and 1980s, including infant mortality, poverty, and education. He finds that in contrast to indicators of economic output, the dispersion of these indicators was relatively low, although poverty rates seemed to display significantly higher regional variation, with some increases over time.

[3] Indonesia has four primary tiers of government. The largest tier is the province (there were 34 in 2014), and provinces are divided into districts (*kabupaten*, of which there were 514 in 2014). Districts are divided into subdistricts (*kecamatan)*, and subdistricts are divided into villages (*desa)* or neighborhoods *(kelurahan*), of which there were more than 80,000 in 2014.

[4] Although district boundaries were relatively stable until the late 1990s (Booth, 2011), the number of districts exploded from 302 in 1999 to 514 in 2014 (Bazzi and Gudgeon, 2017).

Figure 1.1. Histograms of Log Gross Domestic Regional Product, by Kabupaten



Notes: This figure is a histogram of log gross domestic regional product (excluding oil, in constant Rp), where the unit of analysis is a kabupaten (using 1990 definitions).

Because these plot distributions of log GDRP, Panel A shows that in 1983, the district producing the largest GDRP had an over 227 times greater output than the district with the lowest GDRP. By 2007, the district with the largest GDRP was over 286 times greater than the district with the smallest GDRP. Although GDP differences almost certainly overstate welfare differences because they do not adjust for price differences, it should be safe to conclude that there are vast differences in economic activity across districts in Indonesia and that these differences may be increasing over time.[5]

Large regional differences in incomes and economic activity have always been important considerations for Indonesian policymakers, particularly because they represent threats to national unity. The movement for Indonesia's independence from the Dutch was arguably only successful because it focused on "*Bhinneka Tunggal Ika*", the national motto, which translates to "Unity in Diversity".[6] However, in the 1950s, violent separatist movements in Sumatra and Kalimantan, notably in Aceh, threatened to overwhelm Sukarno's early presidency (1945-1967) and dissolve the Indonesian nation. In 1957-58, several regions off-Java attempted to secede, and in the 1960s and 1970s, two distant Eastern

[5] Ravallion (1988) makes a similar point about using GDP differences to make welfare comparisons. Using subnational data, Balisacan, Pernia, and Asra (2003) estimate the elasticity of poor expenditure to distict-level aggregate expenditures in Indonesia of about 0.8. This is somewhat smaller than the one-for-one movement of poor expenditures with average expenditures estimated by Dollar and Kraay (2001).

[6] Geertz (1971) argued that "[a]rchipelagic in geography, electic in civilization and heterogeneous in cultured, [Indonesia] flourishes when it accepts and capitalizes on its diversity and disintegrates when it denies and suppresses it" (p. 19).

provinces (Irian Jaya and East Timor) were incorporated into the Republic (Hill, 1998). After decades of violence between Indonesia's military and local separatist groups, East Timor separated from Indonesia and became a sovereign nation in 2002. Given the changes in territory and separatist movements, Booth (1992) wondered whether it would be possible for "Indonesia [to] survive as a unitary state".

Not only from a desire to preserve national unity but also to create equal opportunities for Indonesians living throughout the archipelago, place-based policies to promote development in lagging regions have long played an important role. In this article, we review Indonesia's experiences with place-based policies, attempting to understand the extent to which they have been effective in restricting the growth of regional inequalities and improving livelihoods throughout the archipelago.

1.1 Place-Based Policies: Definition, Rationale, Types, and Examples

Many welfare programs, such as conditional cash transfers or unemployment assistance, are person-based, because they explicitly target individuals. Unlike these programs, *place-based* policies explicitly target specific geographic areas for special treatment. Broadly speaking, place-based policies to stimulate growth and development focus on three different, broad substantive areas: (1) attracting firms; (2) attracting workers and human capital; and (3) improving local public goods. Examples of such policies could include tax subsidies to attract firms to particular regions, school construction programs to improve local human capital, or public investments to improve communications and transport infrastructure.

If threshold effects and multiple equilibria are important features of economic growth, place-based policies could theoretically attract sufficient economic activity to generate a "big push", causing massive increases in productivity (e.g. Rosenstein-Rodan, 1943; Murphy, Schleifer, and Vishney, 1989; Azariadis and Stachursky, 2005). This could improve welfare not only in the areas affected by these policies, but also throughout the country. While these policies might be initially quite expensive, because of agglomeration economies and productivity spillovers, the subsidies could create a self-sustaining, virtuous circle of development that provides growth dividends sufficient to cover initial subsidy costs.

Despite the theoretical promise of place-based policies, their global performance record has been mixed, and the relative costs and benefits of place-based policies can be difficult to discern (Kline and

Moretti, 2014b). If firms and workers are perfectly mobile, all of the benefits of place-based policies accrue to landowners and are capitalized in housing prices (Rosen, 1979; Roback, 1982). Even if workers are not perfectly mobile, so that they bear some of the incidence of these policies, the extent to which a place-based policy improves national welfare hinges on whether the agglomeration function, a mapping between the density of manufacturing employment and productivity, is sufficiently non-linear (Kline and Moretti, 2014b). In the absence of a sufficiently non-linear agglomeration function, place-based policies might just relocate economic activity from one place to another, making one region better off at the expense of other regions. At best, this leaves national welfare unchanged, and at worst, it represents a waste of resources consumed by transfer payments or relocation costs (Bartik, 1991; Glaeser and Gottlieb, 2008).[7]

In spite of these theoretical concerns, place-based policies are used widely throughout both developed and developing countries. Kline and Moretti (2014a) have argued that in the United States, place-based policies have become the de-facto industrial policy, embraced by governors and mayors from both political parties. In a typical year, federal and local governments in the U.S. spend roughly $95 billion a year on such programs, and it is now rare for a large new facility to open in the United States without receiving some kind of tax incentive or subsidy from state and local governments (Kline and Moretti, 2014b).

In the United Kingdom, Regional Selective Assistance funds have provided substantial grants to firms locating in disadvantaged regions (Criscuolo et al., 2012). The European Regional Development Fund uses taxpayer money to fund generous business subsidies and public investments in EU regions with low nominal income and high unemployment. From 2007-2013, the fund amounts to 49 billion Euros per year, roughly 4 times the amount spent by the US federal government.

1.2 Scope of Review

In examining place-based policies in Indonesia, we largely focus on policies that were, by their nature, explicitly place-based, enumerating particular regions or areas to receive targeted assistance. This

[7] In developing countries like Indonesia, we may also be particularly concerned about the corruption with respect to these policies. The allocation of spatially targeted investment subsidies may be given to particular cities or areas industries where politically connected individuals or firms stand to directly benefit.

ignores many important individual-level or national policies that may ultimately end up being place-based because of the unequal distribution of individuals and firms over space (such as minimum wage laws or trade policies).[8] We also focus primarily on policies that attract firms and improve human capital, and block grants that specifically target lagging regions. Policies to improve local public goods, such as transport and communications infrastructure, were recently reviewed in McCawley (2015).

We also chose to focus primarily on policies originating at the national level. During Suharto's New Order, policymaking was unusually centralized, with national government agencies implementing most local policies through direct spending by a system of regional offices. Local governments were relatively weak, with little control over fiscal expenditures and no ability to set local tax rates.

However, after 2001, the government began a rapid effort to decentralize, and the authority for providing many public services was transferred to district (*kabupaten*) governments. As a consequence, we also review particular aspects of the decentralization process, particularly the extent to which the creation of new districts (*pemekaran*) affected the provision of local public goods.

1.3 Organization of the Article

This article conducts a critical review of place-based policies that have been implemented in Indonesia since Suharto's presidency. It examines the evolution of different policies and programs, aiming to understand whether these programs have increased prosperity, improved livability, and promoted greater inclusiveness for Indonesians. Before beginning the policy review, Section 2 describes the evolution of central and local policymaking in Indonesia. This section provides context for understanding how local policies were implemented under Suharto, and it describes how decentralization has created new districts with increased fiscal autonomy. Section 3 reviews policies to attract firms to particular places, focusing on investment laws and tax incentives. It also reviews the history of special economic zones in Indonesia. Section 4 describes a variety of different policies to promote human capital in

[8] For example, many policies are person-based (e.g. minimum wages), but because they are implemented differently in different localities, and this can generate spatial biases (Kline and Moretti, 2014b). With respect to minimum wages in Indonesia, Hill (2002) argues that per capita income of Nusa Tenggara is about one sixth of what it is in Jakarta, but minimum wages in Nusa Tenggara are about 60 percent of Jakarta's minimum wage. As another example, because of differing factor endowments, Indonesia's national price and trade policies that promoted manufacturing activity increased the income of Java's urban centers and reduced that of people living in rural Java and the Outer Islands (Garcia Garcia, 2000, Firman, 2004).

Indonesia, including education and health programs. In Section 5, we review place and person-based social assistance policies. Some of these person-based policies have an important spatial dimension, given the imbalance of program recipients across regions. Section 6 concludes.

2. Evolving Central and Local Policymaking in Indonesia

Place-based policies are designed and implemented through the combined work of national and local governments. As a consequence, it is important to understand the relationship between central and local policymaking in Indonesia, and especially how this relationship has changed over time. In this section, we discuss how, under Suharto, Indonesia's central government retained considerable control over local expenditures and decision making. After the Asian Financial Crisis in 1998, which brought economic collapse and political upheaval, the balance of power shifted away from the central government. Local district (*kabupaten*) governments became more independent following important decentralization and democratization reforms. This has led to increasing fiscal autonomy at the district level and affected how local public goods are provided.

2.1 Policymaking Under Suharto's New Order (1965-1998)

Local government in Indonesia has four main tiers. In 2014, there were 34 provincial governments comprising the first tier of local government. Each province is divided into districts (*kabupaten*), representing the second tier; nationwide, there were 514 districts in 2014. Each district is divided into subdistricts (*kecamatan*), the third tier of local government; there were 7,094 subdistricts in 2014. Finally, below the sub-district is the village (*desa*) or neighborhood *(kelurahan*), constituting the fourth tier. There were more than 80,000 villages or neighborhoods in 2014 (Bazzi and Gudgeon, 2017).[9]

Under Suharto's New Order government (1968-1998), Indonesia operated as a highly centralized, unitary state. The central government was the supreme policymaking authority. Most policies were implemented at the local level by the central government's ministries, through a network of subnational, local branches (Lewis, 2017). Although local governments participated in the national

[9] When Suharto assumed power in 1965, villages in Indonesia were autonomous and governed by a variety of different traditional institutions and customs. In 1979, the village law imposed a new, uniform governance structure of village institutions across the country. The village law created village heads (*kepala desa*) and the village assembly, giving considerable power to village heads while ensuring that village leaders had to be loyal to Suharto's party and to avoid political and social unrest in the villages (Martinez-Bravo, 2017).

planning process, they had little control over fiscal expenditures (Smoke and Lewis, 1996; Lewis, 2003). Local tax rates were equalized everywhere, local governments had limited autonomy in their revenue policies, and local officials rarely exercised independence in initiating policy reforms (Hill, 1998).[10] Because provinces, districts, sub-districts, and villages were not able to vary tax rates to raise local revenues or to implement different local policies without approval from the center, under Suharto, local government was quite different from many federal systems of state and local government, such as the United States. Consequently, particularly regard to taxation, the playing field across regions was quite level, and fiscal competition was limited.

