

Migrant settlement distribution in urban centers of megacities Jakarta

Nandi Nandi^{1,*}

¹Geography Education Program, Faculty of Social Sciences Education, Universitas Pendidikan Indonesia, West Java, 40154 Indonesia

Abstract. Rapid movement of people and goods has been a remarkable distinction of Jakarta. Apart from being seen as center of development, Jakarta has also been perceived to seek better life and find new opportunities. This cultural phenomenon attracts people from various locations and socio-economic backgrounds to settle, both permanently or temporarily. The presence of migrants in Jakarta plays an important role toward social and economic aspects. This research discusses; (1) migrant settlement distribution, (2) migrant settlement and its relation to development in urban centers, and (3) socio-economic. To analyze the in-migration phenomenon, this research used Crude In-Migration Rate and on analyzing the distribution of migrant settlements from the urban cores, buffer analysis was implemented. The result of this research shows that migrant settlement in Jakarta does not concentrate on the urban cores or even does not show any possible spread direction toward the core. The dominant migrant settlement and areas with most migrants showed in the southern part of Jakarta Province as it directly connected with South Tangerang City, Depok City, and Bekasi City. Dominant migrant settlement in the west also indicates better transportation and network infrastructure, similar economic activities, and growing livelihood opportunities in southern part of Jakarta.

1 Introduction

Asian cities experienced a rapid and radical urbanization process that blurred the definition of rural and urban [1], [2]. Urban development in several Asian countries extend beyond the administrative boundaries, influencing surrounding regions and radiating from city centers toward all directions. The aforementioned blurred lines between rural and urban in Asian cities cause policies to be generally failed as urbanization processes could not be slowed down and balanced [3]. The unbalanced flow of urbanization toward urban patterns, however, resulted in a highly diversified economic activities and land uses, including industrial estates, large-scale housing projects, and tourist resorts interspersed with existing agricultural activities, which is referred as mega-urbanization phenomenon [4]. Some examples of this mega-urbanization can be examined from Asian mega-cities Jakarta, Bangkok, and Metro Manila. Study held by Murakami et al (2005) stated that urbanization in these cities proceeded differently with patterns of urbanization in western cities. Various studies also

* Corresponding author: nandi@upi.edu

assert that the major features of Asian urbanization is the land-use mixture [5]. Aside from depicting diverse socio-economic backgrounds, this phenomenon could result in serious economic problems, inadequate infrastructure problems, and a complex urban planning system, making understanding toward the urbanization process needed [6].

Urbanization or process of rural-urban migration in Jakarta, as also happened in urbanization case in general, always shows inseparable phenomenon with poverty [7], as shown by the fact that urbanization in Jakarta, for decades, resulted in marginal settlement, illegal housing, and slum areas. While this fact is economically concerning, migrants drive economic activities involving the very top to the most bottom economic sectors and players. The innermost part of Jakarta was once the most populous and the center of maximum economic activity that became the magnet for people beyond the metropolitan area [8], [9]. As it influenced regions in the fringes, it also created a unique pattern of population density [10]. In 1970, Jakarta showed a drastically decreasing population density over the range of 0 – 5 km from the city center from 300 persons/ha in 1970 to 169 persons/ha in 1998. Yet in the range of 15 – 25 km, Jakarta showed a rapid population density at 7 km from 60 persons/ha in 1970 to 156 persons/ha in 1998. This resulted in a more even distribution of possible migrant settlement that as the city center still attracting locals for better life and living quality, areas beyond the center as well as the city fringes continues to receive migrants as it provide much cheaper land value and job opportunities matched their own qualifications [6].

Analysis toward socio-economic diversity as explained above, could be indicated toward the distribution of migrant settlement as well. Whether its distribution shows an even spatial diffusion or concentrated in some development centers, it is indicating how Jakarta is perceived as an urbanization destiny examined through locations on which migrants settle [11]. This paper discusses the distribution of migrant settlement, how city centers affect migrant settlements, as well as how migrants crudely affects socio-economic aspects in the settled locations in Jakarta.

