

INNOVATIONS, INSTITUTIONS AND GREEN GROWTH

Vera Barinova,
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INNOVATIONS – A BACKGROUND FOR GREEN GROWTH

- ***Innovation Policy***
- ***Russia vs the World***
- ***Institutions***
- ***Green technologies***

Innovation policy

2011: the Innovation Development Strategy of the Russian Federation 2020

Top-priority sectors : safety and terrorism resistance, nanosystems, ICT, life sciences, transport and cosmic systems, enginery, medicals and pharmaceuticals. The **conservation and energy efficiency, energy saving** and nuclear power.

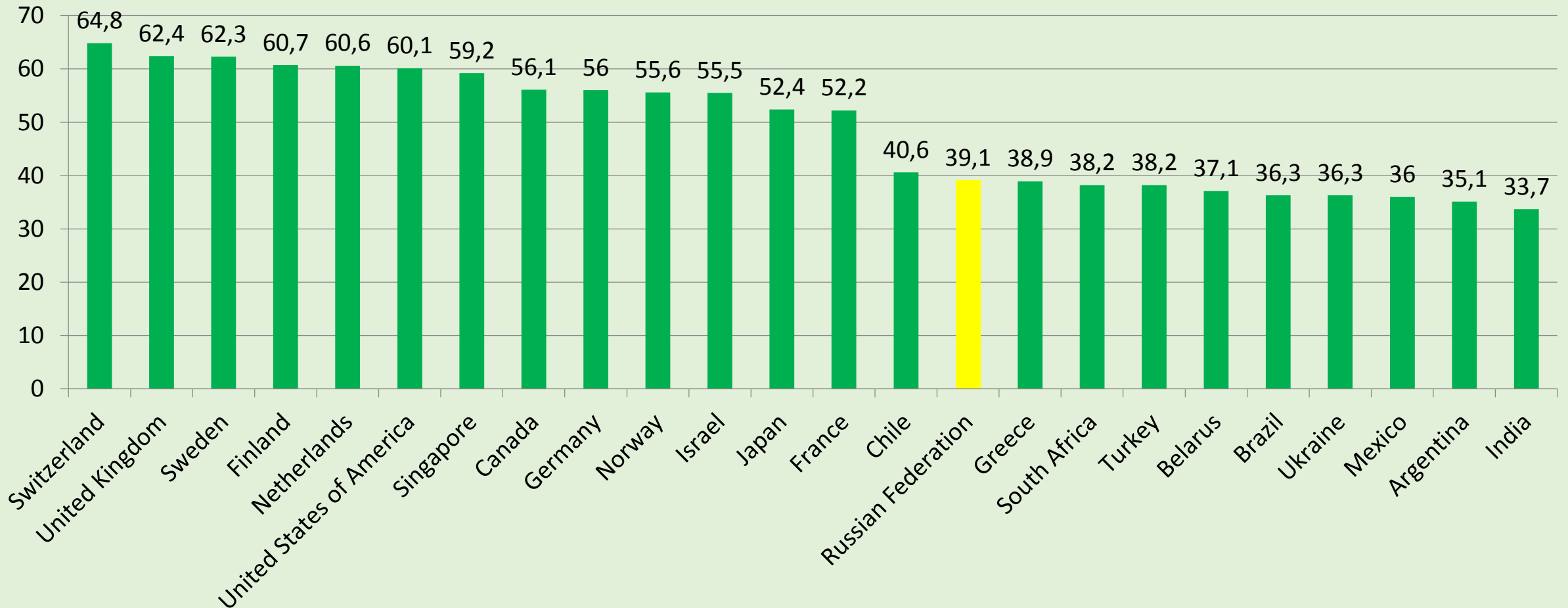
- ✓ “The development of top-priority science and technologies (2007-2013)”
- ✓ “The education (2011-2015)”
- ✓ “The industry, human resources development in science and education (2009-2013)”
- ✓ “The Science and Technology development 2013-2020”
- ✓ “The industry development and its competitiveness growth up to 2020”
- ✓ “The Ecology Program 2012-2020”
- ✓ “The integrated program of biotech development in the Russian Federation by the 2020”.

