

**THE ROLE OF EXTERNAL AND INTERNAL FACTORS IN CREATING VALUE
USING eCOMMERCE: THE CASE OF RUSSIA**

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EXECUTIVE OVERVIEW

This paper develops a model for eCommerce value creation. The model identifies eight key drivers of eCommerce value--ease of use, availability of products/services, ease of search, trust, complementarity, novelty, lock-in, and efficiency. Further, the model reminds us that while national differences may play a somewhat smaller role with the advent of eCommerce than previously was the case, differences in the external environment of different countries are important to keep in mind. To facilitate this, the model describes the external environment in terms of eleven key characteristics: financial resources, computer and internet availability, telecommunications infrastructure, computer programming resources, economic and political stability information security, external physical environment (poor weather, safety, and transportation), customs and delivery, laws and regulation, support institutions, and payment systems. To illustrate the importance a different external environment can make in developing desirable value creation strategies, the empirical setting for the study is Russia, a country arguably very different from the USA or Western Europe—the traditional home of eCommerce. The model is developed with the help of interviews with managers from fourteen firms using eCommerce and shown to have utility by being used to show via mini case studies how value is created in four firms successfully using eCommerce in Russia.

eCommerce, with its dynamic and ever evolving characteristics, provides new opportunities for creating wealth with skillfully designed business models. Worldwide eCommerce revenues are expected to grow from \$286 billion in 2000 to \$3.2 trillion by 2004.¹ This wealth creation is derived from both dot.com firms and eCommerce-related applications used by brick and mortar companies. However, the recent well-publicized troubles of many dot.com firms illustrate that in keeping with the experience of traditional brick and mortar firms, only superior business models will make money. It would be wrong to conclude, that the impact of the internet will be like other management tools or just a passing trend. There is little doubt that the eCommerce revolution will transform business processes, supplier and procurement systems, the structure of industries, and maybe even the nature of firms.² However, clearly just doing something with the Internet is no guarantee for success. Thus, an important question, and that which this paper sets out to address, is what are the characteristics of a business model which make it likely to create sustainable value?

Although interest in the eCommerce field has swept the globe, little academic research has focused on eCommerce and almost no research has focused on eCommerce outside of the US or certainly outside of the US and Western Europe. This is a potentially large problem since while eCommerce in the 1990s was dominated by the USA, in the next decade it is expected that the majority of the world's eCommerce customers will reside outside of the USA.³ As a result, based on interview-based empirical data and analysis, this paper focuses on developing a model to explain how value can be best created using eCommerce in the transition country context of Russia.

While it is true that in comparison to traditional business, eCommerce likely diminishes the role that country-specific factors play, a company using eCommerce in Russia (where few people have credit cards and infrastructure is poor) is likely to face some different challenges than would be the case in the United States. Thus, this paper proposes that environmental factors (which vary from country to country) play an important role in determining the way value can be best created with eCommerce in a given country. As a result, environmental factors are included in the model of eCommerce value creation which we develop in this paper.

Amit and Zott contributed significantly to the field by proposing a model of eCommerce value creation which encompasses four key value creators--novelty, efficiency, lock-in and complementarities.⁴ Based upon our fieldwork and analysis of eCommerce in Russia, we develop a more refined model of eCommerce value creation which in addition to the four above-mentioned value creators includes trust, product/service availability, ease of

search, and ease of use as value creators. While these additional value creators and our model in general are particularly salient in Russia. We also found that the model is likely to have broader applicability to at least other transition countries and likely even beyond. In fact, in preparing this article we obviously often found ourselves reading articles written about eCommerce in different geographical contexts than Russia (e.g., USA) and we found that our model, especially with the inclusion of the outer ring of the model which focuses on environmental factors, is particularly useful in identifying differences between the way eCommerce works in different countries.

Thus, this article seeks to contribute to the field by 1) presenting a model of eBusiness value creation, 2) showing that the external environment effects the way eCommerce value creation works, 3) suggesting how value can be created using eBusiness in Russia and 4) analyzing the current state of eCommerce and the prospects for its development in Russia. Following a description of eCommerce in Russia and development of our model, the article will analyze four case studies of firms using eCommerce in Russia in an effort to shed light on how value can be created using eCommerce in Russia.

eCOMMERCE IN RUSSIA

Russia is a potentially attractive market with its 150 million people, a technically sophisticated and inexpensive workforce, and abundant supply of natural resources. Despite this, limited purchasing power, a low penetration of computers and internet access, and poor transportation and communication infrastructure, cause significant challenges for eCommerce development in the country. As a result, only 0.2 billion US dollars of eCommerce revenues were generated in Russia in 2000 as compared to 9.8 billion US dollars in Germany or 2.5 billion US dollars in Sweden.⁵

eCommerce in Russia largely began to develop after the August 1998 crisis. The crisis served as a catalyst for entrepreneurship by forcing many skilled Russians to create employment for themselves. The crisis also forced companies to focus more on increasing efficiency, and some companies did so by adopting eCommerce solutions. As a result, between August 1998 and the end of 1999 the number of dot.com companies in Russia grew from 40 to over 400.⁶ Today, eCommerce in Russia remains in the early stages of development and for this reason, identifying a successful eCommerce firm in Russia has not been easy. Estimates suggest that less than half of the dot.coms that were once active are still operational today.⁷ Further, it has been estimated that only 2.5 % of the Russian population has access to the Internet (3.5 million people)⁸ and access is concentrated in commercial

centers like Saint Petersburg and Moscow wherein fixed line density is the highest (Telephone density per 100 residents in cities and towns is 21.%, and 9.6% in rural areas).⁹ Most Russians with access to the internet only have access via a dial-up connection. Further, most Russians who do have access to the internet are able only to access the internet at work. Despite these challenges, some very sophisticated and promising eCommerce business models have developed in Russia

Despite the above-mentioned challenges, the development of eCommerce in Russia is important for several reasons. First, one of the most significant advantages for encouraging eCommerce development in Russia lies in its ability to ensure that a wide variety of goods are not only available in Moscow and St. Petersburg, but also in the regions. The lack of availability of diverse goods in the regions is a key challenge the country faces today and is exacerbated by the fact that Russia has very few national retail chains. Second, there is evidence to suggest that eCommerce is more efficient than traditional commerce in conducting certain types of transactions, and thus in order to be internationally competitive it is important that eCommerce is embraced.¹⁰ That is, eCommerce often allows companies to make a direct link with customers, bypassing traditional middle-men in the value chain. For example, a producer of CDs may bypass distributors and sell via eCommerce directly to end customers. eCommerce is at times more efficient than traditional commerce as it provides access to anyone anywhere anytime. Further, eCommerce has the ability to decrease customer search costs and costs associated with creating transaction-specific assets (transactions are conducted on an open network).¹¹ eCommerce can also be beneficial to a firm by enabling it to control access to a group of customers which other firms are keen to reach —thus eCommerce brings with it great possibilities for alliances.

