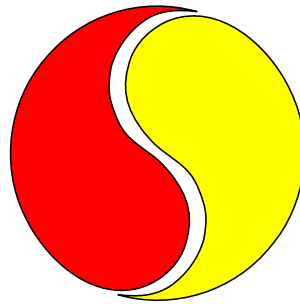


Health Management and China's Sustainable Development



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Health Reform

- For what?
- Sustainable development
- Health for all Chinese.

Proposition

- Health is one of the most important resources for sustainable development in China.
- We must invest in health to increase its value.
- We must manage health scientifically to reduce resource waste.
- Goal: sustainable development , health for all Chinese.

I will discuss...

- Health resource plays a key role in China's economic rise.
- The existing health resource cannot support sustainable development in China.
- It is desperate to invest/manage health resources for sustainable development in China.

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**HOW THE RISE OF
THE NEXT
SUPERPOWER CHALLENGES
AMERICA
AND THE WORLD**

TED C. FISHMAN

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DID YOU KNOW?



- Three hundred million rural Chinese will move to cities in the next fifteen years. China must build urban infrastructure equivalent to Houston's every *month* in order to absorb them.
- 220 billion text messages were sent over mobile phones in China last year.
- General Motors expects the Chinese automobile market to be bigger than the U.S. market by 2025. Some 74 million Chinese families can now afford to buy cars.
- China has more speakers of English as a second language than America has native English speakers.
- China has more than 300 biotech firms that operate unhindered by animal rights lobbies, religious groups, or ethical standards boards.
- On average, American companies make a 42 percent return on their China operations.
- There are 220 million "surplus workers" in China's central and western regions. The number of people working in the United States is about 140 million.
- Apparel workers in the United States make \$9.56 an hour. In El Salvador, apparel workers make \$1.65. In China they make between 68 and 88 cents.
- One in ten American jobs is at risk of being "offshored."
- There are 186 MBA programs in China.
- China's sex industry alone needs 1 billion condoms a year.
- China has 320 million people under the age of fourteen, more than the entire population of the United States.
- More people use the Internet in China than in the United States.

How strong is China's national power?

陈铁源 苏海河

	USA	Japan	France	UK	Germany	Russia	China
Comprehensive power 1	美国	日本	法国	英国	德国	俄罗斯	中国
综合国力值 1	8371	5112	4270	4070	3918	3203	2175
Comprehensive power 2	6090	3096	3254	2830	2710	1604	1101
综合国力值 2							

What does China's rise base on?

- Leadership

-

-

-

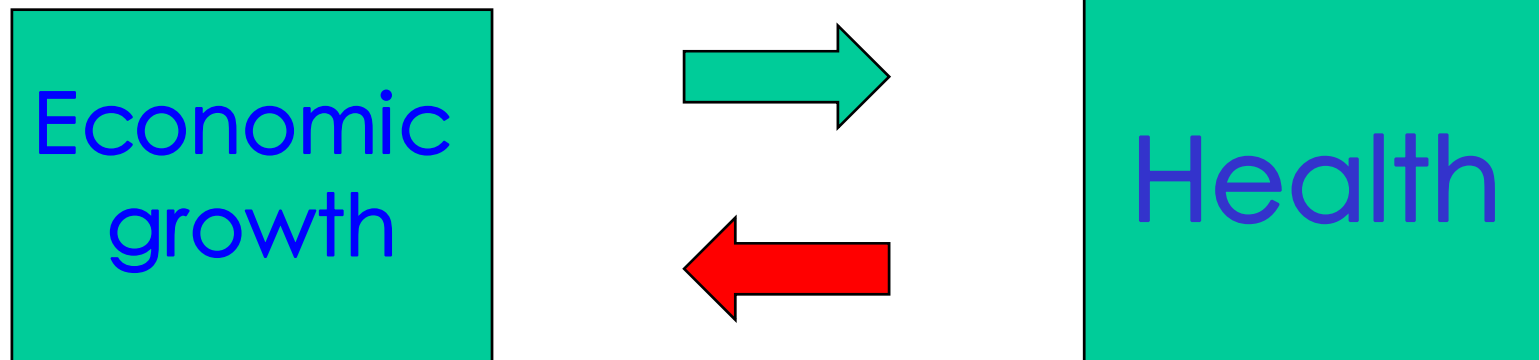
**Huge healthy
population!**

- Others

Healthy manpower is a key resource

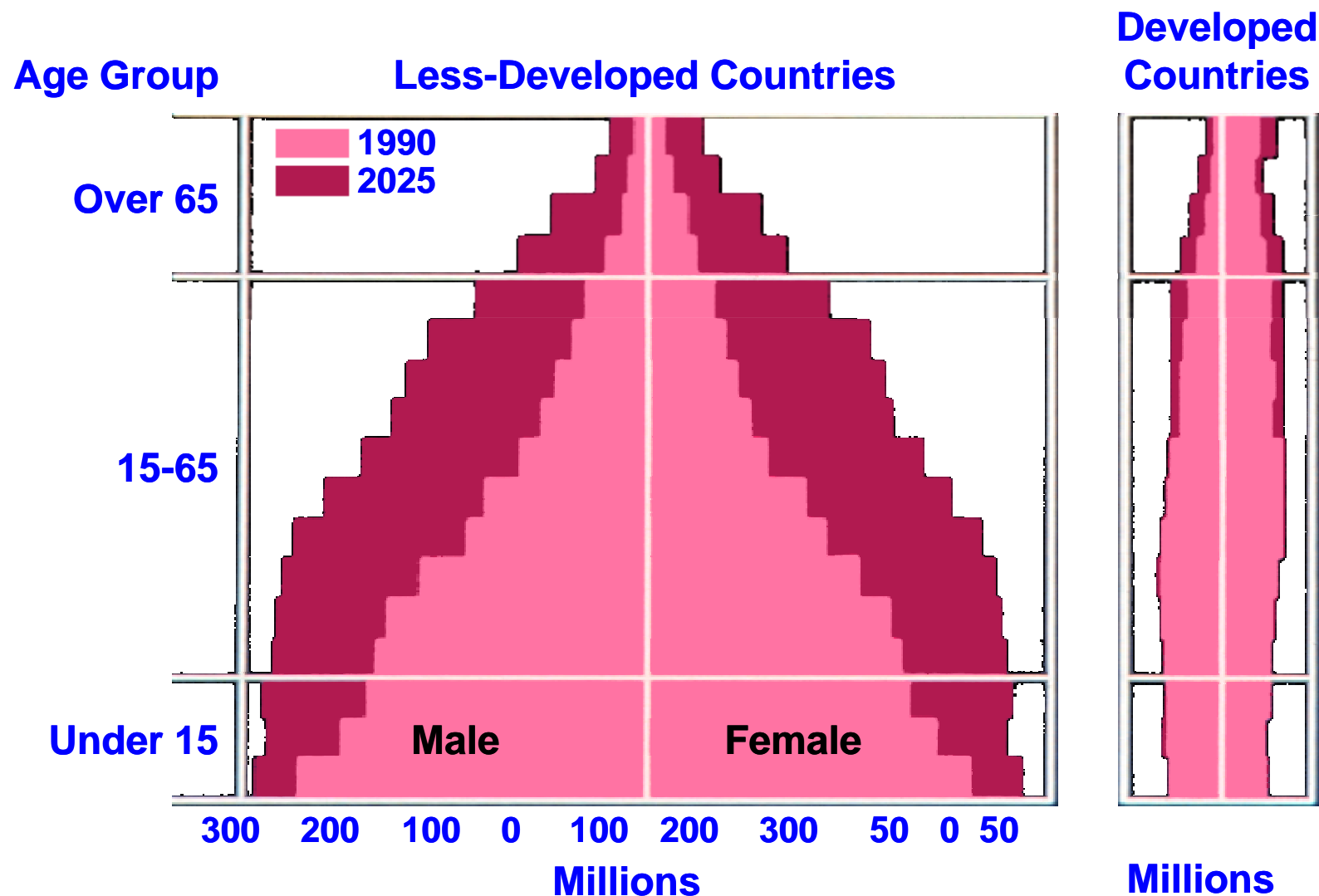
- Healthy manpower is
 - Main body of productive force
 - The base and important determinant for productive force development
 - The basic element and the most valuable resource for state and nation's survival and development.