Because provincial and district governments had little control over local revenues, transfers from the center were largely responsible for financing the expenditures of local governments. For instance, in 1984-1985, local taxes constituted only 17.2 percent of total local government revenues.[11] Additionally, only 2.3 percent of total local development expenditures was financed through regional own source revenues (Aziz, 1990). Shah, Quereshi, and Associates (1994) estimate that in the early 1990s, the central government directly controlled 76 percent of sub-national expenditures. Another 8 percent was effectively controlled by the central government, and much of the remaining 16 percent was influenced by central policies.

Given the centralized, hierarchical nature of fiscal policy, it should not be surprising that regional policies had a "top down" structure. Local development funds largely consisted of direct spending by the ministries, called *Daftar Isian Proyek* (DIP) funds, which did not pass through local governments. A separate system of grants from the central government to local governments, created under the first five-year development plan (1969/70-1973/74), was called *alokasi devisa otomatis* (ADO). This system involved allocating to provinces and districts an amount based on their contributions to exports. This was thought to be inequitable because it allocated very little to regions that did not contribute to total exports (Crane, 1995). The need for more balanced regional disbursements was highlighted in *Repelita II*

[10] During Suharto's New Order era, local government tax revenues largely came from taxes on motor vehicles and from land and building taxes. Land and building taxes (*pajak bumi dan bangunan*, or PBB) were collected by the central government on behalf of regional governments. In practice, provinces like Jakarta and Bali had large local tax revenues because they had lots of motor vehicles and many more buildings, but the tax rates that prevailed across districts were equalized.

[11] Additionally, Lewis (2003) notes that the property tax rate in Indonesia is one of the lowest rates in the world. Moreover, only around 40 percent of local sector property tax potential has been realized. There are several issues with local property taxes, including poor assessments, tax coverage, and collection problems.

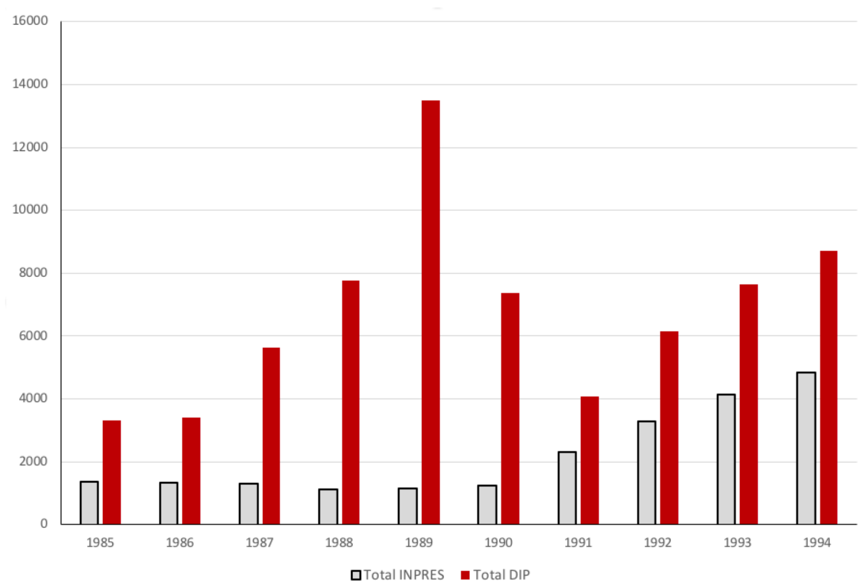
(1974/75-1978/89), while *Repelita III* (1979/90-1983/84) gave more priority to the need for greater equality between and within regions.

2.2 The INPRES System

From the mid-1970s to the end of Suharto's era, various presidential instruction (*instruksi presiden*, or INPRES) programs were one of the major vehicles for promoting regional development. INPRES began as a way of redistributing the massive oil boom and mining windfalls that accrued to the nation in the 1970s. After the nascent Indonesian economy had reached a sufficient level of complexity, it became apparent that strictly unitary fiscal policies originating from the center would be inefficient, and there was an urge to better target policies toward specific localities. By providing funding for regional governments, the aim of INPRES was to promote development objectives, increase social welfare, and develop human capital and capabilities of people and institutions at the local level (Aziz, 1990; Akita and Szeto, 2000).

Despite the creation of the INPRES system, the total revenues flowing to the regions from INPRES were significantly lower than direct ministry spending (DIP). Figure 2.1 shows the total INPRES capital transfers and DIP program allocations, in billions of Rupiah, from FY 1985 to FY 1994. For much of this period, DIP allocations represented the vast majority of total regional development spending (DIP plus INPRES spending), reaching as high as 92 percent of the total in 1989. However, total INPRES grants began to expand, nearly doubling in FY 1991 and growing significantly thereafter. As a proportion of total development spending, INPRES constituted only 8 percent in FY 1989, but by FY 1994, this figure had grown to over 35 percent.

Figure 2.1. Total INPRES Capital Transfers and DIP Program Allocations (Billions of Rp)

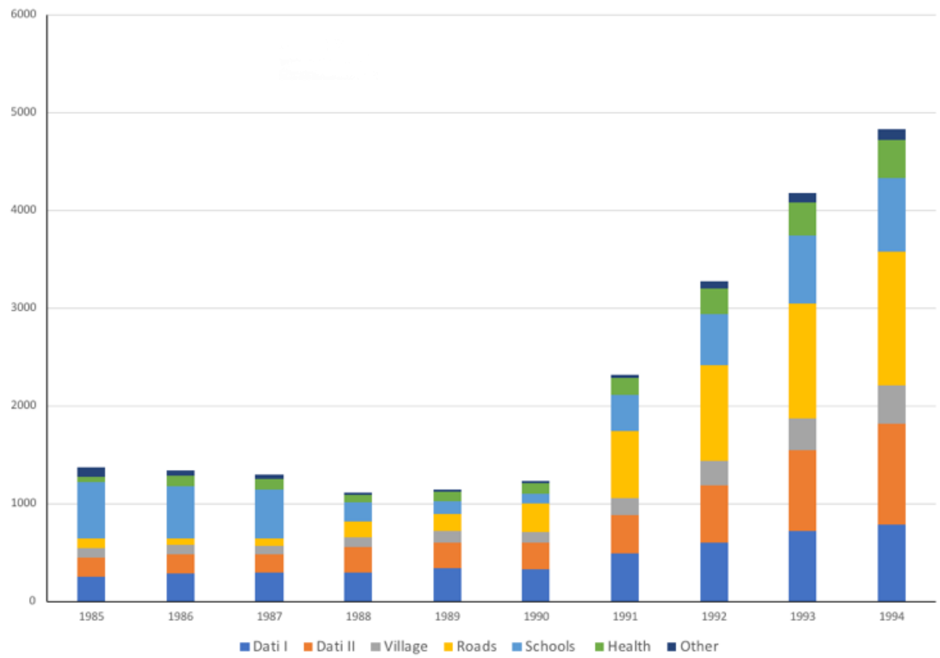


Source: Crane (1995), Table 1, which uses data from unpublished Indonesian Ministry of Finance data, various editions of the annual Government of Indonesia budget, and Shah and Qureshi (1994).

INPRES grants could be categorized into two different types of payments. The first type of grant involved general purposes grants given to lower tiers of governments. *Dana Alokasi Tier I* (DATI-I) grants were given to provinces, while DATI-II grants were given to districts. The INPRES system also contained general purpose block grants for sub-district (*kecamatan*) and village-level (*desa,* or *kelurahan*) funds. In addition to block grants to provinces and districts, the INPRES program also included a series of specific-purpose grants, discussed in later sections. These specific grants covered a wide range of priority areas, including primary schools, markets, highways, reforestation, and health facilities.

Figure 2.2 breaks the total capital transfers disbursed by the INPRES system (from Figure 2.1) into these different categories. From FY 1985-FY 1994, DATI-I transfers averaged 22 percent of total INPRES transfers, while DATI-II averaged 19 percent of total INPRES transfers, and these proportions were relatively constant over the period. Health INPRES grants, at approximately 8 percent of total INPRES grants, were also relatively constant as a share of total INPRES grants. However, school INPRES grants fell from 42 percent of total INPRES grants in FY 1985 to 15.5 percent in FY 1994, while road INPRES grants rose from 5.2 percent of the total in FY 1986 to 28 percent in FY 1994. The increase in road development spending was reflected in the fifth five year-development plan (*Repelita V*), which prioritized resources for transport infrastructure (Rothenberg, 2013).

Figure 2.2. INPRES Capital Transfers by Expenditure Category (Billions of Rp)



Source: Crane (1995), Table 1, which uses data from unpublished Indonesian Ministry of Finance data, various editions of the annual Government of Indonesia budget, and Shah and Qureshi (1994).

Initially, many observers questioned the allocations of national revenues to provincial governments through DATI-I block grants. For instance, in 1984/85, 18 provinces received the exact same amount of DATI-I funding (Rp 9,000,000). This allocation clearly ignores population and economic differences between the provinces (Azis, 1990). The allocation of DATI-II and desa grants were a bit more transparent, based on population size and the number of villages located in the region. However, over time, allocation rules for both DATI-I and DATI-II funds were revised to reflect concerns regarding regional differences in needs and resources, and the program gradually became more focused on reducing regional inequalities and alleviating poverty (Crane, 1995; Hill, 1998).

In a study of the allocation rules associated with DATI-I grants in FY 1984/1985, Ravallion (1988) finds that the INPRES system shows mild absolute inequality aversion. INPRES receipts as a proportion of regional income decreased as income increased. The center did not show equal concern for provinces of equal income, and seemed to prefer provinces with relatively lower populations. However, implicitly, there was some willingness to accept large regional disparities.

Because of the widespread nature of the INPRES program, Hill (2002) argues that by the last decade of the Suharto era, there was actually more decentralization than is widely recognized. The scale and complexity of the INPRES program lead Hill (1998) to argue that regional policy in Indonesia amounted to "an awkward amalgam of initiatives" which, despite sometimes lacking coherence, nevertheless produced broadly successful development outcomes. Consequently, the growth in regional inequality was constrained over this period, although the levels of regional imbalances remained persistent.

2.3 Decentralization Period (1998-present)

When President Suharto resigned in May 1998, a series of sweeping decentralization reforms shifted the balance of power away from the central and provincial governments, and increased power at the district level. As of January 2001, district governments assumed responsibility for nearly all public policies, and district officials were granted extensive autonomy over local government expenditures. Law 22 of 1999, passed under Suharto's successor, President B. J. Habibie, states that districts would be responsible for administering many important functions, including health, education, environment, and infrastructure services, with the central government retaining control over other matters, including national defense, international relations, justice, police, monetary policy, development planning, religion, and finance. As a consequence of these changes, over 2 million civil servants, or almost two thirds of the central government workforce, was transferred from central government ministries to the districts (Hoffman and Kaiser, 2004).

