

Thailand's Sustainable Urbanization

Bhanupong
Lecture 30

“All happy families resemble one another, but each unhappy family is unhappy in its own way”

***Anna Karenina* by Leo Tolstoy.**

Outline

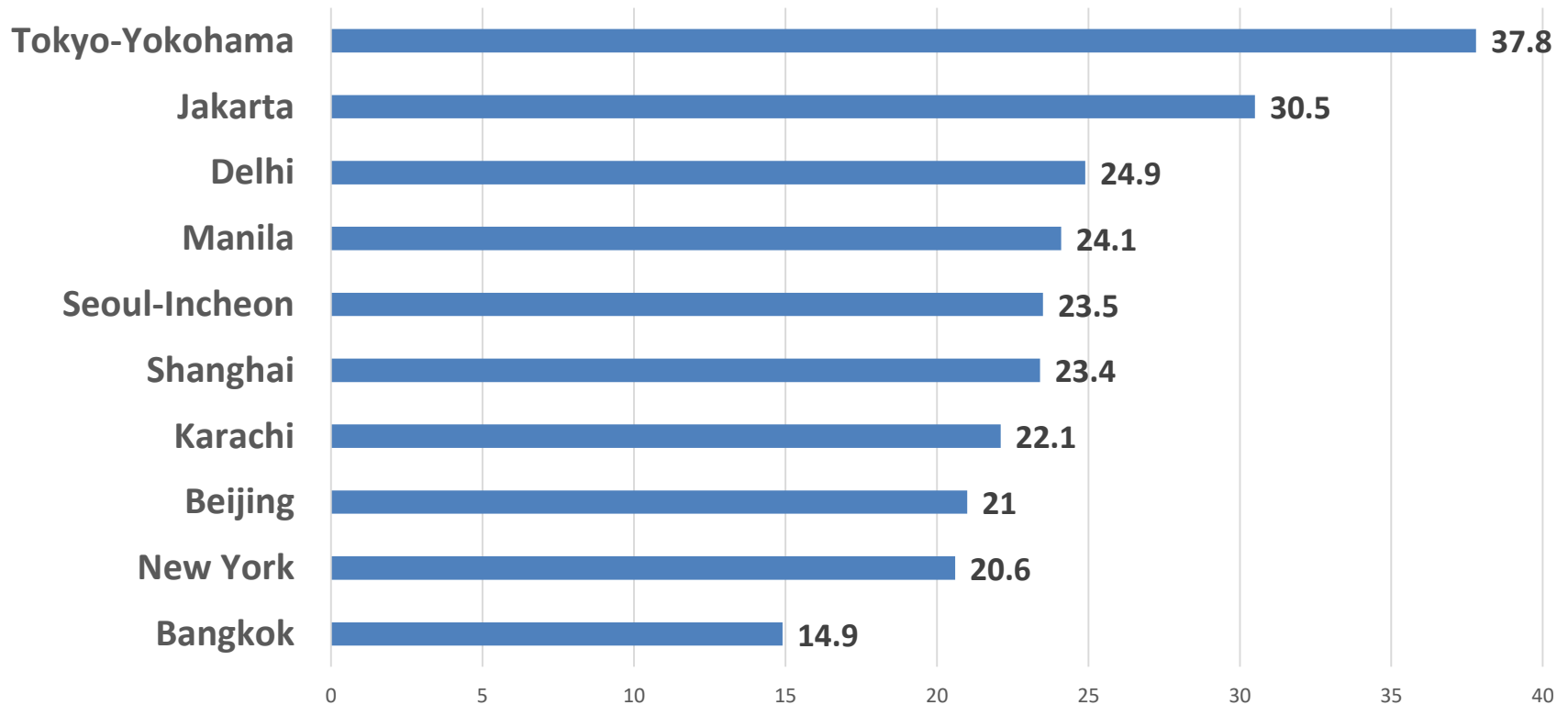
1. Urbanization around the world
2. Rural and urban divide
3. Urbanization matters
4. Urban Primacy
5. Sustainability of Bangkok
6. Environmental Kuznets Curve

1. Urbanization around the world

- Back in 1950
- Less than one-in-three people lived in urban areas.
- The world had just **two** so-called "megacities" with populations in excess of 10 million
- New York and Tokyo.

Megacities in 2015

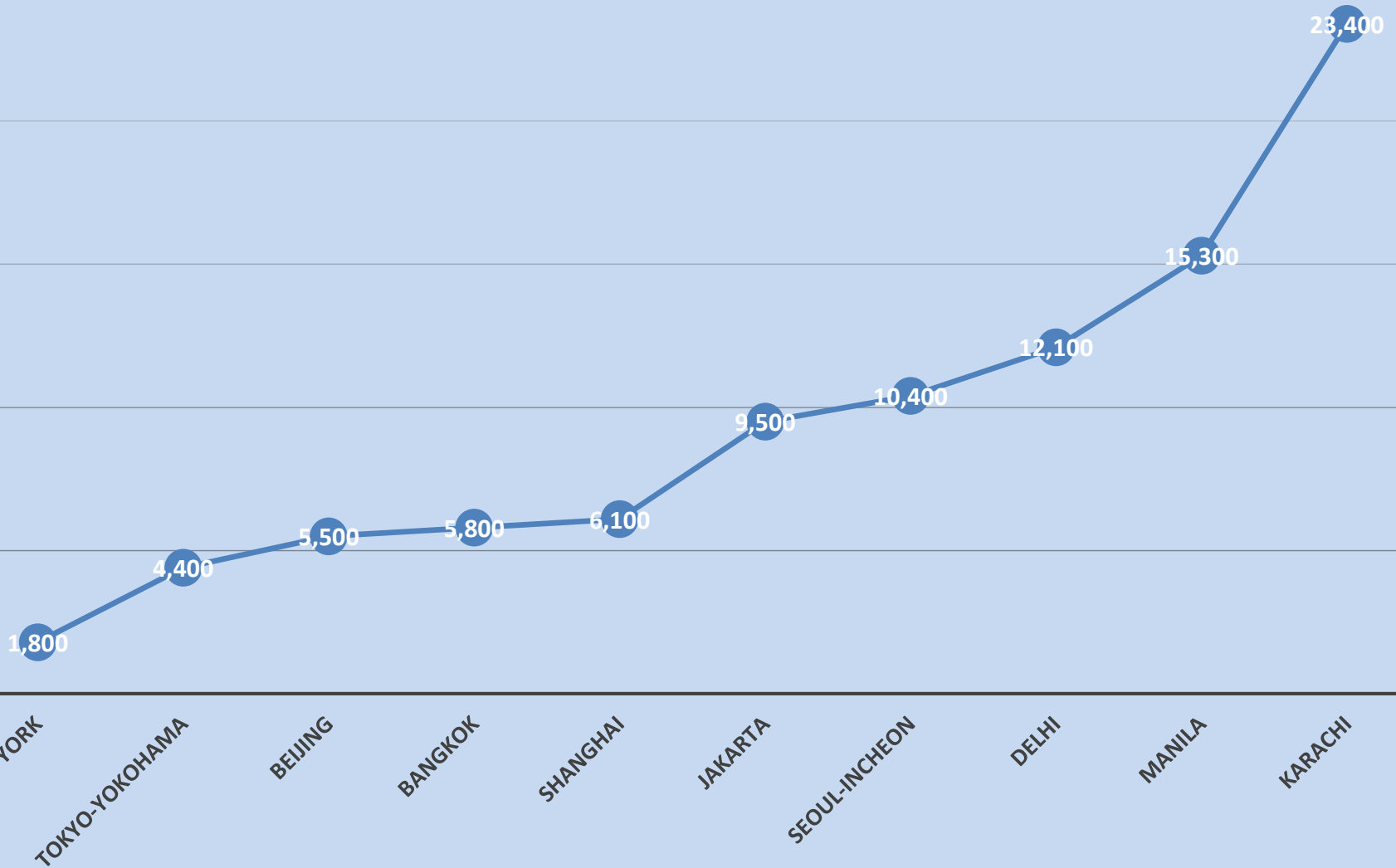
Population in Urban Area: 2015
(million people)



