

EE460: Sustainable Urbanization in Thailand

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

- Urbanization around the world
- Declining Bangkok primacy
- Sustainability of Bangkok urbanization
- Cost of excessive concentration

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.

By 2000, ranking of big cities

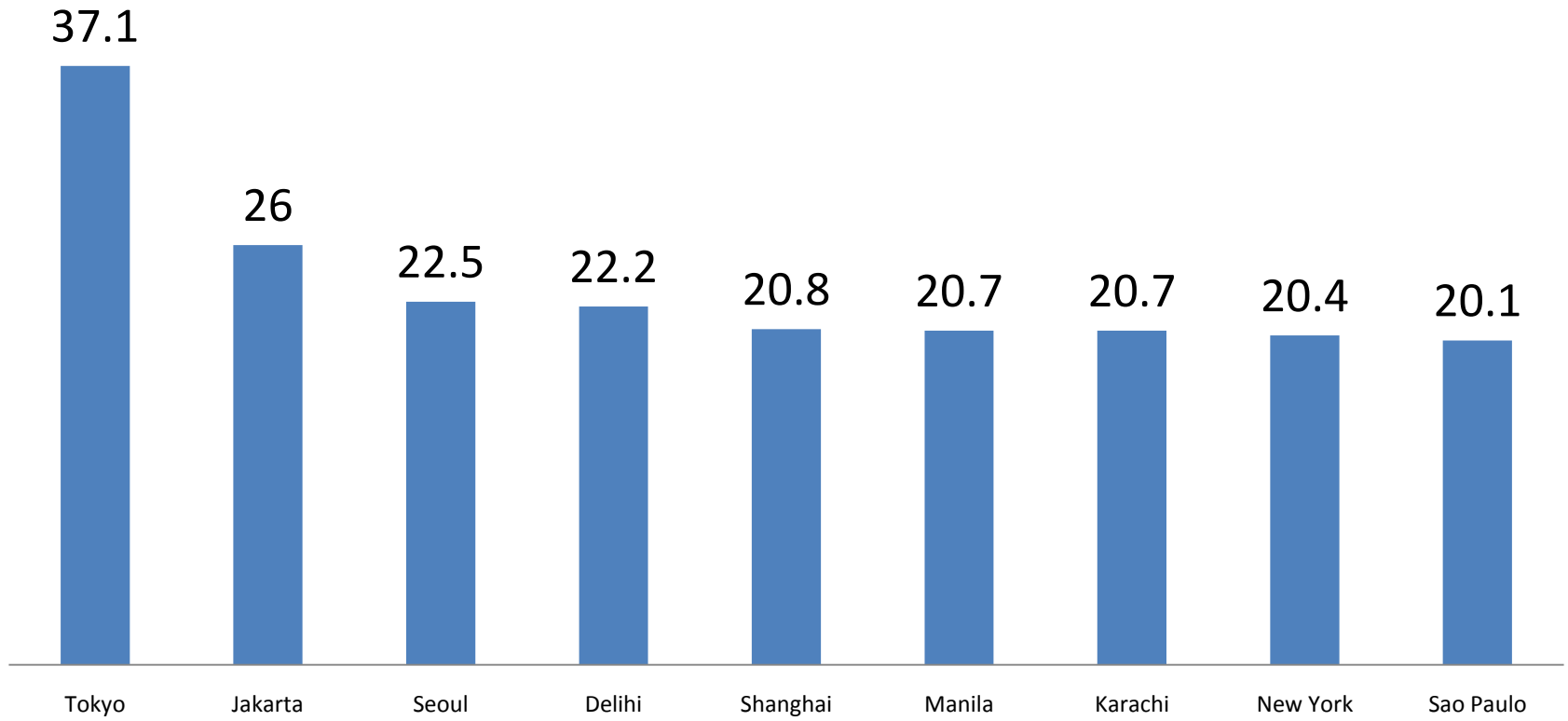
1. Tokyo	26.4
2. Mexico City	18.1
3. Sao Paulo	18.0
4. New York	16.7
5. Mumbai	16.1
6. Los Angeles	13.2
8. Shanghai	12.9
16. Manila	10.0
18. Seoul	9.9
19. Paris, Cairo	9.5
25. London	7.5
26. Bangkok	7.4

Today, there are at least 20 mega-cities.

Greater Tokyo, the world's biggest city, has expanded from 13 million residents in 1950 to today's figure of **34** million.

