

Sergei B. Perminov

E-Commerce Technologies Dissemination in Russia

1. E-commerce and Market Institutions Building

Unlike some other post-soviet economies – Poland and Hungary - Russia has not made yet a significant progress in its transition to free market economy. Russian GNP and living standards dropped dramatically during last ten years, although rebounded slightly in 2000 due to unexpectedly high world oil prices.

In fact, there are no economic obstacles to rapid economic growth in Russia - enough natural resources, skillful labor, R&D potential and spare production capacities. Nevertheless, GDP per capita is less than 15% of the US level. The key economic reason is unequal and unfair competition that causes low productivity in virtually all sectors of Russian economy. That is the price which Russia is paying for too unhurried shaping modern market institutions.

A lot of paper work (property law, bankruptcy legislation, contract law, etc.) has been done already. However, it appeared more difficult in Russia to get the modern market paradigm really working. It is not enough to fabricate and publish the proper laws for changing human preferences and relations. Institutions change very slowly, but they have a strong influence on economic performance. That is why market institutions building is a key point of economic policy in post-soviet countries (G.Kolodko, 1999).

Unfortunately, laws in Russian history never worked properly. It is well known that in its historical prospective the economic life in Russia has been always regulated not by laws but by in-person relations. The number of people interested in violation of laws is too big and the institutions that are responsible to control laws are weak and corrupted.

We suppose that the e-commerce technologies open for Russia a tremendous and unanticipated opportunity to make a leapfrog in market institutions building and establishing conditions for steady long-term economic growth. It would happen because e-commerce technologies have a strong technical background and their dissemination cannot be voluntary stopped. This process

should be considered as a key driving force in forming free market institutions in Russia and its integration into world marketplace. In other hand, the e-commerce dissemination in Russia should and can be accelerated without big investments.

Nowadays, the Russian e-commerce industry is five years behind the US online market in terms of sales volumes. It would take plenty of time for e-commerce technologies to be disseminated without any governance like many other technologies do. In the current business environment the e-commerce technologies require the specific policy (program) to be outlined and implemented in order to accelerate this process. It is not a question of business education only. It requires the dissemination process to be monitored and adequate decisions to be undertaken.

The key reason why this issue is that much important for Russia is the genuine ability of e-commerce to promote free competition. The free competition problem is featured in “The Common Strategy of the European Union on Russia” (adopted in June 1999). The brutal reality is as follows. Even now - ten years after “perestroyka” years - it is hard to find in Russia a product which market is not strictly controlled in terms of price fixing and raising barriers for new entrants. According estimates made by Russian Chamber of Commerce and Industry there is only one market that can be considered as absolutely free – market of salt.

The importance of fair competition for productivity and long-term growth is visible from the following example. There are two software markets in Russia. The market of standard software indisputably stagnates because the products are mostly pirated. The second market – project software services – reached 72% of the US productivity level (McKinsey, 2000). The key reason - all these software firms have equal conditions for competition since the customized nature of their products makes them immune to piracy.

Let us consider another example. There are four hundred computer retailers in Moscow. After launching the web site www.price.ru that compares prices for computer products, the price war really strengthened and retail prices fell 10-15% in average. This would be not surprising for other countries but in Russia this example proofs that price fixing can be really prevented with a help of economic instruments or, more precisely, e-commerce technologies. In current Russian business environment the modern e-commerce technologies should be a radical solution. The case of computer retailers is the simplest one. The number of competitors here is big enough. The market entry doesn't require much capital, no special permissions to be obtained. In result,

the very simple e-commerce technology easily counterweighted the natural desire of sellers to raise prices.

The real problem is the implementation of this e-commerce technology in other sectors which are corrupted and where price fixing is a common practice. It takes place, for example, in travel services. It is also a very standardized product that has been easily involved in e-commerce all over the world. However, launching of online travel booking services in Russia didn't lead to substantial price reductions. In fact, Moscow travel agencies continue to enjoy heavy margins. One of the reasons is the necessity for new entrants to obtain the local authority permission. Many other industries experience the same difficulties in e-commerce technologies dissemination.

Another example is of B2B type - government procurement through online auctions. It is very transparent and widespread scheme but is not implemented by now. A lot of work has been done and money spent to make this concept understood by government and region authorities. But, as we mentioned above, it is not the issue of education only. In general, managers are not motivated to use this technology. This experience shows that it is necessary to establish special market institutions implementing e-commerce technologies.

