

Россия: инновационный путь развития, «сырьевая зависимость» и освоение Арктического шельфа

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Russia: innovative economic growth, “resource curse” & Arctic offshore development

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Russian economic recovery: can energy industries be a driver?

- Two school of thoughts within Russian decision making circles:
 - Energy & “resource curse” => to search for innovative economic drivers outside energy industries
 - Energy as a new innovative cluster for economic growth
- Russian energy production (supply curve) is being more costly since moving to remote areas with worse natural conditions; this is both the:
 - risk of loosing competitiveness both in energy & capital markets if no technological breakthroughs,
 - challenge since immanent demand for revolutionary STP as a basis for new quality of economic growth

Five innovative clusters for Russian economy

At the First meeting of Commission for Modernization and Technological Development of Russia (18.06.2009) then RF President D.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.

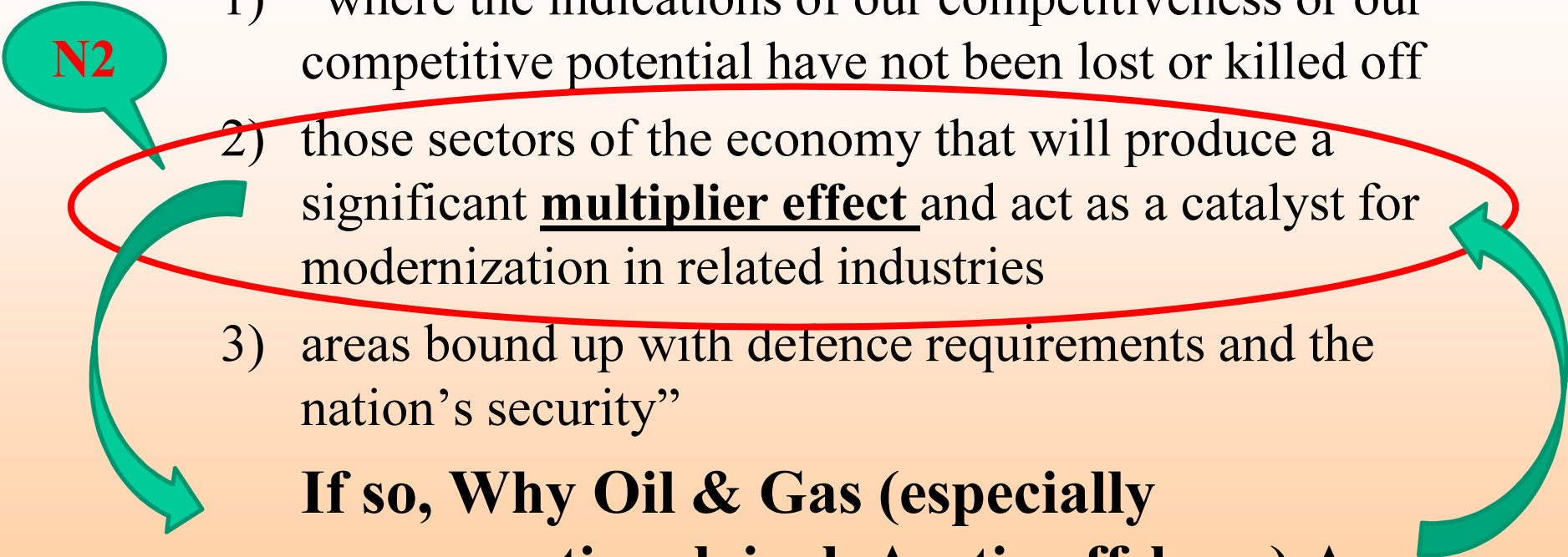
They have been mostly repeated later by President V.Putin



N1

Five innovative clusters for Russian economy – criteria

Areas of technological breakthrough => 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 modernization in related industries
 - 3) areas bound up with defence requirements and the nation’s security”

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

Deep offshore vs. outer space

	Altitude / water depth	Number of visitors
Outer space	Min = 19-20 km ISS = 337-430 km	
Moon	Av. = 384 400 km	
Mariana trench	11 km	

ISS = International Space Station

Deep offshore much more difficult to develop than outer space

	Altitude / water depth	Number of visitors
Outer space	Min = 19-20 km ISS = 337-430 km	432 from 32 states (since 1961)
Moon	Av. = 384 400 km	12 (since 1969)
Mariana trench	11 km	3 = 2 (1960) + 1 (2012)

ISS = International Space Station

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
R U S S I A					
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
K A Z A K H S T A N					
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

A.Konoplyanik, Russian Arctic O&G, Moscow, 16.04.2014

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.

