Russian Energy Strategy and Modernization of Russian Economy (Oil & Gas as Russia's 6th innovative cluster)

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Two ways of introducing innovations in energy-rich economy: First option => *Away from Oil & Gas*

Dominant position within current Russia's political leadership & society => **innovations as a means of *passing away* from oil & gas dependence:**

- Contradistinction of oil & gas (natural resource industries) & innovations =>
- Political statements => public perceptions: "To get rid of the oil & gas dependence", "to overcome resource curse", "quick departure from oil & gas" => misleading for O&G investors
- President Medvedev: Five innovative clusters *outside* (does not include) natural resource industries

Five innovative clusters of President Medvedev

At the First meeting of Commission for Modernisation and Technological Development of Russia (June 18, 2009) President Medvedev listed **five** priority areas for its work:

- **energy efficiency and energy saving** (incl. development of new (types of) fuels & deep fuel processing);
- **nuclear technologies**;
- **space technologies**, above all telecommunications related (incl. GLONASS and its ground infrastructure);
- **medical technologies**; and
- **strategic information technologies**, incl. development of supercomputers and software.

Five innovative clusters of President Medvedev – criteria (1)

Areas of technological breakthrough - to be under direct presidential control => criteria for such areas:

1) “where the indications of our competitiveness or our competitive potential have not been lost or killed off,
2) those sectors of the economy that will produce a significant multiplier effect and act as a catalyst for modernisation in related industries,
3) areas bound up with defence requirements and the nation’s security”.

Economic multipliers for different investment O&G projects (acc. to late Prof. Alexander A. Arbatov)

Project	GDP multiplier for:		Employment multiplier for:		
	CAPEX	OPEX	CAPEX	OPEX	Project
RUSSIA					
6 PSA O&G projects	**1.90**	**2.82**	Not defined	Not defined	**4.9**
Timan-Pechora PSA project	**2.69**	**2.09**	**17.4**	**69.0**	**41.3**
Russian part CPC oil pipeline	**3.14**	**3.16**	Not defined	Not defined	**182.3**
Offshore terminal "Northern Gates"	**1.68**	**2.21**	**5.0**	**12.2**	**9.9**
Russian participation in exploitation of Tengiz oilfield, Kazakhstan, & transportation its export crude via Russian territory	**-**	**3.09**	Not defined	**5.7**	Not defined
KAZAKHSTAN					
Exploitation of Tengiz oil field	**1.55**	**1.59**	**5.4**	**22.0**	**7.7**
Construction & exploitation of Kazakh part of CPC oil pipeline	**1.77**	**1.97**	**4.7**	**97.3**	**62.2**

Compiled on: publications of late Prof. Alexander A.Arbatov, etc.

Source: А.А.Конопляник. Анализ эффекта от реализации нефтегазовых проектов СРП в России для бюджетов разных уровней (к вопросу об оценке воздействия на социально-экономическое положение страны крупномасштабных инвестиций в реализуемые на условиях СРП нефтегазовые проекты). *«Нефтяное хозяйство»*, 2000, № 10, с. 24-30

Distribution of cumulative effects (direct plus indirect) from realization of O&G PSA projects in Russia between different budgets, % of the total (prior to 2003 oil taxation reform)

	Budgets		
	Federal	Regions	
		Oil-producing	Machine-building
(1) If **one** technological conversion is considered:			
Onshore:			
- small	20	50	30
- large	20	30	50
Offshore	40	20	40
(2) If **five** technological conversions are considered:			
Onshore:			
- small	30	50	20
- large	30	30	40
Offshore	50	20	30

Source: А.Конопляник. Когда в выигрыше все. К вопросу исследования экономического эффекта от применения механизма СРП. – *«Нефть и капитал»*, 2000, № 9, с.4-8; «Стулья» - завтра, деньги – сегодня. Как решить финансовые проблемы российских нефтяников и машиностроителей, участвующих в СРП. – *«Нефтегазовая Вертикаль»*, 2000, № 10, с. 140-143.

Five innovative clusters of President Medvedev – criteria (2)

Areas of technological breakthrough - to be under direct presidential control => criteria for such areas:

1) “where the indications of our competitiveness or our competitive potential have not been lost or killed off
2) those sectors of the economy that will produce a significant multiplier effect and act as a catalyst for modernisation in related industries
3) areas bound up with defence requirements and the nation’s security”

If so, Why Oil & Gas (especially unconventional) Are Not On The List ???