The Innovation Development Strategy 2020

Quantitative goals		2013 (real)	2013 (planned)	2020
The share of firms, introducing technological innovations (in the total number of firms)	%	8,9%	9,6%	25%
The share of high-tech and knowledge-intensive goods and services (in the total number of goods and services produced by the manufacturing industry)	%	8,9	7,2	25
The share of industrial production firms, that implement technological, marketing or organizational innovations (in total number of industrial production firms)	%	10,1	24	60
The share of firms that use the Broadband WL (Internet) (in the total number of firms)	%	88,1	85	98
The average (mean) age of a researcher	years	48*	47,5	43
The share of federal governmental services to be provided electronically (in total number of such services)	%	80	98	100

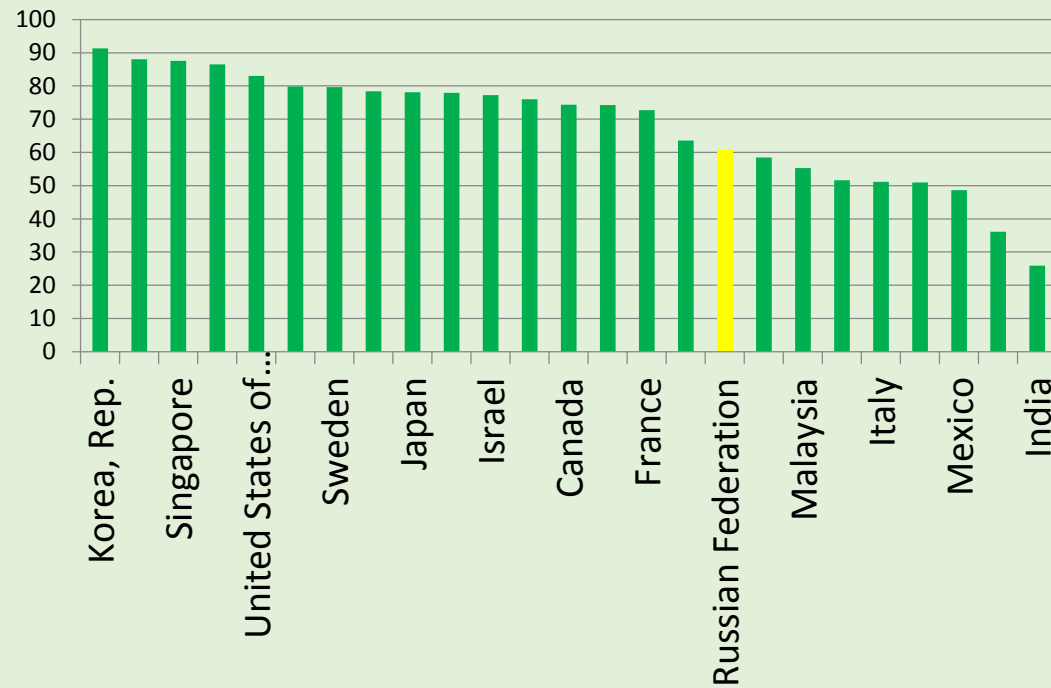
Russia vs the World: 49 of 140 on GII

Global innovation index score 2014

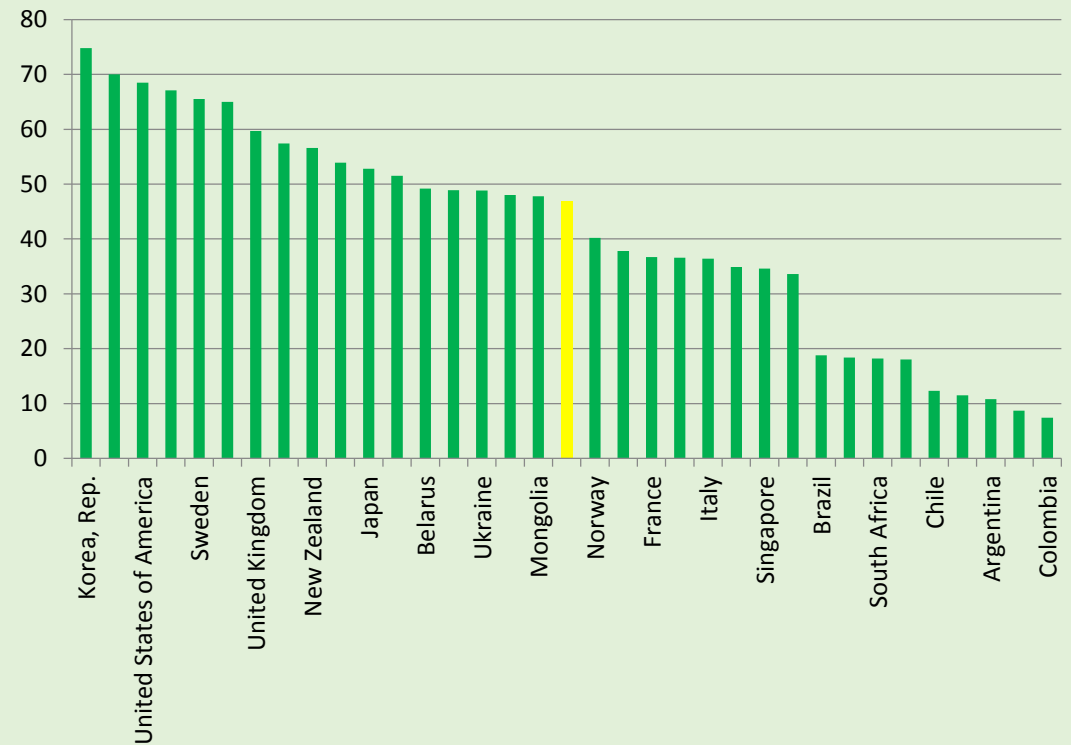


Russia vs the World

Information and communication technologies (ICTs): 28 rank of 140 countries



Knowledge creation score: 18 rank of 140 countries



Russia vs the World2: human capital (30 of 140)

Education

Expenditure on education (87), governmental expenditure on education per pupil (secondary) (55), school life expectancy, assessment in reading, mathematics and science (35), pupil-teacher ratio (secondary) (8)

28 of 140 (score 45,6)

Tertiary education

Tertiary enrollment (15), graduates in science and engineering (14), tertiary inbound mobility (74)

30 of 140 (score 46)

Research and development

Researchers (34), gross expenditure on R&D (32), QS university ranking average score of top-3 universities (25)

30 of 140 (score 33)

Key factors:

Exogenous

- Competition (entrepreneurship, SME support, market enter barriers);
- Science&education sector;
- Financing the innovation activities (Federal programs) and workplace innovations support; PPP);
- Effective tax system;
- Legislation system (Federal innovation Strategy, the IP rights; technical regulation – esp.energy saving and efficiency);
- Innovation infrastructure

Endogenous

- Engineering facilities, scientific base;
- Organizational structure;
- entrepreneurship, institutionalized in CC and strategic planning.
- Motivation strategy, that varies depending on the employee's role in the innovative upgrowth

Factors' classification

	Exogenous		Endogenous
Infrastructural factors ("framework") – to be provided firstly, Form the background for innovations	Competition		Engineering facilities,
	Science&education sector		scientific base;
	Financing the innovation activities;		Organizational structure;
	Effective tax system; Legislation system, including the intellectual property rights;		entrepreneurship, institutionalized in corporate culture and strategic planning
	Innovation infrastructure.		
Activating ("stimulating") companies start innovate") - useless unless formed with infrastructural	Stimulus&incentives	constraints	
	Direct financing (subsidizing)	Technical regulation	corporate culture
	tax incentives		Strategic planning

Russia vs the World-3: institutions

Political environment

Political stability and the absence of violence/terrorism (112)

Government effectiveness (92)

Press freedom (121)

112 of 140 (score 45,6)

Regulatory environment

Regulatory quality (100)

Rule of law (116)

Cost of redundancy dismissal (81)

100 of 140 (score 39,5)

Business environment

Ease of starting a business (64)

