



Bangkok - A Primate City

Bangkok has a population of 6.5 million people and covers an area of over 1569 square kilometres. The city's population density averages 3600 people per square kilometre. It is a primate city - demographically, politically, economically and culturally dominant over all others in the country. Bangkok's population continues to grow; between 1988 and 1991 an extra 90,000 people were added to the Bangkok metropolitan region's population. This urbanisation has caused problems for the city and its planners. This Factsheet sets out the reasons for Bangkok's primacy and the problems that this rapid urbanisation has created.

History

During the reign of King Rama V (1868-1910), Bangkok underwent a major period of public works building. Many roads were built in the city. Horse drawn carriages and rickshaws became the main road conveyances through to the end of the nineteenth century along the four major metalled roads that had been built. After the arrival of motorised transport in the early twentieth century, roads connecting these original four streets were added as the city expanded in all directions. Canals were built, gaining the city the nickname 'The Venice of the East'.

When Thailand established a constitutional government in 1932, Bangkok became the nerve centre of a vast civil service which, coupled with its growing success as a world port, transformed Bangkok into a mecca for Thais from rural areas seeking economic opportunity and social activities. During World War II, there was a temporary period of stagnation, when the Japanese occupied the city, but the pace of development quickened in the 1950s. Bridges were built over the Chao Praya river (Thailand's major waterway), canals were filled in to provide space for new roads, and multi-storey buildings began crowding out the traditional teak structures.

Although Thailand has never been colonised, the British and to a lesser extent, the French, have had an enormous impact on the city during the first part of the century. During the Vietnam War, Bangkok gained notoriety as an R&R (rest and relaxation) spot for troops stationed in South East Asia and gained US influence over its development.

Since the opening up of Vietnam, Cambodia, Laos and Myanmar (Burma) to foreign investment, Bangkok has become the financial hub for mainland South East Asia. It continues to attract migrants from Thailand and from around the world. It is the epitome of the primate city.

Primacy

The Bangkok Metropolitan Area represents one of the World's most extreme examples of primacy. Its share of the national urban population increased from 45% in 1945 to 63% in 1980.

Approximately 70% of Thailand's urban population now live in Bangkok (and 10% of the country's total population). In comparison, 30% of the Philippine's total urban population live in Manila and 27% of Malaysia's urban population live in Kuala Lumpur - the regions second and third most primate cities.

Bangkok has a disproportionate share of other development indices:

- 79% of all pharmacists
- 45% of all doctors
- 80% of the country's telephones
- 72% of all registered passenger cars

It provides 60% of the country's Gross Domestic Product. The primacy of Bangkok means that it does not fit the 'Rank Size Rule'.

The Rank Size Rule

Zipf, an American geographer, proposed in the 1930s that if all the settlements of a country or region are ranked according to their population size, the size of the settlements is proportional to their rank. In other words, the population of the second largest settlement would be half that of the largest one, whilst the third ranked settlement would be one third of the largest one and so on. This can be expressed numerically:

$$Pr = P_1/r$$

Where P_r is the population ranked 'r'
 P_1 is the population of the largest town
 r is the population of the town 'r'

This rule does not apply to Thailand. The official population of Bangkok is 6.5 million. The population of the next largest city, Nakhon Ratchasima, is 278,000. Since $6,500,000/2 = 3,250,000$ the population of Nakhon Ratchasima should theoretically be 3,250,000 according to the Rank Size Rule. Since it falls a long way short of the theoretical figure - Bangkok is a primate city. A graphical representation of this is shown in Fig 1.