Two ways of introducing innovations in energy-rich economy: Second option => *Through Oil & Gas as well*

Alternative position: five President Medvedev's innovative areas PLUS market-based implementation of innovations through O&G as well:

- O&G is not the "curse" per se, but the value - if adequately managed => the problem is not in availability of natural resources, but in their (in)effective management and collection & utilization of resource rent
- Not to oppose O&G vs. innovations (in Russia in late 1990-ies up to 47 federal & regional taxes & duties on O&G => O&G earnings were intended to finance conversion of former USSR military economy => this policy has failed)
- If reasonable state investment policy, O&G provide credit worthy demand for innovations & create high(est) multiplier macroeconomic effects (2nd Medvedev's criteria) => investment projects in resource industries as generators of demand for innovations + as regional development projects
- Worsening conditions of O&G development (since early 1970-ies) worldwide => to be competitive at the energy & capital markets, O&G **should** become another high-tech, innovative cluster to compensate negative influence of "natural factor" => **OIL & GAS AS *SIXTH* INNOVATIVE CLUSTER IN RUSSIA**

Russia's Arctic offshore as innovative cluster

- Some historical innovative clusters that have led to creation of new industries & infrastructure ("new economy"):
  - Military (e.g. nuclear weapons => USA, USSR, 1940-ies +)
  - Double-purpose (e.g. space exploration => USA, USSR, 1950-ies +)
  - Civil (e.g. motorization => USA, Germany, 1930-ies +)
- Priority innovative spheres within Russian O&G:
  - outer continental shelf development, esp. deep-water Arctic offshore
  - Eastern Siberia gas processing industry, incl. helium
- **Deep-water Arctic offshore** development is nor less (if not more) difficult & challenging task than outer space exploration => demand for innovations (technological breakthroughs) to meet new challenges in economy and (especially!) ecology =>
  - ***Q:*** whether Arctic offshore development will lead to creation of new industries ("new economy") in Russia?
  - ***A:*** it depends on state investment policy…=> stimuli for project finance

Financing of innovative clusters: *THEN*

- The period of highest military confrontation of two political systems
- Offshore development - by utilization of high-tech achievements of military industries (e.g. gas turbines at offshore platforms & pipelines compressor stations = modified aircraft engines)
- Natural resource industries (e.g. offshore development) were **secondary** consumer of double-purpose high-tech technologies,
- Military industries provided credit worthy **primary** demand for costly innovations and created new industries & "new economy"
- **Budgetary** financing of innovations for military industries, incl. of double-purpose ones

Financing of innovative clusters: *NOWADAYS*

- Offshore O&G development (firstly – Arctic offshore) as generator of **primary** demand for innovations
- Natural resource industries as supplier of high-tech solutions for other civil industries
- O&G of Arctic offshore = civil industries = **project** (debt) **financing** (but not budgetary financing)
- O&G Arctic offshore could provide credit worthy primary demand for costly innovations and thus create new industries & "new economy" – **BUT ONLY IN CASE OF**
- Effective **investment climate for direct investment** in Russia in general & Russian subsoil use in particular => it requires radical transformation: **from fiscal-oriented to investment-friendly =>**
- Author's view on solution = **Multiple investment regimes for Russian subsoil use**

Matrix of multiple investment regimes for Russian subsoil within "legal stability – tax favourability" framework (proposal of the author)

Key idea: to create competition between investment regimes for investor

		Legal system	
		Administrative (public law)	**Civil law**
Taxation regime	**Common (universal)**	**Licensing regime (currently MRPT + export duty)**	**Concessionary regime**
	Special (individualized)	**Licensing regime with derogations (differentiated licensing regime)**	**Regime of production-sharing agreements (PSA)**

Comparative economic (dis)advantages of different subsoil investment regimes (1)

