



HIGHER SCHOOL OF ECONOMICS

Institute for Statistical Studies and Economics of Knowledge



Foresight Centre

Foresight

RUSSIA: 2018

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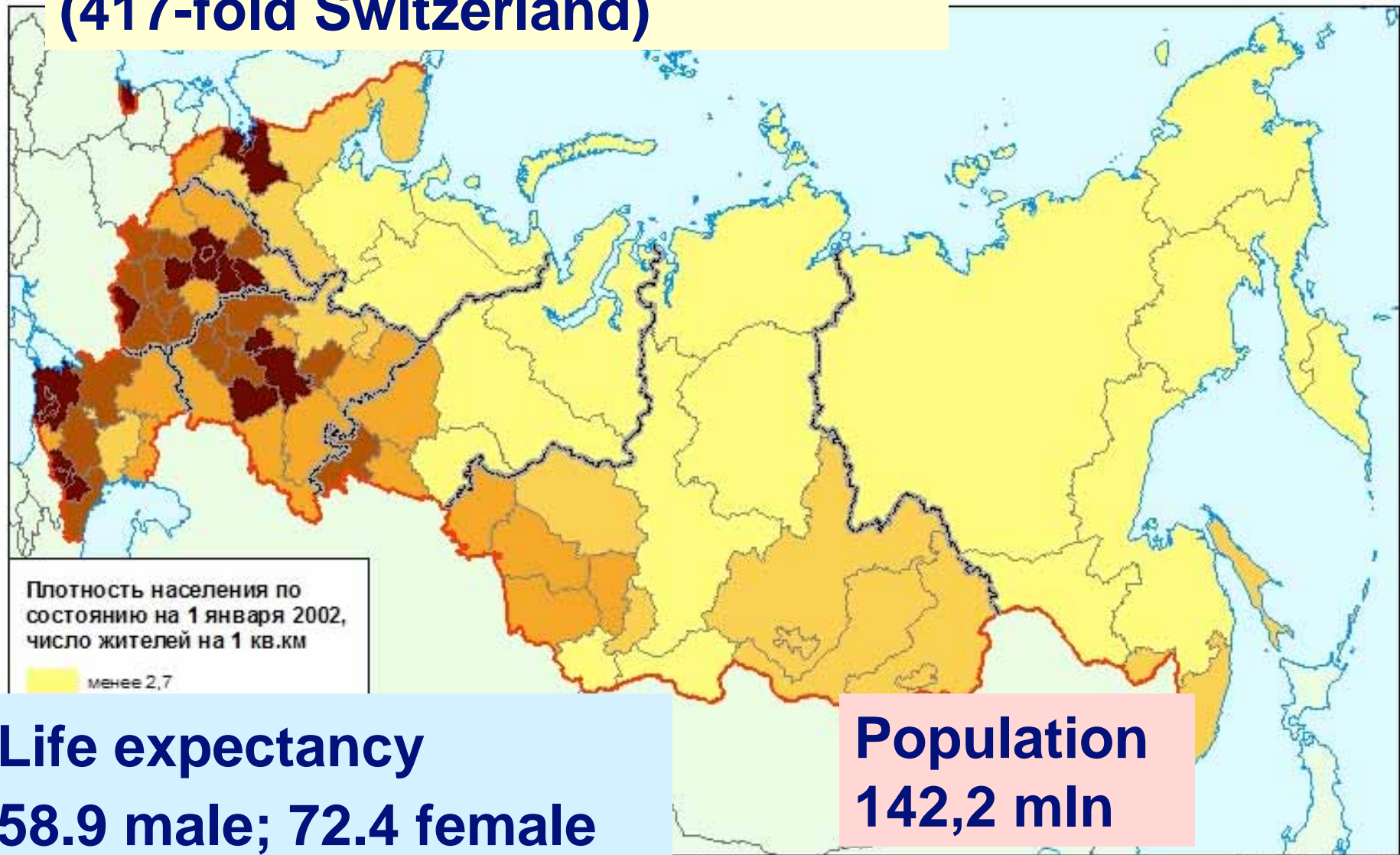
European Futurists Conference

Lucerne, 27 October 2008

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- ◆ **Recent Trends**
- ◆ **Strengths and Weaknesses**
- ◆ **Opportunities and Threats**
- ◆ **Russia's role by 2018**
- ◆ **Competitiveness via Innovation**