DEVELOPING A MOEL OF eCOMMERCE VALUE CREATION

We identified two main groups of factors that influence the success of a particular eCommerce firm. The first of these is the environment in which the eCommerce firm operates (in our case Russia). While a single firm can have a limited effect on the eCommerce environment, the government and, to some degree, groups of firms and industrial organizations play a central role in creating a conducive environment. However, perhaps more importantly, firms should keep in mind the operating environment when developing their business models. We refer to the second set of factors that influence the success of a particular eCommerce firm as what we call “value creators”-- characteristics of a firm’s business model which are likely to create value such as ease of use or customer lock-in¹².

Both to avoid repetition and because of the more applied nature of this paper, we do not cover this here. We adopt Amit and Zott’s definition of a business model for this paper: “A business model depicts the content, structure and governance of transactions designed so as to create value through the exploitation of business opportunities.”¹³

Our model of eCommerce value creation draws inspiration from Amit and Zott’s assertion that four key eCommerce value creators exist -- novelty, efficiency, lock-in, and complementarities.¹⁴ In conjunction with these, data collection and analysis have inspired us to add to our model four additional value creators -- product/service availability, trust, ease of use, and ease of search, which are particularly relevant in Russia, but which we feel are also likely to have utility in other contexts (something we leave for future research to explicitly test).

As we have mentioned above, the environment in which an eBusiness operations has important implications for the way in which the value drivers work. As a result, we include eleven factors that describe the environment in our model of eCommerce value creation-- availability and quality of financial resources, computers and internet connections, telecommunications infrastructure, computer-programming know-how, economic and political stability, internet security, external physical environment (poor weather, safety, and transportation), delivery companies and clearing customs, government and legal system, support, and credit cards/other payment systems -- which describe the environmental context in which the eCommerce operates. The importance of incorporating the operating environment into the business model cannot be underestimated as it significantly impacts the manner in which value creators operate. Our model for eCommerce value creation, which recognizes the roles that both the eCommerce value creators and environmental factors play in creating eCommerce value is depicted in Figure 1. After presenting the study’s methodology, we address each of the eleven environmental factors and the eight value creators individually before applying the model to the four case studies.

----- Insert Figure 1 about here -----

eCommerce occurs in a virtual market which has several important implications for the ways in which value can be created. In a virtual market transactions are conducted via an open network. Such markets have high connectivity, a focus on transactions, a focus on networks, and an ability to handle rich information (detailed information) and facilitate high reach (access to many people). However, an important point of this paper is that while eCommerce has helped make it easier for firms to begin working in different countries due to

the characteristics listed above, country-specific factors still play an important role in determining which types of business models will be most effective in a particular country.

METHODOLOGY

Our study was conducted in two parts. First, in order to obtain a thorough understanding of the eCommerce environment in Russia, fifteen semi-structured interviews lasting approximately 60 minutes in length were conducted during the first half of 2001 with different key actors knowledgeable about the eCommerce environment in Russia. These included telecommunications firms, regulators, computer programming firms, etc. In addition, a thorough search of secondary data on the subject was undertaken.

The second part of our study consisted of two phases. In phase 2A, twenty-five firms conducting eCommerce in Russia were selected with the assistance of three experts on Russian eCommerce (one manager in a successful dot.com firm in Russia, one manager working at a firm investing in Russian eCommerce firms, and one industry analyst). The goal was to collect a sample that included some of the more interesting and successful eCommerce firms in Russia which were pursuing as diverse business models as possible with an aim of developing a model which would help explain what types of business models are most effective in Russia. Eleven of the twenty-five firms declined participation in our study even after repeated phone calls. Semi-structured in-depth interviews 60-90 minutes in length were conducted with a key manager from each of the remaining fourteen. The interviews took place in the first half of 2001. The interviews were conducted in either English or Russian with the assistance of a translator. Two researchers were present during the interviews and notes were taken by both to support reliability. Transcripts were typed within 48 hours of the interview.

Sample firms included both dot.com firms and traditional brick and mortar firms using eCommerce as a channel to reach customers (see Table 1 for a description of the firms included in the sample). In addition to drawing on the information gained from the fourteen eCommerce firms mentioned in phase 2A above, this article focuses on mini case studies of four additional firms (Phase 2B) to provide more in-depth illustrations of the more successful and interesting eCommerce business models which are emerging in Russia. The firms chosen for the case studies include three of the five internet stores rated A+ (the highest possible rating) by Expert RA in March 2001.¹⁵ *Expert* is something like the magazine *The Economist* in Russia. The fourth firm included in the case studies due to its high evaluation by our three expert evaluators, Foroza.ru, is a brick and mortar firm which also had a web presence and

was outside the scope of the Expert RA study. These four firms were purposely excluded from phase 2A of this study as they were deemed to be the most successful firms using eCommere in Russia which we could identify and thus they were saved for phase 2B. The purpose of conducting case studies was twofold: first, it enabled us further refine our model, and, second, it allowed us to show its utility for both analyzing the firms' business models and for showing how value can be created using eCommerce in Russia.

----- Insert Table 1 about here -----

While clearly some limitations exist to the above selection procedure, including potential biases, it was felt that this method was likely to identify four interesting and successful firms using eCommerce in Russia, even if they are not *the* four most interesting/successful firms using eCommerce in Russia. Unfortunately, precise financial information was not obtained in most cases since firms are generally reluctant to give out this kind of information since few firms accurately report their income to tax authorities and reporting standards are still emerging. Even if we were able to obtain financial information for firms, it is not clear that this would be an accurate indicator of a firm's success since most firms have only been using eCommerce for a few years. Thus, we feel confident that the approach (described above)—that has been adopted to select firms has merit.

Mini-case studies were used to supplement interviews because, as Yin states, they are appropriate when examining “a contemporary phenomenon in its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident.”¹⁶ Such a case study design is also desirable because it allows for the emergence of testable theory and fosters a close correspondence between theory and data.¹⁷

THE ENVIRONMENT FOR eCOMMERCE IN RUSSIA

We now turn our attention to evaluating the status of environmental factors which affect the demand for, and success of, eCommerce in Russia. These factors include the availability and quality of financial resources, computers and internet connections, telecommunications infrastructure, computer-programming know-how, economic and political stability, internet security, external physical environment (poor weather, safety, and transportation), status of delivery companies and clearing customs, government and legal system, supportive institutions, and payment systems. Managers of the 14 firms selected for using eCommerce were asked which factors they believed to hinder eCommerce development in Russia. Lack of purchasing power (financial resources), limited internet access, poor telephone line quality, and a poor postal system were the most commonly cited inhibitors of

eCommerce development—all factors part of our model (see Table 2). Each of the eleven environmental factors which emerged from our interviews as especially important and thus constitute part of our model (depicted in the outer ring) are discussed in turn below.

----- Insert Table 2 about here -----

Financial Resources

Significant financial resources must be invested in electronic business tools and infrastructure for eCommerce to be successful. According to Porter, “The total stock of capital resources in a country, and the forms in which it is deployed, is affected by the national rate of savings and by the structure of national capital markets, both of which vary widely among nations.”¹⁸ Low incomes, and limited national productivity and foreign direct investment translate into further limited domestic financial resources available for eCommerce activities in Russia.

