Transit-induced Gentrification in Bangkok, Thailand: A Review

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Abstract. As many of the developing megacities, Bangkok has also implemented a TOD system to tackle the increase of traffic congestion and the availability of transportation issues. However, the TOD projects in Bangkok are not supported by an appropriate provision in affordable housing. In recent years, as the improved accessibility and transit proximity are often capitalized into housing and land prices, it resulted in the low-income population displacement, a condition that refers to the term transit-induced gentrification. This paper uses Bangkok, Thailand, as a case study to review the impact of TOD especially in the displacement of populations. The review concludes that the gentrification in Bangkok is initiated by the increase of the value and rent price of the property due to the presence of the transit station. The case in Bangkok is one of the precedents that have a combination of characteristics from the early period and the latest period definition of gentrification. It has the characteristics that the case is concentrated in the city center and the subject is working class and wealthy residents, which from the early definition. While it still represents the characteristics of the latest definition, such as indirect and direct displacement that appear at the same time.

1. Introduction

The sustainability concept has been introduced since 1987 from the Brundtland Commission report and the 1992 Rio conference. It has been widely used as a policy reference to promote strategies for more reasonable uses of renewable resources. In parallel, awareness has been growing on the contribution of urban transport and mobility to main environmental externalities, and the growth of demand management programs has striven to minimize the mobility footprint through the reduction of automobile reliance and modal shift [1].

Transit-oriented Development (TOD) is one of the most popular interventions for minimizing the mobility footprint, thus making it a critical component of smart growth and new urbanism [2]. As many of the developing megacities, Bangkok has also used a TOD system to tackle the presence of traffic congestion and the availability of transportation issues. The implementation of the TOD system in Bangkok has a positive impact on raising property values and tax revenues. It considered a positive economic benefit for property owners and justification for the high cost of building close to the rail transit infrastructure. However, the TOD projects in Bangkok are not supported by an appropriate provision of affordable housing.
In recent years, the improved accessibility of transit proximity is often capitalized into housing and land prices. It resulted in the low-income population displacement, a condition that refers to the term transit-induced gentrification that becomes the affordability paradox of TOD [3].

The research about gentrification-related outcomes resulting from TOD initiatives in Bangkok is still limited in number. In many literature on gentrification, there are almost no qualitative accounts of displacement [4]. Therefore, it is vital to reinstate and discuss the issue. This article tries to reveal the transit-induced gentrification in Bangkok by using lesson-learned from selected literature. The article begins with a review of literature on transit-induced gentrification, followed by TOD development with the impacts in Bangkok, discussion of Bangkok case from the perspective of selected literature, and ends with the conclusion and recommendations regarding the gentrification issue.

2. Methodology
This paper reviews several articles and papers related to the transit-induced gentrification phenomenon. It is using secondary sources which contain specific keywords such as transit-induced gentrification, TOD, and gentrification. The insight from the literature is then compiled by using a comparative method and then concluded. The case of Bangkok will be discussed using the conclusion from the literature review to reveal and gain insight into the causal relationship between the presence of TOD and gentrification.

3. Literature review
This section presents a general review of the definition of gentrification and the evidence of transit-induced gentrification.

3.1. Definition of gentrification
Gentrification can be found anywhere. None of the cities can avoid from gentrification process because it is a natural form of the life cycle of cities [5]. There are various definitions of gentrification from many scholars, one of the earliest defined it as a shift of wealthy residents (gentrifiers) into working-class central city neighborhoods, directing displacement of low-income inhabitants, and altering the neighborhood socioeconomic condition [6]. The definition also followed by other literature that focused mainly on the direct displacement of the poor from working-class central city neighborhoods [7].

Nowadays, the definition of gentrification has transformed and expanded to the influx of capital into the vacant area or inhabited area, directing exclusionary displacement of the existing inhabitant, and shift the socioeconomic condition in that area. It has become significantly complex and takes a variety of forms. For instance, it is not only limited to the context of the inner city’s neighborhoods but also in rural and suburban areas and to describe upgrading neighborhoods that have already experienced earlier rounds of gentrification [8].

