

# 北京大学国家发展研究院

## PKU National School of Development

### Introduction to Economic Growth (In English)

Instructor: Prof. Gordon Liu

Students: Undergraduate Students

Term: Spring 2018, March 3-June 16

Time: 3:10-6:00pm on Saturdays

Weekly hours: 3

Credits: 3

Prerequisite: English

Classroom: 北大理教 302

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#### Instructor

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Prof. Gordon Liu is a Yangtze River Scholar and PKU BOYA Professor of Economics at Peking University National School of Development (NSD), and Director of PKU China Center for Health Economic Research. His research interests include health and development economics, health reform, and pharmaceutical economics. Prior to joining NSD, he served as full-time faculty at USC, UNC Chapel Hill, and PKU Guanghua School of Management. He has taught courses as China in Transition, Managerial Economics, Macroeconomics and Health, and Health Economics.

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## I. Course Overview

The world economies have experienced the greatest divergence in economic growth in human history since the Industrial Revolution. China, in particular, has gone through perhaps the most dramatic transitions, from leading the world economy for most of the agricultural era, to falling into the poorest economies in the late 70s, and then to upturning again with an unprecedentedly high growth for the recent decades. While the world great divergence is well observed so far, large disputes and puzzles still remain on why and how the divergence took place in such a way that is so in favor of most nations primarily in the west Europe and North America, but not for many of those in the tropical zones and Africa? Would the divergence

trend continue forever or inevitably turn to a convergence at some point in 21st century due to the conventional wisdom of diminishing returns to economic production?

This course will provide undergraduate students with a systematic view of economic principles, key frameworks, and empirical literature that are essential to a comprehensive understanding of economic growth, with some focus on China. Drawing upon the materials from the economics textbooks and literature, this course will have 13 central topics on growth, walking students through the tour of what has happened across nations in terms of living standards and income before and after the Industrial Revolution, followed by a set of key economic principles, basic growth models and empirical evidence aiming to explain the growth observations.

As for outcomes, this course expects students to gain a good understanding of why and how growth paths have taken place as observed between the rich and poor nations in general, with a particular focus on China's transitions. It is intended to help students set a sound economic perspective in assessing future public and private choices for economic growth and development in China.

## **II. Course Topics**

### **Topic 1 The World Economic Growth and Great Divergence – from the Agricultural Era to Industrial Revolution**

Today's world as a whole is surely much more prosperous than ever before. In the meantime, it also has been accompanied with growing disparities in income and living conditions across the planet, leading to the greatest income divergence ever in human history. How has the human income gap changed over time? What may be the possible main drivers for the observed growth and distribution gaps? How to determine economic growth in an analytic framework from the conventional theory? What happened to the dynamics of economic transitions in China and why?

### **References**

Henderson, J. V., A. Storeygard, and D. Weil, "Measuring Economic Growth from Outer Space," *American Economic Review*, 2012 (2): 994-1028.

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Huang, Y., "How Did China Take Off?," *Journal of Economic Perspectives*, 2012 (26): 147-170.

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Pritchett, L., "Divergence, Big Time," *Journal of Economic Perspectives*, 1997 (11): 3-17.

Elhanan Helpman, Chapters 1-2, *The Mystery of Economic Growth*, 2010.

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罗伯特·巴罗,《经济增长的决定因素: 跨国经验研究》, 李剑译, 中国人民大学出版社, 2004 年第 1 版。

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德怀特·帕金斯,“从历史和国际的视角看中国的经济增长”,《经济学(季刊)》, 2005 年第 4 卷第 4 期, 第 981-912 页。

## **Topic 2 Economic Principles: Conventional Wisdoms and Different Thoughts**

This topic will help students with a quick review of main economic principles that are offered from introductory economics. Mainly drawing from conventional textbooks, it will cover the principles of how economic agents make rational decisions based on cost benefit analysis. In addition, some different thoughts will be introduced, including behavioral economics, Hayekian and new structural economic arguments. How government plays or should play a role in a market economy, leading to possible changes in economic and social wellbeing?

### **References**

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Zhang Weiyong, *The Logic of the Market*, 2015

Thaler H Richard and Sunstein R Cass, *Nudge, improving decisions on health, wealth, and happiness*, Yale University Press, 2008.

## **Topic 3 Growth Model and Factors of Production: Physical Capital**

How economists model economic growth in the context of conventional framework? What are the most fundamental factors of production in growth models? How is capital determined and how its nature and roles have been evolved over time in human history of economic growth? What are the major shortcomings with the conventional growth model settings? Discussions on diminishing returns, convergence and divergence.