As of March 2001, the average nominal monthly wage per capita in Russia was approximately \$100 (2867 rubles) as compared to \$60 (1575 rubles) in January 2000. (These figures stand in stark contrast to previous years—real wages and real disposable incomes that dropped 30% between 1997 and 1999 during the Russian Financial Crisis¹⁹). Despite recent increases, 30% of the population still lives below the poverty line of \$40/month or 1234 Rubels/month.²⁰ Thus, low incomes most definitely limit the prospects for eCommerce activities and future growth will therefore be dependent on improving the purchasing power of the Russian people

Corruption also represents a problem for general business development in Russia. It has been estimated that Russia’s shadow economy in the year 2000 amounted to more than 20% of GDP. This represents a decline, however, from estimates of as high as 50% in the mid-1990s.²¹ Capital flight, both legal and illegal, reached \$24-28 billion in 2000, severely limiting the money available for domestic investment.

As of January 2001, transportation, trade/catering, food, and oil production accounted for almost 70% of foreign direct investment in Russia. FDI in Russia is higher than in other parts of the former Soviet Union but much lower than in other parts of Eastern Europe and other emerging markets -- \$61 per capita as compared to \$389 for Poland and \$967 for the Czech Republic. The United States is the largest investor in the country and has invested cumulatively about \$5.49 billion to date. The leading sectors of US investment over the year 2000 included transportation, fuel, communications, and engineering.²²

Availability of Computers and Internet Connections

Low national levels of internet access and hardware penetration severely limit the development of electronic commerce in Russia. There are 6-8 million computers in the country as opposed to 140 million computers in the United States.²³ As well, 48% of Russians who access the internet do so at work, meaning that more than one person is likely to use one computer.²⁴ The local hardware production sector is protected by import duties (10% duties are imposed on imported hardware and peripherals to make local production more attractive) and this has enabled local producers like Formosa and Aquarius to compete against the big foreign names like Compaq in the low-end of the market, further increasing the level of penetration, albeit slowly.²⁵

It has been estimated that only 2.5 % of the population has access to the internet--3.5 million people and access is concentrated in commercial centers like Saint Petersburg and Moscow.²⁶ Russia has 350 internet service providers, almost a third of which are located in Moscow alone.²⁷ Dial-up access (via modem, PC, and telephone) has proved to be the most affordable and therefore the most common method of access to the internet. Even so, most Russians cannot afford average monthly unlimited access expenditures of \$120 dollars or limited access expenditures of \$20 per month (with access as low as \$6/month for 6 hours of internet time/month).²⁸ Outside of the workplace, scratch cards and internet cafes that charge approximately \$1/hour are commonplace. Users tend to fall into the highest Russian income (\$800/month) bracket. Approximately 10% of all Russian internet users shop online.

Telecommunications Infrastructure

The successful development of eCommerce anywhere appears to be highly dependent upon the state of communications infrastructure. Telecommunications infrastructure in Russia was extremely poor by the end of the communist period in the late 1980s. Nevertheless, throughout the 1990s it had improved substantially due in part to the appearance of some private telecommunications companies which served to increase competition and investment. In 2000, about \$2 billion was invested in the Russian telecommunications sector.³⁰ Apart from investment, the sector has also benefited from the advanced telecommunications knowledge available in the surrounding Baltic Rim area (Scandinavia + Baltic States). Nevertheless, competition today remains relatively low, especially at the local level where monopolies have traditionally been dominant. For instance, although network operators were privatized in 1993, regional providers were united under the Svyazinvest holding and Rostelecom became the single national network operator. Although the former was to be further privatized over time, privatization was halted after the 1998

financial crisis.³¹ Fixed-line prices have since been kept low enough for local service to be politically acceptable and fend off competition. However, low prices have also prevented companies from making enough money to enable adequate investment in needed telecommunications infrastructure improvements.

Overall, telecommunications equipment needs to be upgraded and access extended. It is also worth noting that with the exception of fiber optical cable, most firms prefer to use foreign telecommunications equipment even though it is normally more expensive. —Russian telecommunications and thus eCommerce would therefore benefit if the local (Russian) production of telecommunications equipment was more competitive internationally. Furthermore, line quality is often very poor in Russia making internet use slow or even problematic. This is especially true in the regions where line capacity is limited. (That is, in many regional locations it is often difficult to get a telephone line even if one can afford to pay for it).

Today, fixed line density in rural areas is a low 9.6% and 21.3% in the cities.³² Mobile phone density is 2% as compared³³ to 24% in the United States.³⁴ Greater competition in mobile services has improved the quality, options of mobile services (e.g. SMS, roaming, and mobile internet connections), and reach of existing services into the regions. In fact, much of the growth in mobile communications in 2000 was the result of the successful expansion of providers into the regions. In the future, increased competition and investment in the industry will be needed to create better services at an affordable rate for a wider Russian audience.

Not surprisingly, internet usage in Russia is concentrated in the largest cities like Saint Petersburg and Moscow where the quality of communications infrastructure is best and the greatest density of commercial activity exists, providing a critical mass of financial and computing resources to make eCommerce feasible.³⁵

Computer Programming Resources

Computer programming is an area which is important for eCommerce development and is an area in which Russia has an international reputation for cost-effective excellence. To be more specific, the sub-area of project services (as opposed to packaged software which is plagued by piracy problems in Russia) -- consulting, programming specifically designed for one company, implementation and training, and offshore programming—is the part of computer programming most needed for eCommerce development and an area in which Russia excels. As a result, in addition to serving local demand, off-shore programming has

become a prospective industry in Russia with a growth rate of 50-60% a year. Approximately 100 Russian off-shore computer programming companies now actively take orders from Western firms located abroad and 10-15 major Western firms have offshore programming activities in Russia.³⁶ Off-shore programming for eCommerce is particularly attractive and the continued growth of such will help Russia increase its competence in this area not only by generating revenues but by helping local programming firms to gain more experience by serving demanding foreign customers and thus become more advanced/competitive.

Although off-shore programming has been one of the more successful and progressive industries in Russia, further progress is still needed to compete with countries like India. Much of the progress made in Russia thus far has been in overcoming negative perceptions associated with doing business with the country rather than in developing skills and possibilities in areas like innovation. In a recent global new eEconomy index conducted by the Meta Group ranked 47 nations according to five digital economy factors, including technological competitiveness and innovation. While overall the top five countries included the United States, Japan, Germany, France, and Finland, the innovation category was led by Japan, followed by the United States, Germany, Russia, and China.³⁷ To fuel further development in this area, the Russian government must provide a transparent economic policy, protect intellectual property rights, increase spending on practically-focused higher education, and promote high value-added production activities.

Economic and Political Stability

The last fifteen years in Russia have been filled with much economic and political instability. For example, the government has been changed multiple times with little warning under President Yelsin, the government has been held up by tanks in the duma, unexpected laws have been passed (for example laws radically changing what can be considered a deductible business expense), and citizens have lost much of their savings as Banks folded and the ruble devalued during the financial crisis of 1998. These events in turn have created a situation where a business' ability to rapidly adapt to changes is much more important than in countries which are more stable economically and politically.