Economic Model

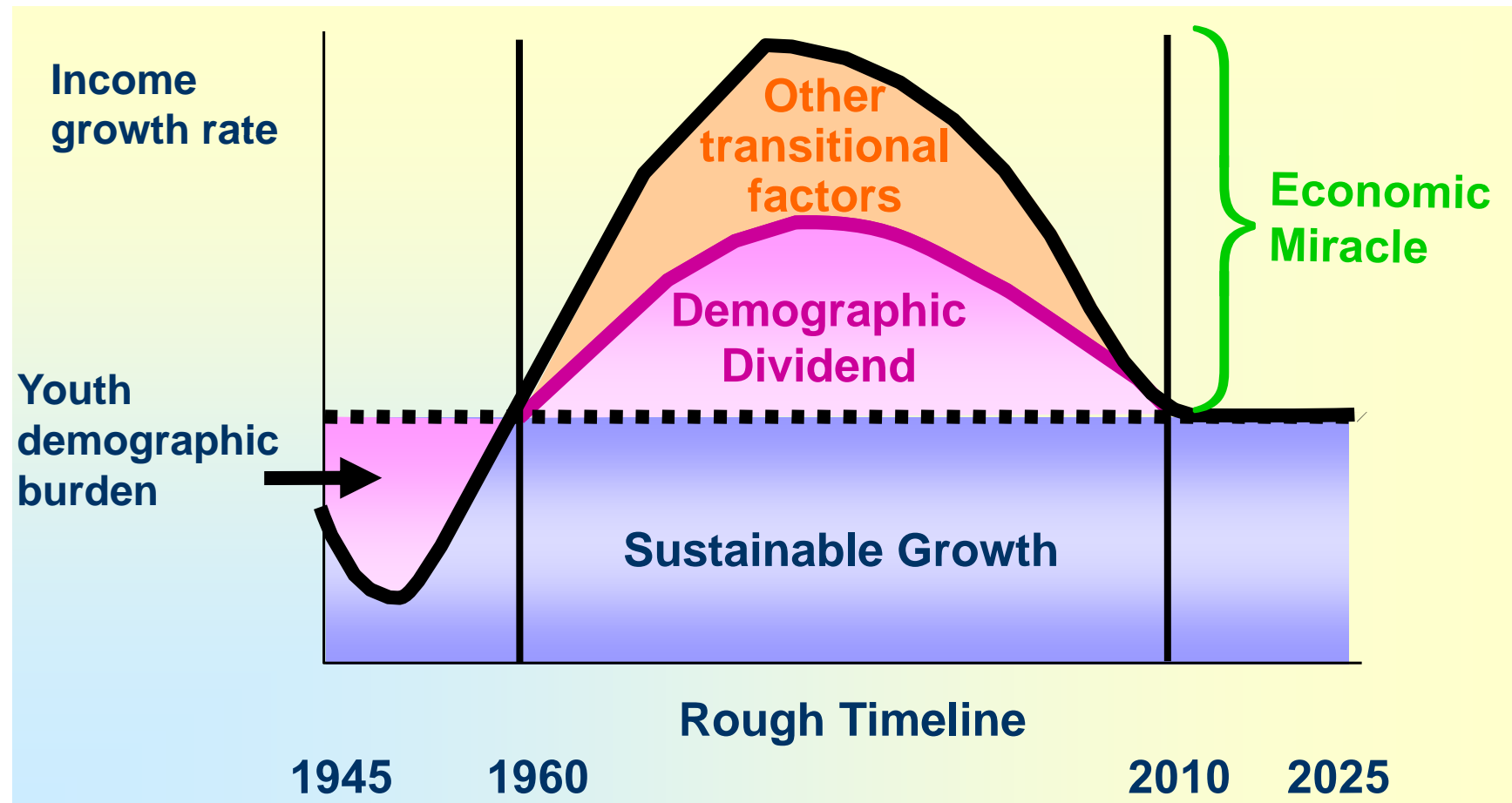


THE DEMOGRAPHIC TRANSITION

Age Distribution of Populations, 1990 and 2025

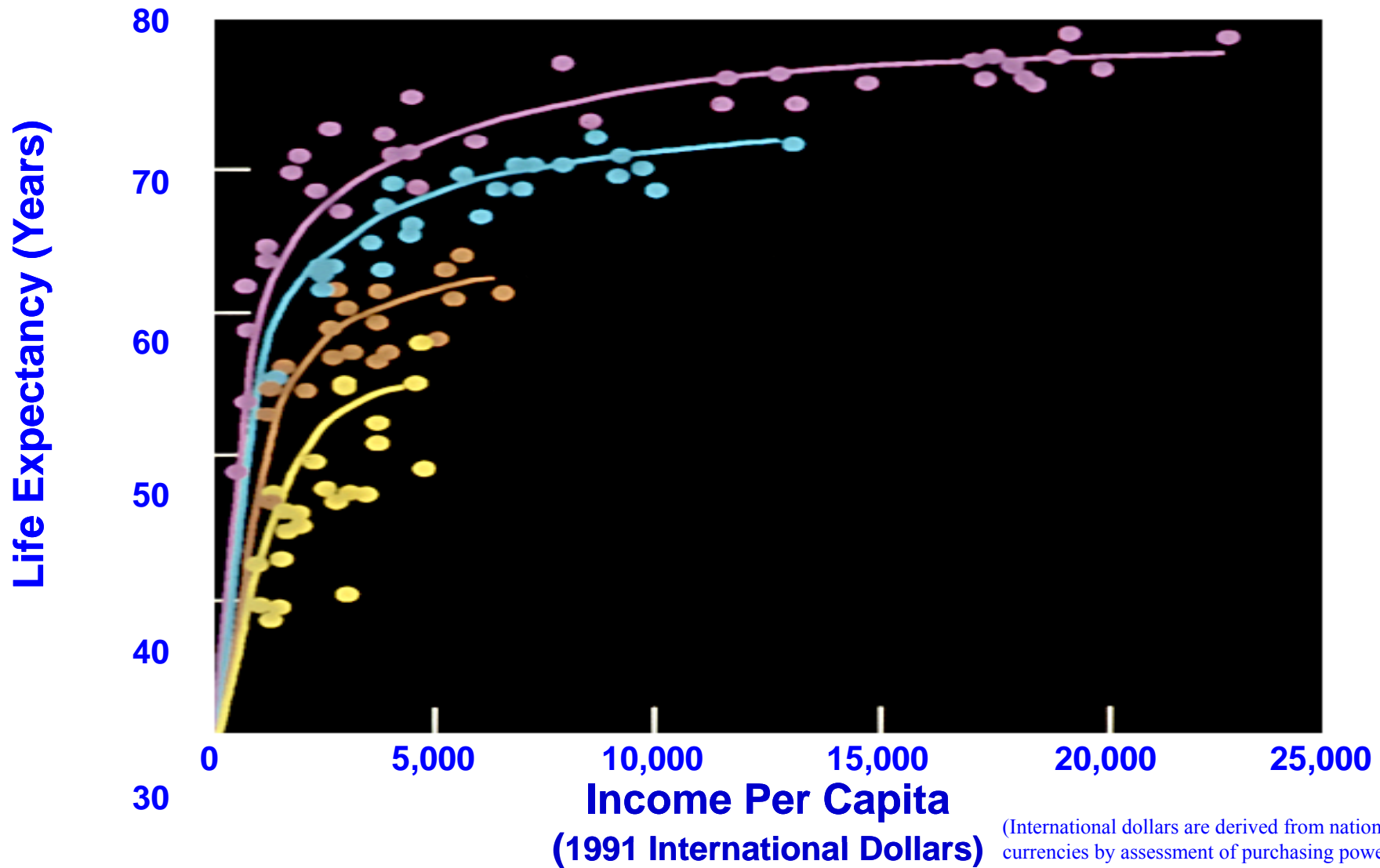


STYLIZED MODEL OF ECONOMIC GROWTH AND THE DEMOGRAPHIC TRANSITION



Bloom, D , J. Williamson, and Canning, D. *Rand Reports, World Bank Report*

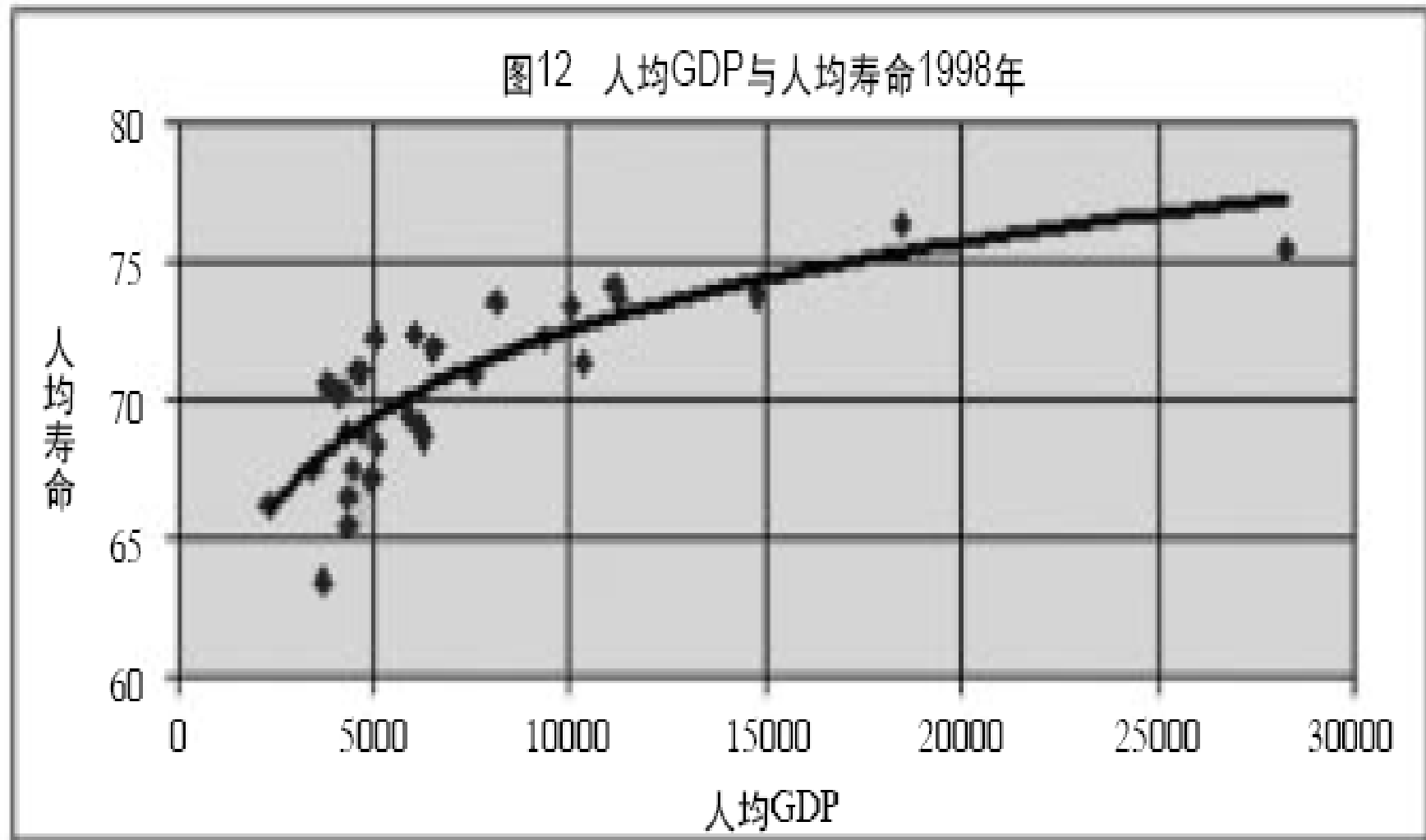
Life Expectancy and Income Per Capita



(International dollars are derived from national currencies by assessment of purchasing power, not by exchange rates. This measurement returns higher incomes for poorer countries.)

