State-Owned Enterprises as Innovation Development Agents:

*The Comparative Analysis of Russia’s and France’s Cases*

Ivan Danilin

Institute of World Economy and International Relations (IMEMO), Russian Academy of Sciences; Moscow State Institute of International Relations

Elena Yamburenko

Moscow State Institute of International Relations (MGIMO-University)

57th ISA Annual Convention
March 19, 2016
Atlanta, Georgia

*Supported by Russian Foundation for Humanitarian Research, grant #16-02-00615*
SoE as innovation agents: why study?

- SoEs still function in different sectors of emerging and most advanced economies
- Despite SoE presence in technology and innovation areas is less apparent, they still perform some set of functions
  
  Especially this is true for capital-intensive industries and/or “strategic” (defense/security or dual-use) industries like aerospace, nuclear, machinery, etc.

  In the PRC and in some other emerging economies this is also true for some “traditional” innovation areas
- Former success stories and ongoing PRC and some other nations experience
- Moderate revival of interest considering development state concepts (Wade, Mazucatto) and discussions on “new industrial policy” (Rodrick, OECD, UNCTAD)

SoEs are not economically unimportant

- In advanced economies - up to 25% of GDP – mostly infrastructure and public services, but also defense, some aerospace and nuclear, etc.
- Companies with state enterprises are even more widely presented in economic activity
- 23% of Fortune-500 (2014)
- Up to 96% of top-10 companies (in Germany – 11, Finland – 13, France – 17)
Problem areas of innovation/technology development for SoE interventions

- shortages of resources and/or long-term risk-tolerant capital resources (“patient capital”), need for fast and controllable mobilization of resources
- absence and/or relative weakness of private businesses in the respective areas
- unwillingness of existing private businesses to take risks, associated with development of “disruptive” technologies and/or long-term, strategic industrial development
- challenges for global mature markets entry (strong conglomerates control target markets);
- execution of public control over development of “sensitive” defense, security technologies;
- public control over selected civilian technologies for achieving wider social/societal benefits (as opposed to pure commercial) or because of ideology (i.e. belief in the “need” for public control for better serving “public” interest).

SoE potential utilization

- “initiators” and first (“anchor”) users/markets for innovations
- sources of “patient capital”
- redistributing resources for most advanced or prospective directions of societal and/or economic development
- instruments of industrial policy
- quasi regulators etc.

Instrumental approach: convenient instrument for government as Principal:

- more targeted and at least partly more professional management of industrial development
- simplify policy tasks [of development]
SoE economic and commercial performance considered to be generally poor, face multiple shortcomings [Vickers and Yarrow, etc.]

**BUT!**

What effects should we measure (target function, spill-over and other or profit and capitalization)?
On what time scale?

**Dilemma of SoE efficiency vs effectiveness as innovation/development agents [also Tonurist, Karo]**

*Research question (preliminary)*

1. *May SoEs effective in innovation developing?*
2. *Are SoEs in developed nations just an anachronism or bear some important functions in technology and innovations?*
Comparison of French and Russian policies toward SoEs in the context of SoE innovation studies

Most literature is focused on China experience (mostly empirical studies)
The PRC is a specific case, may be more illustrative if supported by studies of cases from other economies

- Study and comparison of Russia and France may reveal important general factors
- Despite all differences comparison is possible because of some similarities of two economies and innovation policies

Differences
- Economic models
- Development level (especially for industry)
- Institutional settings and political regimes
- Size and population
- Natural resources deposition… etc.

BUT!

Similarities
- History of innovation systems and associate political models, institutions and instruments
- Focus on traditional high-tech industries
- Heavy accent on “national champions” – big and powerful national companies in public or mixed property
- Strong social orientation of economic policies
2001-2014 a new framework for SoE governance and management constructed (compliance with EU, WTO and OECD norms and regulations)

Since mid-1990s following rise of EU regulations and liberalization of French economic policy - privatization and deregulation trend, with sharp decrease of public involvement in non-strategic innovation activity of enterprises

BUT! Some notable exception – French government role in rise of Airbus and EADS in general (now Airbus Group)

2001 Organic Law on State Finance (LOLF)
2004 Government Shareholder Agency established. State as “regular” shareholder, no more as strategic manager or investor
2014 French Government doctrine for actions:
  - controlling interest in companies of strategic public interest;
  - guarantee the existence of resilient corporations;
  - support corporate growth;
  - bail out companies on an ad hoc basis.