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 + road infra => 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 not 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:** Should be, BUT it depends on state investment policy => stimuli for project financing & market-based innovations in O&G & manufacturing

Arctic offshore development: 5 factors

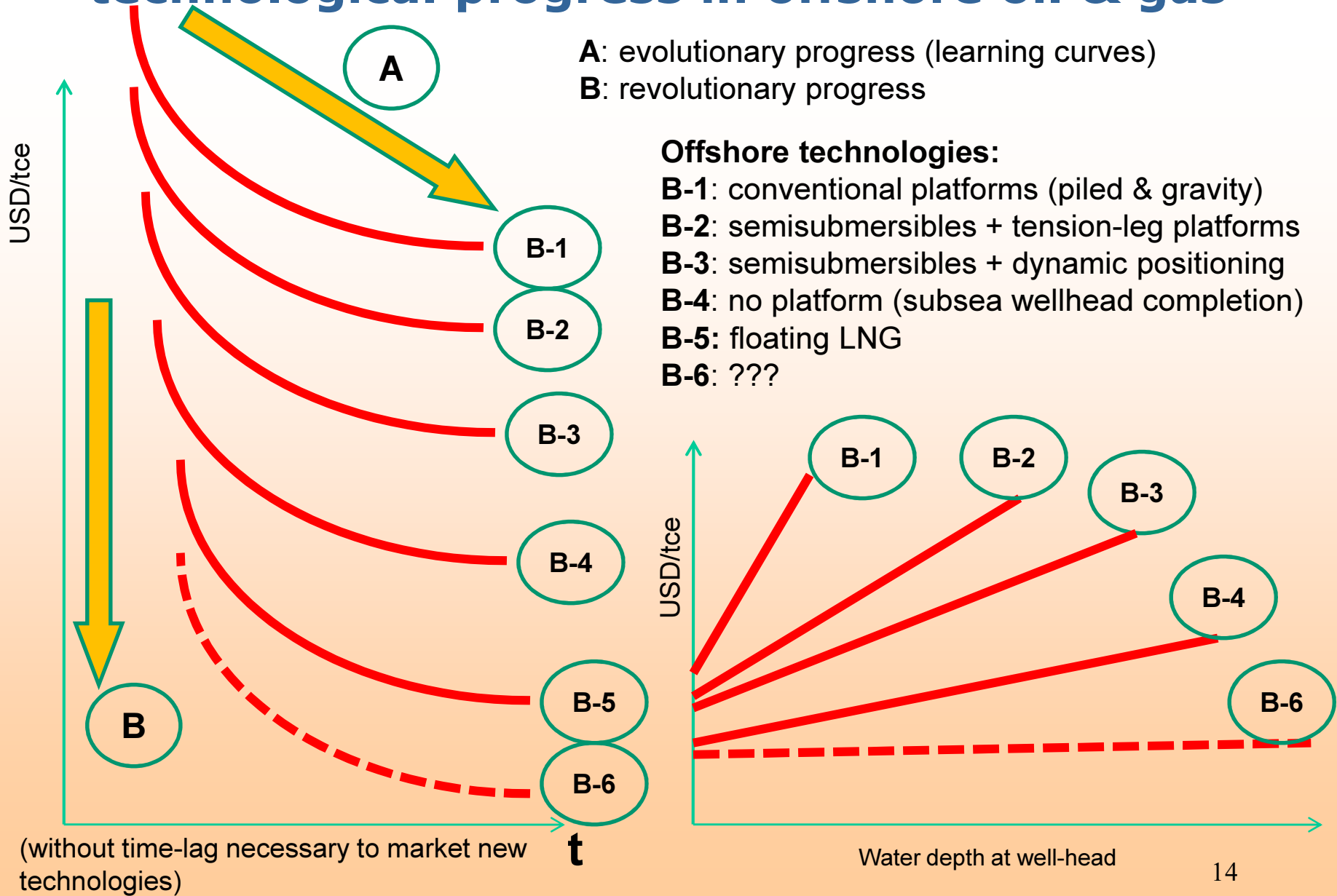
- 1) Investment regime(s) in O&G (single vs multiple)
- 2) Investment regimes in manufacturing (domestic production vs import)
- 3) Stimuli for innovations (in O&G & manufacturing)
- 4) Ecology (speeding-up or slowing-down Arctic offshore development?)
- 5) Comparative economics with other non-conventional O&G (supply) & improving efficiency (demand) =>