Under Habibie, Law 25 of 1999 was also passed, replacing the existing INPRES grants with a series of equalization grants. This new grant system was supported primarily by a block grant from the general allocation fund (*Dana Alokasi Umum*, or DAU). General allocation grants tended to constitute at least 25 percent of the total regional transfers, and most of these grants flow through provinces, directly into district governments. Additionally, a special allocation fund (*Dana Alokasi Khusus*, or DAK) became a source of grants to particular districts or provinces on the basis of need. Both DAU and DAK have increased substantially over time. Through DAU, the average district was granted Rp 48.9 billion in 1999, but this figure increased to Rp 805.4 billion by 2012. DAK grants grew more slowly, constituting an average of Rp 22.3 billion in 1999, but only reaching Rp 80.4 billion in 2012.[12]

Another major change in district revenues following the new decentralization laws was that oil and natural resource exploiting regions were now able to retain more of their locally earned revenues for local spending, instead of being required to share them with other regions. Under the new National Resources Revenue Sharing Fund (*Dana Bagi Hasil Sumber Daya Alam*, or DBH SDA), different regions are able to keep 15 percent of locally produced oil revenues, 30 percent of local gas revenues, and 80 percent of revenues from natural resources exploited within their boundaries. Firman (2003) argues that one third of total DBH SDA funds went to districts in Riau and the Provincial Riau government, while another third of DBH SDA went to districts and the province of East Kalimantan; both regions benefit from natural resource extraction industries. These areas received substantial revenue windfalls, while other regions have benefitted less substantially, leading potentially to a greater divergence in outcomes.

As a consequence of these changes, Booth (2005) argues that grants to the regions substantially increased since the decentralization legislation was implemented in 2001. For instance, in 1996, the central government spent only 22.2 percent of its total budgetary expenditures on regional grants, while in 2005, over 32.9 percent of total budgetary expenditures were spent at the regional level.

2.4 Redistricting

Until the late 1990s, district boundaries were relatively stable (Booth, 2011). Many boundaries originated under colonial rule when the Dutch relied on local leaders to implement indirect rule. However, as a consequence of the decentralization process, many groups of subdistricts split off from their original districts, forming new districts. The number of districts increased from 302 in 1999 to 514 in 2014, through a process known as *pemekaran* or blossoming (Bazzi and Gudgeon, 2017).

Several factors contributed to the rise in districts during the post-Suharto period. These included the allure of self-government, block grant formulas that had a high lump sum transfer combined with relatively smaller per-capita transfers, and the ability to reduce the extent to which locally produced

[12] These figures are taken the World Bank's Indonesia Database for Policy and Economic Research (DAPOER). We aggregated districts back to their 1998 definitions in these calculations.

natural resource revenues were shared (Burgess et al., 2012). Bazzi and Gudgeon (2017) find that as a result, when a district splits from its parent, it receives significantly greater fiscal revenues.

2.5 Implications

Indonesia's experience with sweeping decentralization presents both opportunities and challenges for place-based policymaking. As the next section describes, place-based policies designed at the national level may sometimes encounter local implantation difficulties. Different district governments have different capacities for monitoring and implementing national initiatives, and this can create challenges for place-based policymaking. Using SUSENAS data, Lewis (2017) finds that the establishment of new local governments had no impact on school enrollments, but it negatively affected access to water and sanitation. This provides some preliminary evidence that new local governance environments in Indonesia are relatively fragile. Burgess et al. (2012) also find that redistricting lead to increased deforestation and decreased timber prices, results that are consistent with rent maximization by local officials. To the extent that local governments suffer from increased elite capture, clientelism, and corruption, all of which were major problems during Suharto's national regime, this could worsen local public service delivery (Bardhan and Mookherjee, 2000; Smoke, 2015).

On the other hand, increased fiscal autonomy and redistricting could also provide districts with the opportunity to independently create place-based policies designed to attract firms and workers. Increased proximity of individuals to local governments allows governments to more accurately learn their citizens' needs, and to design policies more effectively based on that knowledge (Tiebout, 1956; Oates, 1972). It remains to be seen whether the challenges of decentralization can be overcome, and whether decentralization provides Indonesian policymakers with stronger and more effective place-based policies.

3. Policies to Attract Firms

In this section, we review the history of tax incentives and other policies that were designed to influence the location decisions of firms in Indonesia. A series of early investment laws, enacted in the beginning of Suharto's regime, gave extended tax holidays for firms locating outside of Java, but probably had little impact on agglomerations. One of the first special economic zones in Indonesia was created on the island of Batam in Riau Province, and this led to the creation of several related programs, including the KAPET program and the new SEZ policy after the fall of Suharto. This chapter outlines each of these different programs and summarizes the literature on their effects.

3.1 Early Incentives: National Investment Laws (1967-1984)

During the early period of Suharto's New Order regime, the government focused mostly on attracting investment to Indonesia in general, rather than to lagging areas in particular. Law No. 1 of 1967 on Foreign Investment and Law No. 6 of 1968 on Domestic Investment granted several incentives for investors to establish new businesses and to increase investment. These included both a five-year holiday on payments of corporate taxes and also exemptions on import taxes for capital goods and equipment.[13] Although most incentives applied to all investments in Indonesia, if firms located outside of Java, they benefitted from an additional year of tax breaks, as long as projects met basic size and foreign exchange earning requirements (Ikhsan, 2006). However, the laws did not enumerate specific regions in Sumatra, Sulawesi, Kalimantan, or other Outer Islands for special treatment, and their impact on economic activity outside of Java was probably limited (Temenggung, 2013).

In 1970, Law No. 12 reduced these tax incentives, particularly the tax holiday, which fell from a duration of five years to only two years, although an additional year was granted for projects that were (1) large or "risky"; (2) located outside of Java; (3) represented significant foreign exchange savings, or (4) fell into one of several "special priority" categories. However, the income tax holiday was completely eliminated in 1984, as a consequence of the passage of Law No. 7 of 1983 on Income Tax. By removing the tax holiday, policymakers hoped that tax collection would become simpler and more efficient, given the limited administrative capacity of Indonesian tax authorities (Pangestu and Bora, 1996).

3.2 Batam as a Special Economic Zones under Suharto

In 1970, the free trade and port zone (*Kawasan Perdangangan Bebas dan Pelabuhan Bebas*, or KPBPB) of Batam was created by a presidential decree. Batam is a city on an island in the Riau archipelago in the

[13] Specific incentives included a tax exemption on corporate profits, an exemption on dividend taxes on certain profits paid to shareholders, exemptions from import duties on fixed assets (including machinery, tools, or other capital instrument), and an exemption from capital stamp duties. Tax relief was also granted, including a five-year tax holiday for five years of not more than 50 percent of total taxes, and favorable accounting practices, such as allowing accelerated depreciation of fixed assets, were also adopted.

Sunda straits, south of Singapore. The area was designated as a free trade zone because of its long-standing history as a port location and because of its importance in facilitating trade.[14]

As a special economic zone (*Kawasan Ekonomi Khusus*, or KEK), Batam was originally conceived as a logistics base for oil and gas activities. To facilitate industrial development, the central government established the Batam Industrial Development Authority (BIDA). Early development efforts focused on infrastructure, light manufacturing, industrial real estate, gas, chemicals, and offshore drilling, sponsored by the state-owned oil company, Pertamina.

In 1978, Batam was further designated as a *bonded*, or duty free, zone, to support the development of export-oriented industries.[15] After establishing Batam as an SEZ, the Indonesian government made significant investments on the island. The central government, through DIP allocations, financed the construction of the island's entire transport infrastructure network, including roads and ports (Wong and Ng , 2009). In 1979, the island's population was only 34,000, but the Master Plan for Batam included a population target of 700,000, to be achieved by 2004, which would hopefully be stimulated by manufacturing growth. By 1988, Batam's population had more than doubled, but employment was mostly concentrated in local services, tourism, and oil-related firms, with little manufacturing development (Grundy-Warr et al., 1999).

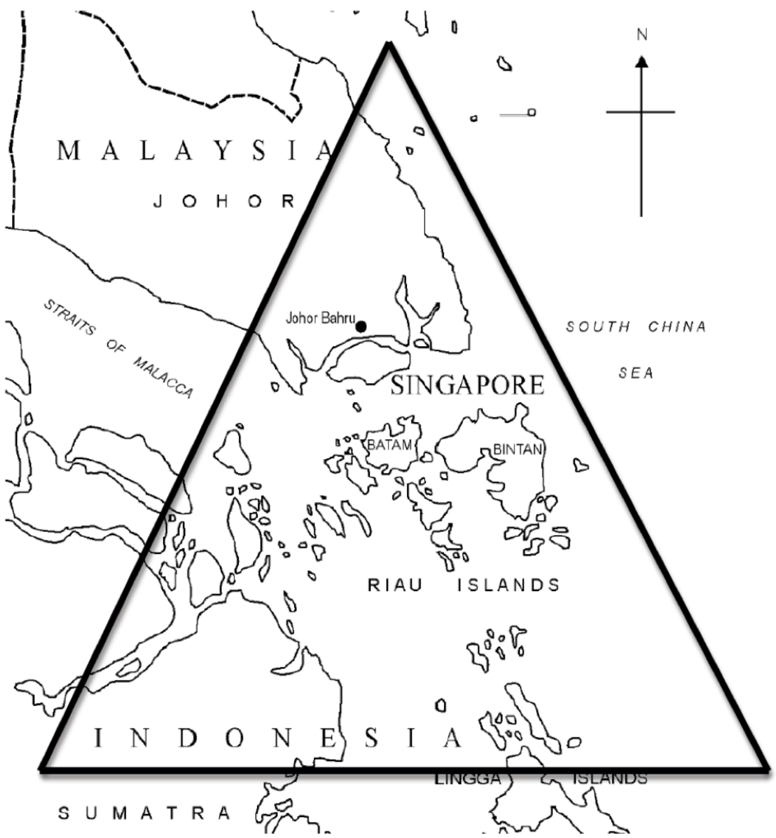
In 1989, a new law was passed on the management of industrial estates, allocating approximately 1,700 hectares of land for the development of 8 industrial estates on the island (Wong and Ng, 2009). Several flagship developments, including the Riau-Batamindo Industrial Park, the Bintan Industrial Estate, and the Karimun marine and industrial complex, were created as industrial enclaves to stimulate manufacturing activity. Restrictions on foreign investment in industrial estates were also relaxed, and Batam was announced as a key part in the formulation of the SIJORI growth triangle, together with

[14] Sabang, the northernmost city in Indonesia, was also designated as a free trated and port zone in 1970. Unfortunately, as a SEZ, Sabang has been relatively understudied, but it later became part of the KAPET program described below.

[15] To promote exports, in the mid-1980s, export processing zones or bonded zones (*Kawasan Berikat*) were established by Government Regulation 22/1986. Investors in bonded zones received tax and custom facilities such as import duty exemptions, excise and value-added exemptions, and luxury tax exemptions, especially for raw materials, intermediate materials, and capital goods that are used to produce export products. As of 2012, there were 1,350 bonded zones in Indonesia, with 92 percent of them being located on Java. A new working paper by Wicaksono et al. (2019) finds that Indonesia's bonded zones did not lead to any significant promotion of exports, either intensively or extensively. There was some evidence that bonded zones increased employment, but these findings were not very robust.

