

# THE GLOBAL SMARTPHONE MARKET IN THE CONTEXT OF THE US-CHINA TECH WAR

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# Goals

1. The main cause of the US-China trade war
2. Competition in the global smartphone market
3. Comparative analysis of the technological potential
4. Can the US stop a technological progress in China?  
Comparison with Japan.
5. Will Huawei be able to maintain leadership in the smartphone market under US sanctions?

# 1. The main cause of the US-China trade war

- The central knot of the contradictions in Sino-US relations is industrial policy, which is reflected in the policy document “Made in China 2025”.
- The main cause is the struggle for dominance in the field of new technologies.
- The Chinese company Huawei has become the main player in 5G technologies, which can provide China's strengthened position in the field of national security and defense.

## The US is very concerned about the introduction of 5G Huawei

- In the summer of 2018, the United States imposed a ban on the purchase of telecommunications equipment of Chinese companies ZTE and Huawei, explaining that this equipment can be used by the special services of China.

# The first countries to deploy the service for commercial use 5G

the US

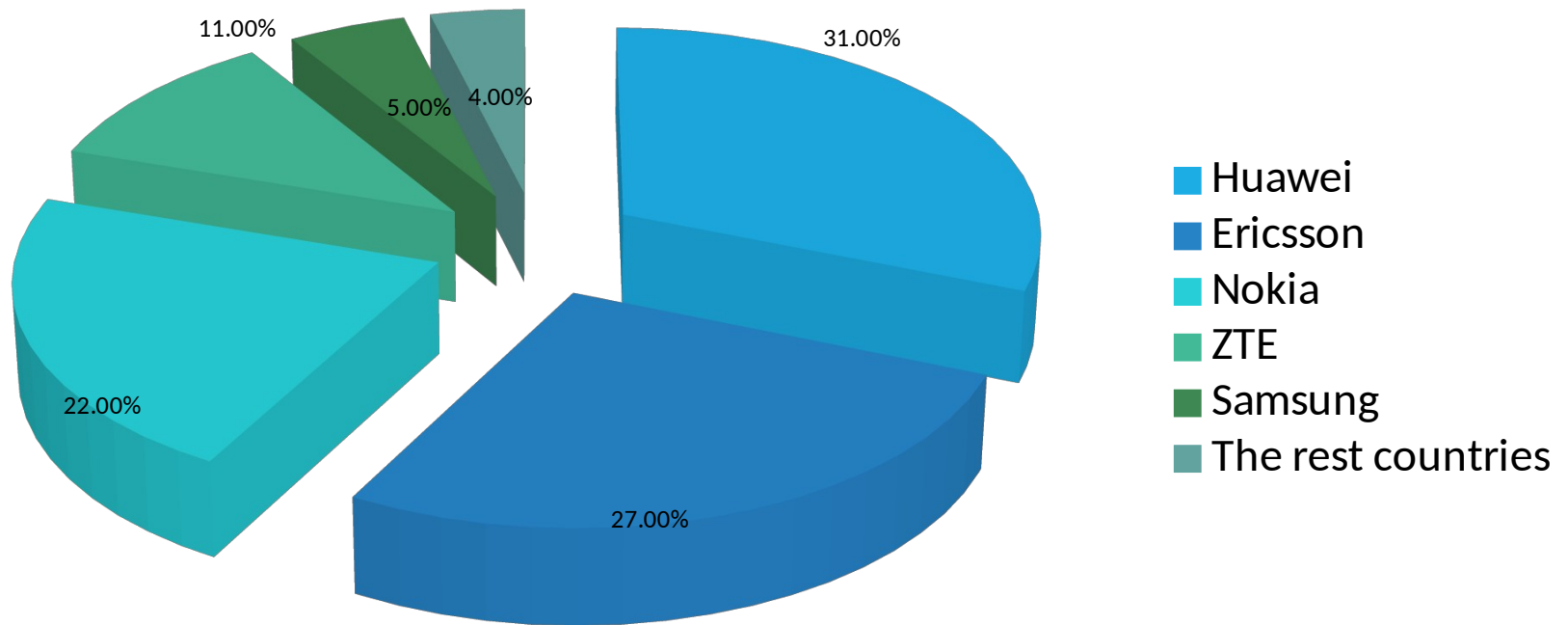
South Korea

China

the UK

Japan, Germany, and India will launch 5G-phones in 2020

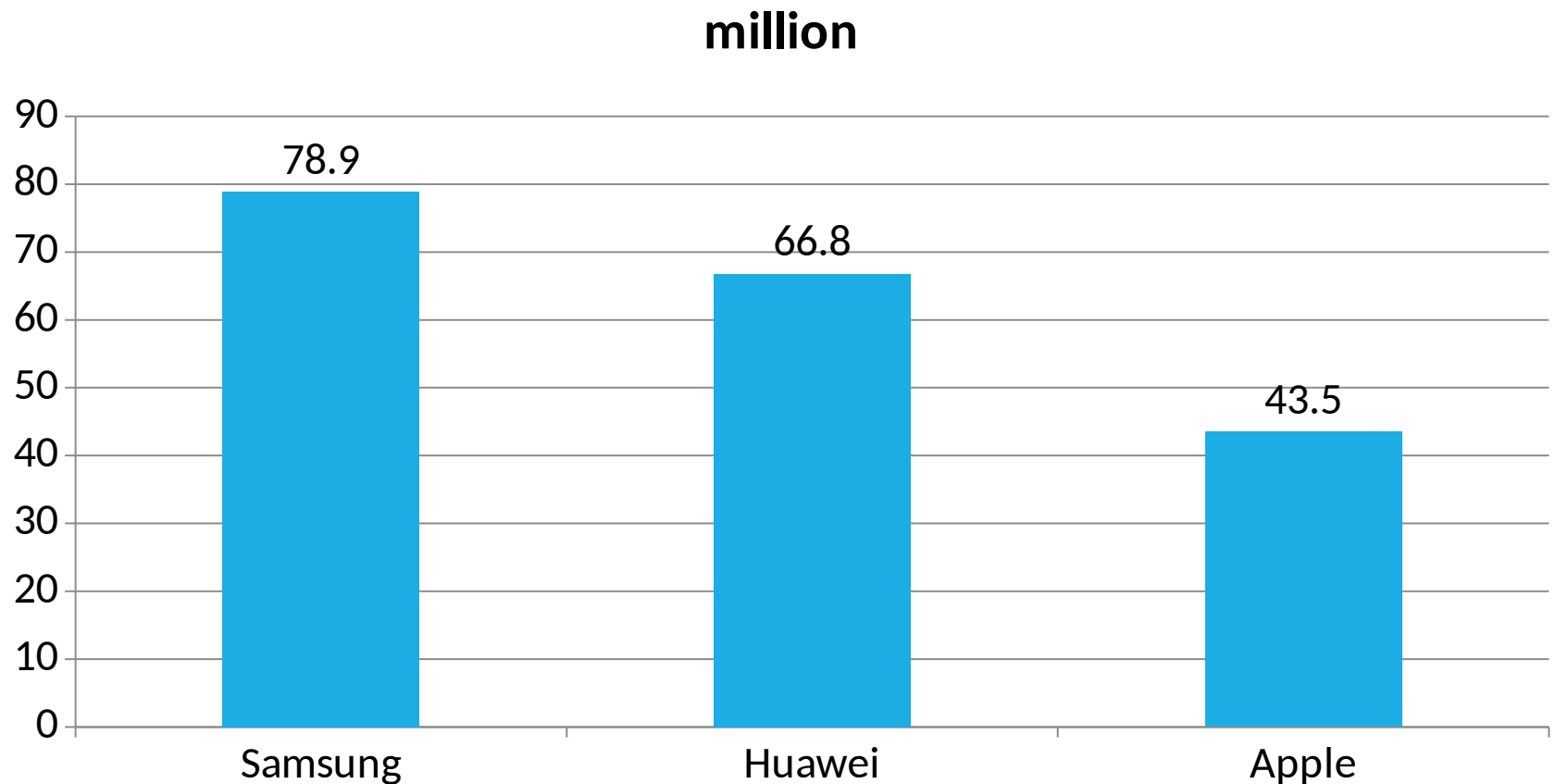
# Share of companies in providing infrastructure of the cellular communications market