Stylized fact

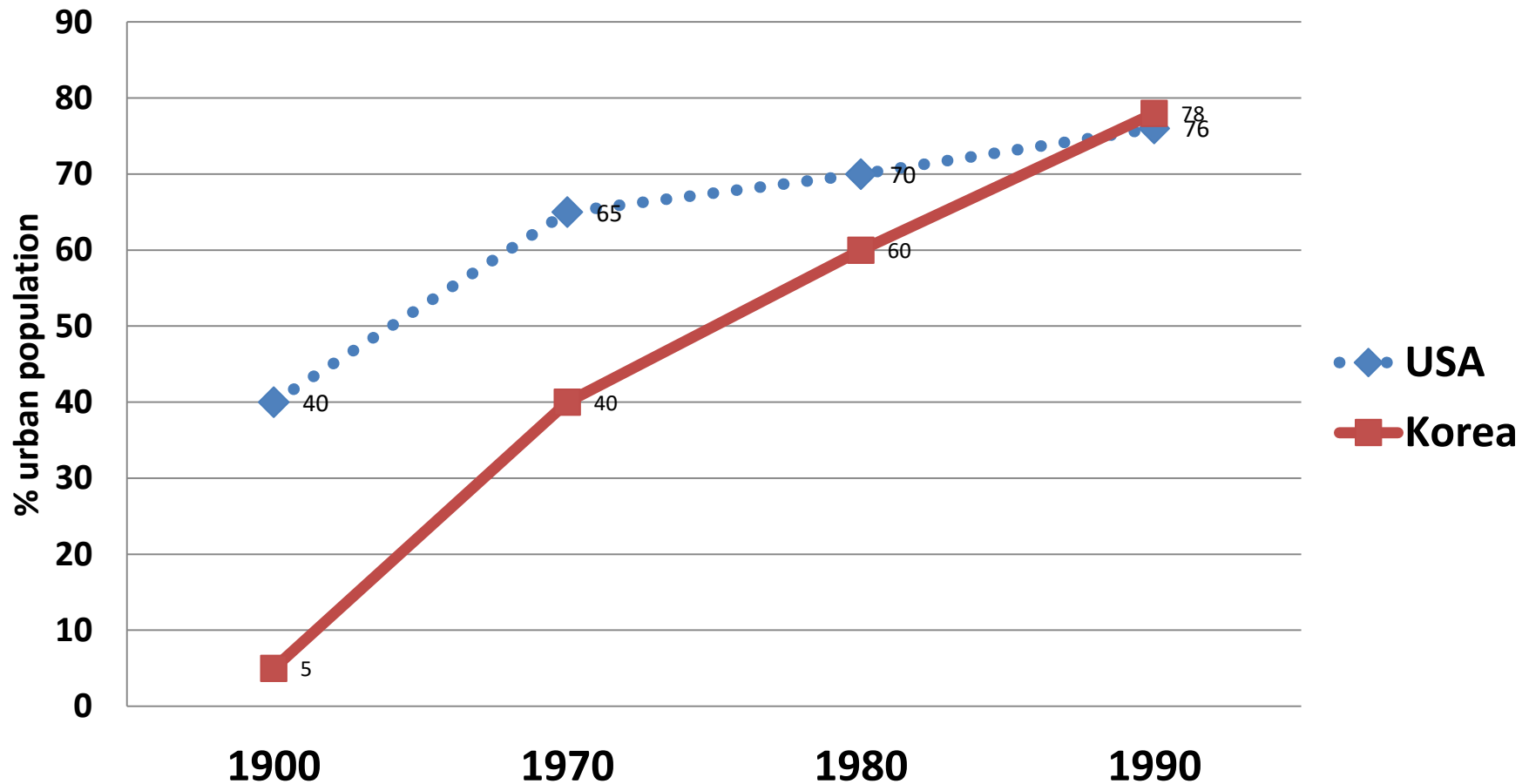
- The world is fast approaching the point where the *majority* of the human population will be found in urban areas.
- The United Nations estimates that about 180,000 people are being added to the urban population every day.
- The world's **urban infrastructure** has to absorb the equivalent of the population of two Toykos each year.

Population Density in mega cities (people per square kilometer)



It took the US **90** years to raise urbanization from 40% to 75 %
while it took only 30 years for Brazil, **20** years S. Korea

Faster Speed of Urbanization



The world's economy is shaped by urbanization

- Out of the top 25 growth cites, an astonishing 21 are in the developing world.
- Only New York, London, Los Angeles and Tokyo will outgrow places like Xi'an and Dongguan.
- The upshot is that urbanization as much as globalization is shaping the earth's economy.

Urbanization in China

- China's urbanization has followed the **traditional drivers experienced by the West.**
- Its industrial revolution is the most rapid the world has seen, and the Chinese government says it has helped lift more than 200 million people out of poverty.
- Millions of people migrated from rural to urban areas to fill the jobs generated by the economic explosion.
- Many workers receive low wages and live in poor conditions.

A general view of Shenzhen in 1985 and 2015
Shenzhen, Guangdong province of China



A model to replicate across China

- Gone is the model of cheap labor and foreign investment pioneered by Deng Xiaoping,
- It's now driven by an innovation force which China wants to replicate across the country.
- The board-stuffing electronics lines filled with migrant workers are also gone.
- In their place are bankers, tech entrepreneurs, researchers and hipsters.
- Deng made Shenzhen a test ground for a market-based economy in 1980, and it succeeded beyond all expectations.
- The city is home to many of China's most successful companies, including telecom giant Huawei Technologies Co., web portal Tencent Holdings Ltd. and Ping An Insurance (Group) Co.

Urbanization in rich countries

- In the ***traditional model*** of urbanization, which North America and Europe experienced during the Victorian era, people were pushed away from the countryside by the ***mechanization of agriculture***, and pulled towards urban areas by the offer of jobs and wages.
- North America and Europe's urban areas already account for about 70-80% of the regions' populations, and these are expected to ***stabilize*** at these levels.

A different kind of urbanization: Poor countries

- Sub-Saharan Africa, which has the world's **highest rate of urban migration**, is **not** following the traditional western pattern.
- Developing nations are struggling to cope with the huge influx of people into urban areas.
- Some cities' populations are 40 times larger than what they were in 1950.

Gradual vs. rapid urbanization

- The gradual pace, combined with relatively high GDP and education per capita, allowed time for the development of political and economic institutions and market instruments essential for an efficient form of urbanization and a reasonable quality of urban life.
- Rapidly urbanizing developing countries require adaptation of rural institutions and governance to urban society.

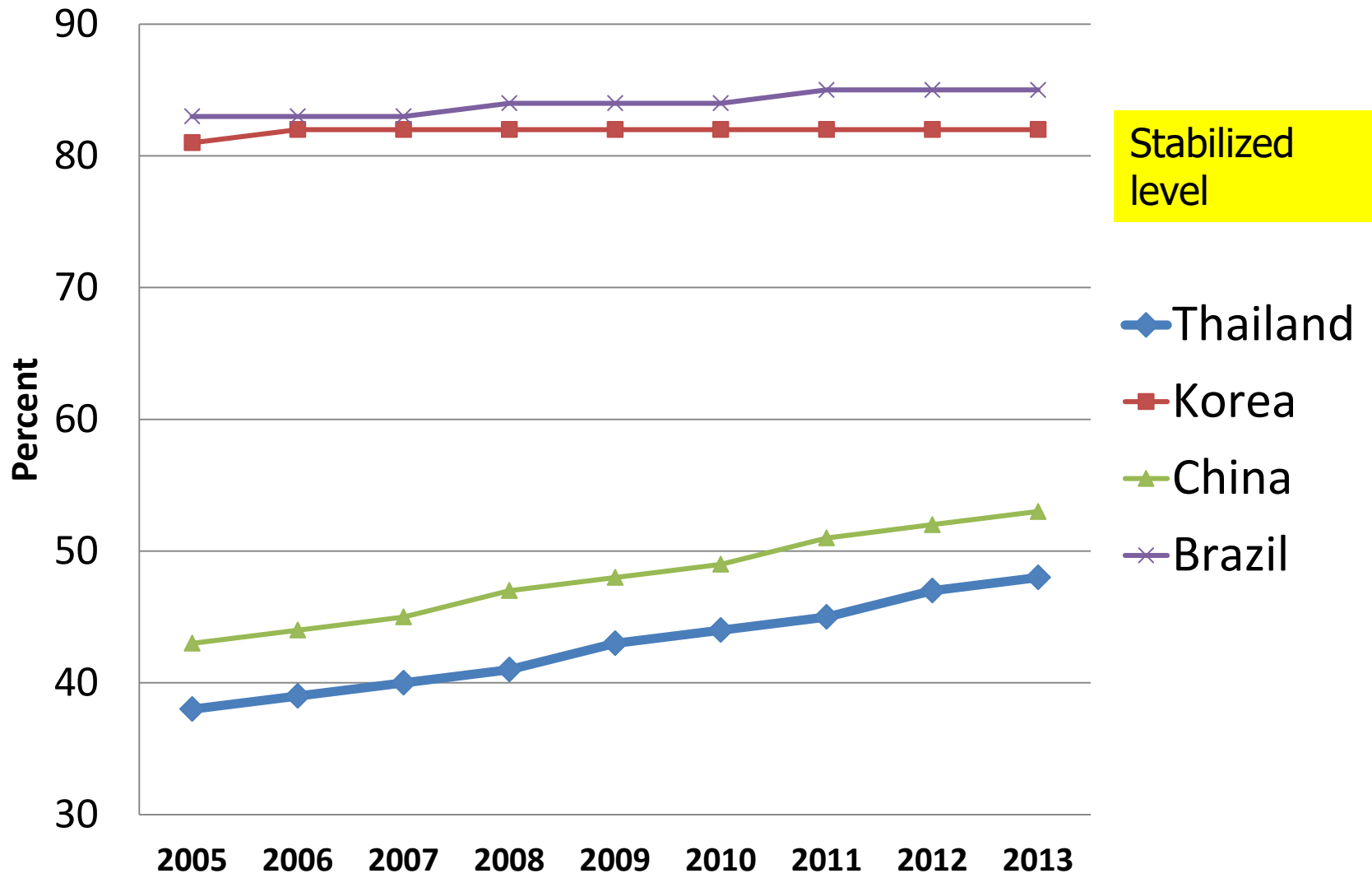
Gradual vs. rapid urbanization

- They have little room for timely experimentation and adjustment.
- So rapid that there is no time to put electrical and phone lines underground: trees must be trimmed regularly to protect electrical lines.
- No time for establishing and planning efficient means of mass transportation (BTS and MRT in Bangkok)

Bangkok population increased from 1.3m to 9.6 m

- UN World Urbanization Prospects estimated that Bangkok' population in 2017 is at 9,617,000.
- In 1950, Bangkok population was only 1.36 million.
- Bangkok has grown by 347,000 in the last year, which represents a 3.7% increase.
- These estimates represent the urban agglomeration of Bangkok, which typically includes Bangkok's population, in addition to adjacent suburban areas.