Singapore and Johor in Malaysia (see Figure 3.1).[16] Batam was attractive to Singapore's economic policymakers, because it promised to reduce labor costs for Singapore-based manufacturers, and because its proximity facilitate monitoring and supervision of investments (Grundy-Warr et al., 1999).

Figure 3.1. Map of the SIJORI Growth Triangle



Source: Sparke et al. (2004).

During its first few years, foreign and domestic investments in Batam increased substantially, and export growth was substantial. For instance, in 1988, Batam's exports were valued at $44 million, but by 1996, that figure had increased to over $3 billion (Grundy-Warr et al., 1999). Between 1988 and 1998, the population of Batam increased by more than a factor of 3, from 88,000 to 294,000.Despite the substantial increase in economic activity on Batam, several researchers have argued that under Suharto,

[16] SIJORI stands for Singapore-Johor-Riau. The SIJORI Growth Triangle was first publicly announced in 1989 by Singapore's Deputy Prime Minister Goh Chok Tong. It was designed to encourage the relocation of labor-intensive manufacturing from Singapore to Johor and Batam, in Riau Province.

the SEZ did not really harness the full potential of agglomeration externalities that could lead to nationally beneficial productivity spillovers. For instance, Grundy-Warr et al. (1999) argue that most of the manufacturing activity at the Batamindo Industrial Park, Batam's largest investment enclave, mainly consisted of low-skill product assembly. Manufacturers would import product parts made elsewhere and use facilities on Batam to assemble those products so that they could be exported to the rest of the world. Manufacturers chose to set up operations on Batam to take advantage of lower labor costs, but as minimum wages have grown, the cost advantages of Batam have declined somewhat. More importantly, Batam's manufacturing activities were not associated with much research and development or idea generation (Wong and Ng, 2009).

Industrial development on Batam outside of Batamindo was quite limited, and the other industrial estates reserved for manufacturers had not expanded as of 1999. Workers in Batam tended to be relatively low skill, and they often lived outside of the industrial parks where land was reserved for their housing, and instead chose to reside in nearby informal squatter settlements (Grundy-Warr et al., 1999). The shortage of skilled labor in Batam was a key problem with the SEZ, at least as it was managed under Suharto (Debrah et al., 2000).

3.3 Integrated Economic Development Zones (KAPET)

In 1993, Suharto's government developed a program called "Acceleration of Development in Eastern Indonesia" (*Percepatan Pembangunan Kawasan Timur Indonesia*, or PP-KTI). According to the Decree of the Development Council for Eastern Indonesia (*Jakstranas PP-KTI*), accelerating development in Eastern Indonesia encompasses four priorities: (1) reducing regional inequality; (2) improving the welfare of local people; (3) preparing Eastern Indonesia for free trade; and (4) preserving national unity.

PP-KTI established a governing body, the Development Council for Eastern Indonesia (DK-KTI), and proposed two short (through 2004) and long-term (through 2010) growth targets for Eastern Indonesia. PP-KTI also created the Integrated Economic Development Zones (*Kawasan Pengembangan Ekonomi Terpadu*, or KAPET), first announced in 1996. The KAPET program probably represents the first true effort by the Indonesian government to use special tax incentives to attract firms to locate in specific regions.[17]

3.3.1 Program Description

The KAPET program was designed to accelerate development in certain parts of Eastern Indonesia.[18] Businesses that chose to locate in KAPET zones were eligible for substantial tax breaks, including a partial tax holiday, with a 30 percent reduction of taxes on capital, expanded choices for depreciation and amortization of capital and losses, fiscal loss compensation for 10 consecutive years, and a reduced income tax on dividends for foreign taxpayers. Other benefits included: (1) an exemption on income taxes for imported capital goods, raw materials, and other production-related equipment (Presidential Decree 9/1998, Article 22); (2) a 50 percent reduction of building and land taxes, including those paid for both new construction and also business expansion; and (3) additional tax breaks, including being able to deduct 50 percent of employee costs from taxable income.

In addition to these generous tax incentives, only eligible for firms locating within KAPET zones, the program also included several different non-financial incentives, including 31 priority programs in human, economic, and natural resources, facilities and infrastructure, and investment facilitation services. Temenggung (2013) argues that these non-financial incentives were potentially even more important than the financial incentives.

Several programs under the umbrella of KAPET targeted micro, small, and medium-sized enterprises (MSMEs). These included business counseling and assistance programs, programs to help MSME owners apply for loans, and the promotion of a one-stop-shop integrated licensing system (*Pelayanan Terpadu Satu Pintu*, or PTSP) to reduce the costs of business registration.[19]

By using these fiscal and non-financial incentives, policymakers hoped that KAPETs would attract investment, stimulate manufacturing growth, and promote the growth of exports. Planners also intended to encourage the creation, expansion, and development of MSMEs. Another goal was to

[17] Note that Hill (1998) mentions a *Kawasan Andalan* program that was established in 1996, with 13 high potential locations selected in each of the provinces.
[18] Eastern Indonesia refers to the island groups of Kalimantan, Sulawesi, Maluku, Papua, and Nusa Tenggara.
[19] Rothenberg et al. (2016) provides more background on the PTSP program and evaluates the extent to which the program had impacts on business registration.

reduce unemployment and poverty, and it was thought that manufacturing growth from large, medium-sized, and small firms would provide jobs and also expand economic development.

The KAPET program was launched in 1996 by Presidential Decree No. 89 of 1996, and eventually 13 separate zones were created. Table 3.1 lists the names and locations of these 13 KAPET zones, the presidential decree that established them, and the dates they started operation. Although one KAPET was established in Banda Aceh, in North Sumatra, and one was located in Papua, the remaining 11 other KAPETs were located in Eastern Indonesia. Some zones were launched by presidential decree in January 1998, before Suharto resigned, while others were created in September 1998, after Habibie became president.

Table 3.1. KAPET Locations

Name	Province	No. of Districts	Year	Presidential Decree
KAPET Biak	Papua Barat	5	1996	Keppres 90/1996
KAPET Batulicin	Kalimantan Selatan	1	1998	Keppres 11/1998
KAPET Sasamba	Kalimantan Timur	3	1998	Keppres 12/1998
KAPET Sanggau / Khatulistiwa	Kalimantan Barat	3	1998	Keppres 13/1998
KAPET Minado-Bintung	Sulawesi Utara	3	1998	Keppres 14/1998
KAPET Mbay	Nusa Tenggara Timur	1	1998	Keppres 15/1998
KAPET Pare-Pare	Sulawesi Selatan	5	1998	Keppres 164/1998
KAPET Seram	Maluku Tengah	1	1998	Keppres 165/1998
KAPET Bima	Nusa Tenggara Barat	2	1998	Keppres 166/1998
KAPET Batui	Sulawesi Tengah	1	1998	Keppres 167/1998
KAPET Bukari / Bank Sejahtera Sultra	Sulawesi Tenggara	3	1998	Keppres 168/1998
KAPET DAS Kakab	Kalimantan Tengah	3	1998	Keppres 170/1998
KAPET Sabang / Bandar Aceh Darussalam	Propinsi D.I. Aceh	2	1998	Keppres 171/1998

Source: BAPPENAS and various presidential decrees (KEPPRES).

In total, 40 different districts were treated by the program; 31 districts were fully treated, and 9 districts were only partially treated, with specific sub-districts within those districts being affected by the program. Districts (and sub-districts within those districts) were selected for the KAPET program according to several different, but vague, selection criteria: (1) favorable geography; (2) economic growth potential; (3) possessing existing leading sectors that would be capable of boosting growth for hinterland areas; and (4) the potential for large investment returns. Despite these criteria, note that each KAPET zone was established in a different province in Eastern Indonesia. Within provinces, it was hoped that KAPETs would be growth centers, attracting activity from hinterland areas. Figure 3.2 presents a map of the districts treated by the program.

Figure 3.2. Map of Treated Districts

Source: Authors' calculations using BPS district shapefiles. Information on treated districts was taken from the text of various presidential decrees, listed in Table 3.1. KAPET Biak is not shown on the map.

3.3.2 Implementation Concerns

The KAPET program suffered from several implementation issues that may have affected the program's performance. Many zones were created in early 1998, during the monetary crisis that eventually lead to Suharto's resignation. Given the instability and uncertainty of the business climate at the time, it is possible that many potential investors were dissuaded from taking advantage of the program, despite its tax breaks. However, the government did appear to be committed to the program. Further modifications to the program took place in 2000, with Regulation No. 20 offering some streamlining of the KAPET incentive structures and more flexibility to firms who would be using them.

Second, because KAPETs were managed by local governments, the governing authorities had significant discretion over how they would use program funds. In the early days of Indonesia's "big bang" decentralization, there were significant jurisdictional questions over administrative authority and obligations. District governments had trouble coordinating with the central government and often lacked the capacity to manage and implement many of the responsibilities that were transferred to them (Hofman and Kaiser, 2004).

3.3.3 Evaluation of KAPET

Several early reviews of the program highlighted the substantial heterogeneity in the performance of different KAPET zones. These mixed results could have come from how the federal program was inconsistently implemented in different localities (Temenggung, 2013). For example, Soenandar (2005) emphasizes heterogeneity in KAPET performance. He focuses on KAPET Parepare and KAPET Bima, and he finds that the overall KAPET program was not consistently well managed at the local level, leading to implementation problems. Mahi and Nazara (2012) argue that in designing new place-based policies, Indonesian policymakers should learn from the troubled KAPET initiative. The KAPET zones had "weak links with local economic activities and hence were never a successful model for new economic growth incentives" (p. 20).

Looking at the program as a whole, Rothenberg et al. (2017) find that along many dimensions, KAPET districts experienced no better development outcomes, and in some cases fared even worse, than their non-treated counterparts.[20] Although firms in KAPET districts were paying lower taxes, the tax reductions did not encourage greater entry or output of firms, and they did not attract greater migrants. Consequently, the KAPET program probably had little intended welfare impacts, and it does not seem to have promoted growth in Indonesia's lagging regions.

3.4 Special Economic Zones after Suharto

In July 2005, the status of the Batam Industrial Bonded Zone, together with Bintan Industrial Estate and Karimun Industrial Cooperation Zone, were upgraded to "Bonded Zone Plus" to give investors more legal certainty. The Minister of Finance confirmed Batam's status as a "Bonded Zone Plus" and issued a package of reforms to improve the island's investment climate. This was supported further when a framework agreement between Singapore and Indonesia on Economic Cooperation in the islands of Batam, Bintan, and Karimun (BBK) was signed in June, 2006. In June, 2007, Batam was granted Free Trade Zone status while Bintan and Karimun were granted enclave status (Wong and Ng 2009). Despite these changes in legal status, investment in BBK did not grow substantially over this period.

[20] This experience contrasts sharply with the performance of China's special economic zones, which experienced significant economic growth after they were created (Wang, 2013).