In 2012

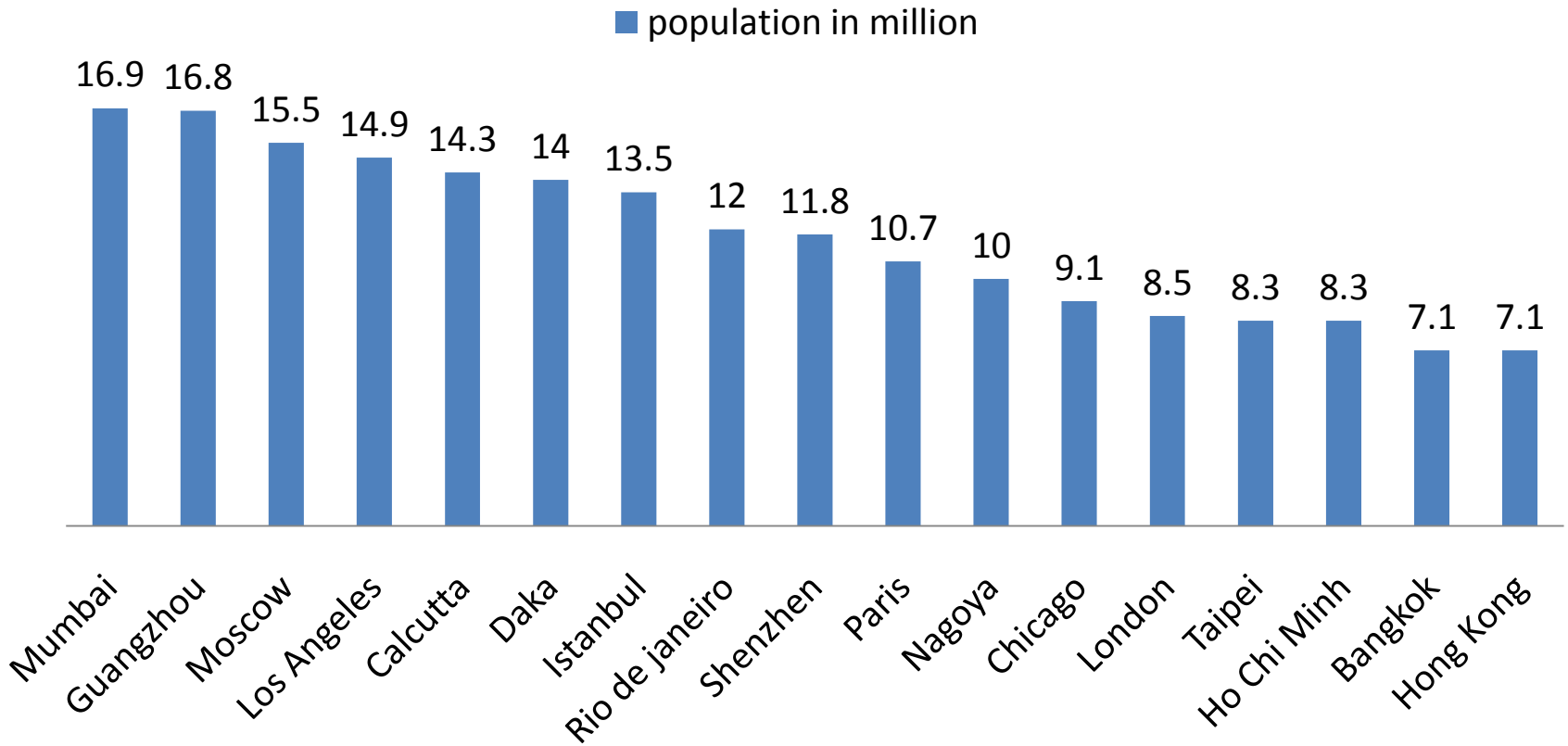
Megacities
population in million



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.

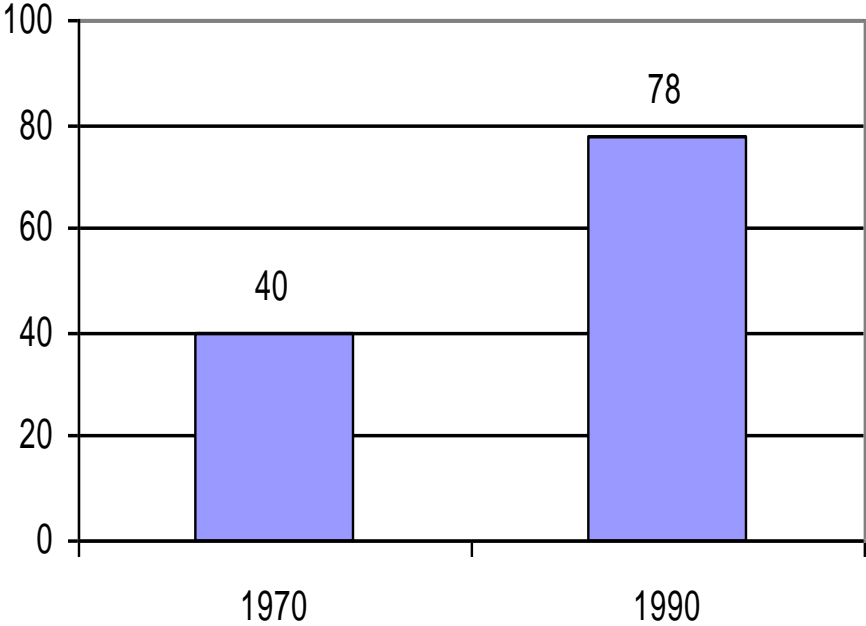
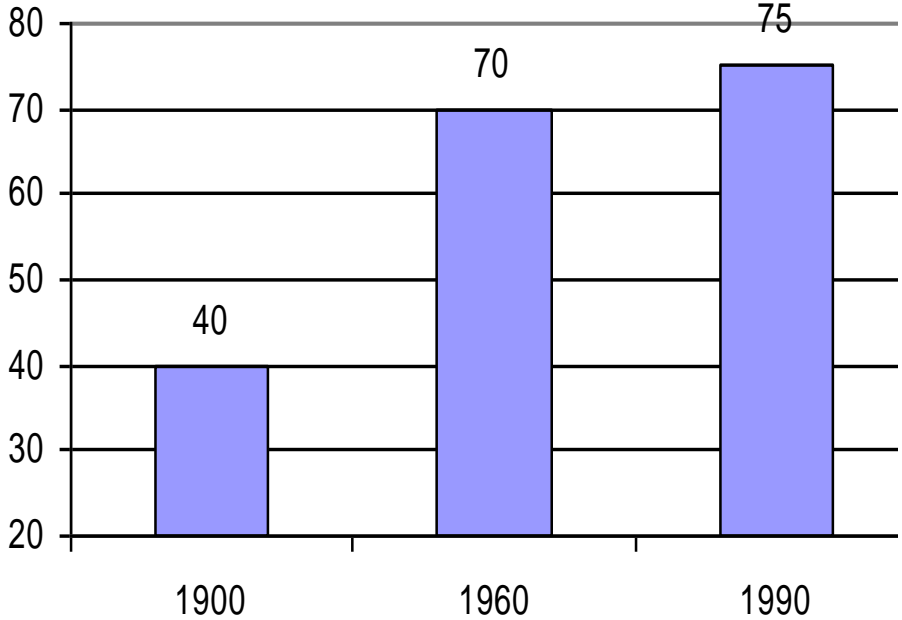
Population in large cities: 2012



What took the US 90 years to accomplish took Brazil for 30 years, Korea for 20 years

Urbanization in South Korea

Urbanization in USA



Urbanization in developed 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.

Not in poorer countries

- Sub-Saharan Africa, which has the world's highest rate of urban migration, is **not** following the traditional pattern.
- Developing nations are shouldering the vast majority of this burden, leaving them 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.

Slow 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**.
- They have little room for timely experimentation and adjustment.

Urbanization in Africa

- The agricultural sector is **not** flourishing and urban areas are **not** generating economic growth.
- Natural disasters and conflicts are forcing people to flood into towns and cities.
- Currently, only about 36% of Africa's population lives in urban areas but the continent is experiencing urbanization rates **twice as high as** those seen during the West's industrial revolution.

Living in slums

- Because the *urban areas are economically stagnant* or in recession, local authorities do not have the money or expertise to provide services such as access to water, housing, education and healthcare.
- As a result, **70%** of Africa's urban population find themselves living in slums.
- An estimated **one billion** people in **Latin America, Asia, as well as Africa**, live in slums or informal settlements that are not legally recognized.
- Without any intervention, this number could double by 2020

Unmanaged urbanization breeds slums and crime

- The Global Monitoring Report (GMR) 2013, released April 29, 2013 by the World Bank and International Monetary Fund (IMF), states that although urbanization helps pull people out of poverty and advances progress towards the Millennium Development Goals (MDGs), it can also lead to burgeoning growth of slums, pollution, and crime if not managed well.

