BUILDING A MODERATELY PROSPEROUS SOCIETY IN ALL RESPECTS
– New-Type Industrialization*

Zhang Qizi
Institute of Industrial Economics (IIE), CASS, Beijing, China

Abstract: *After announcing the goal of building a moderately prosperous society in all respects by 2020, the Chinese leadership also called for a new path of industrialization, putting a premium on quality and new development concepts. Unlike traditional industrialization in the broad or narrow sense, new-type industrialization features synergy between primary, secondary, and tertiary industries, integration between traditional economy and the new economy, environmental protection, technology progress, and innovation. It represents an inclusive approach to industrial development. At the fundamental level, the success of China's new-type industrialization can be attributed to China's inclusive learning and innovations.*

Keywords: *building a moderately prosperous society, new-type industrialization, inclusive learning and innovation*
JEL classification code: O14; I32P
DOI: 1 0.19602/j .chinaeconomist.2020.01.03

1. Building a Moderately Prosperous Society in All Respects: New Requirements for Industrial Development

In a broad sense, industrialization has similar connotations with modernization. In addition to the rising share of the industrial sector in GDP and employment, industrialization also encompasses growth in per capita GDP, urbanization, and technology progress. In the narrow sense, industrialization only refers to growth in industrial output and share of industrial employment. In building a moderately prosperous society, China strives to industrialize in ways beyond the broad and narrow sense of industrialization.

When Comrade Deng Xiaoping put forward the goal of building a moderately prosperous society, he had per capita income in mind. In 1991, the National Bureau of Statistics (NBS) formed a task force together with personnel from 12 agencies, including planning and public finance departments, to come up with 16 indicators for a "moderately prosperous society." Not all of them are related to industrial development.

In 2002, the Report to the 16th CPC National Congress called for uplifting people's living standards

* Correspondence: Zhang Qizi, email: zhangqizi65@126.com
Acknowledgement: This paper is an outcome of the National Social Science Fund of China (NSSFC) Key Project "Study on the Adjustment and Impact of Global Value Chain in the Context of New Technology Revolution" (Grant No.: 19AJY013) and the Chinese Academy of Social Sciences (CASS) Key Discipline Development Project "Developmental Economics."

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

全面建成小康社会：新型工业化*

张其仔

中国社会科学院工业经济研究所

摘　要：中国在提出全面建设小康社会的目标后，对工业化也提出了新要求。全面建设小康社会所要求的工业化既不同于一般意义上的广义的工业化，也不同于一般意义上的狭义的工业化，而是一种新型工业化，是一种高质量的、体现新发展理念的工业化，其特点是，一二三产业协同发展、传统经济与新经济融合发展、资源环境友好、技术进步和创新贡献不断提高，是一种包容性的工业化。自中国提出全面建设小康社会目标以来，特别是党的十八大以来，中国的新型工业化取得了明显进展，其之所以能够成功成功，从根本上说是因为中国建立了一种包容性学习与创新机制。

关键词：全面建成小康社会；新型工业化；包容性学习与创新

JEL 分类号：O14; I32

一、全面建成小康社会对工业化提出的新要求

从一般意义上讲，广义的工业化是指现代化，既包括工业在GDP中所占比重提升，工业部门就业比重提升，也包括人均GDP、城市化水平提升以及技术进步。狭义的工业化仅指工业产值和就业比重的增加。全面建成小康社会中的工业化有其独特的含义，既非一般意义上的广义工业化，也非一般意义上的狭义工业化，而是具有新的要求。

邓小平同志在提出小康目标时，指的是人均收入水平。1991年国家统计局会同计划、财政等12个部门的研究人员组成课题组，提出了反映小康社会内涵的16个基本指标，这些指标中并没有工业化的指标。党的十六大报告提出的人民生活总体上达到小康水平时，包括城乡居民收入稳步增长；城乡市场繁荣、商品供应充裕，居民生活质量提高、衣食住用行都有较大改善；社会保障体系建设成效明显；“八七”扶贫攻坚计划基本完成四大内容。虽然这些内容没有直接包括工业化、城市化的内容，但是，没有工业化、城市化作为依托，这些目标都是不可能实现的。

党的十六大报告在宣布人民生活水平总体上达到小康的同时还指出，“现在达到的小康还是低水平的、

* 作者邮箱：张其仔，zhangqizi65@126.com

本文为社科基金重点项目“新技术革命背景下全球创新链的调整及其影响研究“（项目编号：19AJY013）、中国社会科学院重点学科建设项目“发展经济学建设项目”的阶段性成果。

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

to a moderately prosperous level, as reflected in:

- Steady growth in urban and rural household incomes;
- Market prosperity, sufficient commodity supply, higher quality of life, and significant improvements in clothing, food, housing, daily necessities, and transportation in both cities and the countryside;
- Significant progress in the development of the social protection system;
- Completion of the Seven-Year Priority Poverty Alleviation Program to lift 80 million people out of absolute poverty.

To achieve these targets, industrial and urban development is of vital significance.

While announcing that the Chinese people's living standards had generally reached the threshold for moderate prosperity, the Report to the 16th CPC National Congress in 2002 also stated that "the current level of prosperity is uneven and sporadic prosperity at a low level." Therefore, the report called for building a moderately prosperous society at a higher level and linking per capita GDP growth with industrial and urban development. The report identified structural and efficiency improvements as prerequisites for achieving the goal of doubling GDP by 2020 over the level of 2000. It stressed that development towards a moderately prosperous society must follow a "path of new-type industrialization."

The report defines new-type industrialization as "IT-driven industrialization featuring high technology content, good economic return, low resource consumption, subdued environmental pollution, and fully utilized human resources." "Fully utilized human resources" should be interpreted in the following ways: First, China has a large working population; second, China's labor competence is improving. These implications remind us that China's new-type industrialization cannot discard traditional industries. The large working-age population and improving competence require China's traditional industries to renovate and upgrade.

The Report to the 17th CPC National Congress in 2007 reviewed the achievements in building a moderately prosperous society since the 16th CPC National Congress in 2002. It announced the goal of doubling China's per capita GDP by 2020 over the level of 2000 by improving structure and efficiency, reducing energy intensity, and protecting the environment. The report also called for ramping up indigenous innovation, integrating IT application with industrialization, creating a modern industrial system, promoting the development of new-technology industries, and enhancing the synergy of primary, secondary, and tertiary industries as drivers of economic growth.

In 2012, the Report to the 18th CPC National Congress vowed to complete the building of a moderately prosperous society in all respects by 2020. It gave unprecedented prominence to innovation, calling for an innovation-driven development strategy. It identified the strategic adjustment of the economic structure as a key direction in transforming the pattern of economic development. Specifically, it called for policies to support the real economy, develop strategic emerging industries (SEIs), advanced manufacturing, and modern services, upgrade traditional industries, and improve the layout of infrastructure and essential industries. Other priorities include the development of next-generation information infrastructure and the modern IT industry system, the broad application of information and internet technologies, among others.

In 2017, the Report to the 19th CPC National Congress identified the period from 2017 to 2020 as the decisive stage for building a moderately prosperous society in all respects. In line with the requirements of the 16th, 17th, and 18th CPC National Congresses, we must accomplish the goal of building a moderately prosperous society in all respects in a way that wins people's recognition and stands the test of history. According to the Report to the 19th CPC National Congress, China's economy has transitioned from rapid growth to a new stage of high-quality growth, characterized by the principal contradiction between unbalanced and inadequate development and the people's ever-growing needs for a better life.

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

不全面的、发展很不平衡的小康”。为此，党的十六大报告提出要建设更高水平的小康社会，并把实现人均GDP提高与工业化、城市化等挂钩。报告明确指出实现2020年国内生产总值比2000年翻两番的目标必须建立在优化结构和提高效益的基础上，强调全面建设小康社会必须走“新型工业化道路”。何为“新型工业化道路”？党的十六大报告对此也进行了明确阐述，即新型工业化是指以信息化带动工业化，以工业化促进信息化，科技含量高、经济效益好、资源消耗低、环境污染少、人力资源优势得到充分发挥。这里提到的人力资源优势得到充分发挥应包括了两个方面的含义，一是中国劳动人口的规模不断扩大，二是中国劳动力的素质不断提高。这两个方面的含义表明新型工业化不是一条完全扔掉传统产业的工业化。巨大的劳动人口规模和不断提高的劳动力素质对中国传统产业发展及改造升级提出了要求，也是支撑中国传统产业发展及改造的重要基础。

党的十七大报告对党的十六大以来我国在全面建设小康社会上取得的成就进行了总结，并再次提出要在优化结构、提高效益、降低消耗、保护环境的基础上实现人均国内生产总值到2020年比2000年翻两番的目标。报告同时强调要显著提高自主创新能力，大力推进信息化与工业化融合，建设现代产业体系，提高新技术产业发展水平，促进经济增长由主要依靠第二产业带动向依靠第一、第二、第三产业协同带动的转变。

党的十八大报告明确提出了到2020年全面建成小康社会的目标，把创新的作用提高到一个新高度，明确提出要实施创新驱动发展战略。将推进经济结构战略性调整作为加快转变经济发展方式的主攻方向，主要内容包括：实行更加有利于实体经济发展的政策措施，推动战略性新兴产业、先进制造业健康发展；加快传统产业转型升级，推动服务业特别是现代服务业发展壮大，合理布局建设基础设施和基础产业；发展下一代信息基础设施和现代信息技术产业体系，推进信息网络技术广泛运用等。

党的十九报告提出，从十九大到2020年这个时期是全面建成小康社会决胜期，要按照十六大、十七大、十八大提出的全面建成小康社会各项要求，使全面建成小康社会得到人民认可、经得起历史检验。党的十九大报告明确了我国经济发展阶段与基本矛盾已经发生的变化，即我国经济已由高速增长阶段转向高质量发展阶段，基本矛盾已转变成为人民日益增长的美好生活需要和不平衡不充分的发展之间的矛盾。党的十九大报告对经济发展阶段和基本矛盾的阐释揭示了全面建设小康社会进程中我国走新型工业化道路的必要性、必然性和紧迫性。报告明确提出要建设现代化经济体系。在建设现代化经济体系的过程中，必须坚持质量第一、效益优先，以供给侧结构性改革为主线，推动经济发展质量变革、效率变革、动力变革，提高全要素生产率，着力加快建设实体经济、科技创新、现代金融、人力资源协同发展的产业体系。全要素生产率首次出现在了党的文件中。

综合十六大以来，十七大、十八大和十九大等报告中有关经济发展和工业化的内容可以得出结论——工业化构成了全面建成小康社会的重要内容，而且全面建成小康社会对工业化提出了新要求。总体要求是要走一条中国特色的新型工业化之路，一条贯彻和落实新发展理念的工业化之路，其主要特色和要求体现为以下几个方面。

（1）全面建成小康社会所要求的工业化是一个结构优化的工业化。结构变化是衡量工业化水平高低的一个重要标准，传统的工业化标准，就是农业比重的下降，第二、第三产业比重的上升。长期以来，我国工业化的

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

Interpretations on the new development stage and principal contradiction in the Report to the 19th CPC National Congress reveal the necessity, inevitability, and urgency for China to pursue a new path of industrialization. The report unequivocally calls for modernizing our economic system, putting a premium on quality and efficiency. "Through supply-side structural reforms, we should transform the quality, efficiency, and momentum of our economic development, increase total factor productivity (TFP), and build an industrial system that promotes the synergy of the real economy, innovation, modern finance, and human resources. For the first time, TFP appeared in the Party's official document.

