

# 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

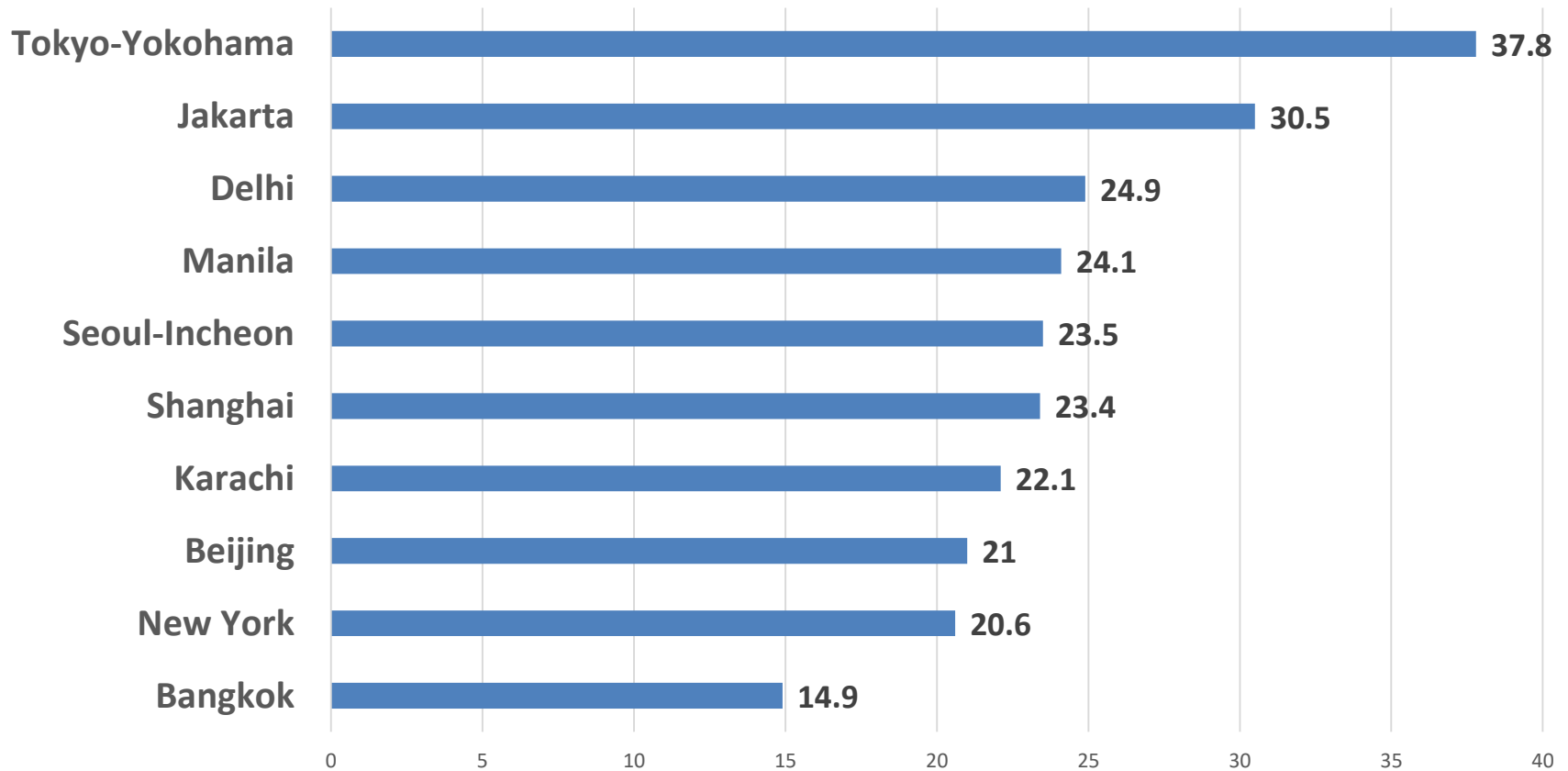
1. Urbanization around the world
2. Rural and urban divide
3. Urbanization matters
4. Urban Primacy
5. Sustainability of Bangkok
6. Environmental Kuznets Curve
7. The Chinese stories

# 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

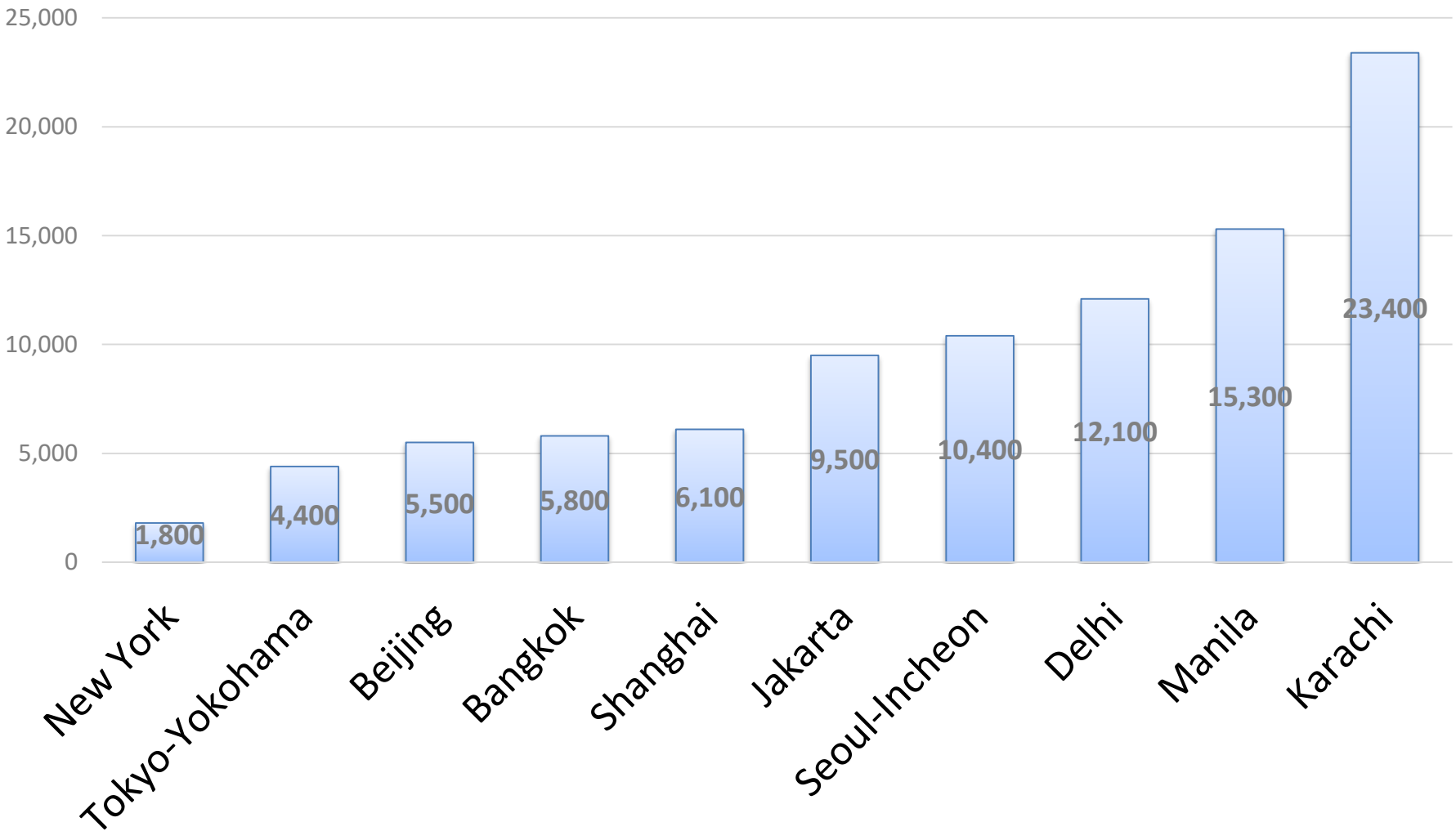
Population in Urban Area: 2015  
(million people)