- Urbanization has been a major force behind poverty reduction and progress towards other MDGs and that with over 80 per cent of global goods and services produced in cities, countries with relatively higher levels of urbanization, such as China, and many others in East Asia and Latin America, have played a major role in lowering extreme poverty worldwide.

- In contrast, though, the GMR 2013 indicates the two least urbanized regions, South Asia and Sub-Saharan Africa, have significantly higher rates of poverty and continue to lag behind on most MDGs.
- The report reveals that large cities and smaller towns are fast becoming home to the world's largest slums, with Asia home to 61 per cent of the world's 828 million slum dwellers, Africa 25.5 per cent and Latin America 13.4 per cent.
- The developing world's urban centers are expected to burgeon, drawing 96 per cent of the additional 1.4 billion people by 2030.

Rural-Urban Dynamics and the Millennium Development Goals

- The report starkly compares the well-being in the countryside versus the city and reveals that while urban infant mortality rates range from 8-9 percentage points lower than the rural rates in Latin America and Central Asia;
- It is 10-16 percentage points in the Middle East and North Africa, South Asia, and Sub-Saharan Africa and highest in East Asia (21 percentage points).

- In South Asia, 60 per cent of urban dwellers have access to sanitation facilities, compared with 28 per cent in rural areas.
- In Sub-Saharan Africa, 42 per cent of the urban population has access, compared with 23 per cent of rural residents.
- Access to safe water in urban areas in developing countries was almost complete in 2010, with 96 per cent coverage, compared with 81 per cent of the rural population having access, according to the report.

- Commenting on the findings of the report, Kaushik Basu, the World Bank's Chief Economist and Senior Vice President for Development Economics said: "The rural-urban divide is quite evident.
- 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 centres 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.

- Deputy Director of the IMF's Strategy, Policy and Review Department stated: "Emerging market and developing countries are growing robustly notwithstanding slow growth in advanced economies."
- Sustaining this growth by continuing to maintain prudent macro policies and strengthening the capacity to manage risks, including through a rebuilding of depleted policy buffers is key to continued progress in poverty reduction as we approach 2015."

- Senior Economist in IMF's Strategy, Policy and Review Department and co-author of the GMR, however believes “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.”
- Lead Economist at the World Bank and lead author of the GMR though, “Urbanisation does matter.
- In order to harness the economic and social benefits of urbanisation, 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 programmes.”

- The GMR, which is also an annual report card on MDG attainment, finds that progress continues to lag on reducing maternal and child mortality and providing sanitation facilities, targets, which will not be met by the MDGs 2015 deadline.
- Progress has been stellar on reducing extreme poverty, providing access to safe drinking water and eliminating gender disparity in primary education, with these targets already achieved several years ahead of the MDGs deadline.

- Though extreme poverty has declined rapidly in many countries, the World Bank estimates that by 2015 there will still be 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.
- As the report points out, the challenge of fighting poverty and improving the living conditions of the poor lies in both urban and rural areas.

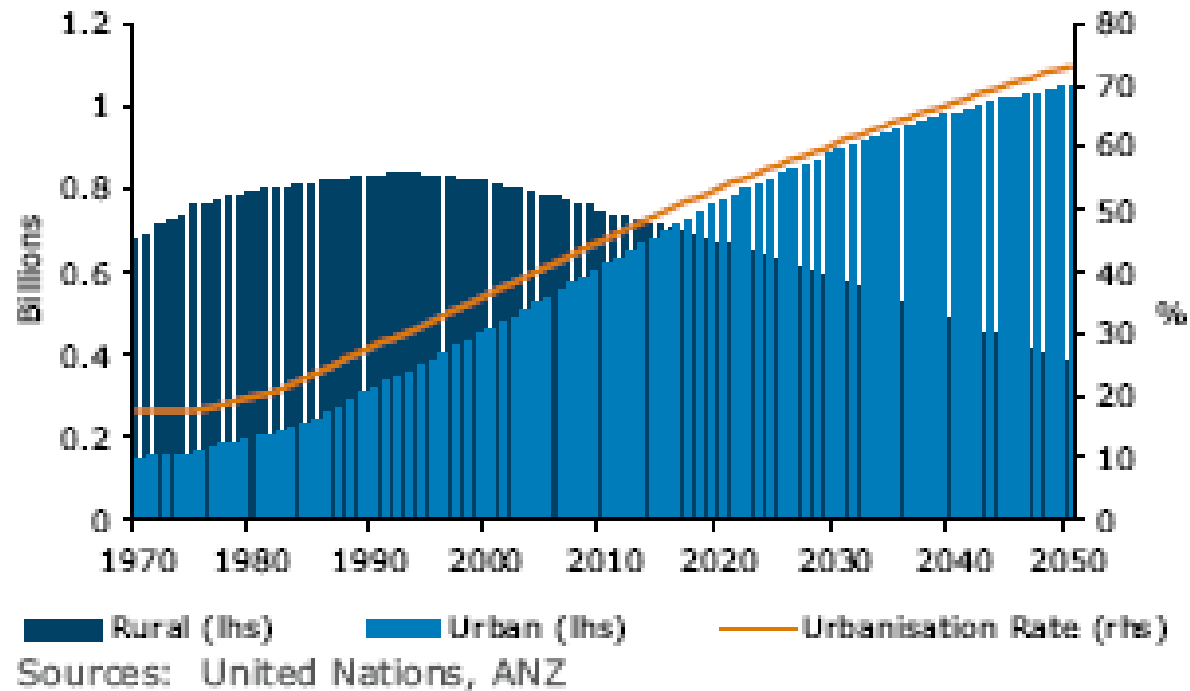
- To cope with urban growth, a coordinated package of essential infrastructure and services is needed. Only by meeting essential needs related to transportation, housing, water and sanitation as well as education and healthcare can cities avoid becoming hubs of poverty and squalor, the report says.
- At the same time it says, stepped up efforts are also needed to improve development in rural areas, where 76 per cent of the developing world's 1.2 billion poor live, with inadequate access to the basic amenities defined by the MDGs.

- Rural poverty rates far exceed those of urban areas across all regions of the world, the report further finds, indicating that rural women are hurt the most by poor infrastructure, because they perform most of the domestic chores and often walk long distances to have access to clean water, and lower levels of education attainment.
- Although tackling rural development challenges will not be easy, it can be done with complementary rural-urban development policies and actions by governments to facilitate a healthy move toward cities without short-changing rural areas, the report recommends.

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.
- An estimated 200,000 people **each year** move to slums on the southern outskirts of the capital, Beijing.