Urban population (% total)



By 2016, urbanization rate in Thailand increased to 50%

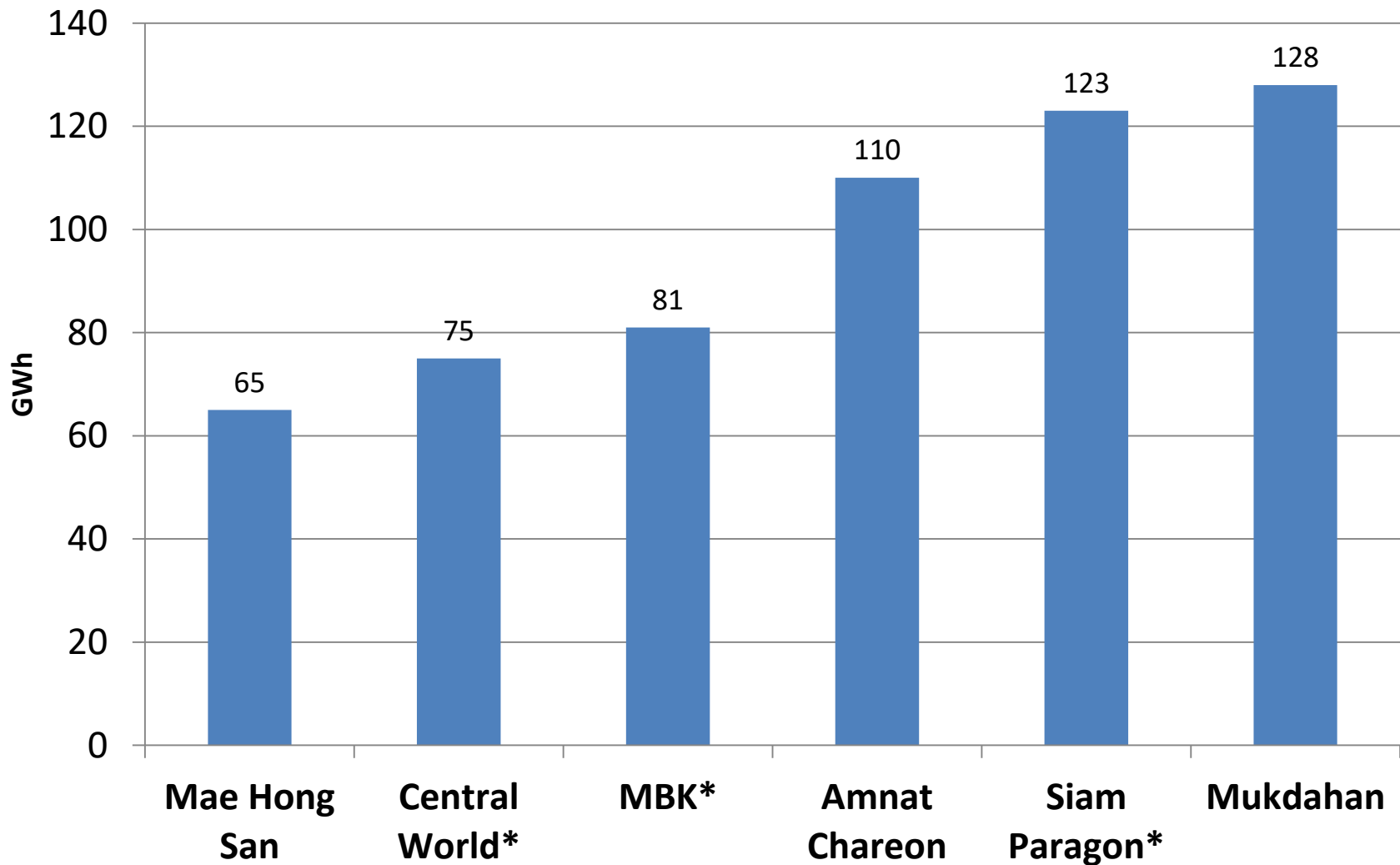
2. The rural-urban divide

- **Megacities** and large cities are the richest and have far better access to basic public services;
- Smaller towns, secondary cities, and areas on the perimeter of urban centers are less rich.
- **Rural areas** are the poorest, but this does not mean unfettered urbanization is a cure-all
- **The urban poor** in many places urgently need better services as well as infrastructure that will keep them connected to schools, jobs and decent health care.

How much luxury retail does one city need?

Bangkok's newest high-end mall, Em Quartier, opened March 27, 2015, featuring brands including Louis Vuitton, Chanel, Dior, Prada, Cartier, Dolce & Gabbana, Tiffany, Fendi, and Balenciaga.

The rural-urban divide: Electricity usage (GWh) Bangkok Shopping Malls (*) and Rural Provinces



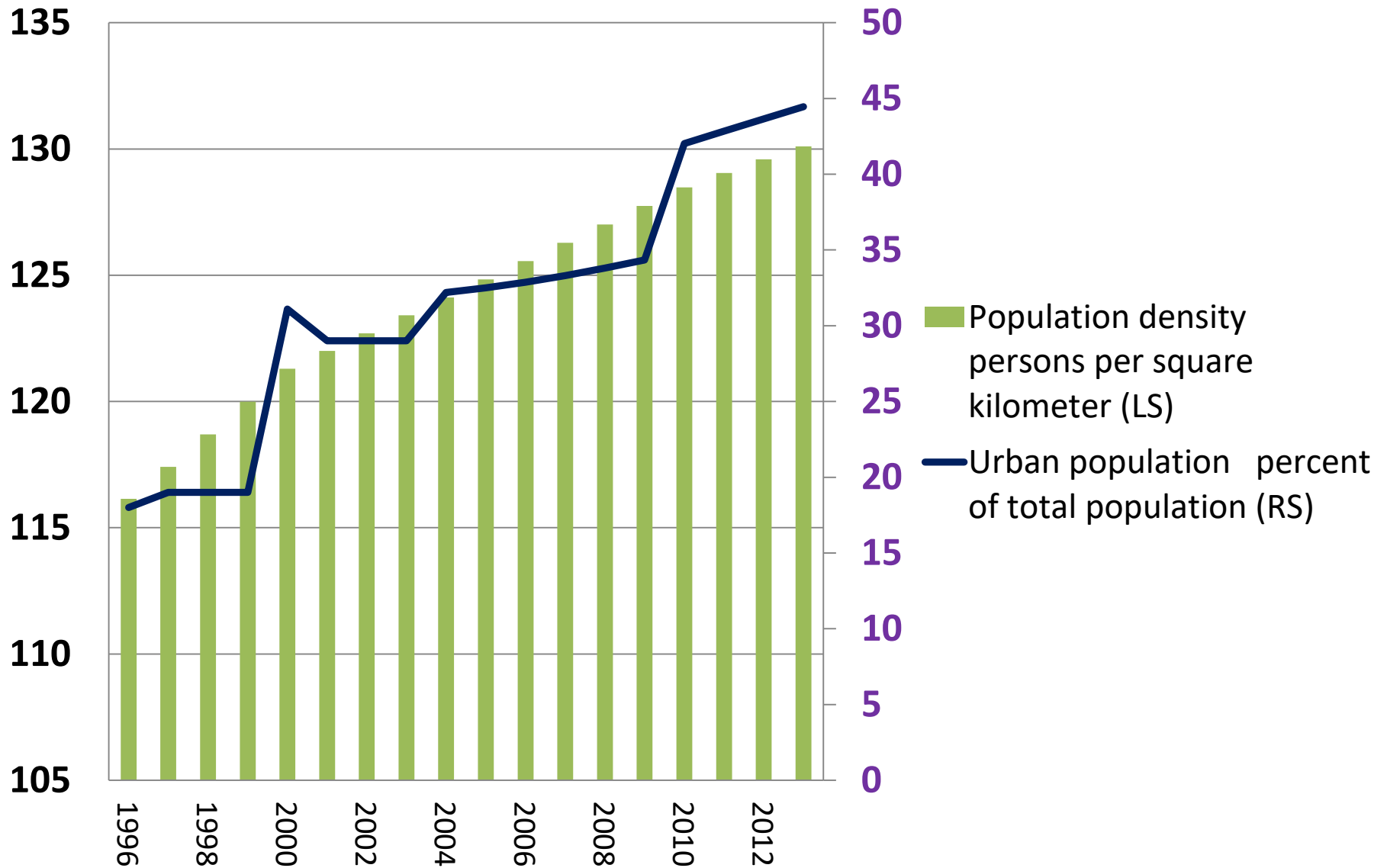
Because of the city's intense climate—it is one of the hottest big cities in the world—Bangkok malls and their massive air conditioning systems consume immense amounts of electricity.

The huge Siam Paragon mall consumes nearly *twice* as much power annually as all of underdeveloped **Mae Hong Son** province, home to about 250,000 people.

3. Urbanization does matter

- Agglomeration, or the clustering of people and economic activity, is an important driver of development and evidence suggests that it can have high pay offs, particularly for countries on the lower rungs of development.
- In order to harness the economic and social benefits of urbanization, policy-makers must plan for efficient land-use, ***match population densities with the required needs for transport, housing and other infrastructure***, and arrange the financing needed for such urban development programs.