1.1 Migration in Jakarta

The very first reason migrants settled in Jakarta dates back to 1972 when Temple (1975) conducted research to study the background of migrants coming to Jakarta [12]. Through this study, it was proven that 80% people from the occupational sample migrate to Jakarta from rural areas. It is then found to be clear that the reason to migrate to Jakarta is based on economic and life-driven motivations due to the very small amount, only one third, of migrants in 1972 had ever visited Jakarta before they came to settle. Temple also observed the seasonal pattern of migrant flow which was in January and December. Distance between migrants' own places to Jakarta did not pose a barrier. 75% of people moving to Jakarta only need money equivalent to three day wages to afford transportation, other conditions like hitched vehicles for free or taking stops at relative houses to reach Jakarta also commonly found. 60% of people had intended to stay permanently by the time they arrived in Jakarta, only 25% made a decision after they stayed for six months or less. The reasons of moving to Jakarta, sorted from the very dominant, are, (1) no available work in the village, (2) economic difficulties, (3) improving living standards, (4) pursuing education, (5) job promised, (6) desire for independence, (7) village life boring, and (5) marital problems. Those reasons above were stated by informants who are petty traders, becak drivers, squatters, and even prostitutes.

Entering the 21st century, when economic development in Jakarta started to be stable again after 1998 monetary crisis, the megacity of Jakarta has its population increased quite rapidly from 17.14 million people in 1990 to 20.63 million people in 2000 and 28.02 million people in 2010 [13]. Pattern of urbanization occurred in Jakarta initially marked by rapid

population growth, followed by the concentration of various activities that radically changes the city structure, changes in land use also occurred, indicated by built area intensity, distribution of facilities, transportation network system, movement pattern toward the urban core, and development of activities [14]. Migration phenomenon in Jakarta can be evaluated through social, economic, and ecological impact as the most remarkable signs. Through social and demographic analysis, Jakarta has a huge diversity of ethnicity, culture, and religion from its people. This makes the city grow quite without dominating majority and uncertainty in various affairs and interests [15]. Economically, the presence of migrants in Jakarta somehow builds a better economy for the province as well as providing cheap labor for investors and local enterprises. This is also driven by the fact that most people who decide to settle in Jakarta are motivated by economic reasons [16]. Other important and concerning issues out of rural-urban migration are ecological issues, and various research has been pointing out migration effects on carbon emission, water shortage, and waste problems [2].

1.2 Migrant settlement issues

Common issues found on migrants settling Jakarta is the poverty they had to face. As the capital and place with plenty and various economic activities going on, the presence of migrants as laborers is crucially needed [17]. However, most migrants did not consider the competition they had to deal with when they lived in Jakarta, starting from cost of living and employment certainty. This situation could be the root of problems that have happened in Jakarta. In terms of public settlement, lots of settlement had been built in a riverside, which can endanger both urban ecology as well as their own health [18]. Settlement along the riverside generally did not have adequate sanitation and sewages. Under this situation, residents who lived there also utilized the water for washing needs. Therefore diarrhea cases in Jakarta, which were especially suffered by infants and children under 5 years old, reached 54.23 percent [19]. While this continues to happen, health insurance aided by the government has paved a complicated way for economically unprivileged people to access [20].

Other concerning issues out of migrant settlement is also crime rate and deviations. Sociologically, migrants who worked in Jakarta had to face hard work and lots of problems relating to their family lives [21]. This had developed into a harsh society where juvenile delinquency and profanity were common. Out of this hard situation, crime could possibly occur. While being employed is complicated, being involved in crime also happens. In many cases, offensive street beggars, robbery, and burglary could be commonly found in dense settlements where migrants live [22] Begging has also been viewed as a job for beggars in Jakarta, in some cases, they are also able to collect a huge amount of money from begging. It has also been reported that beggars who acted that way were originally from rural areas outside Jakarta [23].