Duration of preparatory cycle for Arctic offshore production to start

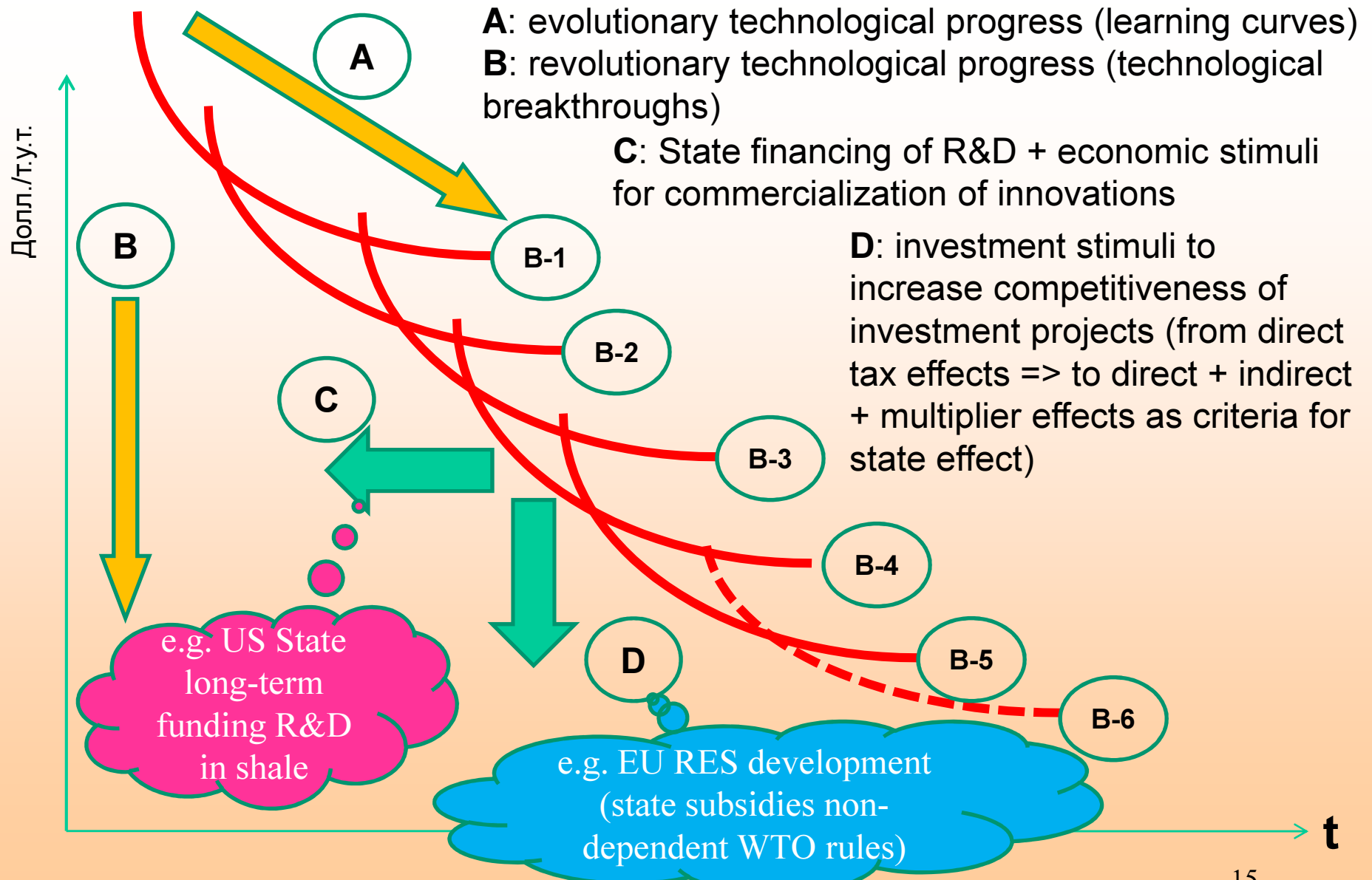
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"Learning curves": evolutionary & revolutionary technological progress in offshore oil & gas



