

New Patterns of Urbanization in Indonesia: Emergence of Non-statutory Towns and New Extended Urban Regions

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Abstract

Indonesia is home to more than 260 million people and is one of the world's most rapidly urbanizing countries. Between 1980 and 2010, Indonesia's urban population grew about fourfold, from 32.8 to 118.3 million. Using data from National Census publications, this article examines the urbanization patterns and trends in urban growth in Indonesia from 1980 to 2010. The urbanization process has increased the number of cities in Indonesia from 50 to 94 and expanded large urban regions. Most of these expanded urban regions are located on the island of Java, including the metropolitan areas of Jakarta, Bandung, Surabaya, Semarang, Malang, Surakarta and Yogyakarta. The article also identifies the emergence of non-statutory towns and new extended urban regions outside the jurisdictions of urban municipalities. The policy implications of the emergence of such urban areas are additionally discussed.

Keywords

Urbanization, metropolitan, non-statutory town, urban region, Indonesia

Introduction

The world has experienced a process of rapid urbanization for more than six decades. Cities are now home to 55% of the world's population and since 2007, the urban population has remained larger than the rural population. As the world's fourth most populous country, Indonesia also contributes to this growth. Indonesian society has been predominantly urban since 2012 (Gavin & Mulyana, 2015).

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According to the United Nations' latest report on world urbanization (UNDESA, 2019), the country has been among the world's most rapidly urbanizing in the past few decades.

Various studies have shown that urbanization tends to pose higher economic development potential and investment opportunities (McGranahan et al., 2016; Sircar, 2017; see also Ye & Xie, 2012). Urbanization has offered cities and regions opportunities for economic development, welfare and quality of life that strengthen interactions among places (UN-Habitat, 2016).

Some scholars argue that government policies often promote urbanization because of its positive effects (Anderson & Ge, 2005; Fan, 1999; Ye & Xie, 2012;). For example, the rapid urbanization in India is claimed to be influenced by the urban settlement status granted by the government enlisted census town (CT) (Bhagat & Mohanty, 2009; Mitra & Kumar, 2015) CTs are defined on the basis of three criteria: population size, density and percentage of the male workforce engaged in non-agricultural sectors. The inclusion of these towns has significantly boosted the number of urban areas in India (Sircar, 2017).

Besides its benefits, rapid urban growth through extended urbanization also introduces social, economic, ecological and governance conflicts due to disparities between the core city and the extended urban areas (Shatkin, 2019). Urban population growth, particularly in the Global South, has also been associated with concerns such as unemployment, poverty, disparities, inadequate infrastructure and housing. Additionally, latest studies argue that demographic change, along with governance and infrastructure, are factors affecting the spread of infectious diseases (Connolly et al., 2020).

Moreover, the scale, location and the rate and form of contemporary urbanization differ from the historic urbanization patterns experienced by the Global North. Contemporary urbanization occurs at a larger scale and involves multidimensional aspects, multiple driving forces and multiple spatial scales, which require a regional or national perspective to comprehend (Seto et al., 2010; Zhang & Han, 2009). Regional urbanization requires transformative capacity. Such capacity is needed to achieve greater economic productivity to reduce regional disparity (Seto et al., 2010).

One of the problems of governing urbanization is government directives for urbanized area. This is exemplified by the phenomenon of the CT in the Indian context (Pradhan, 2013). The problem arises through the fact that most of the CTs, an urbanized area within districts, are governed by the rural administrative framework. Linking the CT with urban's standard for services and infrastructure is one of the proposed solutions to deal with the problem of governing urbanization outside a declared urban area (Pradhan, 2013).

Soja (2011) emphasized the importance of regional urbanization analysis, especially for recognizing the challenge of reconfiguring metropolitan and regional urbanization processes, including intercity connectivity (see also Friedman & Sorensen, 2019). Such analysis is also important for understanding the spatial influence of regional urbanization in increasing equal opportunities for cities and their inhabitants. In this context, the study of urbanization has also been linked to efforts towards improving the role of cities and other urban concentrations in creating welfare, a better quality of life and sustainable development (UN-Habitat, 2016).

Similar to the global population trend, Indonesia has transitioned from a rural to a predominantly urban society. The Intercensal Population Survey of 2015 showed that Indonesia had an urban population of 136.44 million and an urbanization level of 53.1% (BPS, 2015). The total number of urban populations was about 50 times higher than it was one century ago (Figure 1). Indonesia has also become a member of the group of countries that have more than 100 million urban population since the first decade of the twenty-first century (see UN, 2015). Indonesia's urban population is projected to increase rapidly, reaching 203 million in 2035 with a level of urbanization of about 66.6% (BPS, 2013). This indicates that Indonesia will add more than three million urban dwellers annually until 2035 (BPS, 2018). These figures indicate some of the great urbanization challenges that lay ahead for Indonesia. For example,