Source: *World Development Report 1993* p. 34.

GDP Per Capita and Life Expectancy

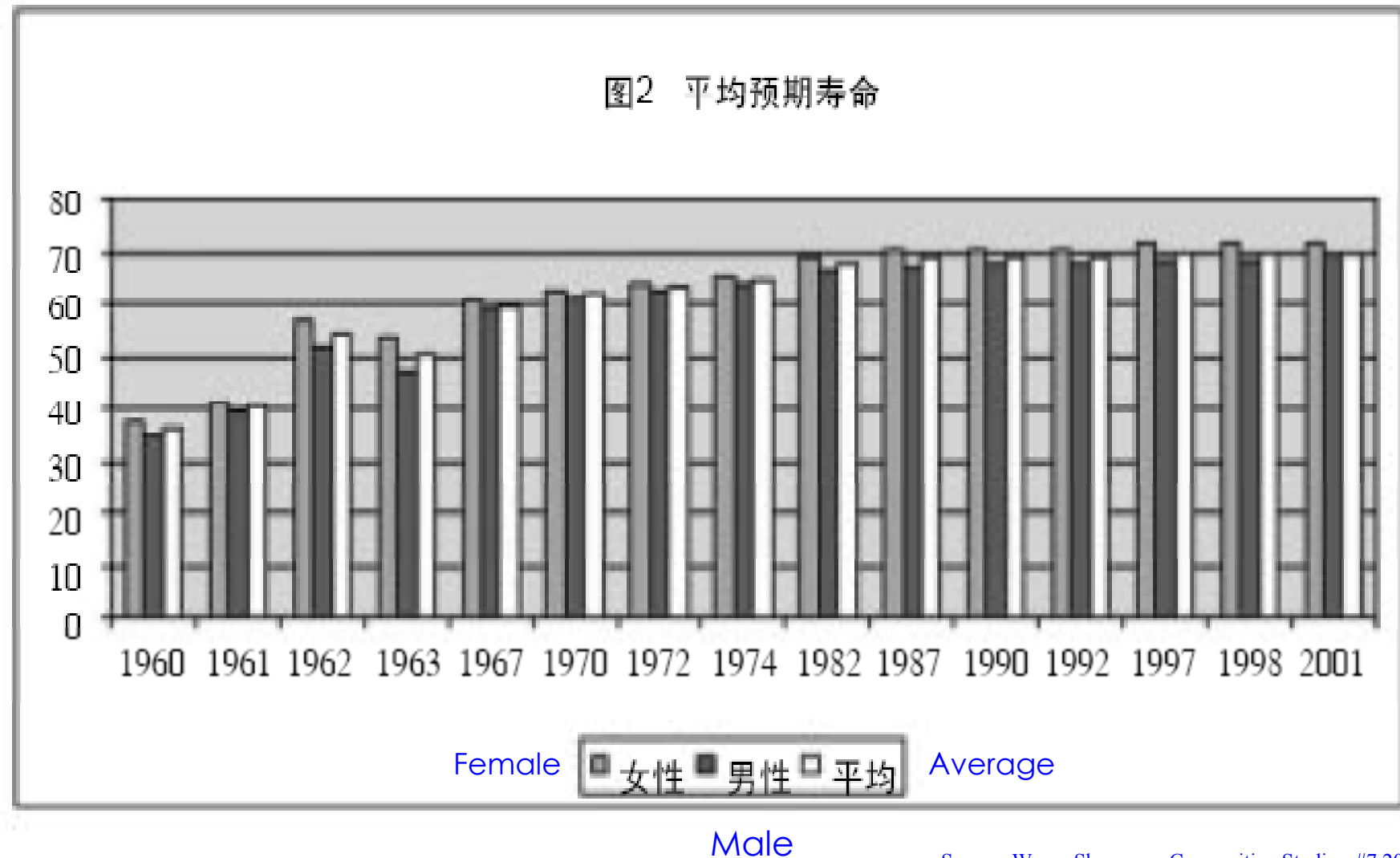


Source: Wang, Shaoguan, Comparative Studies, #7, 2003

Economic Impact of Life Expectancy Increase

- Elasticity of manpower productivity is about three times of that of material productivity.
- Manpower capital value may increase by increase of productivity.
- Function of total human capital is determined by educational investment and life expectancy.
- Life expectancy increases 10%, GDP increases 1.1%, according to UNDP.

