Graduate Labor Economics, Spring 2026

Lecture 1: Overview of the Labor Market: Some Concepts and Statistics

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Review the Previous Lecture

- What is the Labor Economics and its unique features?
  - Labor Economics studies how labor resources are allocated by economic agents and how these allocation decisions affect society.
  - Five Characteristics of Modern Labor Economics
- Why Study Labor Economics and what is the role of Labor Economics in China?
- Course Structure and Evaluation
  - Class Participation and Performance (10%)
  - Discussion in Class (30%)
  - Research Proposal and Presentation (60%)

Today's Agenda

1. A Myth about Population

2. Basic Labor Market Statistics

    - Labor Force and Participation Rate
    - Unemployment and Employment
    - Job Opening
    - Labor Income

3. Labor Statistics in China

The Population Fallacy in Economic Development

The Population Fallacy in Economic Development

- A central question in development economics: What is the relationship between population size and economic prosperity?

> "China was poor in the past because we have too many people; we are struggling to become wealthy today for the same reason."

- This narrative appears even in required political economy courses:
- **Question**: 中国的基本国情是什么?
- **Answer**: "*人口多，底子薄，各地发展不平衡...*"
- This represents a fundamental **misconception** about population's role in economic development.

The Population Fallacy in Economic Development

- **Question**: How is the wealth actually created in an economy?
- **Answers**: Wealth or economic output is created by the combination of *capital* and *labor* under a given technology:

$$Y = F(K, L) \text{ or } Y = AF(K, L)$$

- But what determines the labor supply L?
- **Answer**: Labor supply derives from population, specifically the working-age population willing and able to participate in economic activity.
- Therefore, population represents not a **constraint** on economic prosperity but a **foundation** for productive capacity.

Introduction: Traditional Viewpoints

Thomas Malthus (1766-1834)

- *Malthusian Trap*

1. An increase in a nation's food production improves the well-being of the population.
2. However, the improvement inevitably leads to higher population growth.
3. This in turn restores or even lowers the original per capita production level.

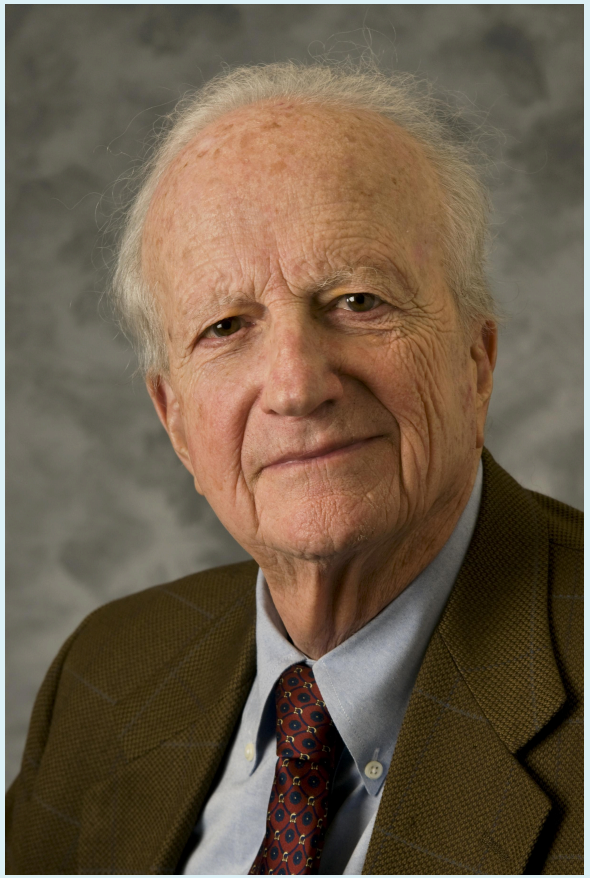
- Any improvement of production was *temporary* because of population growth.

- **Policy implication** "*the family size ought to be regulated such that families do not produce more children than they can support*".

Introduction: Family Planning Programs

- Population Explosion Era (1950s-1980s): especially for the developing countries
  - Global population doubled from 2.5 billion (1950) to 5 billion (1987)
  - Developing countries' share increased from 68% to 77% of world population.
- Major Family Planning Programs were implemented worldwide besides China:
  - India: National Family Planning Program (1952) - sterilization campaigns, incentives
  - Indonesia: National Family Planning Program (1970s) - "Two children are enough"
  - Thailand: Population and Community Development Association programs
  - Mexico: Family planning integrated into health services (1970s)
- Policy Results: These programs significantly reduced fertility rates.
  - Total Fertility Rate declined from 6+ children per woman to 2-3 children.
  - Unintended consequences: Gender imbalances, aging populations, labor shortages.

Introduction: Modern Viewpoints



Gary Becker (1930-2014)

- Nobel Prize in Economics 2000

- *Quantity-Quality of Children*

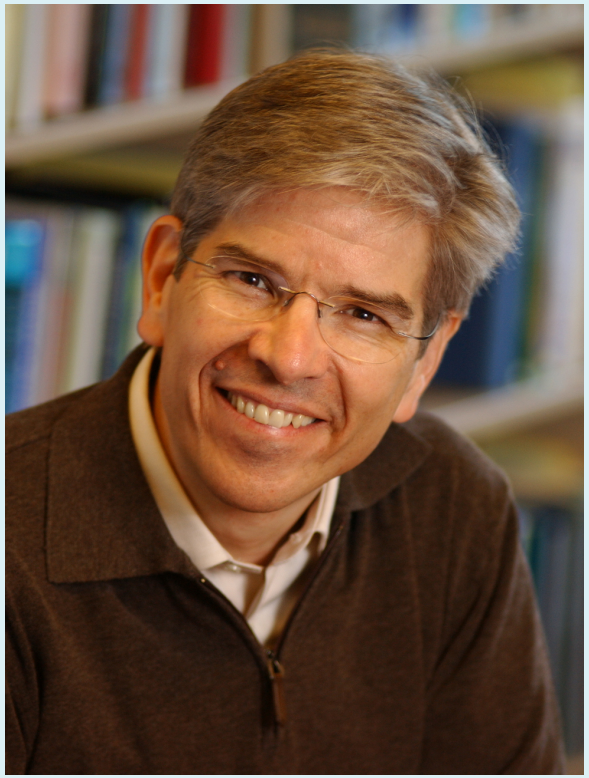
1. Child quantity and quality are close substitutes.

2. Parents choose child quantity and quality according to their income.

3. A rise in income would eventually reduce fertility, substituting child quantity with quality.

- In summary, the relationship between income and fertility is not positive but negative.

Introduction: Modern Viewpoints



Paul Romer (1955-present)

- Nobel Prize in Economics 2018

- *Endogenous Growth*

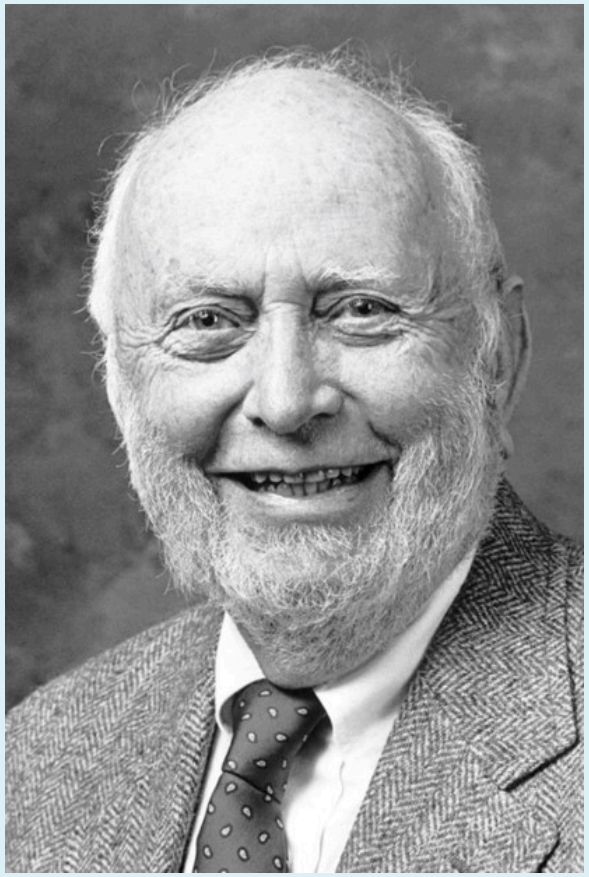
1. Technology change

2. Returns to scale

- In summary, technology change results in increasing returns to scale in the economy, which overcomes population consumption.

- E.g., "When eagles eat chickens, chickens become fewer; but when humans eat chickens, chickens become more numerous.(鹰吃鸡，鸡越来越少；而人吃鸡，鸡越来越多)"

Institution is a key role for productivity



Douglas C. North (1920-2015)

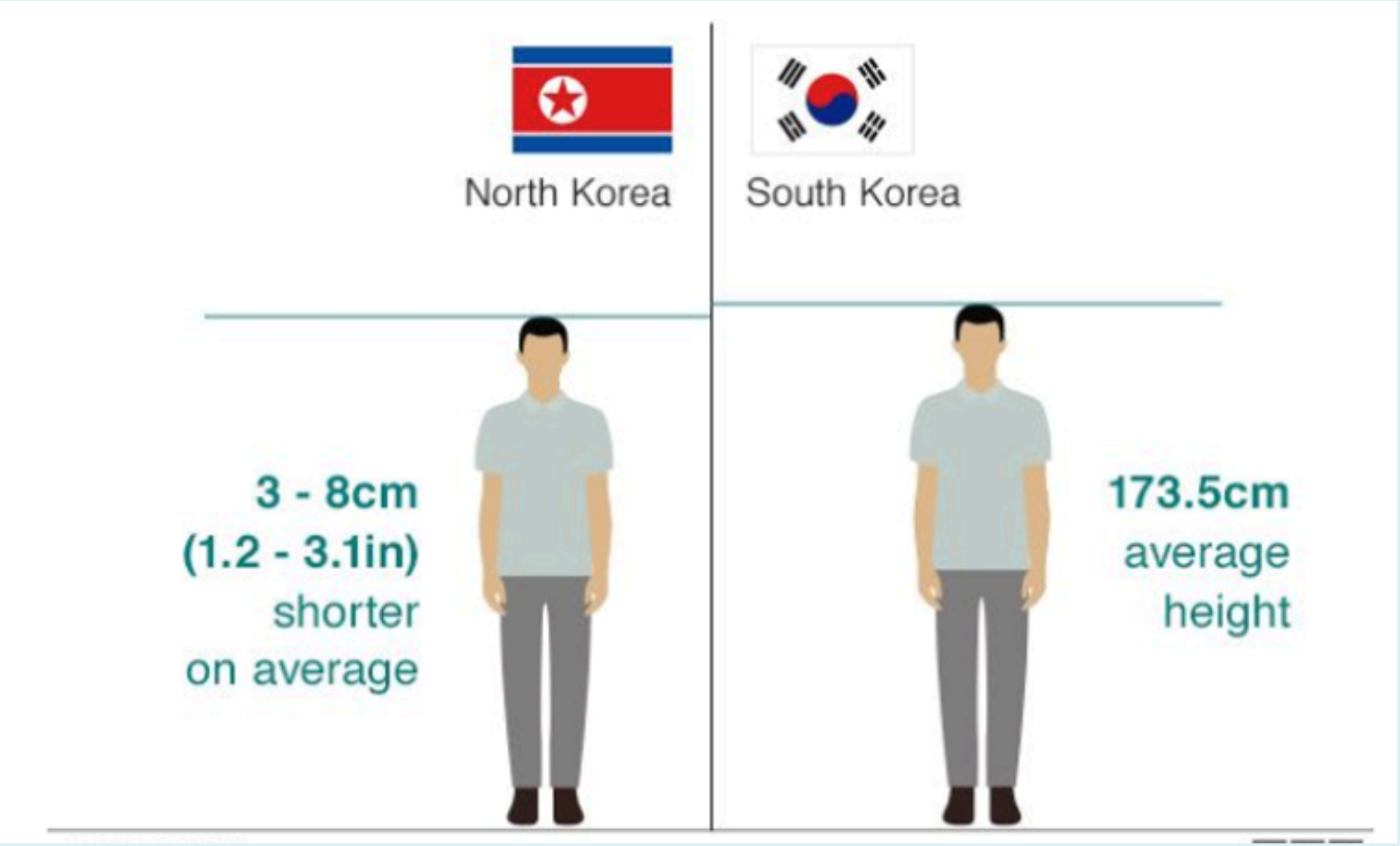
- Nobel Prize in Economics 1993

- What are the determinants of long-run economic growth?
- The most important factor is proper institutions (*Douglas North, 1981*)
- Institutions—the organization of society or "rules of the game"—are a major determinant of economic performance and a key factor in understanding vast cross-country differences in prosperity.
- Some Cases
    1. North Korea and South Korea
    2. East Germany and West Germany