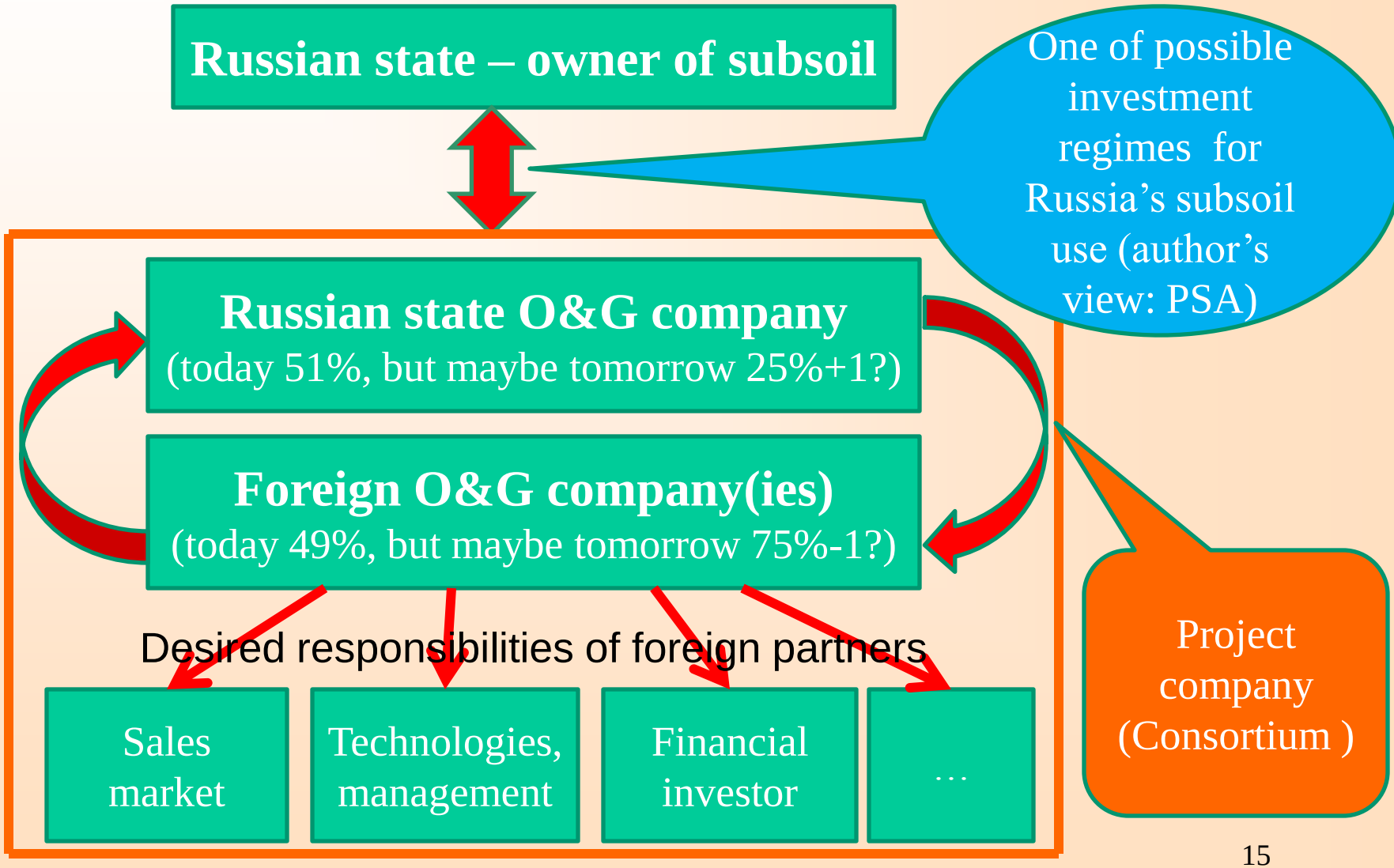
Investment regime	Characteristics of investment regime within project life-cycle	
	Tax burden (resource rent extraction)	Legal stability
Licensing regime (currently MRPT + export duty)	Non-optimal (high), unilaterally established	No
Licensing regime with derogations (differentiated licensing regime)	Non-optimal (diminished), unilaterally established	No
Concessionary regime	Non-optimal (high), unilaterally established	Yes
Regime of production-sharing agreements (PSA)	Optimal, negotiated	Yes

Comparative economic (dis)advantages of different subsoil investment regimes (2)

