

## POLICY MATRIX

### Policy Recommendations on Innovation in Private Firms

**Deficiency by aspect of the investment climate**

**Recommended areas for policy dialogue**

**Recent or on-going government activities**

R&D sector: incentive problems

The incentive conflicts existing in the current arrangements have resulted in informal arrangements under which scientific research teams based within the public system sell R&D services on an informal yet commercial basis to enterprises. Although facilitating “spontaneous privatization”, this causes a conflict of interest between researchers and institutes, uncertainty surrounding the ownership of technical results, and political concerns that the state is not capturing the rents due to it from its intellectual property.

Reform the incentive regime to encourage (i) researchers at public R&D institutes (RDIs) to engage in commercial innovation and/or absorption in private companies and (ii) spinning off research groups from RDIs, with the objective of lowering the public financing burden in RDIs, fostering commercial innovation and absorption by firms, and reallocating public support towards basic R&D in universities.

“Strategy of Russian Federation in the Area of Development of Science and Innovations until 2015”

**In March 2006 the government approved the “Strategy,” which emphasizes a number of policy directions aimed at igniting the “innovation economy” in Russia, including a greater state commitment to research and development, better protection and enforcement of intellectual property rights, and the formation of IT parks and state venture funds.**

**This strategy considers the continuation of some initiatives to promote innovation and implementation of new**

initiatives:

For smaller firms, the measures include creating effective innovative infrastructure (technology parks, incubators), providing centers that offer specialized services, and providing financial support for small and start-up firms.

Support for larger firms and the development of innovation networks and clusters include indirect measures to stimulate exports, quality certification for assistance, co-financing for venturing into global markets, support for patenting abroad, and support for developing joint R&D projects.

Provide incentives for private firms to invest more in absorptive capacity to encourage knowledge-driven productivity growth. Specifically recommend the greater use of matching grants for supporting the absorption of new technologies and processes, access to ICT, ISO certification, and investments in “soft” technology within private firms.

Matching grants encourage public-private risk sharing and orient the selection process toward projects with clear commercial outcomes. The justification for supporting ICT technologies and ISO certification is that these investments have strong and positive effects on productivity and innovative behavior. However, there exist major risks to effectively allocating matching grants, including program corruption, capture, and sectoral targeting. Thus certain prerequisites are required for its success: an institutional design that would immunize the funding allocation from political interference, corruption, and other state or specific interests capture and allocation neutrality so that grants are not steered in any predetermined directions by targeting (“picking winner”).

Public support of commercial innovation

Even a well-functioning market economy cannot generate optimal levels of R&D by itself. There are two main sources of market failure with respect to R&D: (1) partial appropriability (due to spillovers), which does not allow inventors to capture all the benefits of their invention, and (2) information asymmetries, which lead to a “funding gap.”

**The OJSC Russian venture company would be a government-owned institution supporting innovation by acquiring participations in existing venture funds and contributing to the creation of funds to finance new companies.**

Encourage the use of private “seed” capital funds but avoid state-owned and state-managed VC.

**In the most successful cases worldwide, governments typically “seeded” the venture capital industry by investing in privately managed funds. In these public-private partnerships, governments mitigate some of the risk inherent in technology-oriented startups, and the venture capitalist provides commercial and managerial expertise.**

Russian venture company

**The Russian government is proposing to establish a Russian venture company that would be a government-owned institution supporting innovation by acquiring participations in existing venture funds and contributing to the creation of funds to finance new companies. Fully state-owned VCs have not proven a success in other countries and thus caution is warranted.**

**A “seed” capital program aimed at promoting absorption and innovation is likely to work best in situations in which support for R&D exists and where a grants program provides critical funding at the earlier stages of technological development.**

Support patenting activity of firms, especially patenting abroad and patenting by smaller firms with less capacity.

**Patenting abroad (for example in the U.S. and the EU patent offices) would protect the IPRs of Russian exporters and facilitate exports.**

Protection of Russian IP in the global market

**Inventors tend to apply only for Russian patents, with few opting for higher-cost U.S., EU, or Japanese patent registration. The low incentives for foreign registrations are due to the modest integration with the global economy on domestic technology absorption, and in particular, the limited trade in critical parts and components.**

## Policy Recommendations on Skills and Training

### Deficiency by aspect of the investment climate

Although highly-educated by international standards, the Russian workforce lacks the requisite skills for firms to compete globally, a deficit that can be made up through an effective combination of in-house training and vocational training. Whether Russian firms benefit from greater innovation and knowledge absorption will depend critically on these skills.

- The quality of education, and its relevance to skills that Russian firms need to become competitive, is declining.
- Russian firms can no longer rely on state-funded schools to provide them with workers who possess requisite skills and qualifications needed for a globally competitive firm.

### Recommended actions

Use employer-targeted incentives to invest in in-service training.

The proportion of employees in Russian firms that receive in-house training is one of the lowest among the countries for which data are available. The Russian government should consider putting in place employer-targeted training policies to remedy the underinvestment in in-service training.

*Payroll-levy training funds.* International experience suggests that: (i) that employers should be closely involved in the governance of levy funds; (b) that policies should be designed to increase competition in training provision from all providers, both public and private, including the employer; and (c) that levy funds should be strictly earmarked for training and not diverted to other government uses.