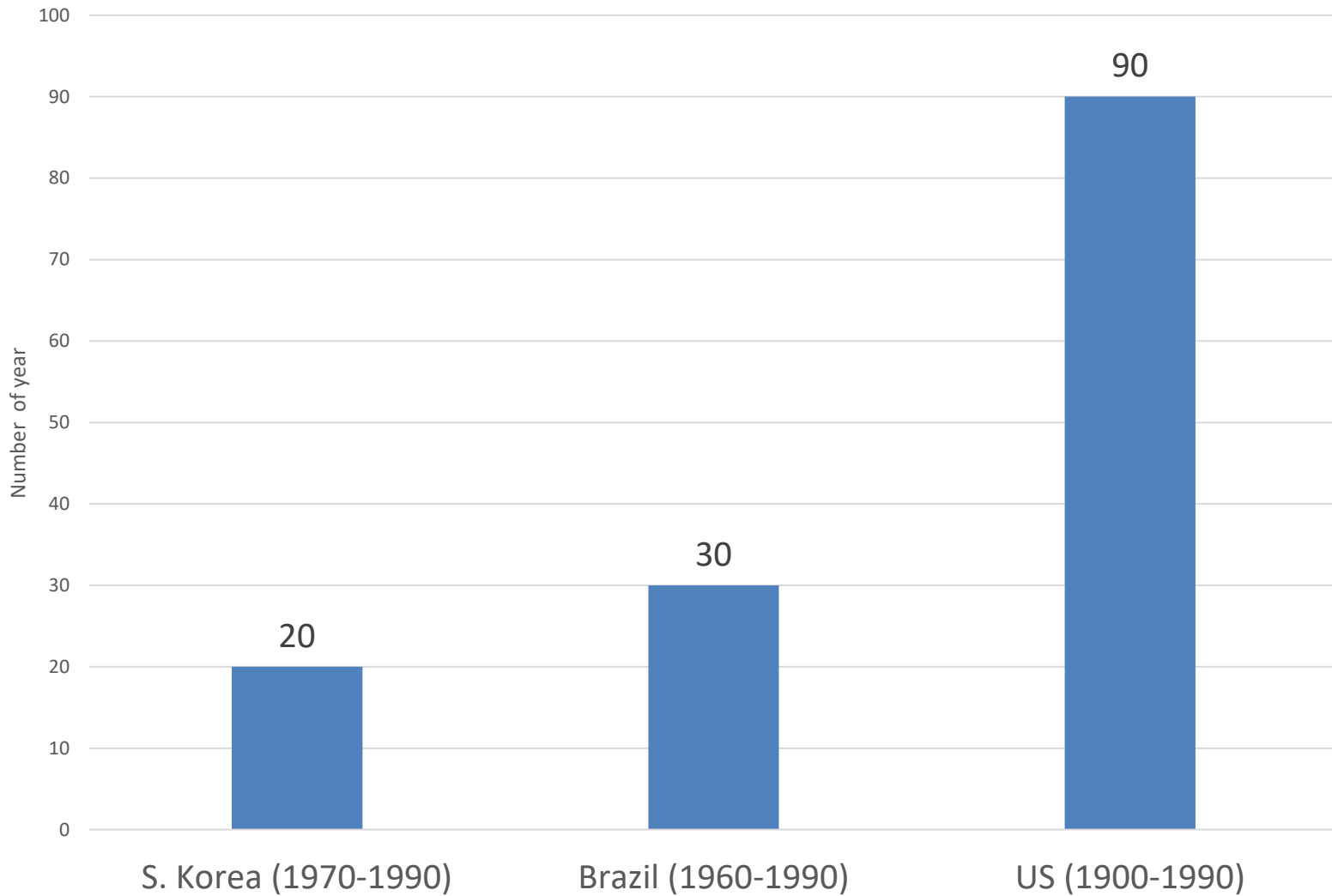
# Stylized fact

- 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)



# Number of years required to raise urbanization from 45% to 70%



# 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.

# Urbanization drivers in rich countries



## Urbanization in poor countries: Only the pull factor

- 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, resulting high unemployment in urban areas (Harris-Todaro Model)

# 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 (USA and other European cities).
- Rapidly urbanizing developing countries require adaptation of rural institutions and governance to urban society.

# Gradual vs. rapid urbanization

- Poor countries have little room for timely experimentation and adjustments.
- 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 1.36m (1950) to 9.6 m (in 2017)

- In 1950, Bangkok population was only 1.36 million.
- UN World Urbanization Prospects estimated that Bangkok' population in 2017 is at 9,617,000.
- This estimate represents the *urban agglomeration* of Bangkok, which typically includes Bangkok's population, in addition to adjacent suburban areas.

## 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.

# Richard Mille RM 11-02 GMT Rose Gold Titanium Rubber Automatic Watch

US \$195,000 ( THB6.2 million baht)



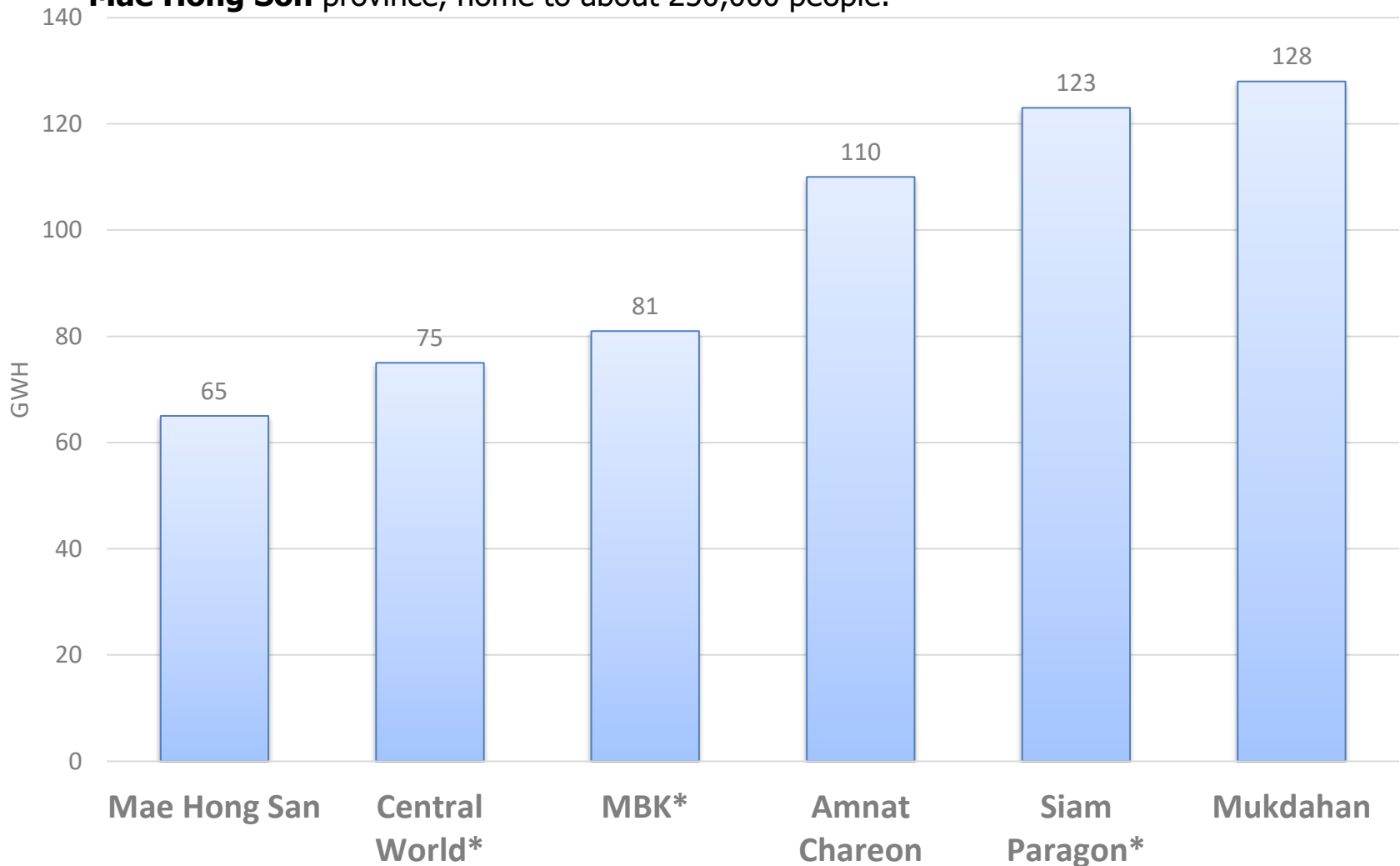
# High-end brands: A Status Symbol

Bangkok's high-end mall, MQuartier, opened March 27, 2015, featuring high-end brands including Louis Vuitton, Chanel, Dior, Prada, Cartier, Dolce & Gabbana, Tiffany, Fendi, and Balenciaga. Then came IconSiam together with Takashimaya

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

The 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.

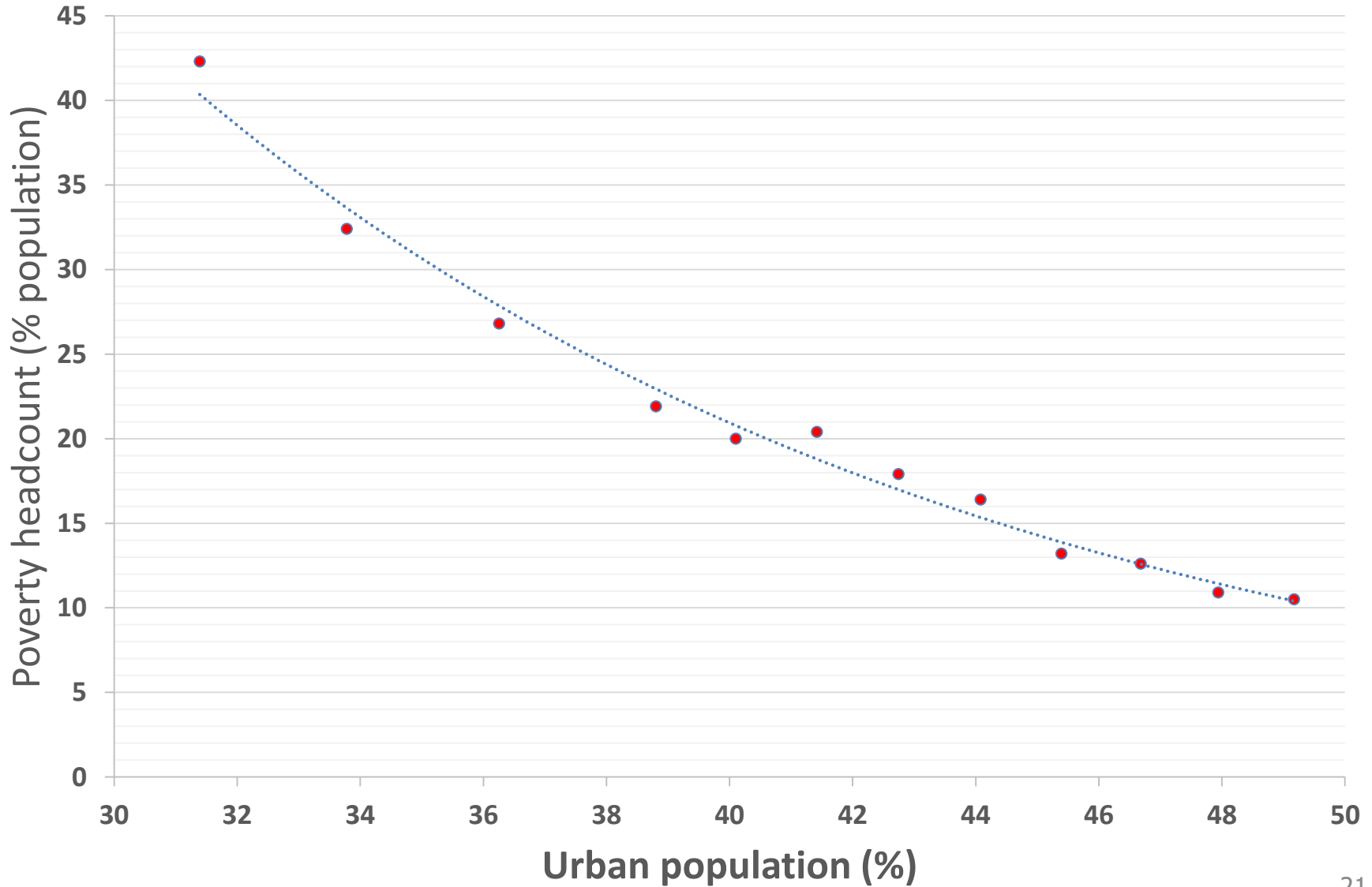
# Fighting extreme poverty in urban and rural areas