"Learning curves" & the role of State



Arctic offshore: investment stimuli for O&G producers is not enough => manufacturers

- How to stimulate domestic manufacturers within WTO rules?
- TRIMS/WTO: no price discrimination, no local/domestic quotas (like 70% in RF final PSA law), but => EU RES state subsidies?
- State shall help domestic manufacturers to pass investment peaks for innovative CAPEX => RF state guarantees/subsidizes for domestic manufacturers as in EU RES? => no price discrimination
- All sort of investment stimuli for localization in RF of innovative manufacturing for Arctic offshore (for future O&G production) *or* to (continue) diminish/cancel import duties on unique foreign equipment (for today's O&G production)? But...
- ...whether Arctic offshore be developed today? Time window for Russian Arctic offshore development = window of opportunities for Russian manufacturing if supported by State

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Energy projects financing => invest.regimes

- Equity (corporate) vs debt (project) financing: 30/70-40/60
- The rule: Project rating < company rating < host state rating (=> for current Russia its project ratings are in speculative grades zone)
- Debt financing in Russia mostly via externally-raised syndicated loans, even if underwriter is Russian bank; if Russian state banks => de facto state sovereign guaranty => but Russia rating reliability below medium
- Global financial crisis + Eurozone crisis + low Russia credit rating => shrinking of available zone of potential project financing
- In crisis role of project financing decrease, and of corporate financing, on contrary, increase, *but* current financial in-crisis problems of the companies (more difficult servicing of debt & on-going needs) => shrinking of available zone of potential corporate financing
- => Russia: still high risks of financing energy (subsoil) investment projects... => how to diminish them in the given circumstances?
- My draft (historical) answer: **multiple investment regimes in subsoil use + competition between them**

Comparative data on implementation of subsoil use tax/investment regimes worldwide, 2003 & 2009

-	2003		2009	
Number of states in analysis (data from Barrows Inc./AIPN), incl.:	180		177	
Oil producing states, using:		91		104
- Tax + Royalty (T+R)	113	45	111	55
- Production sharing (PSA)	54	34	55	38
- Both T+R & PSA	13	12	11	11

Based on data, kindly provided to author by Gordon Barrows (Barrows Inc./AIPN)

Source: А.Конопляник. Средство от «правового вакуума». Уровень экономического и правового развития государства определяет выбор инвестиционных режимов в недропользовании. – «Нефть России», 2012, № 8, с.20-24; № 9, с.26-29, № 10, с.16-23.

Author's historical proposal: possible composition of investment regimes (investment matrix/menu) for Russian subsoil use (within legal vs. taxation axes)