The contemporary definition differs from the previous definition in terms of the displacement impact. In the latest definition, it may not be leading to the direct displacement of the existing inhabitants, but to the indirect displacement of the low-income residents due to the increase of the price, social exclusion, and the transformation of the social composition of the neighborhood. [9,10]. Scholars have defined the new gentrification as new build gentrification [11,12,13].

| Table 1. Comparison of ‘gentrification’ definition |
|---------------------------------|---------------------------------|
| **Early Period**                | **Recent Period**               |
| Location                        | City center                     |
| Expand to rural and suburban    |                                 |
| Subject                         | Working-class & wealthy residents|
| Influx of capital               |                                 |
| Displacement                    | Direct                          |
| Expand to Indirect              |                                 |

Source: Compiled by Author (2019)
3.2. Evidence of transit-induced gentrification

Due to the latest development of the cities, the new motives lead to the gentrification process and creating a new type of gentrification. Many works of literature show that TODs (Transit Oriented Development) is affecting surrounding neighborhoods in the form of gentrification, it increases the price of the housing nearby [16,18,19,20]. The gentrification caused by TOD has been studied and resulted in a new term transit-induced gentrification. Transit-induced gentrification defined as a phenomenon that occurs when transit proximity is capitalized into TOD housing prices, resulting in higher-income households outbidding lower-income households for housing in transit-proximate locations [21]. The definition implies the presence of two separate conditions: (a) proximity to public transit is capitalized into the price of land and housing, and (b) high-income households will outbid low-income households for housing in areas where land is more expensive [21].

In 2007, a study using meta-regression models conducted in the US to analyze the effects of proximity to the railway station on property values. It concluded that residential properties located within 0.25 miles of public transit stations have approximately 4% higher price than those located far from public transit stations [23]. The high price of the properties nearby the transit station is inevitable and thus produces gentrification [24]. The gentrifier is the middle-class households who afford the price of the property, willing to drive less, and have compact living in mixed-use neighborhoods [25]. The examples of gentrification caused by TOD can be found in San Francisco and Cleveland neighborhood, where the highest gentrification number happens to the nearest neighborhood to the rail-transit stations.

On the other hand, a limited number of studies resulted in opposite findings. There is evidence that lower-income households with fewer vehicles are more attracted to live near transit-served neighborhoods. Their reason was the cost-saving benefits by spending less on using and owning private vehicles [3]. Surveys conducted by National Household Travel Survey and many regional travel surveys such as in America and West European Countries illustrate that lower-income households who have fewer vehicles prefer to use public transit than wealthier households [26]. Therefore, TOD may have the impact of appealing and keeping low-income households in surrounding neighborhoods. The opposite findings mostly caused by the persistent efforts of the local and regional planners to promote inclusive planning developments. In this manner, the inclusive planning development needs to be supported by government policy and engagement of various stakeholders, such as the residents, the government, and developers/organizations.

From the above explanations, we can conclude that each case results varies depending on the metropolitan area. For instance, in the area where transit-induced gentrification happens, affordability is the dominant factor, while the opposite results happen due to the strong role of planners supported by policy and engagement of various stakeholders in implementing the concept of inclusive planning development. Therefore, the presence of inclusive planning development is very significant in controlling the transit-induced gentrification.

4. Case Study

Bangkok is the capital city of Thailand that is located in the center of Southeast Asia. It is surrounded by five provinces with a 1500 square kilometer area and more than 12 million people living within the city. Due to the size of the city, Bangkok’s citizen has a long commute daily from their home to their job locations in the city. Bangkok has one of the longest commuting times in the world due to traffic congestion and poor road connectivity road system, the average time spent is three hours either by public or private transportation [27]. Therefore, investment in the rail system is promising a better quality of life. Since the first metro system was established in 1999, numerous lines are under construction due to the high demands. It becomes the major agenda of the nation to improve connectivity under the rail system. Moreover, the system territory of the rail network system is growing further. It integrates and includes policy instruments, structures of governments, political, social, and economic aspects [28].

The impact of rail system development has created profound changes and rapidly shifted land use within TOD areas. Along with the development of the metro system (BTS Sky Train), people’s lifestyles around the network dramatically changed. BTS is an elevated train that has two lines, a length of 36.9
kilometers, and 34 stations. It predominantly built to accommodate transportation in the central areas of the city. After several years, rail development had extended significantly, new additional lines open in 2017. Nowadays, the lines have 110.29 kilometers long with 71 stations and planned to be 311.41 kilometers in the future. The development of the train lines simultaneously affects the surrounding neighborhood. After established in 1999, it was followed by the completion of 57,803 condominium units within 500 meters of BTS and MRT stations [30]. The housing market close to the transit lines pioneered and lead by real estate developers that have a low concern with the existing. The impact is that the existing social structures and urban fabric slowly gentrified by the influx of new residents [30].