1.3 Socio-economic Development in Jakarta

Migration has also played a certain role for socio-economic development in Jakarta. As people from various places, social and economic backgrounds migrate and settle in Jakarta, competition in various sectors also occurs. Tight competition in Jakarta has shaped its society to be tough and competitive. There are some examples where people who arrived in Jakarta with lack of belongings then end up successful after going through complex life experiences. The heterogeneous background of Jakarta has also built Jakarta into a more tolerant place for people with different race, ethnicity, and religion. The presence of migrant workers in Jakarta also has economic significance as sources of cheap labour and even talented labourers. Economic activities took place in Jakarta to fasten the circulation of money, making prices relatively high compared to other provinces surrounding Jakarta but also unstable. Migration

has also widened the scope of human needs, this also boosts the creative economy and various economic sectors that have the share of contribution toward domestic incomes.

2 Methods

This research is done to discuss; (1) migrant settlement distribution in Jakarta, (2) migrant settlement and its relation to development in urban centres of Jakarta, and (3) socio-economic analysis in migrant settlements. To analyze and process the spatial data of migrant settlement distribution, this research utilizes the use of GIS data management, weighted overlay, and buffering analysis. Method used to analyze in-migration rate is Crude In-Migration Rate (CIMR) formula which is applied to calculate the number of migrants in 44 sub districts of Jakarta Province. The CIMR formula is shown below

$$\text{Crude In - Migration Rate (CIMR)} = \frac{\text{In-migration number}}{\text{mid-year population}} \times 1000 \quad (1)$$

Sources of data used in this research was retrieved from provincial government institution sites, such as population number and midyear population number from Bureau of Statistics (BPS) as well as previous studies and researches presenting findings of socio-economic phenomenon.

3 Results and discussion

In-migration phenomenon in Jakarta is varied between sub-districts. Taken from in-migration data in census year 2015, while demographic census is held each 10 year, in-migration in Jakarta spans from 2 migrants to 25 migrants per 1000 people in each sub-districts annually, while the average population of Jakarta itself is in the amount of 220.000 people. Therefore the migrant population in Jakarta could be two hundred times the number of CIMR, and this indicates that each sub-districts could have 10 percent of their respective demographics consist of migrant settlers. **Figure 1** below shows the distribution of CIMR numbers in Jakarta Province that not only shows the distinction between CIMR numbers in each sub-districts but also presents a unique pattern of migrant numbers in Jakarta viewed from its urban characteristics.