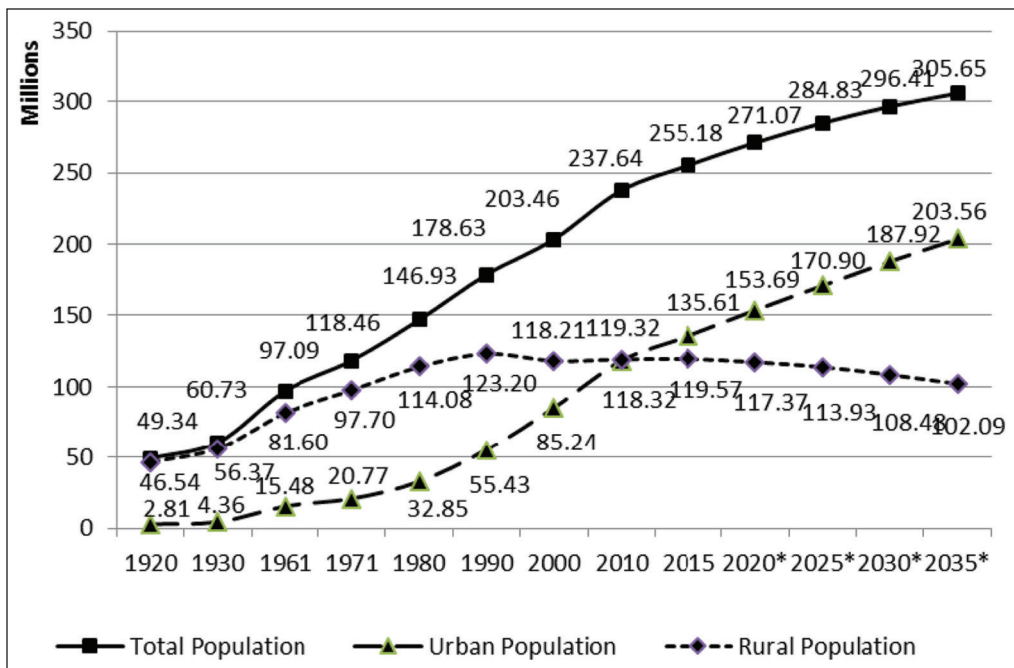


Figure 1. Total, Urban and Rural Populations in Indonesia, 1920–2010 and 2015

Source: Calculated from census data.

Note: *Calculated based on Bappenas, BPS and UNFPA Population Projection in BPS, 2013.

Indonesia had 7.6 million housing backlogs in 2015, mostly in urban area, while the capacity to provide in 5 years was only 2.2 million houses (GoI, 2015).

This article examines the patterns of urbanization and the trends of urban growth in Indonesia from 1980 to 2010. We use population data from the Statistics Indonesia (BPS) census publications by administrative boundaries including provinces, municipalities (*kota*), regencies (*kabupaten*), and sub-districts (*kecamatan*) and by urban boundaries. Statistics Indonesia uses three criteria to classify localities as urban: population density, percentage of non-agricultural households and the number of urban facilities (Sukamdi, 1996). Our analysis focuses on the patterns of urbanization by administrative boundaries and urban boundaries. We identify and discuss the emergence of non-statutory towns and new extended urban regions outside municipalities. We also present policy implications of the emergence of such urban areas.

Urbanization Patterns by Provinces and Macro Regions of Indonesia

Urbanization is a rural to urban socio-economic transformation of societies. Firman (2016) identified three elements of urbanization in Indonesia, including population migration from rural to urban areas, natural population increase in urban areas and the reclassification of locality status from ‘rural’ to ‘urban’.

Indonesia has experienced significant population growth since the last century. Between 1920 (the first census in the Dutch colonial era) and 1961 (the first national population census in the independence era), the population doubled from 40.34 to 97.07 million. Following this, based on the 2000 national census, the population doubled again to 203.46 million. The last national population census in 2010 found that the population was 237.64 million which, by the time of the 2015 intercensal census, had grown to 255.18 million. Urban population of the country in the same year (2015) was 135.61 million, which accounts for 53.1% of the total population (see Figure 1). Indonesia can now be called an urbanized country, as per the cut-off point of 50% outlined by Poston and Bouvier (2010). With 3.5% annual urban population growth between 2010 and 2015, Indonesia has experienced a much more rapid urban population growth than the global, Asian, and Southeast Asian, which growth rates were 2.05%, 2.50% and 2.53%, respectively (UN, 2015). Bappenas (National Development Planning Board of Indonesia), BPS (Biro Pusat Statistik/Statistics Indonesia) and the United Nations Population Fund (UNFPA) have also projected that Indonesia's urban population will exceed 200 million by 2035 (BPS, 2013).

The Indonesian urbanization process exceeded its peak after the 1980s, as argued by Zhang and Deng (2016). These scholars defined the 1980s as a stage of extraordinary urbanization and the 1990s as the stage of urbanization adjustment. Contrary to their claims, this article argues that the period following the 1980s (1990s and later) presents a more complicated picture. This is because, although the annual growth rate of the urban population has significantly slowed, the absolute increase in the number of urban dwellers remained at an increase until about 3.5 million annually in the 2010s, which is more than one and a half times the number in the 1980s. It is estimated that the 2010s is the decade when Indonesia had the greatest annual increase in its urban population, although it will still have more than three million new urban populations annually until 2035 (BPS, 2013).

The enormous number of additional urban inhabitants that need to be accommodated highlights the importance for Indonesia to develop urban infrastructure and services for its cities, which are as of yet, still inadequate. The problem will become increasingly dire in the coming decades. A failure to address these consequences will constrain effective delivery of services as well as economic growth (Turok & McGranahan, 2013). It will also increase the formation of slums if the rapid urbanization process is not associated with economic growth and development (Quintana, 2016).

Indonesia's population is unevenly distributed throughout the country. Notably, the intercensal population survey in 2015 showed that the population remains concentrated on Java (see Table 1). According to the latest census in 2010, nearly 60% of the total population lives in Java. Sumatra and the other islands region represent about 20% of the total population, respectively (BPS, 2010).

For the past four decades, Java has maintained its share of more than 66% of Indonesian urban population (Table 2). However, urbanization processes have not always remained the same. Java experienced a very rapid urbanization process in the 1970s and 1980s, which has increased its level of urbanization from 18% to 25% (and continued to rise). Population census of 2000 indicated that Java had an urbanization level of 49%, and until now, maintains the highest level of urbanization among regions in the country (see Table 1). As such, Java maintains a major share of urban population in Indonesia, which is predicted to remain in forthcoming decades (Table 3).