Urbanization in Thailand



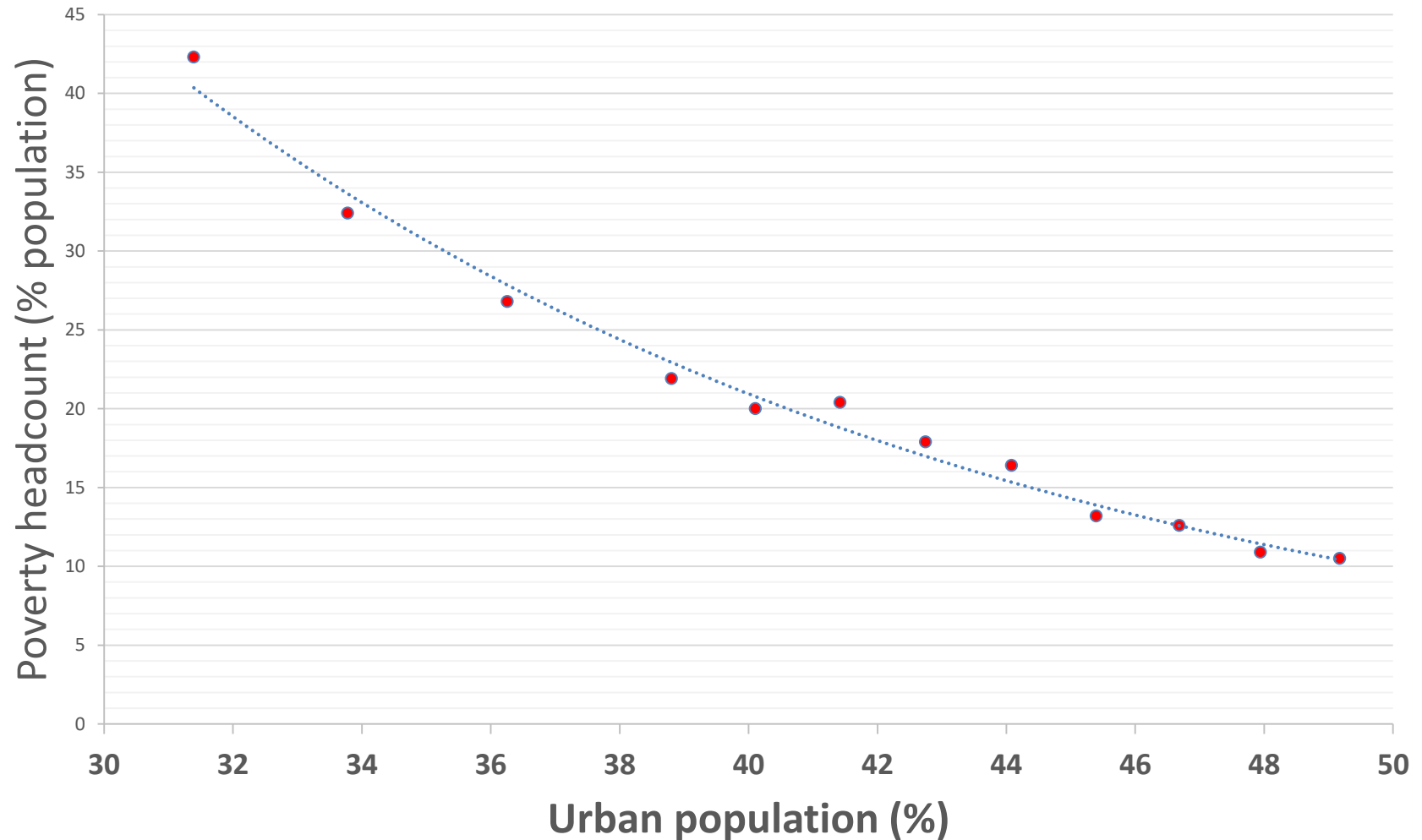
Fighting extreme poverty: Both urban and rural areas

- Though **extreme poverty** has declined rapidly in many countries, the World Bank estimates that in 2015 there were still 970 million people living on \$1.25 a day.
- Therefore, continued concerted efforts to get extreme poverty as close to zero as possible are needed.
- The challenge of fighting poverty and improving the living conditions of the poor lies in both urban and rural areas.

Urbanization reduces poverty

- With a fifth of the world's population, 600 urban centers account for some 60% of worldwide GDP.
- All the new entrants will be from emerging markets, a shift that will have profound social consequences.
- Urbanization is **lifting** more people **out of poverty** than any movement in history.

Poverty and urbanization in Thailand 2000-2015



Declining urban poverty, thanks to the economic boom

- The strength of the economy before the AFC between 1988 and 1996 had cut the urban poverty from **12.6** percent in 1988 to a mere **3.1** percent in just 8 years.
- When the Thai economy was hit by the financial crisis, the **rise** in poverty incident in 1999 went up to only 3.8 percent.
- The rural people had to bear the brunt of the economic meltdown **more than** the city people who created the economic crisis.

4. Urban Primacy

- The rapid urbanization in developing countries is also reflected in urban primacy—the share of population in ***the largest city*** in national urban population.
- A high degree of concentration is reflected in the share of large population of metropolitan areas in total urban population.

The primate city

- Mark Jefferson, a renowned geographer, was the first person to put forward in 1939 the concept of primate cities.
- According to his definition, a primate city has to be ***twice as large*** in size as the next biggest city.
- It must also be twice as important, socially and economically.
- Moreover, a primate city needs to be on top in most aspects, including politics, universities, media and culture.

Imbalance Development

- The presence of a primate city in a country may indicate an imbalance in development – usually a progressive core, and a lagging periphery, on which the city depends for labor and other resources.
- However, the urban structure is not directly dependent on a country's level of economic development.

Examples of primate cities: *Twice as large in size as the next biggest city*

- Paris (9.6 million) is definitely the focus of France while Marseilles has a population of 1.3 million.
- The United Kingdom has London as its primate city (7 million) while the second largest city, Birmingham, is home to a mere one million people.
- Mexico City (8.6 million) outshines Guadalajara (1.6 million).

The law of primate city

- The **primate city** dominates the country in influence and are the **national focal-point**. (i.e., Sydney rather than Canberra)
- Their sheer size and activity becomes a strong pull factor, bringing additional residents to the city and causing the primate city to become even larger and more disproportional to smaller cities in the country.
- Bangkok is the primate city of Thailand.
- It has the highest density of population and highest number of functions.

The dominance of Bangkok in Thailand

- Bangkok has been called "the most primate city on Earth", being many times larger than Thailand's second-largest city of Nakhon Ratchasima. Really?
- “People outside Bangkok voted to choose the government, while Bangkok people toppled it down.”

Positive Effects of primate cities

- An agglomeration of economic activity through various industries and services
- It provides a large market for goods and services. The ability to offer higher-end goods and services (including education) because of a larger threshold population.
- The enhanced flow of information and ideas in large population create advantages
- A centralized transportation and communication network also create advantages
- A country can compete on a global scale and attract foreign investment (global trade opportunities)
- Increased tourism in primate cities create economic benefits to the nation's economy

Negative Effects of primate cities

- The distribution of investments is unequal and deters national economic development
- Economic and resource development is unequal
- The distribution of wealth and/or power is unequal
- Transportation networks may prevent equal accessibility to all regions

Negative Effects of primate cities

- Centrifugal forces and other difficulties associated with political cohesion on economic development are created.
- The migration and unequal distribution of education, entrepreneurship, and other opportunities for individual progress ("brain drain" from smaller settlements to primate city)
- Rapid urban growth and slum districts may create unsustainable environmental impacts;
- Creates a burden on national economy to cope with problems related to sustainability

5. Characteristics of sustainable Urbanization

1. *Declining* population density in the primal cities
2. *Declining* urban poverty
3. *Improving* income equality
4. *Improving* quality of environment