From the reports to the 16th, 17th, 18th and 19th CPC National Congresses from 2002 to 2017, we may draw the following conclusion regarding China's economic and industrial development: As an essential part of building a moderately prosperous society in all respects, China's industrial development must follow a new path underpinned by new development concepts. Specifically:

(1) In building a moderately prosperous society in all respects, China must improve its industrial structure in keeping pace with industrial development. Traditional industrialization is manifested in the falling share of agriculture and the rising share of secondary and tertiary industries. Over the years, China has persistently expanded its secondary and tertiary industries, particularly secondary industry, as manifested in technology and knowledge-based sectors crowding out resource- and labor-intensive ones. In building a moderately prosperous society, however, China should also increase synergy between primary, secondary, and tertiary industries. Industrialization does not mean reliance on the industrial or service sector at the expense of agriculture.

(2) In building a moderately prosperous society in all respects, China must pursue innovation-driven industrialization. As a developing country, China has followed a factor-driven path of industrial development after reform and opening up in 1978. Compared with factors like capital and labor, innovation played a less prominent role in supporting industrial growth, and TFP remained low. This phenomenon is not unique to China, but common to all developing countries in catching up with developed countries. As the economy advances to a new level, a country may experience rising factor costs, particularly labor and land costs, and diminishing late-mover advantage as its technology approaches the frontier level. As a result, the spillover effects of foreign technology dry up, and return on factor-driven growth starts to fall. At this moment, groundbreaking innovations, particularly indigenous innovations, become essential to jumpstarting the economy.

(3) In building a moderately prosperous society in all respects, China must integrate the new economy with the old economy. The goal of building a moderately prosperous society was adopted when a new round of technological and industrial revolution was sweeping across the world. Back then, China was yet to complete industrialization. In the context of new technological and industrial revolutions, China could not repeat each step from the first to the fourth industrial revolution as advanced economies did over a long course of history. Without leapfrogging, China would not be able to achieve the goal of building a moderately prosperous society in all respects by 2020 - a milestone in its long journey of development. Economic development has to follow its laws. China's industrial development cannot discard traditional industries and rely on new industries alone. Instead, it should upgrade traditional industries while expanding new industries, and explore a new path of industrialization where old and new industries reinforce each other.

(4) In building a moderately prosperous society, China must pursue resource- and environmentally-friendly industrialization. When investigating the relationship between economic development and environmental protection, economists often cite the Kuznets curve, i.e. the inverted U-shaped curve. The idea is that economic development initially worsens the environment until a certain point where the country reaches a specific income level. Then, the environment will start to improve. Judging by the path of developed countries, China is yet to cross the tip of the Kuznets curve and reverse environmental degradation. Over the past decades, China has achieved breakneck industrial development at the expense of natural resources and the environment. In building a moderately prosperous society, China must

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

推进也比较重视第二、第三产业比重的提升，特别是第二产业比重的提升，在各个产业内部表现为技术含量、知识含量较高的产业比重提升，资源密集、劳动力密集的产业比重下降。这是工业化的一般性要求，全面建成小康社会所要求的工业化当然也不能脱离开这个一般性要求，但并不仅限于此。除这个要求外，全面建成小康社会所要求的结构优化还包括了三次产业协同发展的要求。全面建成小康社会所要求的工业化是必须是第一、第二、第三产业协同推动的工业化，而不能是一条牺牲农业，主要靠工业或主要靠服务业推动的工业化。

（2）全面建成小康社会所要求的工业化是一个创新驱动型的工业化。中国是一个发展中国家，改革开放后的一段时期，中国的工业化是要素驱动型的，工业增长主要靠资本和劳动以及其他要素的大规模投入拉动。创新虽然起到了一定作用，但相比要素投入对工业增长的拉动作用较小，全要素生产率总体水平不高。这种现象并非中国所独有，而是发展中国家在追赶发达国家过程中的一种常见现象。但随着经济发展阶段的演进，经济规模的扩大，要素的成本，特别是劳动力成本、土地成本不断提高，后发技术优势随着与前沿技术的趋近而缩小，可引进或吸收的外来技术种类趋于减少，以要素大规模投入拉动工业增长的回报趋于下降。此时，要进一步促进经济增长，就需要大力提升社会的创新能力，提升创新，特别是自主创新对经济增长的贡献。

（3）全面建成小康社会所要求的工业化是一个新旧经济融合发展的工业化。中国提出全面建设小康社会的时期正值全球处于新一轮技术和产业革命的时期。从传统意义上而言，中国在提出全面建设小康社会的时期工业化进程虽然还没有完成，但在新的技术和产业革命的大格局下，中国的工业化不可能不顾新的技术和产业变革要求仍完全依照发达国家的顺序按部就班地从第一次工业革命进入到第二次工业革命，从第二次工业革命进入到第三次工业革命，从第三次工业革命再进入到第四次工业革命等等。如果这样，中国全面建成小康社会的目标是难以实现的，全面建成小康社会这样一个阶段也就不可能起到承上启下的作用。经济发展有其自身的规律，中国的工业化同样也不可能是完全抛弃传统产业仅依靠新产业来推动的工业化，而是要走一条传统产业改造不断升级、新产业不断扩张、新旧产业不断融合发展的工业化道路。

（4）全面建成小康社会所要求的工业化是一个资源环境友好型的工业化。经济学家在研究经济发展与资源环境保护的关系时曾经提出过库兹涅兹曲线，也就是倒U型曲线，意思是指在经济发展水平比较低的时候，资源环境状况是比较好的。随着经济发展水平的提升，资源环境状况会恶化，但并不会持续恶化下去。当经济发展到一定水平时，资源环境状况就会逐渐得到改善。遵循这个逻辑，按发达国家所走过的路径估计，我国仍没有越过库兹涅兹曲线的顶部，资源环境状况还只能继续恶化。一段时期以来，我国的工业化确实付出了较大的资源环境代价，但全面建成小康社会则要求改变这种状况。全面建成小康社会的工业化必须是体现绿色发展理念、降低资源消耗、保护环境的工业化，这既是满足人民对美好生活向往的需要，也是保证工业化可持续性的需要。

二、全面建成小康社会进程中的中国工业化进展

（一）产业结构优化

不断优化产业结构是全面建成小康社会的基本要求。2002年以来，中国产业结构总体趋势是第一产业的

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

embrace a new type of industrialization based on green development, efficient use of resources, and better protection of the environment. This approach not only addresses people's need for a better life, but ensures sustainable industrial development as well.

2. China's Industrial Progress in the Context of Building a Moderately Prosperous Society in All Respects

2.1 Improving Industrial Structure

In building a moderately prosperous society, China has persistently improved its industrial structure, as reflected in the rising share of secondary and tertiary industries and the falling share of primary industry in GDP since 2002 (Figure 1). The tertiary industry created more jobs in 2011 and value-added as a share in GDP in 2012 than did the secondary industry for the first time. The tertiary industry contributed an additional ten percentage points to China's economic growth in 2012 over the level of 2000 and an additional 14 percentage points in 2018 over the level of 2012 (Figure 2).

Since the 18th CPC National Congress in 2012, China's industrial structure has been improving, as manifested in the rising share of technology- and knowledge-intensive industries. In 2018, high-tech and equipment manufacturing industries made up 13.9% and 32.9% of value-added of industries, respectively, above a designated scale, boosting technology- and knowledge-intensive production capacity (Department of Industrial Statistics of NBS, 2019).

The question is: Did industrial restructuring enhance China's industrial competitiveness? To answer this question, we must examine China's international comparative advantage. In 2018, China's global market share of finished goods exceeded 17%, followed by primary goods (3%) and the tertiary industry (4.5%). Measured by revealed comparative advantage (RCA), China's