Following the slow development of the free trade zone in BBK, and after the failure of the KAPET program to promote trade and investment in eastern Indonesia, in the mid-2000s, the government established a new initiative to promote special economic zones (*Kawasan Ekonomi Khusus*, or KEK). The SEZ program has four main objectives: (1) to increase investment by providing competitive geo-strategic and geo-economics zones; (2) to optimize industrial, export, import, and other high value economic activities; (3) to accelerate equitable growth by establishing new economic growth centers in different regions in Indonesia; and (4) to develop a new model of regional development that would increase job creation.

In September, 2009, Law No. 39 of 2009 on SEZs was passed by parliament. According to the law, special economic zones are defined as zones with certain boundaries within territories of the Republic of Indonesia where certain facilities and incentives are given to firms who locate there. The term SEZ covers a broad range of zones, such as export-processing, logistics, manufacturing, technology development, tourism, and other economic activities. Following the introduction of the new law by the Coordinating Minister of Economic Affairs, the government promised that the implementing regulation required to support the law would be released within 100 days (Tempo 2009).[21]

The decision to establish an SEZ is made by the central government through the National SEZ Council (*Dewan National KEK*), but proposals are supposed to come from regional governments.[22] This bottom-up mechanism is designed to avoid the lack of ownership and by-in on the part of regional governments in developing these zones, as happened in previous programs such as KAPET (Temenggung, 2013). Because the SEZs have been self-selected by regional governments, the hope is that these governments will do a better job of addressing many issues related to their development and management, including infrastructure, labor, and land issues.

---

[21] To support the development and implementation of SEZs, the central government issued two implementing regulations: (1) Law 39/2009, and (2) Government Regulation Number 100/2011 (which was a revision of Government Regulation Number 2/2011). These two main regulations stipulate the function, form, and criteria of SEZ, mechanisms to establish SEZs, and the institutional framework and facilities provided at SEZs. The Coordinating Minister for Economic Affairs Regulation No. 7/2011 also provides detailed guidance on the mechanisms for how SEZs are proposed.

[22] SEZ proposals can come from one of these three parties: (1) private sector or state-owned enterprises, with support from the relevant sub-national government; (2) local governments (district/city); and (3) provincial governments. Upon receiving complete proposal and supporting documents, the SEZ National Council will have to give their decision about whether the area would become an SEZ within 45 days. Once approved, government regulations guide the establishment of an SEZ, which needs to become operational within 3 years of approval.

A total of 48 districts applied to be selected for SEZs, including some districts in eastern Indonesia. In June 2010, the Coordinating Minister of Economic Affairs announced that only five SEZs would be developed and would be part of the Economic Corridors plan designed by the government (*Masterplan Percepatan dan Perluasan Pembangunan Ekonomi Indonesia*, or MP3EI). The groundwork for these SEZs was expected to be ready in 2014 (Republika 2010).

3.4.1 SEZs Facilities

Government Regulation Number 96 of 2015 provides the basis for investment facilities at an SEZ. This is followed by the relevant technical/implementing regulations covering facilities such as: fiscal incentives (tax and custom/excise); employment; land; immigration; licenses, etc. Table 3.2 describes the different incentives given to investors in different types of zones, and it shows that investments made in SEZs are treated much more favorably when compared to investments made in other types of zones.

Table 3.2. Fiscal Incentives for Strategic Zones in Indonesia

Type of Incentives	FTZ	Bonded Zone	KAPET	SEZ
1. Corporate Income Tax Facility				
a. Investment Allowance	.	.	Y	Y
b. Accelerated amortization	.	.	Y	Y
c. Dividend tax	.	.	Y	Y
d. Loss carry forward	.	.	Y	Y
e. Tax holiday	.	.	.	Y
2. Import income tax exemption (Article 22 Income Tax)	Y	Y	Y	Y
3. Value Added Tax (PPN) and Sales Tax on Luxurious Goods (PPnBM) Facilities				
a. Non collected import VAT	Y	Y	Y	Y
b. Non collected VAT for domestic purchase	Y	Y	Y	Y
c. VAT and/or Sales Tax on Luxurious Goods exemptions	Y	Y	.	Y
d. VAT return for individuals holding foreign passport	.	.	Y	Y
4. Duty and excise facilities				
a. Import duty temporary dispensation	.	Y	Y	Y
b. Import duty exemption	Y	.	.	Y
c. Excise exemption	Y	Y	Y	Y

d. Import duty reliefs				

Source: National SEZ Council

Specific incentives include: (1) an income tax holiday, with a deduction of 20 to 100 percent for 10-25 years for investment greater than IDR 1 trillion, for 5-15 years for investment greater than IDR 500 billion; (2) waivers for import value-added taxes (PPN) and sales taxes on luxury goods (PPNBM) as well as waivers for PPN between SEZ investors; (3) import duty exemptions from SEZ to domestic market; (4) legally enabling foreigners to own property at SEZs; (4) PPN and PPnBM exemptions for foreigners who owned property; (5) a deduction of leisure taxes paid for investments in tourism-focused SEZs; (6) simplified employment arrangements for SEZs including foreign worker arrangements; (7) simplified immigration processes; (8) improvements in land acquisition; and (9) simplified licensing procedures. Through its economic policy package VI in 2016, the government also issued a number of regulations to improve licensing services at SEZs. With these reforms, it was hoped that investors could start the construction process faster at SEZs.

When the Yudhoyono (SBY) administration issued the MP3EI plan, SEZs were part of the plan for developing economic corridors. Although MP3EI was replaced by initiatives linked to Nawacita when Jokowi administration came in 2014, the development of SEZs continued to be one of the government's priorities in developing regions outside Java.

From 2011 to 2018, a total of 12 SEZs have been established (see Figure 3.3). These are:

1. Sei Mangkei – industry (North Sumatera) based on Government Regulation No. 29/2012. Developed and managed by PTPN III (Plantation SOE) through its subsidiary PT Kawasan Industri Nusantara (KINRA). Focused on palm oil plantation and supporting industries,
2. Tanjung Lesung - tourism (Banten) based on Government Regulation No. 26/2012. Developed and managed by PT Banten West Java Tourism. Focused on tourism and creative economy.
3. Mandalika -tourism (Lombok) based on Government Regulation No. 52/2014. Developed and managed by PT Indonesia Tourism Development Corporation (Persero)
4. Palu (Central Sulawesi) based on Government Regulation No. 31/2014. Developed and managed by city government of Palu. Focused on commodity processing industries: cocoa, seaweed, rattan, etc.

5. Bitung (North Sulawesi) based on Government Regulation No. 32/2014. Developed and managed by North Sulawesi provincial government. Focused on processing industries (fishery, coconut, etc.) and logistics
6. Tanjung Api-Api (South Sumatera) based on Government Regulation 52/2014. Developed and managed by PT Sriwijaya Mandiri Sumsel, focused on rubber and palm oil plantation.
7. Morotai - tourism (North Maluku) based on Government Regulation No. 50/2014. Developed and managed by PT Jababeka Morotai. Focused on fishery, tourism and logistics.
8. Maloy Batuta Trans Kalimantan/MBTK (East Kalimantan) based on Government Regulation No. 85/2015. Developed and managed by PT MBTK, focused on palm oil and wood processing industries
9. Tanjung Kelayang -tourism (Bangka Belitung) based on Government Regulation No. 6/2016. Developed and managed by PT Belitung Pantai Intan
10. Sorong (West Papua) based on Government Regulation No. 31/2016. Developed and managed by BPM-PTSP Sorong (Sorong Investment Body and One Stop Shop Agency). Consists of shipyard industry, processing industry, mining and logistics.
11. Arun Lhokseumawe (Aceh) based on Government Regulation No 5/2017. Focused on energy, petrochemical, agroindustry, and logistics. Managed by consortium of PT Pertamina, PT Pupuk Iskandar Muda (PT PIM), PT Pelindo 1, and PT Pembangunan Aceh (PDPA)
12. Merauke (Papua) – recently postponed by the President due to budget constraint and prioritization of strategic development

Figure 3.3. Map of Special Economic Zones

Source: Information retrieved from National Council for Special Economic Zone website (http://kek.go.id/)

3.5 Implications

Since independence, Indonesian policymakers have made several attempts to use spatially targeted investment incentives to attract firms to lagging regions. So far, these policies have not had a strong record of demonstrated success. Perhaps the best example of a special economic zone in Indonesia, the island of Batam, is now an important manufacturing center in the region, but much of its growth owes to its unique proximity to Singapore. Moreover, research suggests that Batam's manufacturing is still relatively low-skill and has not led to growth extending beyond the immediate SEZ borders. It also seems difficult to duplicate the performance of Batam in other settings with less favorable geography, worse transport and communications infrastructure, and poorer access to natural resources.

Other examples of place-based investment incentives, such as KAPET or Indonesia's bonded zones, have neither led to growth nor generated the self-sustaining productivity spillovers necessary for them to contribute to national welfare improvements. There is an important potential for such policies to be wasteful tax giveaways to firms that would have located in the targeted regions in the absence of such subsidies. If Indonesian policymakers want to continue pursuing these types of place-based policies, they should proceed with caution.

4. Policies to Improve Human Capital

This section reviews several initiatives to improve human capital in Indonesia, many of which have an important place-based component. First, we describe several education initiatives, including a large primary school construction program, the establishment of Indonesia's higher education system, and a cash transfer program for poor or at-risk students. Next, we discuss the health sector, focusing on how the government-run primary health system was developed and how recent policies have created programs to reduce the cost of health care for the poor. Finally, we describe several social protection initiatives, such as village-based grants for infrastructure and small business development. Some social protection programs, like rice subsidies and unconditional cash transfers, are not explicitly place-based, but either because of targeting rules or because recipients are concentrated in certain regions and provinces of Indonesia, these programs benefit some places more than others.

4.1 Education

4.1.1 Sekolah Dasar INPRES

In the mid-1970's, Suharto's government used the INPRES program to undertake one of the largest primary school construction programs in modern history (Duflo, 2001; Martinez-Bravo, 2017). Sekolah Dasar INPRES, one of the first INPRES initiatives, constructed over 61,000 schools between between 1974 and 1978. The total cost of the program was over 500 million 1990 U.S. dollars (1.5 percent of Indonesia's GDP in 1973). The program effectively doubled the stock of schools, creating more than one school per 500 children aged 5 to 14.

Once an INPRES school was established, the government recruited teachers and paid their salaries (each school was designed for three teachers and 120 pupils). An effort to train more teachers paralleled the INPRES program (World Bank, 1990). Despite the rapid increase in new teachers, with the stock of teachers increasing by 43 percent, the proportion meeting minimum qualification requirements did not fall significantly between 1971 and 1978 (Daroesman, 1971).

Sekolah Dasar INPRES was designed explicitly to increase primary school enrollment, and it targeted children living in areas who had not previously been enrolled in school. The general allocation rule was that the number of schools to be constructed in each district was proportional to the number of children of primary school age not enrolled in school in 1972. The “presidential instructions” also listed the exact number of schools to be constructed in each district.

Despite the publicly announced rules for targeting school construction, Duflo (2001) finds that the Indonesian government actually built slightly more schools in areas that already had many enrolled students, so that the program somewhat less equalizing across regions than originally intended. Nevertheless, the program caused considerable economic returns and resulted in substantial wage growth for affected cohorts (Duflo, 2001).