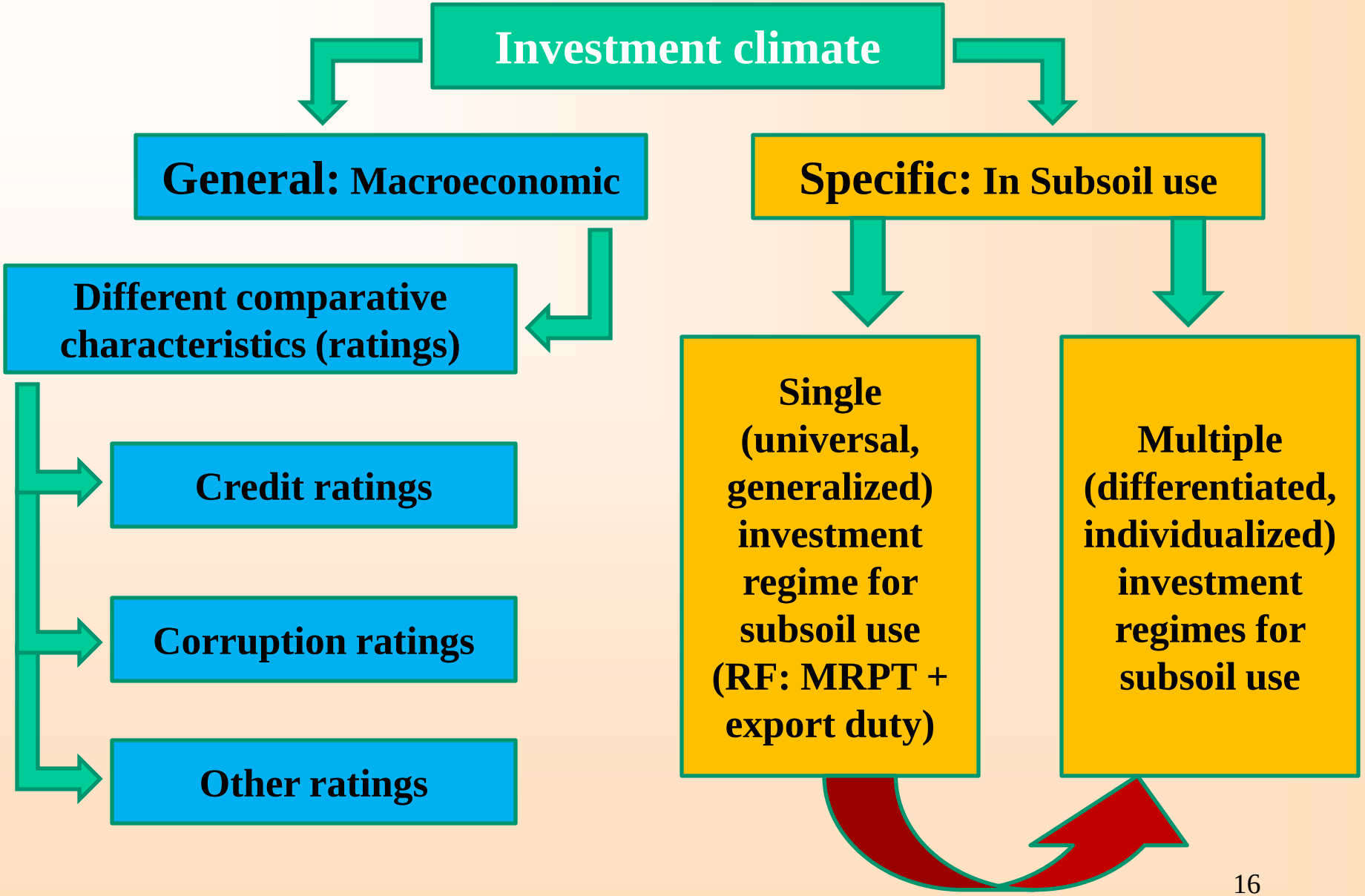
Investment regime	Characteristics of investment regime within project life-cycle	
	Tax burden (resource rent extraction)	Legal stability
Licensing regime	Non-optimal (high), unilaterally established	No
Licensing regime with derogations (differentiated licensing regime)	Non-optimal (diminished), unilaterally established	No
Concessionary regime	Non-optimal (high), unilaterally established	Yes
Regime of production-sharing agreements (PSA)	Optimal, negotiated	Yes

From author's view, **PSA is the best investment regime for Russian Arctic offshore O&G: optimal resource rent distribution + maximum stability (if capable negotiators)**

Possible organizational structure of consortia for Russian Arctic offshore O&G development (within author's concept of multiple investment regimes for subsoil use)