## Huawei is in the so-called «Black list»

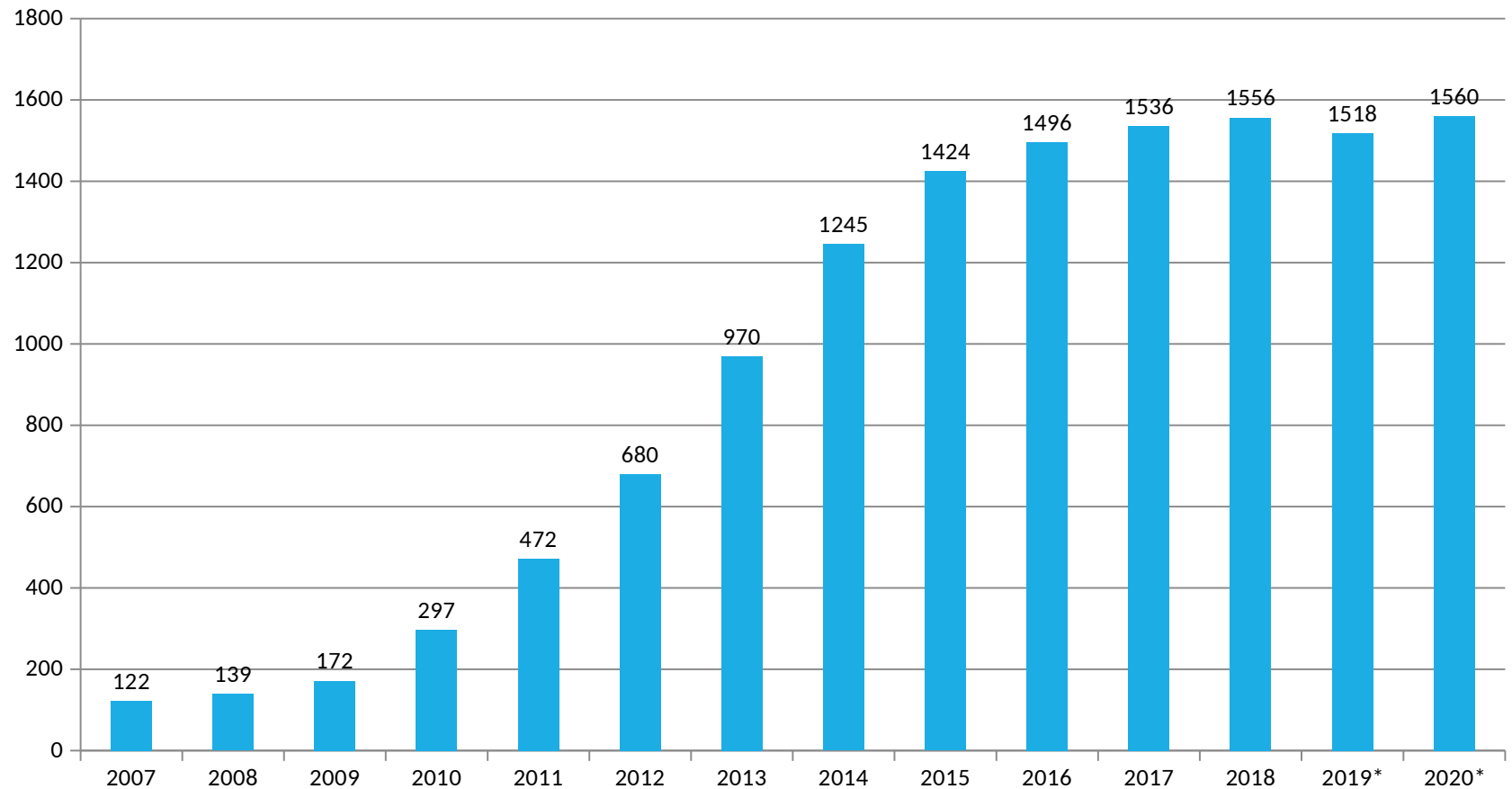
- American companies need to obtain a special permit for further cooperation with the Chinese company.
- Google stops cooperating with Huawei, Chinese smartphones are not able to use the Android operating system.
- Huawei smartphone owners outside China will not be able to use Chrome apps, YouTube, Play Market app store.