Increasing Roles of *Kabupaten* in Accommodating Urban Population Growth

Urbanization process in Indonesia has also increased the number of cities and towns. The number of cities has increased from 50 cities in 1980 to 94 in 2010 up to now. The increase in the number of cities

Table 1. Distribution of Urban and Total Population in Indonesia, 2015

Regions	Area (km ²)	Urban Population	Urban Population Share (%)	Total Population	% Urban	Population Density (Inhabitants/km ²)
Java	129,438	90,825,696	67.0	145,013,573	62.6	1,120.3
Sumatra	480,793	22,848,775	16.8	55,198,752	41.4	114.8
Sulawesi	188,522	6,892,367	5.1	18,702,298	36.9	99.2
Kalimantan	468,682	6,864,938	5.1	15,320,017	44.8	31.3
Bali & Nusa Tenggara	73,070	5,998,627	4.4	14,091,466	42.6	192.9
Papua	418,708	1,191,056	0.9	4,011,907	29.7	9.6
Maluku	78,897	991,627	0.7	2,844,131	34.9	36.1
Indonesia	1,965,709	135,613,086	100	255,182,144	53.1	129.8

Source: Calculated from SUPAS data (2015).

Table 2. Distribution of Urban Population in Three Macro Regions in Indonesia, 1971–2010

Year	Java	Sumatra	Other Regions	Indonesia
Urban Population (Inhabitants)				
1971	13,727,869	3,700,235	3,337,168	20,765,272
1980	22,926,377	5,481,488	4,437,964	32,845,829
1990	38,335,297	9,291,747	7,762,127	55,389,171
2000	59,229,340	14,581,448	12,791,062	86,601,850
2010	79,949,854	19,787,628	18,582,774	118,320,256
Share of Urban Population (%)				
1971	66.1	17.8	16.1	100
1980	69.8	16.7	13.5	100
1990	69.2	16.8	14	100
2000	68.4	16.8	14.8	100
2010	67.6	16.7	15.7	100
Level of Urbanization (%)				
1971	18.0	17.7	15.4	17.5
1980	25.1	19.6	15.8	22.3
1990	35.7	25.5	22	30.9
2000	48.8	33.7	30.7	42
2010	58.5	39.1	36.9	49.8

Source: Calculated from census data of 1971, 1980, 1990, 2000 and 2010.

Table 3. Distribution of Annual New Urban Dwellers in Three Major Regions in Indonesia, 1971–2010

Regions	1971–1980		1980–1990		1990–2000		2000–2010	
	People	Share (%)	People	Share (%)	People	Share (%)	People	Share (%)
Java	1,022,056	76.10	1,540,892	68.40	2,089,404	66.90	2,072,051	65.30
Sumatra	197,917	14.70	381,026	16.90	528,970	16.90	520,618	16.40
Others	122,311	9.10	332,416	14.70	502,894	16.10	579,171	18.30
Indonesia	1,342,284	100	2,254,334	100	3,121,268	100	3,171,841	100

Source: Calculated from census data of 1971, 1980, 1990, 2000 and 2010.

Table 4. Distribution of Urban Population in *Kabupaten* and *Kota*, 1971–2010

Year	<i>Kabupaten</i>	Share (%)	<i>Kota</i>	Share (%)	Total	Number of <i>Kota</i>	% Urban
1971	5,912,294	28.5	14,852,978	71.5	20,765,272	50	17.5
1980	14,048,324	42.8	18,797,505	57.2	32,845,829	50	22.3
1990	29,267,080	52.8	26,122,091	47.2	55,389,171	51	30.9
2000	49,083,721	56.7	37,518,129	43.3	86,601,850	63	42
2010	66,059,240	55.8	52,261,016	44.2	118,320,256	94	49.8

Source: Calculated from census data of 1971, 1980, 1990, 2000 and 2010.

has especially occurred after 2000, influenced by the opportunities provided by the government's new decentralization scheme initiated via Law No. 22/1999 on local government. As a result, all cities became classified as municipalities (*kota*) with decentralized authorities, with the exception of DKI Jakarta, the largest city in Indonesia, which is a special region with provincial status. The *kabupaten* (regency) is another local autonomous region in the Indonesian administrative division, designated for non-urban district.

The growth of urban populations and activities takes place in both *kota* and *kabupaten*. However, the urbanization process in Indonesia has reversed the role of *kota* and *kabupaten* in accommodating the growing urban population (see also Fahmi et al., 2014). Until the 1980 census, *kota* dominated in accommodating the urban population in Indonesia. However, today, instead of *kota*, *kabupaten* plays a bigger role in accommodating Indonesia's urban population. The share of urban population in *kabupaten* is greater than that of *kota* since 1990, and this share continues to increase even though new *kota* have been created (Table 4).

The increase in number of cities, through the formation of new *kota* and new *kabupaten* as a new local autonomous territorial division, is part of the country's process of democratization (Fitriani et al., 2005). Therefore, most of the new *kabupaten* and *kota* were formed after the year 2000, which is considered as the beginning of the decentralization era and the democratization process in Indonesia. In Indonesia, the creation of new *kota* and/or new *kabupaten* is known as *pemekaran daerah*. This literally means the 'regional blossoming' process (Fitriani et al., 2005). Booth (2011) preferred the term 'splitting', as the process can be considered as a 'splitting' of the new *kabupaten* or *kota* from its *kabupaten induk* ('mother *kabupaten*'). However, not all growing urban concentrations within *kabupaten*'s territory can become new *kota*. This is because the formation of new cities must follow political and administrative processes, which involves acquiring approval to become new *kota* from the mother *kabupaten*, the central government and the national parliament. Therefore, there are still many growing urban concentrations (towns) within *kabupaten*'s territory that are not split into new *kota*.