North v.s. South: A little bit of history

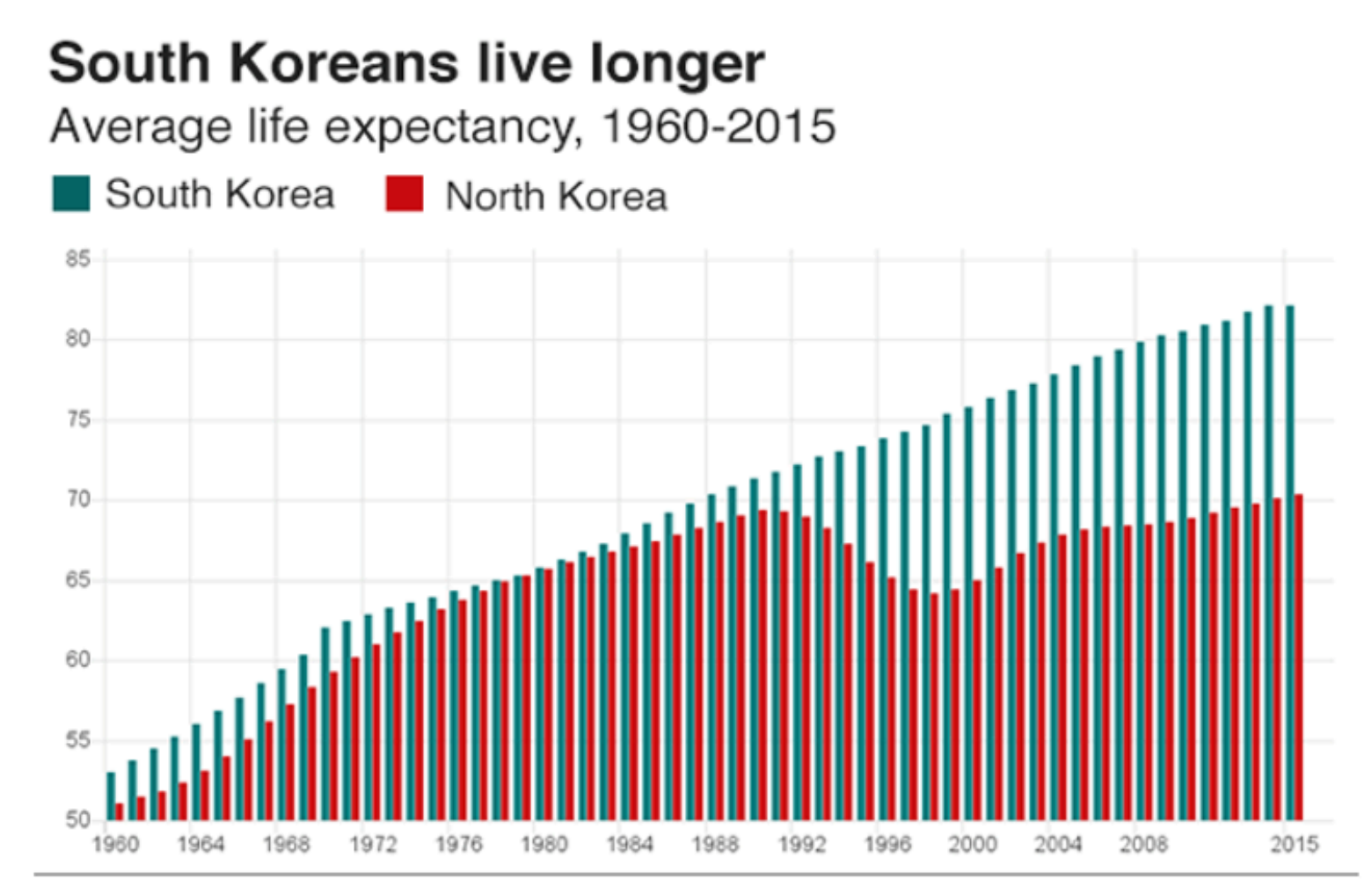
- Japanese Colonial Period (1910-1945): Korea was a unified country under Japanese rule for 35 years.
- Post-WWII Division (1945): Korea split along the 38th parallel.
- Korean War (1950-1953): Devastating conflict that cemented the division.
- Most importantly, North Korea has some advantages over South Korea after the Korean War in the 1950s-1960s.
  - 80% of Korea's heavy industry was located in the North
  - Abundant natural resources: coal, iron ore, bronze, hydropower
  - Soviet economic aid and industrial equipment(American helped South Korea in 1970s).
  - More urbanized population and established factory workers.
- After 75 years development separately, South Korea's economic performance is much much better than North Korea.

North v.s. South: Height



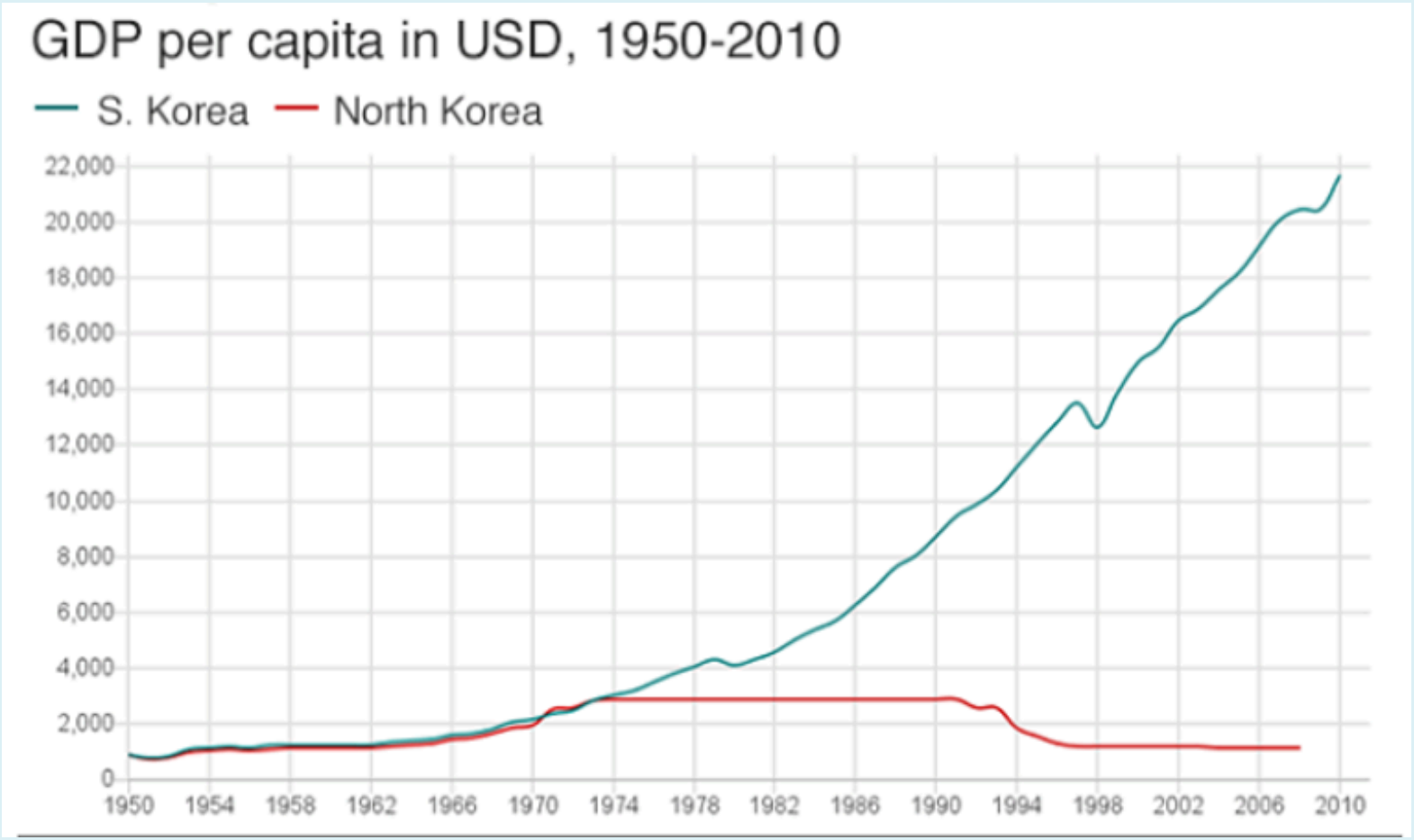
Source: Daniel J. Schwekendiek, 2014

North vs South: Life Expectancy



Source: World Bank

North v.s. South: GDP



Source: The Maddison Project

In Summary

- The most important factor is *proper institutions*, which include:
  - Competitive and open markets
  - Dependable legal system
  - Reasonable property protection
  - Political stability
  - and others...
- Population is not only a burden but a *resource* for a country.
- On the contrary, as a resource, the quantity, structure, and quality of population are important in determining the quantity and quality of the Labor Force.

Labor Supply by Demographic View

Labor Supply by Demographic View

- The Quantity of Population: Total Population

$$TotalPopulation = Births - Deaths + NetMigration$$

- More birth rate, more population. More death rate, less population. More net immigration, more population.
- The Structure of Population
  1. Age structure
  2. Gender structure
- Because normally the death rate is relatively stable in most countries. Then
  - the birth rate is the main determinant of the population growth and the structure of population.
  - For some countries with high migration, migration can also be a significant determinant of the population growth and the structure of population.

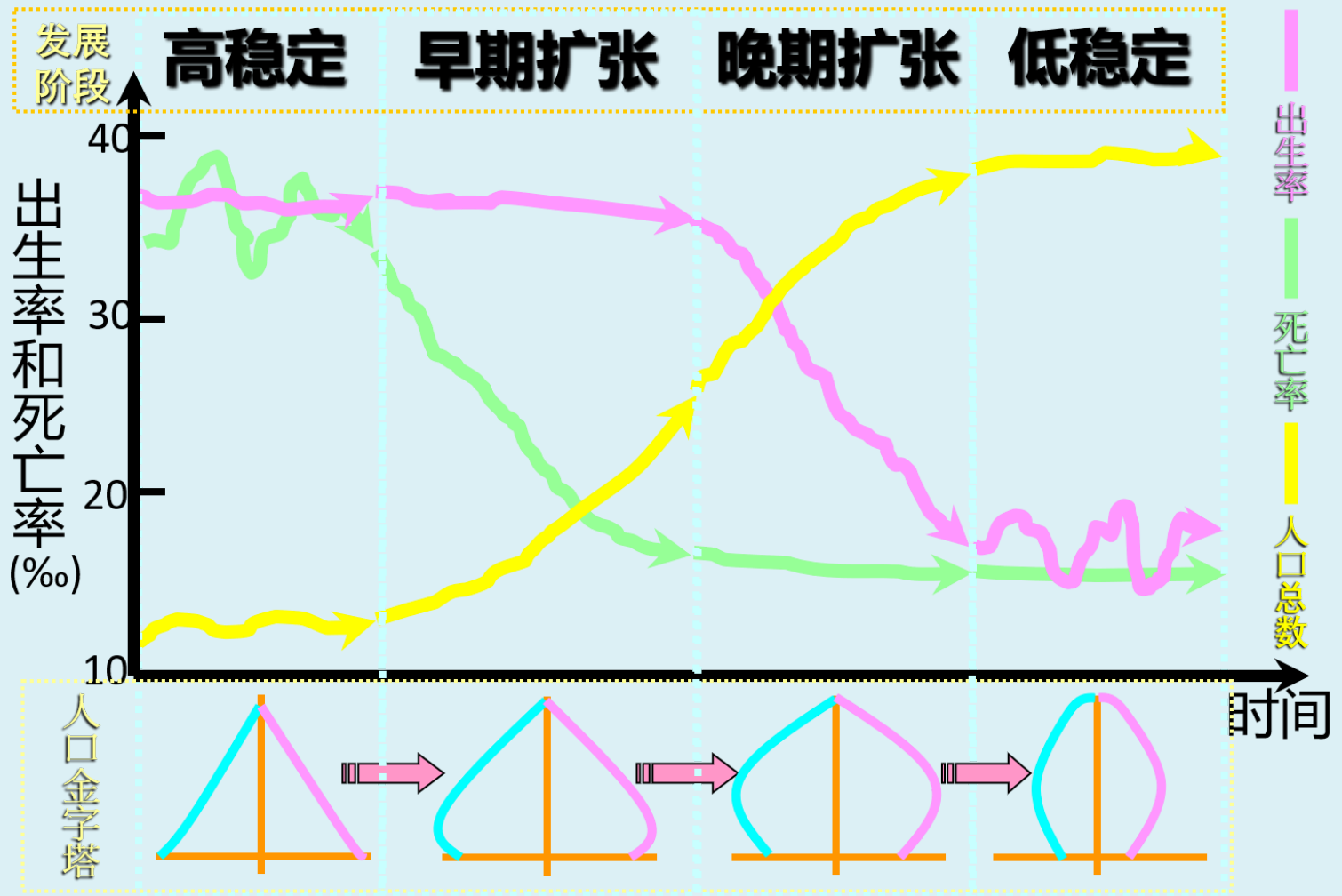
Labor Supply by Demographic View

Age Structure

- The population consists of:
  - The elderly (≥65 years old)
  - The children (0-14 years old)
  - Working-age population (15-64 years old)
- Total Dependency Ratio is the ratio of non-working age population to working age population which can be measured the "feeding burden" of the elderly and children to the working-age population.

$$\begin{aligned}\text{Total Dependency Ratio} &= \frac{\text{Non-working Age Population}}{\text{Working Age Population}} \\ &= \frac{\text{Child Population}}{\text{Working Age Population}} + \frac{\text{Elderly Population}}{\text{Working Age Population}} \\ &= \text{Child Dependency Ratio} + \text{Elderly Dependency Ratio}\end{aligned}$$

Demographic Structure Evolution



Source: 李柏翰

Demographic Transition and Economic Growth

- Demographic Dividend(人口红利)
- A rise in the rate of economic growth due to a rising share of working-age people in a population.
- This usually occurs late in the demographic transition when the fertility rate falls and the youth dependency rate declines.
- There is much evidence that China economic growth after 1980s is partially driven by the demographic dividend which can be attributed the high fertility rate before 1970s in the early expansion stage.

Fertility rate

- Total Fertility rate: normally is measure in the the number of children born to a woman in her lifetime.
  - In order to keep the population stable, the fertility rate should be around 2.1, this the *replacement rate* (更替水平出生率).
  - If the fertility rate is below 2.1, the population will not shrink immediately, but the growth rate will slow down.
  - In the end, the population will shrink if the fertility rate is below 2.1.
- Actually, the Chinese fertility rate is far below 2.1 since 2000s(in 2000 census, the fertility rate is 1.22, but in 1990 census, the fertility rate is 2.31).

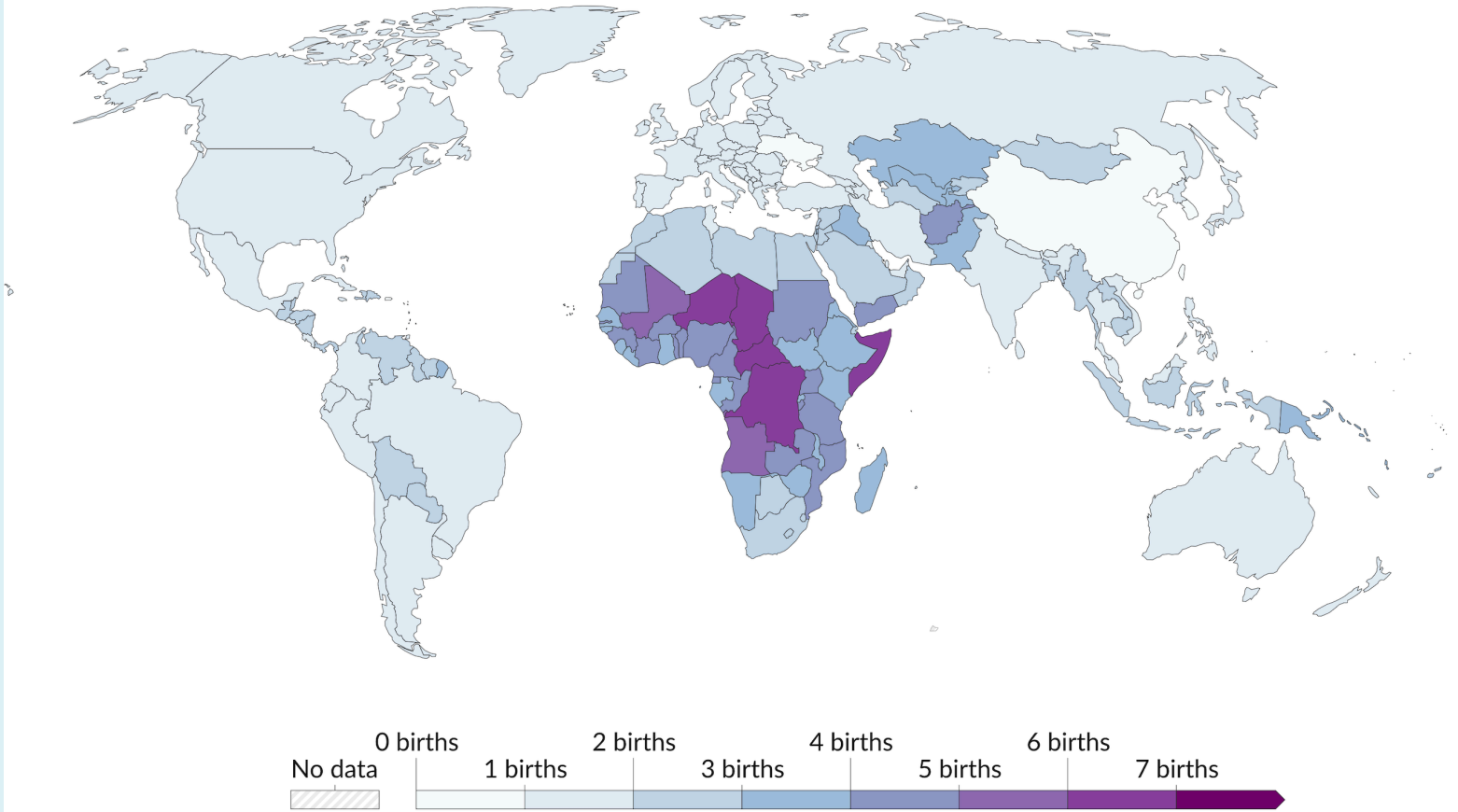
Fertility rate in China

Fertility rate worldwide

Total fertility rate: births per woman, 2023

Our World in Data

The total fertility rate[1] summarizes the total number of births a woman would have, if she experienced the birth rates seen in women of each age group in one particular year across her childbearing years.