Key idea: to create competition between investment regimes for investor

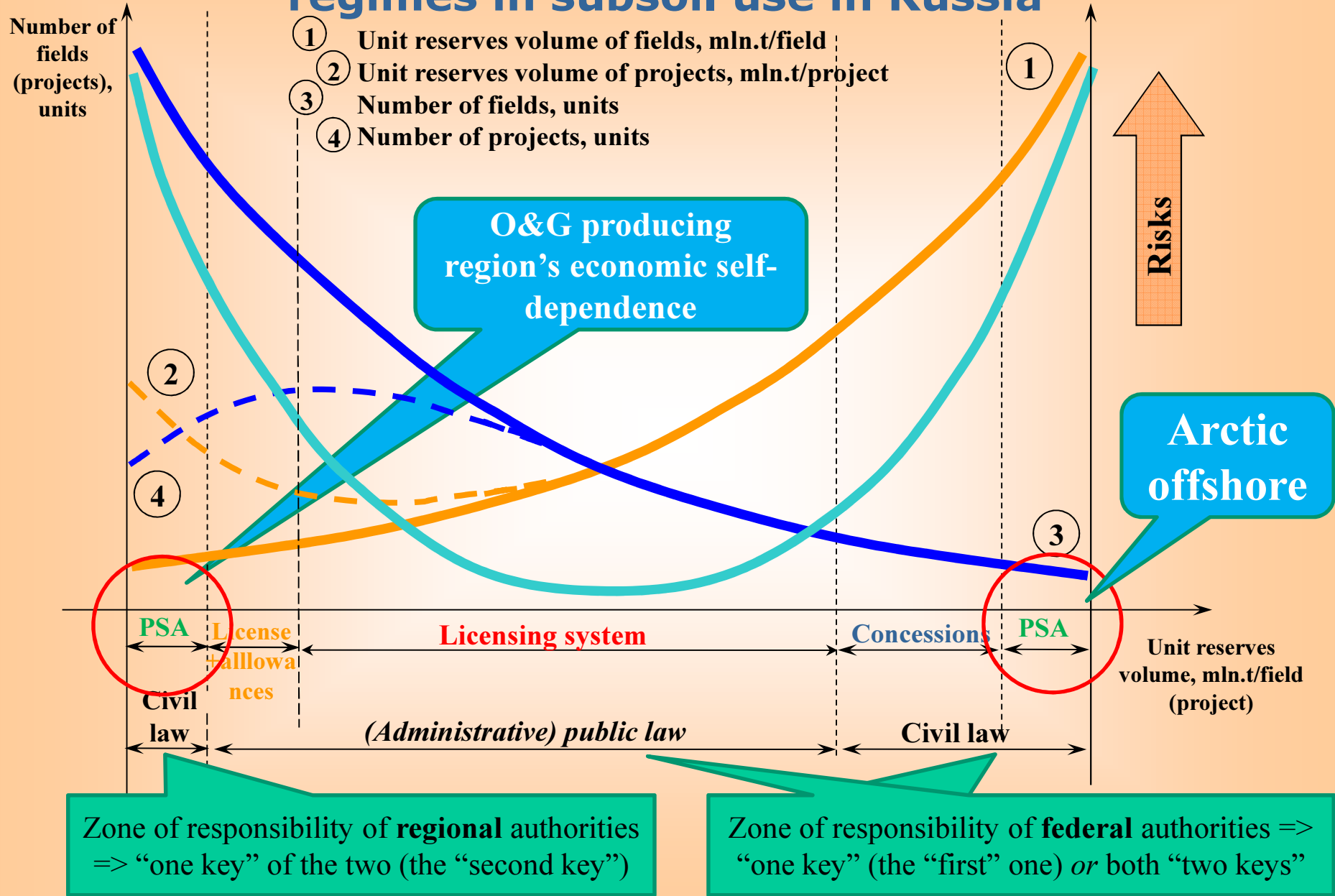
A way to increase investment attractiveness of Russian subsoil use

		Legal system	
		Administrative (public)	Civil
Tax treatment	General (common)	Licenses 1	Concessions 3
	Special (incl. individualized)	Licenses with allowances (differentiated licensing regime) 2	PSAs 4