The Emergence of Urban Regions in the Urbanization Process in Indonesia

One important feature of the Indonesian *kota* is that most could be categorized as small- or medium-sized cities. Only 27 among 94 *kota* in 2010 could not be categorized as small or medium-sized cities, since 11 *kota* have a population of more than one million, and 16 others have a population of 500,000 to one million. Meanwhile, 67 *kota* could be classified as small and medium cities. Usually, the category of small- or medium-sized cities does not only refer to their population size but also their administrative territory.

The size of the administrative territory influences the formation of urban spatial patterns of many cities, especially in Java, which has been the main location of urbanization for decades. The limited administrative territory of many *kota* in Java and the proximity of the bordering area to the city centre has led to urban spatial development in many *kota* beyond the city limits. Together with the growth of other urban concentrations in the peripheries, these phenomena form extended urban areas (defined as urban region in this article), with area of the *kota* as the core of the urban region.

The formation of urban regions is a distinct phenomenon within the urbanization process in Java (Firman, 2018). It occurs in large metropolitan cities such as Jakarta, Bandung and Surabaya, which account for the main urban concentration on the island (see Table 5), and also in much smaller cities, and even tinier cities, as is shown in Table 6.

Java Island has numerous urban regions with a wide variety of population size. The most prominent of the regions is mega-urban Jabodetabek with Jakarta as its core. Today, this region has an urban population of nearly 30 million (see Table 5). Java also contains two large metropolitan regions, that is, Metropolitan of Bandung Raya (or Greater Bandung Metropolitan Area) and Metropolitan Surabaya, with each having an urban population exceeding five million. In addition, Java has four medium-sized metropolitans with an urban population of two to five million each (see Table 5), and four smaller metropolitans with an urban population of one to two million, five urban regions with urban populations of 500,000 to one million, and two urban regions with urban populations less than 500,000 inhabitants (see Table 6).

The period from the 1980s to 2000s was the era of mega-urbanization within Java, which is signified by the development of mega-urban Jakarta and the metropolitan areas of Bandung and Surabaya (Firman, 2016). The high population density of Java has enabled concentrated urbanization and an enormous annual absolute increase in urban population (more than 1.9 million per year). This high population density is the basis for the formation of extended urban regions in the island, which have consequently shifted many urban activities, especially residential, manufacturing, business and commerce, from the cores towards the fringe areas. This, in turn, has greatly expanded the urban areas. Later on, this phenomenon, which changed the spatial forms, jobs and lifestyle of people in the fringe area, also caused urban environmental issues such as traffic jams and inequalities in urban services delivery. The latter largely owes to limited government capacity to provide such urban services in the fringes.

The Emergence of Urbanized *Kabupaten* and Non-statutory Towns in the *Kabupaten*

The increasing urban population in *kabupaten* has also led to the increasing number of urbanized *kabupaten*, characterized by the proportion of the urban share which is more than half of the population. Based on the national census of 2010, in 34 *kabupaten*, more than half of the population resided in urban areas. Of these *kabupaten*, 22 are located on Java and 12 outside Java (Table 7). Moreover, there were also three *kabupaten*, which both have an urban population greater than one million, although their urbanization levels were less than 50% (see Table 7). In Java, the number of urbanized *kabupaten* had increased from seven in 1990, to 14 in 2000. *Kabupaten* Bogor was the largest urbanized *kabupaten* with an urban population of 3.8 million in 2010. The size of these urban populations in their respective territories serve as a reminder for these—and other—urbanized *kabupaten*, to work harder to support and manage the urbanization process.

Table 7 also presents the number of urbanized *kecamatan* (sub-district, a territorial subdivision of *kabupaten*), as well as the range of population size of the urbanized *kecamatan* in every urbanized *kabupaten*. It is interesting to see that urbanized *kecamatan* are home to a significant population of the

Table 5. Urban Population Growth in Larger Urban Regions in the Island of Java, 1980–2010

Region	Urban Population (People)				Urban Growth (%)		Share (%)	
	1980	1990	2000	2010	1980–2010		1980	2010
1. Mega-urban Jabodetabek	7,782,469	13,096,673	18,167,494	25,923,037	4.09		100	100
Core area (DKI Jakarta)	6,480,654	8,227,746	8,361,079	9,607,787	1.3		83.3	37.1
Periphery	1,301,815	4,868,927	9,806,415	16,315,250	8.8		16.7	62.9
– the west periphery (Bekasi areas)	228,162	1,520,837	3,266,664	5,413,132	11.1		2.9	20.9
– the east periphery (Tangerang areas)	188,668	1,152,883	2,631,542	4,443,001	11.1		2.4	17.1
– the south periphery (Bogor areas)	884,985	2,195,207	3,908,209	6,459,117	6.9		11.4	24.9
2. Metropolitan Bandung Raya	2,099,892	3,349,995	4,792,806	6,548,327	3.9		100	100
Core (kota)	1,461,407	2,058,122	2,136,260	2,394,873	1.7		69.6	36.6
Periphery	638,485	1,291,873	2,656,546	4,153,454	6.4		30.4	63.4
3. Metropolitan Surabaya	2,581,984	3,660,295	5,297,677	6,316,557	3.0		100	100
Core (kota)	2,017,527	2,473,272	2,599,796	2,765,487	1.1		78.1	43.8
Periphery	564,457	1,187,023	2,697,881	3,551,070	6.3		21.9	56.2
4. Metropolitan Semarang	1,289,008	1,746,977	2,256,867	2,891,293	2.7		100	100
Core (kota)	1,024,957	1,250,971	1,348,803	1,520,481	1.3		79.5	52.6
Periphery	264,051	496,006	908,064	1,370,812	5.6		20.5	47.4
5. Metropolitan Malang	704,975	1,130,034	1,693,709	2,157,237	3.8		100	100
Core (kota)	510,906	695,089	742,263	820,243	1.6		72.5	38.0
Periphery	194,069	434,945	951,446	1,336,994	6.6		27.5	62.0
6. Metropolitan Surakarta	772,129	1,176,365	1,834,189	2,130,073	3.4		100	100
Core (kota)	469,532	504,176	490,214	499,337	0.2		60.8	23.4
Periphery	302,597	672,189	1,343,975	1,630,736	5.8		39.2	76.6
7. Metropolitan Yogyakarta	570,853	1,235,182	1,697,581	2,148,223	4.5		100	100
Core (kota)	398,192	412,392	396,744	388,627	–0.1		69.8	18.1
Periphery	172,661	822,790	1,300,837	1,759,596	8.1		30.2	81.9

Source: Calculated from census data of 1971, 1980, 1990, 2000 and 2010.