Data source: UN WPP (2024); HFD (2024)

OurWorldinData.org/fertility-rate | CC BY

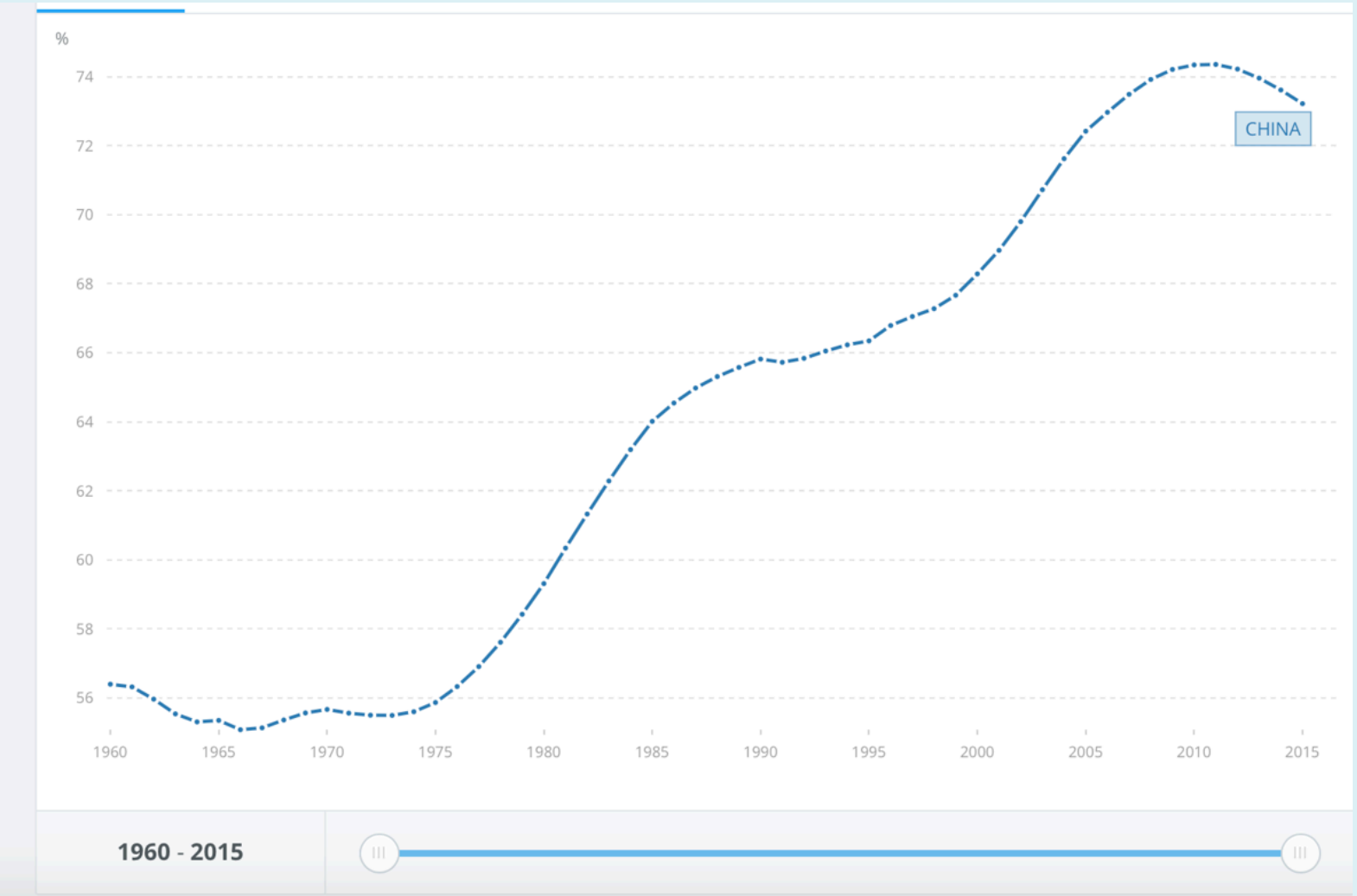
The lowest fertility rate countries/regions

Hong Kong SAR, China	2022	0.7
Korea, Rep.	2022	0.8
Palau	2020	0.8
Puerto Rico	2022	0.9
British Virgin Islands	2022	1.0
Singapore	2022	1.0
Macao SAR, China	2022	1.1
Malta	2022	1.1
Spain	2022	1.2
China	2022	1.2

Why Such Rapid Fertility Declines?

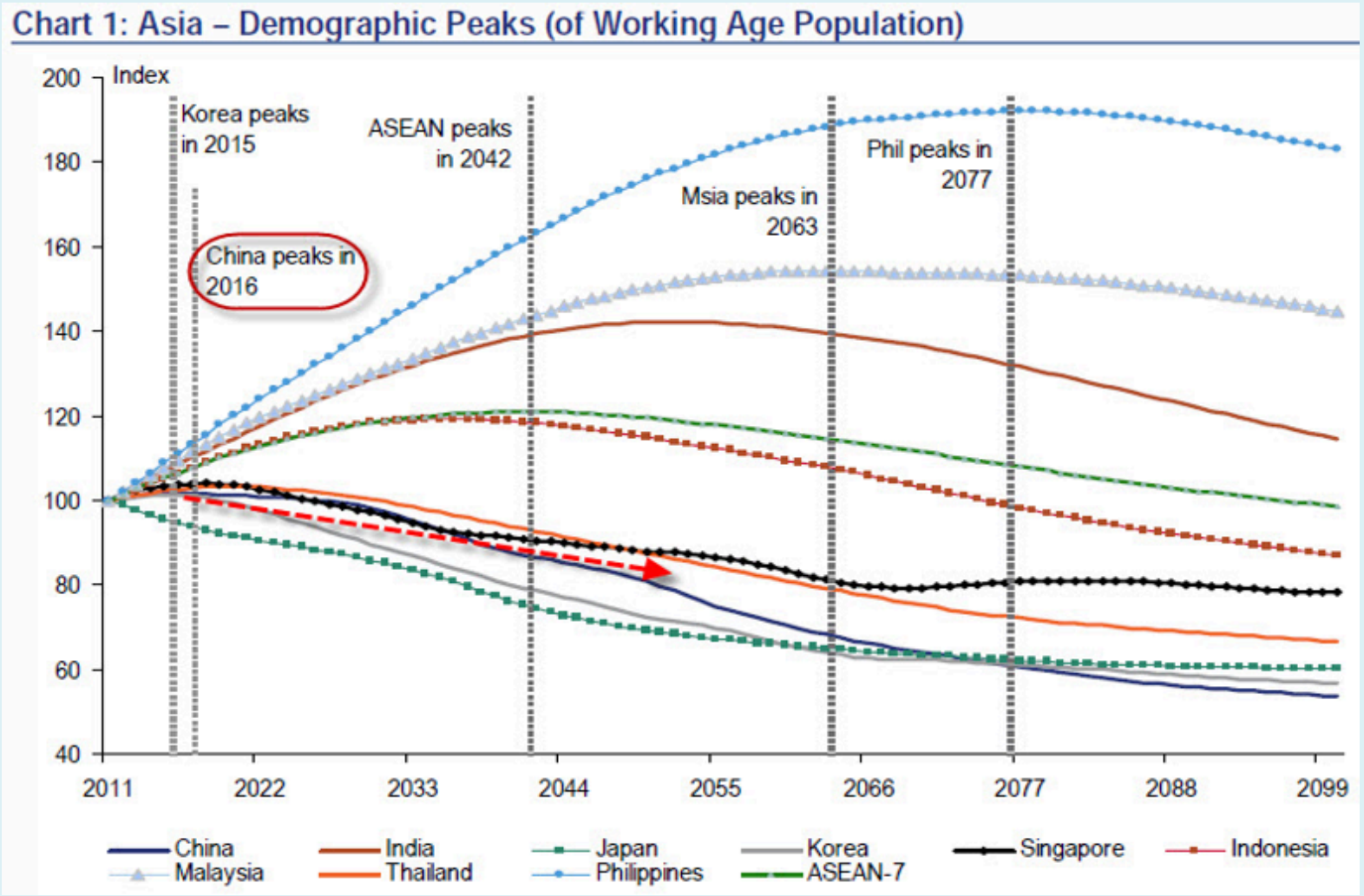
- One-Child Policy (China): Direct government intervention in family planning
  - Strictest family planning policy in human history (1979-2015)
- High cost of child-rearing: Housing, education, healthcare expenses
  - Urban living costs make children economically challenging
  - In major cities, raising a child can cost $200,000+ USD
- Cultural shifts: Career prioritization, delayed marriage, lifestyle changes
  - Women's increased participation in higher education and workforce
  - Changing social norms about family size
- Economic development paradox: Higher income → Lower fertility
  - Becker's Quantity-Quality theory in action: Substituting child quantity with quality

Working age population in China



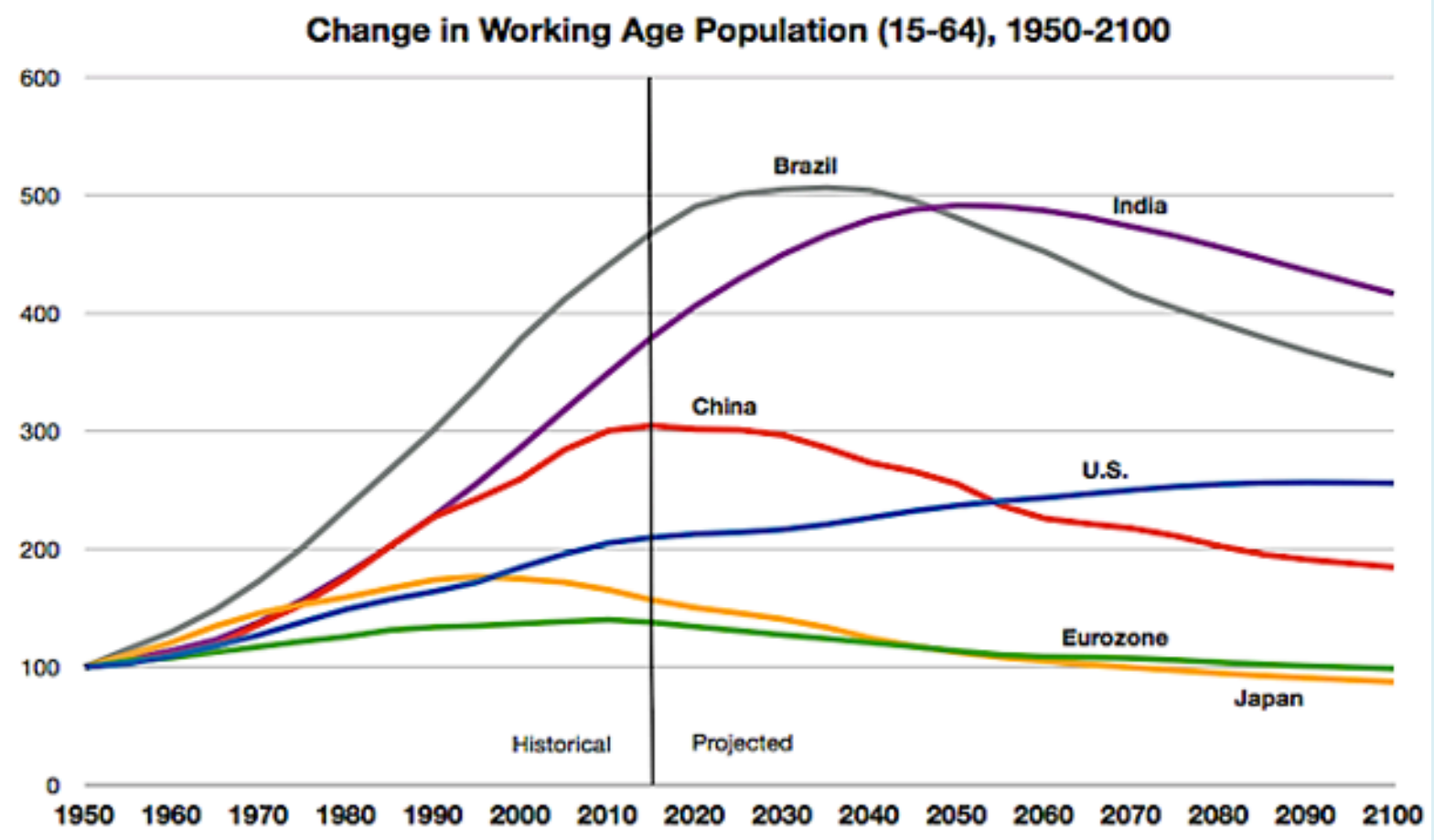
IMF (2017)

Working age population in Asia



ADB (2012)

Working age population in the World



ADB (2012)

