

STI Strategies for Sustainability and inclusion: Practices and Insights from China

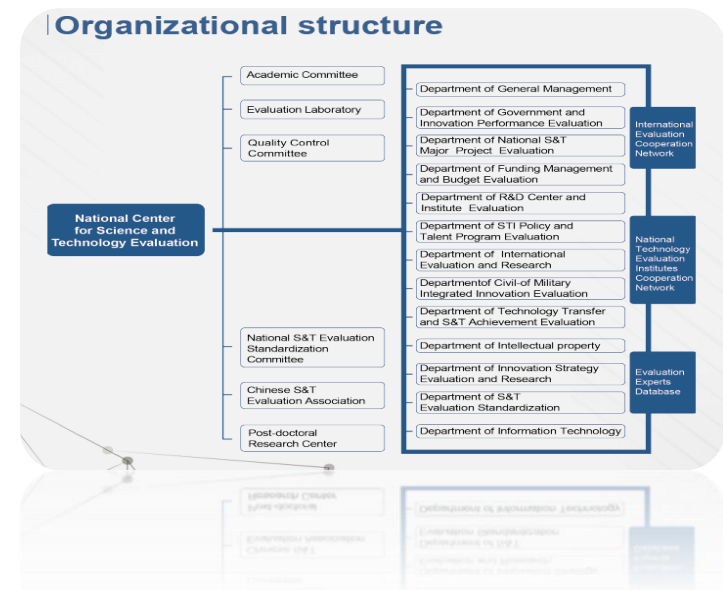
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National Center for Science and Technology Evaluation (NCSTE)

- NCSTE, established in 1997, is the first national institute and the leading agency in STI evaluation of China.
- It has more than 150 professional evaluators and network of 10,000 experts.
- It is excellence in conducting evaluations on STI policy, program, project, research institute, public expenditure, and international cooperation, as well as developing evaluation standards and methodologies.
- Research and evaluation of STI for Sustainability and inclusion has become essential, yet challenging part of NCSTE's business. We appreciate the opportunity of exchanging and sharing information with the international colleagues.



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STI Strategies for Sustainability and inclusion in China

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national sustainable development experimental zone (NSDEZ)

3

Challenges and issues

1

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Challenges and issues

1.1 National Strategies and Plans

National Strategy

At present, the state focuses on implementing

- the innovation-driven development strategy
- the rural vitalization strategy
- the coordinated regional development strategy
- the sustainable development strategy

Meanwhile, President xi jinping has pointed out that, we must carry out targeted poverty alleviation, and prevent and control pollution.



China's National Plan on Implementation of the 2030 Agenda for Sustainable Development

- **China attaches great importance to the 2030 Agenda.** linking it with domestic mid-and-long term development strategies.
- **China formulates China's National Plan on Implementation of the 2030 Agenda for Sustainable Development in september 2016.**
- China will stick to the development concept of innovative, coordinated, green, open and shared development.
- Principle of Inclusiveness and Openness. Countries should commit to achieving inclusive economic growth and building an inclusive society, where development gains are shared by all and no one is left behind.

中国落实2030年可持续发展议程

国别方案



1.2 STI Strategies and Plans

The 13th five-year national plan for STI

To establish a sustainable modern agriculture system

- by 2020 to develop an environment-friendly modernization production with high output efficiency, promising product safety, and resource saving.

Establish and improve technological system for livelihood improvement and sustainable development including:

- Ecological and environmental protection,
- Highly efficient resource utilization and recycling,
- Public health,
- New urbanization,
- Public security and social governance.

Special plan for promoting “One Belt And One Road” construction of STI cooperation

Build a community of interests and a community of destiny, and promote sustainable development and common prosperity.

One Belt and One Road Key Technology Cooperation Areas:

- Agriculture
- Energy
- Resources
- Environment
- Ocean
- Medical health
- Disaster prevention and mitigation
- ...