Fig 1. Graphical representation of the Rank Size Rule

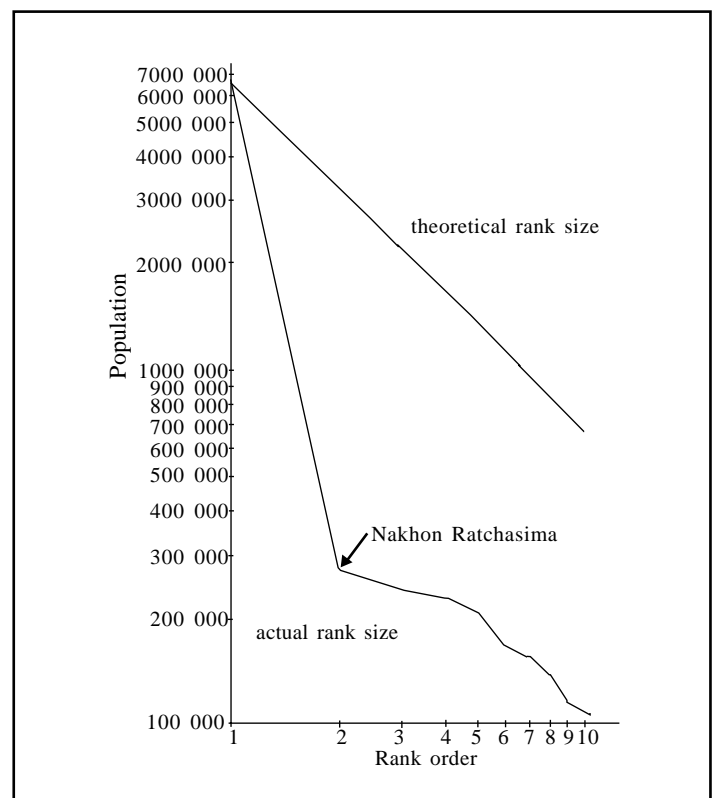


Table 1 lists the population sizes of the biggest cities in Thailand, from which Fig 1 was plotted.

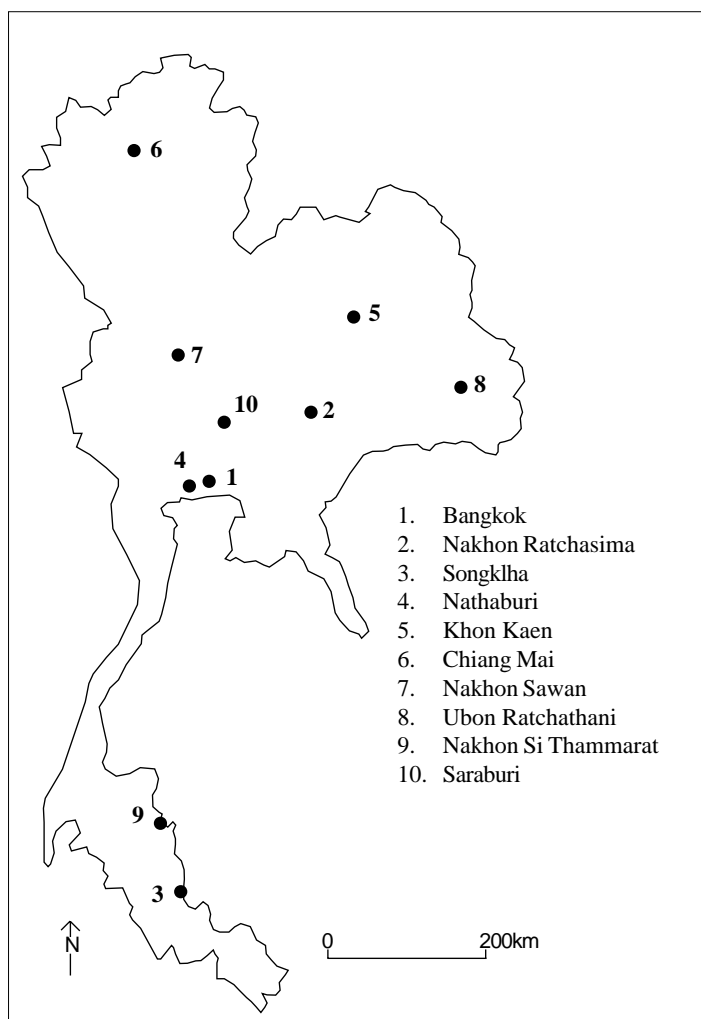
Table 1. Population of Thailand's cities