Demographic View: Gender

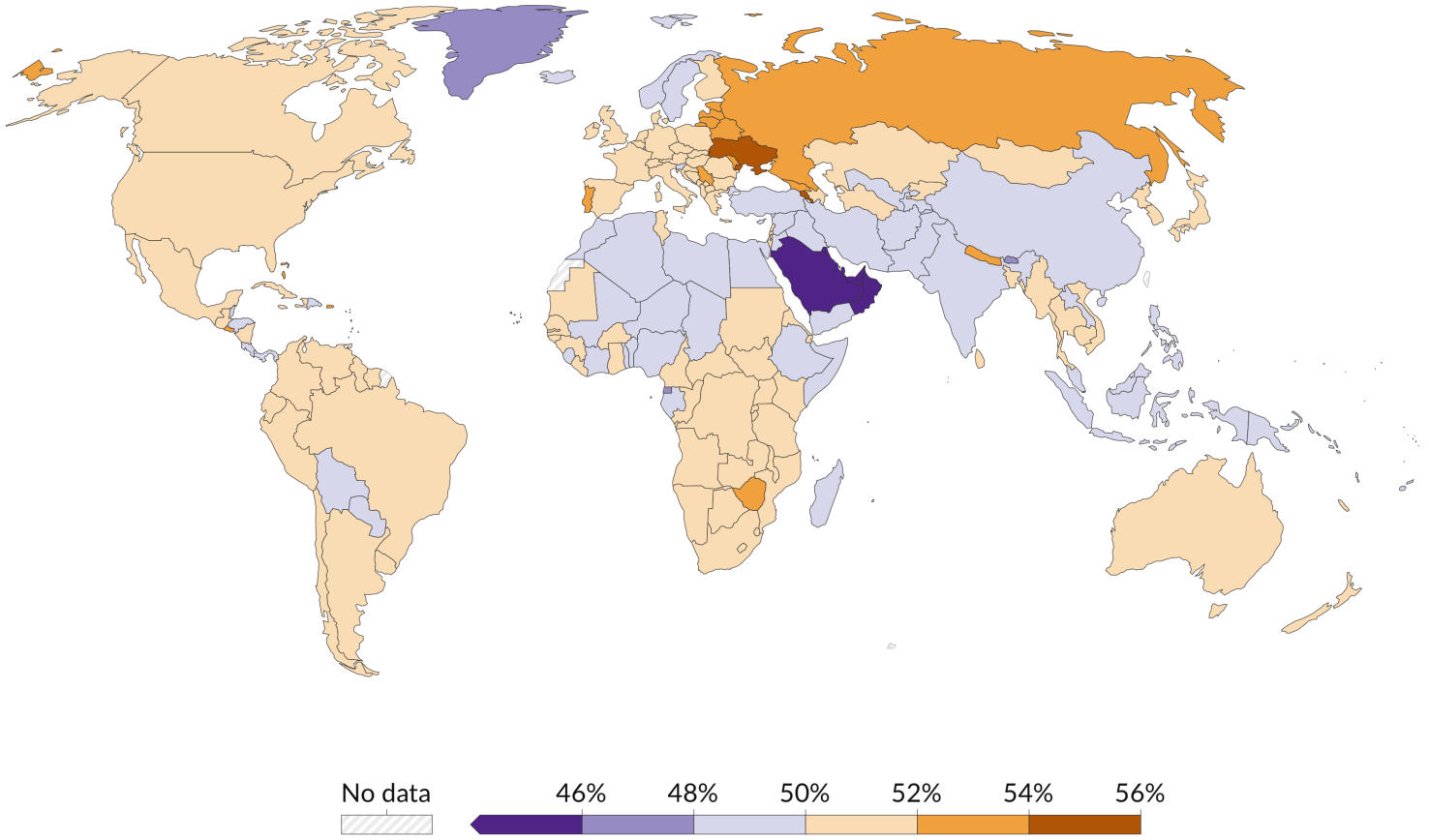
Gender Structure

$$\text{Sex Ratio} = \frac{\text{Male Population}}{\text{Female Population}} \times 100$$

Female Share of the population

Share of the population that is female, 2022

Our World in Data



Data source: Multiple sources compiled by World Bank (2024)

OurWorldInData.org/gender-ratio | CC BY

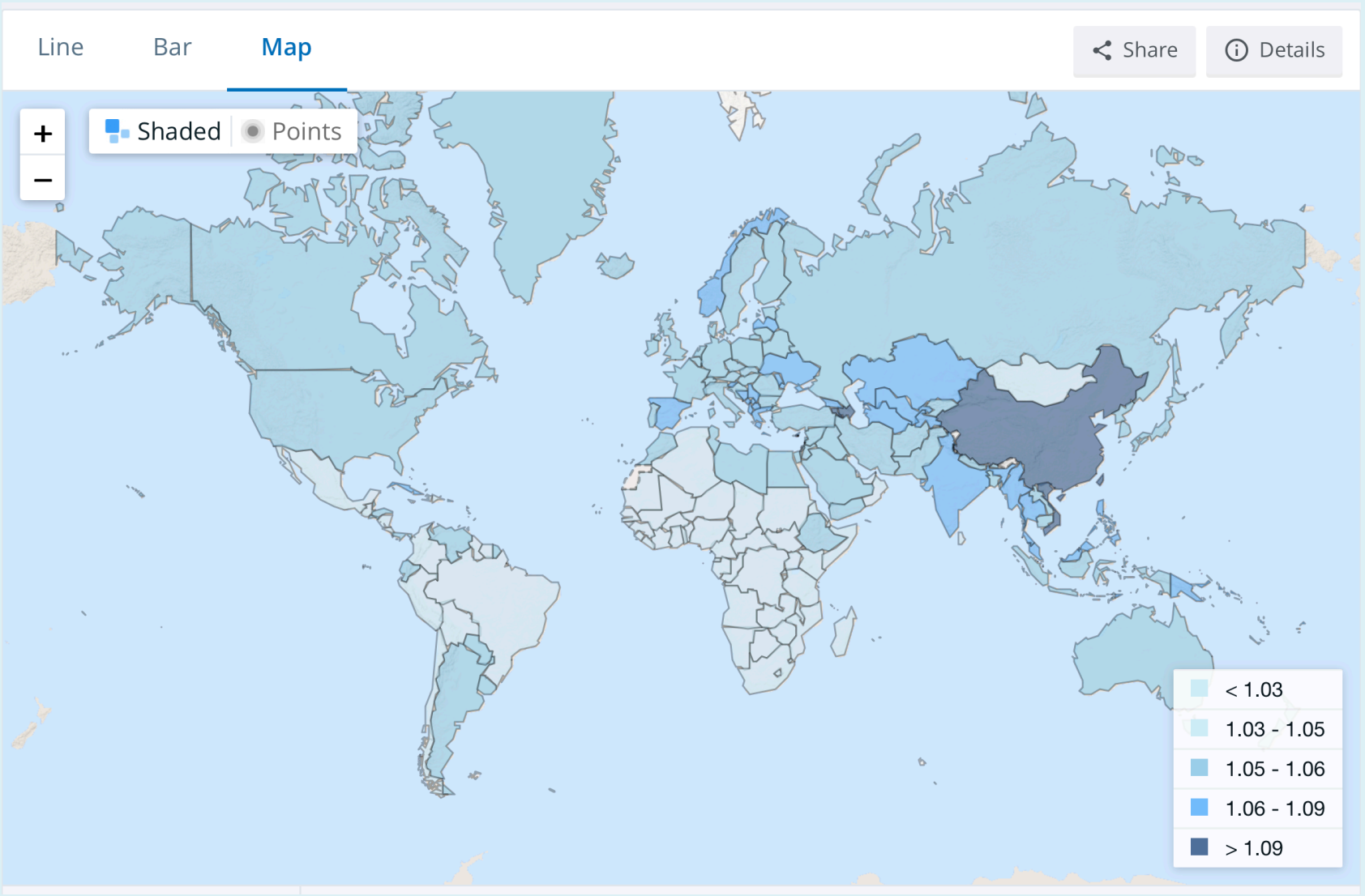
Note: Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship.

Demographic View: Gender Structure

Sex Ratio at Birth

- However, the sex ratio at birth is usually around 105-107, which means the number of males is slightly more than the number of females naturally.
- But, in some countries, the sex ratio at birth is much higher than 106, which means the number of males is much greater than the number of females.
- One possible reason is the **son-preference culture** in some countries.
- Inbalance of sex ratio at birth will lead to some social problems like **competitive marriage market** and **human trafficking** etc.

Sex Ratio at Birth across the world



Worldbank (2022)

Wrap Up

- Population is not a burden, but a resource: The fundamental shift from Malthusian thinking to modern economic growth theory.
- Quantity matters: More working-age population can provide more labor input.
- Structure is equally crucial: Who makes up the population determines labor force quality
- Besides, the other aspects of quality of population is also important, like health status, education level, experiences and skills, though we did not discuss yet.
- Key insight for labor economics: Population provides the raw material (labor) for production, but institutions and policies determine how effectively this human resource contributes to economic prosperity.

Basic Labor Market Statistics

Labor Force Status

- Population aged 16 and over (劳动力资源)
- Labor force; economically active (经济活动人口)
- Not in the labor force
  - Student
  - Housewife
  - Retired
  - Sick
  - Other

Labor Force Participation Rate

- Potential Labor Force refers to the working-age population minus those who have lost their ability to work (disabled persons) and others like individuals in prison.
    - In practice, the population aged 16 and above is often used as a proxy for the potential labor force indicator.
- Then the **Labor Force Participation Rate** is the ratio of the economically active population to the potential labor force.

$$\text{Labor Force Participation Rate} = \frac{\text{Economically Active Population}}{\text{Potential Labor Force}} = \frac{\text{Employed} + \text{Unemployed}}{\text{Potential Labor Force}} \times 100\%$$

- The **Labor Force Participation Rate** measures the relative size of the population engaged in economic activities within a society, reflecting the overall intensity of people's willingness to work and thereby measuring the activity level of the labor market.

LFPR of Men, 1900-2000, USA

TABLE 2-1 Labor Force Participation Rates of Men, 1900–2000

Sources: U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Years to 1970,* Washington, DC: Government Printing Office, 1975; U.S. Bureau of the Census, *Statistical Abstract of the United States,* Washington, DC: Government Printing Office, various issues.

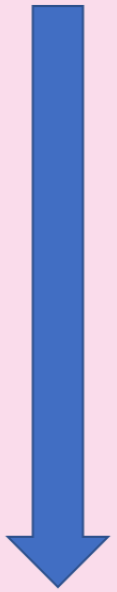
Year	All Men	Men Aged 25–44	Men Aged 45–64	Men Aged over 65
1900	80.0	94.7	90.3	63.1
1920	78.2	95.6	90.7	55.6
1930	76.2	95.8	91.0	54.0
1940	79.0	94.9	88.7	41.8
1950	86.8	97.1	92.0	45.8
1960	84.0	97.7	92.0	33.1
1970	80.6	96.8	89.3	26.8
1980	77.4	93.0	80.8	19.0
1990	76.4	93.3	79.8	16.3
2000	74.7	87.9	78.3	17.5

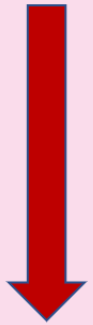
LFPR of Women, 1900-2000, USA

TABLE 2-2 Labor Force Participation Rates of Women, 1900–2000

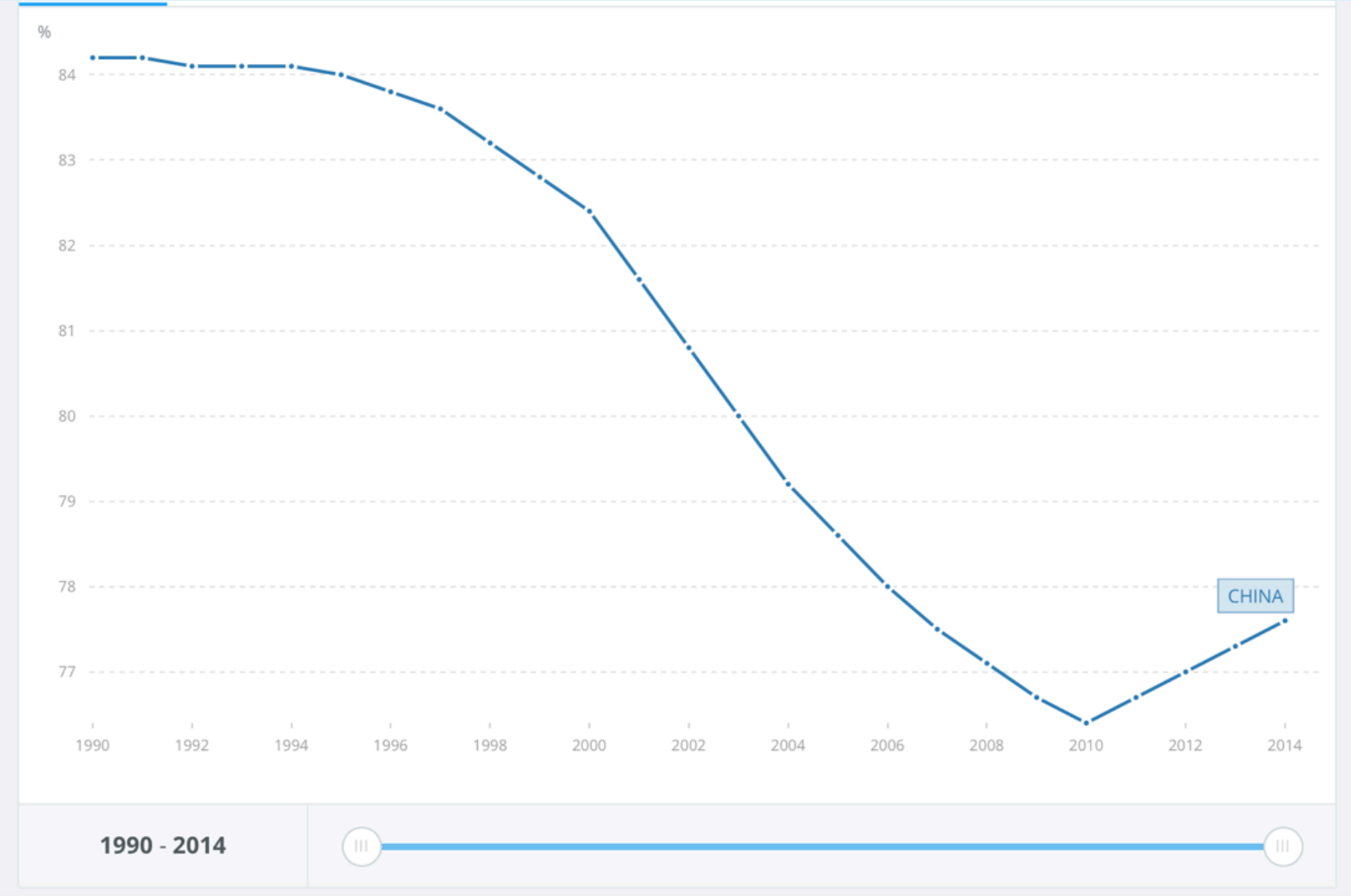
Sources: U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Years to 1970,* Washington, DC: Government Printing Office, 1975, p. 133; and U.S. Department of Commerce, *Statistical Abstract of the United States, 2002,* Washington, DC: Government Printing Office, 2002, Table 569.