Why e-commerce should be the essential part of economic policy? The prevailing in past decade primitive concept of market liberalization based purely on deregulation actually led in Russia to prevalent fixing of selling and buying prices instead of lowering prices and raising of quality. The lesson from this constituting history mistake is that the government policy in this field should be not only declared but also clearly articulated in terms of detailed market technologies and legal procedures. To our opinion, Russia has now a 3-5 years time window until the newly formed non-efficient market institutions of "wild capitalism" get solid. After that it will be much harder to change them. From this point of view, e-commerce startups should be considered as "agents of change" which mission is to modernize the obsolete economic environment.

It is necessary to have in mind that in Russian business environment a dissemination of new technology takes more time than in other developed countries. It actually happened with very many industrial technologies (S.B.Perminov, E.A.Botwinova, 1992). In spite of that, this problem has at least two positive factors: a high educational level and an absence of need in big investments to implement e-commerce technologies. Besides, Russia doesn't have long lasting

history of market institutions development. It should grow right from the “ground floor” level. Russian firms were very much isolated from each other in centrally planned economy. That is the reason why we can expect the e-commerce to grow pretty fast after the initial stage has passed. Besides, it should cut transaction costs in Russian economy much more significantly because its current level is tremendously higher comparing to developed countries.

New Internet ventures in Russia like in other countries are small but nevertheless they are capable to launch new e-commerce technologies. But large-scale implementation of them cannot be done without big market players which, in fact, keep all markets under control. Virtually all sectors of Russian economy still have very high level of concentration and are not much interested in free competition and, therefore, in dissemination of both B2B and B2C e-commerce technologies. That is why the special program is badly needed.

Three phases of dissemination of new Internet technologies can be identified.. The first phase is performed solely by a few innovators (not more than 3% of totals). The second phase involves around one third of potential users. Finally, on the third stage the technology is getting common for almost everybody. The e-commerce technologies, unlike computer or Internet per se, get a highest impact only if become widespread. According to our estimates, the e-commerce dissemination in Russia is accelerating because it’s entered only its initial stage and is currently far away from maturing and even a steady growth phase. Since the dissemination cannot be voluntarily stopped, this process should be considered as a key driving force in forming free market institutions in Russia and its integration into global marketplace. In order to reach the maximum effect the e-commerce technologies they must be implemented simultaneously in many regions and local markets. The economic policy should be oriented towards a supporting of small Internet startups as well as encouraging the big companies.

2. B2C Sector: It Will Take Several Years to Become Profitable

The main obstacles to successful dissemination of B2C e-commerce in Russia are: low penetration of both Internet users and credit cards as well as the obsolete taxation system.

There are only 2.5-3.0 million Internet users but majority of them live in Moscow and other big cities (the average user is 26 years old, 60% of them have an university degree). Therefore the penetration of the Internet didn't reach yet 3% of total population¹ mark that is commonly considered in other countries as a starting point of an explosion growth and a commercially efficient e-commerce usage (compare with the current penetration rate in Europe – above 10%). This 3% mark should be reached in Russia in 2001. The first reason is the lack of computers. In 1999 PC penetration in Russia was only 4%, compared to 28% in Europe (Brunswick Warburg). In this regard Russia is similar to other emerging markets. On the other hand, Russians are generally very receptive to new information technologies. That is why Russia is likely to rapidly adopt new B2C e-commerce technologies.

Nevertheless, the second phase of the accelerated growth of e-commerce in Russia just began. The main reason – the entry barriers in Russian e-commerce are extremely low and this attracted local venture capital into numerous e-commerce startups.

Russian e-commerce market is expected to grow from \$2 mn in 1999 to \$20 mn in 2000 (UFG Research). Boston Consulting Group is even more optimistic and forecasts \$400-600 mn by 2003. In order to be realistic, it is necessary to have in mind that popular search engines like Rambler, Yandex, Mail.Ru have doubled last year in terms on visitor numbers. It is questionable that e-commerce is capable to grow much faster, ahead of them in coming years.

The relative numbers are more transparent. The average Russian user spends in 2000 only \$1 per month in retail e-market comparing to \$24 in the US (UFG estimates). These parameters are expected to reach \$3 and \$53 by 2005, respectively. As we can see, it takes time for e-commerce in Russia to become a 'mass market'. In order to reach a billion dollars volume of sales this market has to have 20 mn users spending around \$5 per month.