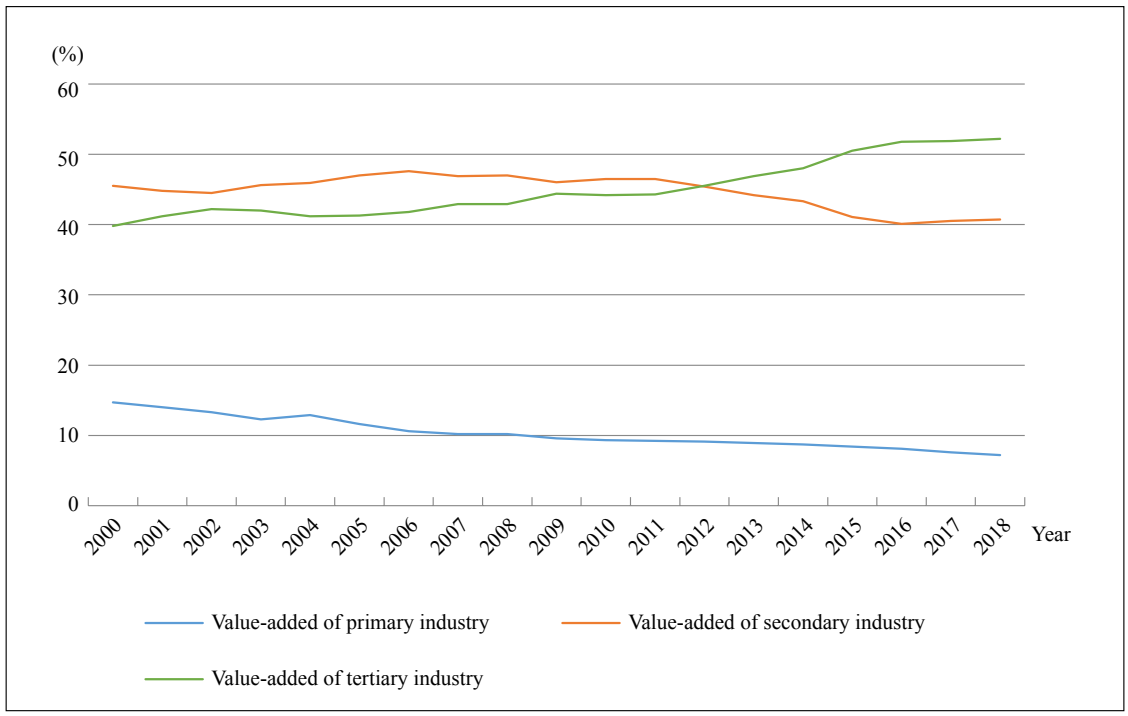

Figure 1: Composition of Primary, Secondary and Tertiary Industries

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

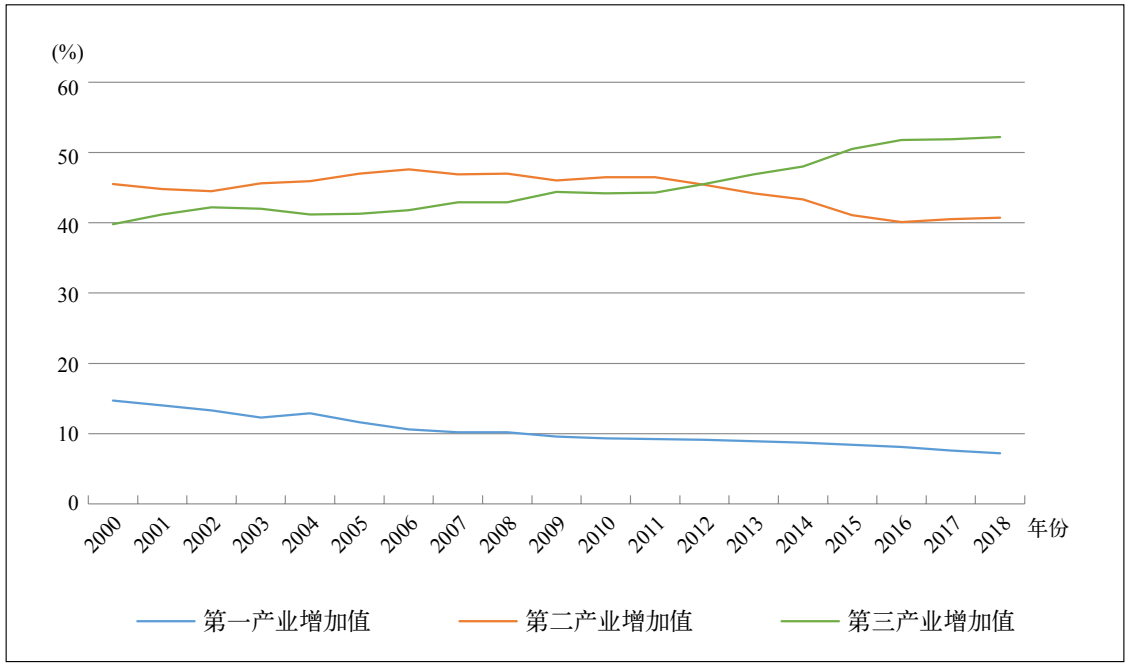

图 1:三次产业的构成

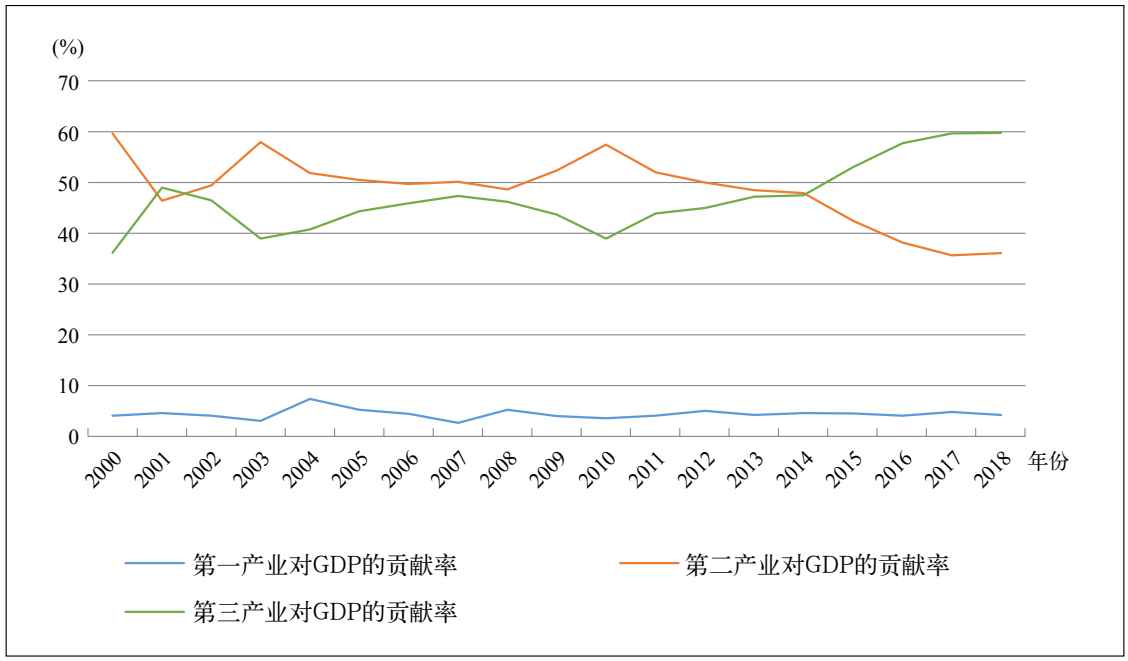

图 2:三次产业对GDP的贡献率

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

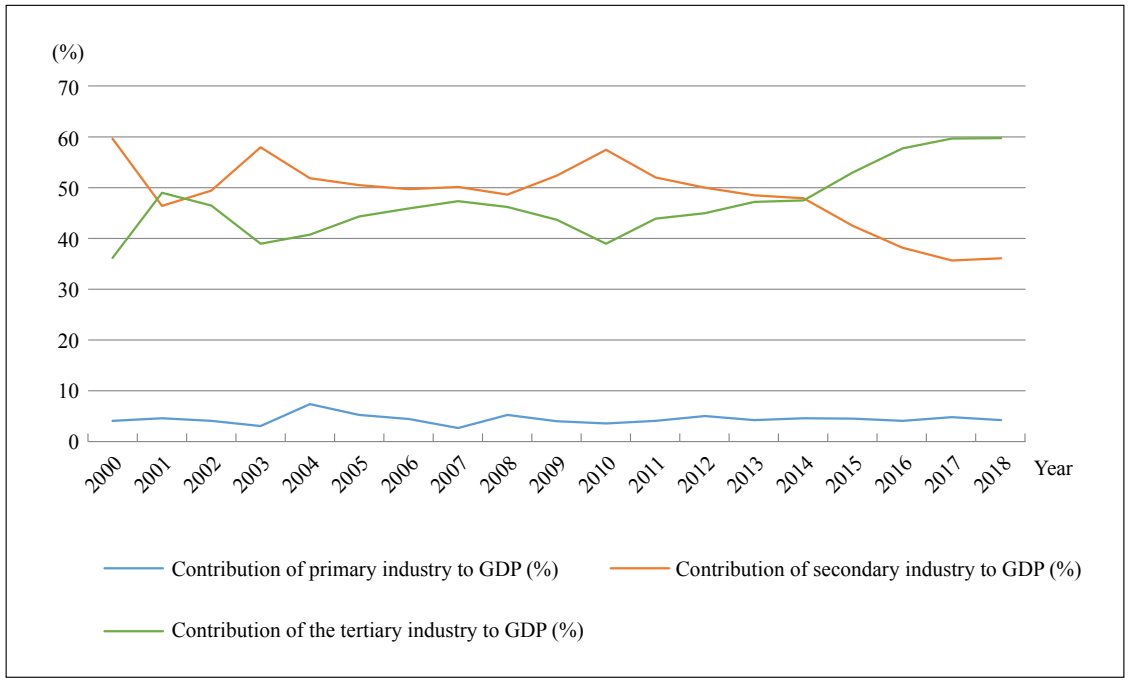

Figure 2: Contribution of Primary, Secondary and Tertiary Industries to GDP

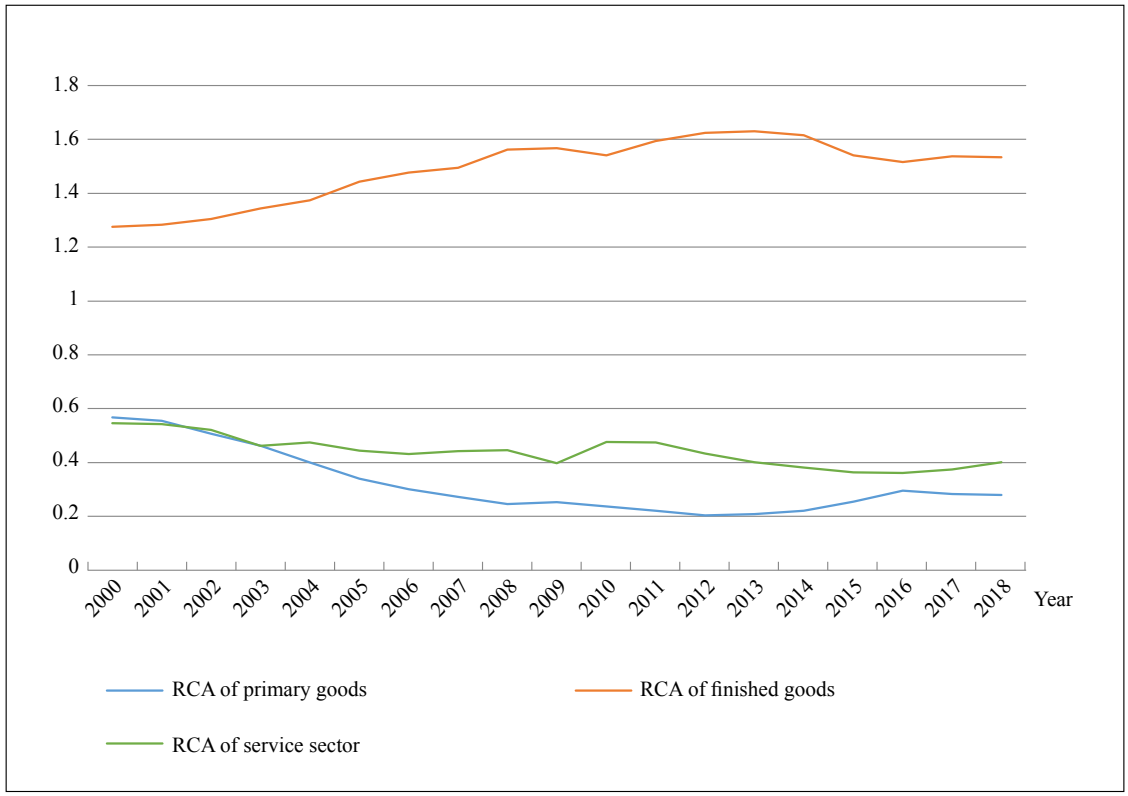

Figure 3: Revealed Comparative Advantages of Primary, Secondary and Tertiary Industries

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

比重呈下降趋势，第二、第三产业加起来占GDP的比重呈不断上升的趋势（见图1）。从产业结构变迁考察的中国经济增长动力也发生了新的变化。中国经济增长较长一段时间内主要靠工业拉动的格局也在发生变化。2002年以来的总体趋势是三次产业对经济增长的拉动作用越来越明显。2011年第三产业就业占总就业的比重以及2012年第三产业的增加值占GDP的比重首次超过第二产业。2012年与2000年相比，第三产业对经济增长的贡献率提高了约10个百分点。2018年与2012年相比，第三产业对经济增长的贡献率提升更快，提高了14个百分点以上（见图2）。产业结构优化从产业内部而言会表现为技术含量、知识含量较高的产业比重上升，资源密集、劳动力密集的产业比重下降。党的十八大以来，我国工业经济内部结构不断优化，2018年，高技术制造业、装备制造业增加值占规模以上工业增加值比重分别为13.9%和32.9%，技术含量、知识含量较高的主要产品发展势头强劲（国家统计局工业司，2019）。

产业结构的上述演进，其基础是否坚实？对此，可以把产业结构优化放在开放型经济背景下考察，就是从比较优势的变化加以评估。与从产业结构以及产业对经济增长拉动作用角度对结构优化进行评估相比，从这个角度进行的评估，因为立足国际竞争背景，更可反映各个产业发展的基础是否坚实。从全球市场占有率看，我国2018年不同产业占全球市场的比重制成品超过17%，初级产品约占3%，第三产业约占4.5%。以显示性比较优势指数衡量，我国第二产业的竞争力较强，第三产业比较优势一直较弱，2015年之后第三产业比较优势走弱的势头有所扭转，其国际竞争力开始呈现逐步走强的苗头（见图3）。如果把制成品分成低端和中高端

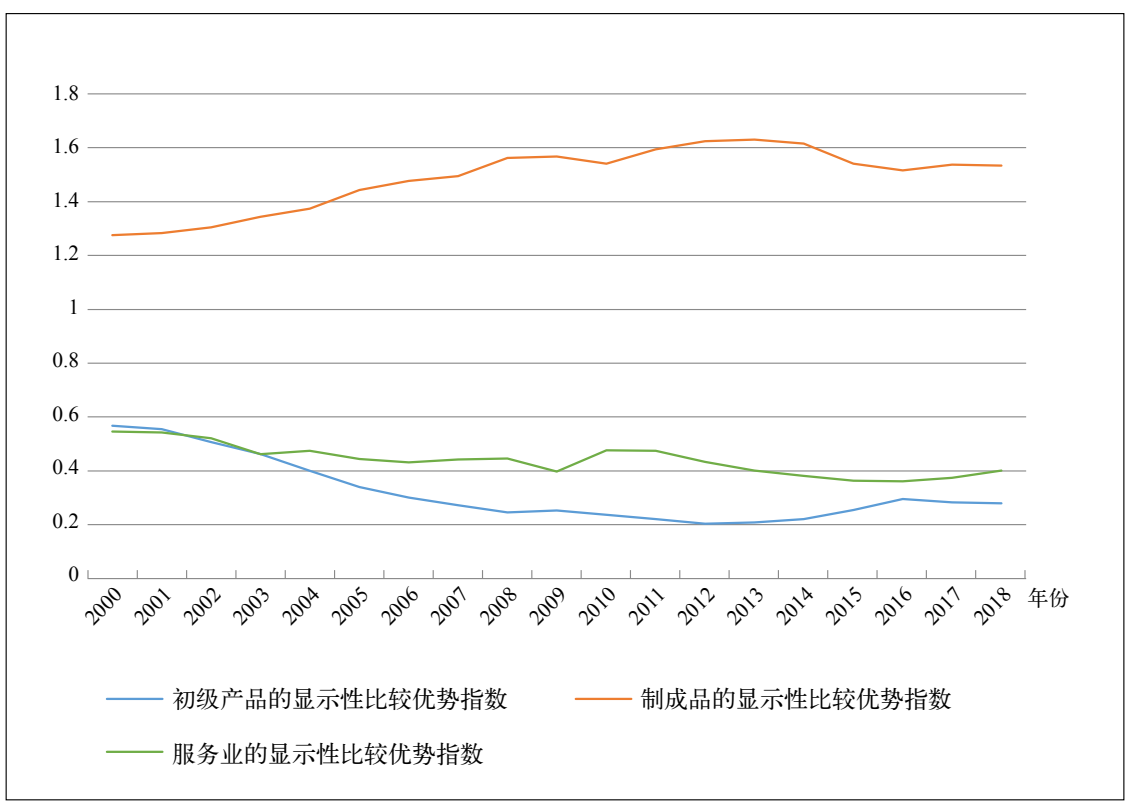

图 3：三次产业显示性比较优势指数的变化

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

secondary industry has been more competitive, and the comparative advantage of the tertiary industry remained weak until 2015 (Figure 3).

In 2018, China supplied 16% of low-end finished goods and 15% of medium and high-end finished products to the global market. Measured by revealed comparative advantage (RCA), its low-end finished goods have been more competitive than medium and high-end finished goods. There is an upward trend in China's market share and RCA for medium and high-end finished goods. A similar trend has also appeared for knowledge and technology-intensive services, including financial, IPR, and information services.

2.2 Rising Innovation Capacity

The lack of innovation, particularly original innovation, has been a drawback of China's economic development. In building a moderately prosperous society in all respects, China strives to promote innovation as a driver of industrial development. In 2018, China registered the fastest growth of innovation index since 2005, the first year with available data, which exceeded 200 for the first time to reach 212.0. In 2018, China's full-time equivalent (FTE) of R&D personnel reached 4.38 million person-years, the highest in the world. In the same year, China's R&D spending amounted to 1,967.79 billion yuan, the second-highest in the world, and the ratio of R&D spending to GDP stood at 2.19%, exceeding the average level of 2.13% for 15 EU states in 2017 (NBS, 2019).