Year	All Women	Single Women	Married Women	Widowed, Divorced, or Separated
1900	20.6	43.5	5.6	32.5
1910	25.4	51.1	10.7	34.1
1930	24.8	50.5	11.7	34.4
1940	25.8	45.5	15.6	30.2
1950	29.0	46.3	23.0	32.7
1960	34.5	42.9	31.7	36.1
1970	41.6	50.9	40.2	36.8
1980	51.5	64.4	49.9	43.6
1990	57.5	66.7	58.4	47.2
2000	60.2	69.0	61.3	49.4



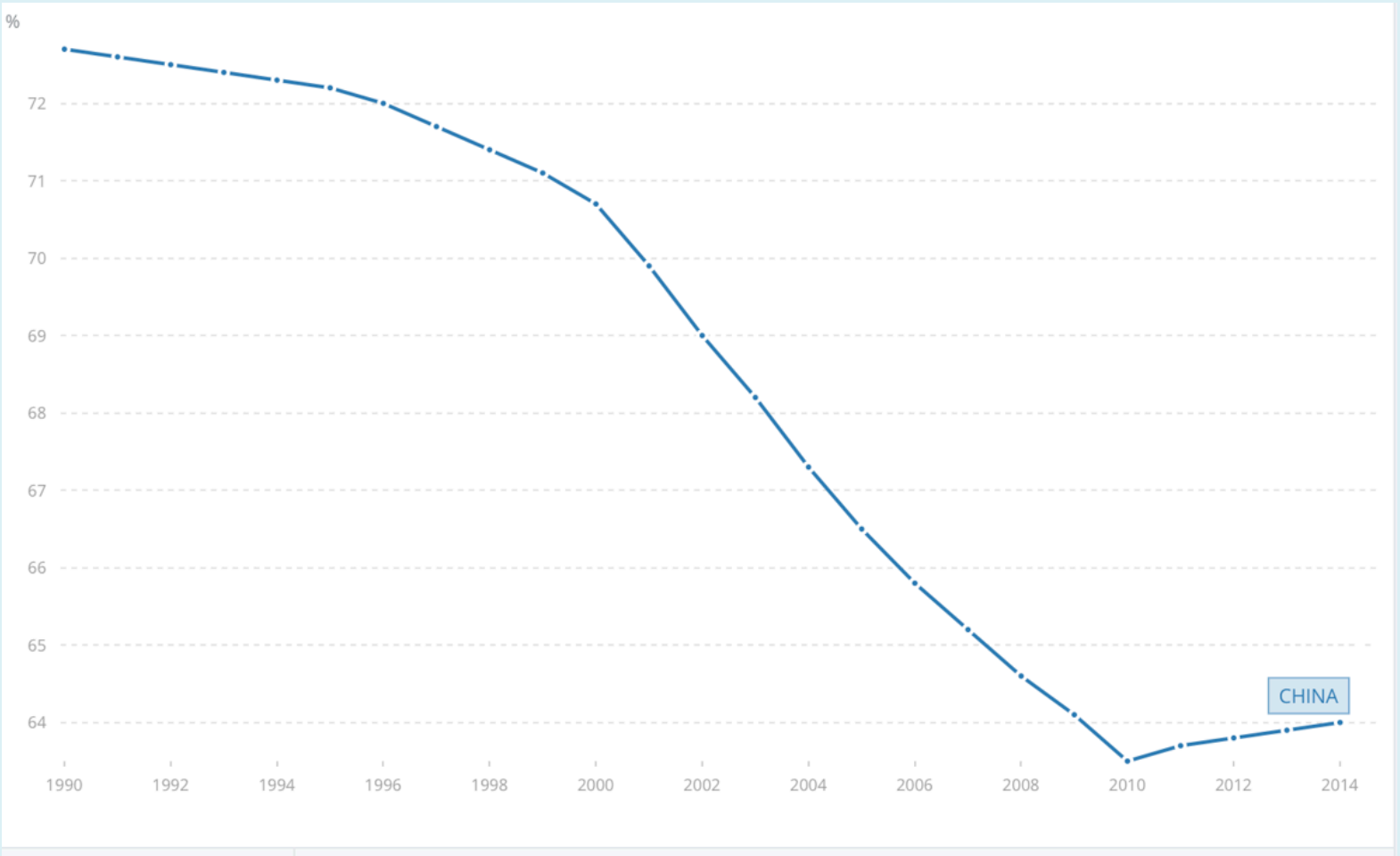


LFPR, Total 1990-2014, China



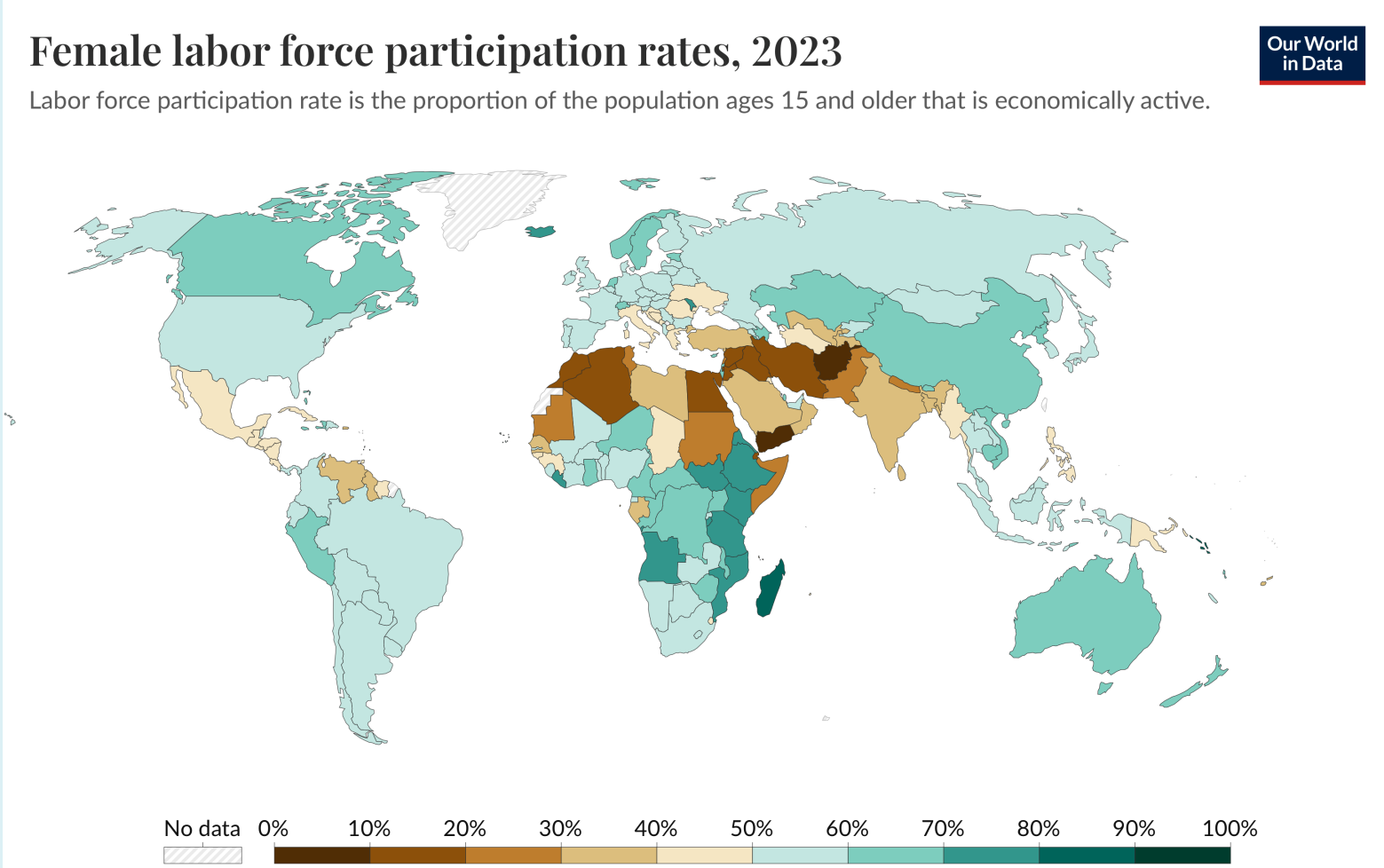
IMF (2015)

LFPR, Women, 1990-2014, China

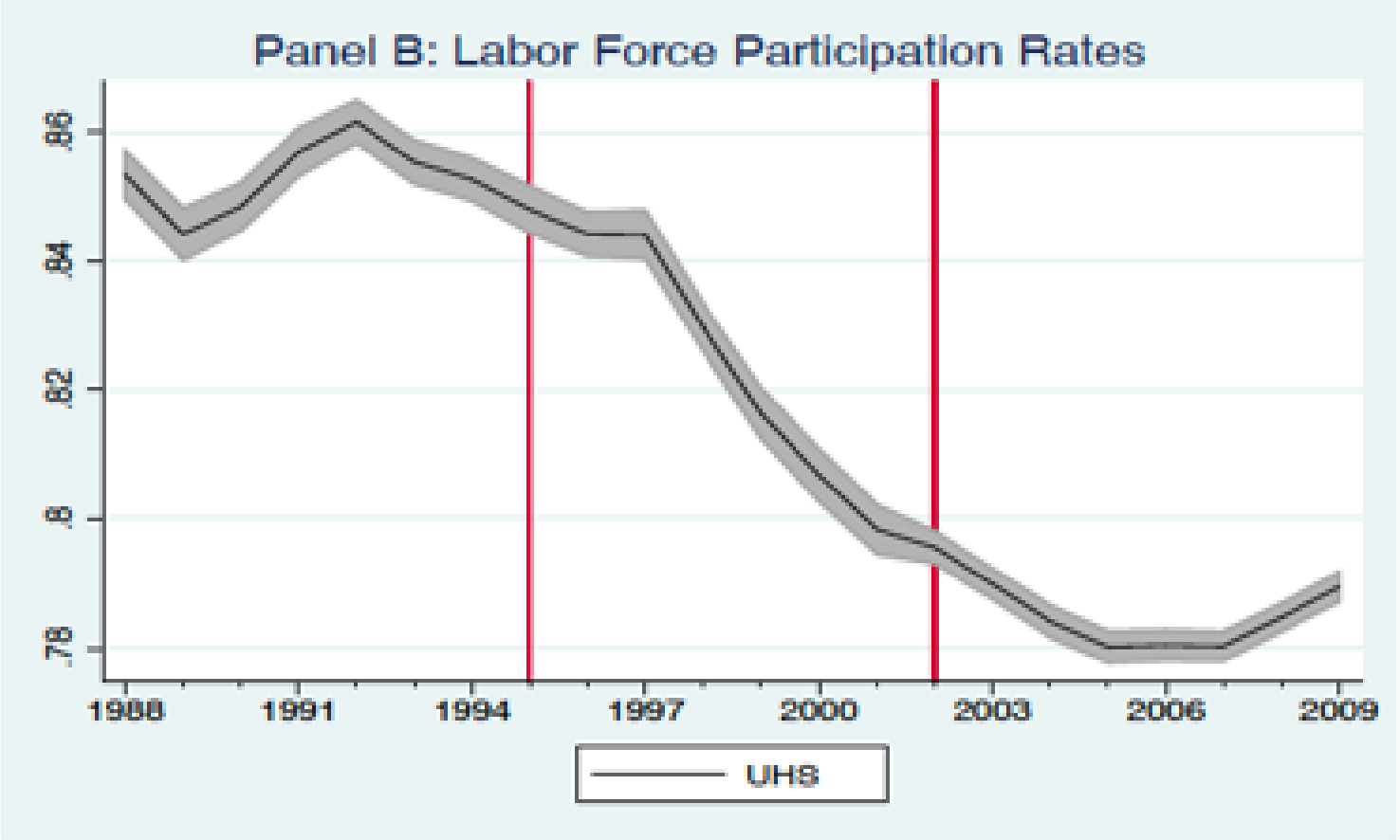


IMF (2015)

LFPR, Women, across countries, 2023



Feng, Hu and Moffitt (2015)



Labor Force and Employment

- The labor force includes non-institutionalized individuals age 16 and above who are presently employed and those who are not presently employed, but are actively seeking work.
- The **Labor Force** is the sum of the employed and unemployed.
  - Labor Force = Employed + Unemployed

Employment and Unemployment

- According to the International Labour Organization (ILO) standard definition, there are three criteria /kraɪˈtɪriə/ for determining whether a person is unemployed:
  - **No work**: Neither employed by others nor self-employed;
  - **Available for work**: Currently available and willing to be employed or self-employed during the reference period;
  - **Actively seeking work**: Actively searching for employment or self-employment opportunities in the recent period.
- In summary, *during a given period, the unemployed have no work, are available for work, and are actively seeking work*.

> "没工作，准备工作，正在积极找工作"

Employment and Unemployment

- Employment Rate is the ratio of the employed population to the potential labor force.

$$\text{就业率} = \frac{\text{就业人口}}{\text{潜在劳动力人口}} \times 100\%$$

- Unemployment Rate is the ratio of the unemployed population to the economically active population.

$$\text{失业率} = \frac{\text{失业人口}}{\text{经济活动人口}} \times 100\% = \frac{\text{失业人口}}{\text{失业人口} + \text{就业人口}} \times 100\%$$

- Question: Do employment rate plus unemployment rate equal 1?