1.3 Field Strategies and Plans



- National Agricultural Sustainable Development Plan (2015-2030)
- The 13th five-year plan for the development of agricultural S&T

Agriculture

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- Nation 13th five-year plan for S&T development of environmental protection
- The 13th five-year plan for STI on climate change

Environmental
1 protection

- The 13th five-year plan for Energy
- Special plan for STI in the field of resources during the 13th five-year plan

Energy and
resource

Field Strategy
and Planning

- Implementation plan for the action to support rural revitalization
- Special plan for innovation-driven rural revitalization and development (2018-2022)

Rural
Revitalization

- Outline of the healthy China 2030 plan
- Special plan for STI in the field of health during the 13th five-year plan

Health

1.3 Field Strategies and Plans

Special plan for innovation-driven rural revitalization and development (2018-2022)

12 goals

	indicators	2022 target value
1	Contribution rate of agricultural S&T progress	61.5%
2	Comprehensive mechanization rate of crop cultivation and harvest	>70%
3	Agricultural labor productivity	55,000 yuan/per son
4	National technology innovation center	80
...

8 primary missions

- strengthening STI supply
- STI base construction
- STI talent team construction
- high and new technology development
- Innovation-driven development in counties
- poverty alleviation
- transformation of S&T achievements
- international cooperation

1.4 Specific Policy Measures



national sustainable development experimental zone

To Promote sustainable regional development:
189 national sustainable development experimental zones,
sustainable development innovation demonstration area for 2030

Agenda:

- Shenzhen, Guangdong province
- Guilin, Guangxi Zhuang Autonomous Region
- Taiyuan, Shanxi Province
- Cluster of 5 cities in northern Jiangsu province.



National Science and Technology Major Projects

- Water Pollution Control and Treatment,
- New Medicine Research and development,
- Prevention and Control of Infectious Diseases.

1.4 Specific Policy Measures

National key R&D Programs

The Ministry of Science and Technology has launched 14 programs in the field of social development, seven of which are in the field of resource and environment.



Green Technology Bank

Established in 2015 as an important platform for implementing the 2030 Agenda in the green development area.



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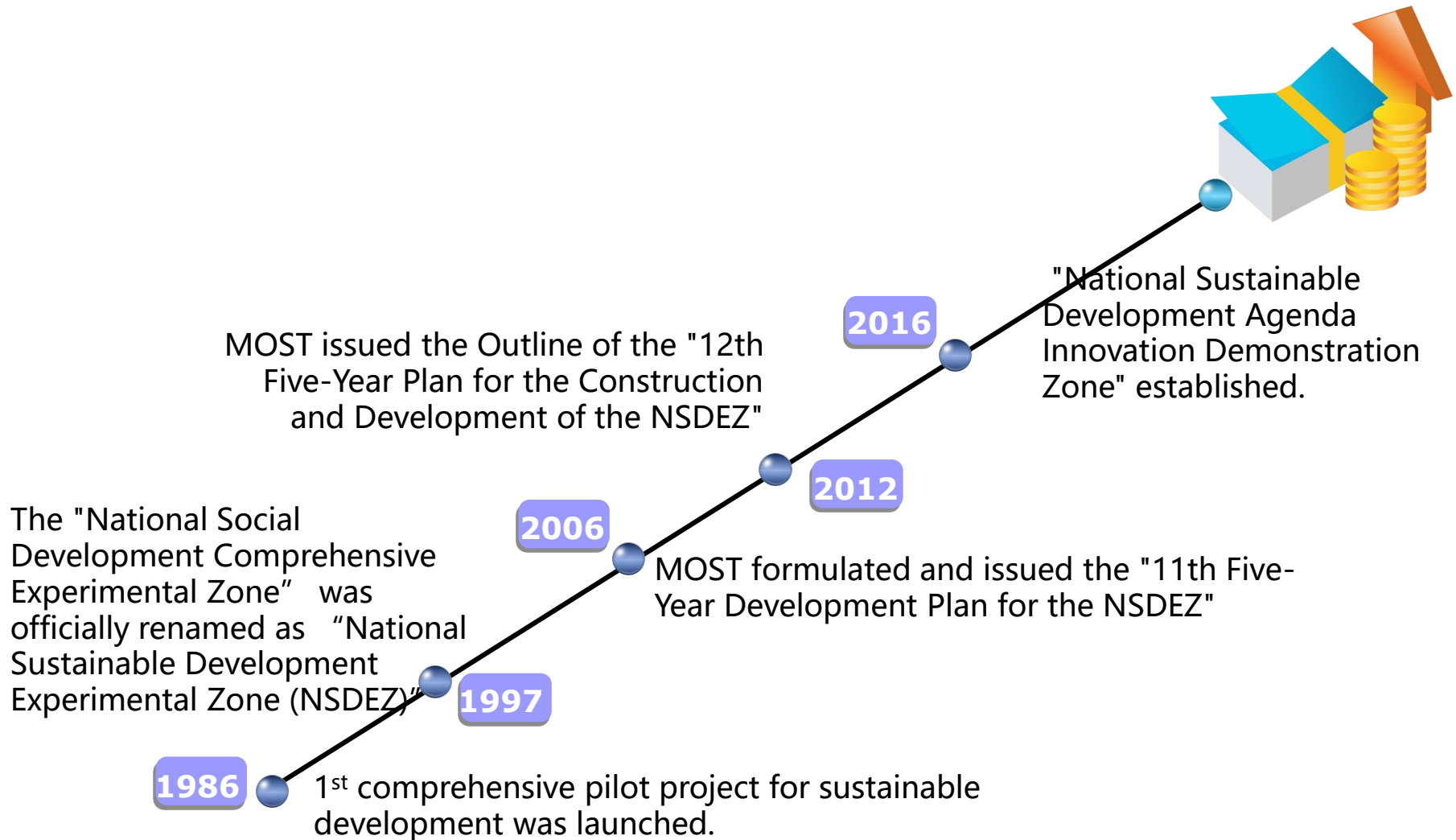
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Challenges and issues