**Russia occupies 17 mln sq.km
(417-fold Switzerland)**

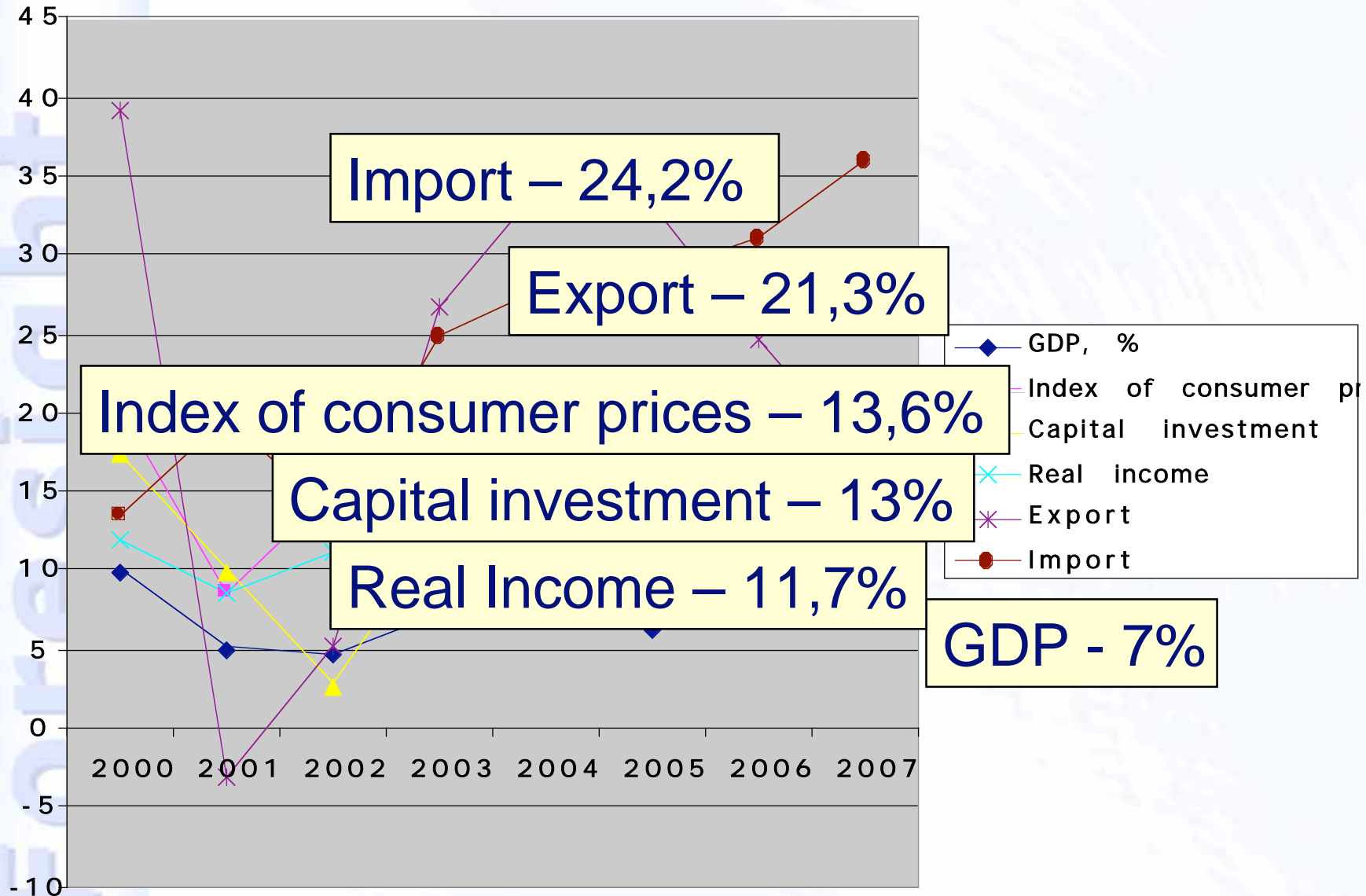


**Life expectancy
58.9 male; 72.4 female**

**Population
142,2 mln**

GDP per capita (PPP) – 12500 USD

Macroeconomic indicators: 2000-2007



Average GDP Growth: 2000-2007, %

| | |
|------------------|------------|
| USA | 2,5 |
| Euro zone | 2,0 |
| Japan | 1,7 |
| Brazil | 3,3 |
| Russia | 7,0 |
| India | 7,0 |
| China | 9,9 |