Table 6. Urban Population Growth in Smaller Urban Regions in Java from 1980 to 2010

Region	Urban Population (People)			Urban Growth (%)		Share (%)	
	1980	1990	2000	2010	1980–2010	1980	2010
1. Metropolitan Cirebon	459,918	868,330	1,354,999	1,883,821	4.8	100	100
Core (<i>kota</i>)	223,504	254,477	272,263	296,389	0.9	48.6	15.7
Periphery	236,414	613,853	1,082,736	1,587,432	6.6	51.4	84.3
2. Metropolitan Tegal	502,061	1,012,893	1,543,807	1,800,862	4.3	100	100
Core (<i>kota</i>)	131,440	229,713	236,900	239,599	2.0	26.2	13.3
Periphery	370,621	783,180	1,306,907	1,561,263	4.9	73.8	86.7
3. Sukabumi Urban Region	324,370	453,714	760,679	1,279,379	4.7	100	100
Core (<i>kota</i>)	109,898	119,938	252,420	298,681	3.4	33.9	23.3
Periphery	214,472	333,776	508,259	980,698	5.2	66.1	76.7
4. Cilégón Urban Region	139,984	269,096	753,523	1,224,477	7.5	100	100
Core (<i>kota</i>)	nd	nd	294,936	360,125	2.0	58.0	29.4
Periphery	139,984	269,096	458,587	864,352	6.3	60.9	70.6
5. Kediri Urban Region	301,201	469,179	761,834	949,221	3.9	100	100
Core (<i>kota</i>)	221,636	249,538	244,519	268,507	0.6	73.6	28.3
Periphery	79,565	219,641	517,315	680,714	7.4	26.4	71.7
6. Pasuruan Urban Region	258,404	408,697	677,415	847,996	4.0	100	100
Core (<i>kota</i>)	93,366	152,075	162,521	186,262	2.3	36.1	22.0
In the peripheries	165,038	256,622	514,894	661,734	4.7	63.9	78.0
7. Pekalongan Urban Region	270,883	432,983	618,151	708,369	3.3	100	100
Core (<i>kota</i>)	132,413	242,874	262,272	274,839	2.5	48.9	38.8
Periphery	138,470	190,109	355,879	433,530	3.9	51.1	61.2
8. Probolinggo Urban Region	159,696	283,151	432,133	567,142	4.3	100	100
Core (<i>kota</i>)	100,152	176,906	156,657	196,957	2.3	62.7	34.7
Periphery	59,544	106,245	275,476	370,185	6.3	37.3	65.3
9. Blitar Urban Region	152,626	271,087	379,242	554,531	4.4	100	100
Core (<i>kota</i>)	78,381	118,933	119,372	131,968	1.8	51.4	23.8
Periphery	74,245	152,154	259,870	422,563	6.0	48.6	76.2
10. Magelang Urban Region	221,462	291,110	398,438	449,731	2.4	100	100
Core (<i>kota</i>)	123,358	123,213	117,531	118,227	–0.1	55.7	26.3
Periphery	98,104	167,897	280,907	331,504	4.1	44.3	73.7
11. Madiun Urban Region	206,522	246,802	314,830	364,431	1.9	100	100
Core (<i>kota</i>)	150,260	170,050	163,956	170,964	0.4	72.8	46.9
Periphery	56,262	76,752	150,874	193,467	4.2	27.2	53.1

Source: Calculated from census data of 1980, 1990, 2000 and 2010.

Table 7. Population Size in Urbanized *Kabupaten* on the Island of Java, 2010

Kabupaten	Urban Population	Percentage Urban	Number of Kecamatan	Number of Urbanized Kecamatan	Range of Population	
					Smallest	Largest
West Java Province						
– Bogor	3,770,213	79.0	40	31	40,013	309,918
– Bandung	2,673,499	84.1	31	27	36,529	220,762
– Bekasi	2,108,130	80.1	23	16	37,253	417,008
– Cirebon	1,587,432	76.8	40	36	12,888	72,036
– Karawang ^a	1,268,086	59.6	30	12	38,817	145,215
– Garut ^a	1,043,517	43.4	42	15	25,142	117,726
– Bandung Barat	938,778	62.2	16	8	53,619	147,797
– Purwakarta ^a	458,599	53.8	17	6	29,314	165,447
Banten Province						
– Tangerang	2,324,209	82.0	29	23	38,437	227,634
Central Java Province						
– Tegal	811,372	58.2	18	10	40,094	109,035
– Banyumas ^a	807,607	52.0	27	12	27,894	233,951
– Klaten	759,450	67.2	26	18	15,233	57,958
– Jepara ^a	656,570	59.8	16	8	28,842	98,054
– Pemalang ^a	636,977	50.5	14	7	24,201	147,087
– Sukoharjo	632,367	76.7	12	8	15,348	127,886
– Karanganyar	414,969	51.0	17	6	56,111	78,304
– Kudus ^a	600,965	77.3	9	7	54,208	99,466
– Pekalongan	433,530	51.7	19	8	20,435	79,797
Yogyakarta Province						
– Bantul	761,396	83.5	17	12	26,228	120,015
– Sleman	998,200	91.3	17	16	18,534	181,490
East Java Province						
– Malang	1,166,046	47.7	33	14	19,861	140,403
– Jember	1,018,122	43.6	31	10	23,695	116,032
– Sidoarjo	1,772,043	91.3	18	18	31,373	228,818
– Jombang ^a	746,272	62.1	21	12	25,980	137,233
– Gresik	703,912	59.8	19	8	22,340	112,755

Source: Calculated from the result of the 2010 census.