Breierova and Duflo (2004) find that each school built per 1,000 children increased years of education by 0.15 for the first cohort of women fully exposed to the program, and by 0.26 for their husbands. They also find that the associated increases in education led to lower ages at marriage, a lower number of very early births, and lower child mortality. Duflo (2004) also finds that the program increased labor force participation but may have actually reduced wages for older cohorts. Martinez-Bravo (2017) finds that because it created more educated village heads, the program was associated with important improvements in the provision of public goods.

Although disadvantaged regions in Indonesia have made great strides in improving access to education and enrollment, largely as a consequence of Sekolah Dasar INPRES, there has been relatively little progress in improving learning outcomes across regions and increasing school quality. In the 2015 Programme for International Student Assessments (PISA) tests, the performance of 15-year-old Indonesian students on questions in science, mathematics, and reading was one of the lowest among PISA-participating countries, with an average ranking of 62 out of 69 countries. Importantly, Indonesia’s education system may not serve students from disadvantaged backgrounds, as the percentage of low performers in science among disadvantaged students was among the highest globally. Overall, efforts to bolster school quality and improve learning outcomes, particularly in lagging regions, could increase productivity and growth by leveraging the power of human capital externalities (Moretti, 2004).

4.1.2 Tertiary Education

In 1950, Indonesia had roughly 10 tertiary education institutions, all of which were located on Java. These included the Bandung Institute of Technology, founded in 1920, Gajah Mada University, a state-run university in Yogyakarta, founded in 1949, and Universitas Indonesia, founded in 1950 in Depok.

Under Suharto, several laws were passed to enable the growth of private universities, and the number of private higher education institutions increased from less than 400 in 1975 to over 1,200 in 1995. Student enrollments increased from approximately 100,000 in 1975 to over 1.5 million in 1995.

Today there are over 2,000 institutions, with roughly 1900 private institutions and 100 public institutions. Enrollment has continued to increase. From 2000 to 2010, the number of workers that had at least some tertiary education increased from 5 million to 10 million. Despite the increase in labor supply, the returns to tertiary education were still quite large, and a shortage of high skill labor in many industries is widely recognized (World Bank, 2014).

Despite increases in the supply of tertiary education facilities, Hill and Thee (2012) argue that the quality of higher education in Indonesia remains highly variable. The system contains perhaps 7 elite universities (mostly located on Java), but it also has many rudimentary colleges do not offer much in the way of skills or training. Overall public spending on tertiary education remains very low, particularly relative to comparable countries.

Welch (2007) also argues that although Indonesian higher education has been expanding, academics are not well paid and staff qualifications have not consistently improved. Myriad (2013) finds that although more than 8 out of 10 high school students express a desire to continue their education at the university level, only 3 in 10 can enroll. High fees and the absence of any financial aid packages make it difficult for students to attend college. Improving access to and the quality of tertiary education for Indonesian workers could reduce skilled labor shortages for many industries and may have significant productivity spillover benefits.

4.1.3 Cash Transfer for Poor and At-Risk Students

Program Indonesia Pintar (PIP), formerly known as *Bantuan Siswa Miskin* (BSM), reduces the cost of access to education by providing cash transfers directly to poor students. Poor students, as verified by their schools, are provided annual cash transfers of Rp 450,000 (US $35), Rp 750,000 (US $58), or Rp 1 million (US $77) to cover the cost of enrolling at primary, junior secondary, and senior secondary schools. The program is designed to reduce drop out probabilities and increase enrollment rates among poor and at-risk students.

When the program began operations in 2008, the expenditure sum was only 20 percent of the largest social assistance program in the country (the rice subsidy program, Raskin, described below). By 2016, the program had reached nearly 20 million students in Indonesia and it became the third largest social assistance program in the country.

4.2 Health

4.2.1 Indonesia's Primary Health System

At independence, Indonesia inherited a weak health system from the Dutch colonial government (Heywood and Harahap, 2009). In the 1950s, health facilities in Indonesia consisted of public and private hospitals, treatment clinics (*balai pengobatan*), and maternal and infant health clinics (*balai kesehatan ibu dan anak*). The system tended to focus on curative medicine, instead of emphasizing preventative care, and clinics and hospitals were more frequently located in existing urban centers, leaving many without access to care.

Based on the success of a program in Bandung in the early 1950s, which integrated preventative and curative medicine, Indonesia's Ministry of Health developed a hierarchical network of hospitals and health centers throughout Indonesia, with the goal of expanding access to care and increasing preventative medicine. At the top of the hierarchy, the government's primary health system consists of government hospitals (*rumah sakit*), which are located in district capitals and tend to be relatively inaccessible for most of the population (Frankenberg, 1995).

Below hospitals were a network of community health centers (*pusat kesehatan masyarakat,* or *puskesmas*), which tend to be the primary source of care, particularly in rural areas. Health centers tend to be located in subdistrict capitals, are staffed by a doctor, and employ a midwife and one or more nurse. On Java, health centers had roughly 15 employees in 1991, but in the outer Islands, their staffs were much smaller (van de Walle, 1994). Some subdistricts that are heavily populated will have more than one health center. Community health subcenters (*puskesmas pembantu*), and integrated health and family planning post (*posyandus*) round out the bottom tier of the network of primary health care. Subcenters are staffed either by resident paramedical workers or by itinerant health workers, and they are only open once or twice a week.

By the mid 1990's, more than 7000 health centers had been established, with the average population per center falling from 96,000 in 1968 to under 30,000 in 1995 (Heywood and Harahap, 2009). Suharto's government also added over 20,000 health subcenters over the period, greatly expanding access to care, particularly in rural areas. Despite expanded access to care, by the mid 1990's, the availability of health services still tended to be better in urban areas, and large variation in health service quality across geographic areas persisted (van de Walle, 1994). For instance, in 1994, there were 1.24 patient beds per 1000 people in Jakarta, while in Lampung, one of the poorest provinces, there were only 0.18 beds per 1000 people. Several government studies also show that in the late 1990s, before decentralization, there was wide variation between districts in efficiency of health resource use and that most district systems operated at sub-optimal levels.

Barber, Gertler, and Harimurti (2007) use data from the 1997 round of the Indonesian Family Life Survey to describe the variation in the quality of health services before the decentralization period. They find significant quality variations between different types of providers (public health centers vs. private physicians), and they also find that most providers outside of Java-Bali have lower service quality. Within regions, the poor and wealthy have access to the same levels of quality, but the poorest women report receiving fewer prenatal procedures.

Many policymakers hoped that decentralization, which increased the power of local governments to direct health spending, would have enabled the health system to become more effective. Heywood and Choi (2010) find that despite the expansions in spending on health after decentralization and some increases in the supply of health facilities in lagging regions, there was still significant variation in the performance of the heath system across districts. Using data from the Indonesian Demographic and Health Surveys (IDHS), which monitors health supply and outcome indicators for 10 districts in East and Central Java, the authors found little improvement in the utilization of maternal and child health services after decentralization, one key indicator of health system performance.

In general, better efforts to improve health outcomes, particularly in lagging regions, could be very effective in bolstering human capital and productivity. Like Indonesia's education system, policymakers have focused on expanding access to facilities, and more attention needs to be given to training and retaining high quality doctors, nurses, and assistants, and improving service delivery.

4.2.2 Health Insurance for the Poor

During the Asian Financial Crisis, the government of Indonesia created a program to provide poor households with free curative care at community health centers and referral care at district hospitals (*Jaring Pengaman Sosial Bidang Kesehatan*, or JPS-BK). This program was designed to replace some inadequacies of the health-card program (*kartu sehat*), which was introduced in 1994 but had a relatively low take up rate for the poor (van de Walle, 1994). JPS-BK also included targeted nutritional supplements and operational support for health facilities and midwives.

In August, 2003, the Indonesian government launched a reformed health insurance for the poor program called JPK-Gakin (*Jaminan Pelayanan Kesehatan Untuk Keluarga Miskin*), which became known as Askeskin, its Indonesian acronym. The program initially tried to provide 60 million Indonesians with health guarantees worth Rp 5,000 per person per month. Instead of providing unrestricted block grants to health providers, the program tied funding to the number of patients served, and it also gave district governments autonomy in designing targeting and benefit schemes.

Today, JPK-Gaskin has evolved into and been absorbed by JPK-PBI (*Jaminan Pelayanan Kesehatan Penerima Bantuan Iuran*), and total funding for the program has increased substantially. In general, although this program has reduced the cost of care for the poor and vulnerable, there are large differences in the quality of care across regions in Indonesia. Access to quality care remains difficult for many people in the Outer Islands, both because health facilities are not of consistent quality and because of personnel differences (World Bank, 2017).

Sparrow (2006) finds that during the crisis, JPS-BK was well targeted, but actual utilization of care was low. The operational grants to improve health facilities probably had larger welfare impacts than the reduced care fees. Sparrow et al. (2013) find that the Askeskin program, during its first year, expanded access to health care for the poor and increased outpatient utilization among the poorest quantile of households.

4.3 Implications

Unlike spatially targeted investment incentives to encourage firms to locate in lagging regions, policies to improve human capital in poorer areas have dramatically transformed livelihoods in Indonesia. Indonesia's school construction program dramatically expanded access to education for millions, with important positive short and long run consequences. The nation's health services program has also been successful in transforming access to health care for millions. Given that Indonesians will continue to face large internal migration costs, efforts to improve human capital in poorer provinces will doubtless continue to be beneficial to growth and productivity in those regions. However, despite the improvements in access to education and health care, quality remains highly variable across regions. Improving the quality of care and service delivery in lagging regions should be an important policy goal.

5. Place and Person-Based Social Assistance Policies

This section reviews both place and person-based social assistance policies in Indonesia. Place-based policies include block grants to left-behind villages (*Inpres Desa Tertinggal*, IDT) and subdistricts (Kecamatan Development Program, KDP). Person-based social assistance policies include rice subsidies and cash transfer programs.

5.1 INPRES Desa Tertinggal

Indonesia's first anti-poverty program was the *Inpres Desa Tertinggal* (IDT) program (Presidential Instruction Program for Left-Behind Villages). The program began in 1994/95 and ended at the close of 1997/98. Some 7,000 villages were initially designated as *tertinggal*, and each selected village received a block grant of Rp 20 million (roughly $9,000) per year, to be used for infrastructure projects and job creation. On behalf of BAPPENAS, BPS conducted a survey in 1993 to determine which villages would be selected, and 20,633 out of 65,554 villages were initially eligible for IDT grants (Shah et al., 1994). By 1998, the program operated in all villages in four provinces (Irian Jaya, Maluku, East Nusa Tenggara, and East Timor), in addition to other villages throughout Indonesia.

The IDT program was one of the first large-scale "community-driven development" programs in the world. Villages were selected based on criteria that included the quality of local infrastructure, the quality of the housing stock, rates of ownership of livestock, consumer durables, the availability of electricity, school enrollment rates, and indicators of health and infant mortality (Daly and Fane, 2002; Alatas, 2000). Once selected, villages would decide how to allocate the annual block grant, and groups of poor people were invited to submit proposals for using the funds. If the grant proposals were successful in generating income and employment, they were supposed to be repaid, but according to Alatas (2000), only 60 percent of recipients repaid any part of the funds they received.[23] Although the central government continued to regulate the spending of other block grants, village governments and local civic groups had extensive leeway in determining how IDT funds would be spent (Akita and Szeto, 2000).