- 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

- In 1939, Mark Jefferson, a renowned geographer, put forward 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.**

# 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**.

# 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.
- The urban structure and the primate city look modern while the country has high level of backwardness and low level of institutional development and scientific and logical thinking.

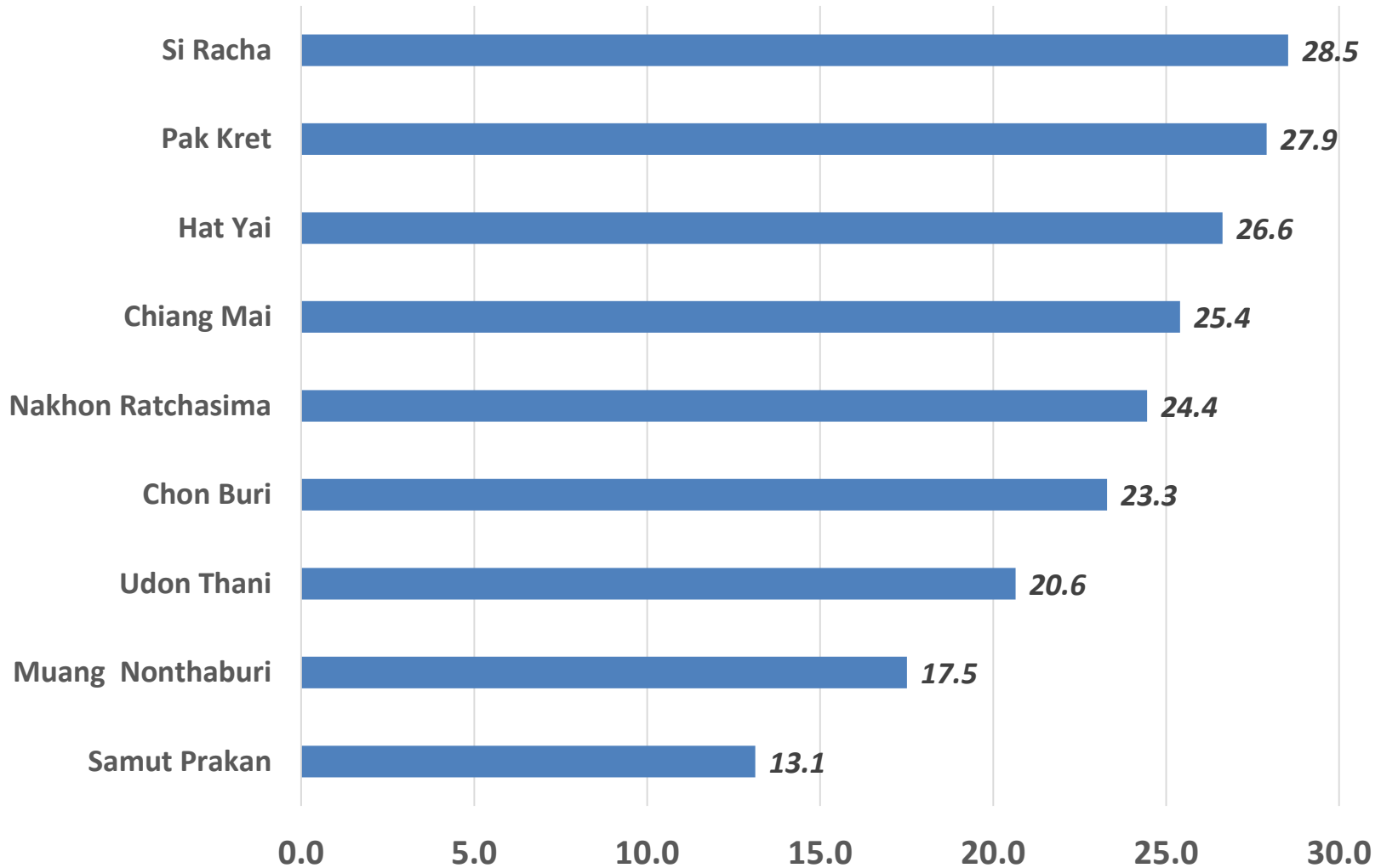
# Examples of primate cities:

*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).
- Bangkok has been called "the most *primate* city on Earth", being many times larger than Thailand's second-largest city.

# Multiple of Bangkok Population: 2019

Source: Base on World Population Review



# Positive effects created by 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 and a centralized transportation and communication network also create advantages in the primate city.
- ***A country can compete on a global scale and attract foreign investment*** (global trade opportunities)

# Primate cities attract tourists

- Increased tourism in primate cities create economic benefits to the nation's economy
- Tourist arrivals to Thailand increased 20% in the latter half of November 2018 in response to visa-on-arrival (VOA) fee waivers.
- Visitors from China and India are bouncing back.

# *Negative* Effects of primate cities: *Inequality*

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

# Primate cities: Political cohesion and brain drain

- 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"***
- 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

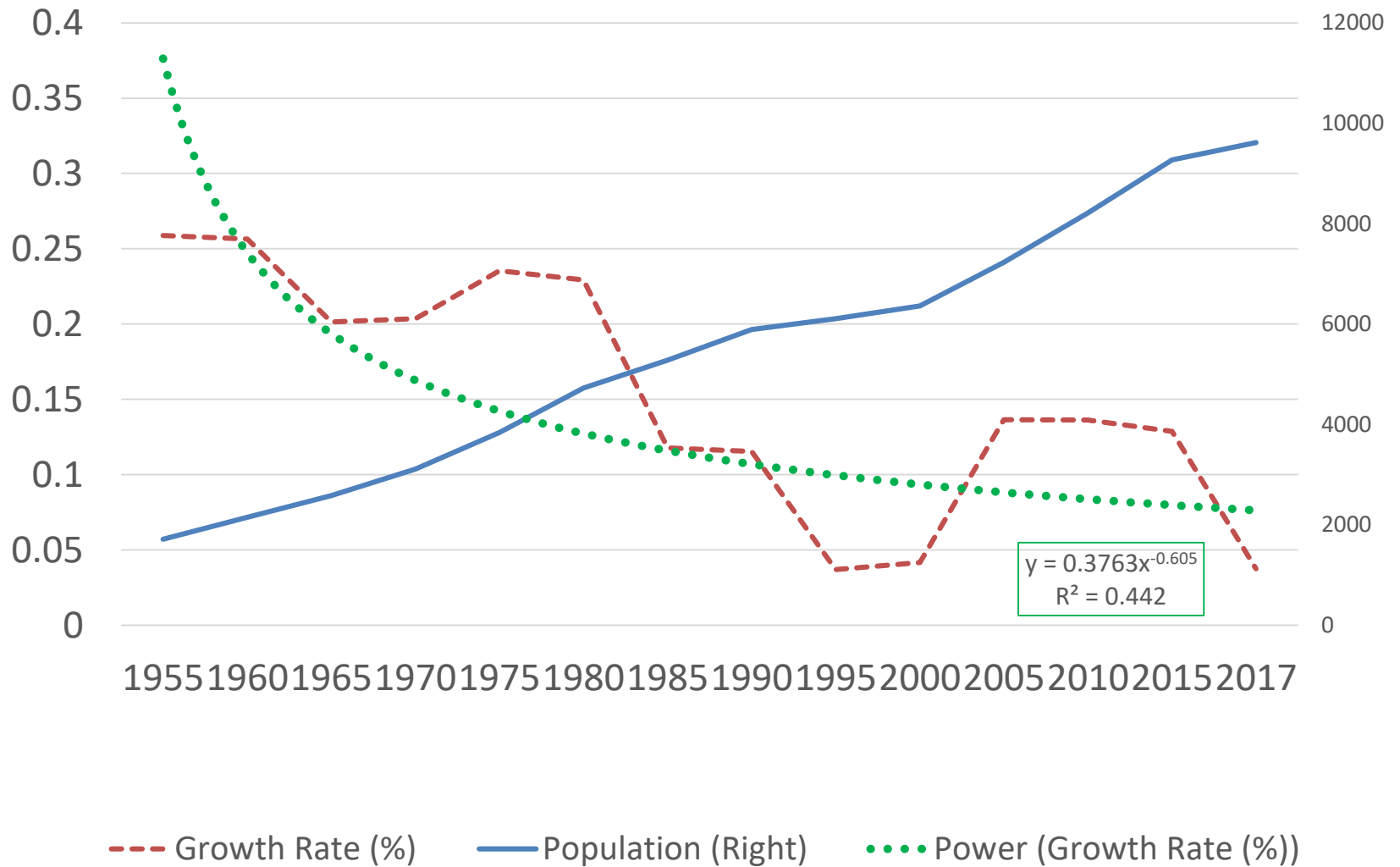
# Declining population density:

The first stage of **decentralization**

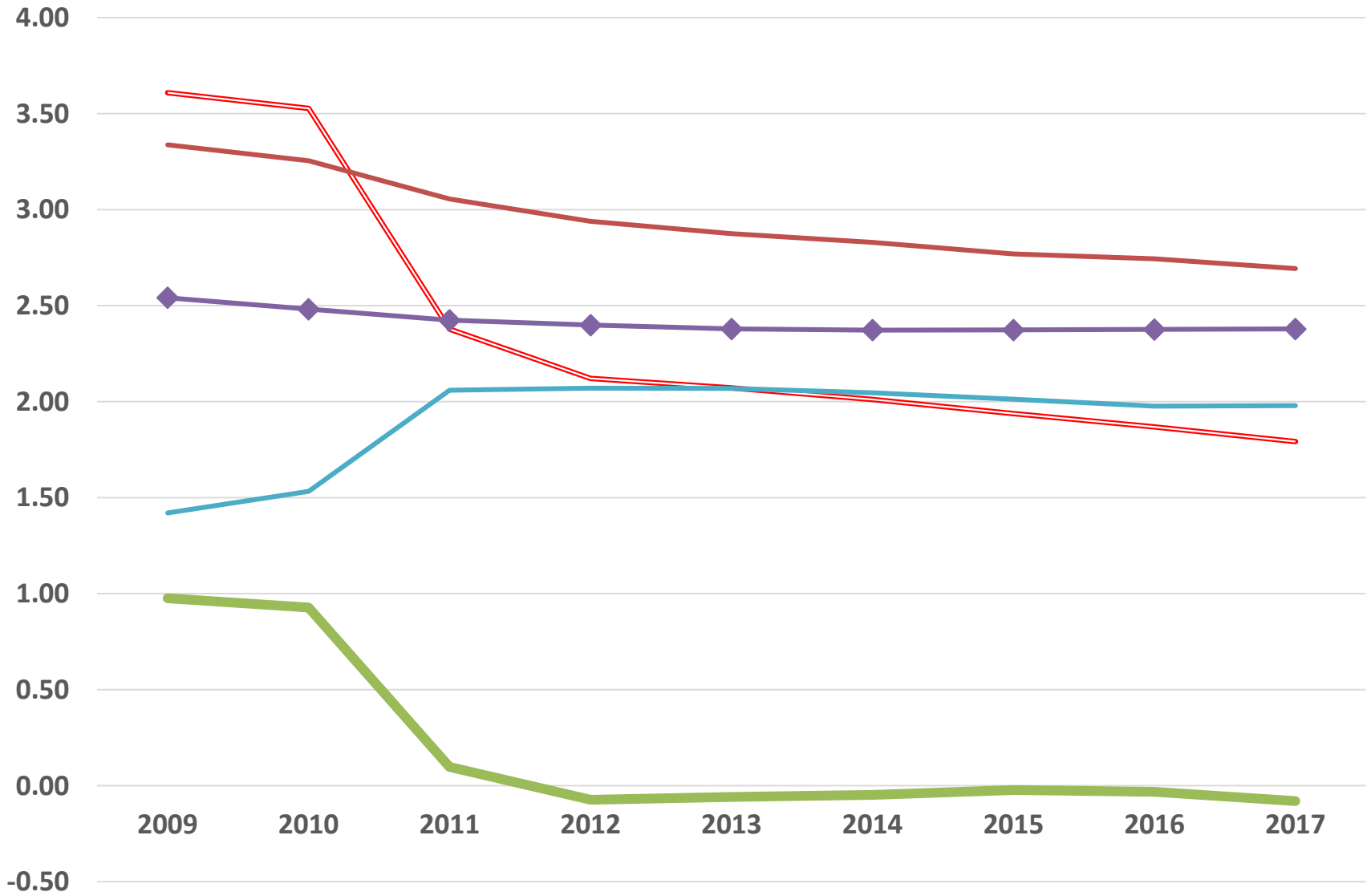
- Thailand's *declining* population growth rate
- Growth rate of population in Bangkok has slowed down.
- The *population density* in Bangkok has been on the declining trend.