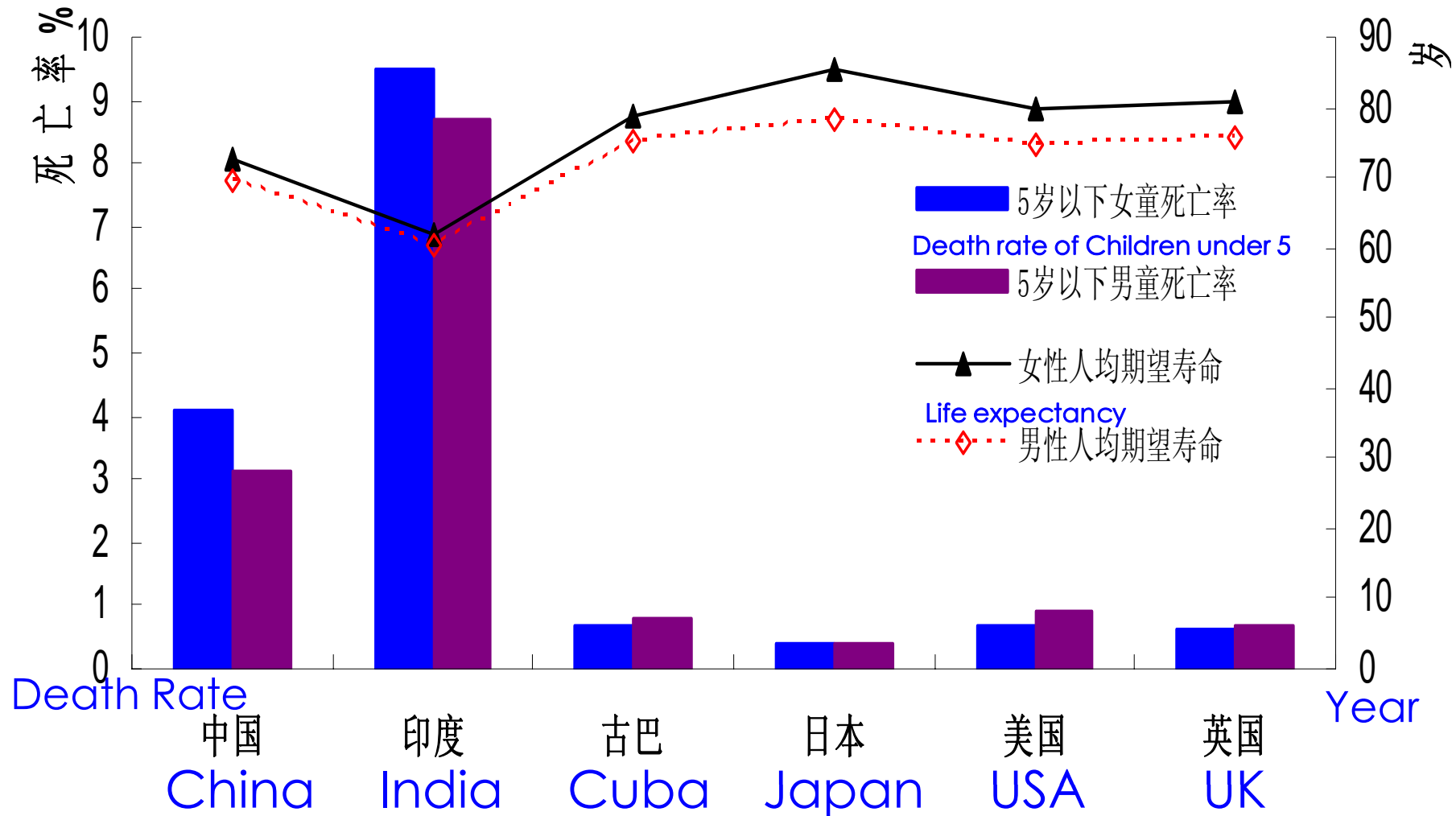
Life Expectancy, China, 1960-2001



Source: Wang, Shaoguan, Comparative Studies, #7, 2003

2002年部分国家5岁以下儿童死亡率和人均期望寿命分布图

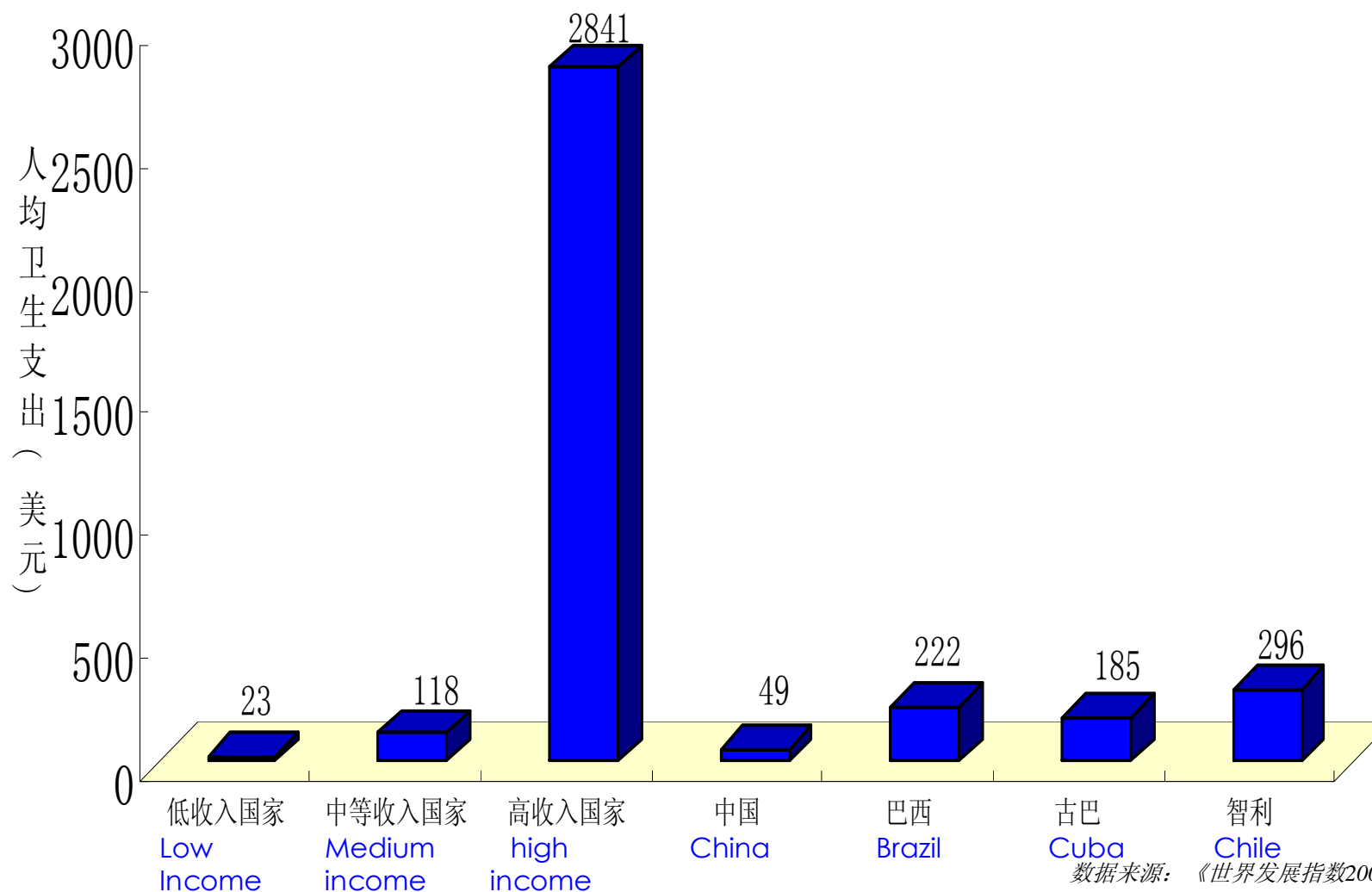
Death rate of Children under 5 and Life Expectancy, 2002