Information Security

Public confidence in the secure transfer of information over the internet is of critical importance for the development of eCommerce. To strengthen information security in the country President Putin signed the National Doctrine on Information Security on September 9,

2000. This document outlines the principles for the protection of information security in Russia. It also raises issues such as increased internet penetration, improvements in IT security, and mentions different protection tools. The doctrine also states that the Russian government recognizes the importance of bringing Russian standards and certified norms in conformity with international levels of IT security.

Due to cost constraints, internet security solutions in Russia have not been fully developed. According to the US Foreign Commercial Service in Moscow (2001), firewalls (which restrict the access of unauthorized logins) are the security systems most commonly employed by Russian firms (24%), followed by electronic signatures (18%), and virtual private network tools (12%). Further, online security tools are most often implemented by banks (19%), state and social enterprises (15%), oil and gas companies (13%), and energy and trade companies (8%)—enterprises with strong financial positions.³⁸

External Physical Environment--Poor Weather, Safety, and Transportation

The external physical environment in Russia is challenging. For example, Russia's cold and harsh winters, relatively few people have cars [only 120 cars/1000 people in Russia compared to 478 cars/1000 people in USA in 1999] in which to transport themselves and products, and concern with going outside alone (especially in the evenings) due to concerns for personal safety and petty theft, combine to limit the convenience of purchasing products from physical stores.³⁹ These items combine to create some extra advantages for ordering products via eCommerce in Russia compared to places like Germany, Sweden, or the USA. These characteristics also suggest some advantages offered by home delivery over post-office pick-up for products ordered online. This is one reason carriers are so popular in Russia.

Customs and Delivery Systems

The transfer of goods across the Russian border and the circulation of goods within the country are severely limited by the overall inefficiency of both national and regional distribution channels. As a result, most individuals and companies prefer to make physical trips to the shops. Importing products into Russia through Russian customs is often a timely and costly procedure. This, in conjunction with poor systems integration with local/foreign suppliers, has led many companies to resort to keeping high stocks of inventory which increases the cost of running an eCommerce that is dependent on foreign imports in Russia. To facilitate trade, experts suggest that the Russian transportation system will require major rehabilitation and upgrading in coming years.⁴⁰ Furthermore, the Ministry of Industry,

Science, and Technology believes that eCommerce development in Russia could reduce transportation and delivery expenses of Russian enterprises by 20 percent—transportation expenses now represent an estimated 37 percent of GDP.⁴¹

Imports to Russia during the first quarter of 2001 amounted to \$6.334 billion.⁴² In the first half of the year 2000, transit container volumes increased by 4% and the demand for transportation services is expected to continue to increase at 4-5% annually over the next several years. At present, railways account for 80% of all domestic freight transport and seaports handle 80% of the international trade with Russia, and 26 of them over the last eight years have been completed or are nearly completed.⁴³ Cargo transportation within Russia is generally limited by poor road quality.⁴⁴

Although courier services (e.g. UPS, DHL) are expanding into the Russian market, the absence of a nation-wide network makes these services very expensive for Russians.⁴⁵ It has been estimated that 60 or so independent couriers operate in the country. Garantpost EMC, a foreign courier that operates locally and has low prices (relative to other international couriers) and reliable service, is by far the most popular of the foreign couriers. However even EMC is often too expensive for many local firms using eCommerce and as a result many employ their own couriers or send packages through the standard Russian post (the service of which has improved in terms of reliability, but still takes three months to get payment received to the shipper for COD orders. This delay causes large cash-flow problems for many eCommerce businesses in Russia).

Laws and the Government

Electronic business activities currently fall under local commercial legislation. Speculation has it that because of the limited number of eCommerce transactions, the Russian government is not concerned about related revenue collection or regulation activities at this time. Some analysts suggest that until internet penetration reaches the 10% level, which is expected to occur in 2003, the prospects of eCommerce in Russia will remain limited.⁴⁶ Nevertheless, the Ministry of Communications and Information (minSvyaz) recently announced its plans to inject \$2 million dollars into eCommerce development between 2001-2006 and a series of draft laws have been proposed and are beginning to be passed.⁴⁷ For example, a law legalizing electronic signatures was recently passed (early 2002). Further, in April 2000 a draft law on “information policy” was issued by the state committee of the Duma.

One item that has assisted eCommerce development in Russia thus far has been the relatively uncharacteristic hands-off approach taken by the Russian government. An approach felt by many Russian managers involved in eCommerce to be positive. For example, according to Michael Egorov, General Director of X World a web development firm and eShop, “The government of Russia is similar to an inexperienced gardener who normally plucks his crop too quickly. Fortunately, in the case of eCommerce so far the government has largely left the crop alone.” However, while the government should not interfere with competition, its involvement in the following areas would benefit the development of eCommerce-related activities: 1. Creating laws on electronic money, protection for payments, and electronic signatures; 2. creating and promoting IT-related education programs; 3. promoting Internet technologies and attracting investment; 4. raising incomes and the standard of living; 5. improving the quality of communications; 6. expanding the presence of Internet Service Providers and reducing access costs through subsidization.

Supportive Institutions

In the absence of government assistance, a number of supportive institutions and forums for information sharing have been created. Together these institutions form a flexible and very basic institutional framework that serves to reduce high transaction costs and opportunism by establishing the ground rules for production, exchange and distribution.⁴⁸ The Russian Organization for Communications and Internet Technologies (ROCIT), for one, has been active in organizing presentations and seminars on topics of interest related to information technology. (The organization holds an Internet forum every spring in Moscow). The Federation of Internet Education is another organization that provides practical training to schoolteachers. Training centers are located in Moscow, Saint Petersburg, Samara, Tomsk, and Novosibirsk. Finally, the Internet Exchange in Moscow is a monthly meeting place for entrepreneurs and investors.

It sum, it is necessary to consider the institutional framework and its relationship to value creation as strategic choices of all kinds of businesses, including eCommercees, are selected within and constrained by such. And, it is encouraging to see that both businesses actively using eCommerce and those interested in the field of eCommerce are self-organizing which we believe is a far better situation than would otherwise be dictated by the government alone. (Government involvement should be limited to the areas mentioned in the previous section). Over 2000, about one conference a week was held on the topic of electronic business in Moscow or St. Petersburg.

Payment Systems

In most western countries, eCommerce purchases tend to be paid for with a credit card. However, in Russia it is estimated that less than 5% of consumers have credit cards and as a result, despite the fact that cash on delivery remains the most common method of payment, substantial activity has been made in developing alternative electronic payment systems. Besides cash on delivery, payment systems can be divided into three main categories: bank client systems, credit systems, and electronic cash systems. Bank-client systems allow clients to make payment orders at home or at work electronically via their bank. In 1999 payment orders accounted for 95% of all non-cash payment instruments in the Russian banking system. Bank-client transaction systems are conducted over open banking channels and costs are therefore minimal. Examples of such systems in Russia include Gута Bank's on-line payment system which executes payments over the internet, and Avtobank's home banking system which is also accessible through the internet.⁴⁹ Passwords and digital signatures are security measures employed in both cases.