In 2018, the top three international science paper indexes respectively accepted 418,000, 266,000, and 59,000 science papers from China, ranking the second, the first, and the second in the world. According to the Essential Science Indicators (ESI), China ranks second in the world in terms of science paper citations (Department of Social, Science and Technology, and Cultural Statistics, NBS, 2019).

Growing R&D investments by the Chinese government and enterprises have led to a spike in China's patent filings and authorizations, which totaled 4.32 million and 2.45 million in 2018 respectively. In 2018, China's invention patent applications amounted to 1.54 million, or 35.7% of the world's total patent applications. According to the World Intellectual Property Organization (WIPO), the Chinese mainland has recorded a rapid growth of patent applications and patent authorizations since 2000. In 2017, 13.72 million valid patent applications were filed globally, including 2.98 million in the United States, 2.17 million in China, and about 2 million in Japan. More than 40 million trademarks were registered globally, including 14.9 million in China, 2.2 million in the United States, and 1.9 million in Japan. China accounted for 32% of the world's 3.75 million valid design patents for industrial goods and over 90% of valid new-type patents filed in 2017.

China ranks second in terms of patents per unit of GDP, followed by Japan, and South Korea tops the list. Numerous innovative firms have emerged in China. Among them, ZTE and Huawei are among world leaders in terms of patent filings (WIPO, 2018). With big strides in original innovation, China is increasingly catching up with and overtaking the most innovative countries.

2.3 Integration between Traditional Economy and New Economy

The world is experiencing a profound technological revolution. In building a moderately prosperous society in all respects, China must increase the share of the new economy based on new technology.

The concept of the new economy first appeared in the 1990s, and initially referred to a new form of IT-based economy (Zhang, 2019). Today, the new economy refers to the economy based on the Fourth Industrial Revolution, which is spearheaded by the internet of things, digitalization, artificial intelligence, and green development (Zhang, 2018). Based on the index method, the Study Group on China's Industrial Competitiveness at the Institute of Industrial Economics (IIE), the Chinese Academy of Social Sciences (CASS) measured the new economy competitiveness of various countries. The findings of this study will reveal the trend and international position of China's new economy.