*Matching grants.* Training levies do not work particularly well for small and medium enterprises, which are often unlikely to be reached by targeted training programs. Encouraging training in small and medium enterprises may require a more

### Recent or on-going government activities

proactive approach to address systemic weaknesses in both training and technological capabilities and in information, as well as the more limited access to finance that most SMEs face. Once SME constraints are identified, matching grant schemes can be used to finance training and other business support services delivered by available public or private sector providers.

The government can help Russian firms overcome shortfalls in worker skills by boosting incentives for investment in in-house training capacity, by reducing the turnover of skilled workers, and by engaging with appropriate private sector counterparts to expand and reform vocational training.

- More companies are relying on in-house training programs to upgrade the skills of their employees. But while many more Russian firms offer this type of training, it is provided to a small fraction of employees.

## Policy Recommendations on the Investment Climate

### Deficiency by aspect of the investment climate

The Russian investment climate—while much improved in the last few years—is still characterized by significant instability as well as a tendency to punish its most dynamic and innovative firms. Both issues can be overcome by fostering a business environment characterized by greater competition and openness. In particular, inclusive business associations can reduce investment climate barriers for competitive firms, and the associations' participation in policy-making processes could be encouraged.

While many regions and municipalities have instituted mechanisms to privatize real estate, the mechanisms are neither transparent nor fair. Regions that had already adopted legislation on land privatization, ahead of the federal law (the Land Code), tend to be the leaders in land reform. In

### Recommended actions

Privatize municipal-held land.

Land privatization, ultimately, will require greater use of auctions and tenders for vacant land instead of discretionary and opaque administrative procedures, and lower prices for land privatization, especially for land under buildings that have already been privatized.

Improve the allocation and protection of intellectual property rights.

A more detailed elaboration of the distribution of IPRs among inventors, research organizations, and the state is needed.

Support business associations as a tool to strengthen the consultative basis for regulatory decisions.

### Recent or on-going government activities

A new Land Code of the Russian Federation explicitly calls for the land under privatized buildings to be privatized as well, thus allowing land and buildings to be consolidated in a single property registry. However, most usable land remains in the hands of municipal governments.

While the adoption of the Land Code may have clarified the basis for land transactions, it did not necessarily persuade unwilling regions to initiate land reform and land privatization.

other words, while the adoption of the Land Code may have clarified the basis for land transactions, it did not necessarily persuade unwilling regions to initiate land reform and privatization. About 90 percent of firms trying to purchase land failed to finish the procedure in half a year. The lack of competition in real estate markets contributes significantly to these problems.

The intellectual property rights (IPRs) regime in Russia has two primary weaknesses. First, the assignment of IPRs remains unclear. There is an ongoing debate as to whom these IPRs belong: the inventor, the inventor's employer (research institute or enterprise, either state-owned or private), or the state, which may have paid R&D costs. These uncertainties complicate collaboration between private firms and public institutes, inhibit technology transfer, impair the development of spin-off companies into independent and growing businesses, and create potential conflicts of interest for the institutes themselves. Second,

Previous analyses have shown that certain well-connected firms receive tax breaks, investment credits, direct subsidies, guaranteed loans, access to state property, and the creation of special economic zones on sites of specific enterprises.

Firms facing competitive pressures that are members of business associations, however, find themselves more protected from investment climate obstacles. Members of business associations report that, among the most valuable services, business associations provide information on regulations, standards, accrediting, and markets. Moreover, firms facing the greatest competitive pressures that are also members of business associations are less likely to have excess labor, to pay bribes for government contracts, and to believe that regulations are unpredictable. In sum, there is power in numbers: through collective action, innovative firms can overcome these investment climate constraints.

A current draft of the Civil Code allows research organizations to become owners of IPRs for the technologies developed using government funds "provided that the procurement contracts do not specify otherwise." However, research and business communities are rightly concerned that this open-ended provision would allow public authorities to continue to exercise ownership for subsequent IPRs and will prevent closer cooperation between innovators and firms.

Difficulties in informing market participants in a timely manner about new and forthcoming legal and regulatory changes can improve the quality and stability of regulation. The participation of business associations that represent smaller and medium-sized firms should be actively encouraged, and the government should intensify its efforts to develop adequate mechanisms to consult the community of

registered IPRs are weakly protected due to inability or unwillingness of public authorities to police producers or importers of pirated goods and to prosecute violators—a particular concern for foreign investors and exporters facing copyright piracy or patent infringement by domestic producers or importers.

- Although progress has been made since 2001, informal corruption, informal practices, and the quality of the legal system have continued to deteriorate.
- Firms believe that the stability of the policy environment has worsened, undermining confidence that their contractual rights will be upheld, and deterring investment.
- Innovative economies are characterized by the competition, and the Russian economy is no exception. But the Russian investment climate is less

entrepreneurs and businesspeople—a natural constituency for competitive, open markets—and to inform market participants sufficiently in advance of new measures.

favorable for firms that face the most competitive pressures.

- Greater flexibility in the acquisition and trade of tangible and intangible assets, amendments to laws to ensure progress in administrative reforms, and more openness in policymaking, including consultation with business associations, is needed.