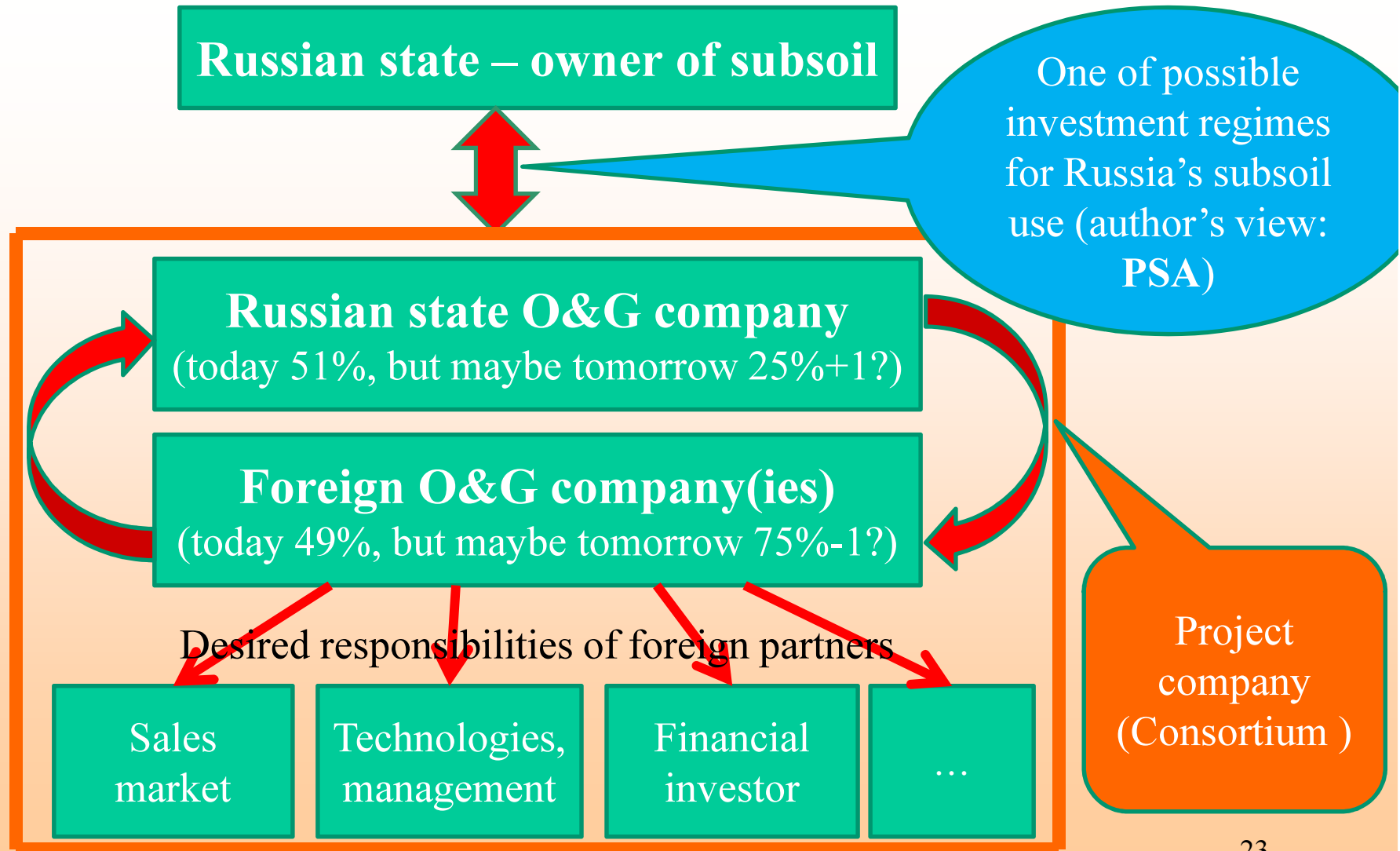
Different investment regimes in subsoil use: comparative legal & tax advantages/disadvantages

Investment regime	Investment regime's characteristics during project life-time	
	Tax pressure	Legal stability
Licensing (1)	Non-optimal (high), established unilaterally	No
Licensing with allowances (special / differentiated tax regimes) (2)	Non-optimal (high / diminished), established unilaterally	No
Concessions (3)	Non-optimal (high), established unilaterally	Yes
PSA (4)	Optimal, negotiated	Yes

Proposed application zones for different investment regimes in subsoil use in Russia



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



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**Thank you for your
attention**

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