### **References**

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王小鲁, "经济增长、结构调整和体制改革," 北大国家发展研究院圆桌讨论会发言, 2015-4-9。

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经济增长前沿课题组, "高投资、宏观成本与经济增长的持续性", 《经济研究》, 2005 年第 10 期, 第 12-23 页。

吴忠群, "中国经济增长中消费和投资的确定", 《中国社会科学》, 2002 年第 3 期, 第 49-62 页。

#### **Topic 4 Growth Model and Factors of Production: Labor Supply and Population**

What is the relationship between population, labor supply, and economic growth? What is the well-known Malthusian trap and why it was once popular and then collapsed later during the Industrial Revolution? How to model the roles of population and labor supply in income growth model? How did Malthusian theory influence the population control policies in China? What are the central driving forces for fertility transition and population growth in the long run?

#### **References**

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刘国恩，“转变经济发展方式靠什么？”，《比较》，2013年第3期，第130-144页。

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蔡昉，“人口转变、人口红利与刘易斯转折点”，《经济研究》，2010年第4期，第4-13页。

## **Topic 5 Growth Models and Factors of Production: Human Capital**

How does the quality of labor matter to production? How to measure labor quality from the perspective of education and health as two most critical human capitals in growth models? What are the similarities and differences between human capital and physical capital, and the relationship between health and education human capitals? How to predict the future potentials of human capitals in China's economic growth?

### **References**

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Thomas G. Rawski, "人力资源与中国长期经济增长", 《经济学（季刊）》，2011年第4期，第1153-1186页。

姚先国、张海峰, "教育、人力资本与地区经济差异", 《经济研究》，2008年第5期，第47-57页。

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## **Topic 6 Growth Models and the Roles of Productivity**

Why cannot the different aspects of factors of production fully explain all of the income variation among countries? How to measure productivity in growth models, and how much of the unexplained income variation can be attributed to productivity? How and why productivity differs among countries? How to assess China's growth potential from productivity perspective?

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Young, A., "The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience," *Quarterly Journal of Economics*, 1995 (110): 641-680.

Hsieh, C.-T., "What Explains the Industrial Revolution in East Asia? Evidence from the Factor Markets," *American Economic Review*, 2002 (92): 502-526.

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蔡昉，“中国经济增长如何转向全要素生产率驱动型”，《中国社会科学》，2013年第1期，第56-71页。

## Topic 7 Productivity and Determination: Technology

For a given quantity of physical and human capitals, improved productivity must mean a greater technology or better efficiency. What determines technology and how it is created and applied to economic production process? How technologies differ among countries, and how to model technology improvement in growth production?

## References

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吴延瑞，“生产率对中国经济增长的贡献：新的估计”，《经济学（季刊）》，2008年第3期，第827-842页。

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## **Topic 8      Productivity and Determination: Efficiency**

In addition to technology, how much of the productivity variation can be explained by efficiency levels associated with the users? How efficiency differs among countries? What are the different types of inefficiencies? How efficiency is determined by state institutional arrangement and openness/globalization?

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## **Topic 9      Fundamental Conditions for Growth: Government**

Why does a society need government and what should be its proper roles in the economy? How government would affect growth? Why did government intended goals often end up with different or sometimes opposite outcomes in economy? Why poor countries tend to have poor government?

## References

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## Topic 10 Fundamental Conditions for Growth: Income Distribution

Why do income distribution and inequality matter to growth? How to measure income inequality and how did it change along with economic growth in human history? What is the effect of income inequality on accumulation of physical capital? How does it matter to human capital? How does it affect economic efficiency, political economy, and social sustainability?



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## Topic 11 Fundamental Conditions for Growth: Culture and Value Ideas

To what extent do culture and value ideas affect economic growth? Through what mechanisms do culture and value ideas may play a significant role in economic productivity? How to measure culture and value effect on growth? What determines culture and value ideas? Can culture and value ideas be changed through government or public interventions such as freedom of speech and "market" for ideas? What are the implications of culture effect on economic activities for Chinese?

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## **Topic 12 Fundamental Conditions for Growth: Geography, Climate, and Natural Resources**

To what extent can geographic locations explain income difference across countries? How does climate matter to growth and why? From a country perspective, whether and how the endowment of natural resources may matter to its growth? How would the relationship between the natural resources and growth change from the global perspective?

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## **Topic 13 Growth from the Global Perspective: Natural Resources and Environment**

Taking the global perspective, whether and how will economic growth sustain associated with the use of nonrenewable resources and the environmental degradation? How should one reconcile the economic profit maximization and sustainability, particularly with environment challenges to our future generations on this planet? From economics literature, what conceptual solutions and empirical understanding of the issues have been offered, and what are the major disputes still remained? Can market mechanisms such as technological substitution, pricing, and property right solve the problems?

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### **III. Textbook Reference**

David N Weil, **Economic Growth**, third edition, Pearson, 2013

Elhanan Helpman, **The Mystery of Economic Growth**, Harvard University Press, 2010

### **V. Grading Policy**

Quizzes: 60 points (4points each lecture quiz, for 15 times)

Final Test: 40 points, Team Project Paper plus Oral Presentation in class on June 30, 2018.