In innovation area companies with state participation operate on a general basis with all other private actors

No substantial utilization of SoE for nation-wide advanced technology development outside defense/nuclear

ANDROMEDA case as illustrative example

Social and some other non-economic influence on SoE decision-making still present
Missed ratio – support of “existence of resilient corporation” and “corporate growth” with state shareholding but without moderately pro-active shareholder policies (public and expert critique)

French new industrial policy after German`s Industrie 4.0 – a potential Game Changer? (an issue for further research)
Soviet Union: different realm, still parallels with Western, also French evolution of SoE policies

• Public ownership as a baseline economic institution

• Distant analogues of privatization/liberalization activities of the western and developing nations in the USSR periodic policies for rising economic *raison d`etre* of enterprises by quasi-market instruments (1965 “Kosigin`s” economic reform, M.Gorbachev`s reforms of late 1980s)

• 1990s: chaotic, semi-criminal privatization, deregulation and liberalization.
Modern Russian experience: heavy accent on classic SoEs

• After 2000 – industry consolidation under public ownership (SoEs, State Corporations, Federal Banks)
  Rationale: rising industrial and technology competitiveness in “strategic” areas, where private businesses failed to deliver important economic outputs

• Since 2010-2012 a special emphasis in federal policy for SoEs was placed on the innovative development
  Key instrument - so-called Programs for Innovative Development (in Russian short “PIRs”)

• Supportive innovation-focused instruments
  Technology Platforms, Innovation Territorial Clusters, Technology and Industrial Parks, Small business support policies, etc.

• Supported by a range of federal financial and regulatory interventions
  Federal Targeted Programs in high-technology areas, harshen regulations for foreign competitors, etc.
Use of SoEs for innovation development in Russia: ambiguous results

Share of enterprises, engaged in technology innovation activities
(% to total)

Growth of total output of non-agriculture sectors
(% to the previous year, based on output data in current roubles)

Growth of innovation products and services output of non-agriculture sectors
(% to previous year, based on output data in current roubles)
...but little changed in federal innovation policies for SoEs

Still pro-SoE approach in innovation policy

- creation of a new State Corporation Roskosmos (2015)
- formation new Rostech State Corporation subsidiaries - Stankoprom, Natsimbio, etc. (2013)

Reasons:

- lack of [strategic] investors with needed expertise and resources
- sanctions and problems with capital accumulation outside public sector
- institutional risks and challenges [for SoE – much easier to overcome due to connections with bureaucracy and political heavyweights]
- “command and control” approach, with overestimation of Soviet successes and suspicions over possibilities and reasons of private investors
Some preliminary results from policy analysis and economic outcomes

SoEs appear to be effective mostly in the early stages of development of general purpose technology/industry (supported by the facts of SoE`s commercial inefficiency on mature markets)

Market formation/investor substitution (timely) functions generally supported (outside “demand for 3rd party innovation products and services)

Creative innovation not supported – mostly catch-up/build-up measures

Weak formation of interactions between the NIS actors (excl.some subcontractors) in absence of “perfect” institutions [argument of Tonurist, Karo not fully supported]

Key importance of institutional factors for SoE efficiency [supports Belloc argumentation]

A need for presence of coherent public policy and long-term vision of national development (easy for catch-up/build-up, problematic for advanced innovations directions)
## Comparison between two nations model of SoE utilization of innovation policy may support further conceptualization

<table>
<thead>
<tr>
<th>Goals and other SoE operation characters</th>
<th>France</th>
<th>Russia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area of operation (strategic or critical industrial)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Long-term technology goals</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Long-term market support goals</td>
<td>No</td>
<td>Yes (specific)</td>
</tr>
<tr>
<td>Systemic support of National Innovation System</td>
<td>No</td>
<td>Yes (specific)</td>
</tr>
<tr>
<td>Industry maturity</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Market efficiency</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Autonomy of management</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Economic non-core responsibilities</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Non-economic non-core responsibilities</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Direct government support</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Indirect government support (inputs, regulations, etc.)</td>
<td>High</td>
<td>Medium-high</td>
</tr>
<tr>
<td>Institutional settings</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Macroeconomic settings</td>
<td>Medium-High</td>
<td>Low</td>
</tr>
<tr>
<td>General government and regulations efficiency</td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>

### France – use of SoE as innovation agents non-optimal
- Strategic asset management
- Strong pro-social bias
- Lost rationale of public involvement (outside defense)

### Russia – use of SoE as innovation agents non-optimal
- Strategic asset management
- Overregulated (conflict of short-term tactic considerations and long-term goals)
- Overburdened with extra-functions (resource losses)
- Perfect storm (macroeconomics, institutions, sanctions)
• supporting competition in established industries – in case of substantial autonomy from the state

• mitigating all-economy risks of advanced technology development (through sharing of resources and/or assets, ability for a longer-term approach, etc.);

• controlling and/or providing societal benefits in innovation development

…but executing these functions pose challenges and significant costs of management on the Government side