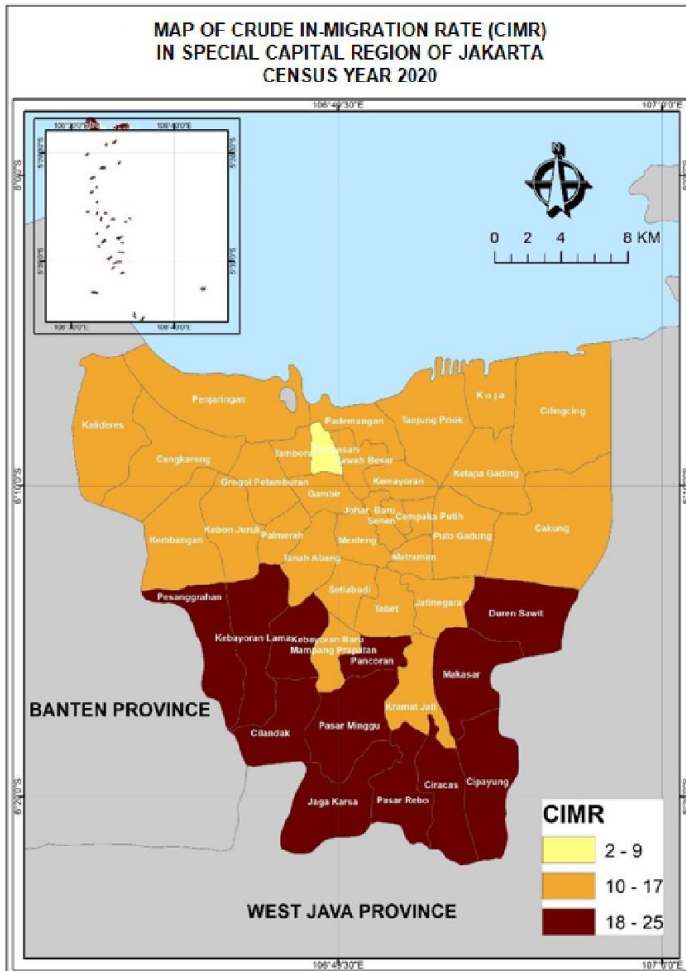


Figure 1. Map of Crude In-Migration Rate (CIMR) in Special Capital Region of Jakarta

Figure 1 shows a unique pattern of in-migration number in Jakarta, the highest range of CIMR, which spans from 18 to 25 migrants per 1000 residents occurring in the southern part of Jakarta province. Two contradicting facts, somehow, are found here. First, the southern part of Jakarta connects most developed urban areas in Jabodetabek (Jakarta, Bogor, Depok, Tangerang, and Bekasi) areas, which are South Tangerang City, Depok City, and Bekasi City. These three cities play a massive role in people and goods movement in the region as well as becoming the industrial basis of the western part of Java Island. Transportation in those parts of the region has also been improved and built intensively, connecting people far easier. Second fact, however, contradicts the basic concepts that migrants would settle urban cores as it provides much better job opportunities and standard of living improvement. Yet as urbanization pattern in Asian megacities has a whole different situation from western cities, which is marked by the mixture of rural and urban characteristic in suburban and urban settlements as well as mixture in socio-economic circumstances, therefore urbanization in Jakarta is much affected by urban sprawl, where the development from urban core had been pushed toward the fringes. It was also related to the findings in the early research of Jakarta urbanization that population density in the urban cores of Jakarta had experienced a drastic decreasing trend, while rapid increase was found beyond the core borders or above the radius of 7 kilometers.