Health Expenditure

Countries with Different Income Level, 2001

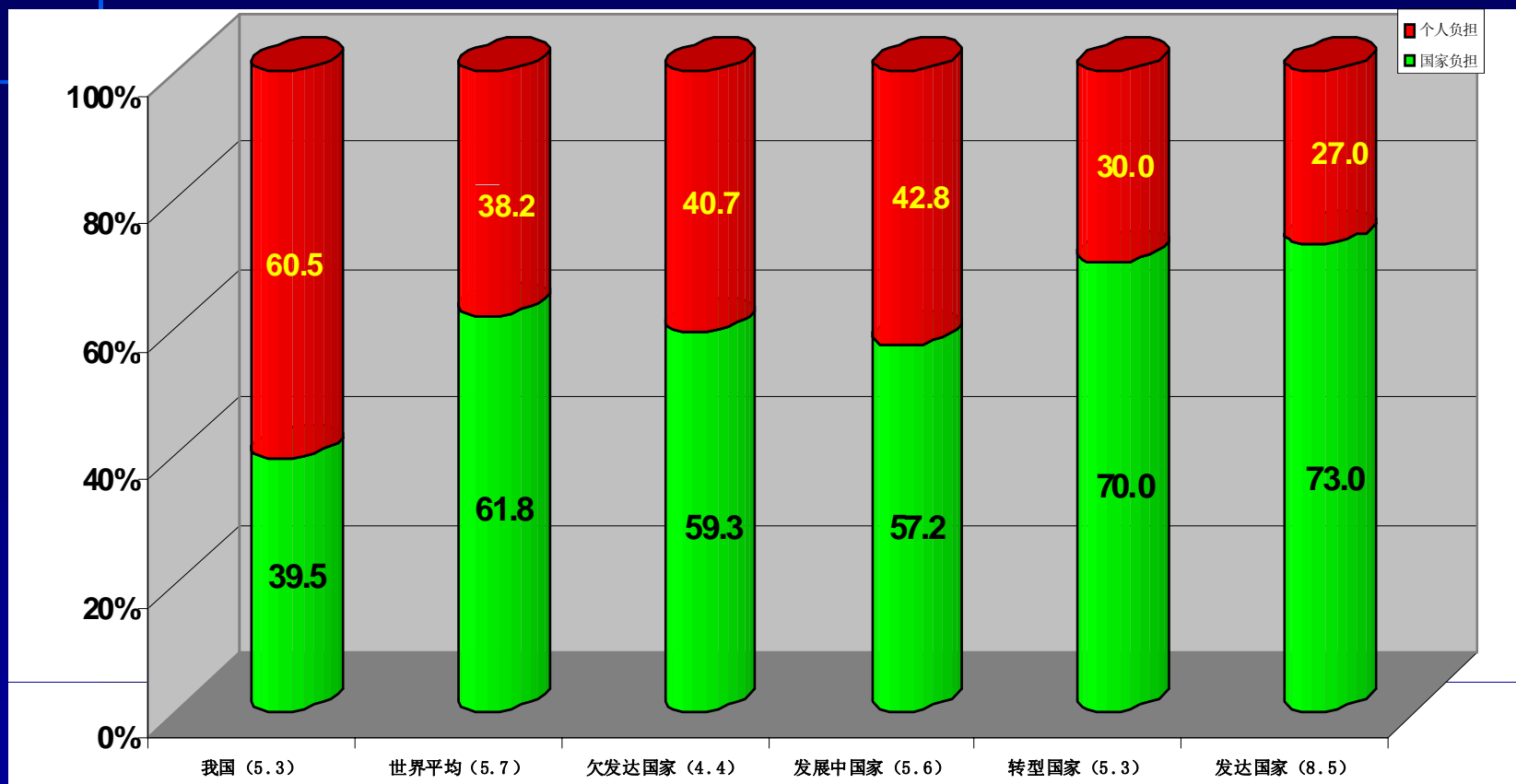
Health Expenditure(USD)



数据来源: 《世界发展指数2004》世界银行

Gap Increased between China and International on Health Investment

投入比例与国际水平差距越来越大



我国与世界不同发展水平国家政府及个人卫生负担比较：2003年
Proportion of government and individual health care burden, different countries, 2003

China's Health Status Before Economic Rise

- Life expectancy increase rapidly, close to the level of developed countries.
- 1983: Health insurance covered almost all city's population and 85 % of rural population.

China's Economic Rise is Closely Related to Chinese Health Status

- 30 ys of health accumulations: LE ↑ fm 35 y in 1949 to 67.9 y in 1981 (33 ys), provided rich healthy resources
- 30 ys of health achievements: Major ID: under control. 20% of a nation's economic increase is depended on ↑ human productivity due to reduction of mortality and morbidity
- 20 ys of health sacrifice: Minimum Health investment during economic rise period.

Economic Rise, to Some Extend, Used Up Existing Health Resources

- What will we face re:
sustainable
development today?
- Do we still have sufficient
health resources to
support development?

Do we still have sufficient health resources to support?

- Delay effect of health investment or health overdraw: consequences occurs 15-20 ys or longer.
- Consequences of 20 ys health overdraw are coming:
 - Double threats by ID and Non-ID
 - Aged without wealth
 - Huge pop., Unbalanced gender distribution, low pop. quality.

Do we still have sufficient
health resources to support?

Double threats by ID and Non-ID

Double threats by ID and Non-ID(1)

- No.of HIV infection increased rapidly
- No of active TB: world No. 2 .
- Hepatitis B carrier: world 1/3
- Old ID come back:TB, Measles
- New ID come out: SARS, Avian Flu

Double threats by ID and Non-ID(1)

Cancer death 1.5 mi.

CVD and stroke: about 3 mi.

Economic burden of above 2: hundreds bi.

Diabetes M. 40 mi.

Hypertension: 150 mi.

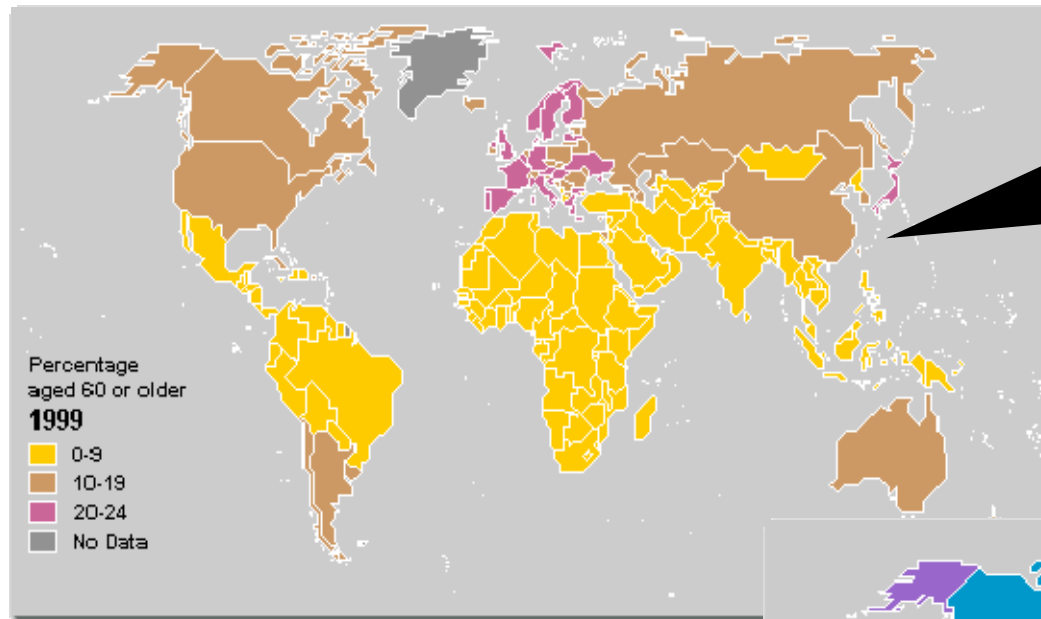
Psychological and mental problems increases.

Do we still have sufficient
health resources to support?

Aged without wealth

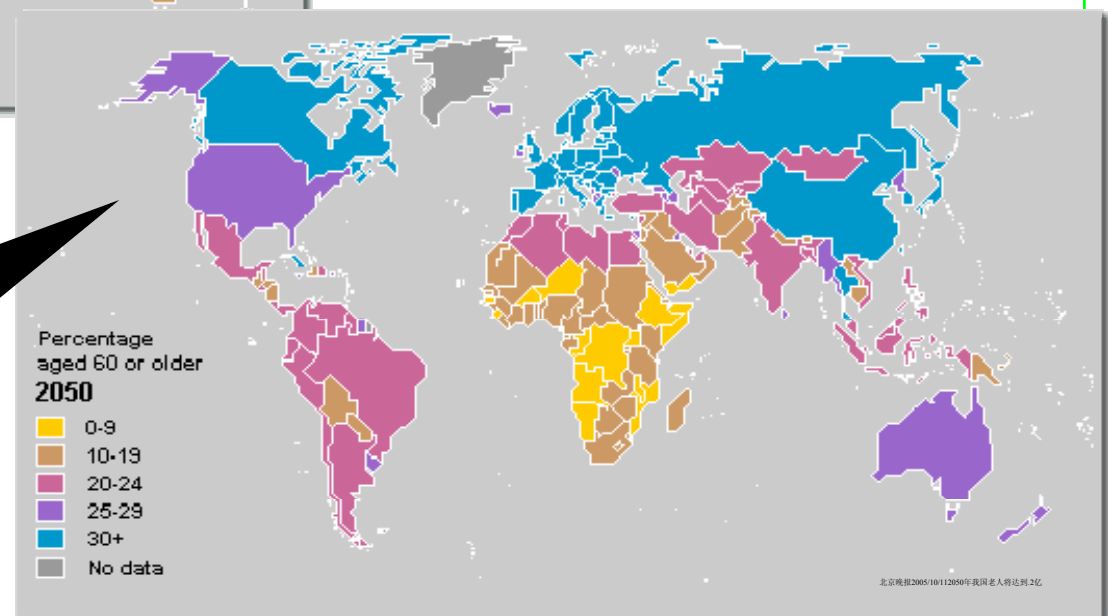
Proportion of Elderly (≥ 60 岁)

10%-Aging society



1999
China 126 mi.
Asia 314 mi.
World 593 mi.

2050
China 410 mi. 30%
Asia 1240 mi.
全世界 1970 mi.



Aged without wealth(1)

	World pop (100 mi)		China pop. (100 mi.)	
	Tot. /Aged	(Proportion)	Tot. /Aged	(Proportion)
1980	50/4	(1/12)	10. 0/0. 8	(1/1(2)
2000	61/5. 9	(1/11)	12. 9/1. 3	(1/10)
2020	75/10	(1/8)	14. 2/2. 1	(1/7)
2040	90/16	(1/6)	15. 3/3. 8	(1/4)
Annual increase (%)	1. 3/2. 5		1. 3/3. 9	

(中华老年医学杂志 2001)

Aged without wealth(2)

- Over 60: >10%, 140 mi.
- Over 65: >7.5%, closed to 100 mi.
- Aged without wealth: China enters aging society with low per capita income, poor social security system and weak health care system.
- Aging brings health and care problems: heavy social and health burdens.