$$\text{Employment Rate} + \text{Unemployment Rate} = 1?$$

Unemployment Rates in China

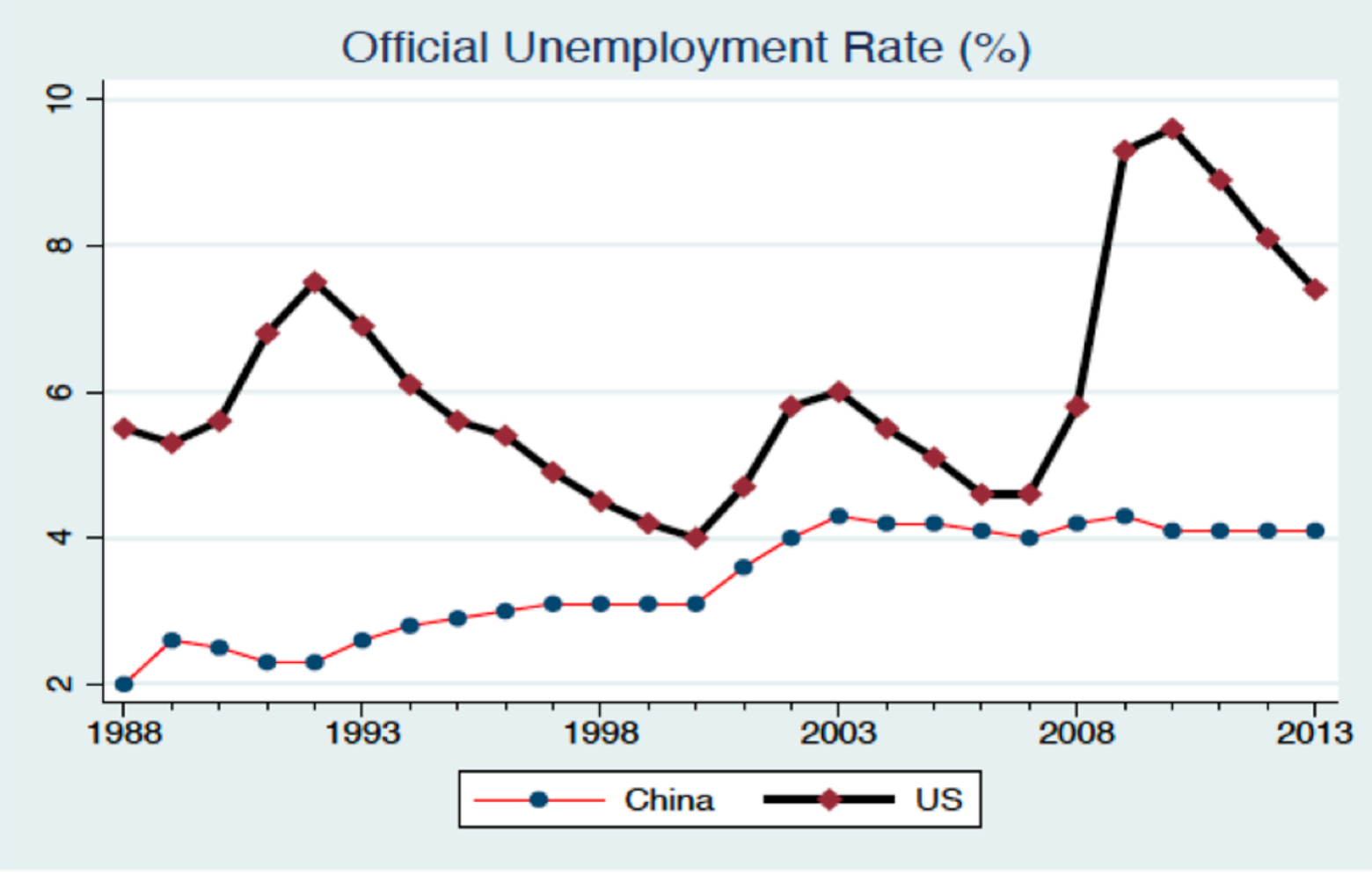
1. 城镇登记失业率

- 非农业户口，失业，在劳动年龄(16岁以上及男60岁以下、女55岁以下)
- 并在当地就业服务机构进行求职登记的人员。
- 不包括毕业生（6个月之后包括），
- 不包括未达到退休年龄但已经办理退休、退职手续的人员，例如下岗、内退人员。

$$\text{城镇登记失业率} = \frac{\text{城镇登记失业人数}}{\begin{array}{l}(\text{城镇单位就业人员}-\text{使用的农村劳动力}-\text{聘用的离退休人员}-\text{聘}\\ \text{用的港澳台及外方人员})+\text{不在岗职工}+\text{城镇私营业主}+\text{城镇个}\\ \text{体户主}+\text{城镇私营企业及个体就业人员}+\text{城镇登记失业人数}\end{array}}$$

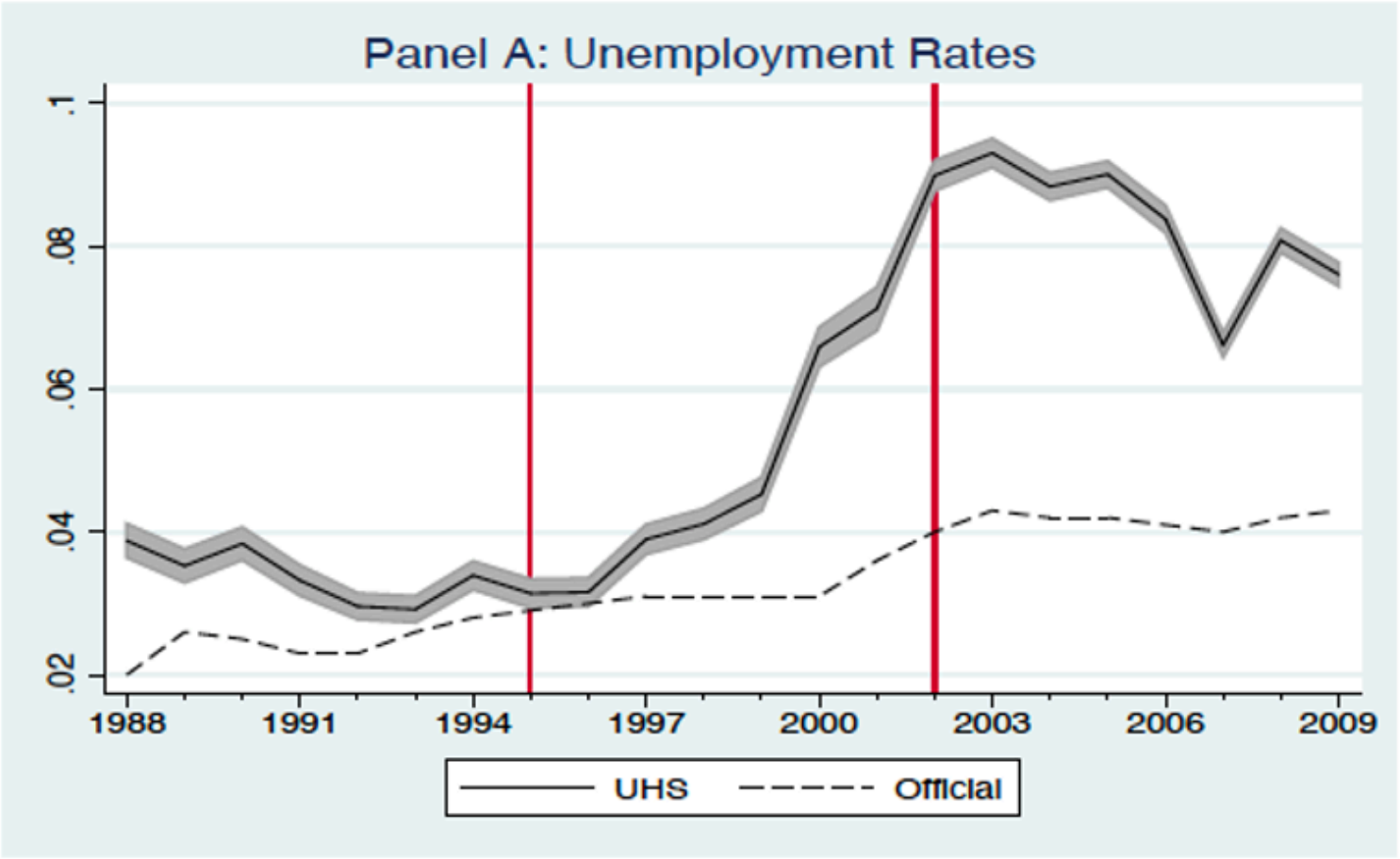
China v.s. Others (2003-2015)

UR: China v.s. US (1988-2013)



Source: Feng, Hu and Moffitt (2015)

Feng, Hu and Moffitt (2015)

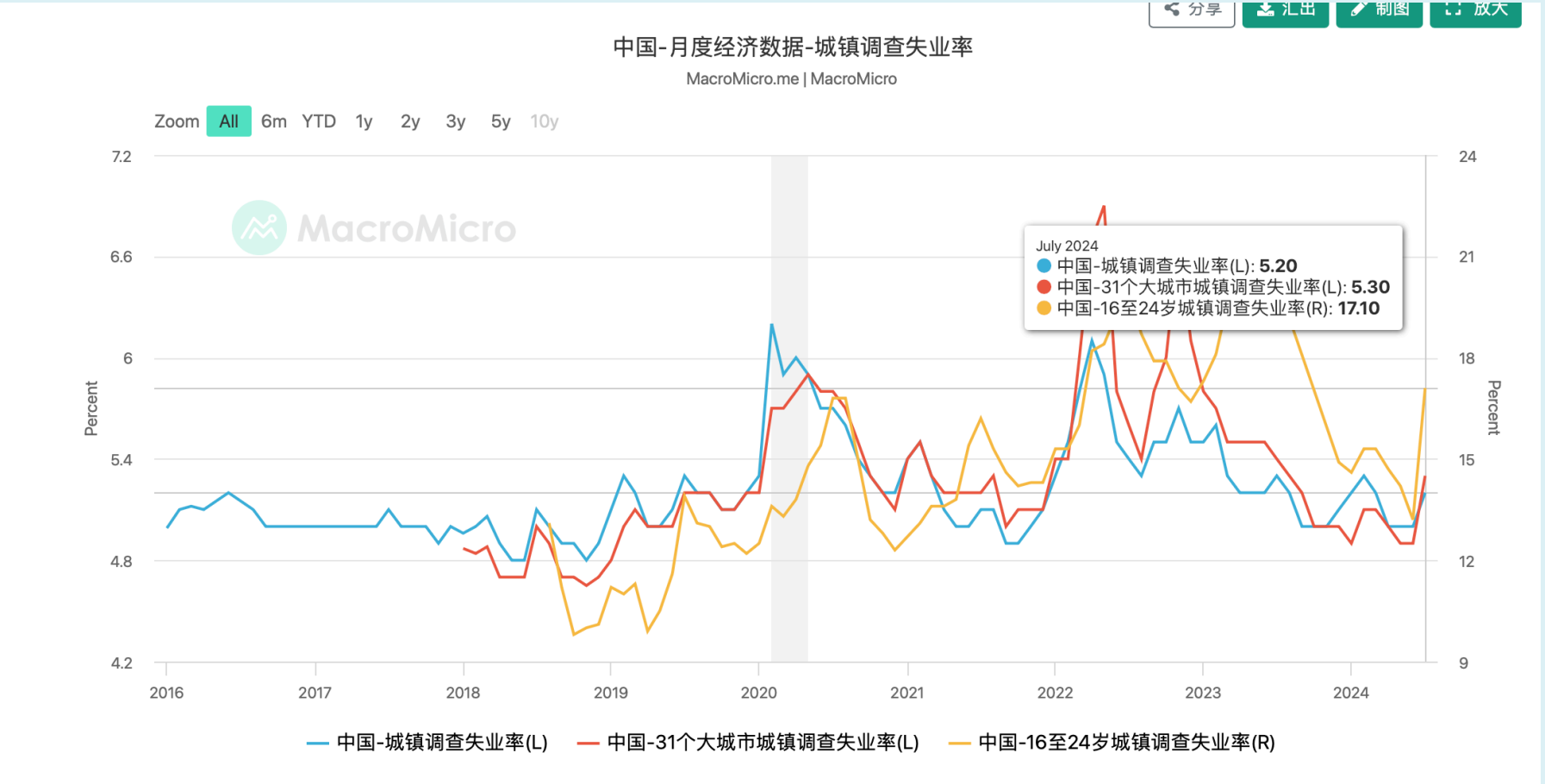


Unemployment Rates in China

2. 城镇调查失业率:

- 劳动部门定期对样本家庭进行调查而获得的。
  - 就业人口是指16周岁及以上，在调查参考期内（通常指调查时点前一周），为了取得劳动报酬或经营收入而工作了至少1小时的人，也包括休假、临时停工等在职但未工作的人口。
  - 失业人口是指16周岁及以上，没有工作但近3个月在积极寻找工作，如果有合适的工作能够在2周内开始工作的人。
- 从2005年开始，每年调查2次。2009年在31个大城市每月进行调查。从2016年开始覆盖全国所有的地级市和县。目前样本量已经达到34万户。从2018年4月开始，正式对外发布(新闻链接：城镇调查失业率数据首次公布）
- 样本特点：抽样样本最初只包含本地户籍居民，从2008年开始扩展为常驻人口，即包含外地户籍居民，但仍然不包含"乡村就业人员"。从2013年起，将乡村就业人员纳入调查范围。并且包含65岁以上人口（无论城市还是农村）。
- In general, this measure provides much more realistic unemployment data in an international standard.