FIGURE 4. CHINA'S URBANISATION PROFILE



Urbanization and poverty

- McKinsey Global Institute, "Urban World: Mapping the Economic Power of Cities," nine of the 10 urban areas that will experience the highest GDP growth from 2007 to 2025 *are in China*.
- Out of the top 25 growth cities, 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 and poverty

- With a fifth of the world's population, 600 urban centers account for some 60% of worldwide GDP.
- By 2025, McKinsey expects the mix of these top cities to radically change.
- All the new entrants will be from emerging markets, a shift that will have profound social consequences. Says Richard Dobbs, director of the McKinsey Global Institute:
- "This urbanization is **lifting** more people **out of poverty** than any movement in history."

Characteristics of Unsustainable Urbanization

- *Increasing* population density in the primal cities
- *Rising* urban poverty
- *Worsening* income inequality
- *Deteriorating* quality of environment
- *Does Bangkok fit this pattern?*

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 degree of concentration is reflected in the share of large population of metropolitan areas in total urban population.

- **urban primacy** indicates the largest city in a country. Such a city is called a primate city.
- Urban primacy can be defined as the central place in an urban or city network that has acquired or obtained a great level of dominance.
- The level of dominance is measured by population density and the number of functions offered.
- Higher functions and population will result in higher dominance.

Examples of primate cities

- 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, Mexico (8.6 million) outshines Guadalajara (1.6 million).
- A huge dichotomy exists between Bangkok (7.5 million) and Thailand's second city, Nakorn rachsrima

Urban primacy in different countries

Percentage of population residing in a single city, 2000

- Beirut, Lebanon 59.2%
- Kuwait City 45.9
- Lisbon, Portugal 38.5
- Dubai, UAE 34.0
- Tel Aviv 33.3
- Buenos Aires 32.5
- Athens 29.4

- Country's leading city is always disproportionately large and exceptionally expressive of national capacity and feeling.
- The primate city is commonly at least twice as large as the next largest city and more than twice as significant. - Mark Jefferson, 1939

Primate city

- Geographer Mark Jefferson developed the law of the primate city to explain the phenomenon of huge cities that capture such a large proportion of a country's population as well as its economic activity.
- These primate cities are often, but not always, the capital cities of a country. An excellent example of a primate city is Paris, which truly represents and serves as the focus of France.

- They dominate the country in influence and are the national focal-point.
- 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

- They dominate the country in influence and are the national focal-point. 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. However, not every country has a primate city, as you'll see from the list below.

Urbanization in Thailand

- In 2000, the population density in Bangkok was **4,060** persons per square kilometer.
- The **Bangkok primacy** was clearly demonstrated by its size of population which was **60 times** the density of population in the Northern region, where **67** persons lived per square kilometer.
- *What does the share of Bangkok population tell us?*

Highest Urban Population

% population living in urban areas, 2001

- Hong Kong, Singapore 100%
- Belgium 97.4
- Australia 91.2
- Netherlands 89.6
- United Kingdom 89.5
- Saudi Arabia 86.7
- Sweden 83.3

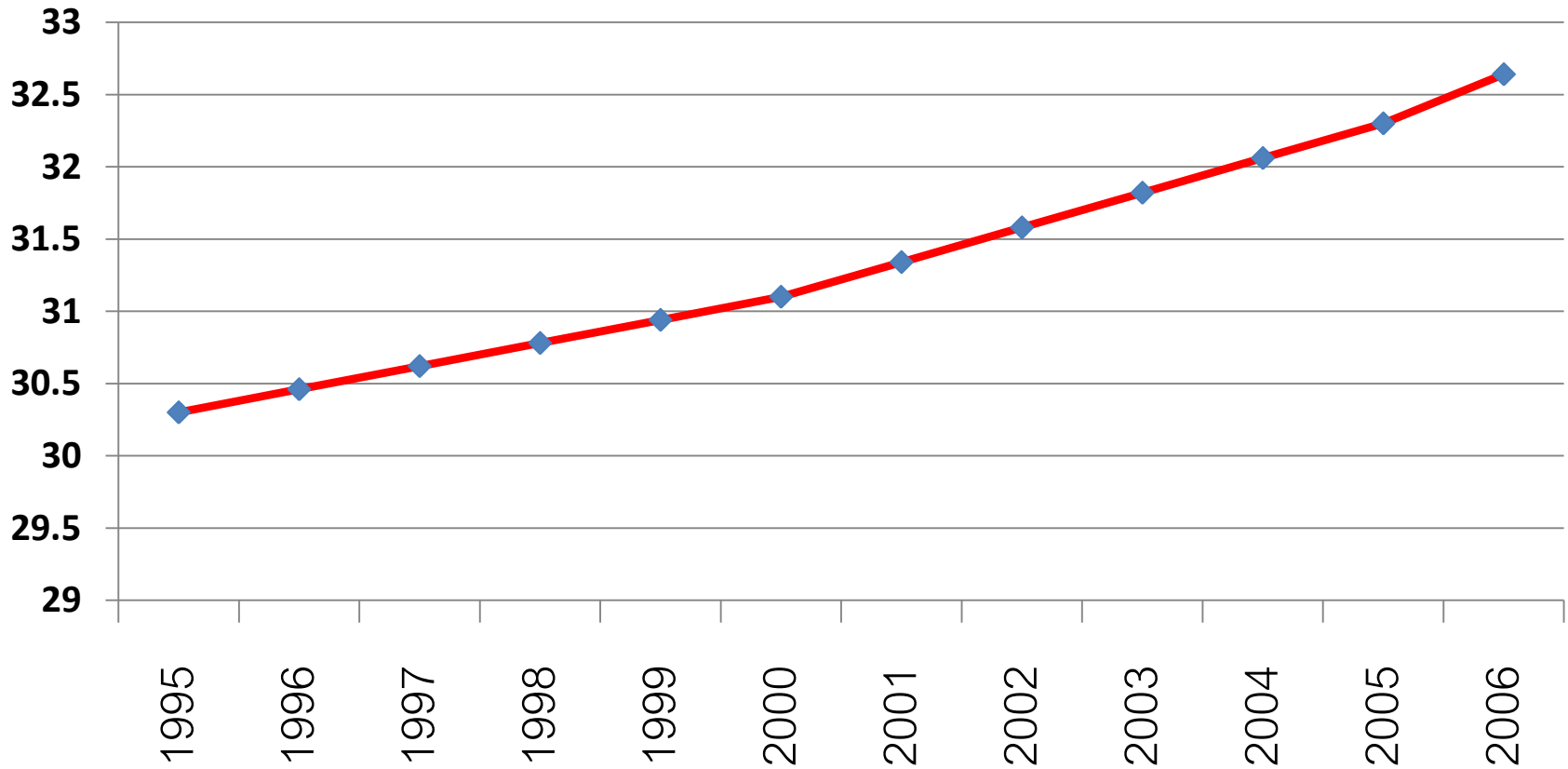
Lowest Urban Population

%population living in urban areas, 2001

- Rwanda 6.3%
- Bhutan 7.4
- Nepal 12.2
- Ethiopia 15.9
- Cambodia 17.5
- Laos 19.5
- Vietnam 24.5
- Myanmar 28.1
- Thailand in 2005: 29% (18.1m/62.4m)
- What do these countries have in common and in contrast with high urban population countries?