How the average B2C startup looks like? Virtually all 550 existing Internet shops have appeared across the country during last year. These startups are not profitable yet because of lack of customers. The future of majority of them is very questionable. They are surviving because startup expenses are in Russian much lower than in Europe or the USA since software programming labor is very cheap.

¹ The PC penetration Russia is 5% and should reach 15% by 2005 (UFG Research, 2000).

The uninterrupted growth of e-commerce in Russia requires the substantial cash flow to be generated. It should be based, first of all, on increase of the Internet penetration. The latter depends very much on telecommunication development which is the real bottleneck (a majority of population outside Moscow do not have phones at all).

The first jumps in Russian B2C e-commerce have made the very standardized goods like books, computers, foodstuff, etc. These Internet shops are established “from scratch” and having big savings on shop space, inventories and overheads. That is why they are capable to offer healthy 10-15% reductions from downtown list prices. In other hand, the startup expenses for these ventures are very low. It can be considered as a pure case of price competition. The price fixing for numerous kinds of goods is infrequent. This positive practice is a good lesson on free market economy. It is interesting that virtually none of online shops were established on the basis of regular shops, though they could be motivated to go online for the sake of cost reductions and sales increase. Nevertheless, it requires a different market mentality. This phenomenon confirms the primary entrepreneurial nature of e-commerce startups in Russia.

In opposite, auto online retailers are formed only on the basis of existing dealerships and do not have the independent price policy. Therefore selling price fixing stays in this sector very common.

It is a pleasure to see that many online consumer goods markets are buyer-centric, do not stagnate in terms of volumes and number of goods available. They have a great potential to develop and will start to have macroeconomic impact when the total number Internet users reach 3-5% of population. The past couple of years didn't require a lot of venture capital to be put in. It takes place because we saw numerous but very small online shops not comparable with well known online merchants. The spreading online shops countrywide should strengthen competition in prices and quality of services. It will demand more capital to be put in. The Internet is almost unregulated and appears a good playing field for foreign and domestic investment inflows. Now we only enter the second stage of rapid growth and the infrastructure for this must be established. What are other bottlenecks in B2C technologies dissemination? First, lack of payment systems (as we have said above major credit cards are lacking in Russia) and low reliability of merchants. The fraud happens too often and scares potential online buyers. The dominant form of payments is “cash on delivery”. The leading online payment service Cyberplat doesn't exceed

\$1 mn per month. Nevertheless, the total volume of online transactions grows by 20-30% per month (UFG , 2000). In this respect, the market institutions must be modernized quickly but it requires big money to be invested, which is not a pure commercial issue. It needs a support of the local and federal government as well as international institutions.

The Russian net advertising market reaches \$2-4 mn in 2000 (PriceWaterhouseCoopers) or \$5 mn (Arthur Andersen). That counts 0.6% of GDP (in the US –2%). The key advertisers are Intel, Microsoft, Compaq, Hewlett Packard and other IT companies (more that 65% in 2000²). Online advertising market expected to grow to \$378 mn in 2008.

Anyway, it is positive that B2C e-commerce technologies are being implemented simultaneously and independently by many entrepreneurs across the country. It is very promising from the long-term prospective. Besides, there is no need to think about how to initiate this process as we did regarding free market institutions ten years ago. Now, the key issue is how to accelerate and widespread this process starting from this “infection point”.

It is also positive that e-commerce as a local market is not controlled yet by any big company and is still developing as a free community that is open for everyone. It is difficult but possible to imagine an alternative scenario when B2C sector is totally controlled by big players or the government in spite of “genetic” openness and flexibility of the Internet media. Unfortunately, it happened in telecommunications and many other industries in Russia.

3. B2B sector: External Impetus Needed

Specific obstacles to successful dissemination of e-commerce technologies in B2B sector are:

- lack of motivation,
- market monopolization and corruption,
- telecommunication bandwidth,
- obsolete taxation system.

According our estimates only one from twenty enterprise managers considers e-commerce as a powerful tool to boost sales and profits. This number is considerably lower than in many other

² “Dengi (Money), #14, May 2000.

countries. The Russian industry doesn't use this source of growth and, in fact, stays outside of global electronic marketplace. Enterprise managers are not much encouraged by obvious short-term benefits - the abilities to reach more buyers and suppliers outside of local business environment. The long-term benefit –the ability to compete on the world marketplace – is also not much attractive for them.