2.1 The development history of the experimental zones



2.2 Current status of NSDEZ

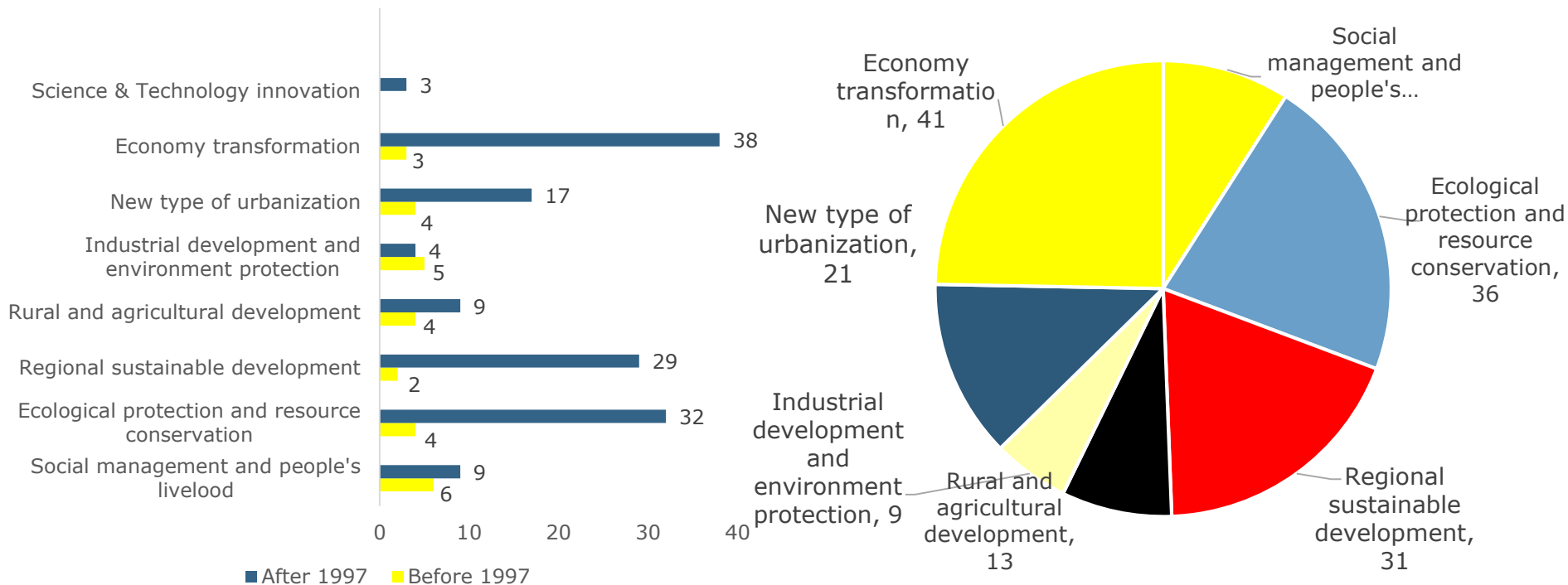


Up to now, there are 189 national-level experimental zones and more than 300 provincial-level experimental zones under construction, covering 30 provinces or autonomous regions, and municipalities except Hong Kong, Macao, Taiwan, and Tibet. Form a situation in which the sustainable development strategy is jointly promoted and carried out at all levels.