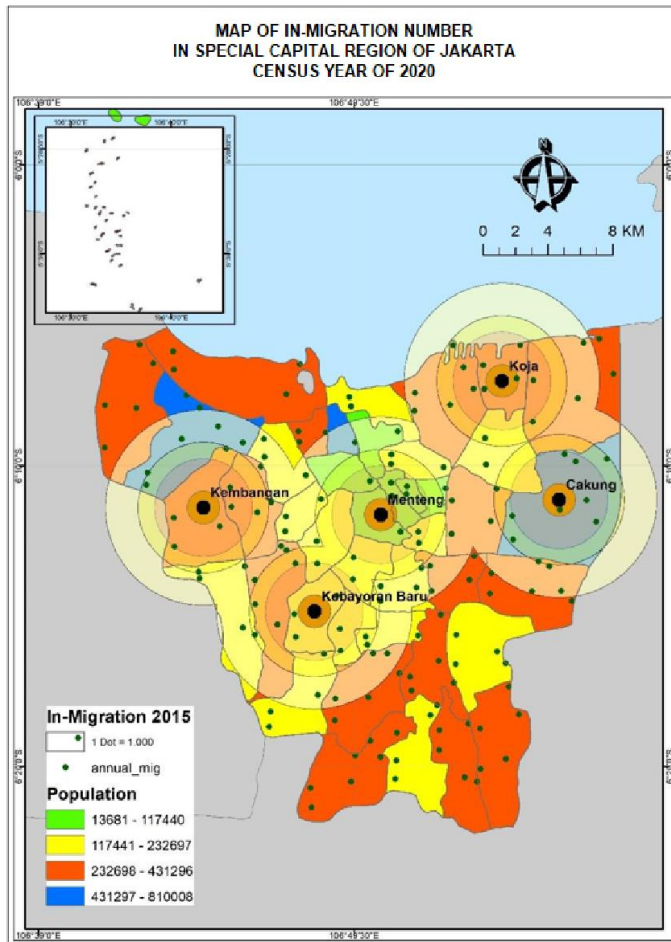


Figure 2. Map of In-Migration Number in Special Capital Region of Jakarta

It was stated by Murakami et al (2005) that population density in Jakarta decreased in the radius of 0 -5 km but increased again beyond the radius of 7 km. Migrant distribution also showed quite similar phenomena. Figure 2 shows a map of Jakarta with five urban cores in five cities, which are Menteng in Central Jakarta, Koja di North Jakarta, Cakung in East Jakarta, Kembangan in West Jakarta, and Kebayoran Baru in South Jakarta. The map presented shows that the distribution of migrants is not influenced by urban core locations. In Jakarta, migrants do not settle in certain concentrated locations, but spread almost evenly in each city in Jakarta. Yet the part where migrants tend to settle is the southern part of Jakarta, where the distance between urban fringes is not far and transportation has been improved. However, in the northern part and near the Kepulauan Seribu, numbers of migrants decreased gradually. This migrant distribution phenomenon indicates that economic development in Jakarta had radiated in each direction beyond the urban cores, showing the push power of urban processes that occurred from the center and sprawled toward its fringes. This phenomenon could result in a much wider urban zoning of Jakarta Metropolitan Area, where Jakarta as the urban core continues to rapidly developed, the spread of goods and movement of people started to push the province border toward other sub-urban areas out of

land needs, labor needs, better accessibility to reach wider areas, as well as connecting the region much closer socially and demographically.

4 Conclusion

Since 1975, migration in Jakarta has experienced a dynamic change. Initially, migrants seek Jakarta as the promising land to get better job opportunities, improve standard of living, and shift migrants' rural identity to the urban identity. Initially, migrants would settle the urban core as it has most of the economic activities and chances for migrants to engage. But from 1998, the pattern of migration had changed and population density itself had an increase beyond the radius of 7 km from urban cores while less than that, population decreased. This indicates the power of the urban core to reach its fringes and indicates urban sprawl phenomenon. This phenomenon could be perceived both positively and negatively, regarding drastic changes in land use and land conversion. Yet this type of urbanization had been considered normal for Asian urbanization, which had a remarkable distinction from the rest of its urban and rural mixtures. For further analysis, migrant distribution analysis could be followed by analysis on its impact toward settlement quality, social and demographic issues, as well as ecological impacts.

5 References

1. E. M. Brennan, "Population, urbanization, environment, and security: a summary of the issues," *Environ Change Secur Proj Rep*, vol. **5**, no. 22, (1999).
2. T. Firman, "The continuity and change in mega-urbanization in Indonesia: A survey of Jakarta-Bandung Region (JBR) development," *Habitat Int*, vol. **33**, no. 4, (2009), doi: 10.1016/j.habitatint.2008.08.005.
3. K. S. Yap and M. Thuzar, *Urbanization in Southeast Asia: Issues and impacts*, (2012), doi: 10.1080/00074918.2014.896312.
4. T. Firman, "Potential impacts of Indonesia's fiscal decentralisation reform on urban and regional development: Towards a new pattern of spatial disparity," *Space Polity*, vol. **7**, no. 3, (2003), doi: 10.1080/1356257032000169712.
5. T. G. McGee, "9 The Emergence of Desakota Regions in Asia: Expanding a Hypothesis," in *Implosions /Explosions*, (2021). doi: 10.1515/9783868598933-010.
6. A. Murakami, A. Medrial Zain, K. Takeuchi, A. Tsunekawa, and S. Yokota, "Trends in urbanization and patterns of land use in the Asian mega cities Jakarta, Bangkok, and Metro Manila," in *Landscape and Urban Planning*, (2005), doi: 10.1016/j.landurbplan.2003.10.021.
7. C. Tacoli, G. McGranahan, and D. Satterthwaite, *Urbanisation, rural-urban migration and urban poverty*, vol. **10**, no. 19, (2015).
8. M. Cadwallader, "Metropolitan Growth and Decline in the United States: an Empirical Analysis," *Growth Change*, vol. **22**, no. 3, (1991), doi: 10.1111/j.1468-2257.1991.tb00551.x.
9. R. Morrill, "Population Redistribution within Metropolitan Regions in the 1980s: Core, Satellite, and Exurban Growth," *Growth Change*, vol. **23**, no. 3, (1992), doi: 10.1111/j.1468-2257.1992.tb00935.x.
10. W. A. Befort, A. E. Luloff, and M. Morrone, "Rural land use and demographic change in a rapidly urbanizing environment," *Landsc Urban Plan*, vol. **16**, no. 4, (1988), doi: 10.1016/0169-2046(88)90007-2.