Major internal economic trends

export

...but less impact of oil prices on
economy

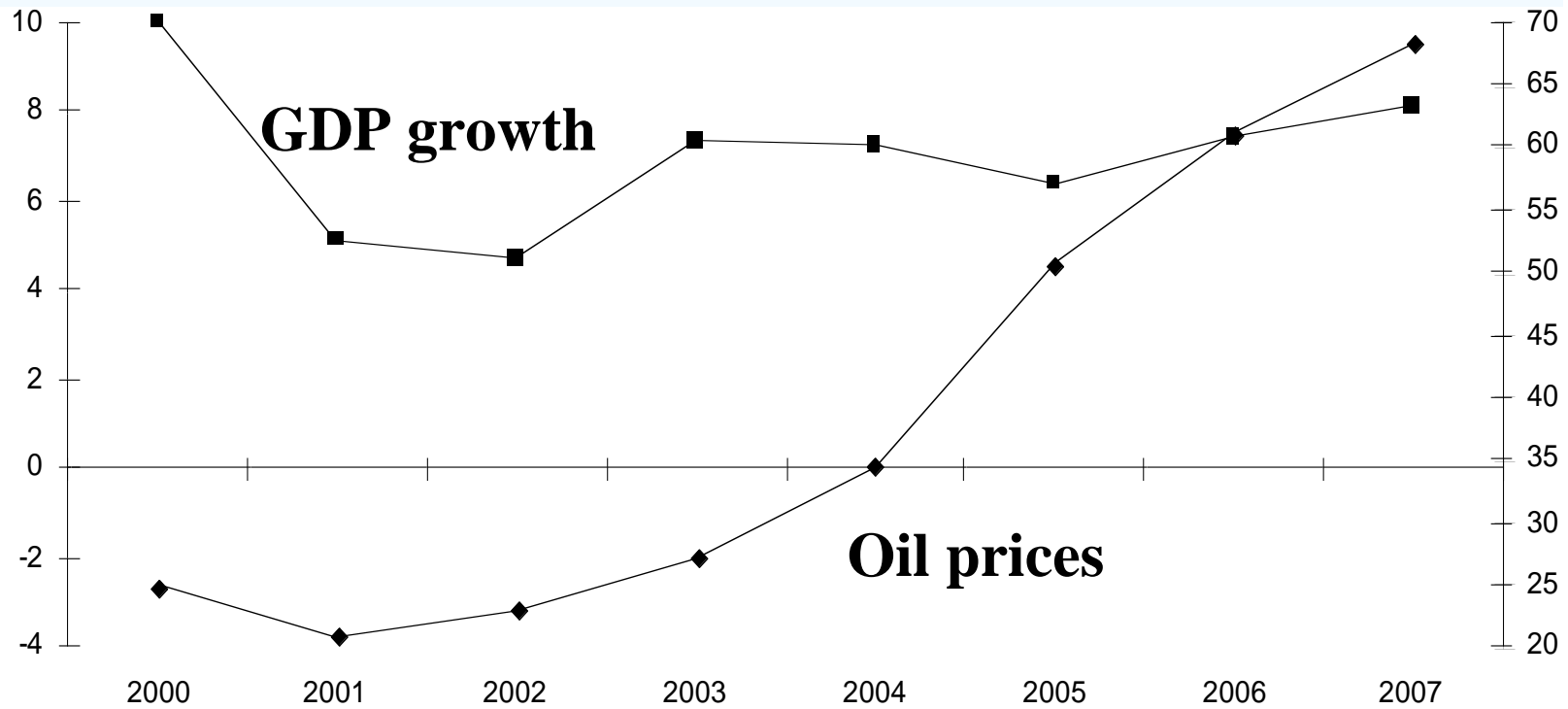
More capital investment

Better structure of import (high-end
equipment)

Oil and gas cannot provide further
economic growth

Labour force becomes more expensive

GDP growth less depends on oil price



Global trends

**Fast technology changes
(converging technologies)**

Further globalisation

Increasing role of human resources

Innovation based growth

Unpredictable disruptive innovation

...