Thailand: 1995 - 2007

Urban population (% of total)

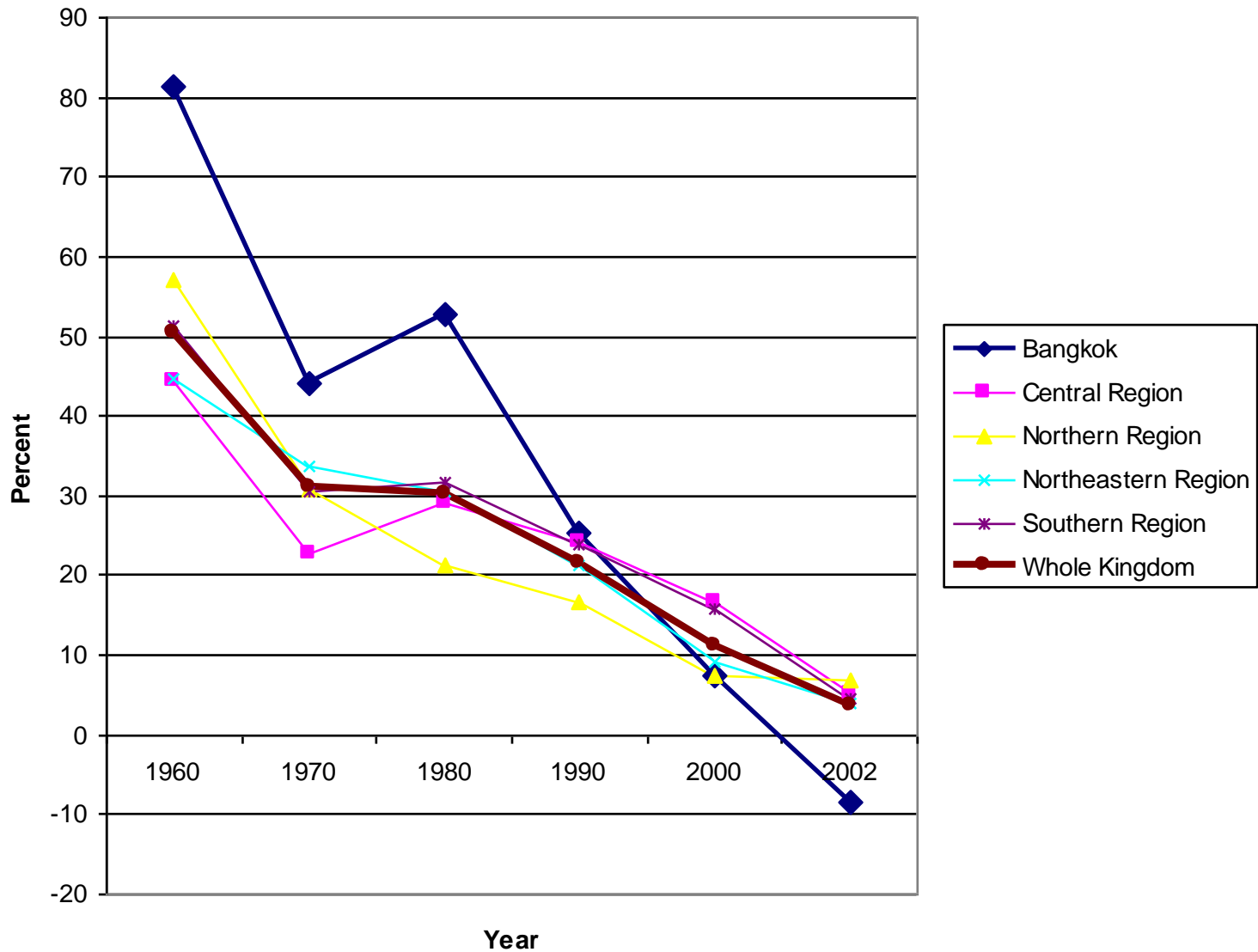


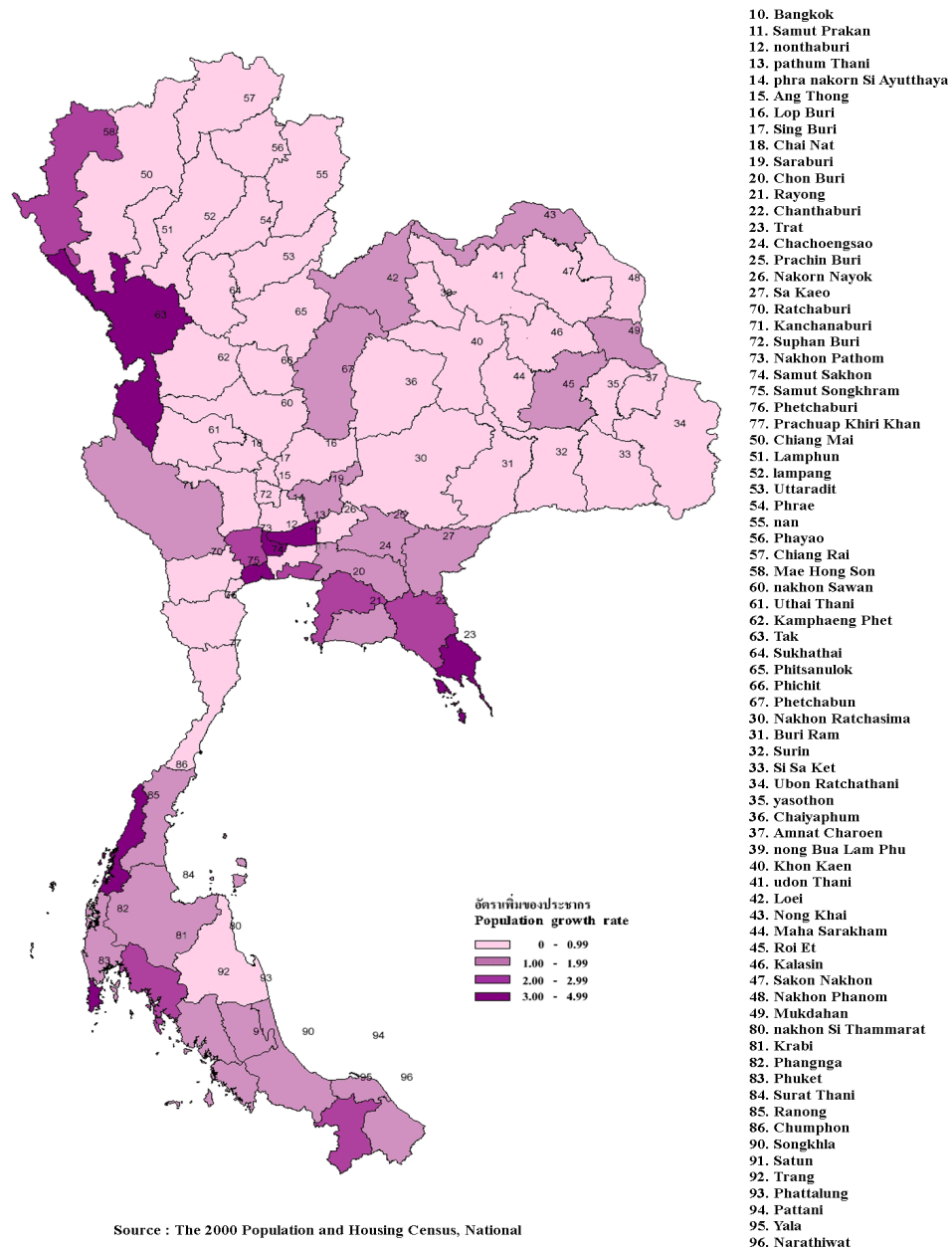
Declining population:

The first stage of decentralization

- The population density in Bangkok has been on the declining trend.
- Between 2000 and 2002, the urban population of the whole kingdom **increased by 3.1 %**, implying increased urbanization for the whole country.
- But the density of population in Bangkok actually **declined by 9 %** to 3,694 persons.
- In 2007, it declined to 3,643 persons.

Slowdown in Population Density Percentage change

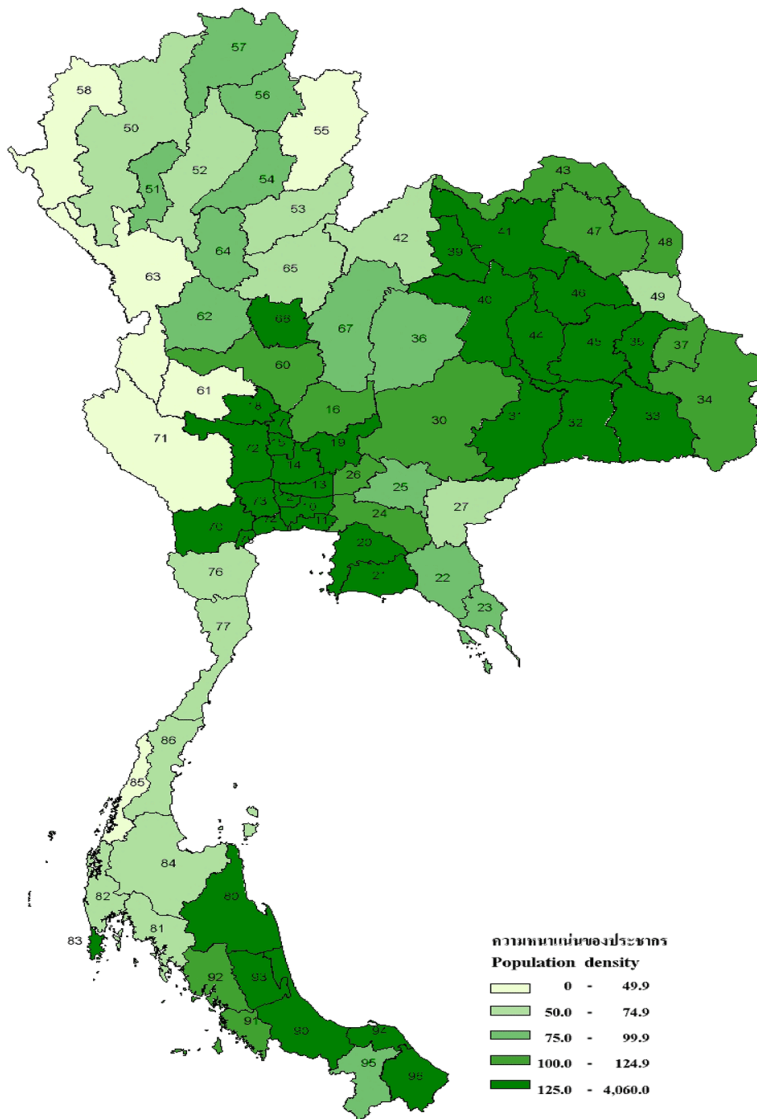




Population growth

Source : The 2000 Population and Housing Census, National

Population Density



10. Bangkok
11. Samut Prakan
12. nonthaburi
13. pathum Thani
14. phra nakorn Si Ayutthaya
15. Ang Thong
16. Lop Buri
17. Sing Buri
18. Chai Nat
19. Saraburi
20. Chon Buri
21. Rayong
22. Chanthaburi
23. Trat
24. Chachoengsao
25. Prachin Buri
26. Nakorn Nayok
27. Sa Kaeo
70. Ratchaburi
71. Kanchanaburi
72. Suphan Buri
73. Nakhon Pathom
74. Samut Sakhon
75. Samut Songkhram
76. Phetchaburi
77. Prachuap Khiri Khan
50. Chiang Mai
51. Lamphun
52. lampang
53. Uttaradit
54. Phrae
55. nan
56. Phayao
57. Chiang Rai
58. Mae Hong Son
60. nakhon Sawan
61. Uthai Thani
62. Kamphaeng Phet
63. Tak
64. Sukhathai
65. Phitsanulok
66. Phichit
67. Phetchabun
30. Nakhon Ratchasima
31. Buri Ram
32. Surin
33. Si Sa Ket
34. Ubon Ratchathani
35. yasothon
36. Chaiyaphum
37. Amnat Charoen
39. nong Bua Lam Phu
40. Khon Kaen
41. udon Thani
42. Loei
43. Nong Khai
44. Maha Sarakham
45. Roi Et
46. Kalasin
47. Sakon Nakhon
48. Nakhon Phanom
49. Mukdahan
80. nakhon Si Thammarat
81. Krabi
82. Phangnga
83. Phuket
84. Surat Thani
85. Ranong
86. Chumphon
90. Songkhla
91. Satun
92. Trang
93. Phattalung
94. Pattani
95. Yala
96. Narathiwat

Source : The 2000 Population and Housing Census, National

Population and its growth in 2000

	Size (mil)	% growth
Whole Kingdom	60	1.05
Bangkok	6.3	0.72
Nakorn Rachasrima	2.5	0.71
Khon Kaen	1.7	0.63
Ubon	1.68	0.89
Chiang Mai	1.4	0.74

Cities surrounding Bangkok

	Population size (million)	% growth
Prathum thanee	0.67	4.84
Nakorn Pathom	.80	2.51
Samut Prakan	1.0	2.76
Samut Sakhon	0.45	3.54
Non Thaburi	0.81	3.43

The second stage of decentralization

- 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.
- 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 deconcentration in suburban areas of Bangkok.
- This encouraging trend implies that urbanization process in Thailand is sustainable, because large cities of BMR would not be expanding without limit.