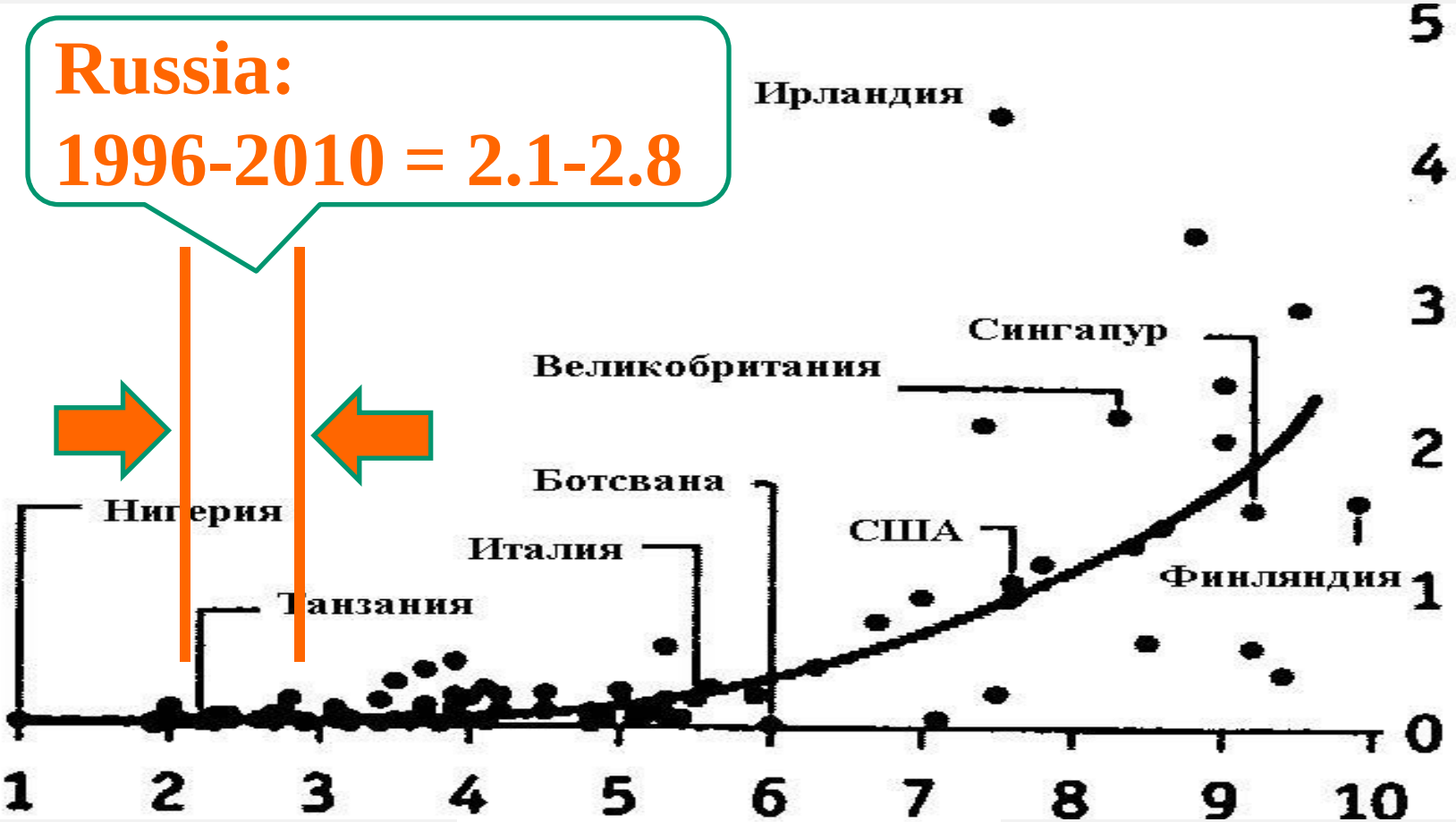


Investment climate in subsoil use: two dimensions



FDI inflow vs. "corruption perception index" correlation

Russia:
1996-2010 = 2.1-2.8



Source: Special report "Bribery and business". - The Economist", March 2, 2002, p.68
«Нефтегазовая Вертикаль», 2011, № 15-16, с.45

Thank you for your attention !

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