Hill (1998) suggests that the IDT program was broadly positive in its impacts, although he criticizes village selection as being arbitrary and lacking rigor. Akita and Szeto (2000) estimate that IDT was associated with a reduction in intra-provincial expenditure inequality between 1993 and 1996. By comparing villages that received IDT funds with similar ones that did not receive IDT funds, Alatas (2000) finds that the scheme raised household expenditures and increased employment in rural areas. However, it also increased employment for children and raised the proportion of households with self-employed members.

Yamauchi (2010) focuses on how well the IDT program targeted the poor within selected villages. He finds that wealthier and more unequal villages did a better job of choosing eligible households for loans. The positive association between inequality and targeting may reflect Indonesia's political context, where village heads were incentivized to follow the national guidelines in targeting the poor. Villages with a high population density and young, educated heads initially exhibit better targeting, but as village heads became less involved in the monitoring of benefit allocation, this advantage is lost.

[23] According to Shah et al. (1994), the following expenditure categories were eligible for the program: (1) small-scale support of self-help efforts to improve agricultural production; (2) introduction of new agricultural technologies; (3) support small-scale, urban enterprises; (4) purchase of medicines to prevent or treat endemic illnesses or epidemics; (5) installation of small-scale health infrastructure; (6) any other poverty-reduction measures.

5.2 Kecamatan Development Program (KDP)

The Kecamatan Development Program (KDP) began in 1998, funded by a loan from the World Bank. The program, which operates at the village-level, has two components: (1) grants for the development of infrastructure in the village; and (2) loans for small businesses. Each village can submit two proposals, and village proposals are reviewed at the subdirect level. Projects are implemented by the village, with support and guidance from subdistrict officials. By 2010, it had financed projects in roughly 15,000 villages throughout Indonesia (Olken, 2010).

The KDP has an urban equivalent, the urban poverty program (UPP), which provides credit for small and medium-sized enterprises and funding for developing infrastructure in poor urban areas.

5.3 Person-Based Social Assistance Policies

5.3.1 Subsidized Rice for the Poor

Rice is the basic staple food of Indonesian consumers, and it is by far the most important food crop for the poor, comprising nearly 25 percent of average monthly expenditures (Sumarto and Bazzi, 2011). Because of the monetary crisis, the government introduced a rice subsidy program (OPK) in July 1998 in order to ensure that poor individuals would be able to obtain access to rice at affordable prices. During the crisis, OPK was the largest and arguably most critical social assistance program. It enabled consumers to purchase 10 kilograms of rice per month at a highly subsidized price of Rp 1,000 per kilogram, compared to an average market price of Rp 3,000 per kilogram. Olken (2006) estimates that for the median household, the OPK program transfers were large, constituting 9-11 percent of total pre-program monthly expenditures.

Despite the scale of OPK, unfortunately, the program was not well targeted to poor households. By 2001, over 20.2 million households were taking advantage of subsidized rice. This figure was nearly double the target population, but only 53 percent of eligible poor households were participating (Sumarto and Bazzi, 2011). The program had a large spatial component, using regional poverty rates provided by the national family planning agency (BKKBN), but it was often not well administered at the local level.

By mid-2001, OPK had been reformed and given a new name, Raskin, which was later changed to Rastra. Rastra rice is purchased wholesale by the state-owned National Bureau of Logistics (Bulog), and the purchased rice is delivered to more than 50,000 distribution centers across Indonesia. Although targeting has been improved, Rastra still has several problems, including missing rice, hidden financing burdens, and difficult logistics, all of which reduce the value of transfers to poor households (World Bank, 2017).

5.3.2 Unconditional Cash Transfers

Cash transfer programs in Indonesia are relatively a recent phenomenon, but they have grown significantly in size and scope (Daly and Fane, 2002). Indonesia's unconditional cash transfer program (*Bantuan Langsung Sementara Masyarakat*, or BLSM) is designed to supplement consumption for poor households temporarily, particularly in the face of known price increases or macroeconomic stress. For example, from 2013-2015, the Government of Indonesia reduced price subsidies for fuel and compensated poor consumers with an unconditional cash transfer.

The program began in 2005 (when it was called *Bantuan Langsung Tunai*, or BLT), when oil prices began to spike, expecting to hit the poor the hardest. Targeting of beneficiaries began in August 2005, when officials created a list of potential recipients. BPS designed a survey to generate the final list of households that would receive BLSM using a proxy-means test, based on 14 variables capturing welfare indicators. Sumarto and Bazzi (2011) argue that during the early period of BLT/BLSM, local officials in some regions succeeded in extracting a portion of the officially mandated disbursements. As a consequence, program households received substantially less than was intended.

Bazzi, Sumarto, and Surayahadi (2010) use non-experimental identification strategies to evaluate the impact of the unconditional cash transfer program, and they find that the UCT led to increased utilization of outpatient care health services, as well as a reduction of labor supply for children who were enrolled in school. Households that benefited from repeated program transfers had higher consumption growth than household receiving a single disbursement. Overall, non-targeted households seem to receive substantial benefits from BLSM, and many poor have difficulty accessing the benefits of BLSM in their communities (World Bank, 2017).

5.3.3 Conditional Cash Transfers

When it was started in 2007, *Program Keluraga Harapan* (PKH) was designed as a conditional cash transfer to temporarily alleviate short-term poverty for households, and to increase investments in education and health. As long as eligible households meet specified health or education requirements, they can apply to receive cash transfers. The program was initially rolled out in seven provinces and to just under 500,000 families, but by 2016, coverage had expanded to 6 million families. Despite its rapid increase in size, the program remains the smallest of the national social assistance programs (World Bank, 2017).

To be eligible for PKH, households must be considered poor, or in the bottom 14 percent of households in terms of consumption. They must also meet at least one of several conditions, including having small children at home, having at least one household member being pregnant or caring for a small child, or having older children that have yet to complete basic education. Disbursements of PKH take place quarterly, after facilitators from the regional Ministry of Social Assistance office visit health facilities and schools to confirm that PKH households are indeed eligible to receive the benefits they are requesting. In general, PKH seems to have increased consumption and improved health outcomes for poor families, and it has also had minor effects on education (World Bank, 2017).

6. Conclusion

This article has reviewed place-based policies in Indonesia, focusing on policies to attract firms, policies to improve human capital through education and health, and more general social assistance policies to alleviate poverty. Given nation's history and the political salience of regional differences in incomes and economic activity, it seems likely that place-based policies will continue to play an important role in Indonesia for the next several decades.

Based on experiences in Indonesia and throughout the world, we argue that using tax incentives to attract firms to locate in lagging regions is unlikely to be successful. There are many examples globally that demonstrate that these policies tend to be expensive and not very successful in stimulating growth and development in lagging regions. Indonesia's history of such policies, including special economic zones and the KAPET program, has not been especially promising. There is also an important potential for these policies to end up being tax giveaways to politically connected firms that do not create productivity spillovers. If policymakers want to continue to subsidize firm location decisions, they should proceed with caution.

Policies to improve human capital through education and health seem to be more promising ways to improve economic activity in Indonesia's lagging regions. Under Suharto, Indonesia's experience with school and health facility construction dramatically improved access to education and health services for millions of residents, particularly in disadvantaged areas. That said, important challenges remain, particularly regarding improving the quality of education and health services, and reducing the differences between service quality across districts. Such efforts would bolster human capital in Indonesia, which could have significant productivity spillovers.

Finally, we describe place and person-based social assistance policies aimed at reducing poverty. In general, we highlight that place-based social assistance policies, such as the Inpres Desa Tertinggal (IDT) or the Kecamatan Development Program (KDP), may suffer from inefficient targeting, as funds are distributed to village or subdistrict heads and then dispersed to individuals and communities that local leaders decide upon. Person-based policies, such as rice subsidies and cash transfers for the poor, seem to be more effective at reducing poverty, and they overcome a central targeting challenge that all place-based policies face.

7. References

Akita, T. and Szeto, J. (2000): "Inpres Desa Tertinggal (IDT) Program and Indonesian Regional Inequality" *Asian Economic Journal*, 14(2): 167–186.

Alatas, V. (2000): "Evaluating the Left Behind Villages Program in Indonesia: Exploiting Program Rules to Identify Effects on Employment and Expenditures," Working Paper.

Amiti, M. and L. Cameron (2007): "Economic Geography and Wages" *Review of Economics and Statistics* 89(1): 15–29.

Azariadis, C. and J. Stachursky (2005): "Poverty Traps," in *Handbook of Economic Growth*, ed. by P. Aghion and E. Durlauf, Elsevier, vol. 1A, 295–384.

Azis, I. J. (1990): "INPRES's Role in the Reduction of Interregional Disparity" *Asian Economic Journal*, 4(2): 1–27.

Balisacan, A. M., E. M. Pernia, and A. Asra (2003): "Revisiting Growth and Poverty Reduction in Indonesia: What Do Subnational Data Show?" *Bulletin of Indonesian Economic Studies* 39(3): 329–351.

Barber, S., P. Gertler, and P. Harimurti (2007) "Differences in Access To High-Quality Outpatient Care In Indonesia," *Health Affairs* 26(3): 352–366.

Bardhan, P. K., and Mookherjee, D. (2000). "Capture and Governance at Local and National Levels." *American Economic Review*, 90(2), 135–139.

Bartik, T. J. (1991): *Who Benefits From State and Local Economic Development Policies?*, Kalamazoo, Michigan: W. E. Upjohn Institute for Employment Research.

Bartik, T. J. (2011): *Investing in Kids: Early Childhood Programs and Local Economic Development*, Kalamazoo, Michigan: W. E. Upjohn Institute for Employment Research.

Bazzi, S. and M. Gudgeon (2017): "The Political Boundaries of Ethnic Divisions," Working Paper.

Bazzi, S., A. Gaduh, A. Rothenberg, and M. Wong (2016): "Skill Transferability, Migration, and Development: Evidence from Population Resettlement in Indonesia," *American Economic Review*, 106 (9), 2658–2698.

Bazzi, S., A. Gaduh, A. Rothenberg, and M. Wong (2018): "Unity in Diversity? How Intergroup Contact Can Foster Nation Building," Working Paper.

Booth, A. (1988): "Can Indonesia Survive as a Unitary State?" *Indonesia Circle*, 58, 32-47.

Booth, A. (2005): "The Evolving Role of the Central Government in Economic Planning and Policy Making in Indonesia," *Bulletin of Indonesian Economic Studies*, 41(2), 197-219.

Booth, A. (2011): "Splitting, splitting and splitting again: A brief history of the development of regional government in Indonesia since independence," *Bijdragen tot de Taal-, Land- en Volkenkunde*, 167(1): 31–59.

Breierova, L. and E. Duflo (2004): "The Impact of Education on Fertility and Child Mortality: Do Fathers Really Matter Less than Mothers?" NBER Working Paper No. 10513, May.