中国城镇调查失业率: 2016-2024



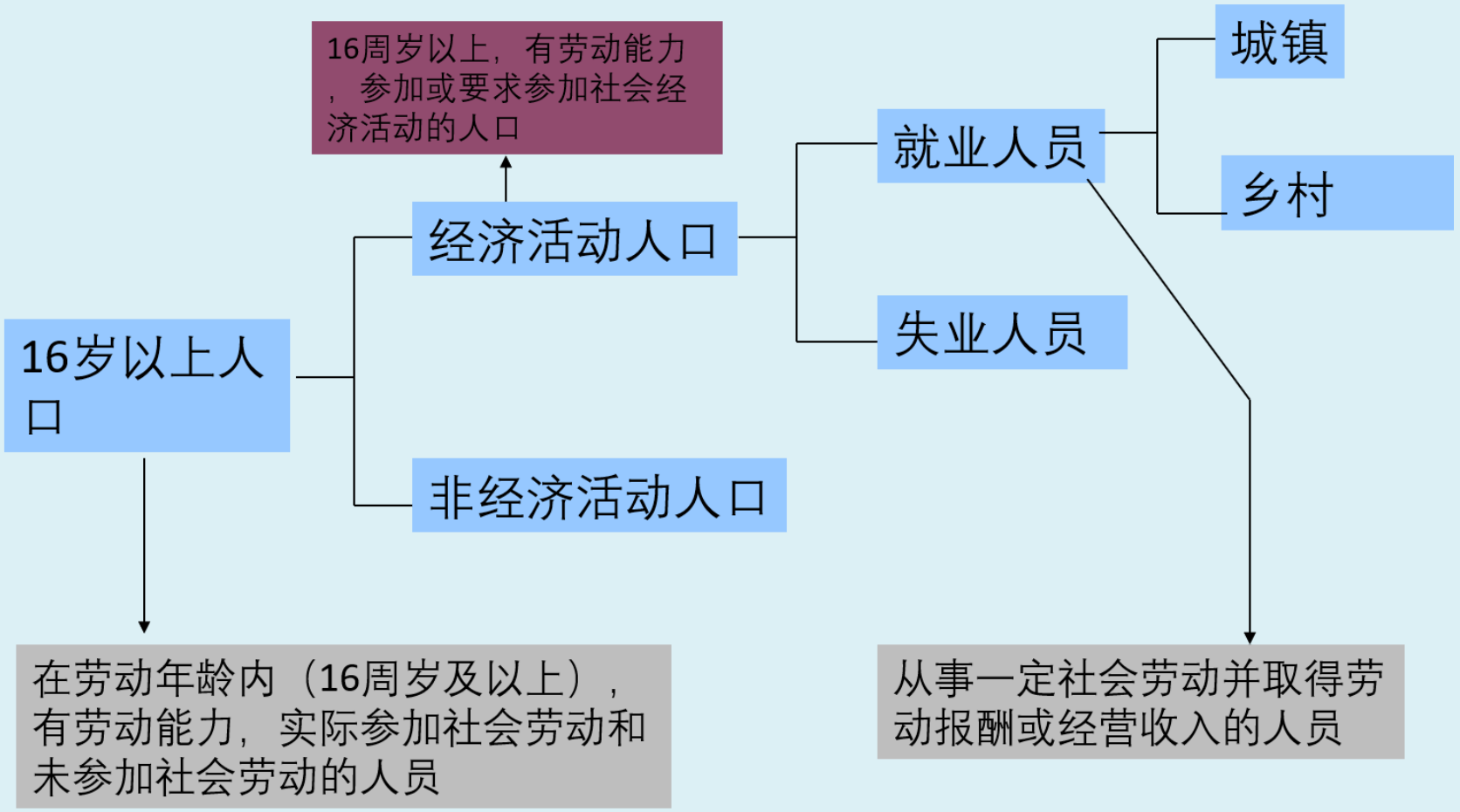
Source: CEIC from NBS

National Labor Statistics in China

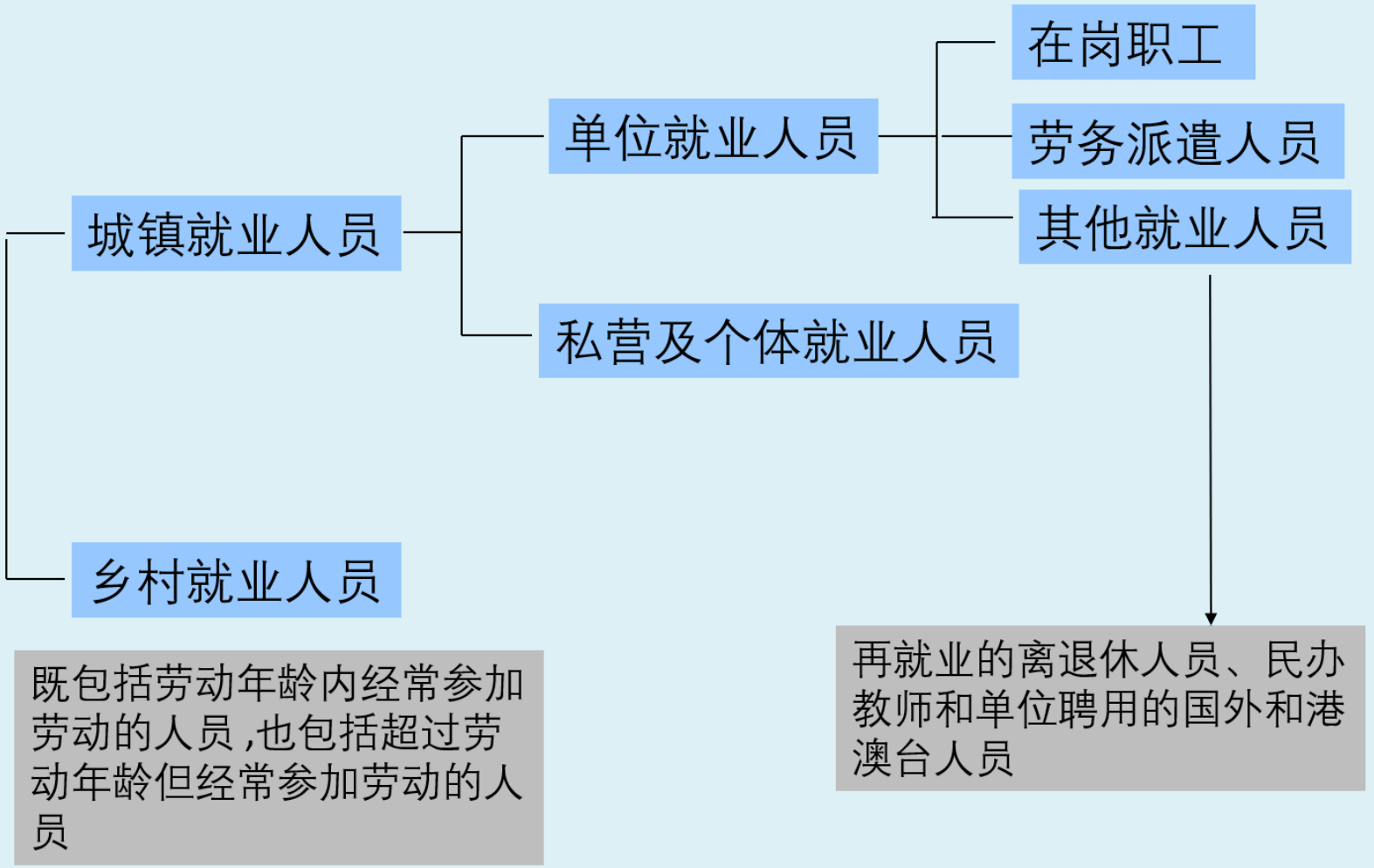
总人口(万人)	Total Population (10000 persons)	**132129**
16岁以上人口数(万人)	Population Above 16(10000 persons)	**104585**
经济活动人口(万人)	Economically Active Population(10000 persons)	**78645**
全国就业人员年末人数(万人)	Employment (end of year, 10000 persons)	**76990**
城镇就业人员	Urban Employment	29350
单位就业人员	Unit Employment	12024
#国有单位	State-owned Units	6424
集体单位	Collective-owned Units	718
其他单位	Other Ownership Units	4882
在岗职工(万人)	Number of Staff and Workers (10000 persons)	**11427**
#国有单位	State-owned Units	6148
集体单位	Collective-owned Units	684
其他单位	Other Ownership Units	4595
城镇私营和个体就业人员	Employment in Urban Private Enterprises and Individuals	7891
乡村就业人员	Rural Employment	47640

资料来源：中国劳动统计年鉴，2008

National Labor Statistics in China



National Labor Statistics in China



Labor Demand in Statistics

Labor Demand

- Labor demand is the measure of employers' willingness to employ workers relative to wage levels.
- Relatively harder to measure.
- Measurements
  - Job vacancies（岗位空缺）
  - Job advertisements（招聘广告）
  - employment intentions of firms（企业招聘意向）

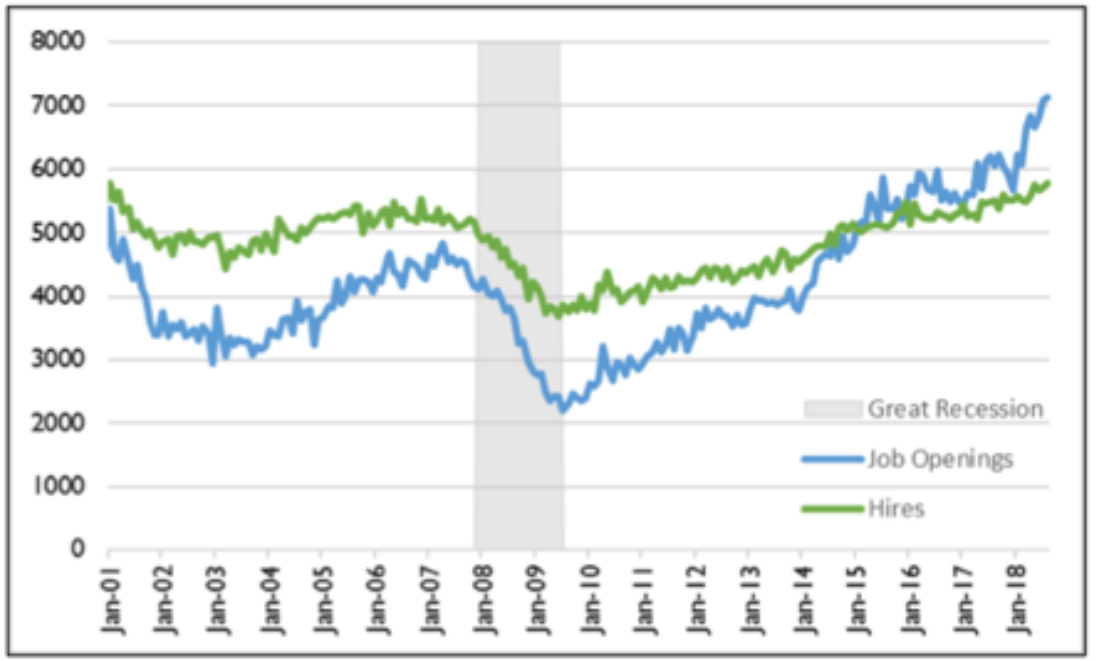
Measurement of Labor Demand in U.S.

- Job Openings and Labor Turnover Survey(JOLTS) by The Bureau of Labor Statistics(BLS).
- JOLTS collects monthly data from a sample of 16,000 business establishments.
- Job openings are defined in JOLTS as the total number of positions open on the last business day of the month.
- A *job opening* exists if
  - a specific position exists and there is work available for that position
  - the job could start within 30 days
  - the establishment is actively recruiting outside workers

Job Openings and Hires in U.S

Figure 1. Total U.S. Nonfarm Job Openings and Hires

(In thousands)



Source: Bureau of Labor Statistics, Job Openings and Labor Turnover Survey (JOLTS)

- The job opening rate is the ratio of the number of job openings to the sum of the number of nonfarm employees and the number of job openings.

Job Openings and Hires in U.S

Figure 2. Unemployed Persons per Job Opening

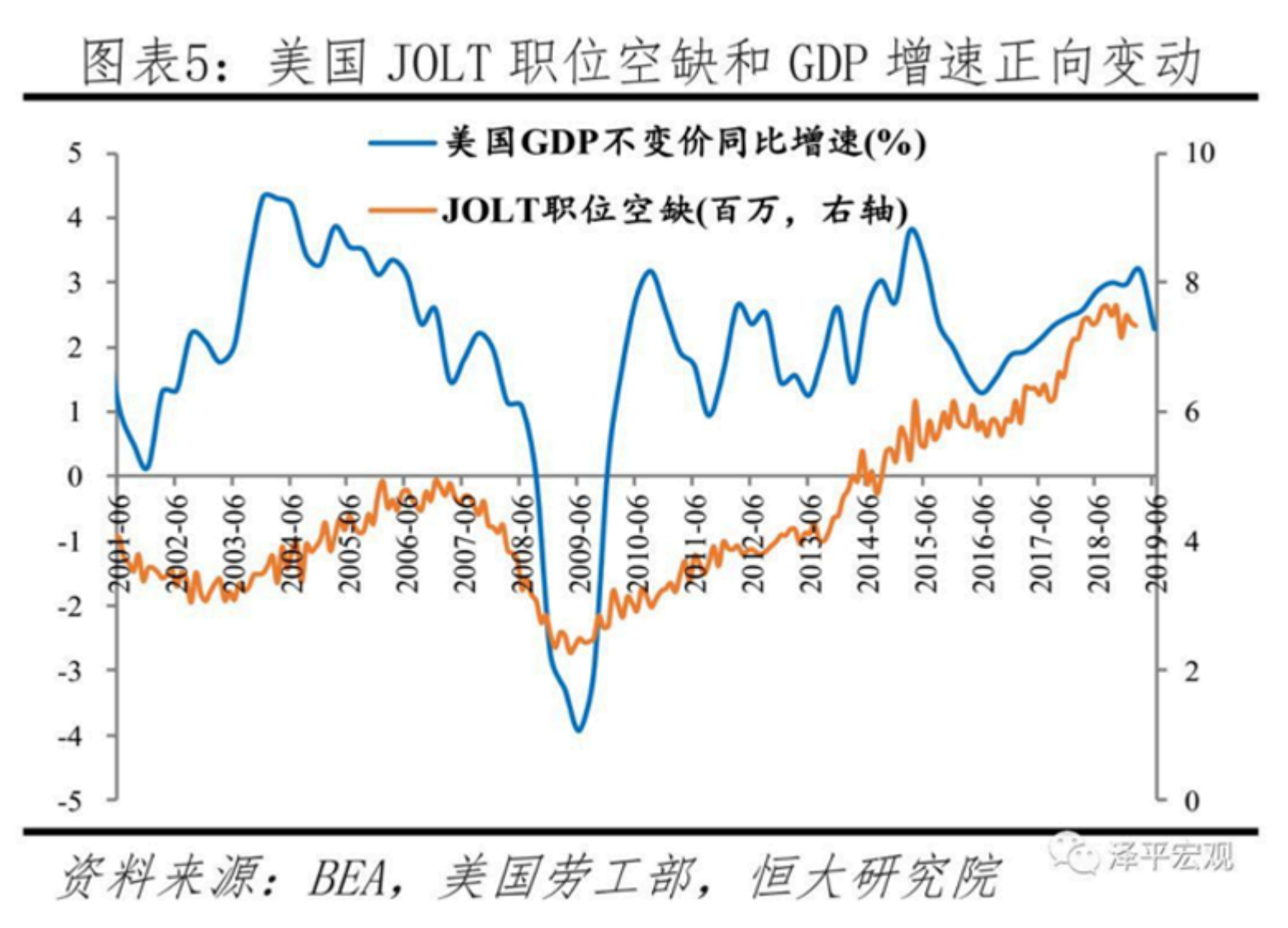
Source: Bureau of Labor Statistics, Job Openings and Labor Turnover Survey (JOLTS), and Current Population Survey (CPS)

- The unemployment to job openings ratio is the number of unemployed persons divided by the number of job openings.