Do we still have sufficient
health resources to support?

Huge population
Unbalanced gender distribution
low pop. quality

Huge Pop. Unbalanced Gender Distribution, Low Pop. Quality

- Sex ratio at birth (M:F)
 - 1982, 108.47
 - 1990, 111.30
 - 2000, 116.86
- Birth defect: 800,000 ~ 1 mi./y
- Disabled 70 mi. Of them 70% due to Birth Defect
- Prop. with BS: 3.6%, USA: 25%
- High tech talent 0.67% of pop., USA or Canada: 300-600 times more than China

Health Indicators of Deferent Co.

表1 各国和地区健康指标的进步速度

	LE 人均预期寿命 (岁)	IM 婴儿死亡率 (‰)	人均预期寿 命的增加 (岁)	婴儿死亡率 的下降 (‰)
	1980	1998	1980	1998
China 中国	68	70	42	31
Australia 澳大利亚	74	79	11	5
HK 香港	74	79	11	3
Japan 日本	76	81	8	4
S Korea 韩国	67	73	26	9
Malaysia 马来西亚	67	72	30	8
New Zealand 新西兰	73	77	13	5
Singapore 新加坡	71	77	12	4
Sri Lanka 斯里兰卡	68	73	34	16
Low Income Co. 低收入国家	51	55	108	79
Medium Income Co. 中等收入国家	64	69	53	30
High Income Co. 高收入国家	73	77	15	6
World Average 世界平均	61	65	67	44

So...

We May Not Have
Sufficient Health Resources
To Support Sustainable
Development in China!

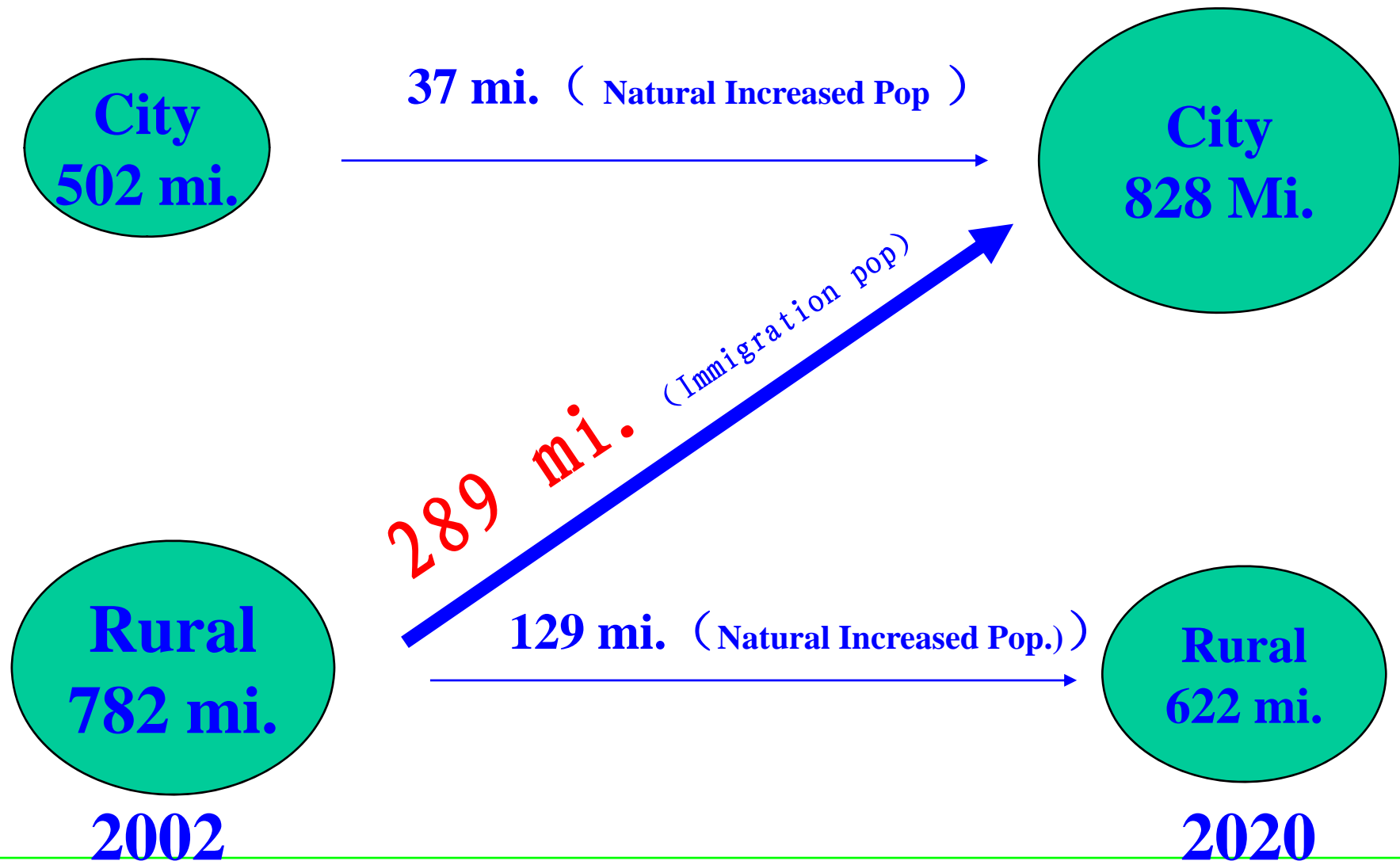
Not Only Without Sufficient Health
Resources, But Also Health Overdraw!

Urbanization is the No 1 challenge
China has to face during 21th
Century.

Nobel Laureate, US Economist J . Stiglitz

(1999年7月23日在中国“城市发展高级圆桌会议”上的讲话)