In 2018, the Study Group created the system of new economy indicators, which consist of six

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

两大类，2018年低端制成品的全球市场占有率约为16%，中高端制成品的市场占有率约为15%。也就是说，以显示性比较优势指数测度的竞争力，低端制成品高于中高端制成品。但从趋势上看，中高端制成品的市场占有率和显示性比较优势指数都开始呈现上升势头。服务业内部的知识或技术密集型服务，如金融服务、知识产权服务、信息服务等也开始出现同样的势头。

（二）创新能力提升

创新能力，特别是原始创新能力一直是中国经济发展的短板。全面建成小康社会要求新型工业化必须是创新能力不断增强的工业化，实施创新驱动战略的工业化，创新能力不断提升。根据国家统计局发布的2018年中国创新指数测算结果，2018年中国创新指数首次突破200，达到212.0，增幅为2005年开始测算以来的最高；2018年，我国R&D人员全时当量达438.1万人年，全球第一；全年R&D经费投入达19677.9亿元，位居世界第二；投入强度（R&D经费投入与GDP之比）为2.19%，超过2017年欧盟15国2.13%的平均水平（国家统计局，2019）。2018年，国外三大检索工具分别收录我国科研论文41.8万篇、26.6万篇和5.9万篇，数量分别位居世界第二、第一和第二位。根据基本科学指标数据库（ESI）论文被引用情况，2018年我国科学论文被引用次数排名世界第二位（国家统计局社科文司，2019）。

随着中国政府与企业研发投入的加大，中国的专利申请量和专利授权量大幅度增加，2018年分别为432.3万件和244.8万件，其中发明专利申请数达154.2万件，占专利申请数比重为35.7%。根据世界知识产权组织（WIPO）的数据，中国大陆地区的专利申请量和授权量自2000年以来快速增长。2017年，全球有效专利申请数1372万件，其中美国约298万件，中国217万件，日本约200万件；全球4000多万件有效商标专利注册中，中国约1490万件，美国220万件，日本约190万件；有效工业品外观设计全球达375万件，中国占32%，而在有效新型中的比重，中国超过了90%。以单位国内生产总值申请的专利数评价，中国居第二位，第一位是韩国，第三位是日本。中国涌现出一批具有较强创新能力的企业，中兴、华为的专利申请量在全球位居前列（世界知识产权组织，2018）。中国创新开始从追赶型阶段向追赶型、并跑型、领跑型等多种形式并存阶段迈进，原始创新能力有所提升。

（三）传统经济与新经济融合发展

中国全面建设小康社会的进程中，全球正面临着深刻的技术变革。适应新技术变革的要求，不断提升基于新技术变革成长起来的新经济发展比重，是全面建成小康社会对工业化提出的新要求。

新经济这个概念产生于20世纪90年代，当时是指以计算机、信息技术为支撑的一种经济形态（张其仔，2019）。进入第四次工业革命之后的新经济则是一种以第四次工业革命为支撑的经济形态。何为第四次工业革命？学界对此有大量解释。综合起来，第四次工业革命是一次聚合了网络化、数字化、智能化、绿色化四大趋势的突破式技术创新（张其仔，2018）。为了把握中国新经济发展的走势以及在国际上的位置，中国社会科学院工业经济研究所“中国产业竞争力研究”课题组采用指数法对各国的新经济竞争力进行了测度。新经济指数的指标体系由课题组于2018年构建，包含6类一级指标和38个二级指标。表1显示的是典型国家2015–

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

Table 1: Country Rankings for New Economy Development

New economy indicators		Digitalization		Internet of things		Artificial intelligence	
US	65.4	US	14.0	US	12.0	US	16.3
China	30.6	China	3.6	Switzerland	7.7	China	7.4
Japan	29.0	Germany	2.3	Denmark	7.6	Japan	3.3
Switzerland	27.3	Japan	1.4	UK	7.4	South Korea	1.7
Germany	27.0	South Korea	1.1	Netherlands	7.4	Germany	1.7
Singapore	26.5	Russia	0.7	Austria	7.2	Switzerland	0.8
South Korea	25.4	India	0.7	South Korea	7.2	Singapore	0.7
Netherlands	23.8	France	0.5	Sweden	7.1	France	0.5
Sweden	23.87	Brazil	0.5	Norway	7.0	UK	0.4
Denmark	23.3	Belgium	0.3	Japan	6.9	Netherlands	0.4
France	22.6	Israel	0.3	China (16)	6.9	Sweden	0.3

Source: "Study Group on China's Industrial Competitiveness." Refer to Zhang Qizi and Zhang Jianying for detailed calculations: "Estimation of New Economy Competitiveness and International Comparison," *Industrial Blue Paper: Report on China's Industrial Competitiveness (2019)*, Zhang Qizi, Social Science Literature Press, 2019.

categories of primary indicators and 38 secondary indicators. Table 1 presents the arithmetic averages of the new economy indicators for typical countries from 2015 to 2017. As can be seen from Table 1, the United States boasts an absolute advantage in new economy competitiveness, and China is in the second tier. China leads developing countries, and even some developed countries, in the three typical areas of the new economy, i.e. digitalization, the internet of things, and artificial intelligence. China's scores far outperform its per capita GDP rankings, particularly in the two areas of digitalization and artificial intelligence (see Table 1). With rapid development in the digital economy, platform economy, cloud computing, internet of things, and artificial intelligence, China has seen an emergence of numerous competitive firms in critical areas.

According to Compass Intelligence, among the 24 top AI chipmakers in the world, six are Chinese (Deng, 2019). In 2018, China's digital economy reached 4.7 trillion US dollars, next only to the United States (Wang, 2019). Aliyun, a subsidiary of Alibaba Group, ranks among the top five companies in the field of cloud computing and the first in terms of market share in the Asia Pacific (Hu, 2019). Among the world's top 20 IoT firms, six are Chinese, next only to the United States (Guo, 2019). Among the world's top 10 platform companies by market cap, two are Chinese (Yuan, 2019).

China boasts significant competitiveness in traditional industries, especially manufacturing. When it comes to the new economy, the United States still has the upper hand, but China is ahead of many other countries as well. By applying the elements of the new economy to traditional industries, China may sustain economic growth and shift growth drivers. Since the 18th CPC National Congress in 2012, China has enacted a host of policies to integrate the new economy with the traditional economy and expedite "internet+" and "smart+" applications with favorable results.

By September 2018, the penetration of digital R&D design instruments and numeric control of critical processes reached 67.8% and 48.5%, respectively, in China (MIIT). By June 2018, 33.7%, 24.7%, and 7.6% of Chinese companies had adopted internet-based collaboration, service-based manufacturing,

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

表 1:中国新经济发展在全球的地位

新经济指数		数字化		网络化		智能化	
美国	65.4	美国	14.0	美国	12.0	美国	16.3
中国	30.6	中国	3.6	瑞士	7.7	中国	7.4
日本	29.0	德国	2.3	丹麦	7.6	日本	3.3
瑞士	27.3	日本	1.4	英国	7.4	韩国	1.7
德国	27.0	韩国	1.1	荷兰	7.4	德国	1.7
新加坡	26.5	俄罗斯	0.7	奥地利	7.2	瑞士	0.8
韩国	25.4	印度	0.7	韩国	7.2	新加坡	0.7
荷兰	23.8	法国	0.5	瑞典	7.1	法国	0.5
瑞典	23.87	巴西	0.5	挪威	7.0	英国	0.4
丹麦	23.3	比利时	0.3	日本	6.9	荷兰	0.4
法国	22.6	以色列	0.3	中国(16)	6.9	瑞典	0.3

资料来源:“中国产业竞争力研究”课题组,详细计算参见张其仔,张建英.新经济竞争力的测算与国际比较[A].张其仔主编.产业蓝皮书:中国产业竞争力报告(2019)No.8[M].北京.社科文献出版社,2019.

2017三年的新经济指数算术平均值。如表1所示,美国的新经济竞争力处于全球绝对优势地位,中国的新经济发展水平处于全球第二阵营。在代表新经济发展水平的三大典型领域——数字化、网络化、智能化当中,中国在发展中国家都处于领先地位,有的领域甚至领先于一些发达国家,远远高于中国人均GDP在全球的排位。而在这三大领域中,数字化、智能化表现尤为突出,数字经济、平台经济、云计算、物联网、人工智能发展迅速,一些关键领域涌现出了一批很有竞争力的企业。Compass Intelligence发布的全球前24家AI芯片企业中,中国有6家公司入围(邓洲,2019);2018年中国的数字经济规模达到4.7万亿美元,仅次于美国(王磊,2019);在云计算服务领域,阿里云跻身世界前五,而在亚太市场的份额居首位(胡雨朦,2019);排名前20家物联网企业中,中国有6家入围,仅次于美国(郭朝先,2019);全球上市公司市值排名前十的平台企业有7家,中国占据2家(袁惊柱,2019)。

中国的传统产业,特别是传统制造业的国际竞争优势是十分明显的。中国的新经济与美国相比虽然仍有差距,但相比很多国家同样具有领先优势。将新的经济要素注入到传统产业中,推动传统产业与新经济融合发展,有助于保持稳定的经济增长和新旧动能的平稳转换。党的十八大以来,中国出台了一系列加快新经济与传统经济融合发展的政策,推动互联网+、智能+等,传统经济与新经济融合发展的势头强劲。据国家统计局引用工信部材料:截至2018年9月,企业数字化研发设计工具普及率和关键工序数控化率分别达到67.8%和48.5%;截至2018年6月,开展网络化协同、服务型制造、个性化定制的企业比例分别达33.7%、24.7%、7.6%,石油、石化、钢铁、家电、服装、机械、能源等行业的工业互联网应用成效明显,具有一定行业和区域影响力的工业互联网平台总数超过50家,重点平台平均连接的设备数量达到59万台(国家统计局工业

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

Table 2: China's Pollution Abatement Investments (in 100 million yuan)

	2000	2002	2007	2012	2017
Total pollution abatement	1,014.9	1,367.2	3,387.3	8,253.4	9,538.9
Urban environmental infrastructure	515.5	789.1	1,467.5	5,062.6	6,085.7
Urban fuel gas	70.9	88.4	160.1	551.8	566.6
Urban centralized heating	67.8	121.4	230.0	798.0	778.3
Urban water drainage	149.3	275.0	410.0	934.0	1,727.5
Urban landscaping	143.2	239.5	525.6	2,380.0	2,390.2
Industrial pollution abatement	2,347,894.7	1,883,663.0	5,523,909.0	5,004,573.0	6,815,345.0

Source: NBS.

and customization systems. Significant progress has been made in applying industrial internet in sectors like petroleum, petrochemicals, iron and steel, home appliances, apparel, machinery, and energy. There are over 50 influential Chinese industrial internet platforms with key platforms connected to an average of 590,000 devices (Department of Industrial Statistics, NBS, 2019).