City	Population in 1000s	City	Population in 1000s
Bangkok	6,500	Ubon Ratchathani	137
Nakhon Ratchasima	278	Nakhon Si Thammarat	112
Songkhla	248	Saraburi	107
Nanthaburi	233		
Khon - Kaen	206		
Chiang Mai	167		
Nakhon Sawan	152		

Exam Hint - The Rank Size Rule does come up a lot in data response questions. Candidates should be clear about how to calculate it. It would also be useful to know which factors encourage the growth of primate cities in other LEDCs (Less Economically Developed Countries)

The large distances between major urban centres in Thailand are a contributory factor to Bangkok's primacy. Nakhon Ratchasima, Thailand's second largest city is over 250 kilometres away from the Bangkok Metropolitan Area (Fig 2). The size of Bangkok also hampers the emergence of contending larger cities since employment and business opportunities are concentrated in the city.

Fig 2. Cities & major towns in Thailand



Urbanisation within Thailand

The history of urbanisation within Thailand is almost exclusively the history of the growth of Bangkok; the expansion of the city is inseparable from the economic growth of the country as a whole.

Bangkok was a sizeable city at the beginning of the century even though there were no large scale manufacturing industries within the city. When industrialisation picked up speed, the population of Bangkok also increased rapidly. This can be seen most dramatically in the period 1960-1980, when the annual average growth rate of migration into Bangkok was 7%. Some periods of time were even more intense than this - between 1975 and 1981, the growth rate was 9%.

Migration is therefore an important component of the city's growth pattern and in 1980, 27% of the city's total population classed themselves as migrants. There is also a distinct seasonal pattern to migration. Most migrants arrive in February and during the slack agricultural season in May. The migrants are predominantly under 30, single and seeking employment in the city. Unlike many migrants in LEDCs, there is a balance of males and females, since the employment opportunities for young women in Bangkok are numerous.

The migrants to Bangkok do not usually move in a stepwise pattern i.e. from a village to a small town thence onwards to a larger town, as is typical in many LEDCs. This variation is due to new transport developments which have made long distance travel easier and cheaper, often at the expense of local destinations. For example, Roi Et, a small town in north-eastern Thailand, has two buses a week making the 900 kilometre trip to Bangkok - a much better service than to the regional capital of Khon Khaen. As a result, many migrants tend to make the direct long distance move to the capital.

The other side of this rural-urban migration is rural stagnation. If cities are advantaged to the extent that wages are considerably higher than in the countryside, Thai farmers will decrease their level of investment in agriculture and in many cases move to urban areas. This fall in agricultural production has had a serious effect on food self-sufficiency and rural livelihoods.

Urban Problems in Bangkok

The excessive growth of Bangkok has led to a situation in which the city is so large that the costs of congestion, pollution, land and labour actually make it less efficient than other towns. This phenomenon is known as a **diseconomy of scale**.

Bangkok is straining to provide the basic services for its rapidly expanding population. Large areas of the city do not have piped water. At least 100,000 people per day obtain water directly from canals and waterways that are badly polluted by industrial effluents and human waste. It is estimated that only 80% of the 2,740 tonnes of solid waste, generated daily, is collected. The remainder finds its way into the rivers and canals. Out of the 700,000 water connections in Bangkok, only 150 are for manufacturing firms. The large percentages of firms which do not receive piped water obtain their supply directly from groundwater. Drawing large amounts of groundwater from the underlying rock strata has led to subsidence problems in Bangkok.

Perhaps the most pressing problem in the city currently is extreme traffic congestion, over wide areas and for long periods of the day. This has been caused by a high level of private car ownership compared to other LEDCs. In fact only 25% of the population use private cars, so the congestion reflects the fact that roads take up only 8.5% of Bangkok's land use; a figure which needs to be increased to 20% to relieve congestion substantially.