11. F. Putri, S. Wibirama, S. R. Giyarsih, A. Pradana, and Y. Kusmiati, "Landuse change monitoring and population density analysis of Penjaringan, Cengkareng, and Cakung Urban Area in Jakarta Province," in *E3S Web of Conferences*, (2019), doi: 10.1051/e3sconf/20197603004.
12. G. Temple, "Migration To Jakarta," *Bull Indones Econ Stud*, vol. **11**, no. 1, (1975), doi: 10.1080/00074917512331332652.
13. D. Rukmana, "Rapid urbanization and the need for sustainable transportation policies in Jakarta," in *IOP Conference Series: Earth and Environmental Science*, (2018), doi: 10.1088/1755-1315/124/1/012017.
14. F. R. Harahap, "Dampak Urbanisasi Bagi Perkembangan Kota Di Indonesia," *Society*, vol. **1**, no. 1, pp. 35–45, (2013), doi: 10.33019/society.v1i1.40.
15. A. Simone, "Cities of Uncertainty: Jakarta, the Urban Majority, and Inventive Political Technologies," *Theory Cult Soc*, vol. **30**, no. 8, (2013), doi: 10.1177/0263276413501872.
16. N. Wajdi, C. H. Mulder, and S. M. Adioetomo, "Inter-regional migration in Indonesia: a micro approach," *J Popul Res*, vol. 34, no. 3, 2017, doi: 10.1007/s12546-017-9191-6.
17. B. Giyanto, "Strategi Penanggulangan Kemiskinan (Studi Kasus Dki Jakarta)," *Jurnal Borneo Administrator*, vol. **4**, no. 2, (2008).
18. M. Noveria, "Fenomena Urbanisasi Dan Kebijakan Penyediaan Perumahan Dan Permukiman Di Perkotaan Indonesia," *Jurnal Masyarakat Indonesia*, vol. **36**, no. 2, (2010).
19. R. Eugene Sampakang and Herwanto, "Angka Kejadian Diare Pada Anak Usia 6-24 Bulan Dengan Riwayat Pemberian ASI Eksklusif Di Puskesmas Kecamatan Grogol Petamburan," *Tarumanagara Medical Journal*, vol. **2**, no. 1, (2019).
20. I. Rohmawati, "hubungan pengetahuan keluarga tentang BPJS (badan penyelenggara jaminan sosial) dengan perilaku keluarga dalam mengikuti program BPJS," *Jurnal Ilmu Kesehatan*, vol. **6**, no. 2, (2018), doi: 10.32831/jik.v6i2.171.
21. E. Brennan-Galvin, "Crime and Violence in an Urbanizing World," *J Int Aff*, vol. **56**, (2002).
22. N. Unayah and M. Sabarisman, "fenomena kenakalan remaja dan kriminalitas," *Sosio Informa*, vol. **1**, no. 2, (2016), doi: 10.33007/inf.v1i2.142.
23. A. Merlindha and G. Hati, "upaya rehabilitasi sosial dalam penanganan gelandangan dan pengemis di provinsi dki jakarta," *Jurnal Ilmu Kesejahteraan Sosial*, vol. **16**, no. 1, (2015), doi: 10.7454/jurnalkessos.v16i1.67.