Russia's strengths

Natural resources (fuels, minerals, water)

Huge territory

Human capital (well established system of education, stock of researchers)

Multicultural and multinational co-existence

Weaknesses

Democracy institutes and civil society

Underdeveloped infrastructures

**Human resources (lack of population,
decreasing quality of education)**

Huge territory (long borders etc)

Inefficient economy

Low productivity

Poor traditions of innovation

Environmental problems

Opportunities:
Use of strengths
spatial advantages (increasing
transit of goods between Europe and
Asia)

mineral resources

Catching up by imitation:
energy and material saving
technologies,
better management, cost efficiency
et al

Innovation activities

High-tech capacities

Threats

Corruption

Inefficient institutions

Growing social gap

Uneven regional development

Isolation from developed countries

Global economic crisis

Low oil and gas prices

Alternative sources of energy

The CRISIS

Huge reserves from oil and gas exports

but big debts of Russian companies to Western banks

Volatile markets

Unstable Russian stock exchange

There are also good sides:

efficient businesses become stronger

be efficient (innovate) or die

Building a vision for the future

Economic
forecasts

Sectoral
strategies

Regional
strategies

Performance
oriented 3-year
budgets

S&T Foresight



National Concept of Long-
term Development: **Russia**

2020

Russia 2020: the Government vision

Good for
living

- high living standards
- growth of middle class
- high quality services, education and medicine
- comfort living conditions
- regional development
- democracy institutes
- better environment

Gaining
status of
one of the
world
leaders

- integration leadership in Eurasia
- sustainable global economic cooperation
- active role in development of global rules
- key role in designing rules for global energy markets
- national safety and defense capacities

Russia 2020: the vision

Competitive

- higher productivity
- lower energy intensity
- higher internal competition
- export diversification
- creation of a node in the global energy infrastructure
- major transit country

Innovation driven

- Increasing Russia's share at high-tech markets
- Leadership in R&D and technologies

Russia 2020: the vision

| | 2007 | 2020 |
|---|------|--------------|
| Annual GDP growth | | 6,5 |
| Export, bln US\$ | 354 | >900 |
| Export of machinery, bln US\$ | 19,7 | 110 – 130 |
| Labour productivity growth | 1 | 2,6 |
| Energy consumption per 1 ruble of production | 100 | 60 |
| Share in the world economy, % | 3,2 | 4,3 |

Russia 2020: the vision

| | 2007 | 2020 |
|--|------|-----------|
| Life expectancy, years | 66,5 | 72-75 |
| Share of middle class in population, % | 20 | > 52 - 55 |
| Share of high-tech sectors and knowledge economy in GDP, % | 10,9 | 17-20 |
| Share of innovation products in production, % | 7 | 25 - 35 |
| Share of industrial enterprises implementing technological innovation, % | 9,5 | 40 - 50 |
| GERD as a % of GDP | 1,1 | 2,5 - 3 |

Industrial Policy

| Share in Industrial Production, % | 2005 | 2020 |
|-----------------------------------|------|------|
| Fuels and Energy | 43 | 26 |
| Machinery | 13 | 22 |
| Raw Materials | 30 | 35 |

Social development

Population growth – 145 mln by 2025

Budget expenditure on medicine and healthcare 5.5% of GDP (now 3.6%)

Decreasing mortality rate for the most dangerous diseases

Education expenditure – 7% of GDP (now 4.8)

Pension not less than 2.5 minimal living subsistence

Competitiveness priorities

Civil aviation

Space industry

Space launch market

Ship building

Nuclear energy engineering

Energy efficiency – 4% a year

Transition to the Innovation Driven Economy

| | 2007 | 2020 |
|--|------|-------|
| Expenditure on Education, % of GDP | 4.8 | 7.0 |
| GERD, % of GDP | 1.09 | 2.0 |
| Share of high tech sectors in VA, % | 10.5 | 18.6 |
| Share of innovation products in total manufacture production, % | 5.6 | 10-12 |

Is it achievable?