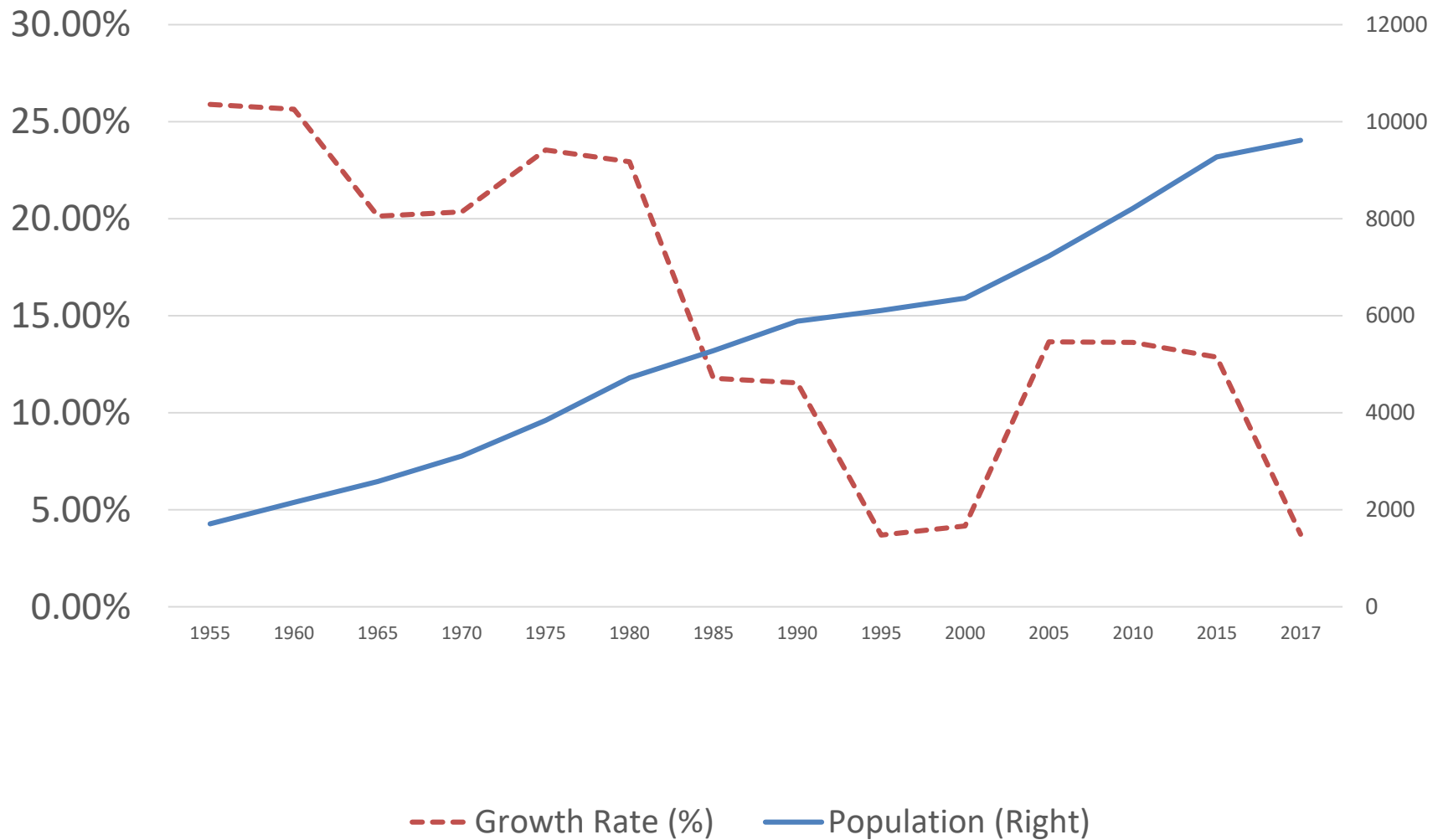
Declining population density:

The first stage of **decentralization**

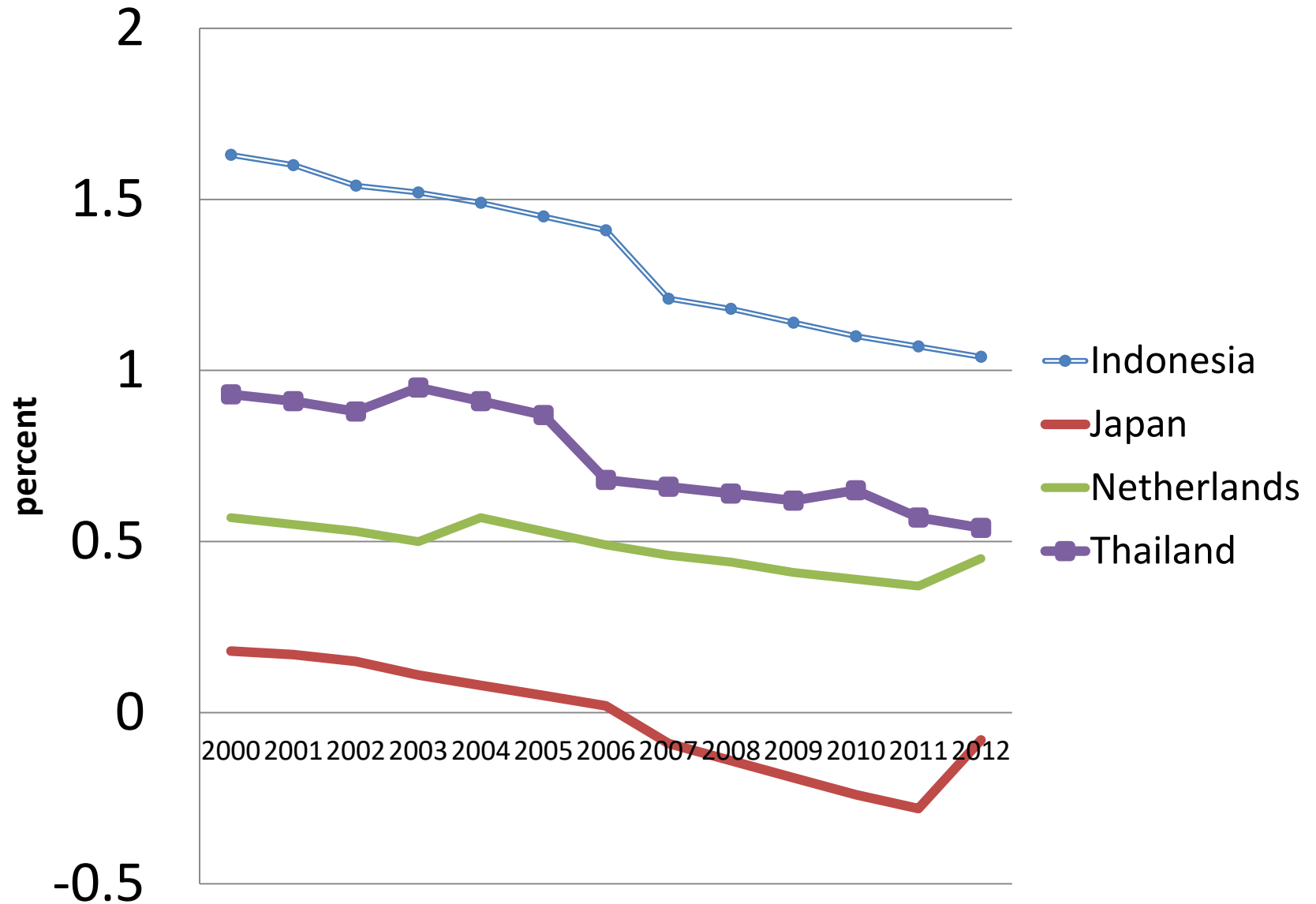
- Thailand's declining population growth rate
- Growth rate of population in Bangkok has slowed down.
- The population density in Bangkok has been on the declining trend.