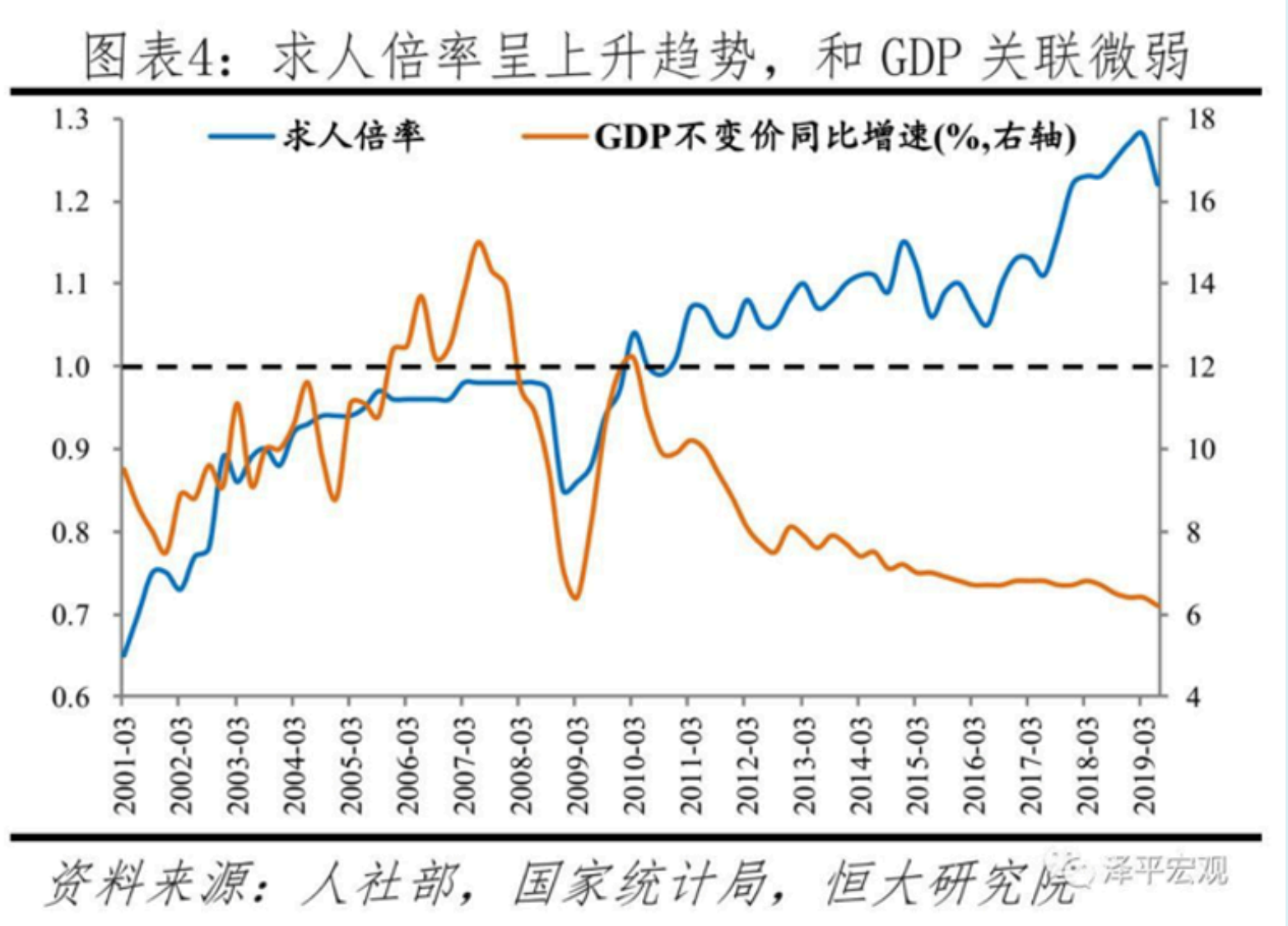
Measurement of Labor Demand in China

- **求人倍率**=岗位空缺/求职人数
  - 数据来自人力资源和社会保障部的100个城市的公共就业服务机构。
  - 在劳动年龄内、有劳动能力、有就业要求的城乡劳动者可持居民身份证等相关证件在常住地公共就业服务机构申请公共就业服务；用人单位可向公共就业服务机构咨询、申请招聘用工服务。

Labor Demand and GDP Growth



Labor Demand and GDP Growth

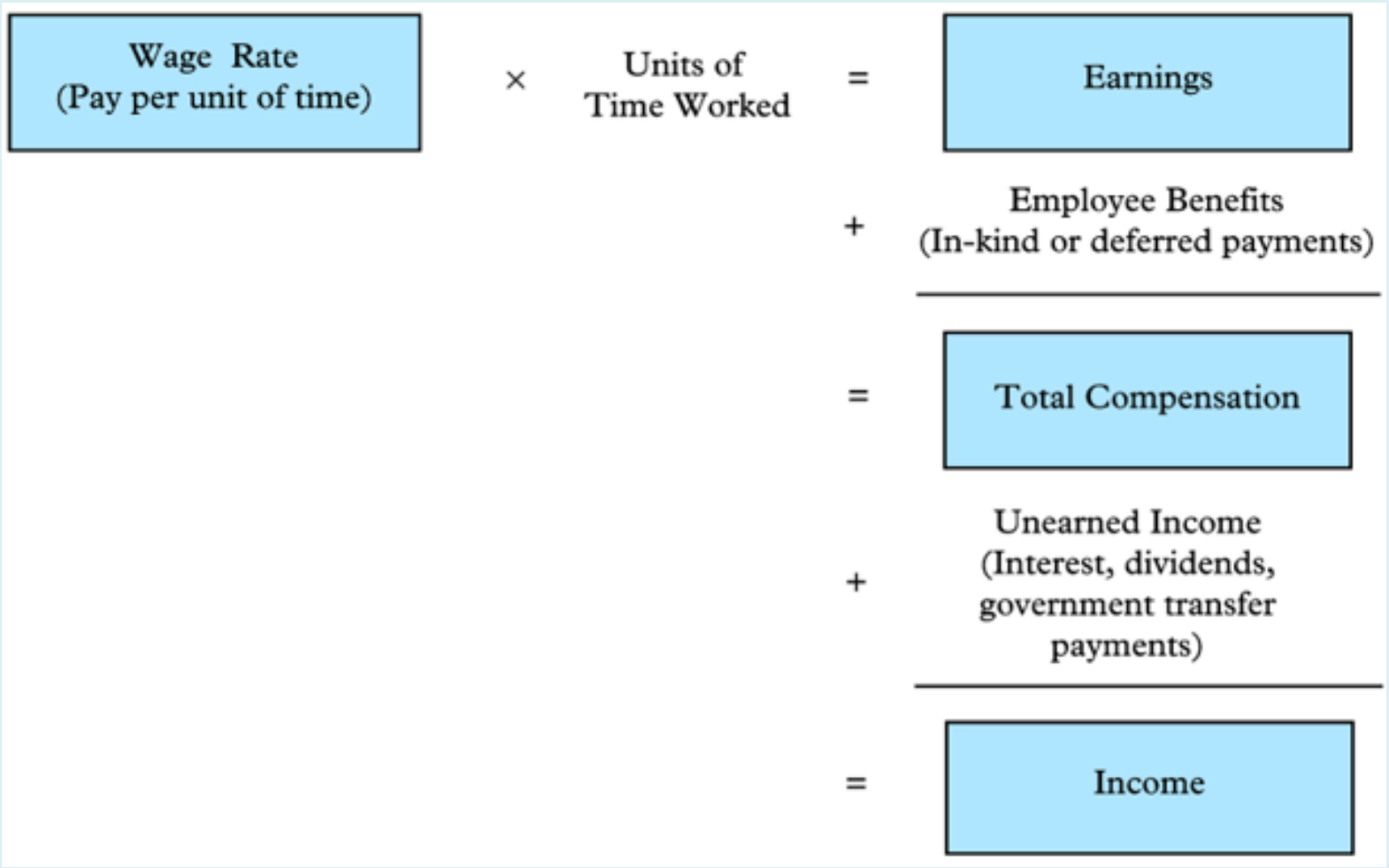


Labor Income

Measurement

- Different forms
  - Wage
  - Earnings
  - Compensation
  - Income
- Different Term
  - Annual
  - Monthly
  - Weekly
  - Hourly
- Real vs Nominal

Wages, Earnings, Compensations, and Income



Nominal and Real Earnings

Nominal and Real Hourly Earnings, US Non-supervisory Workers in the Private Sector, 1977-1997

	1977	1987	1997
Average hourly earnings (current price) (A)	$5.25	$8.98	$12.26
CPI using 1982-84 as a base (B)	63.2	113.6	160.5
Average hourly earnings. 1982-1984 dollars (using CPI) (C)=(A)/(B)*100	$8.31	$7.90	$7.64
Average hourly earnings. 1997 dollars (using CPI) (D)=(A)/[(B)/160.5]	$13.33	$12.69	$12.26
Average hourly earnings. 1997 dollars (using CPI inflation less 1% per year)	$11.00	$11.51	$12.26

中国的工资统计

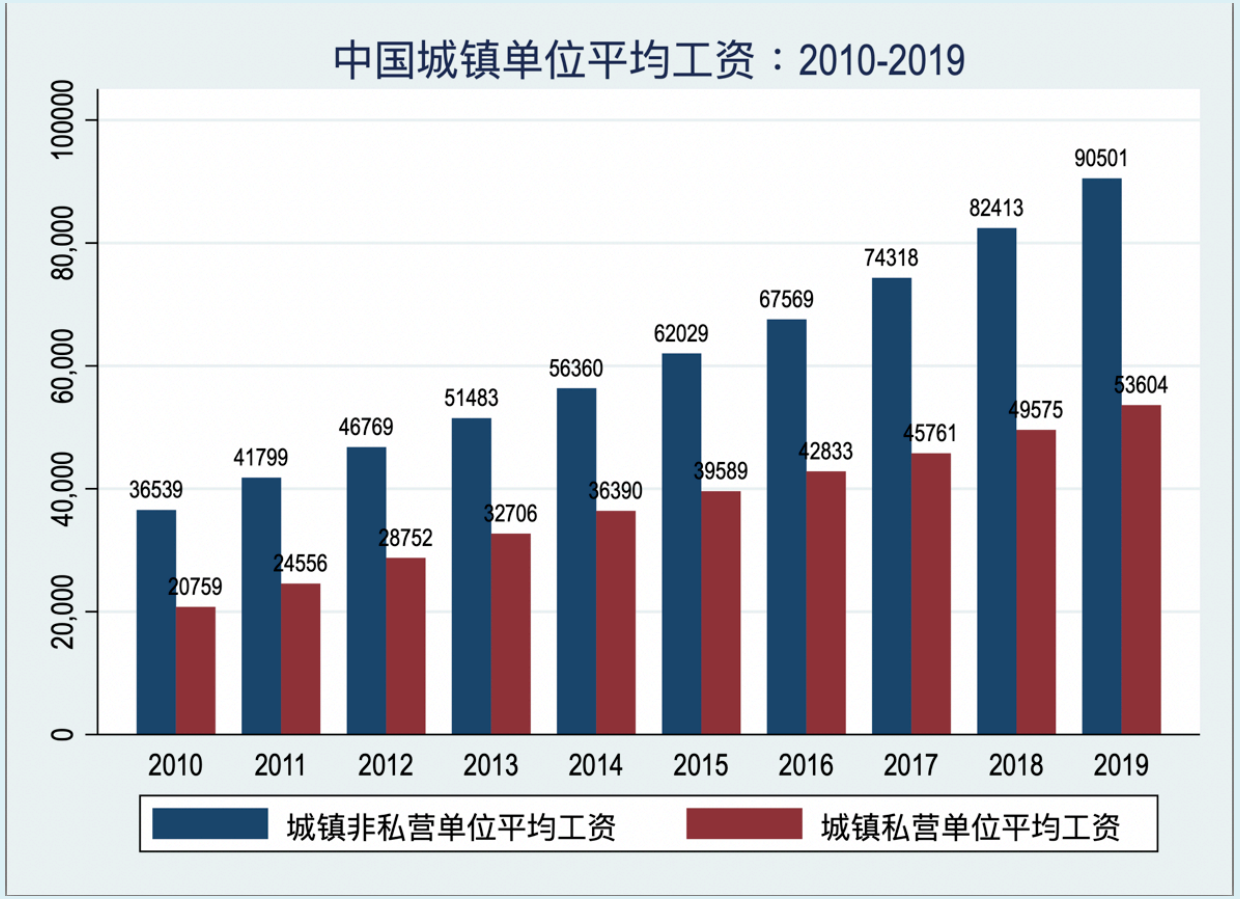
- 法人单位以年度为单位向统计局汇报。根据所有制性质分成两部分：
  - 城镇非私营单位：国有企业事业单位、城镇集体、股份公司、合资和外资企业。所有单位都要报送。
  - 城镇私营单位：私营企业和个体工商户。只需要抽样单位报送数据。

- 工资总额指直接支付给本单位全部从业人员的劳动报酬总额。包括计时工资、计件工资、奖金、津贴和补贴、加班加点工资、特殊情况下支付的工资（包含实物形式）。具体包括基本工资、绩效工资、工资性津贴和补贴等。

- 工资总额是税前工资，包括单位从个人工资中直接为其代扣或代缴的个人所得税、社会保险基金和住房公积金等个人缴纳部分，以及房费、水电费等。

- 缺陷：不包括农村就业人员以及自由职业者。

中国的工资统计: 2010-2019



Earnings and Income: Survey

CHIP 2007

16. 在当前主要工作中，您平均每周工作多少小时?(小时/周)	C16					
17. 从当前这份主要工作中,您一般平均每月得到的收入共计为多少元?（元/月,可以出现 0 或负值） （工资性工作者的工资,奖金,津贴和实物折现；自我经营者的净收入）	C17					
18. 除当前主要工作外,您是否有兼职工作(包括家庭帮工)? ①是 ②否(跳到问题 21)	C18					
19. (问 C18=1)所有有报酬的工作(包括自我经营)加在一起,您平均每周工作多少小时?(小时/周) (C19≥C16)	C19					

20. (问 C18=1)从所有有报酬的工作(包括自我经营)中,一般平均每月得到的总收入为多少元?(元/月) （工资性工作者的工资,奖金,津贴和实物折现；自我经营者的净收入） （C20≥C17）	C20					
21. 您目前是否还在积极寻找另一份工作？如果是，主要原因是什么？ ①否 ②想工作时间长一点 ③想要高一点的报酬 ④不喜欢现在的雇主 ⑤不喜欢现在的工作环境 ⑥其他(请说明)	C21					
22. 您当前这份主要工作是? ①固定工 ②长期合同工(一年及以上) ③短期合同工(一年以下) ④无合同的临时工 ⑤ 不领工资的家庭帮工(检查 C06=2 跳到下一人/表) ⑥自我经营(跳到问题 25) ⑦打零工 ⑧其他(请注明)	C22					
23. 您的主要工作单位如果提供工作餐或伙食补贴，平均每月估计折算多少钱?(元/月,没有填 0)	C23					
24. 您的主要工作单位如果提供住宿或住宿补贴，平均每月估计折算多少钱?(元/月,没有填 0)	C24					

Wrap Up: Key Takeaways from Today's Lecture

1. Population as Labor Force Foundation

- From burden to resource: Modern economics rejects Malthusian thinking
  - Population provides the raw material for economic production
  - Institutions determine outcomes, not initial resources (North vs. South Korea)
- Three dimensions matter:
  - Quantity: More working-age population → More labor input
  - Structure: Age and gender balance affects productivity
  - Quality: Health, education, and skills (human capital theory)

2. Demographic Challenges and Opportunities

- China fertility collapse: From 6+ children to a 1.0 per woman
- Causes: Policy intervention, high costs, cultural shifts, economic development
- Consequences: Aging populations, shrinking labor forces

Wrap Up: Key Takeaways from Today's Lecture

3. Labor Market Statistics: The Challenge of Measurement

- Employment statistics play a key role in assessing the business cycle of the economy
- It won't be easy to get the "real" numbers for labor statistics
  - Multiple measurement approaches (registered vs. surveyed unemployment)
  - Different definitions lead to different conclusions
  - Data limitations and methodological challenges
- Key lesson: Always ask about definitions and methodology when interpreting labor statistic and be cautious about the data.

Homework

1. Find the following demographic statistics for China from 2000 to 2024 and plot them.
    - birth rate
    - married age
    - marriage rate
    - birth sex ratio
    - first-child birth rate
    - second-child birth rate
    - third-child birth rate
2. Find the following labor market statistics for China from 2000 to 2024 and plot them.
    - labor force participation rate
    - job opening rate
    - unemployment rate
    - social average wage rate