Note: ^a*Kabupaten* is not adjacent to any city.

urbanized *kabupaten*. However, the number of urbanized *kecamatan* differs from the number of towns formed in the *kabupaten*, since the towns of some *kabupaten* are formed by the urban agglomeration of several bordering *kecamatan*. For example, *Kabupaten* Tegal in Central Java has 10 urbanized *kecamatan* (see Table 7), while it contains five towns. This difference can be explained by the fact that six *kecamatan* agglomerated and formed two relatively big towns with a population of about 200,000 and 300,000, respectively. Meanwhile, two *kecamatan* make up one town with a population of 80,000, whereas the remaining two *kecamatan* form their own smaller towns.

Outside Java, 12 urbanized *kabupaten* could be identified. Unfortunately, no detailed data is available that can be used to identify urbanized *kabupaten* from the previous population census. Thus, we cannot determine if the number has increased. These phenomenon also shows the population size of towns in urbanized *kabupaten* outside Java, which are relatively smaller than those in Java.

Most urbanized *kabupaten* are located adjacent to a city, as can be seen in Table 7. This pattern indicates that urbanization spreads from *kota* into *kabupaten*. The process has also triggered the emergence of towns within the territory of *kabupaten*. This occurs due to population densification in the *kabupaten* and the increase in non-agricultural activities. This leads to a rural-to-urban reclassification process of villages in the *kabupaten*. Firman (2003) argued that the growth of Indonesian urban population has strongly influenced the growth of large cities in predominantly agricultural corridors, especially along roads that connect large cities of Java. In fact, the growth of large cities has been influenced by their expansion into *kabupaten* in their surroundings. In recent times, such phenomena have been replicated in much smaller cities, especially those that are located in the *Pantura* (*Pantai Utara* or north coast) corridor of Java Island (arguably the most dynamic corridor in Indonesia).

Data from the 2010 census indicates that rural-to-urban reclassification does not only take place in villages of *kabupaten* located adjacent to cities but also in villages in *kabupaten* that do not border any cities. The densification process and the development of urban activities has changed previously rural areas into more urbanized regions that form towns or urban areas of both small and large population sizes in *kabupatens'* territory. This phenomenon is in line with the rapid increase in number of villages classified as urbanized villages, which have increased from 7,510 villages in 2000 to 9,239 in 2010 (Firman, 2016).

Until now, Indonesia lacks proper regulation for identifying towns outside the territory of cities. This bears similarity to how areas are identified in India, as a result of which, urban concentrations outside city municipalities become classified as CTs (Bhagat, 2009, 2011; Mitra & Kumar, 2015). Indonesia also identifies areas for the purpose of population census, classifying all villages into two categories: urban villages and non-urban villages. If the CTs are determined using three criteria, that is, minimum population, percentage of the male working force engaged in non-agricultural jobs and minimum population density of the area (Sircar, 2017, see also GoI, 2016), the villages' classification in Indonesia uses three criteria, that is, population density, percentages of agricultural or non-agricultural households and the presence or access to certain urban facilities in the villages. However, in contrast to the Indian method that directly identifies the towns, the Indonesian census merely identifies urban villages. Most of the towns are formed by several agglomerated urban villages. Indonesia has no regulation or mechanism for identifying the towns as of yet. Therefore, criteria such as minimum population and/or specific population densities can be implemented to identify the town. The lack of such regulation in Indonesia has caused difficulty in identifying the number of towns outside *kota* or municipalities in Indonesia, until now.

The phenomenon of the formation of towns outside the boundaries of city administrations is shown in the case of the Tegal Urban Region in Central Java Province (see Figure 2 and Table 8). This region is formed by *Kota* Tegal, a municipality of 250,000 inhabitants as the core, whereas the periphery comprises two bordering *kabupaten*, that is, *Kabupaten* Tegal and *Kabupaten* Brebes. Tegal Municipality is a small- to medium-sized city, with an area of 39.68 km², while the two peripheral *kabupaten* of Tegal and Brebes have an area of 876.10 km² and 1.902,37 km², respectively.

This article proposes that towns are identified using two factors. The first is the classification of urbanized villages in the peripheral *kabupaten*, classified by Statistics Indonesia. The other uses administrative boundaries of *kecamatan*. The identification could assume that urbanized villages within the same *kecamatan*, agglomerated to form one urban agglomeration, form the same town. According to this, adjoining urbanized villages in different *kecamatan* will be considered to form different towns, even though urbanized villages remain in the physical form of urban agglomeration. In addition, urbanized villages in the same *kecamatan*, which are not bordering, are considered to form different towns.