It looks like the current generation of enterprise managers is not capable to overcome this mentality barrier even with a help of many e-commerce educational programs implemented across the country. Besides, the e-commerce concept is fundamentally inconsistent with price fixing and an abuse of dominant market position. This incompatibility cannot be overcome with a help of education only. This is the critical moment when the new approaches have to be applied.

Our vision is that B2B sector definitely requires the special efforts to be undertaken as a part of economic policy. The central elements of B2B e-commerce mechanism for in current Russian business environment should be on-line auctions and exchanges.

Our proposal is as follows. The federal or local authorities should oblige all producers of specific products to sell the weighty fraction of their outputs through online auctions and exchanges that are open for everyone. The benefits should be:

1. It will prevent the price fixing. The big sellers should gradually lose their market power and become so called “price takers”.
2. The agency cost – extra expenses caused by deviation of manager and shareholders interests – will go down. The Russian firms suffer a lot because many managers pump out the assets through unfair transfer prices. It is impossible when all transactions are transparent and performed on competitive basis.
3. There are no technical difficulties to introduce this technology in all corrupted local markets simultaneously and very quickly since this technique is proven for 2-3 years in the USA (for example, the energy market in State of California) and other countries.
4. This technology will reduce local market prices by 5-10% as the common practice shows.
5. This will cut off numberless mediators with a help of economic regulators, which are more effective than efforts of criminal police. It should be considered as a

unique possibility to reduce the power of very influential social groups that stop free market reforms. It would take very long time to cut them off in a bureaucratic manner.

6. This will reduce marketing expenses and allow enterprise managers to focus more on enterprise production efficiency issues and innovations.
7. Fair prices to be formed will provide the adequate price signals for production planning and innovations. It should intensify free competition inside firms and increase production efficiency.
8. Fair pricing should prevent inflation in non-monetary manner that is more healthful for long-term economic growth.
9. It should help customers increase revenues by improving an ability to monitor supply chains. It will reduce the opportunity cost of lost revenues, the time it takes to introduce new products, invoice cost, etc.

Online auctions will reduce very high transaction cost in Russian economy. In fact, many companies across the country feel themselves isolated from global marketplace but even from other regions of Russia. They cannot get fair prices for their inputs and outputs.

The local electronic exchanges should trade, first of all, electricity, gas, gasoline and other energy related products. There are four basic reasons for this. First, these prices are mostly unfair. Some buyers overpay for energy, some of them get it free. Second, this market is corrupted. Third, unfair prices provide inadequate signals for energy savings policy (the energy consumption per one dollar of GNP is in Russia three times higher than in developed countries). Fourth, unfair prices provoke shortages of energy in many regions of Russia.

To our opinion, the political decision, as an initial impetus is strongly required. Even in the USA with well developed market economy many electronic exchanges were established under local state authorities because it is the infrastructure investment that normally cannot be carried by private business only.

It is important, that authorities and public can easily monitor the speed of dissemination of this technology and its efficiency because all transactions, average prices and volumes could be free available for analysis.

These online auctions under local authority guidance should become “agents of changes” and induce the appearance of completely private online exchanges and sophisticated B2B business and e-procurement solutions.

These online auctions and exchanges will become the points of crystallization and attract small businesses as subcontractors. It is very efficient in modern e-market when big companies (for example, Microsoft, Ford, etc.) allow small suppliers to place their offers directly on company web sites. It promotes price competition dramatically and appears beneficial for both sides. In Russian current situation it looks, nevertheless, fantastic and will take, according our estimates, 3-5 years to become popular. In the same time, from technical point of view is an unexpensive addition.

The main synergetic effect can be achieved if B2B relations across value-added chains are formed. The easy decision coordination across value-added chains becomes the key for inventory reductions and production circle acceleration. This would change the business landscape substantially. The good example to follow is a computer industry, which went through this in 1999 when the new adjustment procedures opened by e-commerce technologies came in force. It shortened lead times and reduced production costs by one quarter across the board. This kind of impact can be in Russia very significant. According to our studies, the production circle in Russian semiconductor industry is around eight weeks although the total sum of all operations is only ten days. It means that semi-products await processing 80% of time! It is ridiculous from modern point of view and can be easily fixed up without investments being based primarily on computer technologies.

