

Spatial Distribution of Bangkok City Government's Expenditures on Infrastructure Investment

รับบทความ	09/05/2022
แก้ไขบทความ	06/06/2022
ยอมรับบทความ	07/06/2022

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Abstract

The investments in infrastructure and services help spur Bangkok's economy to faster growth. All the public facilities and services stimulate Bangkok's economy to a strong competitiveness among the Southeast Asia regions which helps increase employment opportunities. Generally, the Bangkok Metropolitan Administration (BMA) gets the largest portion of the national government's financial support among other local governments, as the city is the primary engine of national economic growth and the center of the country's economic activities. In these past years, it is obvious that Bangkok Metropolitan Administration keeps its interest in providing infrastructure projects far and wide under the Bangkok boundary. The proof is that the annual budgets distributed to the city building and services-related departments value a large portion of the total annual expenditures. Also, the annual budgets distributed to 50-district offices tend to rise over time. This paper attempts to take a study of the Bangkok Metropolitan Administration infrastructure investment and the budget allocation criteria considering the spatial pattern of the budget distributed and political factors. The budgeting data are analyzed every two years over 13 fiscal years over the period 2008 to 2020. This study involves content analysis together with integrating statistical and geographical tools. It solely focuses on the expenditures of Bangkok city which belongs to the Bangkok Metropolitan Administration. The findings indicate that Bangkok Metropolitan Administration proposed strategies and population factors influence the allocation patterns and there is some location-specific pattern.

Keywords: *budget allocation, spatial distribution, annual budget expenditure, infrastructure investment, Bangkok Metropolitan Administration (BMA)*

Introduction

Thailand's capital city, Bangkok, is the primary engine of national economic growth and the center of economic activities. Bangkok also dominates the urbanization of the entire country, which has over 10 million estimated population in 2020, including both registered and unregistered populations. In fact, without a huge amount of investment in urban infrastructures, counting city-building and services in succession, Bangkok's economy rarely goes beyond. The transportation networks, environment, sanitation, and communication system are the basis of the city's economic growth and urban well-being. These public facilities and services spur Bangkok's economy to a strong competitiveness among the Southeast Asia regions. They transform the city to become an emerging hub of business, trade, and medical care, which is beneficial to the rise of employment opportunities. The infrastructures also impact the tourism industry of Bangkok, which generates a large amount of income for the country as a whole.

The Bangkok Metropolitan Administration (BMA), the only local government of Bangkok city, plays a significant role in formulating and implementing the rules and policies managing the whole city and the well-being of the residents in the accordance with Bangkok Metropolitan Administration Act, B.E. 2528. The BMA's responsibilities are including urban planning, transportation and road networks, housing, environment and pollution management, healthcare, and security. It is obvious that BMA is the local authority that gets the largest portion of the Thai government's financial support. The annual revenue of the BMA is mainly dependent on the government's grants and the massive own-source revenues, as BMA has the capacity to collect taxes and non-tax revenues. Technically, the BMA has a great ability to set the budget expenditures responding to city-building and urban development. The annual budget is mainly allocated to salaries and routine operational expenses, along with a certain wide range of works, investments, and services such as general administration, healthcare, education, environment, drainage and sewerage system, public works, and traffic and significantly to 50-district offices. Obviously, the BMA budget expenditures have risen over time since 2007. In these past years, BMA keeps the interest in providing infrastructure projects far and wide under the Bangkok boundary. The proof is that the annual budgets distributed to the city building and services-related departments value a large portion of the total annual expenditures. Also, the annual budgets distributed to 50-district offices continue to grow.

As the city thrives as the center of economic actions, the distribution approaches and pattern of the BMA expenditures on infrastructure investment and services may seem to be favoring the overall growing population and relatively economically advantaged areas like the inner district of Bangkok, which is the center of business and commerce. This led to the research question that what reasons and factors contribute to the annual budget expenditure allocation pattern. The objective of this study is (1) to point out the differences between the

budget allocation patterns of the district level budget and the budget given through the BMA departments regarding geographical location and (2) to examine the reasons and factors for such budget allocation patterns.