2.4 Environmental Performance

In building a moderately prosperous society in all respects, China cannot industrialize at the expense of the environment or sustainability. China must pursue environmentally friendly industrialization and green development.

The concept of environmental protection, introduced after the founding of the People's Republic of China in 1949, officially entered into China's policy discourse in the 1970s. In 2012, the 18th CPC National Congress identified ecological civilization as a pillar of the "five-pronged strategy," giving unprecedented importance to environmental protection. Rapid growth in environmental protection investments (see Table 2) has led to significant improvements in environmental quality and energy efficiency.

In 2018, 121 of 338 cities at or above prefectural level in China met air quality targets, accounting for 35.8%; 338 cities reported an average of 79.3% of good air quality days with an annual mean concentration of inhalable particles (PM10) reaching 71 micrograms/m^3. In 2018, China's energy consumption elasticity coefficient was 0.50, and CO_2 emissions per unit of GDP dropped by 45.8% over 2005, accomplishing the goal of reducing CO_2 emissions per unit of GDP by 40% to 45% ahead of the target year of 2020 (NBS Energy Department, 2019).

3. New-Type Industrialization: Chinese Experience

China's economic miracle since 1978 is rooted in the success of its industrial development. Over the years, Chinese academics have attempted to explain China's economic miracle from various perspectives, such as demographic dividend, the role of government, and the process of industrial development. While such explanations make some sense, they are all subject to certain limitations and do not coincide with the theoretical explanations offered by Western academics. At the fundamental

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

表 2:中国的环境污染治理投资

年份	2000	2002	2007	2012	2017
环境污染治理投资总额(亿元)	1014.9	1367.2	3387.3	8253.4	9538.9
城市环境基础设施建设投资额(亿元)	515.5	789.1	1467.5	5062.6	6085.7
城市燃气建设投资额(亿元)	70.9	88.4	160.1	551.8	566.6
城市集中供热建投资额(亿元)	67.8	121.4	230.0	798.0	778.3
城市排水建设投资额(亿元)	149.3	275.0	410.0	934.0	1727.5
城市园林绿化建设投资额(亿元)	143.2	239.5	525.6	2380.0	2390.2
工业污染源治理投资(万元)	2347894.7	1883663.0	5523909.0	5004573.0	6815345.0

资料来源:国家统计局。

司,2019)。

(四)资源环境友好

全面建成小康社会要求的工业化不是以牺牲巨大资源环境为代价的工业化,也不是不可持续的工业化,而是资源环境友好型的工业化,是走绿色发展之路的工业化。

我国的环境保护从中华人民共和国成立之后开始孕育,20世纪70年代正式拉开帷幕。党的十八大把生态文明纳入到"五位一体"总体布局中,资源环境保护受到前所未有的重视,环境保护投资增长很快(见表2),环境质量得到极大改善,资源能源利用效率大幅度提升。2018年,全国338个地级及以上城市中,有121个城市环境空气质量达标,占35.8%,338个城市的平均优良天数比例为79.3%,可吸入颗粒物(PM10)年平均浓度为71微克/立方米。2018年我国能源消费弹性系数为0.50,单位GDP二氧化碳排放较2005年降低45.8%,提前完成2020年单位GDP二氧化碳排放降低40%~45%的目标(国家统计局能源司,2019)。

三、中国新型工业化道路成功的经验

改革开放以来,中国的经济发展取得了巨大成功。这种成功,也是中国工业化道路的成功。所以,解释了中国经济奇迹,也就解释了中国新型工业化为什么成功。中国学术界已从不同的角度对中国的经济奇迹进行了解释,包括人口红利的角度、政府作用的角度、工业化道路顺序选择的角度等。这些解释都有一定的道理,但也都有一定的局限性,都非底层逻辑,也不能完全回应一些西方学者因为从本本出发而预设的所谓理论解释。从底层逻辑分析,作为一个发展中国家,中国工业化道路的成功在很大程度上可能与中国选择了包容性学习与创新机制有关。

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

level, industrial development that took place in China as a developing country may have a lot to do with China's choice of inclusive learning and innovation.

Joseph E. Stiglitz and Paul Gruenwald attributed China's economic growth to the learning society. In their view, education and human capital investment, agricultural incentives, and the reduction of resource mismatch are not sufficient to explain China's economic miracle. They regard learning as the key driver that sustains growth and development. Compared with agriculture, China's industrial sectors are more efficient at learning (Stiglitz, Gruenwald, 2017). This explanation offers a new perspective on China's economic miracle and development. However, their works did not differentiate the types of learning.

In *Why Nations Fail*, Gruenwald and Robinson identified two types of government, i.e. extractive and inclusive. Similarly, we may also divide learning and innovation into the same categories. Extractive learning and innovations are characterized by uniformed learning strategies, exclusion against diverse knowledge, self-isolation, and indiscriminate replication of experience from other countries. In contrast, inclusive learning and innovations embrace openness and diversity. Judging by China's reform and opening-up experience, China's economic miracle and industrial success are underpinned by inclusive learning and innovations.

3.1 Question of Learning from Which Countries and How to Learn

From 1949 to the dawn of reform and opening up in 1978, China had adopted a planned economic system modeled after the Soviet Union with adaptations to its national conditions. The economy was divided into two sectors of industrial and consumer goods, giving priority to heavy industries. By 1978, China had created complete industrial sectors, but was yet to emerge as a manufacturing powerhouse.

In 1978, China's official journal *Theoretical Update* published an article with the title of "Practice is the sole criterion for testing the truth," which later appeared on the front page of *Guangming Daily* on May 11. In December 1978, the Third Plenum of the 11th CPC Central Committee officially recognized the principle that "practice is the sole criterion for testing truth" and established the ideological guideline of "seeking truth from facts" after an extensive debate.

These decisions made it possible for China to break away from ideological dogmas and learn from all countries irrespective of their social systems. In experimenting with foreign experience, Chinese reformers followed the principle of "seeking truth from facts" by creating a pilot program to see how it works before rolling out a policy nationwide. Reflecting the principle of "practice is the sole criterion for testing the truth," this approach allowed China to learn from other countries while avoiding costly mistakes.

3.2 Respecting People's Initiative and the Role of Companies

The household contract responsibility system played a pivotal role in unveiling the first chapter of China's reform and opening up. Yet this system was not inspired by theoretical dogmas or Western experience. Instead, it was a brave invention of Chinese farmers. It was this great invention, and the success of it, that led the Chinese leadership to experiment with broader reforms, such as urban economic and corporate reforms. Before the reform and opening up, Chinese enterprises had little say about how to go about their own business. Under the planned economy, they lacked the initiative to compete globally and operate productively.

"Companies are like abacus balls: they never move unless the government gives them a push," wrote Zhou Shulian, Wu Jinglian, and Wang Haibo in an article that appeared on *Economic Research Journal*. At the outset of reform and opening up, Chinese academics launched a debate on the nature and status of state-owned enterprises (SOEs). In their discussions about China's industrial administrative system, Jiang Yiwei argued that as the basic unit of the modern economy, enterprises must act independently

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

斯蒂格利茨和格林沃尔德曾用学习型社会来解释中国的经济增长。在他们看来，教育和人力资本投资、改善农业激励机制、减少资源错配都不能解释中国的经济奇迹，他们将学习视为可持续增长和发展的关键动力。中国经济增长的奇迹在于工业部门与农业部门相比，具有更高的学习效率，更有利于学习能力的培育（斯蒂格利茨、格林沃尔德，2017）。这一解释为我们理解中国经济奇迹和经济发展提供了新视角，但在他们的著作中，并没有解释更有利于学习型社会建设的工业部门是如何发展起来的，也没有区分不同的学习类型。

学习可以分为不同的类型。阿西莫格鲁和罗宾逊在《国家为什么失败》中将政府分为攫取型和包容型两种类型。受此启发，我们也可以把学习与创新分为两种典型类型，一种是攫取型，另一种是包容型，攫取型学习与创新机制的特征是采取单一化学习策略，对多样化知识持排斥态度，学习的主体、学习的对象单一化，闭关锁国、完全照抄照搬其他国家等，都属于此种类型；包容性学习与创新机制的特征是开放，学习采取多样性策略。从中国的改革开放的实践看，中国的经济奇迹和中国新型工业化的成功，与中国创建包容性学习与创新机制密切相关。

（一）中国的改革开放解决了向谁学、如何学的问题，确立了实事求是的学习原则

1949－1978年，中国实行的是计划经济体制，学习的是苏联经验，同时也根据自身经验进行了适当的调整：把整个经济部门分为生产资料和生活资料两大部类，实行的是优先发展重工业的方针，到改革开放前初步建成了比较完整的工业体系和国民经济体系，制造业也有所发展，但并没有成为制造业大国。

中国的改革开放解决了向谁学、如何学的问题，确立了实事求是的学习原则，就是我们要学习其他国家的先进经验与技术，但又不能脱离中国的国情和实际。1978年，《理论动态》发表《实践是检验真理的唯一标准》，5月11日《光明日报》以特约评论员的名义在第一版发表此文。党的十一届三中全会重新确立并充分肯定了实践是检验真理的唯一标准的大讨论，确立了实事求是的思想路线。

实事求是路线的确立，为理论与实践相结合开辟了道路，也为正确地学习国外先进经验、把国外的经验与中国的实际相结合开辟了道路。当然，中国在改革开放过程中不但确立了实事求是的学习原则，还找到了正确执行这一原则的方法：对于新事物，先采取试点的办法，通过试点，看是否符合中国的实际，如果试点成功了则总结经验教训，然后进行推广。这一做法充分体现了“实践是检验真理的唯一标准”的原则，也避免了因完全照抄照搬其他国家经验、照抄照搬本本而给经济发展造成较大损失的情况。

（二）尊重大众的首创精神和企业的主体作用

中国的改革开放，家庭联产承包责任制起到了重要作用，但这个制度并不是来自本本、来自西方，而是来自中国农民的伟大创造。正是这一伟大的创造，启迪和推动了中国城市的经济体制改革和企业改革。改革开放以前，中国企业的自主权较少、主动性较低，缺乏自主参与国际竞争的能力、参与解放和发展生产力的体制机制基础。周叔莲、吴敬琏、汪海波在《经济研究》上发文，把企业比作算盘珠，就是企业要靠行政机关从外部推动，推一下，就动一下，不推就不动。改革开放一开始，理论界就对国有企业的性质和地位开展了讨论，在对工业管理体制进行的讨论中，蒋一苇提出了著名的“企业本位论”。他指出，过去的经济体制是按“国家本位”

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

based on their economic interests. With fresh ideas, China started to reform SOEs. In the early stage, the government granted more autonomy to SOEs with the goal to "separate government administration from enterprise management." Later, SOE reform adopted the goal of creating a modern enterprise system, and SOEs started to enlist private capital.