## 2. Competition in the global smartphone market. Smartphone sales in 2019 (3q)

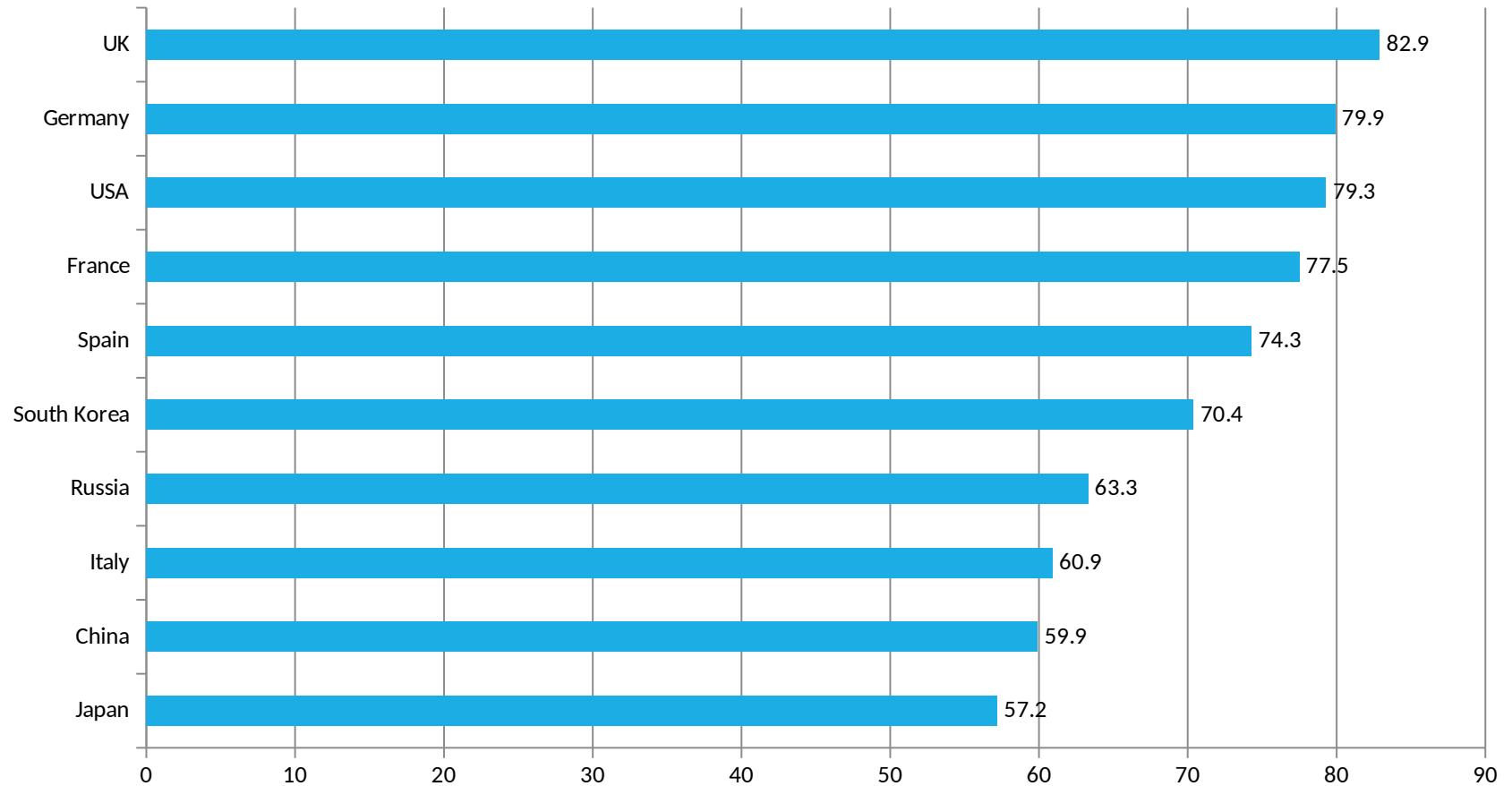




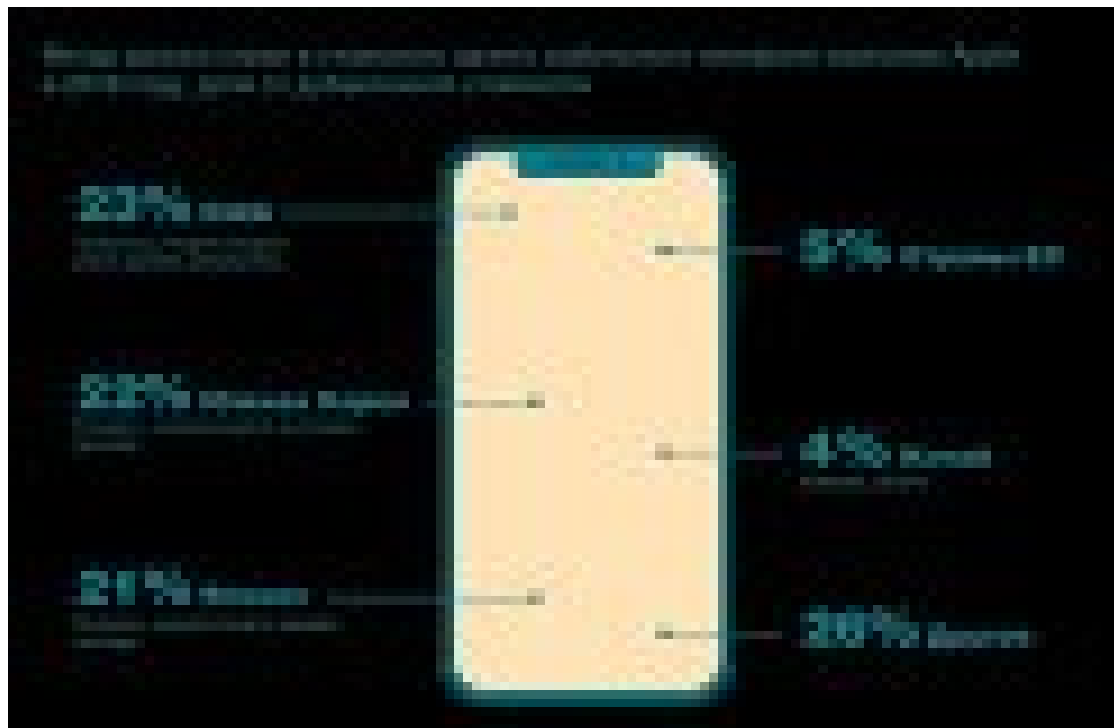
# Number of smartphones sold to end users worldwide from 2007 to 2020 (in million units)