Literature Review

Overview of urban infrastructure investment in Bangkok city

Primarily, Bangkok city is shaped by the network infrastructure, which is highways and mass transit systems. Within the 1568.74 square kilometers boundary of the city, it seems that the local government, has a huge responsibility in providing urban infrastructures. Yet, in fact, the BMA has scarce responsibility in providing the mega-urban infrastructure. The infrastructure and services in Bangkok are provided and delivered by a vast variety of agencies. As mentioned in Webster (2000), the majority of this infrastructure investment is undertaken by state enterprises, for example, the Expressway and Rapid Transit Authority of Thailand (ETA) is in charge of the tollway and expressway, and the Bangkok Mass Transit Authority (BMTA) provides the public bus system and the Metropolitan Electricity Authority (MEA) supplies entire city electricity. Also, the national government still plays an important role in constructing road networks and bridges in Bangkok. The BMA is indeed running the waste management and sewage disposal - in this matter, the expenditure allocated to the Environment Department of BMA is shooting up over years.

Source of revenues and the budget allocation structure of Bangkok Metropolitan Administration (BMA)

The BMA revenues derive from three main sources. First, local own-source taxes and revenues are all the taxes and non-tax revenues collected by district offices. The building and land tax, local maintenance tax, and signboard tax were the premier sources of the BMA's own revenues. The non-tax revenues are for example fees and charges. The second source is the taxes collected by the government like VAT and motor vehicle tax. Regularly, VAT generates the largest amount of BMA revenues. The third source is also obtained from the government, which are the grants, classified into general grants and ad hoc grants.

The budget allocation structure of BMA features two tiers of allocation. The first tier is the budget distributed to the BMA departments which covers all areas of Bangkok and is related to citizenship and well-being, for example, the investment in road and rail networks, environment protection, and education. Another tier is the budget distributed to 50-district offices which is location-specific. The district offices utilize these allocated budgets for general administration, basic public services also district development. The previous study found that BMA allocates the budget for district offices equally with the result that district-level expenditure per capita is less unequal (Patmasiriwat & Ratchatapibhunphob, 2013).

BMA budgeting process in brief

In Thailand, the fiscal year begins on October 1st and ends on September 31st of the following year. Thus, the budgeting process, in general, must prepare in advance. Buracom (2011) mentions that the BMA budget process recurred every year and consists of three main steps: budget preparation, budget adoption, and budget execution. Budget preparation is starting with the senior officials of each department preparing the annual budget to submit a budget request to the BMA Bureau of Budget. The BMA Bureau of the Budget has the responsibility to analyze the proposed budget and draw up the draft of the BMA Annual Budget Expenditure Ordinance and proposes it to Bangkok Council. Then comes to budget adoption process which Bangkok Council has a key role. The Bangkok Council's consideration of the BMA Annual Budget Expenditure Ordinance proceeds in three stages: the first is to involve consideration of the Ordinance in principle; the second stage involves consideration of the amendments, and the last stage is the final consideration. This consideration process of the BMA is slightly familiar with the national level Annual Budget Bill consideration. After the Annual Budget Expenditure Ordinance has been approved, the executive, led by the Bangkok governor, has the authority to manage the budget expenditure according to the approval. However, the previous evidence reveals that the budget adoption process of the Bangkok Council is not effective enough. The council tends to focus on the input factors rather than the outcomes of the budget allocation, which might cause the political bias of the budgeting allocation. Technically, the existence of the Bangkok Council is to charge of the regulation issue and moderates the working mechanism of the executive.

Research Methodology and Data Collection

This paper attempts to analyze the budgeting data every 2 years over 13 fiscal years from 2008 to 2020 (B.E. 2551 to 2563) and to examine the changing factors of the BMA annual budget. Urban infrastructure investment projects are categorized into main four groups from four departments of the BMA, the Public Work Department, the Environmental Department, the Drainage and Sewerage Department, and the Traffic and Transportation Department. The investment project locations are dispersed within Bangkok's 50-district boundary. The qualitative methods, including gathering data from statistical profiles of the BMA, the BMA plans, and budgeting regulations were employed. The study integrates statistical and geographical tools which are Geography Information System (GIS) and the Statistical Package for the Social Science (SPSS). The semi-structured interview is also considered an instrument to gather insights. The scope of the content only focused on the study of the reasons and factors contribute to the annual budget expenditure allocation pattern. It tries to identify and map out the significant features of correlation between the budget allocation of infrastructure investment expenditures and the BMA's geographical location. This study solely focuses on the budget expenditures of Bangkok city which belong to the BMA that are stated in the BMA Annual Budget Expenditure Ordinance: The

fiscal year 2008-2020. The spatial area of the study is BMA's geographical location; 50 districts of 1568.4 square kilometers.