Credit systems process payments conducted with credit cards (e.g. Amex, Europay, IDC, Mastercard, or Visa) over the internet. The internet in this case serves as an intermediary that transfers credit card data from the consumer to the merchant's bank. In general, very few Russians have access to credit cards and as a result, credit systems are mainly used for overseas payments. However, although only 5% of online transactions in Russia are paid for with a credit card, credit card payments generate higher average sales per order and therefore make these customers particularly attractive.⁵⁰ Examples of credit card payment systems in Russia include the following: ASSIST, Russian Shopping Club, Elite, InterRussia, and Instant.

Both local (Union Card, and Zolotaya Korona) and international (Visa, Mastercard, American Express, Europay International, Diners Club) credit cards are available in the Russian market.⁵¹ However, debit cards, rather than credit cards, have grown in terms of availability in Russia since they are less risky for banks to issue. The Bank of Russia has promoted the development of debit cards over the last few years in Russia to facilitate electronic payments and reduce paper-based activities. As of January 1, 2000, 333 credit institutions issued bank cards.⁵²

The last and least well-known, but perhaps the most prospective, category of payment systems is electronic cash -- promissory notes to pay for a certain sum of money upon a presenter's request. It has been estimated that 2-3% of all online transactions in Russia are

conducted through such systems. However, this payment method is expected to grow substantially in the future as technology develops and people become more familiar with electronic cash. eCash methods generally differ in terms of the way information is stored--usually in a smart card or on a computer hard drive. When stored on a smart card, eCash can be replenished at an ATM or transferred to another smart card over the telephone using a wallet device. Smart card payments via the internet can be accomplished only with a special PC adapter referred to as an I-box or E-box. Transaction costs are low because transactions are conducted through the internet. Most eCash systems charge merchants a fixed fee and a percentage of each transaction. The most popular examples of eCash systems in Russia are Paycash and Webmoney. Infrastructure and an absence of trust between buyers and sellers generally limit developments in this area. Nevertheless, significant benefits to using non-cash payment options (including reducing paperwork and improving transaction efficiency) for eCommerce exist and as a result, it is expected that the use of non-cash payment options will grow rapidly in terms of usage in Russia over the coming years.

THE TYPICAL INTERNET USER IN RUSSIA

Qualified technical specialists with a higher education constitute the largest Internet user group (36.7%), followed by students and managers/professionals also with a higher education. (59% of internet users in Russia are male). Further, Russian internet users tend to fall into the highest income bracket (over 800 USD/month) and 35% of all Russian internet users live in Moscow or St. Petersburg. Finally, most Russians use the internet for work-related purposes (81.6%) as compared to 24% who use it for entertainment purposes, 38% for scientific purposes, and 50% for information purposes.⁵³

Karill Modylevski--general director of XXL, an on-line grocery store based in Moscow, believes that as of September 2001 approximately 343,000 people in Moscow accessed the internet every day and 5% of these people (or 16,700 people) had experience buying on the internet. Modylevski notes that this figure constitutes a large enough critical mass for dot.com stores in Moscow to be profitable. He hopes that his company, XXL, successfully reaches at least 2400 people (14% of Moscovites with experience buying on-line) with a minimum purchase order of 45 dollars from each of them. (This amount of sales he calculated as the amount that would enable the on-line grocery store XXL to be profitable). Further, Modylevski reminds us that the number of Russians with internet access will grow quickly. For those Russians who do use the internet for eCommerce, media, office supplies,

and electronics appear to be the most popular online sellers (see Table 1 which lists characteristics of the ten most popular Dot.Coms in Russia).

BUSINESS MODELS

While individual firms cannot significantly influence the environmental conditions present in a country (conditions that determine how conducive a country is to eCommerce), firms can, by selecting a good business model, affect the amount of value their firm will create. We assert that in Russia there are several key characteristics, or value creators, of business models that enhance the likelihood of creating value in transactions. These characteristics include: availability, ease of search, lock-in, ease of use, trust, complementarity, novelty, and efficiency. We explain below why these value creators are so important.

Our model of eCommerce value drivers builds on the work of Amit and Zott, sharing with these authors —the following value drivers: lock-in, efficiency, novelty, and complementarity.⁵⁴ However, our model further adds four additional value drivers (ease of use, availability, trust, and ease of search) in conjunction with factors affecting the external environment.

Our selection of value drivers is backed by two important characteristics of goods/service procurement in Russia that may be easily noted by visiting foreigners: product availability and product/service search. Although it is possible to find most things one needs in Moscow and St. Petersburg, product availability outside of Russia's two largest cities is poor. Thus, those companies that create business models that increase the availability of goods to the regions have a good chance of creating value in Russia and as a result availability is one of the seven eCommerce value drivers we include in our model. An example of an eCommerce company which has used this to its advantage is Colibri. Colibri, which sells books on the web, has found sales within regions outside of Central Moscow (Moscow) and Northwest Russia (St. Petersburg) to be a very fast-growing and important segment for them currently making up 45% of their sales. Further, regional sales are growing much faster than sales in Moscow and St. Petersburg. Colibri managers point out that one reason that explains why the regions are such a prospective customer segment for them is that while potential customers in Moscow have the option of going to a brick and mortar bookstore to purchase most of the books they sell, this option is not normally available in the regions where only small bookstores normally exist.

Second, while most products and services are available in Moscow or St. Petersburg, the task of finding such often proves quite challenging due to the presence of many small stores, an under-developed directory system, and the strange location of many stores. Thus, those eCommerce models which help customers to find products have the potential to create value in Russia. Increasing the ease with which one can search and find a particular product reduces information asymmetries in turn further increasing value by diminishing transaction costs. An example of an eCommerce company which has created a business model to leverage ease of search is Webmarket. Webmarket sells a wide variety of products from car parts to household items. Customers know that Webmarket has many different items and even more importantly Webmarket has a good search engine to help customers find the products they are looking for.

Trust is another important value creator. In the absence of direct physical contact with the end customer, one of the greatest challenges that eCommerce firms face is creating trust, which facilitates a commercial transaction, between the firm and a the customer. This finding is significant for several reasons. First, trust is required to convince a customer to by a product that he or she can not touch. Second, it is significant because trust often affects the method of payment selected. Generally speaking, the level of trust characterizing commercial transaction in Russia is low and this explains the popularity of cash on delivery (COD) payments for online goods and a preference for what has been called a “flee market mode” of transaction—inspecting and buying goods on the spot. Ozon an on-line bookstore has managed to engender trust by offering a money back return policy, trusting customers if they claim that the books did not arrive via Russia’s not always reliable post system, and creating a professional looking web site.

Complementarity, another value creator, refers to the benefits brought about from the bundle of goods and services offered. This may include complementarities between on and off-line offerings or between the bundle of products or services offered on-line. For example, a site that will sell you flight tickets and arrange a rental car and a hotel for you at your destination is probably worth more to you than three separate sites each doing one of these activities. Webmarket is an example of a company which does much to focus on complementarity. It has over 15, 000 products including car parts, office supplies and things for the home in an effort of create a Walmart one-stop shopping experience in Russia on-line. As Yuri Davlistov, the director of Webmarket comments:

The strategy of diversification is successful for Russia in part because there are almost no real retail chains (except for food stores) in Russia and

people are increasingly valuing their time more. It is hard to get people to continue to come back to your store if you only sell one product. However, if you sell many products for a good price then people will often go to your site and see if you have what they need.