2.2 Current status of NSDEZ

In the past 30 years, various types of comprehensive experiments and eco-social development have been carried out and explored. The development topics involve industrial economic transformation, ecological protection and resource conservation, regional sustainable development, and new urbanization, which including various areas of economic and social development.



Topic distribution of experimental zones

2.3 Construction Effectiveness

- 1. Put forward the development concept of “harmonious development of population, resources and environment, and common progress in economy, society and ecology”, which is the “Heading zone” for regional coordinated development strategy and sustainable development strategy.**
 - ✓ **First put forward and to explore and practice the concept of sustainable development.**
 - ✓ **In different periods, the construction content of the experimental area is highly consistent with the national development strategy goals.**
 - ✓ **It has always played the role of “Rangers” in implementing the national strategy.**
 - ✓ **The experimental area's ideas and actions for sustainable development is still working well.**

2.3 Construction Effectiveness

2. Effectively promoted the local sustainable development work and laid a good foundation for the local coordinated .The achievements of sustainable development benefited the masses in the experimental zones.

Economy Transform ation	S&T have promoted regional industrial restructuring and economic development mode transformation, the industrial transformation and upgrading of several experimental zones has been at the forefront of the country or the province.
Improving people's livelihood	Supported by S&T, great progress in social undertakings and people's livelihood has reached, laid a good foundation for the realization of the sustainable development of "people" and the establishment of a modern social governance system. Some important indicators locate far above the national average.
Environment Protection	A long-term mechanism for environmental protection and resource conservation has been established. A series of related technologies such as mining area restoration, wetland ecological restoration etc. have been put into the experimental area.Environmental protection and resource intensive demonstration projects have achieved remarkable results.
Rural Area Construction	New rural construction and new agricultural development have achieved good results, effectively improving both the overall appearance of the rural areas and the living standards of farmers. The coverage rate of rural old-age care and relief systems has generally increased, the income gap between urban and rural residents has been significantly shrunk than the national average.

2.3 Construction Effectiveness

3. Through years of construction and exploration, a number of outstanding experimental zones with characteristics, strong representativeness and remarkable results have emerged.

Experimental Area	Typical Example	Experimental Area	Typical Example
LiaoNing ShenHe	Social management	JiangXi JingGangShan	Sustainable development of ecotourism
SiChuan GuangHan	Municipal waste treatment	JiLin BaiShan	Equal emphasis on resource development and protection
HuBei JiangAn	Urban community management	HeBei ZhengDing	Sustainable development & Agricultural industrialization
GuangXi GongCheng	Exploring S&T development and agricultural transformation	ZheJiang FangXunQiao	Local Urbanization
ShanXi ZeZhou	Regional development with eco-transformation	ZheJiang HengDian	Government guided & firm funded urbanization
LiaoNing ShenHe	Transformation and upgrading of old industrial bases	AnHui MaoJi	Immigration relocation & New city construction
Beijing XiCheng	Modern city management	Fujian DongShan	Island sand damage control

2.3 Construction Effectiveness

4. The experimental zones has high requirements for dissemination and implementation of the "sustainable development concept", and the implementation content is extensive. However, there are still some shortcomings in the implementation and the room for improvement.

- Haven't fully summarized the experience of the experimental area & Shortcomings in exploring the new model.
- Weakened in the role of some management responsibility & insufficient in management. Often the performance in the implementation is driven by the science and technology department alone.
- The mechanism for optimizing resource for all location and integration has not yet been established, the resources of the relevant areas in the experimental area are divided.
- The dynamic monitoring, adjustment and evaluation mechanism is not perfect, the current experimental area construction is still in a state of “Enter Only”.
- The long-term mechanism for the construction of the experimental area needs further improvement.