# Bangkok Population: Increase at a decreasing rate

Source: UN World Urbanization Prospects

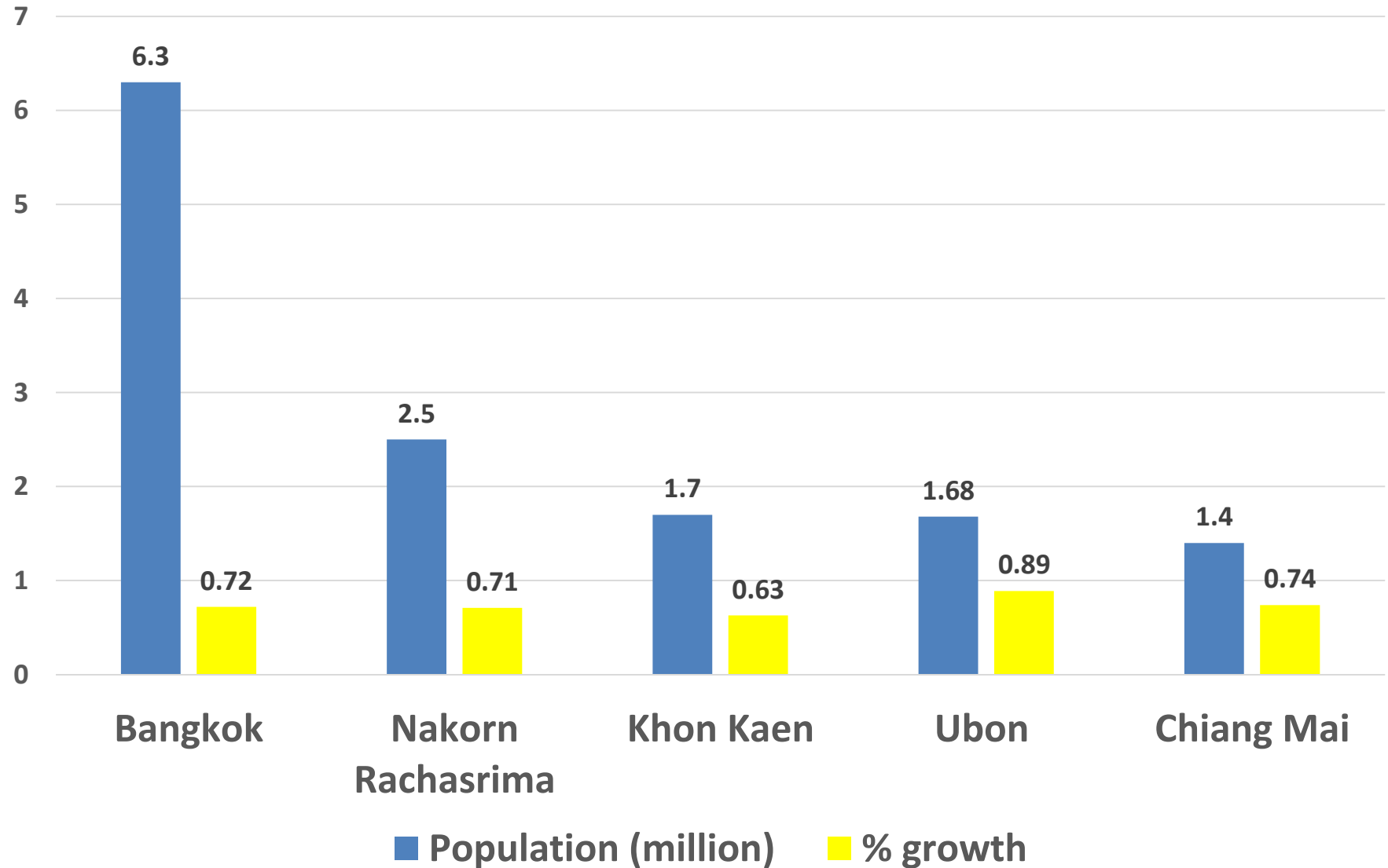


# Urban population growth (%)

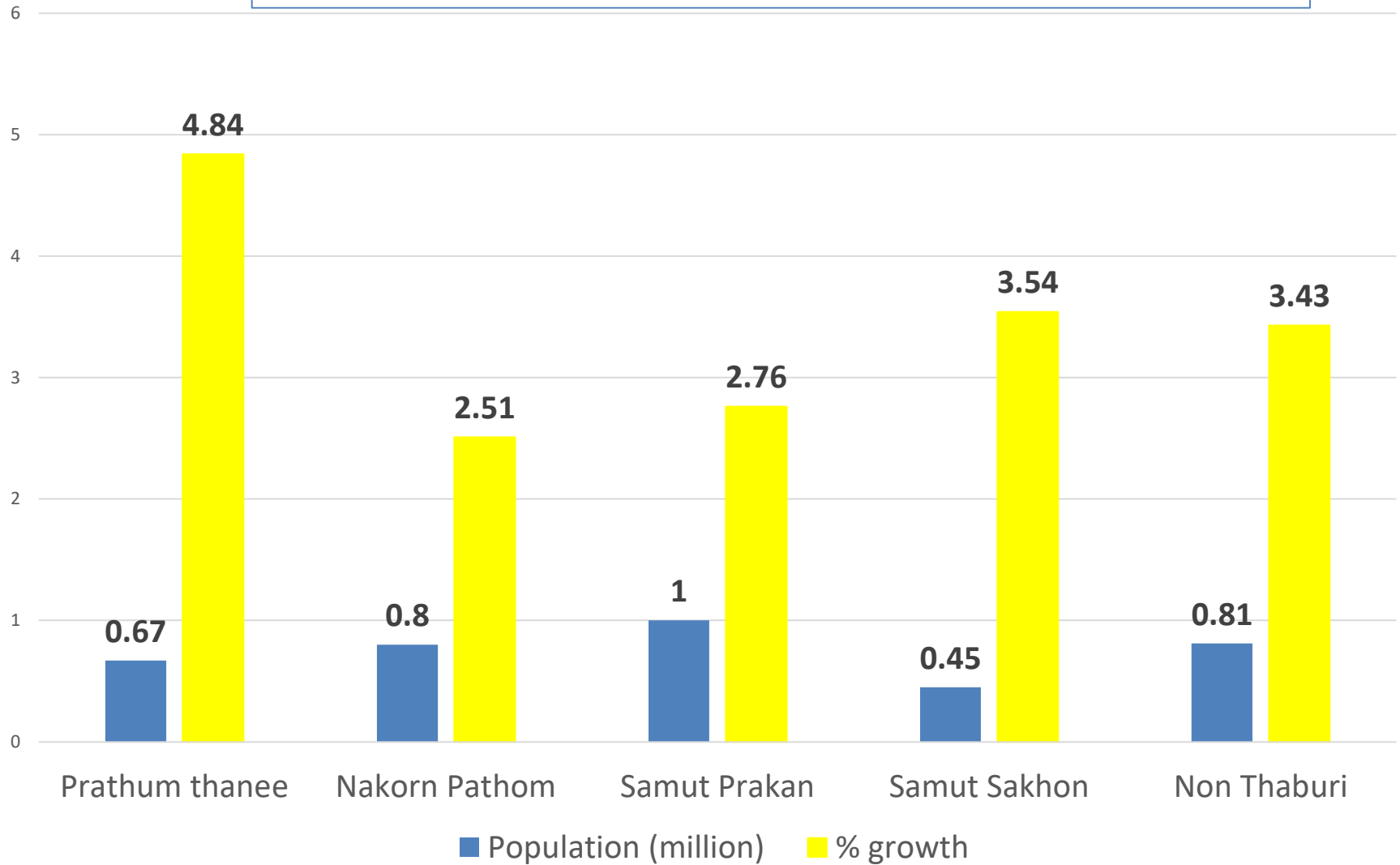


— Thailand — China — Japan — India — Philippines

## Bangkok population size and growth, compared to other large cities in 2000

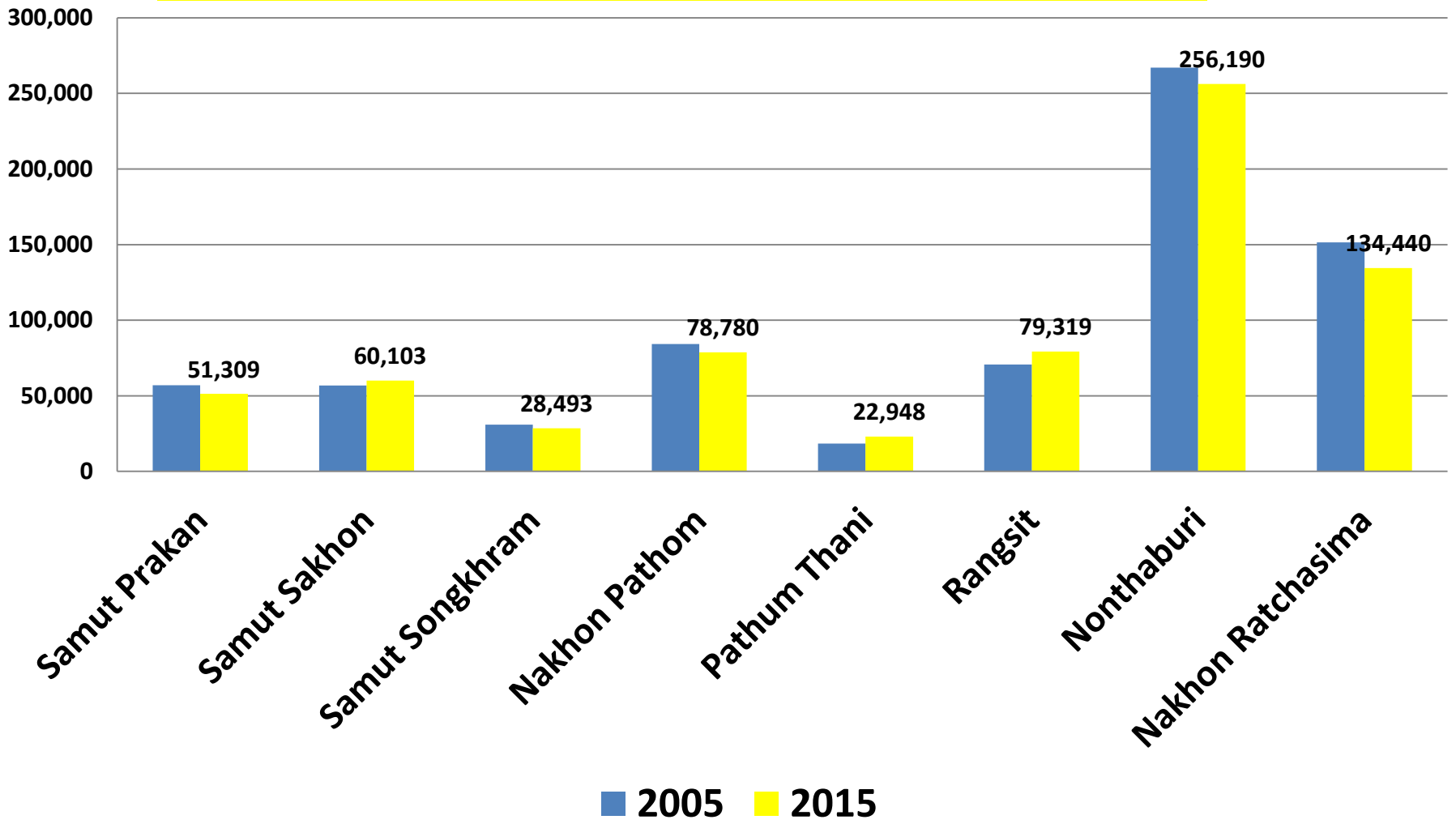


The **periphery** of Bangkok: Booming population in neighboring cities in 2000



# By 2015, population in big cities has been stabilized

## 2005 vs 2015



## 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.

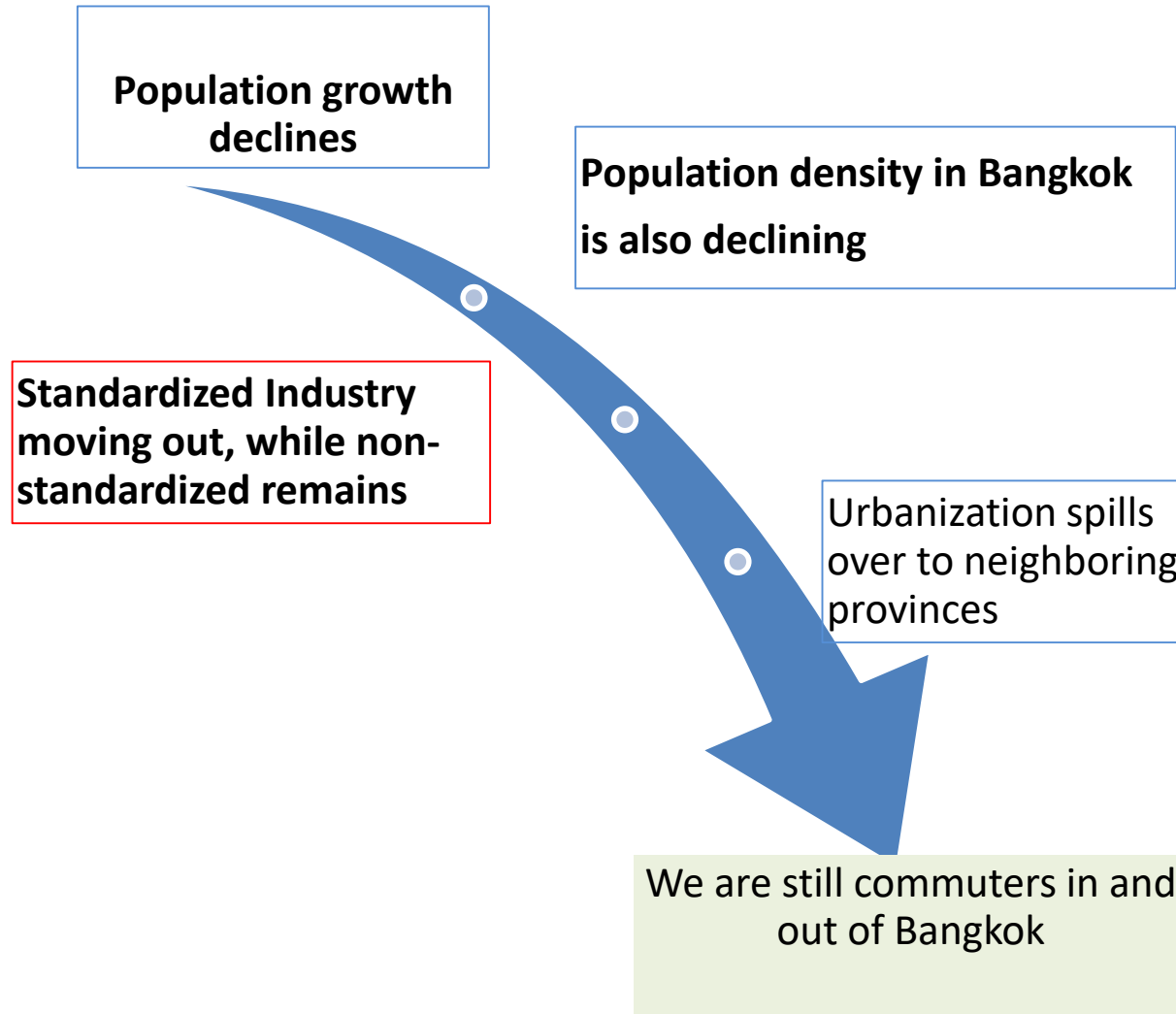
# Declining Bangkok Primacy

- 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.

