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ACADEMIC POSITION

Lingnan College, SUN YAT-SEN UNIVERSITY
Assistant Professor

Guangzhou, China
Nov 2021 – Nov 2024

EDUCATION

Department of Economics, THE CHINESE UNIVERSITY OF HONG KONG
PhD in Economics

Hong Kong, China
Sep 2015 – Aug 2021

Department of Economics, THE CHINESE UNIVERSITY OF HONG KONG
MPhil in Economics

Hong Kong, China
Aug 2013 – Aug 2015

Lingnan College, SUN YAT-SEN UNIVERSITY
Bachelor in Economics

Guangzhou, China
Sep 2009 – Jun 2013

RESEARCH FIELDS

Macroeconomics, Chinese Economy, Economic Growth, Structural Transformation

PUBLICATIONS

Does Digitalization of Government Activities Improve Business Environment? The Influence of Public Service Standardization (with Erqi Ge, Xianxiang Xu, and Quan Zhou), *Economic Analysis and Policy*, 2025, 87: 533–560.

Tertiarization like China (with Guangyu Pei, Zheng Song, and Fabrizio Zilibotti), *Annual Review of Economics*, 2023, 15, 485–512.

A Forensic Examination of China's National Accounts (with Wei Chen, Chang-Tai Hsieh, and Zheng Song), *Brookings Papers on Economic Activity*, 2019, Spring, 77–127.

The Determinants of Business Environment: From the Perspective of Government Service Capacity (in Chinese, with Xianxiang Xu and Yuelin Li), *China Economic Quarterly* 《经济学（季刊）》，2025, 25(2), 496–511.

The U-Shaped Impact of Digital Government Development on Income Inequality: Global Evidence (in Chinese, with Xianxiang Xu, Quan Zhou, and Erqi Ge), *Economic Theory and Business Management* 《经济理论与经济管理》，2024, 44(7), 50–71.

Digital Government Leads to Economic Development: Mechanism and Evidence (in Chinese, with Quan Zhou, Erqi Ge, and Xianxiang Xu), *Journal of Quantitative & Technological Economics* 《数量经济技术经济研究》，2023, 40(12), 50–68.

Commercial System Reform and Structural Transformation: A Micro Perspective Analysis (in Chinese, with Yimeng Zhu, Qingmiao Bi, and Xianxiang Xu), *Economic Research Journal* 《经济研究》，2022, 57(1): 189–208.

Administrative Approval Reform and Firm Entry (in Chinese, with Qingmiao Bi, Xianxiang Xu, and Shujuan Li), *Economic Research Journal* 《经济研究》，2018, 53(2): 140–155.

The Localization of Job Finding by University Graduates in China: A Macro Perspective (in Chinese), *Journal of Sun Yat-sen University (Social Science Edition)* 《中山大学学报（社会科学版）》，2018, 58(4): 196–208.

WORKING PAPER

A Quantitative Assessment of Resource Allocation Efficiency in China: 2003–2022 (with Guangyu Pei and Zheng Song).

A Dual Accounting for the Rise of Service Sectors in China (with Guangyu Pei and Zheng Song).

The Effects of Sectoral TFP on China's Structural Transformation and Growth (with Kaiming Guo).

RESEARCH GRANTS AWARDED

Young Scientists Fund of the Natural Science Foundation of China (Grant No. 72303255)

Jan 2024 – Dec 2026

Fellowship of China Postdoctoral Science Foundation (Grant No. 2022M713646)

Sep 2022 – Nov 2024

TEACHING EXPERIENCE

Intermediate Macroeconomics (in English), Undergraduate

Course evaluation in 2024 Spring: Ranked in the top 7% of the university and top 2% of the college

Basic Macroeconomics (in Chinese), Undergraduate

Course evaluation in 2024 Spring: Ranked in the top 42% of the university and top 33% of the college

Economic Growth and Structural Transformation, PhD

REFERENCES

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WORKING PAPER ABSTRACTS

A Quantitative Assessment of Resource Allocation Efficiency in China: 2003–2022 (with Guangyu Pei and Zheng Song). **Co-First Author.**