Using the above approach, the study identified 51 towns in the periphery of *Kota* Tegal in 2017, with varying population sizes ranging from just a few thousand inhabitants to more than 185,000. Of these

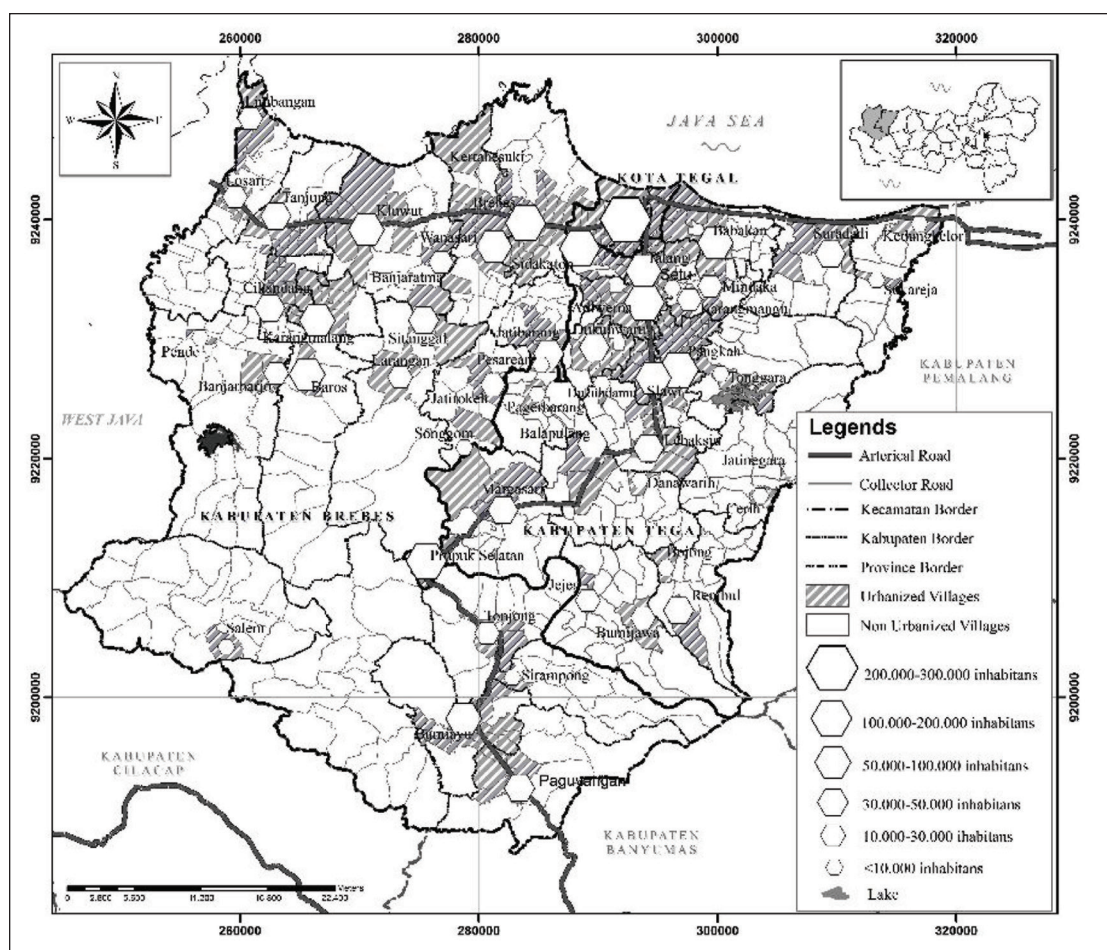


Figure 2. The Towns Developed in Peripheries of Tegal Urban Region in 2017

Source: Analysis by the authors.

Note: Calculated based on the BPS's classification of urbanized villages in 2017.

Table 8. The Growing Number of Towns in Tegal Urban Region, Detailed According to the Population Size, 1990–2017

Town Size	1990	2000	2010	2017
Towns with a population of 100,000–199,999	0	0	3	4
Towns with a population of 50,000–99,999	6	6	9	7
Towns with a population of 30,000–49,999	2	3	9	11
Towns with a population of 10,000–29,999	8	9	13	12
Towns with less than 10,000 inhabitants	14	14	17	17
Total number of towns	30	32	51	51

Source: Analysed from Village Potential Data 1990–2017.

51 towns, 28 are situated in *Kabupaten* Tegal and 23 in *Kabupaten* Brebes. The number of towns increased from 30 in 1990 to 32 in 2000 and then remained at 51 towns in 2010 and 2017.

The identification indicates that relatively a large number of non-statutory towns were developed in *kabupaten* in Indonesia. However, this number is based on the assumption that bordering urban villages were located in different *kecamatan* from different towns. In fact, there are many phenomena that show the occurrence of contiguous and uninterrupted urban physical development from certain urbanized villages to other urbanized villages located in different *kecamatan*. In this case, uninterrupted development in urban villages in different *kecamatan* could be identified as the same town. If this method is applied, the number of recognized towns could be reduced, even though this method will influence the population size of recognized towns. Moreover, the identification has not considered some probable thresholds that could be applied, such as minimum population size and minimum population density. The application of threshold criteria in the identification of towns could also reduce the number of recognized towns.

In terms of town formation in *kabupaten* areas, all the urbanized villages in a *kabupaten* will not agglomerate into a single urban area (town). The large territory of the *kabupaten*, where agricultural land remains the dominating land use restricted the reclassification process to several particular villages. The urbanized villages are influenced primarily by two factors, that is, history of the villages as service centres and the development potential of the villages. Most villages that were reclassified as the initial urbanized villages are those that serve as a service centre like a market place or provide other services such as administrative, commercial and educational or health services. Meanwhile, the proximity and the availability of regional roads that connect the villages to the surrounding urban centres and the availability of potential economic activities are some of the factors influencing the development potential of the villages. Therefore, instead of agglomerating into a single urban area, in most cases, the urbanized villages of *kabupaten* form several towns or urban areas with varying population sizes.