Bangkok Population

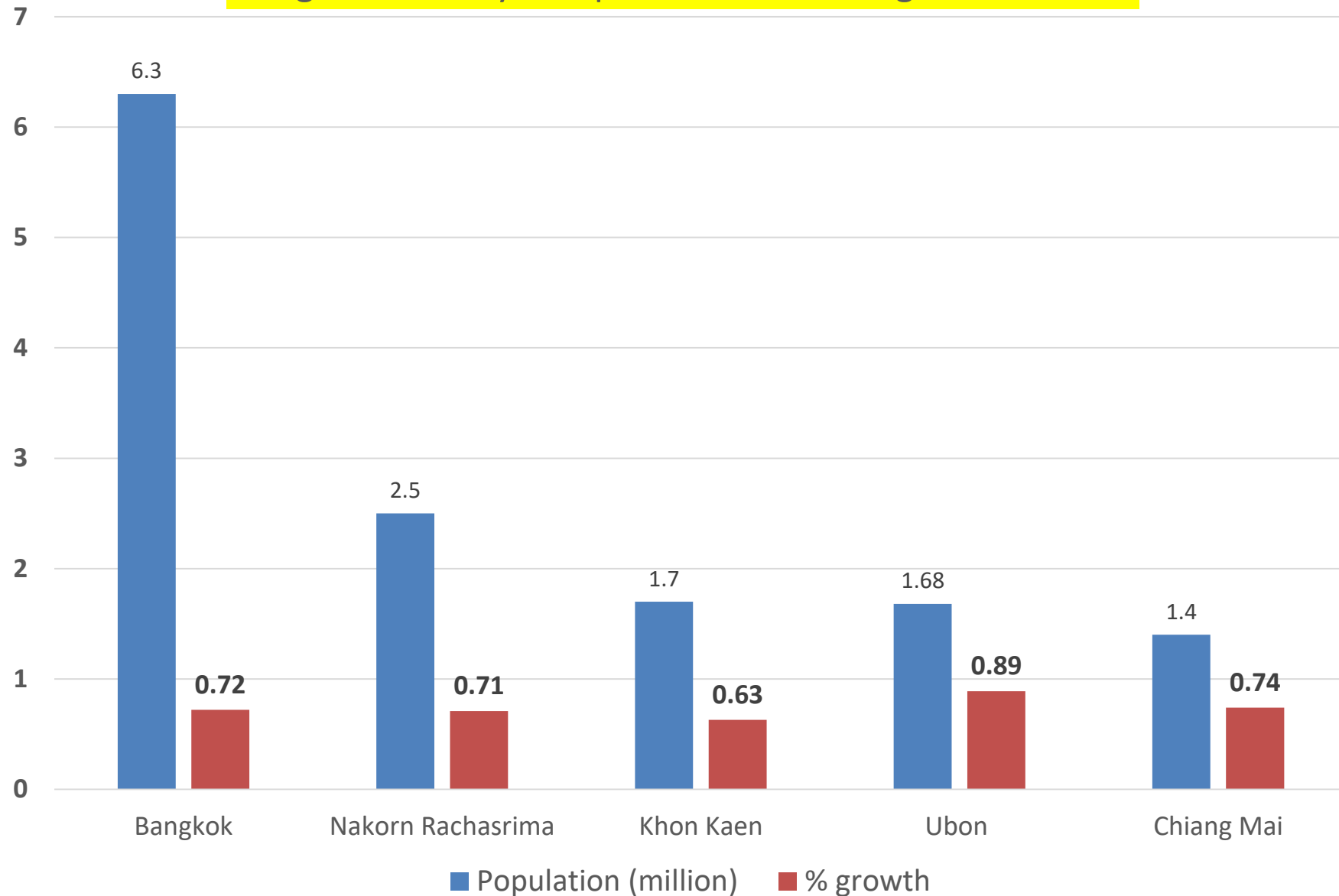
Source: UN World Urbanization Prospects



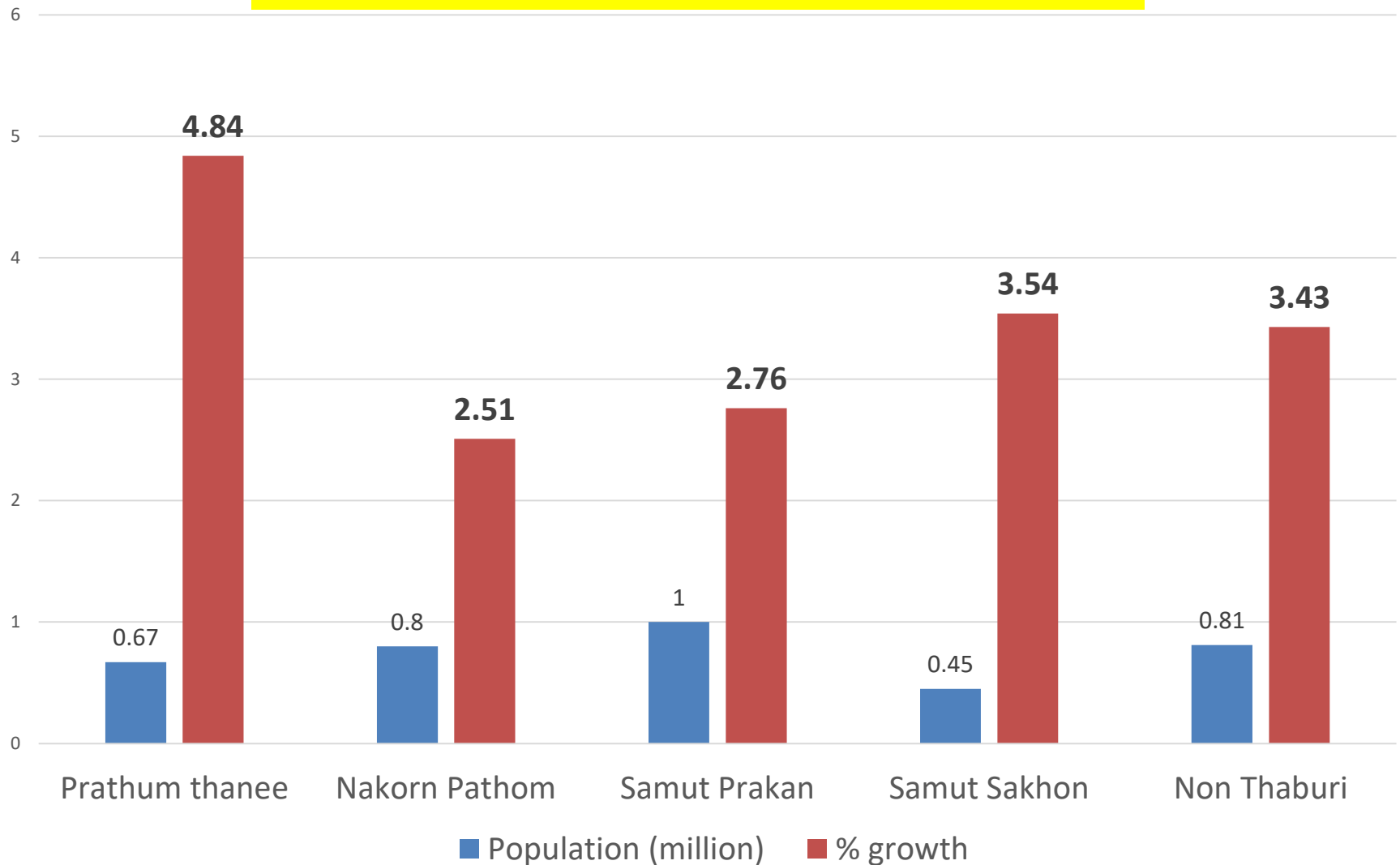
Declining Population Growth



Bangkok Primacy compared to other large cities: 2000



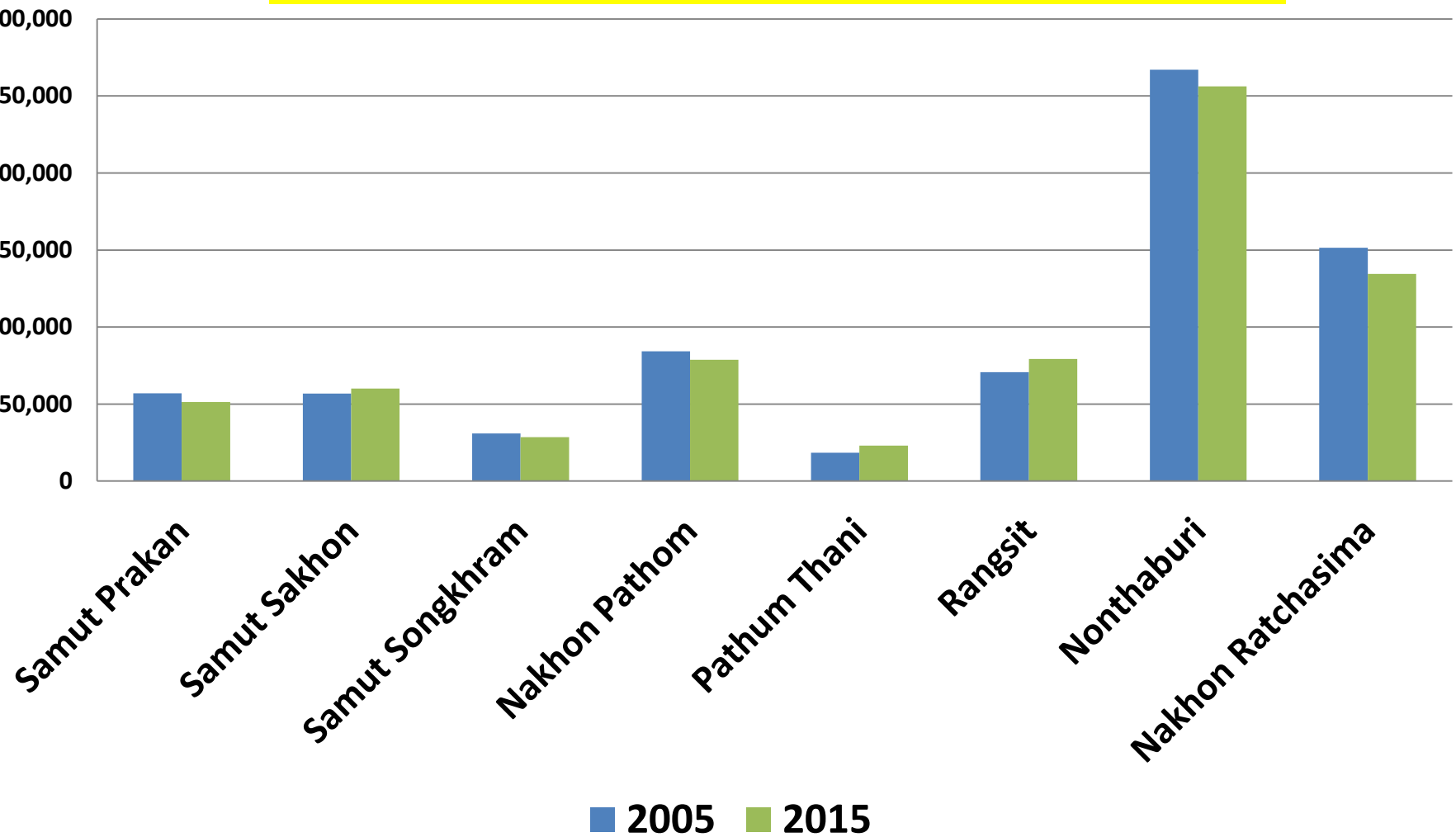
The periphery of Bangkok: Booming Cities in 2000



The second stage of decentralization: Standardized industries are moving out of Bangkok

- It has already begun as ***industries*** are gradually moving away from Bangkok Metropolitan Region, because of higher production and transactions costs in BMR.
- Bangkok has encountered diseconomies of agglomeration.
- Land prices and rent have gone up.
- If the trend continues, a more balanced process of urbanization will emerge with less concentration of industries in large cities.
- The degree of urbanization in Thailand has been slowing down in all regions.

Provinces with declining and increasing population 2005-2015



Declining Bangkok Primacy

- As the impact of diseconomies of scale became apparent, **Bangkok started to lose its comparative advantage in production.**
- ***Both*** shares of output and population in Bangkok has been declining.
- Output share of BMR declined from 53 percent in 1993 to 47.4 percent in 2000—confirming the second stage of de-concentration in suburban areas of Bangkok.
- **This encouraging trend implies that urbanization process in Thailand is sustainable, because large cities of Bangkok Metropolitan Region would not be expanding without limit.**

Urbanization and population growth

- The major factor behind the slow urbanization process is the ***sharp drop*** in the population growth rate, reflecting the successful family planning programs.
- The relative size of economic activity in Bangkok Metropolitan Region has been declining gradually.

How to make urbanization desirable

- If the urban sector can provide better job opportunities with more stable income, urbanization is **not** a disaster and therefore should be **welcome**.
- The important question is *how* to prepare labors from rural areas to make them suitable for working in the urban sector and how to manage traffic jams caused by excessive concentration within the primate city.