A novel business model can also help to create value since customers will have fewer alternatives. For example, Medical Co. (disguised name) which to the best of our knowledge is the only company selling specialized medical equipment all over Russia on the web benefits from being novel. Medical Co. also demonstrates that the web can be useful in aggregating demand for niche products which would not otherwise generate enough demand for products in a traditional store in one town.

Ease of use, that is how convenient and easy it is to access the company and its product/service offering, clearly adds value since people are willing to pay to have their life made easy. This is especially important in Russia, where bureaucracy/paperwork can often make transactions timely procedures. Computer Store (disguised name), an on-line computer equipment store bookstore, is a good example of a firm which has benefited from developing a very user-friendly web interface which is easy to use. Computer Store officials claim that due to their user friendly interface, compared to other Russian eCommerce computer stores, significantly more people who come to their site progress further than just the first page. Further, having an easy-to-use interface has been a key reason Computer Store has been successful at retaining customers.

Lock-in is another important value creator. Lock-in refers to the extent that customers of a firm are likely to continue using the firm because it provides loyalty schemes such as bonus point programs (like frequent-flyer miles) or provides a wide-range of services which a customer is unlikely to be able to do without for a period of time (such as ordering groceries based on a pre-arranged list which took several hours to set up) or unlikely to find in the same configuration elsewhere. Gelmut.ru is an example of an eCommerce firm that has developed a business model which benefits from having a business model which scores high on lock-in. Gelmut.ru sells office and computer supplies. Gelmut.ru facilitates repeat orders (lock-in) by automatically creating personalized shopping lists of items a specific customer has previously ordered encouraging customers to make repeat orders to save the time of setting this up at another store (further, at most other stores in Russia it would have to be set up manually).

Finally, business models which help increase transaction efficiency create additional value. This assertion, which builds on transaction cost theory, indicates that transaction efficiency increases when transaction costs decrease.⁵⁵ It is possible to decrease transaction

costs in a number of ways using eCommerce. For example, making information rapidly available to make more informed decisions or quicker decisions, decreasing search and bargaining costs by reducing information asymmetry, and rapidly grouping individuals with similar purchase wishes together to increase bargaining power.

Now that we have defined all of the components of our model (depicted in Figure 1), we will present four case studies of the most successful eCommerce firms we observed in Russia in an effort to help other firms and policy makers learn from their experience and understand what types of business models can best create value. In Table 3 we present average ratings by the three industry experts (mentioned in the methodology section above) of the value drivers of case study firms' business models.

Formoza: Making Products Available outside of Moscow and St. Petersburg where 136 Million of Russia's 147 Inhabitants Live

Formoza is one of Russia's largest producers and distributors of personal computers. Based in Moscow, Formoza initially began working in Moscow in 1993 and then slowly expanded its sales to the regions primarily through partner retail stores (stores that were independent, but through various types of relationships sold Formoza's products). However, Formoza had dreams of quicker growth and with the advent of eCommerce, aspired to be the Dell of Russia, able to make many sales to customers all over Russia using the internet. Nevertheless, the company soon realized that this business model was unlikely to be successful as so few people in Russia have internet access (especially in the regions), and transportation was poor (two eCommerce environmental factors listed in the outer ring of our model above). They also realized that the fact that few people had credit cards would be a major challenge to how people would pay for the merchandise ordered on the web. Further, the idea that Formoza might undertake direct web-based sales to the regions greatly upset its partner retail stores who were concerned about losing potential customers to the company's direct web-based sales since Formoza would have the ability, if so desired, to sell products less expensively than their regional dealers. The old challenge of channel conflict had raised its head once again.

Formoza's solution was to develop a click and mortar business model that combined the best aspects of on- and off-line transactions--a model high in complementarity. Formoza thereby developed a system called eStream, a web-based system that allowed customers who came to the partner stores to view Formoza's products, retail prices, availability, and shipping time on-line. At the same time customers benefited from certain brick and mortar aspects like

being able to go to a store physically, obtain in-store customer service, talk to a sales representative in person, view a limited number of models in person (and all models via the internet), have increased security by knowing where the store's location, and pay in cash easily (a common practice in Russia). The use of a click and mortar business model that included a physical location near the customers also helped increase the value driver of trust—a major challenge for Russian eBusinesses to overcome. Further, although it was possible to arrange special timely transport to a regional dealer, but timely transport to many distributed individuals would be prohibitively costly in Russia due to the poor existing goods transport facilities. Formoza's partner retailers had free access to the eStream system and based on the store's log-in ID, Formoza was able to display special shipping times and prices for the exact store in question. The eStream system provided end customers with maximum up-to-date information while resolving problems like channel conflict and a lack of internet penetration into the regions. Today, 90% of Formoza's orders from the regions come through the eStream system and this has resulted in considerable cost savings for the company.

When asked what effect eCommerce has had on the company, Sergey Polansky, manager of Formoza's Commercial Department replied, "We decreased expenses using eCommerce without increasing our costs too much...The main result is that now we are ready to enlarge the number of retailing partners we work with." Polansky indicated that Formoza expects to increase the number of its dealers (customers) by a 110 % over the next year. This rapid growth is a direct result of using eCommerce. Whereas once Formoza considered working only with dealers with a turnover of at least \$50,000 dollars per month, with eStream the company is able to work with smaller dealers as well since eCommerce has decreased the fixed costs of working with an additional retailing partner. Formoza has spent considerable effort to optimize its site to work quickly over poor telephone lines often found in Russia and thanks to Russia's inexpensive and skilled computer programmers this has been possible to achieve for a reasonable cost. Polansky indicates that many companies in Russia build their eCommerce sites just like those in the West which run on far better quality telephone lines. In Russia, although such sites are nice to look at, in most cases flashy graphics take a long time to load and as a result most people give up in the process of waiting and never see them. Polansky stresses the importance of keeping the external environment in the country where you are operating in mind.

Clearly the Formoza model scores high on value creators like easy to use and novelty. One can also see that efficiency is increased especially in terms of order-processing and delivery. The Formoza model also facilitates the client's ability to obtain product specificity

and variety not only in Moscow, but all over Russia. This directs attention to two more of our value creators--search and availability. Aside from creating a good convenient experience for the customer, however, the business model does little to lock-in the customer for repeat purchases.

XXL: Convenience, Good Service, and Dependence—A Recipe for Success

XXL was started in 1999 as an on-line grocery store aimed at becoming a “one-stop shopping” location. Thus, in serving as a one-stop shopping location, the company provides its clients with all sorts of foodstuffs, cosmetics, entertainment items (e.g., videos, airline tickets, theatre tickets, and cinema tickets) and services (e.g. dry cleaning and photo development). XXL was one of five dot.com stores which received an A+ (the highest possible rating) by expert RA (2001). Although XXL does not make much money on these additional services, in providing such the company aims to make the customer more dependent and to develop trust in XXL. The company wants to secure customer lock-in by making it difficult for a customer to decide, “This week I won’t shop at XXL I will just go down to the grocery store.” XXL’s wide product and service offering which customers acquire on a weekly basis creates an image of ease in that it is easier and more useful to shop at one store than at many different stores. Thus, XXL scores high on complementarity and lock-in. In providing such a wide variety of products and a sophisticated customer interface, customers can easily find many needed products. XXL therefore scores high on the value creator of search. XXL focuses primarily on the greater Moscow area due to its focus on fresh products thus it does not score well on product/service availability since most of its products/services are not readily available in the regions.