In 2001, B2B e-commerce in Russia will develop in two main directions. Firstly, the establishing of large scale Internet projects like local electronic exchanges which are capital-intensive and require a support. Secondly, the dissemination of very simple web sites providing the Internet presence for any company very cheaply. This sort of activity goes ahead without any support and guidance but the impact is not that much significant.

We distinguish two phases in B2B e-commerce. The first phase contributes primarily in marketing cost reductions, which are also very valuable for Russian firms that just enter this phase. The maximum synergic effect is to be achieved on the second phase when firms start to coordinate their production decisions. It extensively reduces inventories, put-through time,

working capital needs and other costs. This more complicated form of B2B e-commerce is very new-fashioned for Russian enterprises.

B2B e-commerce per se can be also considered as an incubator for small business that is very consequential for free market institutions building and economic growth. The electronic business environment is more predictable for small firms, which can establish long-term relations with each other and fairly compete in contracting with big companies. This mechanism is popular in developed countries and presents very effective form of business when big companies (Sony, Hitachi, etc.) offer tenders and other competition schemes on their web sites and cooperate with best small firms - subcontractors. This is beneficial for both sides. The first examples of these forms should appear early 2002 in Russian car industry.

We suppose that federal or local governments should play a key role within B2B sector in Russia. As we underlined above the government should be a driving force in market institutions building, in particular, the most powerful tool - online auctions. Electronic auctions are introducing in Russia with many difficulties caused first of all by beurocrats resistance. This social group obviously should loose a lot when online auctions come in force. The existing system of government procurement uses the system of public auctions and tenders very rarely and lack of transparency opens broad possibilities for price fixing and manipulating. According EU standards foreign participants should have the equal rights with local buyers and sellers.

The complicated forms of B2B e-commerce require the technology transfer. More realistically, from our prospective, would be to consider this transfer as a substantial part of foreign investments. Though, Russia has much less share of firms with foreign capital (around 1% only) comparing to 30% in France and 66% in Ireland. It is well known that foreign companies spend two times more in R&D. Foreign direct investments in B2B e-commerce infrastructure are also necessary. It would be the best way to promote market reforms in Russia and in the same time a very broad market for high tech exports from the USA and Europe. The “infection points” and agents of changes, in the same time, would be the local electronic exchanges we told about above.

4. Electronic Stock Market: Missing Element

The Russian capital market is not only the field for new e-commerce technologies dissemination but also the moving factor of the e-commerce development.

Unfortunately, there is no a special stock exchange for high tech companies like NASDAQ in Russia. This kind of stock exchange plays a specific role in accumulation and allocation of capital among e-commerce ventures. It is known that venture investments are 3-5 times more efficient than project investments. A stock exchange for high tech companies plays a crucial role in the New Economy development. European countries, where venture investments exceeded 20 billion dollars, have done a lot in this direction.

This requires a modern stock market infrastructure in Russia to be formed. The main reason why Russian economy lacks capital (total amount of foreign investments doesn't exceed 10 billion USD a year) is the obsolescence of stock market institutions and effective legal systems. The guarantees of ownership are not sufficient from modern point of view. Unauthorized dilution of shares becomes common in Russia and very painful for foreign shareholders. The Russian stock exchanges have ridiculously small volumes of trade (in average less than 20 million USD per day) which is not enough to attract serious portfolio investors. Stocks are virtually illiquid and the informational "transparency" of companies is not actually provided. In fact, Russian stock exchanges played the key role in privatization of yearly 90's but now they are not capable to perform their functions in the New Economy, i.e. to concentrate capital on the most important and modern directions. Local Internet startups need technology transfer and investments that can be facilitated by foreign venture funds along with international financial institutions.

The capital infrastructure in Russia has been dramatically deformed during last ten years when plenty of capital has been taken out of production and stolen. It happened because of absence of shareholders control. Even more, a majority of population continues to have no shares and only sells their labor. In opposite, in the USA much more than a half of population possesses shares and stock options. It doesn't provide a satisfactory motivation to work hard that is necessary in modern economy. Moreover, the shareholders control appears to be weak.

Therefore, to prevent the bottleneck in the New Economy forming it is necessary to provide private individuals, foreign and local institutional investors with easy access to Russian electronic stock markets. It may be formed in the form of joint ventures with Western partners and considered as a top priority for international institutions.