Research Results

Strategic Distribution – the overview of budget expenditures distributed to the key departments

According to the annual budget expenditure, BMA annual budget expenditures continually rise over time. As demonstrated in Table 1 below, from the year 2007 to 2021 the overall annual budget accrues at the rate of 5.13 percent. Although as noted above the BMA has carried little responsibility for the city's network

Table 1: Percentage change in the BMA annual budget (fiscal year: 2007-2021)

Fiscal Year	Annual Budget Expenditures (million: THB)	Change (%)
2007	39,508	
2008	45,528	15.24
2009	46,549	2.24
2010	41,588	-10.66
2011	46,458	11.71
2012	55,508	19.48
2013	60,527	9.04
2014	65,517	8.24
2015	65,442	-0.11
2016	70,425	7.61
2017	75,636	7.40
2018	79,047	4.51
2019	80,446	1.77
2020	83,398	3.67
2021	76,452	-8.33
Average Increase		5.13 %

infrastructure, significantly, the infrastructure investment expenditures of the city are increased from the year 2008 to 2020. Figure 1 indicates that annual budgets distributed to these 4 departments: the Public Work Department, the Environmental Department, the Drainage and Sewerage Department, and the Traffic and Transportation Department value a large portion of the total annual expenditures. Commonly, the budget distributed to BMA departments tends to cover all areas of the BMA boundary, but there are still certain projects that benefit some geographical location that would help thrive the district and the community-level development. The analysis also found that the annual budget distributed to the Public Work Department was rising strikingly. The Public Work Department's investment budget is mostly related to the construction and maintenance of the road networks and public buildings. In these past 7 years (see Figure 2) the investments

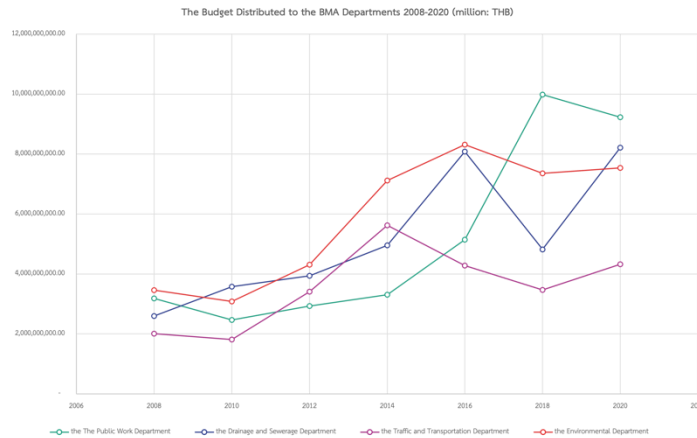


Figure 1: The annual budget expenditures distributed to the BMA Departments (fiscal year 2008-2020)

spread out to the outer district of Bangkok. The spread of these expenditures in Bangkok is consistent with the growth of the registered population in the suburban area of Bangkok. Presently, Bangkok is facing a population decline situation. The average registered population change between 2008-2020 is -0.18 percent. Yet, the number of the registered population in the suburb areas, for example, Min Buri, Lat Krabang, and Bang Khunthain, is rising on average (see Figure3). Additionally, the neighborhood provinces that surrounded Bangkok now achieve fast population growth. According to the BMA 12-year Development Plan (2009-2020), the BMA set the action plans to strengthen the infrastructure for regional mega-city. The BMA targeted connecting the transportation system with the surrounded provinces. Also, the BMA was concerned with the aspect of safety and agility of the traffic systems. Therefore, this analysis can be interpreted that the BMA is attentive to expanding the size of an urban area by offering construction works on the urban fringe. However, these suburb