![Figure 1. Mass transit plan in Bangkok. source: [31]](image)

The socio-economical statuses of those who can afford living costs within TOD areas are middle to high-income class. It illustrated from a survey that the new residents who live in a condominium along the BTS line have an average income of 51,133 Baht, on the other hand, the average household income in Thailand is 18,660 Baht [33]. Another study reveals that there is a relationship between distance from mass transit stations and housing prices. Several high rent samples exclusively reside within 1 km from the station, where the average price of the sample within 1 km is 400 Baht/month/sq.m. If the minimum size of a house is 30 sq.m, the rent will be 12,000 Baht/month [32]. The impact of the high cost of housing and letting the private sectors manage the major development increase the negative effects of gentrification. Therefore, low-income households with high reliance on the public transportation system could not afford the living cost within TOD areas and slowly being gentrified in a negatively [30].

To see the impact of gentrification to a neighborhood, a small study conducted based on statistical data and supported by a semi-structured questionnaire from a condominium and the local neighborhood around the BTS Sky Train in 2018. The study is revealed that there is an increase in indirect displacement due to the high housing costs were reported to be increasing as well as the direct displacement of the inhabitant by the landlord [34]. The data indicate that significant socio-economic and demographic shift has occurred as a result of TOD. It was also reported many working-class residents who have been living in neighborhoods for many years, had to be displaced and have their communities destroyed, which indicated by many demolitions of old houses that occurred in many locations along the transit lines.
Another impact of gentrification is the proliferation of condominium buildings around the transit lines. The condominium development is also supported by the national government to maximize the influx of investment. It is responding to the foreign investment boom that demanding convenient expatriate accommodation and offices [34]. The condominiums have a diverse range from luxurious type to low-end type, with the cheapest price was 1.25 million Baht (approximately $ 38,000) and have increased [34]. It is unaffordable especially for many local inhabitants compared to the national average wage for Thailand. Thus, it representing the huge potential of high-income new residents replacing the originals.

Although the issue of transit-induced gentrification is already considered and evaluated by the government, only little can be done to address the inequities of displacement. It occurs as rental contracts and leases that end as opposed to illegal eviction, thus obstructing the policy interventions of the government. Moreover, an adaptation from urban policy into an action plan has been missing since the initial comprehensive plan in 1960 [30]. Furthermore, It is also exacerbated by the difficulty of stakeholder engagement, due to the regularly changing government and policies which makes planning difficult [34].

5. Discussion
Transit induced-gentrification happens along the line of BTS Skytrain in Bangkok’s city center. It is indicated from tangible aspects such as the growing number of condominiums and the demolition of the old houses along the BTS Skytrain line. Since 1999, a significant development of condominium occurred. There were 57,803 condominium units built within 500 meters of transit stations which clearly reshaping the existing urban fabric and also transforming the previous urban skyline from dominated by low rises buildings to high rise condominiums [29] (see figure 2 & 3). From the intangible aspect, the presence of TOD caused an immense increase in land prices and a significant shift in the socio-economic condition of the surrounding neighborhood. For instance, land prices predominantly near the new mass transit line have tripled from 100,000 Baht per square wah (1 square wah = 4 square meters) in 2011 to 300,000 Baht in 2014 [34]. Furthermore, a result of the survey conducted by Colliers confirmed that the increase in the price is affecting the social composition of the neighborhood [34]. One illustration is in Klongsan district, the area demographic is historically working-class with dominantly lower-income households with low educational levels. They are gentrified by the new inhabitants that mostly young professionals with relatively high incomes and university educated. [33].

In terms of the displacement due to gentrification, indirect and direct displacement arise simultaneously. The indirect displacement revealed from one of the surveys conducted along the MRT area in Klongsan District, where the area near the transit station is becoming an attractive and affordable choice for new residents while becoming less affordable for the local inhabitants and that where the indirect displacement occurred. It is where the local inhabitants are excluded because the area is
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6. Conclusion

In conclusion, the gentrification in Bangkok is initiated by the increase of the value and rent price of the property due to the presence of the transit stations. The case in Bangkok is one of the precedents that have a combination of characteristics from the early period and the latest period definition of gentrification. It has the characteristics that the case is concentrated in the city center and the subject is working class and wealthy residents, which from the early definition. While it still represents the characteristics of the latest definition, such as indirect and direct displacement that appear at the same time.

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