Discussion and Conclusion: Challenges and Policy Implications of New Patterns of Urbanization in Indonesia

As addressed in the discussion of the urbanization phenomenon in the Global South, the urbanization process has intensified urban challenges in large cities but also in smaller size towns and cities (see Cohen, 2004; van Duijne, 2019; Jain, 2017). The challenge of Indonesian urbanization also originates from the rapidly growing small- to medium-sized cities, especially those with a population of 100,000–300,000 inhabitants. Particularly cities located on Java have formed urban regions, in which urban population growth takes place beyond the city's border. This extended urbanization is influenced by the high density of population in Java and limited administrative areas of the cities. The growth of small cities extends to the surrounding *kabupaten* causing a rural-to-urban reclassification process and the formation of towns outside cities. As aforementioned, this is comparable to reclassification processes occurring in India (Pradhan, 2013; Sircar, 2017). The extended formation intensifies urban activities and land-use changes in the fringe areas, which, in turn, triggers a transformation in the social and economic characteristics of inhabitants.

Another aspect of this process is the emergence of urbanized *kabupaten* and the formation of non-statutory towns in *kabupaten* that are either situated adjacent to a city or far from it. While these factors decrease the role of cities in accommodating urban population growth, conversely, they intensify land-use changes and strengthen urban concentrations in *kabupaten*. This increases local income of the *kabupaten* through property and development taxes. With the role of *kabupaten* in accommodating urban

population and activities having increased since 1990, the need for a better management of the *kabupaten* is more evident.

The increasing role of *kabupaten* also leads to some important challenges. The first comes from the size of the urban population involved in the urbanization process in the *kabupaten*. The 2010 census data showed 10 *kabupaten* had more than one million urban inhabitants. Some of these, such as *Kabupaten* Bogor, *Kabupaten* Bandung, *Kabupaten* Tangerang and *Kabupaten* Bekasi, had more than two million urban inhabitants in their territory. For example, the case of *Kabupaten* Tegal which had about 800,000 urban inhabitants in its territory has two towns of 200,000–300,000 populations and another two towns of nearly 100,000 populations. These figures are comparable to the population of many municipalities in Indonesia. Therefore, many urbanized *kabupaten* have to manage urban areas comparable to municipalities.

The second challenge comes from the spatial characteristic of the urban population concentration in *kabupaten*, which is different from urban concentrations in municipalities. The urban population in most *kabupaten* rarely concentrates in a single urban area, and is instead, commonly found in many towns (urban concentrations) of varying sizes. Each of these towns is comparable to a municipality. Most of the urban population can be found in the capital and in urban concentrations that have developed from existing service centres in the area. The large number of urban concentrations in *kabupaten* is a challenge for the *kabupaten*'s institutions as they must manage many towns in their territory. This is, in addition, to their obligation to manage their regional as well as rural development processes.

The last important challenge comes from the nature of *kabupaten*, which are designated as the local authorities for non-urban regions that complement the *kota* (municipalities that are designated as urban regions). The implication of this governance design is that most of the governments of *kabupaten* are ill-prepared to manage urban development processes as well as their implications. This is in contradiction with the fact that a growing number of *kabupaten* must also manage urban development of many growing towns in their regions.

These challenges also originate from the nature of towns in *kabupaten*, which can be classified as non-statutory towns, similar to CTs in India (Mitra & Kumar, 2015). As towns in *kabupaten* are under the administrative status of *kabupaten*, these towns have no authority and resources to manage their own affairs, including human, finance, instruments, as well as decision-making powers, as all of the resources and authorities belong to the *kabupaten*. The lack of authority is due to the Indonesian decentralization policy delivers the powers to *kota* and *kabupaten* level. Therefore, all of the towns are highly dependent on the *kabupaten*'s institutions. These not only manage all towns in the *kabupaten* but also facilitate regional development and rural development since most of the *kabupaten* still consists of non-urban areas.

Studies on CTs in India suggest rural-urban linkages to resolve the problem (Mitra & Kumar, 2015). However, for the Indonesian case, especially in the context of Java, this article argues that the problem should be addressed by improving the institutional capacity of *kabupaten* in managing their urban development. In addition, an organization should also be established in the non-statutory towns, which is specifically aimed at cooperation to integrate the towns' urban development planning and management process with that of the broader region. This process should streamline town development and the *kabupaten*'s regional and rural planning and development, as well as the urban development process of the entire urban or metropolitan region. Without an institution representing the towns, *kabupaten*'s institutions could easily fail to take into account the specific dynamics of each town. This is an urgent issue as there are too many towns for the *kabupaten* to effectively manage. Moreover, without representatives from the *kabupaten*, the towns have no capacity to manage their urban development dynamics. Furthermore, expanding collaboration on the metropolitan scale will offer opportunities to integrate the towns' and *kabupaten*'s development process into metropolitan development strategies.

The solution offered needs fundamental political will to implement political and administrative rearrangements that provide better authorities, tools and mechanisms, especially for the urbanized *kabupaten* in metropolitan areas, in dealing with their urbanization and urban growth process. However, this solution also requires policies to recognize the non-statutory towns within the *kabupaten*. These towns need to be strengthened through the development of parastatal organizations that can integrate three levels of the development process, namely, the level of towns, *kabupaten* and urban or metropolitan regions. Furthermore, this solution requires spatial affirmative policies that allow urbanized *kabupaten* to have urban development management institutions in their local government bodies.

The approach developed in this study is expected to provide insights into the Indonesian urbanization process, which may also be applicable to other developing countries in the Global South. The key aspects of Indonesian urbanization are the significant size of the urban population, the spatial concentration of urban growth in the main region and small towns and cities, including non-statutory towns. The latter should be given more serious policy attention in order to improve the management of their urban development process. Although the pace of urbanization has eased in the last few decades, the challenges of continuing urbanization in Indonesia are still evident. In fact, the challenges associated with urbanization will be greater in the future, since the annual growth of the urban population continues to increase into the next decade and will slightly decrease later on.

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