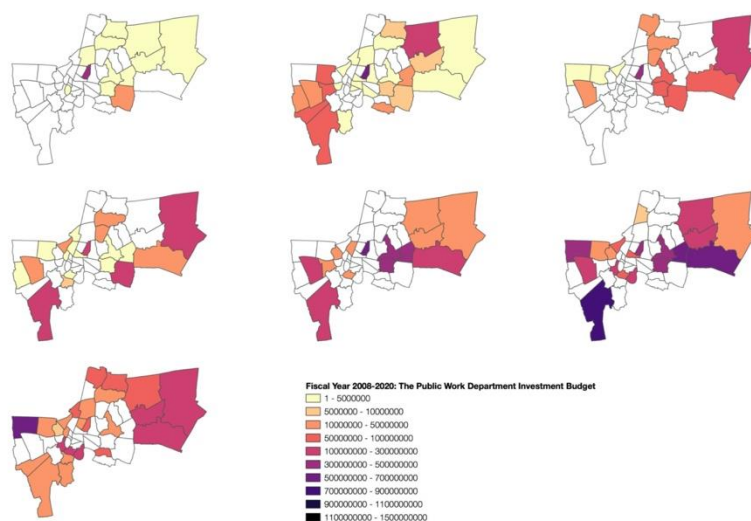


Figure 2: Fiscal year 2008-2020 the Public Work Department investment budget expenditures (THB)

areas are still currently considered rural and agricultural conservation zone and rural and agricultural zone, according to the Bangkok Comprehensive Plan 2013.

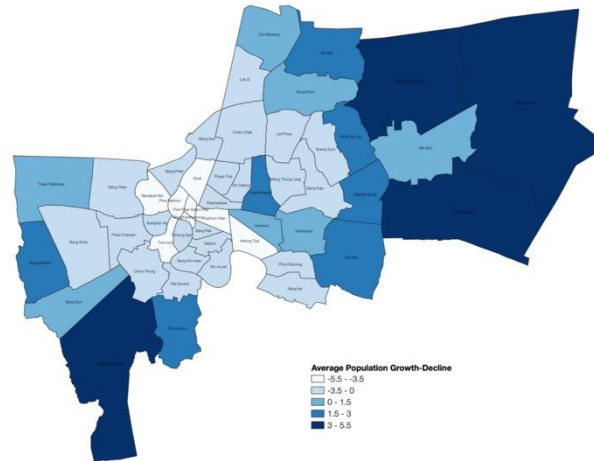


Figure 3: The average population growth of Bangkok (year 2008-2020)

Location-specific budget allocation – addressing the inequalities

As illustrated in Figure 4, in part of the budget distributed to 50-district offices, the study reveals that in the fiscal year 2008-2020 district-level budgets also rose gradually with a 5.29 percent average growth, though there were slight blips of increase in that time frame. The statistical analysis also shows that area size and population factors affect the annual budget given directly to the district offices (p -values ≤ 0.05). According to the data,

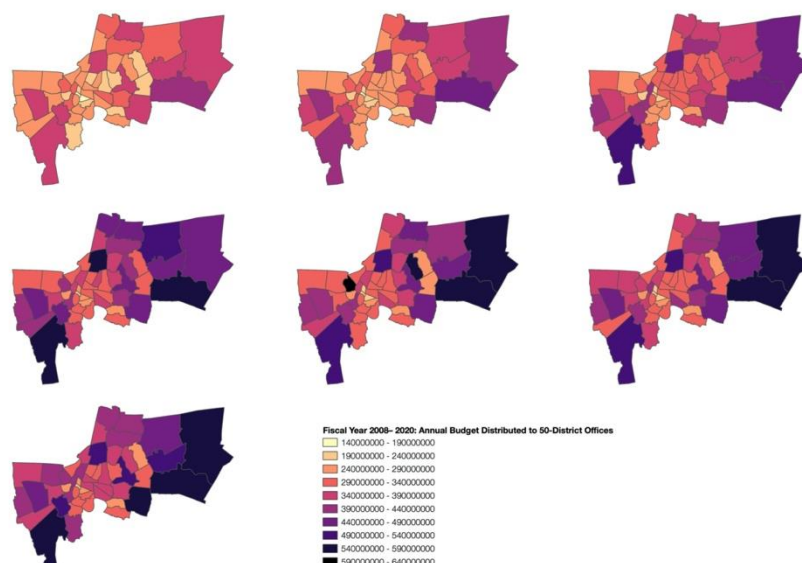


Figure 4: Fiscal year 2008-2020 annual budget distributed to 50-district offices (THB)

the districts that consist larger number of the registered population, which are mainly located in the suburbs of Bangkok, get a large portion of the budget distributed.