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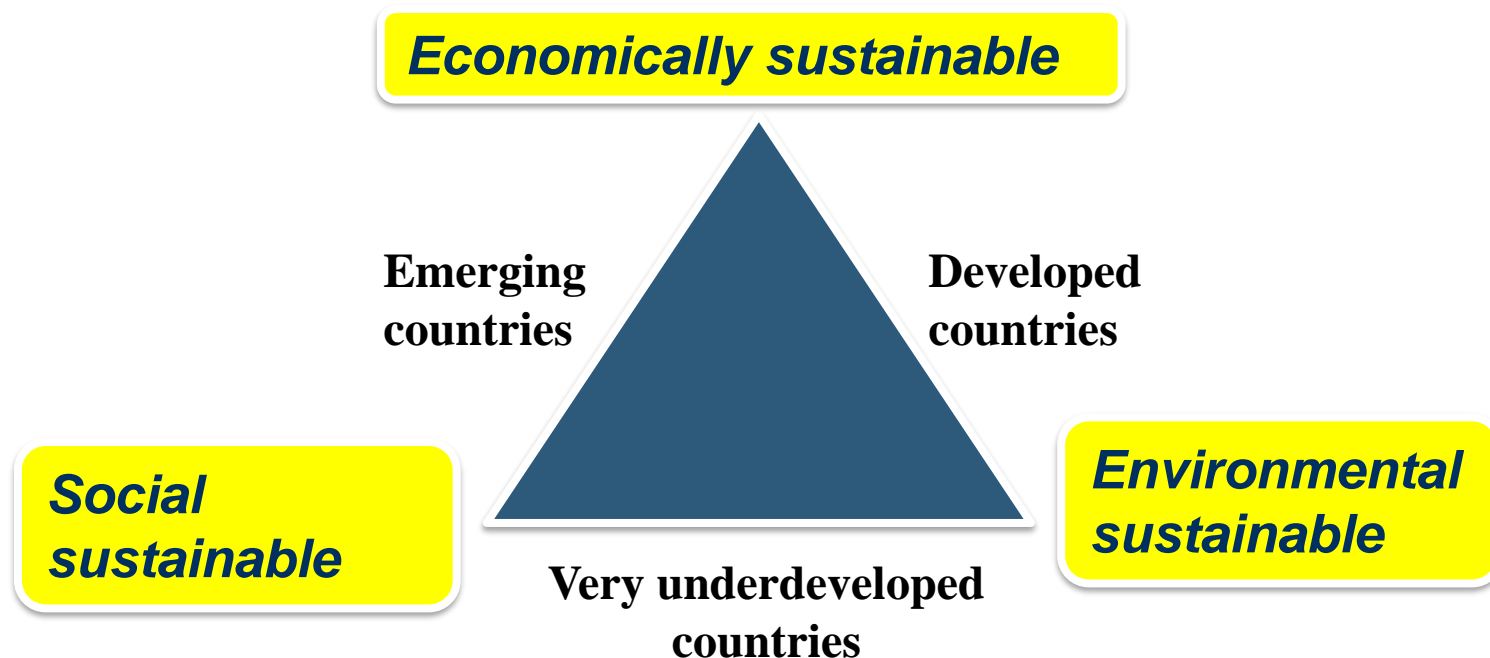
Challenges and issues

3. Challenges and issues

- **China's STI policies belongs to the strong government type. That is, more top-down policies and less bottom-up policies. Moreover, the better the government designs at the top, the less chance for policy innovation at the grassroots level.**
- **Without government support, How can STI policies remain sustainable (e.g., sustainable development experimental zones)?**

3. Challenges and issues

- A country's STI policy system, how to maintain a balance between economic sustainable, social sustainable and environmental sustainable.
- China's current STI policy of SDGs, focuses more on environmental sustainable and less on social sustainable.



3. Challenges and issues

- **Most STI policies for SDGs lack of systematic evaluation .**
- **How will the STI policy deal with the new economy, such as AI, pinduoduo...**



- Pinduoduo is a newly developed mobile shopping APP after jingdong and taobao in China, which was established in September 2015. Users can purchase commodities by pinduoduo with friends, family and neighbors at a lower price.
- Pinduoduo focuses on low-income people.
- Due to the low price, the product quality is also low, but it meets the needs of low-income people who have been ignored by other e-commerce companies for a long time.
- It is a typical case of e-commerce, which enables low-income people to enjoy the convenience of life in the digital age.
- How will government manage and support this type of new economy?



*Many thanks for
your attention!*

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