We are commuters

- Urbanization has already spilled over from Bangkok into surrounding provinces.
- A large number of Bangkok's 10 million people now commute between their residences in Bangkok's suburbs or these five provinces and their offices are in downtown Bangkok.
- Bangkok should learn from the experience of other well-run cities around the world.
- The concept of satellite towns should be explored and introduced in metropolitan Bangkok when and where relevant.

Satellite-town development

- Under the satellite-town concept, now widely applied in many major cities in Germany and other European countries, a city should be divided into many residential areas and suburbs.
- *Each area is made self-sufficient, complete with office and commercial buildings, schools, hospitals, shopping centers and other facilities.*
- This should **reduce the necessity of residents having to take long commute hours.**
- It thereby does away with many urban problems related to ***large numbers of people moving about***, including traffic snarls and air pollution, among other problems, improving people's quality of life.

A Smart City in Bangkok?

- The Minister of Transport (Mr. Arkhom) has a plan to spend 11 billion baht to turn a 35-rai plot near Bang Sue Station into a “smart city”
- The station will become an inter-provincial transport hub for electric, high-speed and goods transport trains.
- It would include shopping complexes, hotels, offices and convention complexes.
- The Mass Rapid Transit Authority of Thailand wants to turn the 497-rai plot into another hub with high end shopping complexes, hotels and condominiums.

Challenges in big cities like Bangkok

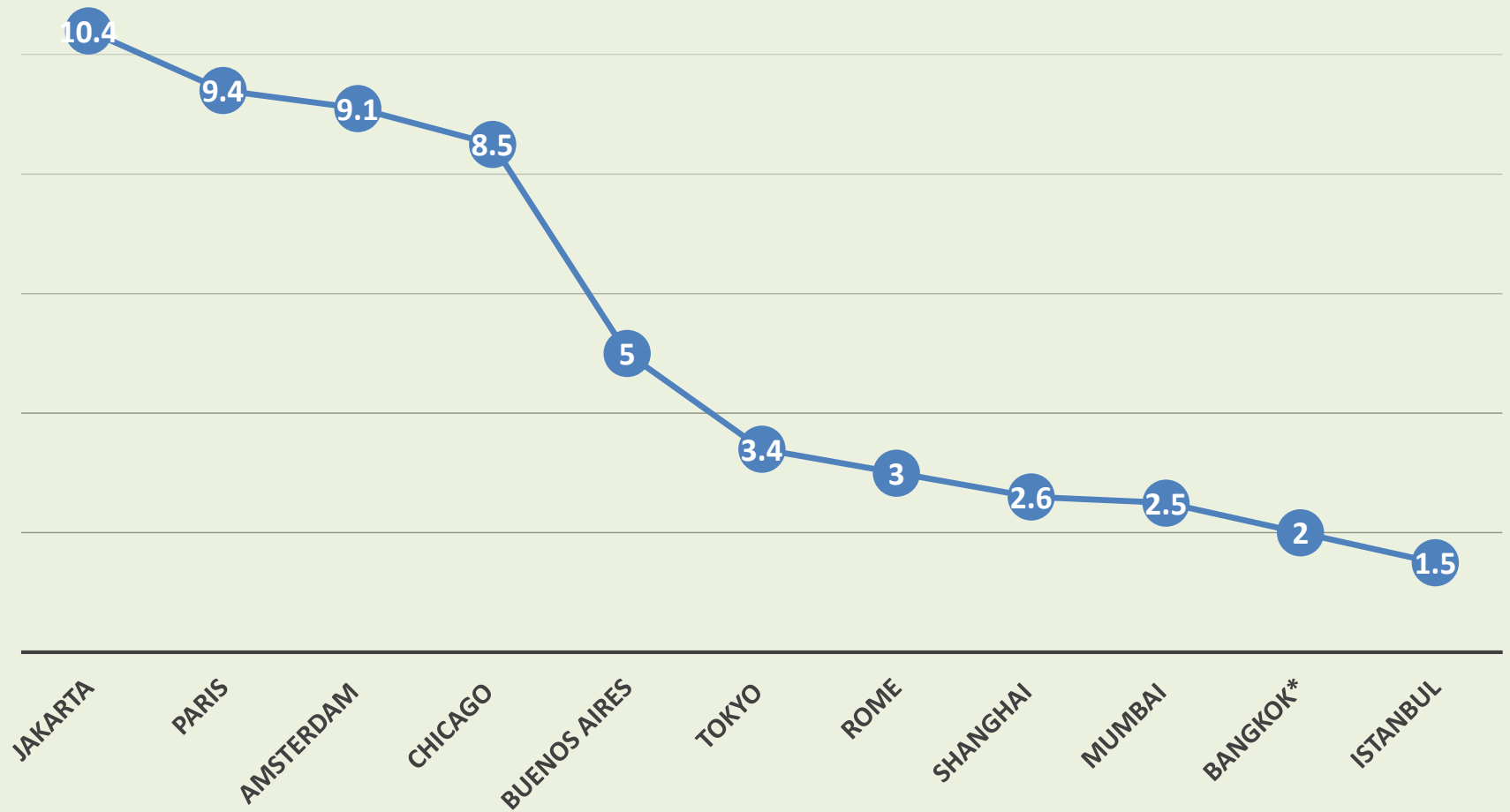
- Industrial competitiveness:
Diseconomies of agglomeration
- Lack of Management and
maintaining effective and efficient
institutional capability
- Social cohesion and instability
- Health and quality of life: green
areas

Insufficient green area

- Bangkok has several parks, although these amount to a per-capita total park area of only 1.82 square meters in the city.
- Total green space for the entire city is moderate, at 11.8 square meters per person
- In the more ***densely built-up areas*** of the city, these numbers are as low as 1.73 and 0.72 square meters per person.
- More recent numbers claim that there is only **3.3** m² of green space per person, compared to an average of **39** m² in other cities across Asia.
- Bangkok thus have 10 times less green space than is standard in the region's urban areas.

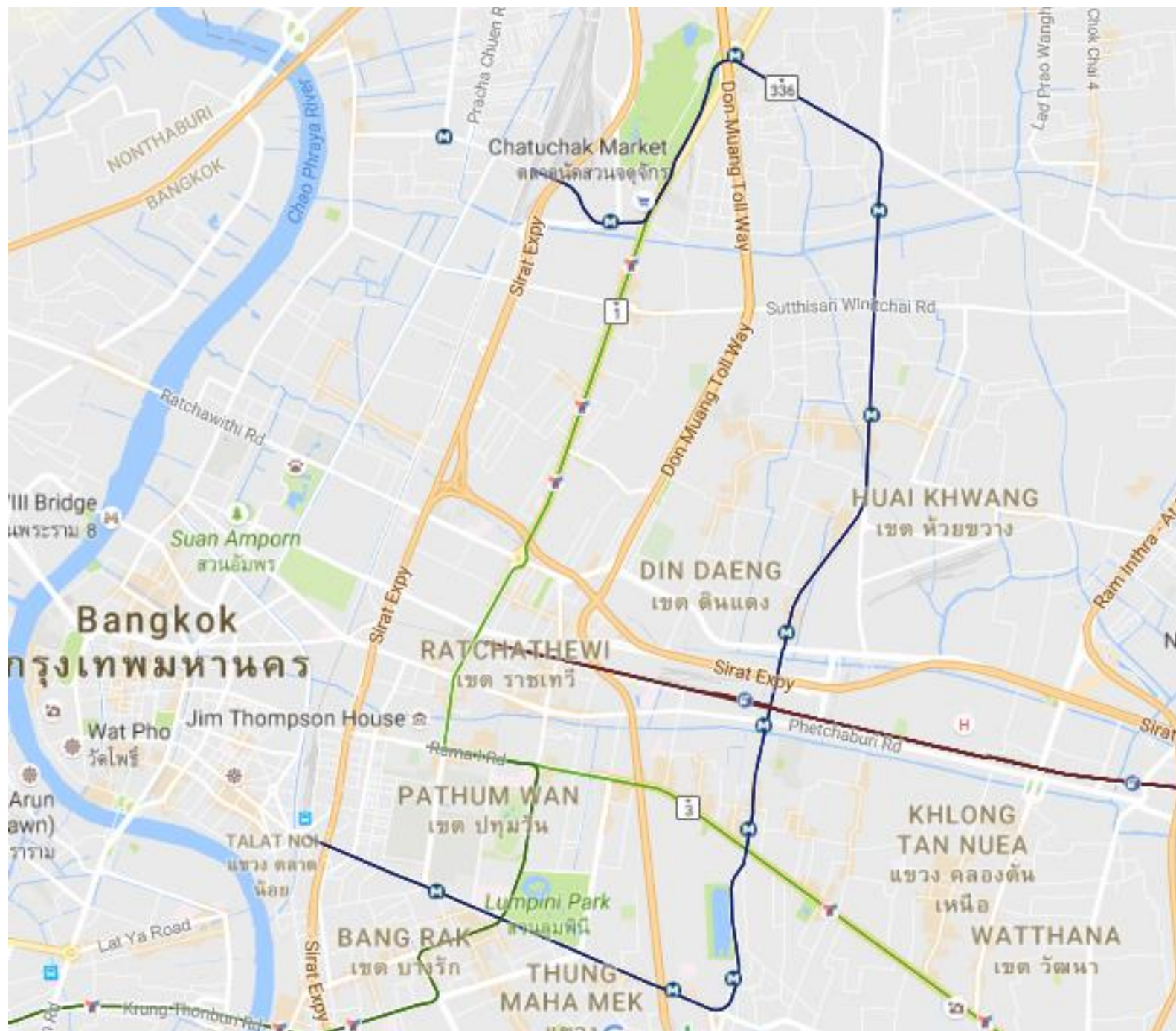
Public Green Space (% total area)