Gradual Urbanization

- 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 BMR has been declining gradually.

Declining Urban Poverty

- The strength of the economy 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.

Desirable Urbanization

- 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.

Education opportunity provided in urban areas

- Disparities in human capital endowment also explain large regional income inequality.
- Urban areas do not only provide jobs for migrant labors, they also provide education for rural people.
- The government imposed the 12 years of compulsory education.
- Remember that education policy made Taiwan and Korea's income distribution patterns differ from Kuznets hypothesis.

First thing, first

- By providing equal opportunity for educational attainment, income inequality can be improved in the long run.
- Through providing **basic education** to all children, the quality of Thai workers can be raised in the future.
- **Before** migrating into cities, rural labors must be provided with sufficient amount of human capital suitable to work in the modern sector.

Urban sector: Labor shedding

- From 1995 to 2000, the rural sector did shed labor force in the agriculture from 68 to 64 percent, while the rural sector' share of industry employment rose from 9.5 to 12.3 percent.
- In contrast, the urban sector shed its labor shares in all sectors ***except in the service sector***, where labor share in the sector increased from 55.7 to 61 percent.
- Does the trend of labor shedding remain unchanged?

Attracted by urban service sector

- Some agricultural labors are absorbed by some industries in rural areas, but a large part is attracted into the service sector in urban areas
- Since the shares of employment in all sectors except services are declining, **only the urban service sector** can take care of migrating workers from the rural sector.

Wage Differentials

Northern and Northeastern regions' wages were only 39 percent of the Bangkok level.

The national average wage rate in 2000 was only 60 percent of the Bangkok wage rate.

Wage differentials are the determinant of migration between urban and rural areas.

Population density in the urban sector and **wage differentials** are therefore related through migration.

We are commuters

- Urbanization has already spilled over from Bangkok into surrounding provinces.
- A large number of Bangkok's **12 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.

Major problems in big cities

- Health and quality of life
- International industrial competitiveness
- Management and institutional building
- Social cohesion and stability

Costs of excessive concentration

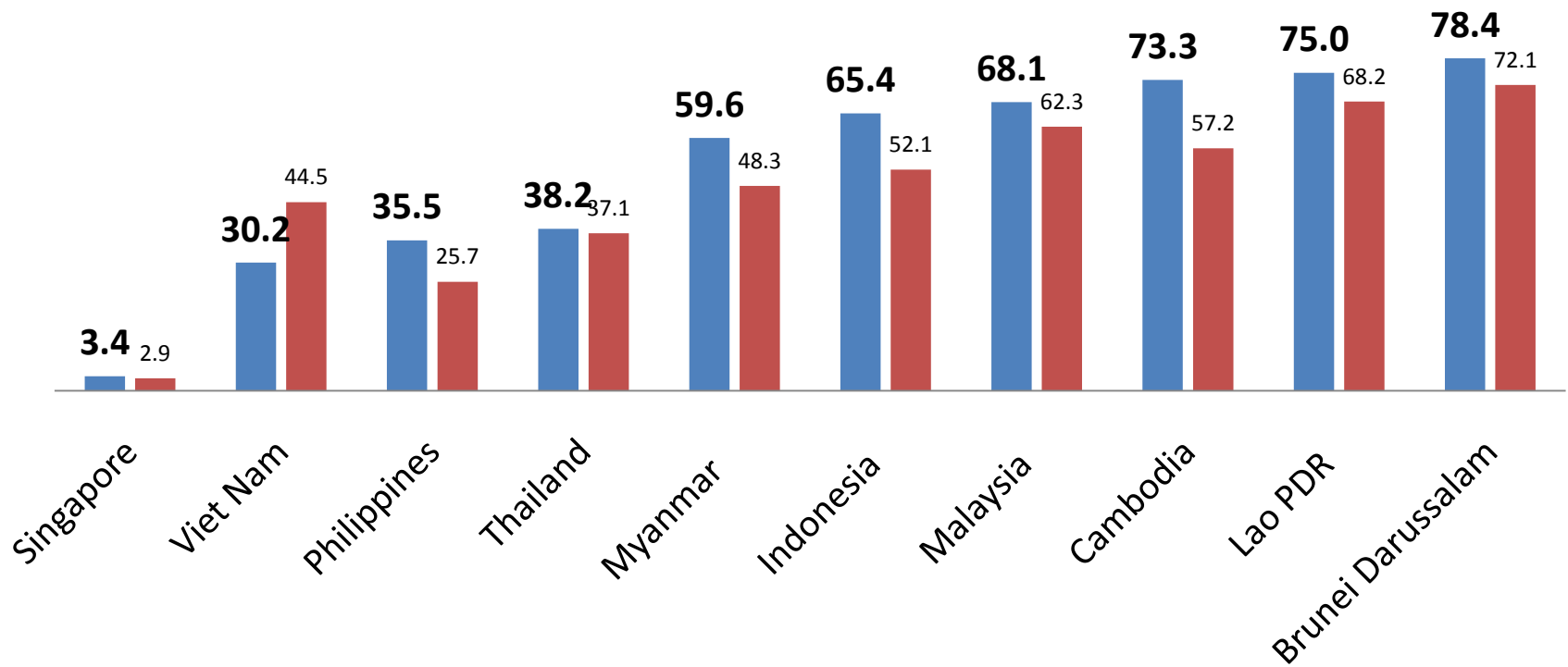
- Excessive concentration significantly **reduces** economic growth.
- **Growth losses** in countries with **excessive primacy** may be as great as those resulting from significantly deficient human and physical capital investment.
- Wage, land and infrastructure **costs escalate** with mega-city size relative to scale benefits for standardized products, making it more difficult **to attract foreign investment and to remain competitive** in world markets.