Burgess, R., M. Hansen, B. Olken, P. Potapov, and S. Sieber (2012): "The Political Economy of Deforestation in the Tropics," *Quarterly Journal of Economics*, 127(4): 1707–1754.

Crane, R. (1995): "The Practice of Regional Development in Indonesia: Resolving Central-Local Coordination Issues in Planning and Finance," *Public Administration and Development*, 15, 139–149.

Criscuolo, C., R. Martin, H. Overman, and J. Van Reenen (2007): "The Effects of Industrial Policy on Corporate Performance: Evidence from Panel Data." Working Paper.

Davidson, J. S. (2010): "Driving Growth: Regulatory Reform and Expressways in Indonesia," *Regulation and Governance*, 4, 465–484.

Daroesman, R. (1971): "Finance of Education." *Bulletin of Indonesian Economic Studies*, 7(3): 61–95.

Debrah, Y., I. McGovern, and P. Budhwar (2000): "Complementary or Competition: The Development of Human Resources in a South-East Asian Growth Triangle: Indonesia, Malaysia, and Singapore," *International Journal of Human Resource Management*, 11(2): 314–335.

Dollar, D. and A. Kraay (2001): "Growth is Good for the Poor." *Journal of Economic Growth* 7(3), 195–225.

Duflo, E. (2001): "Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence from an Unusual Policy Experiment." *American Economic Review*, 91(4): 795–813.

Duflo, E. (2004): “The Medium Run Effects of Educational Expansion: Evidence from a Large School Construction Program in Indonesia.” *Journal of Development Economics*, 74: 163–197.

Firman, T. (2003): “Potential Impacts of Indonesia’s Fiscal Decentralization Reform on Urban and Regional Development: Towards a New Pattern of Spatial Disparity,” *Space and Policy*, 7(3): 247–271.

Firman, T. (2004): “Demographic and Spatial Patterns of Indonesia’s Recent Urbanization.” *Population, Space, and Place* 10, 421–434.

Frankenberg, E. (1995): “The Effects of Access to Health Care on Infant Mortality in Indonesia: A Fixed Effects Approach to Evaluating Health Services,” *Health Transitions Review* 5(2):143–162.

Garcia Garcia, Jorge (2000): “Indonesia’s Trade and Price Interventions: Pro-Java and Pro-Urban.” *Bulletin of Indonesian Economic Studies* 36(3): 93–122.

Geertz, C. (1971) *Report to the Ford Foundation Concerning a Program for the Stimulation of Social Sciences in Indonesia*. Princeton, NJ: Institute for Advanced Study.

Glaeser, E. L. and J. D. Gottlieb (2008): “The Economics of Place-Making Policies,” *Brookings Papers on Economic Activity*, 2008, 155–239.

Grundy-Warr, C., K. Peachey, and M. Perry (1999): “Fragmented Integration in the Singapore-Indonesian Border Zone: Southeast Asia’s ‘Growth Triangle’ Against the Global Economy,” *International Journal of Urban and Regional Research*, 23(2): 304–328.

Heywood, P., and Harahap, N. P. (2009): “Health Facilities at the District Level in Indonesia,” *Australia and New Zealand Health Policy*, 6(13): 1–11.

Hill, H. (1992): “Regional Development in a Boom and Bust Petroleum Economy: Indonesia since 1970,” *Economic Development and Cultural Change*, 40(2), 351–379.

Hill, H. (1998): “The Challenge of Regional Development in Indonesia,” *Australian Journal of International Affairs* 52(1): 19–34.

Hill, H. (2000): *The Indonesian Economy*, Cambridge University Press.

Hill, H. (2002): “Spatial Disparities in Developing East Asia: A Survey,” *Asian Pacific Economic Literature*, 16(1): 10–35.

Hofman, B. and K. Kaiser (2004): “The Making of the ‘Big Bang’ and its Aftermath: A Political Economy Perspective,” in J. Alm, J. Martinez-Vazquez, and S. Mulyani (eds), *Reforming Intergovernmental Fiscal Relations and the Rebuilding of Indonesia: The ‘Big Bang’ Program and its Economic Consequences*. Gloucestershire, UK: Edward Elgar Publishing.

Ikhsan, M. I. (2006): “FDI and Tax Incentives in Indonesia.” Paper presented at the International Symposium on FDI and Corporate Taxation: Experiences of Asian Countries and Issues in the Global Economy, Hitotsubashi University, Tokyo, February 17–18, 2006.

Kline, P. and E. Moretti (2014a): “Local Economic Development, Agglomeration Economies, and the Big Push: 100 Years of Evidence from the Tennessee Valley Authority,” *Quarterly Journal of Economics*, 129, 275–331.

Kline, P. and E. Moretti (2014b): “People, Places, and Public Policy: Some Simple Welfare Economics of Local Economic Development,” *Annual Review of Economics*, 6, 629–662.

Lewis, B. D. (2003): “Property Tax in Indonesia: Measuring and Explaining Administrative (Under-) Performance,” *Public Administration and Development* 23: 227-239.

Lewis, B. D. (2017): “Does Local Government Proliferation Improve Public Service Delivery? Evidence from Indonesia,” *Journal of Urban Affairs* 39(8): 1047-1065.

Manning, C. and R. M. Purnagunawan (2011): “Survey of Recent Developments,” *Bulletin of Indonesian Economic Studies*, 47(3): 303–332.

Martinez-Bravo, M. (2017): “The Local Political Economy Effects of School Construction in Indonesia,” *American Economic Journal: Applied Economics*, 9(2): 256-289.

McCawley, P. (2015): “Infrastructure Policy in Indonesia, 1965-2015: A Survey,” *Bulletin of Indonesian Economic Studies*, 51(2): 263-285.

Murphy, K. A. Shleifer, and R. Vishny (1989): "Industrialization and the Big Push," *Journal of Political Economy*, 97, 1003–1026.

Myriad (2013): *Improving Access and Equity to Indonesian Higher Education for Candidates from Disadvantaged Backgrounds*.

Oates, W. (1972): *Fiscal Federalism*. New York: Harcourt Brace Jovanovich.

Olken, B. (2006): "Corruption and the Costs of Redistribution: Micro Evidence from Indonesia," *Journal of Public Economics* 90: 853–870.

Olken, B. (2010): "Direct Democracy and Local Public Goods: Evidence from a Field Experiment in Indonesia." *American Political Science Review* 104(2): 243–267.

Ravallion, M. (1989): "Inpres and Inequality: A Distributional Perspective on the Center's Regional Disbursements." *Bulletin of Indonesian Economic Studies*, 24, 53–71.

Resosudarmo, B. P. and Y. Vidyattama (2006) "Regional Income Disparity in Indonesia: A Panel Data Analysis." *ASEAN Economic Bulletin* 23(1), 31–44.

Roback, J. (1982): "Wages, Rents, and the Quality of Life," *Journal of Political Economy*, 90, 1257–1278.

Rosen, S. (1979): "Wage-Based Indexes of Urban Quality of Life," in *Current Issues in Urban Economics*, ed. by P. Mieszkowski and M. Straszheim, Johns Hopkins University Press.

Rosenstein-Rodan, P. N. (1943): "Problems of Industrailisation of Eastern and South-Eastern Europe," *The Economic Journal*, 53, 202–211.

Rothenberg, A. (2013): "Transport Infrastructure and Firm Location Choice in Equilibrium: Evidence from Indonesia's Highways," *Unpublished Manuscript*.

Rothenberg, A. D., A. Gaduh, N. E. Burger, C. Chazali, I. Tjandraningsih, R. Radikun, C. Sutera, and S. Weilant (2016): "Rethinking Indonesia's Informal Sector," *World Development*, 80, 96–113.

Shah, A., Z. Quereshi, A. Bagchi, B. Binder, and H. Zou (1994): *Intergovernmental Fiscal Relations in Indonesia: Issues and Reform Options*. World Bank, Washington D.C.

Smoke, P. (2015): "Rethinking Decentralization: Assessing Challenges to a Popular Public Sector Reform," *Public Administration and Development*, 35(2), 97–112.

Smoke, P. and B. D. Lewis (1996): "Fiscal Decentralization in Indonesia: A New Approach to an Old Idea," *World Development* 24(8): 1281–1299.

Soenandar, E. S. (2005): "Government Policy in Solving Uneven Regional Development between West and East Indonesia: Case Study on KAPET." *Econonic Journal of Hokkaido University* 34, 171–192.

Sparke, M. Sidaway, J Bunnell T and Grundy-Warr, C. (2004): "Triangulating the Borderless World: Geographies of Power in the Indonesia-Malaysia-Singapore Growth Triangle," *Transactions of the Institute of British Geographers*, NS 29: 485-498.

Sparrow, R. (2006): "Health, Education and Economic Crisis: Protecting the Poor in Indonesia," Research Series No. 373, Amsterdam, Rozenberg Publishers.

Sparrow, R., Suryahadi, A., & Widyanti, W. (2013): "Social Health Insurance for the Poor: Targeting and Impact of Indonesia's Askeskin Programme," *Social Science and Medicine*, 96, 264-271.

Strauss, J. and Thomas, D. (1995): "Human Resources: Empirical Modelling of Household and Family Decisions", in J. Behrman and T. N. Srinivasan (eds.) *Handbook of Development Economics* 3A, Amsterdam: Elsevier Science.

Sumarto, S. and S. Bazzi (2011): "Social Protection in Indonesia: Past Experience and Lessons for the Future," Working Paper.

Temenggung, D. (2013): "Policies to Promote Development and Integration of Lagging Regions: The Indonesian Experience," in *The Internal Geography of Trade: Lagging Regions and Global Markets*, ed. by T. Farole, Washington, D.C.: The World Bank, 209–227.

Tiebout, C. M. (1956): "A Pure Theory of Local Expenditures," *Journal of Political Economy*, 64(5), 416–424.

van de Walle, Dominique (1994): "The Distribution of Subsidies through Public Health Services in Indonesia, 1978–87," *World Bank Economic Review*, 8(2): 279–309.

Wang, J. (2013): "The Economic Impact of Special Economic Zones: Evidence from Chinese Municipalities," *Journal of Development Economics*, 101, 133–147.

Wicaksono, T. Y., C. Mangunsong, and T. Anas (2019) "Failure of an Export Promotion Policy? Evidence from Bonded Zones in Indonesia." *Unpublished Manuscript*.

Welch, A. (2007): "Blurred Vision?: Public and Private Higher Education in Indonesia," *Higher Education*, 54, 665–687.

Wong, P. K. and Ng, K. K. (2009): "Batam, Bintan and Karimun—Past History and Current Development Towards Being an SEZ." Singapore: Asia Competitiveness Institute, Lee Kuan Yew School of Public Policy, National University of Singapore.

World Bank (2014): *Tertiary Education in Indonesia: Directions for Policy*, Jakarta, Indonesia, Human Development Sector, World Bank Office.

World Bank (2017): *Towards a Comprehensive, Integrated, and Effective Social Assistance System in Indonesia*, Washington D.C., World Bank Group.

Yamauchi, C. (2010) "Community-Based Targeting and Initial Local Conditions: Evidence from Indonesia's IDT Program," *Economic Development and Cultural Change*, 59(1): 95–147.