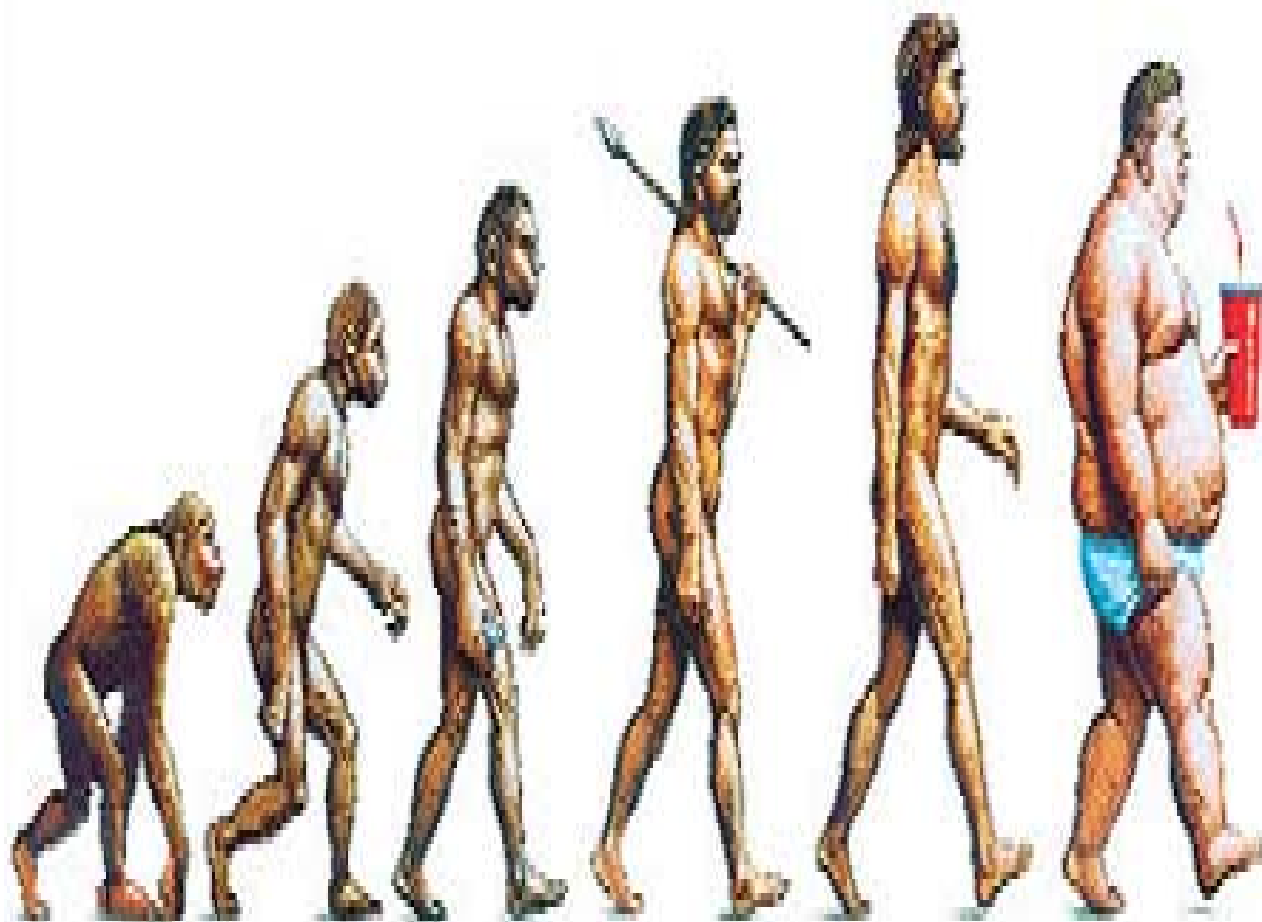
Urbanization 1% increase per year



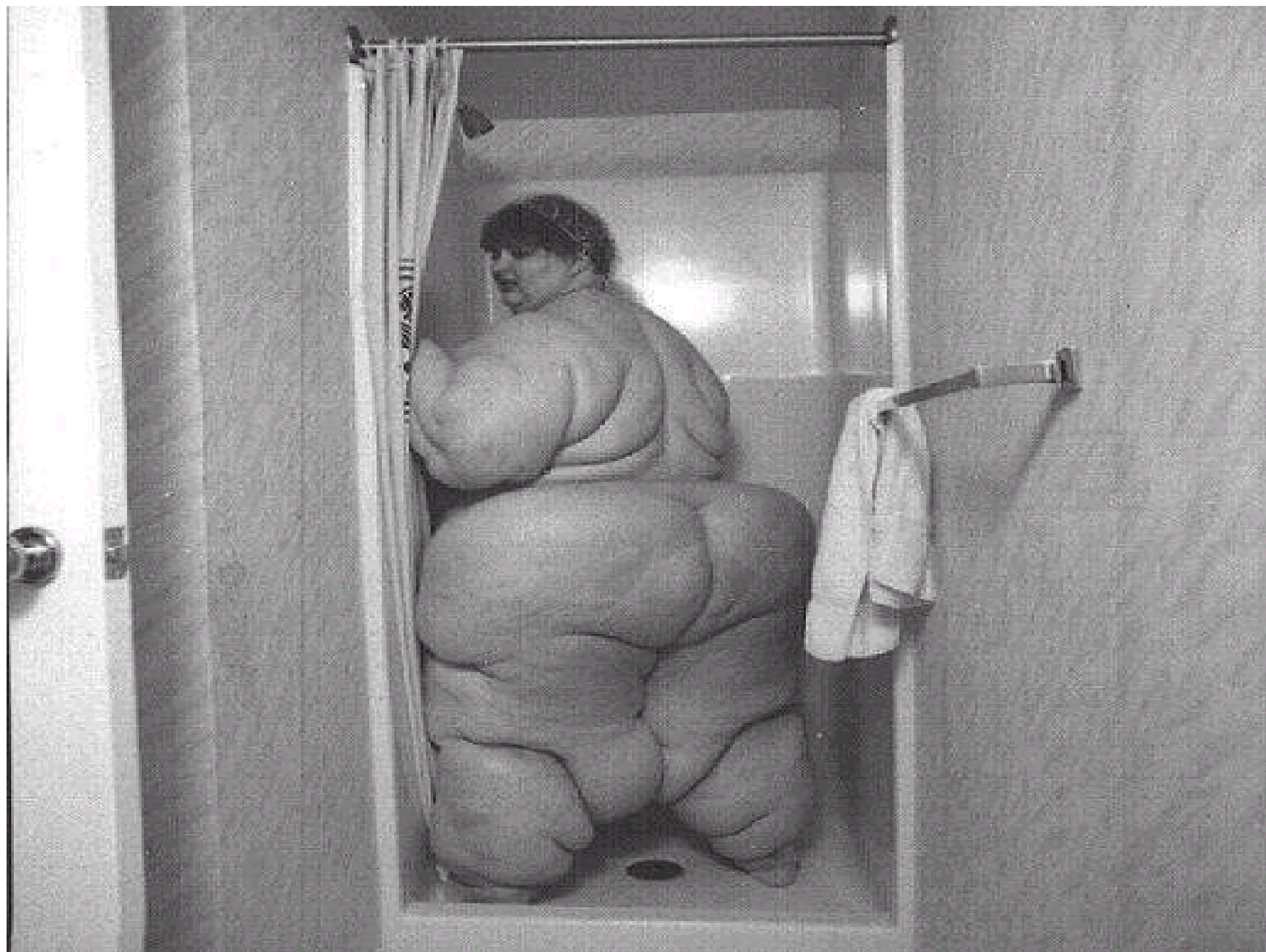
Approx. 300 Mi. Rural Pop. Immigrate to City

- Pop. Move, crowded pop., housing, traffic, limited living space, increased work pressure provided excl. condition. for ID
- Urbanization and globalization bring about the disease of modernization: Epidemic of Obesity.









Also...

- Annual economic lost due to envirn. Pollution: 3–8% GDP.
- 2002, 343 cities surveyed, only 1 / 3 air quality meet required standards, suitable for living.
- According to WB, by 2020, China has to pay 390 bi USD for coal burning pollution, approx. 13% of GDP at that time.

Also...

- Lost in cancer 143.2 bi. RMB , by 2020 年 ,6072.5 bi. , 24.4 % GDP (WB,1990) 。
- Direct lost from hepatitis: 100 bi./y.
- AIDS: by 2010,24 mi-30 mi. poverty.
- Lost from smoking: 560 bi.

Reality is...

- We almost used up all 30 y health resource accumulation
- Current health resources are overdrawn.
- Increase of GDP is not able to catch up with increase of health needs and demands.

Reality is...

- China did not do a good job in health resource investment and management.
- Current health status is not able to support sustainable development in China.

Will China Be Able to Have Sustainable Development?

China's sustainable development depends on whether we can manage Chinese health issues because national health resource is the base for China's sustainable development

Theories and Practice Tell Us...

- Follow west model: No way (USA, Canada, UK all have their own health headache)
- Using 1950s approach: impossible.
- Health investment and health management is the best choice for China's sustainable development
- Health investment and health management can mobilize individual and society to improve citizen's and nation's health status.

How to mobilize to improve health ?

- What is health investment?
- What is health management?

What is health investment?

- Investment is to put resource for return.
- Health investment is to put health resource for health return.

What is Health Management?

- Key to management is to “make right persons do right things at right time and in the right place”。
- Health management is a process to monitor, analyze, evaluate, predict, and prevent individual and population's health risk factors. (韩启德, 中华医学信

息导报, 20:16, 2005)

What is Health Management?

- The goal is to mobilize individual, collectives, and society to effectively use limited resources to maximize health effect.
- Specific approach is to provide accurate individualize health information to individual, collectives, and government timely and to facilitate actions to improve health.

Health Investment/Health Management

- Micro: Individual/Collectives
- Macro: Government/Society

What is individual health management?

- Research based, evidence based medicine and health informatics as the main approaches
- Qualitatively evaluate intervention, incl/ disease control and cost containment
- Standardized operation procedures as communication platform for physician and clients.
- Clearly identified target population therefore it will use limited resources effectively.