Government administration over SOEs shifted towards an asset-oriented approach. In reforming SOEs, China adopted the principle that "the public sector should remain dominant, and diverse sectors of the economy must develop side-by-side." Under this principle, China saw an emergence of individual businesses, private companies, foreign-funded companies, and Sino-foreign joint ventures, which took the initiative to compete globally and increase productivity. The private sector became an essential part of China's socialist market economy.

3.3 Opening Wider to the Rest of the World

China's industrial competitiveness increased hand in hand with the opening-up process. Access to domestic and international markets and resources made it possible for Chinese companies to grow more competitive in the international arena.

The global industrial division of labor underwent three stages. In the first stage, developed countries specialized in the manufacturing of industrial goods, and developing countries specialized in primary goods. In this round of globalization, China was a passive participant.

The second stage of globalization is characterized by the inter-sectoral division of labor. In this stage, developed countries relocated less competitive industrial activity to developing countries while retaining advanced industrial sectors at home. However, China's participation in the global industrial division of labor was limited due to embargoes imposed by Western countries.

In the third round of the global industrial division of labor, intra-industry division of labor gained ground. That is to say, an industry is decomposed into various manufacturing processes that take place in different countries. In this stage, China started to play an active role in globalization. Reform and opening-up enabled Chinese companies to integrate into the global industrial chain based on China's comparative advantage. Participation in world trade expedited China's industrial development.

Without a doubt, China's industrial development requires further opening-up. However, some academics and governments led by the US have a biased view of China. For instance, the US government argued that China did not open to the US as much as the US opened to China, and such an unequal treatment gave China an unfair advantage and led to the bilateral trade imbalance. Such accusations are groundless. China's economic openness went hand in hand with fair competition, without which China's industrial progress would not have been achieved.

Nevertheless, economic openness does not guarantee industrial prosperity. The success of China's opening-up can be attributed to its unique characteristics: (i) China took the initiative to open up in tandem with its development stage and reform process, and was not passively involved in globalization. (ii) China opened further to the rest of the world for win-win results rather than to seek its own gains at the expense of others. (iii) China opened up to both developed and developing countries on all fronts. In a nutshell, China's opening-up is inclusive rather than extractive.

3.4 Giving Full Play to Local Comparative Advantage

Unlike many other developing countries, China is a large country. As Professor Zhang Peigang mentioned in an article about new-type developmental economics, China as a large country differs from smaller countries in many ways, particularly in terms of regional differences. In steering industrial development, the government must give play to the advantage of regional diversity.

As Professor Lin Chonggeng recalled in his book *Recollections of China's Economic and Ideological Opening-up*, Chinese scholars came to realize at the beginning of reform and opening-

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

建立起来的，把全国当成了一个经济组织，现在要把企业当作一个能动的主体，当作现代经济的基本单位，有独立的经济利益。在新的认识推动下，中国进行了一系列的国有企业改革。初期的国有企业改革，主要是放权让利、探索两权分离，其次是以建立现代企业制度为方向进行改革，国有企业开始引入民营资本。政府对国有企业的管理也开始转向管资产。在对国有企业进行改革的同时，中国确立了以公有制为主体、多种经济成分共同发展的基本方针，个体企业、私有企业、外资企业、中外合资企业等都得到了发展。企业参与国际竞争，参与解放和发展生产力的自主性、能动性不断提高，创造性不断提高，民营经济和私营企业逐渐成为社会主义市场经济的重要组成部分。

（三）充分发挥不断扩大开放的作用

中国工业不断提高国际竞争力的过程也是不断扩大开放的过程，使中国能利用好国际国内两个市场、两种资源来促进工业的发展，提升中国工业的国际竞争力，锤炼企业的竞争意识和竞争能力。

从全球化的历史看，全球产业分工经历了几个大的阶段。第一个阶段是工业和农业等产业的全球化大分工。在这个阶段，发达国家以生产工业品为主，发展中国家以生产初级产品为主，以此交换发达国家的工业品。在此阶段，中国是一个被动的参与者；第二个阶段是部门间分工。发达国家将一些工业转移到发展中国家，并由这些发展中国家组织生产。在这个阶段，比较先进的工业部门仍保留在发达国家，发展中国家承接的主要是相对成熟和在发达国家组织生产缺乏竞争力的工业部门。由于西方国家采取封锁政策，中国对全球产业分工的参与十分有限；第三个阶段是第三次全球产业分工，表现为产业内分工或者说是产业链分工，就是一个产业被拆分成多个环节，不同的环节被配置到不同的国家进行生产。期间发达国家将产业链中缺乏优势、附加价值低的环节转移到发展中国家进行生产。至此，中国开始成为全球化的主动参与者，通过改革开放，使企业有机会、有积极性和能动性融入到全球产业链中去，使中国的比较优势得以充分发挥，对提升和加快中国的工业化进程起到了十分积极的作用。

坚持扩大对外开放对中国工业化的作用是毋庸质疑的，但对中国在不断扩大开放中提升工业生产能力，西方的学者或政府，特别是美国的一些学者有着错误的认知。美国政府认为是美国重建了中国，中美之间贸易不平衡问题是因为中国与美国相比没有实行对等开放，是中国采取了不公平竞争的手段、通过不公平竞争的方式获得的。这类指责是完全站不住脚的。中国不断扩大开放的过程就是一个不断推动公平竞争的过程，是一个不断扩大开放度的过程。当前中国的经济开放度、竞争公平性相比以前不仅有了极大的提升，而且有着质的改变，中国工业化的成就完全是伴随着不断扩大开放的过程而取得的。

当然，不断扩大开放并不必然带来工业的高速发展。中国的扩大开放之所以成功，其原因在于中国并非盲目发挥扩大开放的作用。中国扩大开放有其自身的特点：一是中国的扩大开放是一种自主的开放，就是把扩大开放与中国发展阶段和改革的进程相匹配，是主动型的扩大开放；二是中国的扩大开放不是谋求单赢，而是追求共赢。中国扩大开放的目标不单是促进中国的经济发展，还要通过扩大开放让世界其他国家分享中国经济发展的红利；三是中国的扩大开放是全面的，不仅是面向发达国家，同时也面向发展中国家。这些特点充分反映出中国的开放具有包容性，是一种包容性的开放而非掠夺性的开放。

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

up that China could not copy the reform experience of Eastern Europe. Lin mentioned that after the Moganshan Conference, Eastern European scholars visited a few Chinese cities. During their field trips, it occurred to them that China lacked the professionals and material conditions to reform its economy across the board, particularly considering the regional disparities. Based on such reality, China opened up its coastal and border regions first, allowing some regions and people to prosper before assisting other regions in achieving common prosperity.

Regional differences in terms of human and natural resources and development stages significantly increase China's economic resilience and room for maneuver. (1) Regional differences are conducive to creating a complete and diverse industrial system. Even with a complete industrial system, China will not close its doors to the outside world.

(2) Different development stages between regions allow China to allocate industries within its borders. After reaching a certain level of development, more developed regions may relocate less advanced industries to less developed regions, achieving the flying-geese paradigm of industrial upgrades domestically. To a large extent, domestic industrial relocation has prolonged the lifecycle of various industries and prevented China's comparative advantage from diminishing.

(3) Regional differences have increased China's economic resilience. China's quick recovery from the global financial crisis of 2008 stemmed from not only government stimulus, but domestic regional differences and room for policy maneuvers. Of course, differences in regional comparative advantages provide a possibility for, but may not necessarily lead to, the advantage of diversity. To turn such a possibility into reality, the central government must coordinate regional development.

4. Concluding Remarks

In *Why Nations Fail*, Acemouglu and Robinson offered imaginative explanations on China's economic success. They arbitrarily referred to China as a "extractive state" (2019). In their view, a "extractive state" is able to drive economic growth by allocating resources from one sector to another. In this process, the contribution of investment to economic growth diminishes. As a country catches up with advanced economies, innovation emerges as a key growth driver. At this moment, the "extractive state" will impede innovation and sustained economic growth (2014). Therefore, they warned that China's economy would inevitably run into trouble (2019).

While Acemoglu and Robinson may be right in pointing out the innovation and growth effects of a extractive government, their forecast about the Chinese economy will never materialize. The reason is that their assessments about the Chinese government and institutions are groundless. As China's industrial success reveals, China is not a "extractive state," and China's economic system is not a "extractive system." The Chinese government is committed to inclusive development, and the brilliant achievements of China's new-type industrialization would not have been made without inclusive learning and innovations.

In building a moderately prosperous society in all respects, China has made substantial progress along the path of industrialization based on new development concepts. 2020 will be the final year for China to complete the building of a moderately prosperous society in all respects. In the 14th Five-Year Plan period (2021-2025), China will unveil a new chapter of the modernization drive. China's new-type industrialization will continue to face numerous challenges, such as synergy between manufacturing and service sectors, the integration between the traditional economy and new economy, and the changing layout of international competition. Foreseeably, China's new-type industrialization will give play to the synergy between primary, secondary, and tertiary industries, and become more environmentally friendly, inclusive, and innovation-driven.