Karill Modylevski, XXL’S Managing Director, asserts that eCommerce is especially needed in Russia. As he says, “on-line grocery stores are needed even more in Russia than in the west because Russia is a harsh place to live. We have cold winters, our streets are not that safe, and many people do not have cars. It is better to stay at home and order over the internet.”

XXL provides its own courier services for two reasons. First, to meet the special requirements (temperature control) demanded by its products and second, to ensure high service quality (on-time delivery), critical for its business model. The company uses a fleet of specially designed cars which have compartmental refrigerator units (for various temperatures their products require) to service the Moscow area where it operates. (XXL’s focus on the Moscow area while reasonable, given the nature of the business, has not helped

the company to score well on the value creator of accessibility). An expert system hooked up to a GPS system tracks each car and develops a routing strategy for each. Further, some spare delivery cars circle the city so that they can meet up with delivery cars that are delayed by traffic congestion. Although this delivery structure is not profitable today given the company's small size, Karill Modylevski, XXL'S Managing Director, is confident that it will eventually be a key reason behind his firm's success.

XXL is all about customer service. Normally, customers place their orders a day in advance and can choose a three-hour time window for product delivery the next day. For an extra fee, customers can choose a one-hour delivery window or have products delivered within three hours of placing the order. This good customer service and a professional looking web site help XXL.ru to score well on trust compared to other dot.coms, although creating trust is a significant challenge for all dot.coms in Russia. Clearly, XXL scores high on the value creators of novelty and ease of use. Eliminating physical stores and saving customer time also makes XXL score high on efficiency.

XXL's main competitors are standard supermarkets. Modylevski says the company has 70% of the on-line supermarket market in the greater Moscow area and that its products are 5-10% cheaper than traditional Russian supermarkets (of the middle to high-end variety). In September 2000 the company received about 60-110 orders/day, but a large increase is expected as advertising comes on-line in October. Growth for the business looks promising because, as Modylevski states, "Our customers unbelievably like this service! I have never seen comments like the ones I see everyday. Even people who are dissatisfied want to make our company better because they see the service is absolutely necessary for them." Modylevski goes on to explain that the need for this service is greater in Russia than in the USA because of the bad weather (the rain and snow, dirt) lack of safety, and lack of personal cars. As an example, Modylevski indicates that almost no families have two cars in Russia [many have none] and if, a Russian man is working late, if possible, he would not want his wife to have to go to the store alone on a potentially unsafe street to buy food in the middle of the cold winter and carry all of the food home herself. Ordering groceries on line is much more convenient.

eHouse: Gaining Synergies From Creating a Holding Company

eHouse is a dot.com holding company which works following the strategy that expertise and even much infrastructure developed for a dot.com retail store in one business area (e.g., books) can be useful in other business areas as well (e.g., computer products or

children's toys). Thus, eHouse scores well on complementarity. As a result, eHouse has started or acquired 16 dot.com companies and has leveraged its dot.com expertise and infrastructure to make all of the companies in the group more effective and realize cost-synergies. Having a holding company behind smaller stores makes it easier for customers to develop the value creator of trust since the firm appears more financially stable.

This strategy of leveraging an eHolding company has met with good success and is fairly novel for eHouse. As a result, the company scores well on the value creator of novelty. The eHouse group (www.ehouse.ru) currently consists of: Cup.ru (sells coffee), Aromat.ru (sells perfume), Kenga.ru (sells childrens' toys), Tito.ru (sells childrens' toys), Cue.ru selling billiard equipment and information on billiards, Skorohod.ru providing transportation of goods all over Russia, Manifest.ru providing internet advertizing, Enrus.ru providing translation, 24x7.ru selling books, video, software, CDs, Bolero.ru selling books, video, software, cds, and souvenirs, Pricematrix.ru providing information about prices of various products, Gelmut.ru selling office supplies with a focus on computer supplies like printer cartridges, Dostavka selling computers and telephones, Mecashop selling computers and much more, and Wstore selling computers for businesses and office supplies.

eHouse has several interesting business strategies. First, the company has, by acquiring quite a few of the companies in its portfolio, made them more profitable by introducing eHouse know-how, management, and infrastructure (thus eHouse scores well on efficiency). It has also concentrated efforts on several sectors like books, computer equipment, and toys. In each of these product areas the company has several stores. eHouse normally chooses to maintain separate websites for each store finding that customers are attached to a certain website even if prices and product selection are similar to another website. However, they integrate the back-offices of the stores to achieve considerable cost savings. In some cases, over time, it has also tried to focus different companies on different customer segments (e.g., computers for home use versus computers for office use).

One of eHouse's flagship companies is Bolero.ru, {founded in 1999 with a focus on a low-cost strategy and one of five on-line stores rated A+ (the highest possible rating) by Expert RA (2001)} which is by many accounts Russia's second largest on-line book store (after Ozon.ru) with sales of 300 books/day and a stock of 30,000 books, 30,000 CDs, 8,000 videos, 3,000 software programs, and 3000 souvenirs. Recently eHouse acquired 24x7.ru, another one of Russia's leading on-line bookstores. By integrating 24x7 into the eHouse family and combining the back-office with Bolero.ru, eHouse has obtained substantial savings. Anatoly Schkred, Director of eHouse estimates a 50% savings in operating expenses

for the combined 24x7/Bolero organization once the companies are fully integrated (a process that is nearing completion). Only two of 24x7's original 15 employees remain with the company. The remaining work is done by Bolero's former staff of 35 employees. However, to the customer, these still look like two different stores.

Mr. Schkred indicates that the largest challenge for eCommerce in Russia is the poor postal service. To help minimize this problem eHouse has had to develop its own courier company but this is not cost efficient to all cities in Russia. The poor postal service is problematic not so much because it is slow in delivering products but because, 1) 3% of the time products get lost (eHouse always refunds customers without question if this happens and thus this problem is manageable) and even more importantly, 2) it takes three months for eHouse to be paid for products sent COD by the Russian post which causes huge cash flow problems. Most products are sent COD in Russia since few people have credit cards in Russia. Also, eHouse tries to create lock-in by having a wide variety of complementary products and services and a strong company standing behind them. All of eHouse's sites are easy to use and have good search engines making finding the needed product or service easy (this is part of eHouse's know-how). Further, eHouse has exerted much effort to facilitate sales from its stores to the regions including creating the transportation company Schora.ru which makes deliveries to 150 Russian cities and thus eHouse scores well on product/service availability. Anatoly Schkred, director of eHouse indicates that creating trust between companies and customers is a key problem in Russia. Mr. Schkred says that eHouse has an advantage in solving this problem because once trust has been developed by one company in the eHouse group this can be leveraged by other partner firms. Finally, Mr. Schkred stresses the importance for creating dot.com companies that are adaptable since Russia continues to experience some economic and political instability.