Abstract. China's productivity growth has slowed over the past 15 years, a period during which structural transformation has accelerated. The varying pace and nature of this shift across provinces raise questions of how resource allocation—both sectoral and regional—shapes aggregate productivity dynamics. To explore this issue, this paper first compiles a province-sector dataset spanning 2003–22, based on official statistics with key adjustments to ensure internal consistency. We then apply the standard accounting framework to estimate marginal products for each province-sector. Our findings reveal a substantial decline in the dispersion of marginal products across provinces and sectors, indicating improved resource allocation efficiency. Significant declines are also observed in the within-province dispersion of marginal products across sectors and the cross-province dispersion of marginal products in services, whereas the secondary industry exhibits the opposite trend. Finally, we construct a model incorporating non-homothetic preferences, CES aggregators of sectoral inputs, and inter-regional trade to quantitatively evaluate the implications of these changes for resource allocation efficiency. Changes in the dispersion of marginal products have played a significant role in driving aggregate TFP growth in the past. Addressing current allocation inefficiencies holds the potential to substantially enhance aggregate TFP growth in the future.

A Dual Accounting for the Rise of Service Sectors in China (with Guangyu Pei and Zheng Song). **Co-First Author.**

Abstract. China has been experiencing a rapid expansion of the service sector since the mid-2000s. This paper uses a dual accounting approach to investigate the underlying forces for the structural change across sectors and regions. We first use development accounting to back out region-sector TFP growth from regional and sectoral employment shares. We then use “the direct method” that aggregates Hsieh-Klenow statistics to the region-sector level and apply it to a large-scale firm data set. Development accounting and the direct method will deliver the same estimates if the sectoral demand structure is correctly specified for development accounting. We find three main results. First, both development accounting and the direct method reveal fast manufacturing and producer services TFP growth. The sectoral TFP growth estimated by the two methods is also highly correlated, in line with the internal consistency of the dual accounting approach. Second, we decompose sectoral TFP growth by the direct method into efficient sectoral TFP growth, changes in sectoral wedge and changes in within-industry misallocation. We find the manufacturing and producer services TFP growth to be primarily driven by efficient TFP growth but substantially slowed by the worsening of misallocation. Third, we infer misallocation from the dual accounting approach, which turns out to be highly correlated with the directly measured misallocation. The strong correlation not only reinforces the deteriorating misallocation by the direct method but also provides another validity check for our dual accounting approach. Holding within-industry misallocation constant would increase China's service employment share by 26 percentage points.

The Effects of Sectoral TFP on China's Structural Transformation and Growth (with Kaiming Guo). **First Author.**

Abstract. Since the 21st century, China has not only aligned with the Kuznets facts regarding structural transforma-

tion across the three broad sectors but has also experienced substantial upgrading within these sectors. Specifically, Advanced manufacturing and modern service industries have shown unique patterns compared to their traditional counterparts in terms of total factor productivity (TFP) improvement, capital deepening, output growth, and employment growth. The divergence identified within sectors in the above dimensions is often more pronounced than the intersectoral differences. While TFP improvement, especially its diverse performance across sectors, is acknowledged as a crucial driver of structural transformation, there remains a lack of comprehensive research on its concurrent impact on upgrading within sectors. Consequently, accurately assessing the differentiated effects of TFP improvement on economic growth remains challenging. To address this concern, we develop a multi-sector dynamic general equilibrium model that integrates structural transformation at both between and within sectors and thoroughly evaluates the impact of TFP improvement on China's structural transformation and economic growth. We find that from 2003 to 2020, China's structural transformation and economic growth were primarily driven by TFP improvement in advanced manufacturing and traditional services. Specifically, TFP improvement in advanced manufacturing contributed to an increase in its output and employment shares within the manufacturing sector by 8.37 and 8.78 percentage points, respectively, and enhanced the annual GDP growth rate by 1.95 percentage points. In comparison, TFP improvement in traditional services led to an increase in the output and employment shares of modern services within the service sector by 11.71 and 9.09 percentage points, respectively, and elevated the annual GDP growth rate by 1.61 percentage points. Although the overall impact of TFP improvement is slightly lower than that of capital deepening, future structure transformation and economic growth in China will increasingly rely on TFP improvement in the context of a gradually declining investment rate. Enhancing the driving role of TFP in advanced manufacturing and fully unleashing the development potential of TFP in modern services could be possible breakthrough directions for fostering high-quality economic progress.