# Smartphone penetration in top 10 markets worldwide, %



Role of the countries in Apple phone production: US -23%, S. Korea - 22%, Japan - 21%, EU - 5%, China - 4%



### 3. Comparative analysis of the technological potential

- 8 criteria

# 1. Smartphone Market Volume

Indicator 1	USA	China	Winner
Number of Smartphone Users in 2019, million people	260,2	851,2	China

## 2. Most Valuable Technology Companies

Indicator 2	USA	China	Winner
Number of Companies with capitalization more than \$200 billion, June 2019	Microsoft, Amazon.com, Apple, Intel, Alphabet, Facebook, Cisco Systems	Alibaba, Tencent	USA

### 3. Chip Competition

Indicator 3	USA	China	Winner
Largest Semiconductors Company Revenue in 2018, billion US dollars	Intel, 70	HiSilicon, 7,6	USA

## 4. Global mobile infrastructure market and 5G

Indicator 4	USA	China	Winner
Company's Share at Global 4G LTE Infrastructure Market in 2018	-	31% (Huawei) 11% (ZTE)	China



## 5. Income Gap

Indicator 5	USA	China	Winner
Gross Domestic Product per Capita in 2018, US dollars	62641,0	9770,8	USA

## 6. Human Capital

Indicator 6, 7	USA	China	Winner
6. Number of Artificial Intelligence Experts in 2017, people	28000	18000	USA
7. Researchers in R&D in 2016 (per million people)	4256	1205	USA

## 7. Investments and Venture Capital

Indicator 8, 9	USA	China	Winner
8. Total Investments in 2018, billion US dollars	3913,9 20,1 % GDP	6015,6 44,8% GDP	China
9. Venture Capital Investments in 2018, billion US dollars	110	105	China - USA

## 8. Manufacturing

Indicator 10, 11	USA	China	Winner
10. High-technology exports in 2017, million US dollars	156,9	654,2	China
11. Medium and high-tech industry in 2017, % manufacturing value	63.6	60.0	China - USA

# China's weakness is its own small chip production

Chinese companies depend on chip imports by **82%**.

The Chinese government reduced the tax for chip makers to 0% for two years.

Huawei is the most independent company from the United States,

about **70%** of the chips in mobile phones are produced by the company itself.

# Conclusion

1. There'll likely be no clear winner in the tech war
2. China has become the most important competitor of the US not only in economic but also in scientific and technical terms.
3. Despite the great success of the Chinese high-tech industry, it is still dependent on foreign, including American technologies. And this dependence represents the main threat of Chinese business. The US is able to deliver a powerful blow to Chinese companies.

# Conclusion

4. The obvious consequence of the economic confrontation between the US and China was the violent separation of the American and Chinese economies, decoupling, the destruction of global value chains.
5. Among companies in both countries, economic winners and losers have appeared.
6. The breakdown of GVCs had a devastating effect on the two countries' imports, global economic growth and production of many industries.

# Can the US stop a technological progress in China?

- No. Biersteker T. substantiated the conclusion that economic sanctions are most effective if applied to a country with a high but asymmetric interdependence of economies.
- In 1987, the United States imposed a 100 percent tax on Japanese chip manufacturers, blocking their access to the US market. The development of the Japanese economy slowed down . The ideologist of the US-Chinese and US-Japanese trade wars is the same person - Robert Lighthizer.



# Will Huawei be able to maintain leadership in the smartphone market under US sanctions?

- It takes 2-3 years to cut import of US technologies.
- Leadership is possible if China manages to conquer the market of India and other countries with a large population.
- The technological war between the United States and China is expected to be long, each country will firmly uphold its national interests and do everything possible to win.

# Thank you for your attention!

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