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

（四）充分发挥各地的比较优势

中国与很多发展中国家的一个很大不同就是中国是一个大国。张培刚教授在谈到建立新型发展经济学时就提出中国是一个大国，大国经济发展有着不同于小国经济发展的特色，最主要的特色是区域之间差异很大。区域之间差异大，就会产生多样性的优势。政府在推动工业化的进程中，如果考虑了这个特点，就能把这个优势发挥好。林重庚教授在《亲历中国经济思想的对外开放》中就提到，改革开放之初，中国的学者就认识到中国不可能完全照搬东欧的改革模式。他提到，参加莫干山会议的东欧学者在会后对中国几个城市进行了考察，考察途中改变了想法。因为中国各地情况差别很大，综合改革所需的人才和物资匮乏，进行一揽子改革的条件不足。中国也正是基于这样的现实条件逐步推进对外开放，从沿海、沿边到实行全面开放，走了一条让部分地区先富起来，先富地区带动后富地区，实现共同富裕的发展道路。

因为地区与地区之间有差异，其人力资源、自然资源和发展阶段都有所不同，这极大地增强了中国经济发展的韧性，增加了回旋余地。一是国内产业体系可更加多样化。地区间存在各类差异虽然并不意味着中国应走一条建立一个完全封闭的产业体系之路，但客观上有利于建立比较完整的工业体系；二是地区间发展阶段的差异使得中国可以在内部实现产业的梯度化转移和承接。发达地区在经济发展到一定水平后，可将其不具优势的产业转移到相对落后地区，在国内实现雁阵式产业升级，这在很大程度上延长了各类产业的生命周期，减缓了各类产业比较优势的丧失速度；三是地区间的各类差异提高了中国经济抗风险的能力。2008年全球性国际金融危机爆发后，中国经济能较快地克服冲击、实现较快增长。一方面固然与政府采取的一系列政策有关，同时也与中国地区间差异大、政策调整的空间和余地大有关系。当然，客观上，地区比较优势的差异并不必然会转化为多样化的优势，地区之间发展阶段不同、水平不一，只是为发挥多样化优势提供了可能性，要将这种可能性转化成为现实则离不开中央的各种政策措施。只有全国一盘棋，将地方的积极性和中央的统一领导结合起来，地区的多样化优势才能变成全国的优势。

四、结语

阿西莫格鲁和罗宾逊在《国家为什么失败》中对中国经济的成功做过充满臆想的解释，他们主观武断地把中国政府称为“攫取型政府”（2019）。在他们看来，“攫取型政府”可以通过把资源从一个部门配置到另一个部门拉动经济增长。随着越来越多的资源重新配置，投资拉动对经济增长的作用迅速递减，追赶型任务完成，经济增长转向创新驱动型。此时，“攫取型政府”因为阻碍创新而阻碍经济的可持续增长（2014）。按这个逻辑，他们预言中国经济一定会出问题（2019）。阿西莫格鲁和罗宾逊关于“攫取型政府”与创新的关系或经济增长的关系也许是正确的，但其对中国经济未来的预言则永远不会实现，因为他们对中国政府和制度的判断是臆想出来的。中国工业化成功的经验表明，中国政府和制度并不是他们所谓的“攫取型政府”。中国政府是一个推动包容性发展的政府，中国的经济制度，也决非他们所谓的“攫取型制度”。正是因为中国建立起了包容性学习与创新机制，中国的新型工业化才取得了伟大的成就。

全面建成小康社会所要求的工业化，是一条体现新发展理念的工业化，中国在这条工业化之路上已经迈

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

References:

[1] Acemoglu Daron, James A. Robinson. 2014. *Why Countries Fail*. Taipei: Weicheng Press.

[2] Acemoglu Daron. 2014. "China's Future Economic Growth under an Institutional Perspective." *Comparative Studies*, no.5.

[3] Deng Zhou. 2019. "Comparison of IC Industry Competitiveness between China and the US," In *Industrial Blue Paper: China Industrial Competitiveness Report (2019) No.8*, edited by Zhang Qizi. Beijing: Social Sciences Literature Press.

[4] Guo Chaoxian. 2019. "Comparison of IoT Industry Competitiveness between China and the US." *Industrial Blue Paper: China Industrial Competitiveness Report (2019) No.8*, edited by Zhang Qizi. Beijing: Social Sciences Literature Press. http://www.stats.gov.cn/tjsj/zxfb/201907/t20190710_1675173.html.

[5] Hu Yumeng. 2019. "Comparison of Cloud Computing Industry Competitiveness between China and the US." *Industrial Blue Paper: China Industrial Competitiveness Report (2019) No.8*, edited by Zhang Qizi. Beijing: Social Sciences Literature Press.

[6] Lin Chonggeng. 2018. "Recollections of China's Economic and Ideological Opening up." *Comparative Studies*, no.11.

[7] NBS Department of Energy. 2019. "Environmental Protection Giving Rise to Ecological Civilization," http://www.stats.gov.cn/tjsj/zxfb/201907/t20190718_1677012.html

[8] NBS Department of Industrial Statistics. 2018. "China: a Rising Manufacturing Powerhouse," http://www.gov.cn/xinwen/2019-07/10/content_5407835.htm

[9] NBS Department of Social, Science and Technology, and Culture Statistics. 2019. "Innovation Composes a New Chapter of Advancement in Science and Technology," http://www.stats.gov.cn/tjsj/zxfb/201907/t20190723_1680979.html.

[10] NBS. 2018. "China's Innovation Index Reached 212.0 in 2018," http://www.stats.gov.cn/tjsj/zxfb/201910/t20191024_1704985.html.

[11] Stiglitz Joseph, Bruce Greenwald. 2017. *A New Approach to Growth*. Beijing: CITIC Press.

[12] Wang Lei. 2019. "Comparison of Big Data Industry Competitiveness between China and the US." *Industrial Blue Paper: China Industrial Competitiveness Report (2019) No.8*, edited by Zhang Qizi. Beijing: Social Sciences Literature Press.

[13] WIPO. 2018. *IP Facts and Figures 2018*.

[14] Yuan Jingzhu. 2019. "Comparison of Platform Economy Competitiveness between China and the US." *Industrial Blue Paper: China Industrial Competitiveness Report (2019) No.8*, edited by Zhang Qizi. Beijing: Social Sciences Literature Press.

[15] Zhang Qizi, Zhang Jianying. 2019. "Estimation and International Comparison of New Economy Competitiveness." *Industrial Blue Paper: China Industrial Competitiveness Report (2019) No.8*, edited by Zhang Qizi. Beijing: Social Sciences Literature Press.

[16] Zhang Qizi. 2018. "The Fourth Industrial Revolution and Industrial Policy Transition." *Tianjin Social Sciences*, no.1.

[17] Zhang Qizi. 2019. "Study on the Core Competencies for Expediting New Economy Development." *Research on Financial and Economic Issues*, no.2.

[18] Zhou Shulian, Wu Jinglian, Wang Haibo. 1979. "Value Patterns and the Self-Adjustment of Socialist Enterprises." *Economic Research*, no.9.

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

出了坚定的步伐。2020年是中国全面建成小康社会的最后一年，“十四五”之后，中国将进入到全面建成小康社会后时期，将为基本实现现代化而奋斗。展望“十四五”，中国的新型工业化之路虽然面临诸多挑战，如制造业与服务业协调发展的挑战、传统经济与新经济深度融合发展的挑战以及国际竞争格局面临深刻变革的挑战等。可以预期的是，全面建成小康社会后的中国新型工业化之路必定是一条三次产业更加协同发展，新旧经济更加融合发展，更具绿色化、包容性和创新驱动作用更强的工业化。

参考文献

[1] 达龙·阿西莫格鲁：《制度视角下的中国未来经济增长》，《比较》2014年第5期。

[2] 戴龙.艾塞默鲁、詹姆斯.罗宾森[1]：《国家为什么失败》，台湾：卫城出版社2014年版。

[3] 邓洲：《中美集成电路产业竞争力比较》，张其仔主编：《产业蓝皮书：中国产业竞争力报告（2019）No.8》，北京：社科文献出版社2019年版。

[4] 胡雨朦：《中美云计算产业竞争力比较》，张其仔主编：《产业蓝皮书：中国产业竞争力报告（2019）No.8》，北京：社科文献出版社2019年版。

[5] 郭朝先：《中美物联网产业竞争力比较》，张其仔主编：《产业蓝皮书：中国产业竞争力报告（2019）No.8》，北京：社科文献出版社2019年版。[6]约瑟夫.斯蒂格利茨、布鲁斯.格林沃尔德：《增长的方法》，北京：中信出版社2017年版.

[7] 林重庚：《亲历中国经济思想的对外开放》，《比较》，2018年第11期。

[8] 国家统计局：《2018年中国创新指数为212.0，科技创新能力再上新台阶》，http://www.stats.gov.cn/tjsj/zxfb/201910/t20191024_1704985.html

[9] 国家统计局工业司：《工业经济跨越发展，制造大国屹立东方》，http://www.gov.cn/xinwen/2019-07/10/content_5407835.htm

[10] 国家统计局社科文司：《科技发展大跨越，创新引领谱新篇》，http://www.stats.gov.cn/tjsj/zxfb/201907/t20190723_1680979.html

[11] 国家统计局能源司：《环境保护效果持续显现，生态文明建设日益加强》，http://www.stats.gov.cn/tjsj/zxfb/201907/t20190718_1677012.html

[12] 世界知识产权组织：《2018产权组织事实与数据》，https://www.wipo.int/publications/en/search.jsp?pubDate=latest&sort=pubDate&cat2=1&lang=EN

[13] 王磊：《中美大数据产业竞争力比较》，张其仔主编：《产业蓝皮书：中国产业竞争力报告（2019）No.8》，北京：社科文献出版社2019年版。

[14] 袁惊柱：《中美平台经济竞争力比较》，张其仔主编：《产业蓝皮书：中国产业竞争力报告（2019）No.8》，北京：社科文献出版社2019年版。

[15] 周叔莲、吴敬琏、汪海波：《价值规律和社会主义企业自动调节》，《经济研究》1979第9期。

[16] 张其仔：《第四次工业革命与产业政策转型》，《天津社会科学》2018年第1期。

[17] 张其仔：《加快新经济发展的核心能力构建研究》，《财经问题研究》，2019年第2期。

[18] 张其仔、张建英：《新经济竞争力的测算与国际比较》，张其仔主编：《产业蓝皮书：中国产业竞争力报告（2019）No.8》，北京：社科文献出版社2019年版。

[1] 中国台湾地区将阿西莫格鲁和罗宾逊译为戴龙·艾塞默鲁、詹姆斯·罗宾森。

(C)1994-2023 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net