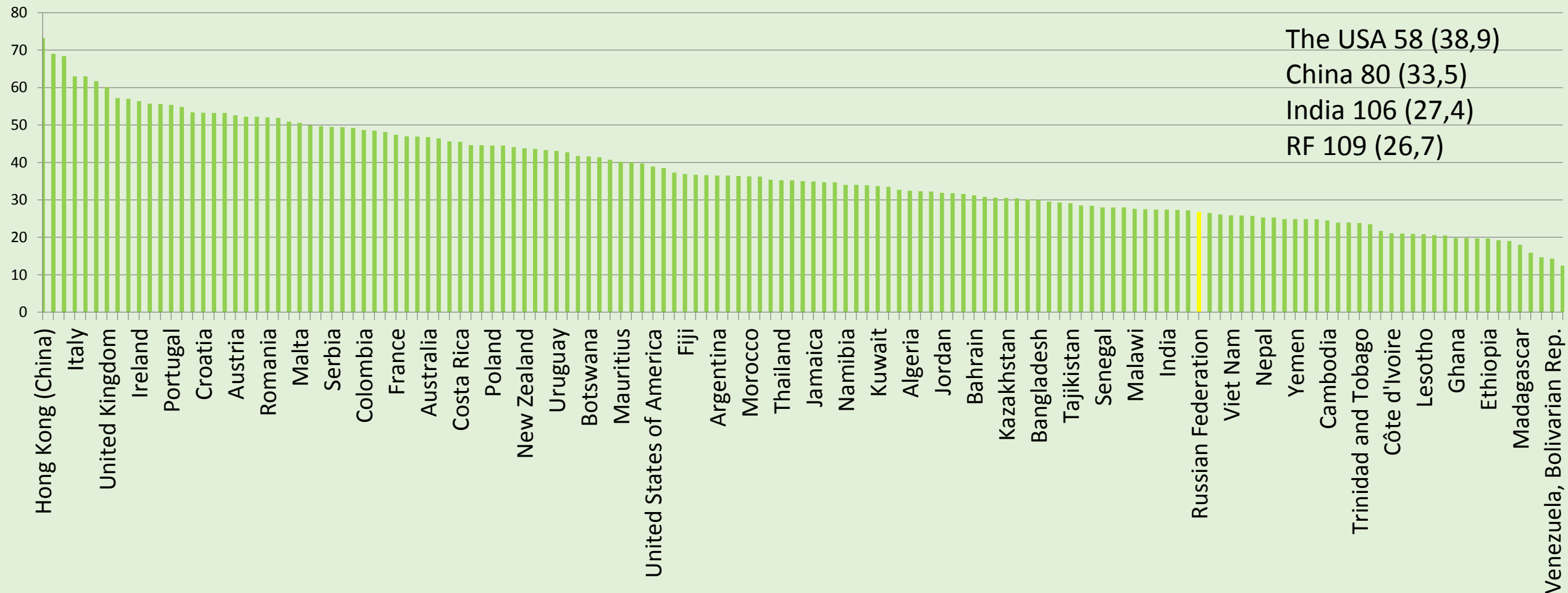
Ease of resolving insolvency (49)

Ease of paying taxes (47)

55 of 140 (score 68,9)

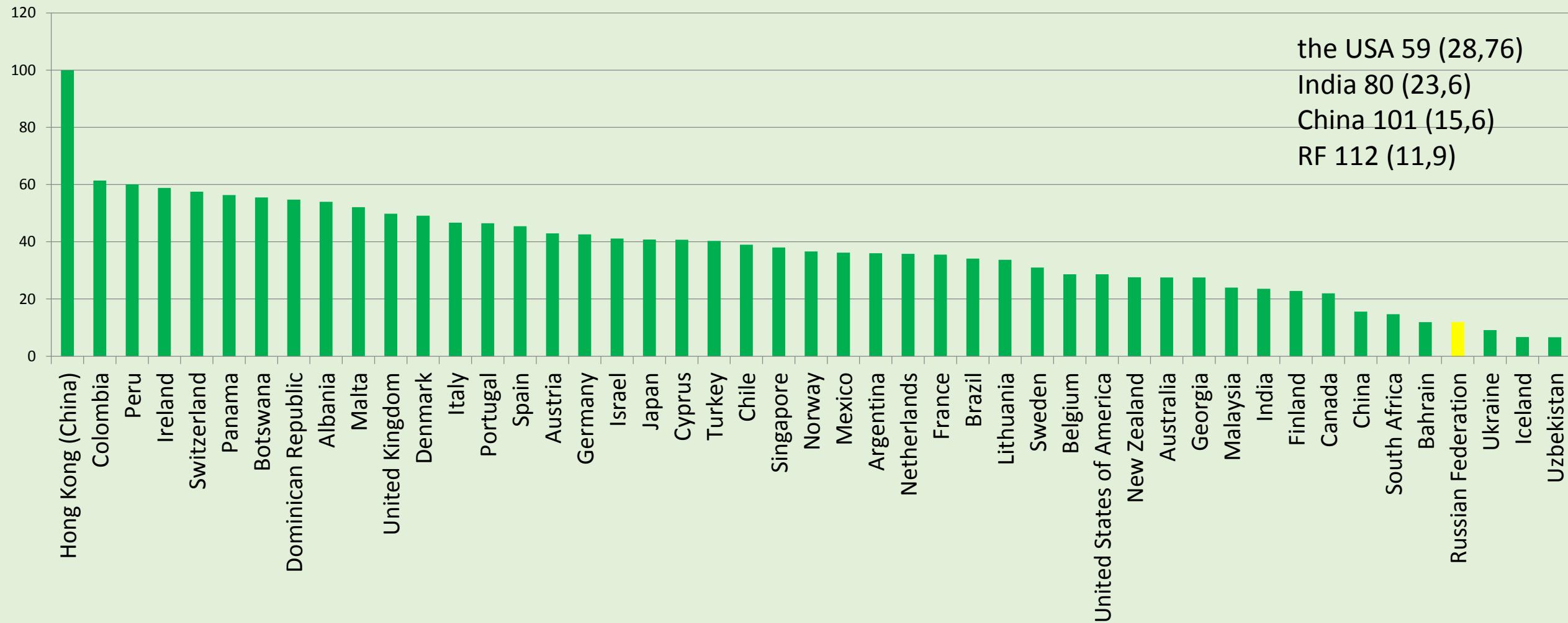
Green technologies: 109 rank of 140 on ecological sustainability