# Slowing down urbanization speed

- This encouraging trend implies that urbanization process in Thailand may be sustainable, because large cities of Bangkok Metropolitan Region would not be expanding without limit, although there is a lingering problem on the air quality in Bangkok.
- 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.

# While share of output and population in Bangkok has been declining, we are experiencing diseconomies of agglomeration



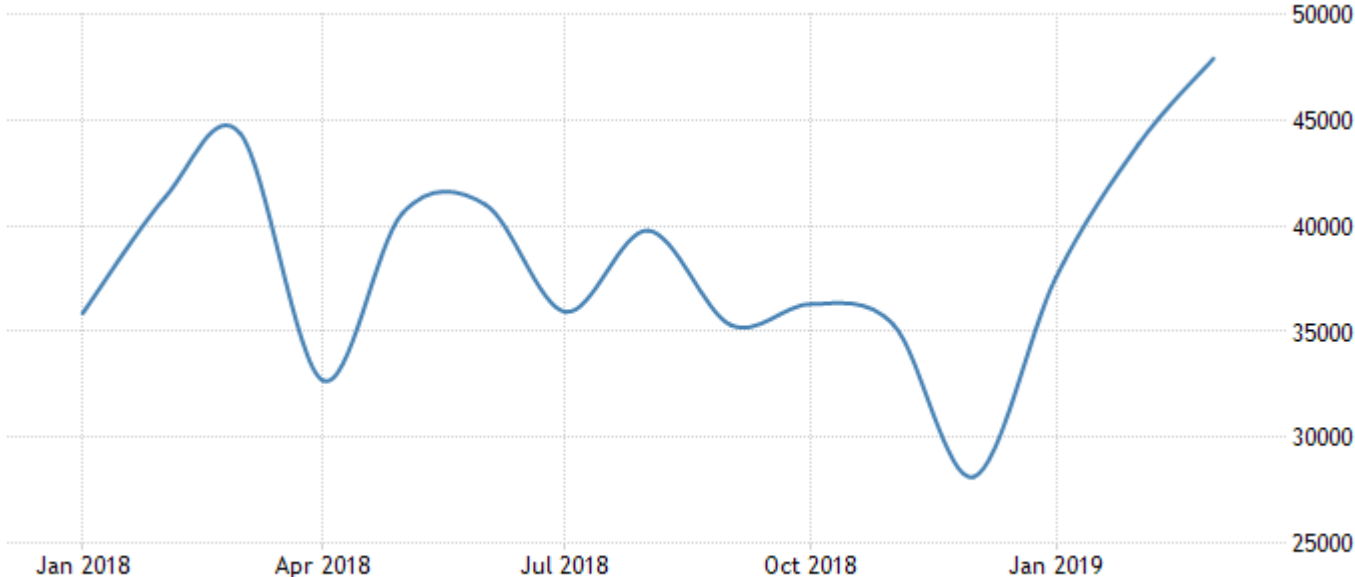
# How to make urbanization desirable

- 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.

Car Registrations in Thailand increased to 47916 in March from 43879 in February of 2019. Car Registrations in Thailand averaged 22673.87 from 1989 until 2019, reaching an all time high of 66668 in March of 2013 and a record low of 1690 in December of 1998.



SOURCE: TRADINGECONOMICS.COM | DEPARTMENT OF LAND TRANSPORT, THAILAND

# Satellite-town model of city development

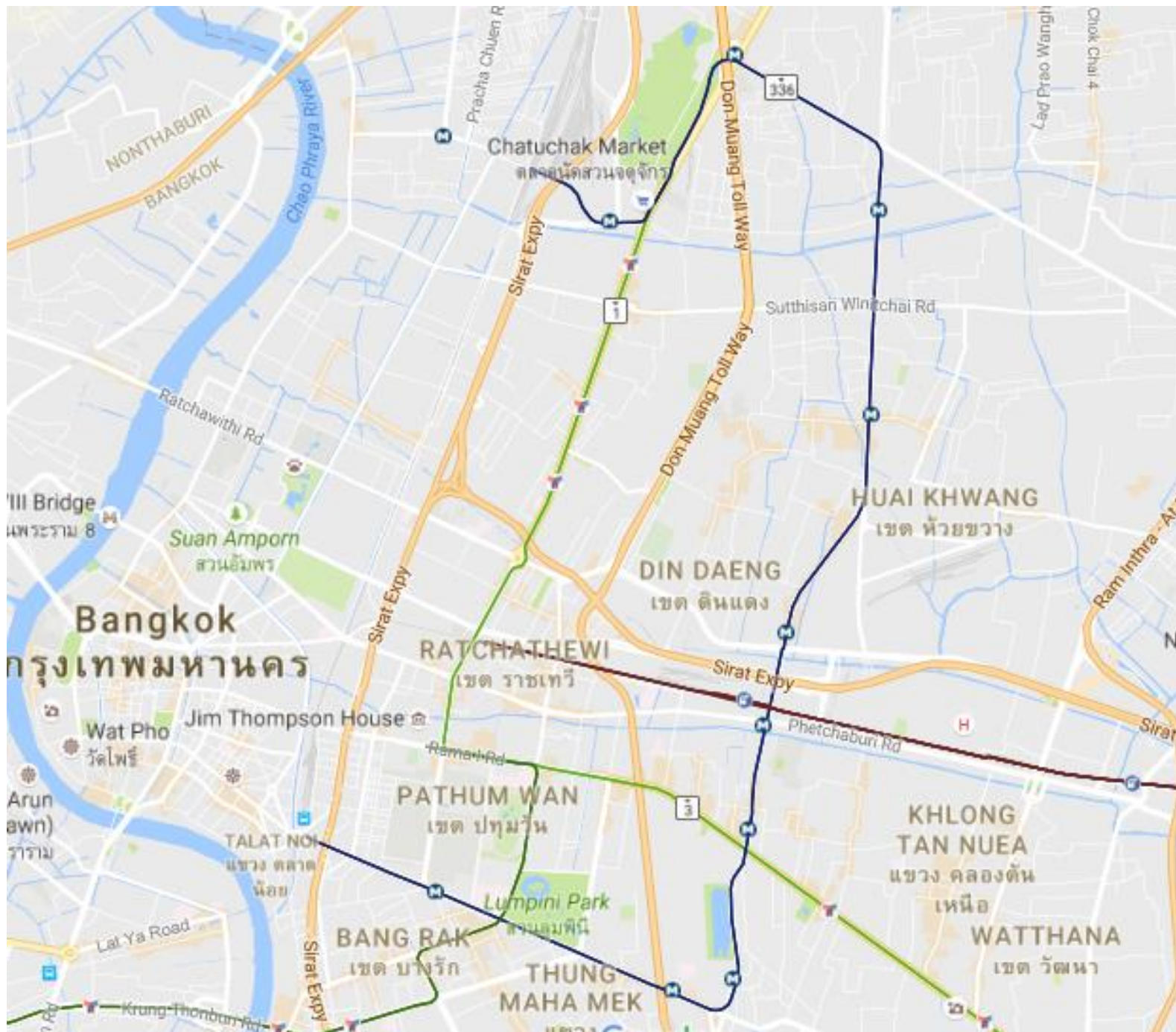
- Under the satellite-town concept, now widely applied in many major cities in Germany and other European countries, **a city should be divided into many residential areas and suburbs.**
- *Each area is made self-sufficient, complete with office and commercial buildings, schools, hospitals, shopping 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.