The key feature of electronic stock markets is informational transparency of companies for investors. The modern technology gives the possibility to arrange this easily. Like in other countries (for example, www.free-edgar.gov) all public companies should be obliged by law to file quarterly reports via email. In other hand, this database must be accessible via the Internet for analysts and public. This will prevent fraud and improve the efficiency of investment decisions. It doesn't require much capital and needs a political decision to be undertaken. Nevertheless, the Russian reality goes in opposite direction. There is no centralized depository or databases. It remains very difficult to get information about any capital flows and investment decisions undertaken.

5. Mission of the Government and Integration into World Marketplace

In all countries archaic mentality and poor understanding of free market institutions induces inability to follow imperatives of the "New Economy" and overall stagnation.

The following positive macroeconomic impact of e-commerce dissemination can be recognized. Firstly, e-commerce technologies should be considered as a tool to lower transaction costs and raise the competitiveness of Russian economy, which is crucial for its long-term growth. Low ability to compete on world marketplace is the most critical weak point of Russian companies. The recent privatization didn't resolve this problem because mistakenly wasn't oriented to establish the proper market institutions, which couldn't appear and develop, by their own. Our suggestion is that e-commerce gives Russia the second attempt to jump into the post-industrial society of free competition.

Secondly, e-commerce would be a weighty factor that counterbalances inflation in non-monetary manner. E-commerce technologies (for example, online auctions) make the distribution of market power more homogeneous and restrict the seller's ability to raise prices voluntary. In this respect, e-commerce is a driving force of price stabilization that is a major growth factor in Russian economy.

To our opinion, the current situation in Russia is similar to the period of late XIX century when plenty of railroads across the country were constructed. That made formerly isolated local

markets well interconnected. It led to the substantial price drop and changes the ties between firms.

The vast majority of Russian companies are having difficulties in adjusting to the terms of the New Economy, mainly in adapting their culture to a faster pace and understanding the advantages of the new technologies. In the same time, the e-commerce law is not yet adopted in Russia. Unfortunately, this issue is not of top priority for federal and local governments. No top level declaration or initiative like in USA or European Union has been passed by now. In the same time, e-commerce infrastructure pretty fast becoming an essential part of all modern market institutions.

Why the Russian government should support e-commerce?

First, many capital-intensive market institutions cannot be constructed purely on commercial basis because these projects are not that much profitable. The e-commerce infrastructure is a so-called public good and all society will benefit of it and should support it.

Second, there are very powerful social groups in Russia interested in abuse of dominant market positions and price fixing. For our point of view, only the federal and local governments can counterweight their interests.

Third, the government should be active to use this 3-5 years time window to update market institutions radically that is necessary for long-term growth acceleration.

A majority of economic agents benefit from e-commerce: buyers will enjoy by reduced prices, sellers benefit from marketing expenses and sales increase. In fact, only an initial impetus from the government is needed.

From practical point of view, the Russian government should identify critical markets where prices are remarkably unfair and huge monopolistic profits are being extracted. It is, first of all, oil, gas and other energy resources. The first step undertaken already by the federal government – auctions for oil export quotes – looks very promising.

Another government dependent bottleneck is the weak (in terms of line numbers and bandwidth) telecommunication industry countrywide, though this market reached 3 billion dollars in 1999. There are around 1.3 million mobile phones in Russia and 19 regular phones per 100 inhabitants (compare to 64 phones in the US). The lagging telecommunication development is more visible in wireless networks. The Russian Ministry of Telecommunications makes a serious mistake, to

our mind, when preferred the GSM standard and almost ignored other standards – CDMA, etc.- that have more bright future for the wireless Internet and, in particular, mobile e-commerce.

Besides, some existing accounting rules also negatively affect the e-commerce growth. It is ridiculous but in Russia Internet related assets like software, databases, web sites, etc. can be depreciated only in twenty years like buildings and other long-life assets. This absurd regulation is really harmful being formally equivalent to special taxation of Internet startups!

The government with a help of international organizations should build adequate market institutions preventing price fixing and abuse of dominant market position. It would significantly promote B2B, lower transaction costs, enhance competition and, finally, accelerate economic growth. Even very effective e-commerce technologies require the proper conditions for their accelerated dissemination.

The skeleton of economic policy in this field should be the Federal Long-Term Program with targets formulated in terms of volumes of numerous e-commerce technologies implementation.