Health
完全健康



Death
绝对死亡

预防干预

低危
险状
态

危险
状态

早期
改变

临床
症状

疾
病

不同
后果

临床干预

Investment

应开始健康投资

Less Opportunity

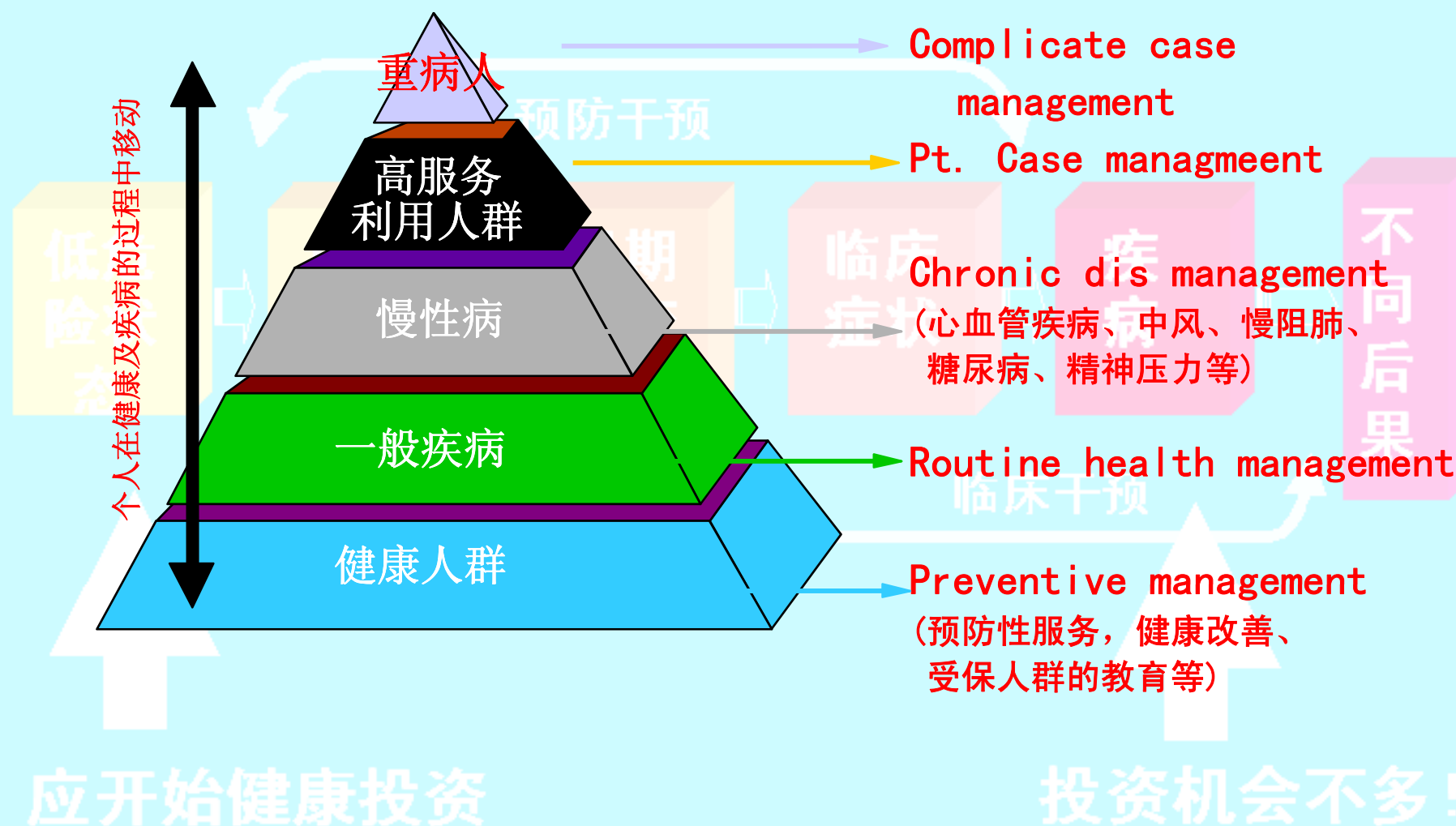
投资机会不多！

Individual Health

完全健康

Management

绝对死亡



How to manage individual health resource?

- To majority, modern high tech is useless.
- What most of us needed is accurate individualized health information.
- Health is on your own hand.

What is macro health investment/health management?

From disease centered to
pay close attention to the
entire life process through
health surveillance,
disease control and
prevention.

Nation's health resource management

- China needs an authoritative coordination agency to organize and manage nation's health resources
- Example: Educational commission in 1980s

Life Expectancy Increase 10% ,

GDP Increase 1.1%

- Infant mortality and ID are the main factor influencing China's LE
- Mainly due to lack of health investment, low primary health care coverage, weak public health system , especially in rural areas.

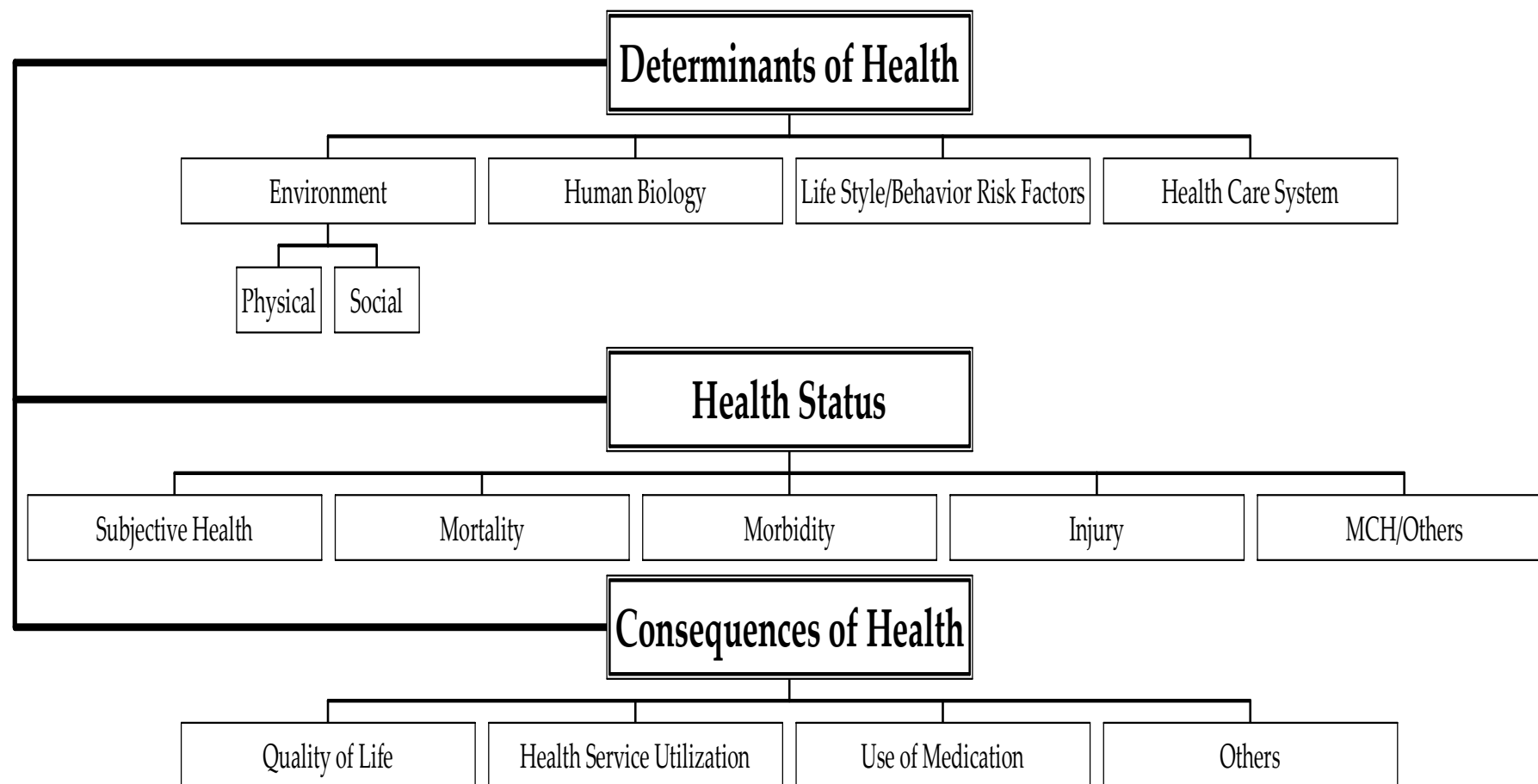
No Matter Micro or Macro Health Management

Focused, accurate
population health
information is vital

No data on health resources

- No modernization of health management
- Health data is highway of health management.
- No national vital statistics system is the major obstacle to the modernization of health resource management in China

Health Model



Summary

- Health resource is one of the most important contributing factor to China's economic rise.
- Current health resource is not able to support China's sustainable development.
- China need to invest in health and to manage health resource scientifically to maintain sustainable development
- We have no choice.

Thank You
Q & A