# Challenges remain in Bangkok

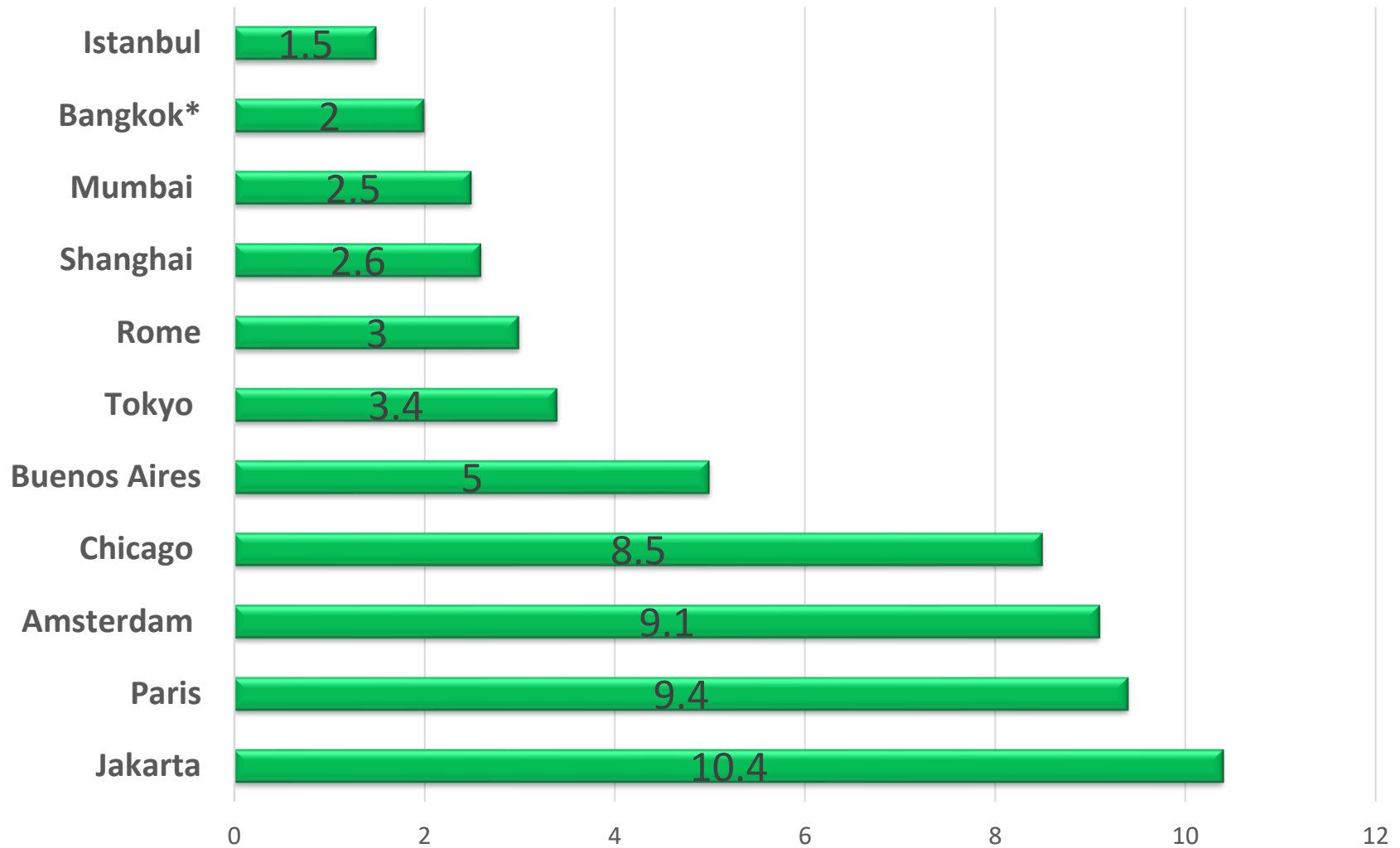
- Industrial competitiveness declines as Bangkok starts experiencing *diseconomies of agglomeration*
- Lack of management to maintain effective and efficient institutional capability (Kor Tor Mor's Blunders)
- Social cohesion and instability
- Health and ***quality of life: green areas***

# 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.
- There is only **3.3** m<sup>2</sup> of green space per person in Bangkok, compared to an average of **39** m<sup>2</sup> in other cities across Asia.
- Bangkok thus ***has 10 times less green space*** than the region's urban areas.



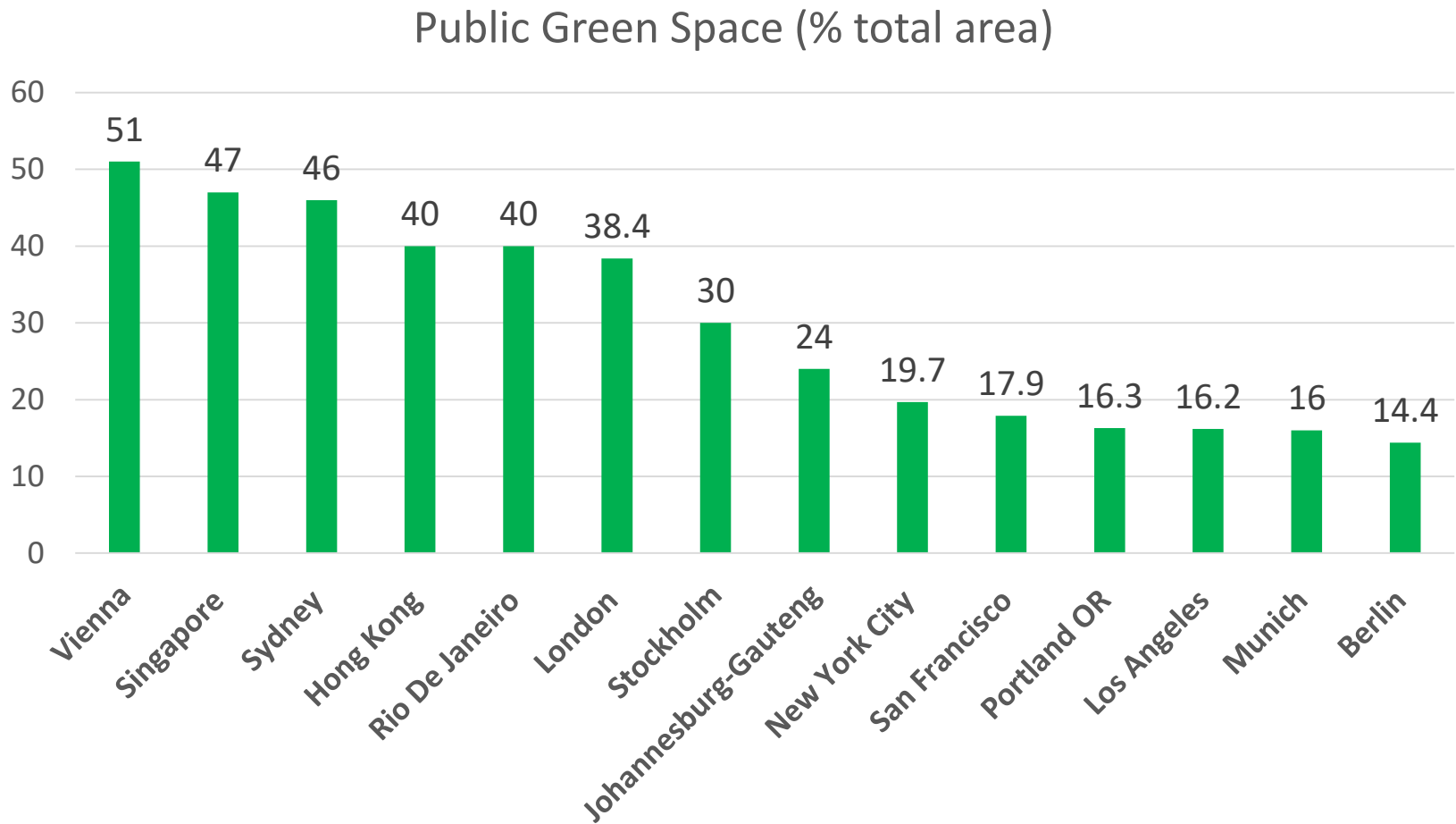
## Public Green Space (% total area) Source: World Culture Report