Ecological sustainability: GDP per unit of energy use, environmental performance, ISO 14001 environment certificates

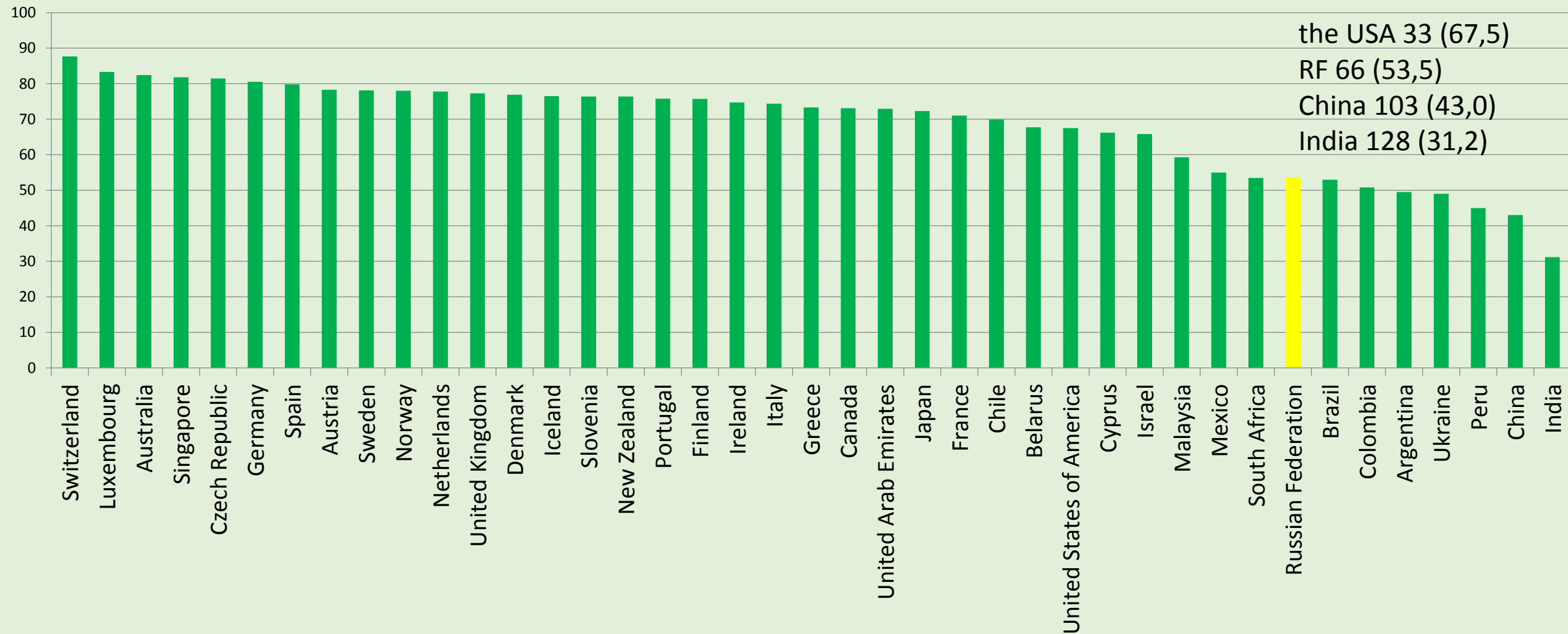


GDP per unit of energy use: 112 of 140

GDP per unit of energy use score



Environmental performance: 66 of 140



Summary

- 1. According to some indicators, Russia is (slowly) improving innovation activities (2013)**
- 2. However, it is a long way to reach high-tech world leaders level in innovations and R&D**
- 3. “Green” technologies are not the main priorities in the Russian politics. The innovations are very rare in “green” techs.**
- 4. Obstacles and problems: institutions (business, political, regulatory, cultural etc.)**

Thank you for attention!

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ISO 14001 environment certificates: 86 of 140