Low innovation activity

Wide gap between R&D and innovation

Business does not fund R&D

Public R&D funding is inefficient

International standing of Russian R&D is decreasing

Obsolete NIS institutes

Weak links between R&D, industry and education

**Russian S&T:
strong R&D, weak innovation
GERD – 17 bln USD (8th)**

Researchers – 478 thsd (4th)

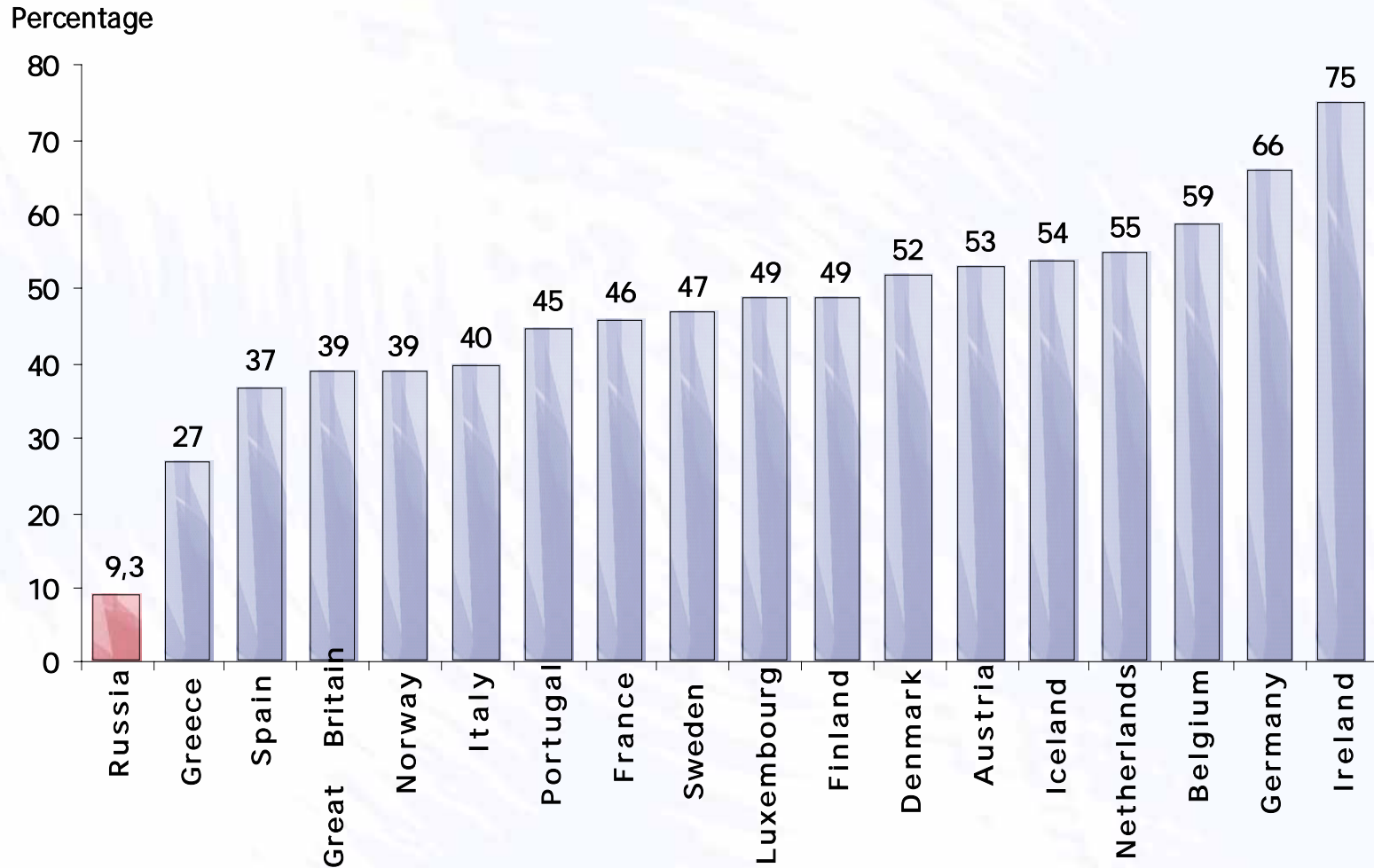
Publications – 8th

Citations –18th

**Revenues from technology exports –
383 mln USD (US – 52643 USD)**

**Share on global high-tech markets –
0.3%**

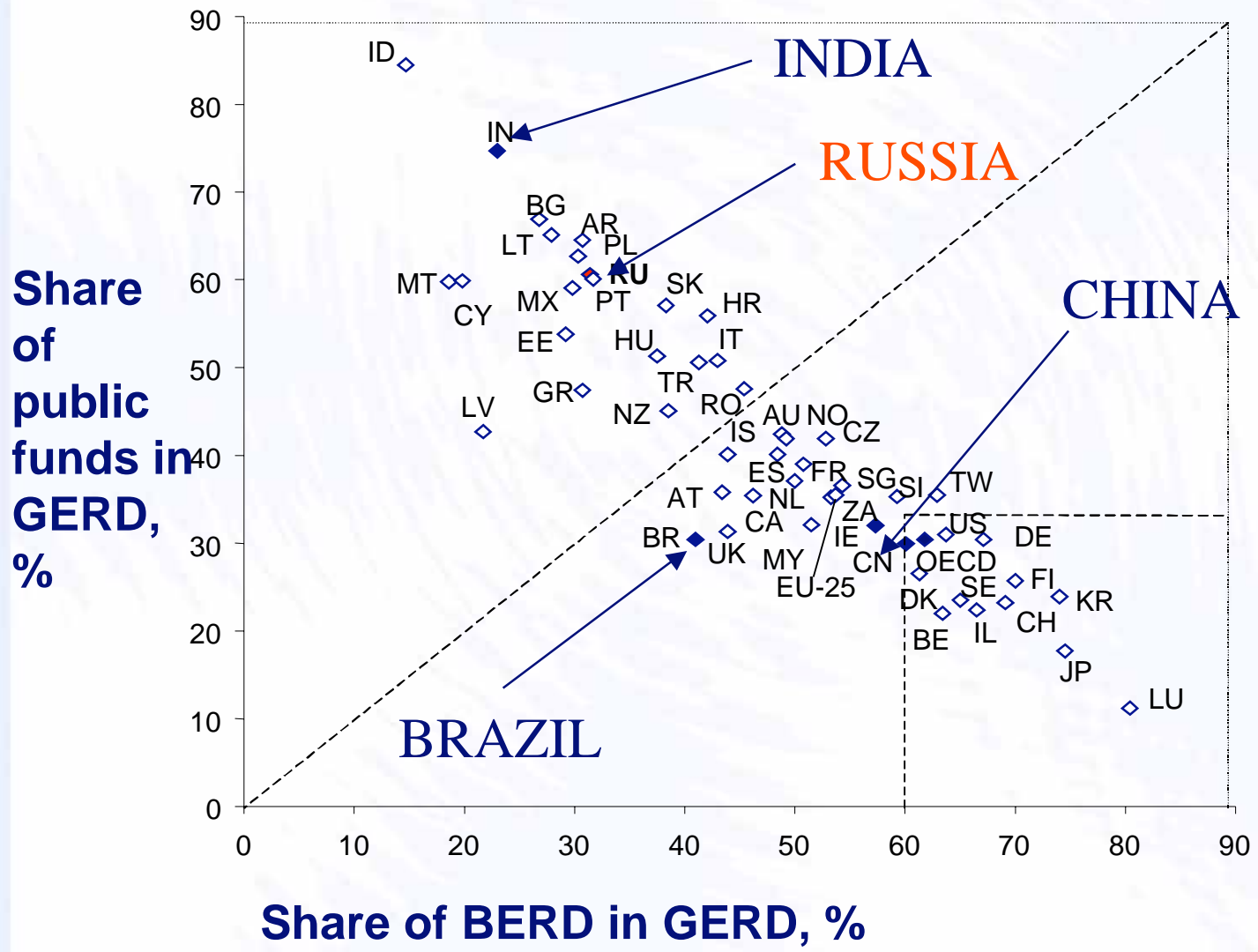
Innovation Activity in Russia and the EU