# London has 39% of public green spaces



# Cities with the most percentage of public green space

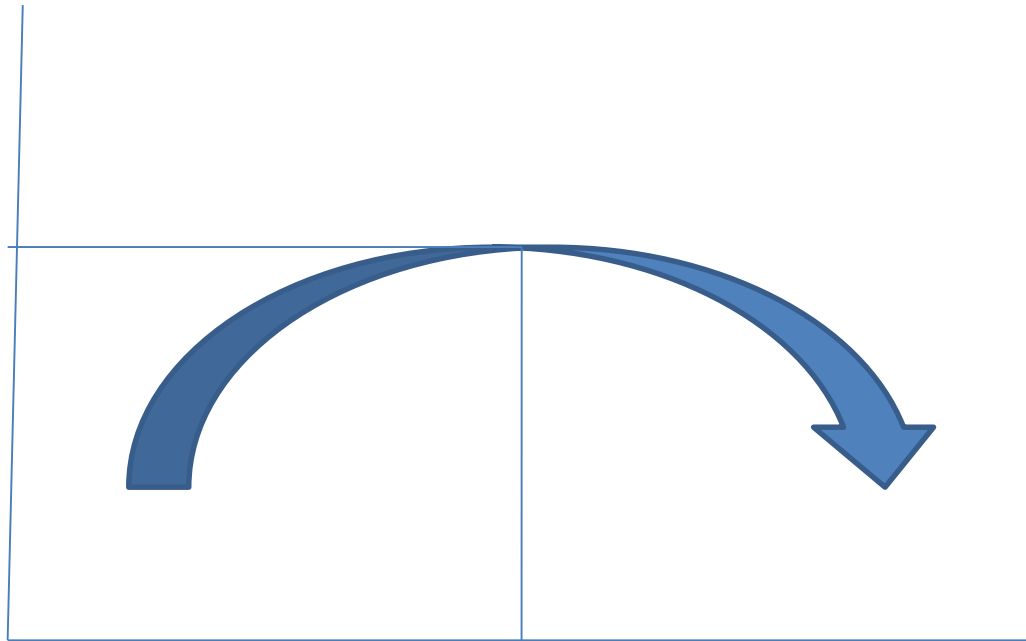


# 7. Environmental Kuznets Curve (EKC)

- 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

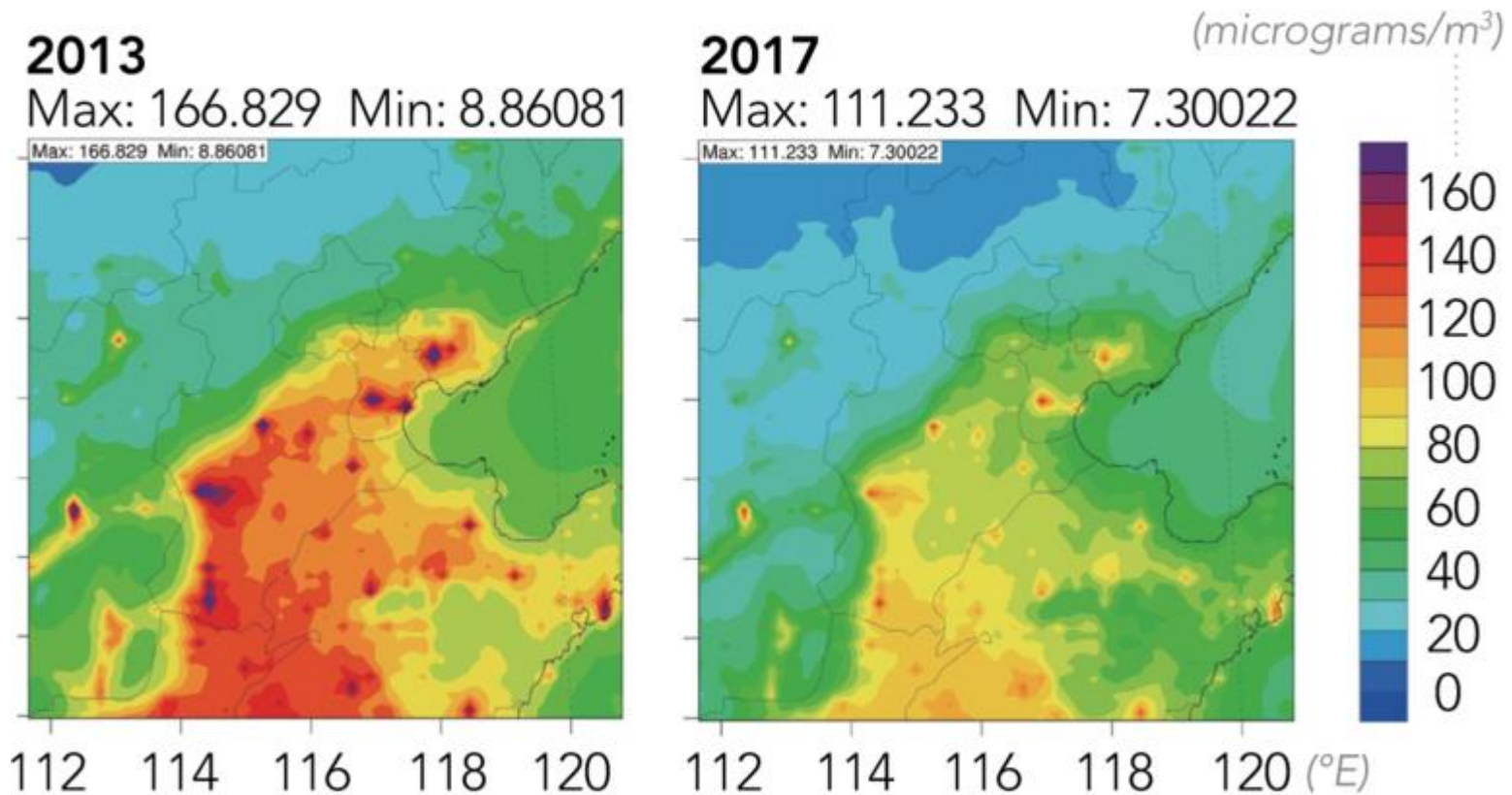
# Environmental Quality and Wealth

- 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

# 7. The Chinese story

## Beijing's pollution progress

Annual average concentration of PM2.5 in Beijing-Tianjin-Hebei and surrounding areas



Source: Tsinghua University

# The most air-polluted cities in the world

- When it comes to what China is doing well, experts also point to its model afforestation, and soil and water improvement projects.
- China is also in the vanguard developing electric vehicles and battery technology.
- Only five of the 30 most air-polluted cities in the world are in China, while 22 are in India -- the worst being Gurugram, which is 30 km southwest of the capital, Delhi.
- Bangladesh and Pakistan are also gagging on urbanization and the downside of old-fashioned economic development.

# Obstructions of river flows

- Its damming of the Mekong, and a proposal to blow up the great river's rapids to ease navigation, have been widely condemned.
- Chinese hydropower projects in Cambodia have overestimated water flows, prompting regular blackouts in Phnom Penh -- a problem only exacerbated by heavy power demand from Chinese construction projects.
- And renewed Chinese pressure to complete the \$3.6 billion Myitsone hydropower project on a stretch of the Irrawaddy River in Myanmar's Kachin state has caused demonstrations and widespread resentment, particularly as most of the power produced by the project would be for export to China; work begun in 2009 was suspended in 2011.
- In Thailand, a proposed 800-megawatt Thai-Chinese coal-fired power project in the southern province of Krabi along a relatively pristine stretch of coast has been stalled by strong public opposition.

# The myth of the Kuznets Environmental Curve

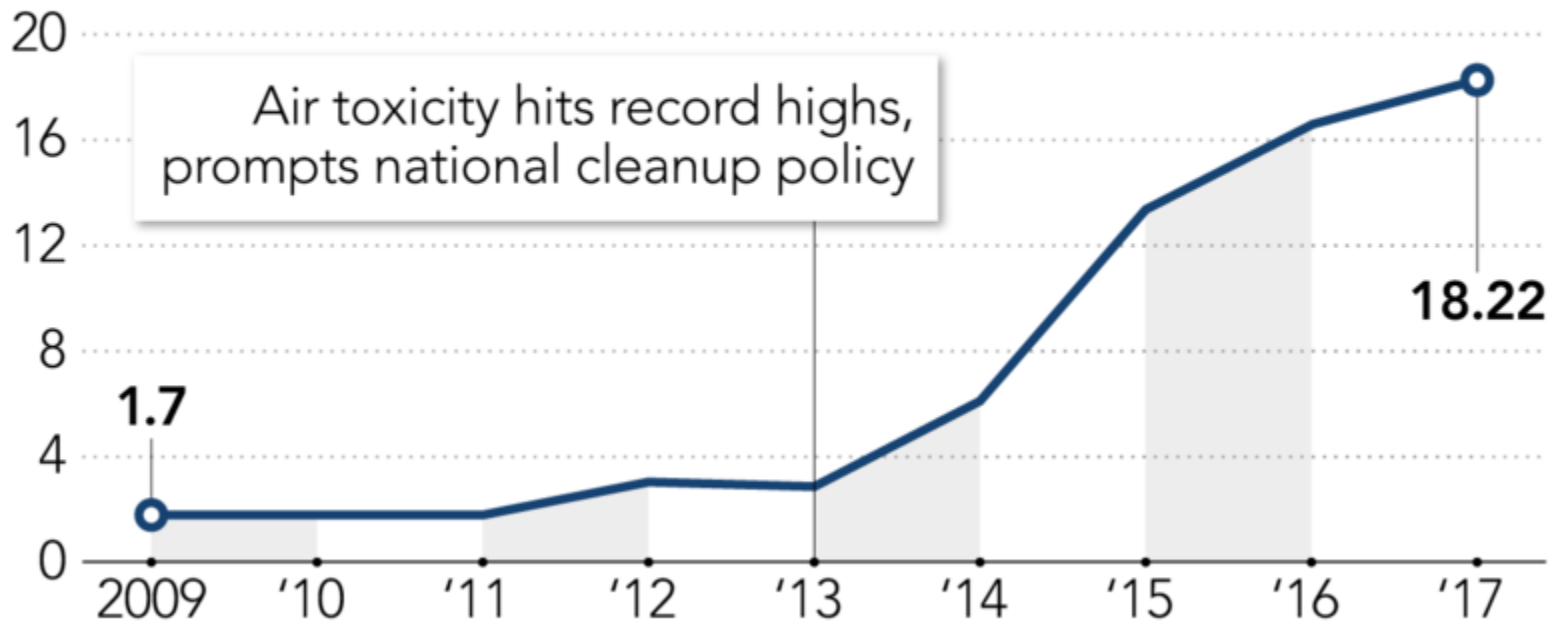
- "When we talk about economic growth, it usually means more pressure on the environment and more use of natural resources,"
- "But it doesn't have to be that way. We can change the economics by using innovation and honest, comparable economic data, and we can decouple economic growth from resource use and environmental degradation."

# Chinese tourists, PM2.5, and the demand for mushrooms

- A quarter of all visitors to Thailand arrive by air from China, generating an estimated 4% of the kingdom's GDP.
- However, Chinese arrivals in Thailand fell more than 12% year on year in February 2019 and nearly 2% in March.
- Ironically, one reason is thought to be exceptionally severe air pollution, particularly in the north, where Chiang Mai has recorded some of the highest readings of PM2.5 in the world this year.
- A significant contributor to the pollution has been the unregulated burning of forest floors to facilitate the collection of wild mushrooms, demand for which is insatiable among China's increasingly affluent middle class.
- Major suppliers in Yunnan Province cannot meet demand from inside the country, where *there are fines for lighting forest fires*, and pay cash for imported black market forest products.
- As a result, Thailand's environment is damaged along with its tourism prospects -- and China figures on both sides of the equation.

## Blue-sky thinking: Beijing's clean air investment soars

Spending on air pollution control, in billions of yuan



Source: U.N. Environment Program, Beijing Municipal Bureau of Finance

# Environmental pollution now as a political risk

- Despite its authoritarian nature, the Chinese government does face an element of accountability: Underlying popular sentiment can never be safely ignored.
- African swine fever has in recent months swept across China, largely through small unregulated and unsanitary pig farms.
- The Chinese are the world's most voracious pork eaters, and while the fever does not affect human health directly, it kills pigs without fail and carries significant political risk in terms of possible unrest.
- "Contamination affects everyone, but often the less-developed groups are affected more and they can become very discontented.
- “ *Environmental contamination affects political contamination.*”

# 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?

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

# Robert Frost

**I shall be telling this with a sigh  
Somewhere ages and ages hence:  
Two roads diverged in a wood, and I,  
I took the one less traveled by,  
And that has made all the difference.**

# Mr. Bhanupong

**I shall be telling you this with a sigh  
For forty years, my students have gone by  
Some excelled, some did not do so well,  
Because of their passion and perseverance  
And that has made all the difference.**