Source: World Culture Report

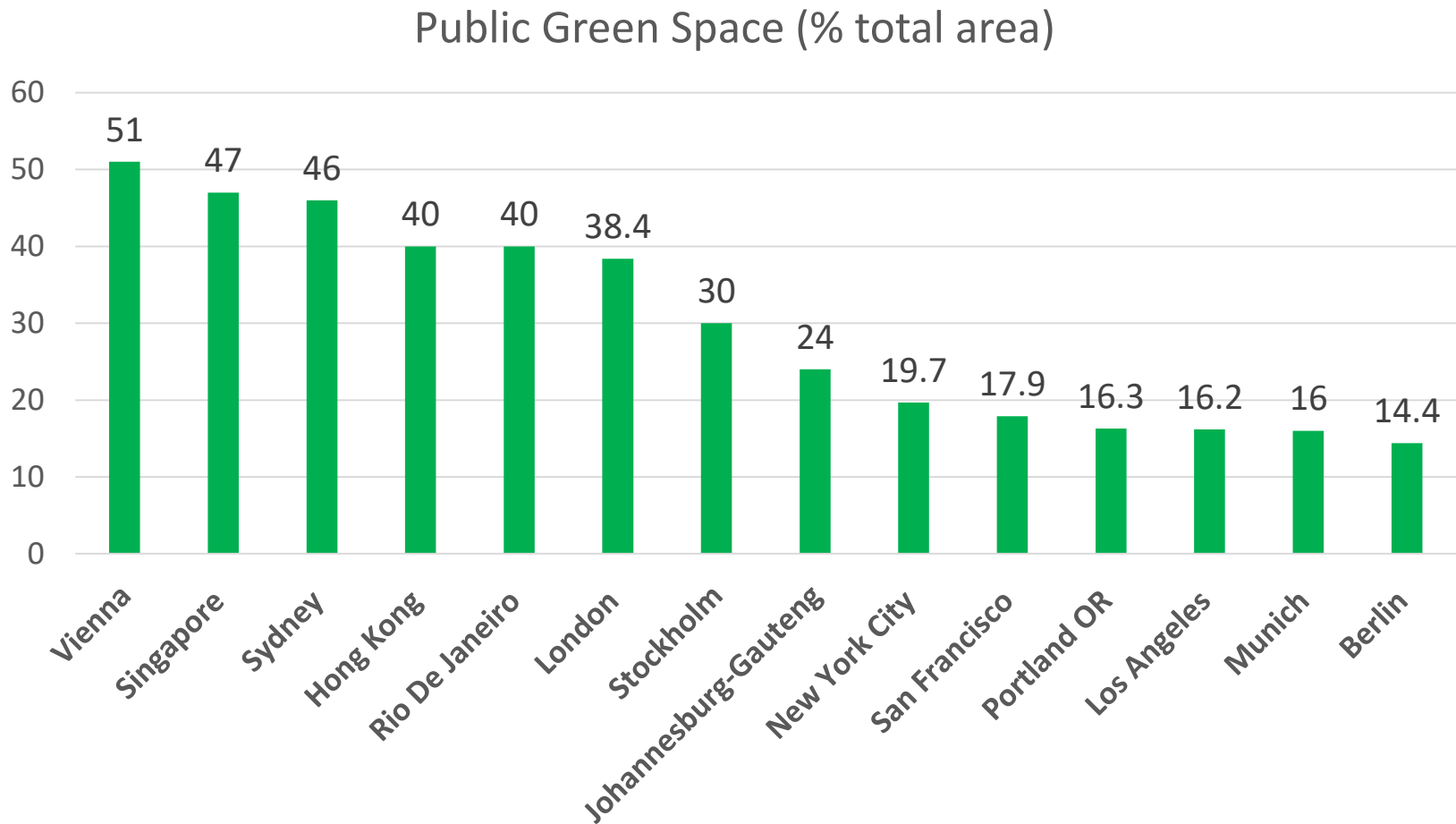


London has 39% of public green spaces





Cities with the most percentage of public green space

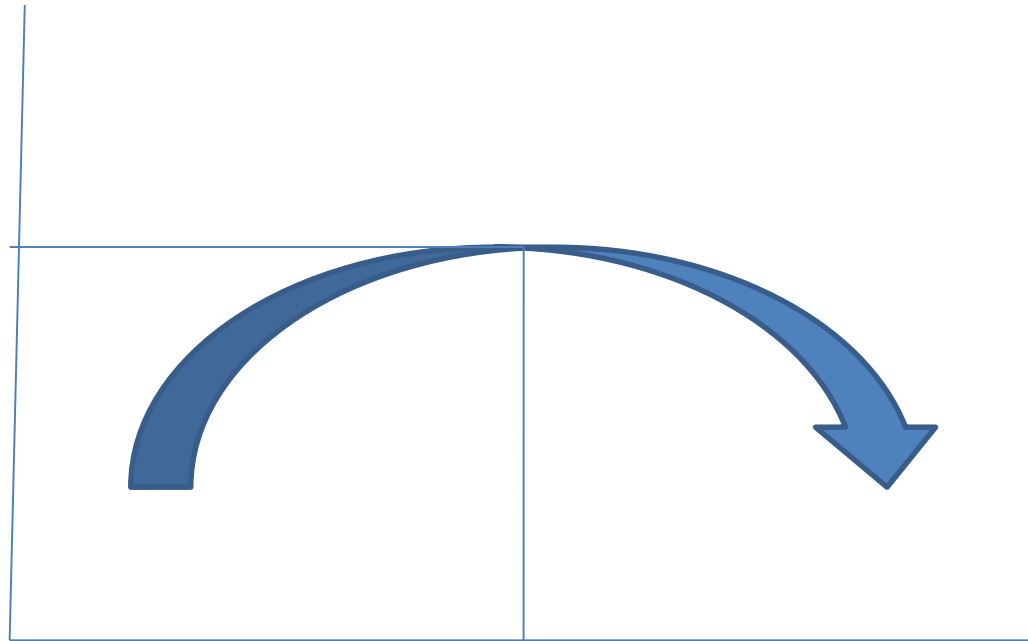


7. Environmental Kuznets Curve (EKC)

- Environment quality declines as economic development has intensified up to a turning point, where the relationship between growth and pollution become delinked.
- Past the turning point, it appears that greater wealth increased environment quality
- Technology in advanced countries increases efficiency and reduce environment degradation.
- Wealth means you can afford EV and the government can enforce them (case of Singapore)

Environmental Kuznets Curve

Pollution level



Threshold level

Wealth

Rich countries can outsource emissions and they can enforce accountability

- Pollution Haven Hypothesis:
- Rich countries (Multinational Corporations) can outsource emissions through FDI outflows to poorer countries.
- Wealth leads to individual wealth and education therefore the state has greater power to hold polluters accountable (Singapore).

Singapore Model

- Singapore rolls out stringent measures to get cars off the road
- The city state has deployed congestion charges and massive spending on public transport.
- Every potential car buyers must bid for a ***certificate of entitlements*** (COE).
- The average cost of a COE a family car is 1.2 million baht. The same car is six times the price in the US.

Singapore Model

- The certificates are valid for 10 years, after which the car must be scrapped or the certificate renewed.
- Other measures are charging tolls on main roads at busy times.
- In November 2017, the government decided to freeze the number of private cars for two years, citing land scarcity.
- The price of COEs jumped by several thousand dollars in a panic buying.
- The government plans to build 700 km of cycle paths.

Environmental Quality and Wealth

- Environmental quality depends on population desire
- Rising wealth means environment is a luxury good for the well-to-do countries.
- EKC only observed in countries without a significant income gap otherwise there is less ability to hold polluters accountable.
- Wealth alone therefore is not enough for high environmental quality

Conclusion

- There is a stylized fact of urbanization process in developed and developing countries.
- Bangkok primacy has been declining, as the second stage of de-concentration is taking place.
- In contrast to the popular view that Bangkok is facing insurmountable environmental and social problems, Bangkok and its surrounding cities are moving toward sustainable urbanization.
- But Bangkok is still a far cry from being a city offering high quality of life.

Review questions

- Compare and contrast urbanization in Thailand and Africa.
- Provide evidence indicating the sustainability of urbanization process in Thailand.
- What can the public sector do to ease the adverse consequences of urbanization?
- Why has urbanization in Thailand been slowing down in all regions?
- “All happy families resemble one another, but each unhappy family is unhappy in its own way” *Anna Karenina* by Leo Tolstoy. Do you think that happy families in Buri Rum and Bangkok resemble one another, but differ when they are unhappy?

EDUCATION IS
WHAT REMAINS
AFTER ONE HAS
FORGOTTEN WHAT
ONE HAS LEARNED
IN SCHOOL.

~ALBERT EINSTEIN

“Education is the
ability to listen to
almost anything
without losing
your temper or
self-confidence.”

-Robert Frost



George W. Bush, on returning to Yale to accept an honorary degree (The Sunday Times, May 2001)

“To those of you who received honors, awards and distinctions, I say well done.

And to the C students, I say, you too can be president of the United States”

**WHAT WE LEARN
WITH PLEASURE
WE NEVER FORGET.
-Alfred Mercier**