Green areas

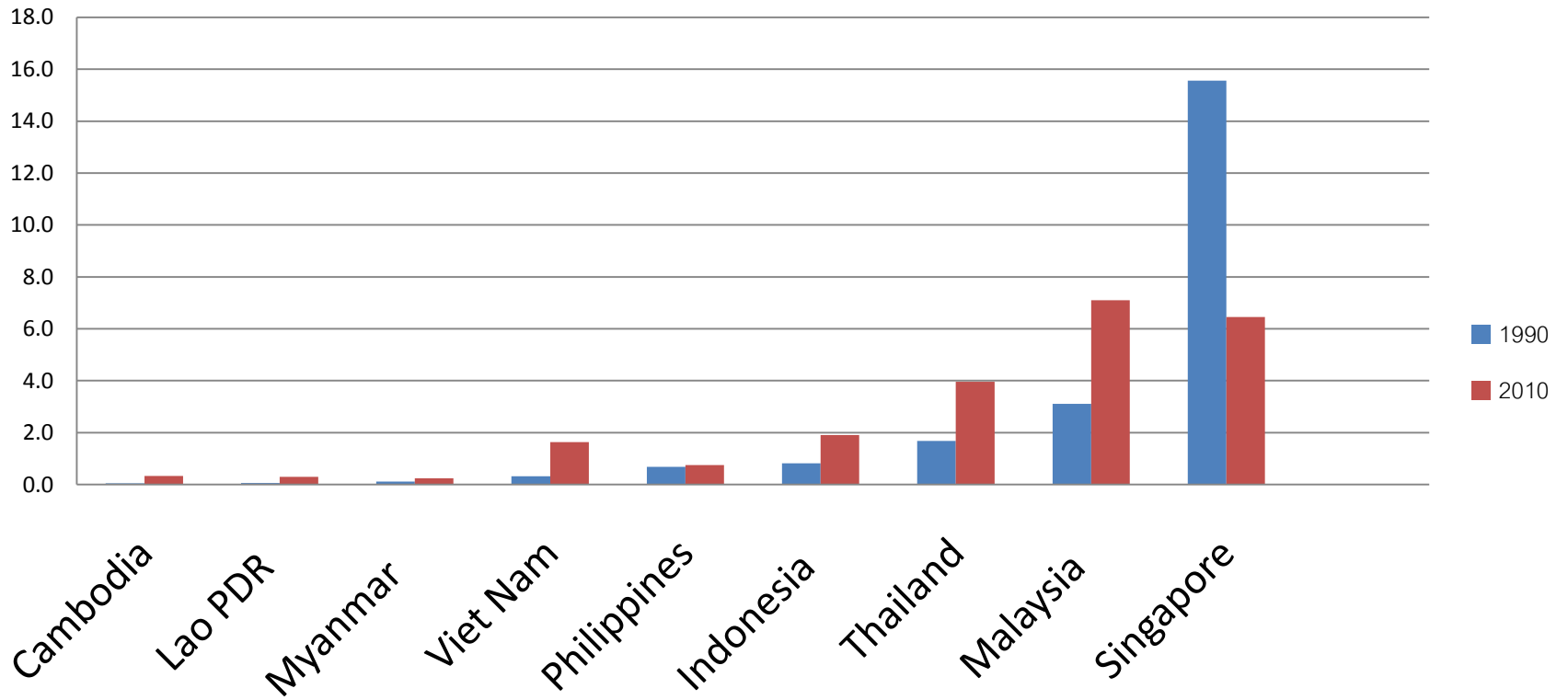
- Bangkok needs more new parks to increase the green-area-per-head ratio to 2.5 square meters from the existing *one* square meter per head.
- Paris has **25** square meter of green area per head.

Area covered by forest (%)

■ 1990 ■ 2010



Carbondioxide emissions (tons per capita)



Advantages

- Bangkok is among the cheapest office markets in Asia. International companies looking to establish an ROH (regional operating head quarters) in the city will enjoy relatively low occupancy costs and a wide variety of office buildings to choose from, in terms of both quality and location.

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?

Quotable quotations

- *“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”*

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

- *“Education is what survives when what has been learned has been forgotten”*

B.F. Skinner (1904-1990)

1. International reserve management

China had \$2.8 trillion international reserves at the end of 2010, while Japan's total reserves amounted to \$1.1 trillion at the end of February 2011. South Korea and Thailand also accumulated \$300 and \$140 billion respectively in March 2011.

- 1.1 What are the causes and motivation of holding such a large amount of international reserves?
- 1.2 Are there any adverse consequences of such action?
- 1.3 What kind of policy responses should be to cope with rising international reserves? How effective are they?

2. Mellon Doctrine

- State whether you agree or disagree with the following statement. Explain and detail your answer very carefully.
- “Expansionary austerity is possible because cutting government spending, even in a slump, increases the available supply of educated, skilled workers for private firms, thus lowering labor costs, which would encourage hiring”.

3. Oil input

“The Thai economy needs 1.3 barrels of oil to produce \$1,000 of GDP. The corresponding figures range from 0.6 in China, 0.9 in Indonesia, 1.0 in Malaysia, and 1.1 in Vietnam”

- 3.1 What are implications on Thailand’s internal and external balances?
- 3.2 How should monetary and exchange rate policy be conducted during the oil price hike?
- 3.3 Should the Thai government restrain the increase in the domestic oil price through subsidy?

4. Value-Chain Finance

The Bank for Agriculture and Agricultural Cooperatives (BAAC) will triple its credit line for the farm sector to 15 billion baht to help lift prices of agricultural products. A senior executive vice-president of the state-owned bank, said the increased credit line would be a form of value-chain finance (VCF), helping clients when their farm products are being stored while waiting to be sold. Oversupply was the main factor behind big periodic price declines for farm products, when all of the output, particularly seasonal crops, floods the market at once. Prices of most produce then fall sharply. Storing the produce and not letting it all come out at the same time is one way to keep prices stable. VCF would be used mainly for rice, sugarcane, rubber, palm oil and beef cattle. The BAAC will lend 80% of the products' value at the minimum retail rate, which is now 7%. Loans will also be provided for processed foods or research and development for value-added farm products, for which the bank will charge the minimum lending rate, now at 5%.

4. Value-Chain Finance

- 4.1 Do you think that the VCF can lift prices of agricultural products? Explain why. If not, why not?
- 4.2 How will the real wage rate in manufacturing sector be affected if product prices can be stabilized by VCF?
- 4.3 How will the VCF affect the performance of the BAAC?

5. Giant economies

- China 1.34 billion people are older and more urbanized than ever before, but there is a looming demographic crisis as the effects of the country's one-child policy take their toll. India's population, which is far younger, may eclipse China's in the next two decades.

Compare and contrast

	China	India		
Median age	35.5	26.2		
Urban population	47%	30%		
Average life expectancy	73	64		

- 5.1 Compare and contrast Thailand's statistics (as discussed in the class) with those numbers shown in the table and explain factors contributing to such differences or similarities.
- 5.2 Discuss consequences of high-growth economies on poverty and income distribution.
- 5.3 Examine the likely impact on Thailand if these giant economies slow down in 2011.