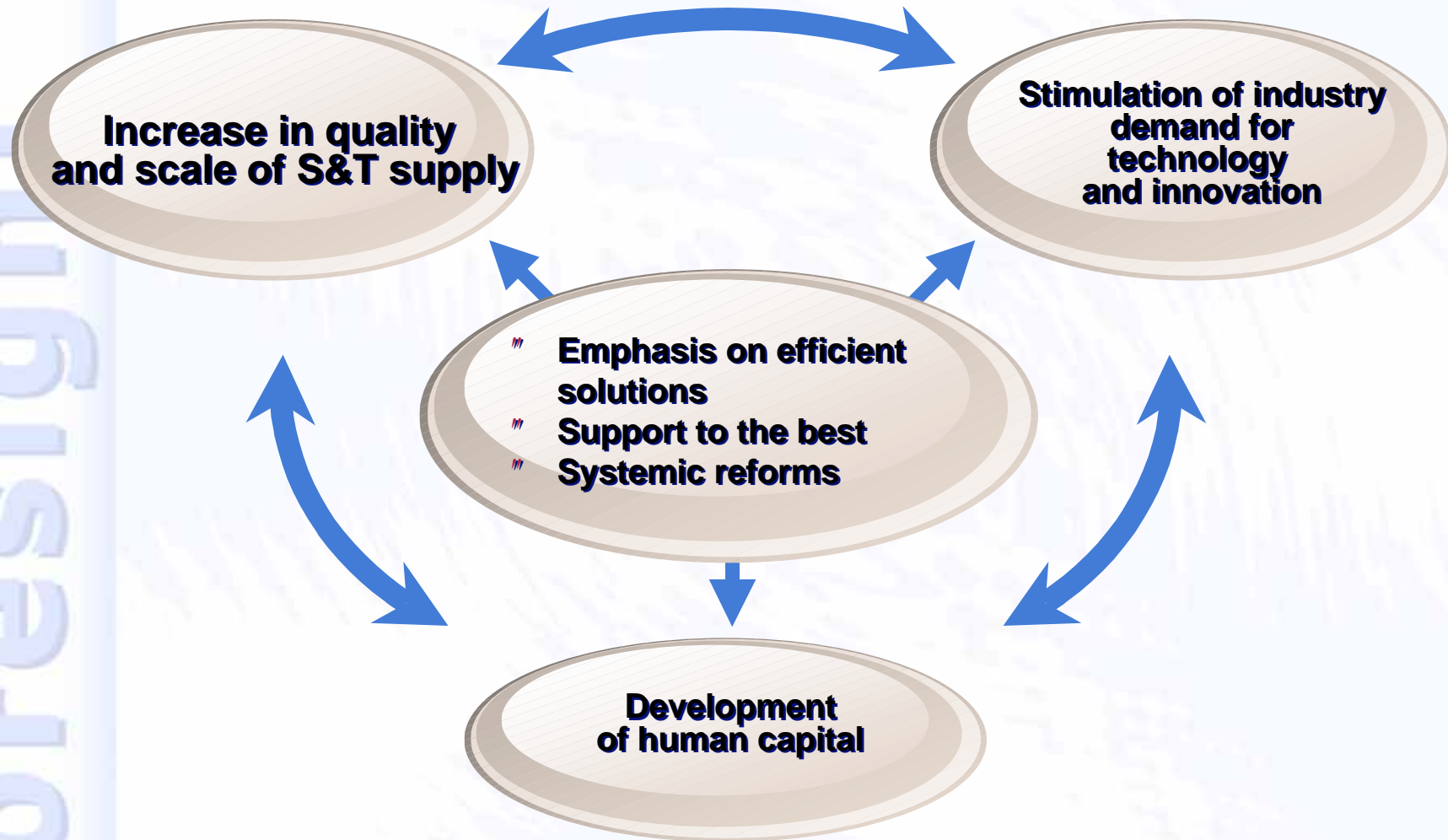
Low innovation activity = loss of competitiveness

| | Russia | Finland |
|---|---------------|----------------|
| Share of innovation products in industrial production, % | 7.0 | 58,3 |
| Innovation expenditure as a % of industrial production | 1.2 | 3.9 |

Public R&D funding dominates



Policy agenda for S&T and innovation in Russia



Thank you

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FORESIGHT journal



Topics:

- Strategies
 - Innovation and economy
 - Science
 - State
 - Methods and best practices
 - Indicators
 - Glossary
- Authors: leading Russian and foreign experts

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