Another practice to measure inequality of the budget allocation is to the district budget expenditure per capita (budget distributed to district offices divided by the number of district registered populations). Throughout the seven years used in the calculation (see Figure 5), the average budget expenditure per capita of Bangkok is 3,329.89 THB. The study points out that the inner-area districts get high values of the expenditure capita, for instance, the average budget expenditure per capita of Samphanthawong district is about 7,487.53 THB. Figure

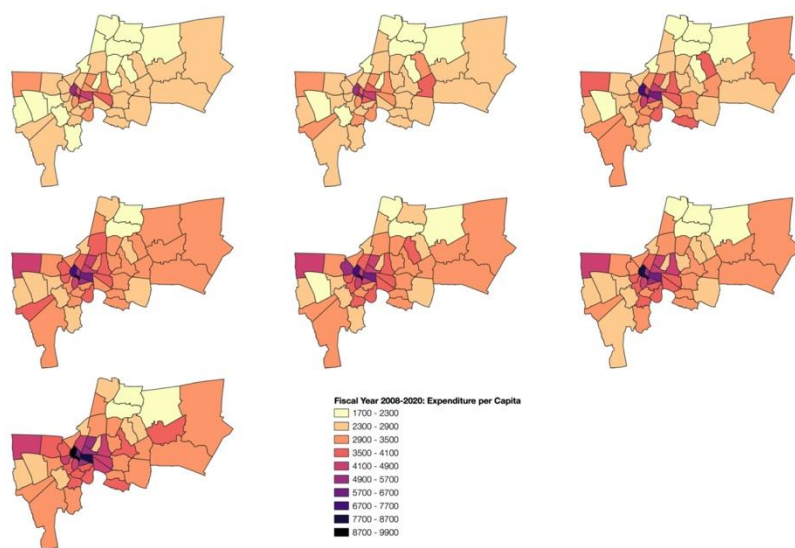


Figure 5: Fiscal year 2008-2020 expenditure per capita (THB)

5 implies that despite the fewer population within the inner-area districts, the expenditures per capita of the central zone of Bangkok city are huge. This analysis rightly emphasizes that the population factor results in the district office level budget expenditure allocation blueprint.

Further, the public finance expert also confirms that the allocation criteria of the BMA district-level budgets tend to be based on the population and area size of each district. The budget allocated to district offices is likely to be less unequal as the 50 district offices have the very familiar, and limited, function of providing the basic services within the district realm.

Owing to these research results, the budget allocation of BMA seems to have a specific pattern. Firstly, the budget expenditure distributed to the BMA department is based on strategic distribution. As the investment

budgets allocated to the departments, specifically the Public Work Department, are prone to spread out to the suburbs and the allocation pattern is related to BMA developed strategies, which is to improve and promote the urban expansion to the outer district area, together with strengthening the living qualities and well-being of the BMA territory. Secondly, though the district offices' budget allocation pattern tends to be agglomerate into the center of the city, the allocation is according to the population and area size standard. These criteria somehow cause inequality in the budget allocation yet on small scale.

Conclusion

BMA development plan and population factors indeed influence the budgeting mechanisms and the allocation patterns. The investment in infrastructure will keep on rising to meet the fast-growing economic needs. As long as the city can collect the local own-sources and still portrays the country's economic development leader, the inequality matters however seem to remain. However, if the political mechanism of Bangkok is effective enough, for instance, Bangkok Council has an effective role in the budget consideration process, and the inequality in the allocation pattern might be reduced. Also, these allocation patterns may result in an alteration of city plans and strategies like zoning maps and the comprehensive plan.

Reference

- Bangkok metropolitan administration act, B.E. 2528.* (2528 B.E., August 20). Retrieved from <https://dl.parliament.go.th/handle/lirt/15282>
- Bangkok metropolitan administration ordinance: Annual expenditure budget, B.E. 2550 to 2564.* [n.d.]. Retrieved from <http://www.ratchakitcha.soc.go.th> ›
- Bangkok metropolitan administration ordinance: Budgetary procedures, B.E. 2563.* (2563 B.E., June 18). Retrieved from <http://www.oic.go.th> › GENERAL › DATA0006.pdf
- Buracom, P. (2011). The roles of the Bangkok Metropolitan Administration Council in budget approval. *Thai Journal of Public Administration*, 9(2), 13–13.
- Patmasiriwat, D., & Ratchatapibhunphob, P. (2013). Fiscal disparity and equalizing budget expenditure: A case study of Bangkok metropolitan districts. *Thai Journal of Public Administration*, 11(1), 111.
- Pungprawat, K. (2009). Budgeting system and Bureau of the Budget in Thailand. *Southeast Asian Journal of Economics*, 21(1), 49–71.
- Webster, D. (2000). *Financing city-building: The Bangkok case*. Hong Kong: Asia/Pacific Research Center.