Some problems in e-commerce development are initiated due a weak position held by the Antimonopolistic Ministry of Russian Federation. In fact, this competition authority doesn't have enough powers to enforce the competition law and decisions against enterprises, to break up firms and prevent the abuse of dominant market position. That is why many e-commerce startups feel a robust pressure of big companies while entering new markets. This ministry doesn't enforce competition in telecommunication industry that is the groundwork for e-commerce. For example, new licenses for wireless telecommunication operators in Moscow were given in 2000 in private, without open competition.

E-commerce evolution assumes free access and equal rights for foreign buyer and suppliers. Free access for foreign companies will accelerate local competition and enforce Russian companies to implement new technologies. We consider as a top priority a highest involvement in European e-commerce projects. The EU is Russia's largest trading partner (more than 1/3 of Russia's trade). At the same time, Russia was the EU's third largest trading partner before the 1998 crisis, after the US and Japan but before China. These trade relations are developing under the Partnership and Cooperation Agreement (PCA) that was signed in 1994 and declared trade to be liberal and WTO-based.

Some EU programs could support e-commerce development in Russia. The main of them - the EU "Tacis" programme (technical assistance) that spends approximately € 200 million per year to promote the economic and democratic reform process in Russia. From our prospective, Tacis should much more focus on e-commerce technologies. One of the main fields for "Tacis" activity could be standard "key-turn e-commerce solutions". The technical collaboration should be based on the following assumptions. Russian companies would prefer not to develop the specific e-commerce software by their own. In the same time, Western companies might be interested in high-volume exports of e-commerce technologies (consulting, software, and hardware) into Russia.

The Russian technology sector, as a core of the New Economy, generated revenue of \$2.5 bn in 1999 (Brunswick Warburg estimates). It is expected to rise sharply in years to come due to Internet services and online business. There are two basic export directions for Russian companies that belong to the New Economy sector. The growth potential for hardware exports is very limited because hardware made in Russia (mainly electronic components) can compete on small niche markets only (for example, watch movements, calculator chips, etc.). The challenge is to export software and outsourced programming services. Some Russian software houses generate up to 30% of their revenues through foreign orders. Nevertheless, Russia is exporting only \$70 mn of offshore programming services, compared to \$4 bn if India in 1999 (Brunswick Warburg).

It is not clear yet which business model Russia follows in its online business development. In one hand, there are examples of the US model, with independent startups. In other hand, you can see the European online business structures, when well-established corporations (telecom companies, media houses, etc.) are spinning off subsidiaries. The key difficulty for pure Internet companies is financing, because high-tech stock market doesn't operate yet and Western venture funds avoid Russian Internet projects due unreasonably high political risks. That is why it is so critical for Russian Internet startups to find a business structure that is capable to generate a cash flow from the very beginning.

Let us consider the following example. The first Russian book online retailer – Ozon.ru – was launched in 1998. It offers about 35,000 book and videotape titles basically in Russian language.

Its revenue range is estimated by \$120-150 thousand per month. This number is too low (for 5-7% margin) to pay back the initial investments and even to cover the current expenses. Besides, about 60% of buyers come from Russian-speaking communities abroad. This example shows that the current e-commerce startups are primarily based on long-term vision and desire to get the presence and the significant market share of the promising online market.

We expect the online business in Russia to be struggling for money in coming years until the foreign strategic interest in e-commerce emerges. It can be expected when the Internet penetration passes the 5% mark. To our mind, the most workable and effective way for big investments to flow in could be partnerships with Western companies. However, in its current shape Russian e-commerce companies are not much attractive for Western potential partners because the growth potential looks very limited in next couple of years until the Internet penetration passes the critical mark.

References

2. Grzegorz W. Kolodko. Ten Years of Postsocialist Transition: the Lessons for Policy Reforms", Policy Research Working Paper, No. 2095, The World Bank, Washington, DC, April. 1999
3. Unlocking Economic Growth in Russia, McKinsey Global Institute, 2000.
4. IT and the Internet economy: Picking the winners before the race begins. Bruswick Warburg, June, 2000.
5. Casting a Wider Net. Russia: Internet. United Financial Group. August 2000.
6. E-Commerce in Russia. American Chamber of Commerce in Russia, Moscow, 2000.
7. S. B. Perminov, E. Botwinova. Diffusion of Numerically Controlled Machine Tools in the USSR, In: "Computer Integrated Manufacturing Models, Case Studies and Forecasts of Diffusion", Chapman & Hall, 1992.
8. S. B. Perminov. Information and Market Technologies. In: "Research and Development in Russia", Moscow, Science, 2000.