The other contributors to congestion are motorcycles, taxis, lorries and an old bus network which does not have sufficient capacity. Several mass transit systems have been planned to help relieve congestion, some of which are under construction and some of which are still on the drawing board.

A major problem with transport planning in Bangkok however, is the lack of co-ordination between the city's authorities. This inevitably means that projects do not get completed on time. The investments involved in these rail and road projects are immense, but as the current traffic costs the nation over several million U.S. dollars per year in fuel, the potential savings far exceed the outlay. Bangkok recently lost out to Singapore in a recent bid to be the site of the new Asia-Pacific Economic Co-operation Secretariat largely because of the city's appalling traffic congestion.

The government is considering toll or traffic control zones within the Central Business District (CBD) and city planners believe that this would be the best approach for quick and lasting traffic congestion relief. This sort of plan has worked well in Singapore, but it remains to be seen whether such a system would work in Bangkok, where the enforcement of traffic lights, parking and one-way streets is less rigorous.

In 1996, the government established an excise tax on products and services which harm the environment. It began with two-stroke motorcycles, a major polluter. Buses are in dire need of attention, as they make up less than 1% of the vehicles on the city's roads but account for as much as half the air pollutants. However, despite the high air pollutant levels, Bangkok did not make the World Health Organisation's list of Asia's five worst cities for air pollution. These were Delhi, Xian, Beijing, Calcutta and Shenyang.

Urban Structure

Bangkok's oldest sector, within the loop of the Chao Praya river, contains the city's major temples, palaces and historic monuments. This central core and adjacent areas have changed rapidly in recent years. High income residential areas near the CBD have been transformed for intensive commercial use, as the rent bid for land has risen.

Until recently, Bangkok was a dense and compact city. However, in the past decade, the urban fringe area has changed into sprawling unplanned suburbs such as Bang Bua Thong. There have also been substantial increases in residential land use on the left bank of the Chao Praya river in the Thonburi area. This urban area is now the fourth largest in Thailand.

Slums have shifted from the now highly valuable CBD area to the suburban areas where the land is less sought-after. The shanty housing has been put together with waste material such as corrugated iron, packing cases and scrap timber. Shanties in Bangkok are built on waste or vacant land such as beside railway lines or on marshy land close to the Chao Praya river. They are often located near to expensive housing.

Decentralisation

The conurbation of Bangkok has now expanded into the five neighbouring provinces and the government is encouraging the growth of satellite cities in these surrounding provinces. Whilst this decentralisation is intended to reduce congestion cost, it may actually work against the intention to develop Thai peripheral regions in the North and South of the country, since this reorganisation is likely to give a competitive edge to the core area around Bangkok. In the past, decentralisation away from Bangkok had concentrated on improving transport and communications in expanding towns around the city. More recently however, the government has offered tax incentive schemes to firms who wish to be located in these regional cities and the government itself has an industrial estate there.

All of Bangkok's surrounding provinces have received benefits such as tax exemptions and subsidies for the building and operating costs of infrastructure facilities such as roads, water supply and electricity. Despite these policies, Bangkok is still the most economically sensible location for companies, especially in the light of the fact that Thailand has a far more service based economy than many of the Asian Tigers. Given the market-led economy of the country, if Bangkok ceased to be a cost effective location because of the congestion, firms would relocate elsewhere.

Exam Hint - When describing the problems which have resulted from rapid urbanisation, candidates need to be systematic in their approach and describe each problem in a separate paragraph. Thus, housing, transport, environmental issues and health services would be dealt with in a logical order.

Conclusion

The primacy of Bangkok has caused the city many problems. The diseconomies of scale have caused environmental, economic and social problems. The government has been attempting to alleviate these difficulties but a lack of central planning has meant that there has not been any co-ordinated action. Shanty towns have grown up in and around the city. The urban area is spreading into the neighbouring provinces and the original site of the capital, discarded as a location in the eighteenth century is now the fourth largest urban area in Thailand. Bangkok exhibits all the challenges and opportunities for which a primate city is renowned.

Acknowledgements;

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