Ozon: Leveraging Good Customer Service and Selling to Russians Abroad

Ozon was started in 1998 and spun-off from Rekssoft, one of the largest Russian software producers in 1999. In 2000 Ru-Net holding obtained majority ownership in Ozon and became the policy maker for Ozon. Ozon is an online shop that sells Russian-language books, videocassettes, and DVDs through the Internet. The company has between 10, 000 and 20, 000 subscribers, but far fewer are frequent customers. It provides subscribers with information on books, writers, movies, actors, reader/viewer awards, and festivals. Although 70 percent of Ozon's customers come from Russia, more than 50% of sales are from abroad (especially from the United States and Israel) since orders from abroad tend to be larger. The

company has focused on providing a wide assortment of products and excellent customer service and as a result it has been able to command a premium price especially since an important group of its customers are Russians living abroad who are less price sensitive. It was also the first large Russian on-line book store and this helped the company attract many clients living abroad who desperately needed Ozon's service. These Russians living abroad have been very loyal to the company, much to the distress of many other Russian on-line stores. Ozon carries a wide selection of products including 33,000 books, DVDs (5000 items), and movies of Russian content only, and its "infosphere," referred to within the company as a "database devoted to world culture." It is interesting to note that the company once carried 100,000 books, but found through experimentation that 70,000 is the optimal stock size because there is little demand for more. They also carry 10,000 videos, 7000 CDs, 10,000 DVDs and 1,000 computer programs. 53% of total sales are books, 24% are videos, 10% are CDs, and 13% are DVDs and software.

Delivery takes 4 hours (express service) in Moscow, 2 days to St. Petersburg, and up to two weeks in other areas of Russia and abroad. 30% of Ozon's sales are to Russian regions. The regions most likely represent the greatest potential area for growth according to management. Most people make purchases while they are at work, but most sales are for personal use. Ozon is in the process of launching a B2B service. Today, after experimentation with off-line media, Ozon limits their advertising to other on-line sites that they find to be most effective. Sales growth has been strong for the company which grew 400% in 2000. Total turnover in 2000 was 1,3 mln\$. Ozon gets 16 000 visitors per day to its site which creates about 500 sales at an average of \$18/order. Management considers Bolero, part of the eHouse group, to be its main competitor.

With its state of the art and easy to use/search site combined with excellent customer service eHouse scores very high on ease of use and ease of search. Further, it is with these features of excellent customer service and ease of use that Ozon has tried to use to differentiate itself from its competitors with some success and achieve customer lock-in. However, with over 15 active on-line book stores in Russia, showing that it is truly novel is what Ozon struggles with most (and tries to achieve primarily with customer service and ease of use as mentioned above) despite being the market leader. Ozon's back-office systems and the general concept of ordering a book on line help this company score pretty well on efficiency of its business model. Having a wide variety of products beyond just books makes it score high on complementarity and since its products are available throughout Russia (and the world) Ozon also scores well on product/service availability.

Alexander Krivtsov, director of Ozon's St. Petersburg operations indicates that Ozon has spent great efforts to make a quick web site due to poor telecommunications infrastructure and older computers and modems which are prevalent in Russia. Mr. Krivtsov also indicates that Russia, and especially St. Petersburg, has very talented computer programmers which have been a valuable resource in developing Ozon.ru. Thus, external factors in the outer ring of our model have played a role in Ozon's strategy.

CONCLUSIONS

The large number of failures attributed to eCommerce recently has made it clear that hype alone will not make a successful eCommerce model. Not surprisingly, it is now clear to all that just as in traditional business, to be successful in eCommerce firms must also have sound business models which generate profit. eCommerce is just one more channel of conducting business. However, because of various factors like very low transaction costs and ability to access anyone anywhere at anytime, eCommerce does offer some new possibilities for companies with skillfully crafted business models. This article shows that skillfully-crafted business models are those that focus on the value creators in our model --lock-in, availability, efficiency, novelty, trust, complementarity, ease of use, and ease of search-- while keeping in mind the how the external environment (computers and internet, telecommunications, computer programming, information security, customs and delivery, legal and regulation, support institutions, payment systems, financial resources, economic and political stability) impacts value creation (see Figure 1).

As shown in Table 3, the four case studies described above provide examples of companies which have been successful by leveraging the value creators identified in our model while keeping the external environment in mind. The study makes several important contributions: first, it helps us to understand the state of eCommerce in Russia and what types of business models are likely to be successful in Russia. This contribution is particularly useful since almost no research has focused on eCommerce in countries in transition like Russia. Second, the study shows that the external environment does play an important role in affecting the way eCommerce value creators work. The logical implication of this is that somewhat different business models are likely to be preferable in different countries—an explicit test of this hypothesis remains an important next step for future research. It would also be useful for future research to explicitly test our model in other countries to explicitly show that it works in different geographic contexts. Third, the study presents a model of

eCommerce value creation. In general, the authors hope that firms and scholars can learn from the experience of the companies described in this article and from our model.

Table 1: eCommerce Firms in Sample

Name	Industry	Type	e-type	Location
FIRMS IN PHASE 2A				
R1 Traders ¹	Wholesale trader, mostly foods	Traditional	B2B	Moscow
R2 Industrial ¹	Large Mechanical Product	Traditional	B2B	Moscow
R3 Materials ¹	Unique Materials	Traditional	B2B	St.Petersburg
R4 Graphics ¹	Graphics equipment/software	Traditional	B2B	St.Petersburg
R5 Placement ¹	Staffing services	Traditional	B2C	St.Petersburg
R6 Beer ¹	Beer	Traditional	B2B	St.Petersburg
R7 Store ¹	Books, CDs, etc.	Internet	B2C	Moscow
R8 Mall ¹	Electronic Mall	Internet	B2C	Moscow
R9 Mobile ¹	Telephone equipment	Internet	B2B	Moscow
R10 Computer Store ¹	Mostly PC related	Internet	B2C	Moscow
R11 Colibri	Mostly books	Internet	B2C	Moscow
R12 Webmarket	Wide variety of products	Internet	B2C	Moscow
R13 Gelmut	Office supplies	Internet	B2C	Moscow
R14 Medical Co.	Medical Equipment	Internet	B2B	Moscow
FIRMS IN PHASE 2B (CASE STUDIES)				
C1 Formoza	Computer sales and production	Traditional	B2B	Moscow
C2 XXL	E-supermarket	Internet	B2C	Moscow
C3 eHouse	Wide variety of products	Internet	B2C	Moscow
C4 Ozon	Books, CDs, software	Internet	B2C	St. Petersburg

1. At the request of these firms their names are disguised.

Table 2: Largest Factors Hindering eCommerce in Russia

Factor Hindering eCommerce	Number of Responses
Lack of purchasing power (financial resources)	12
Lack of people with internet access	11
Poor telephone line quality	8
Poor postal system	7
Other	6

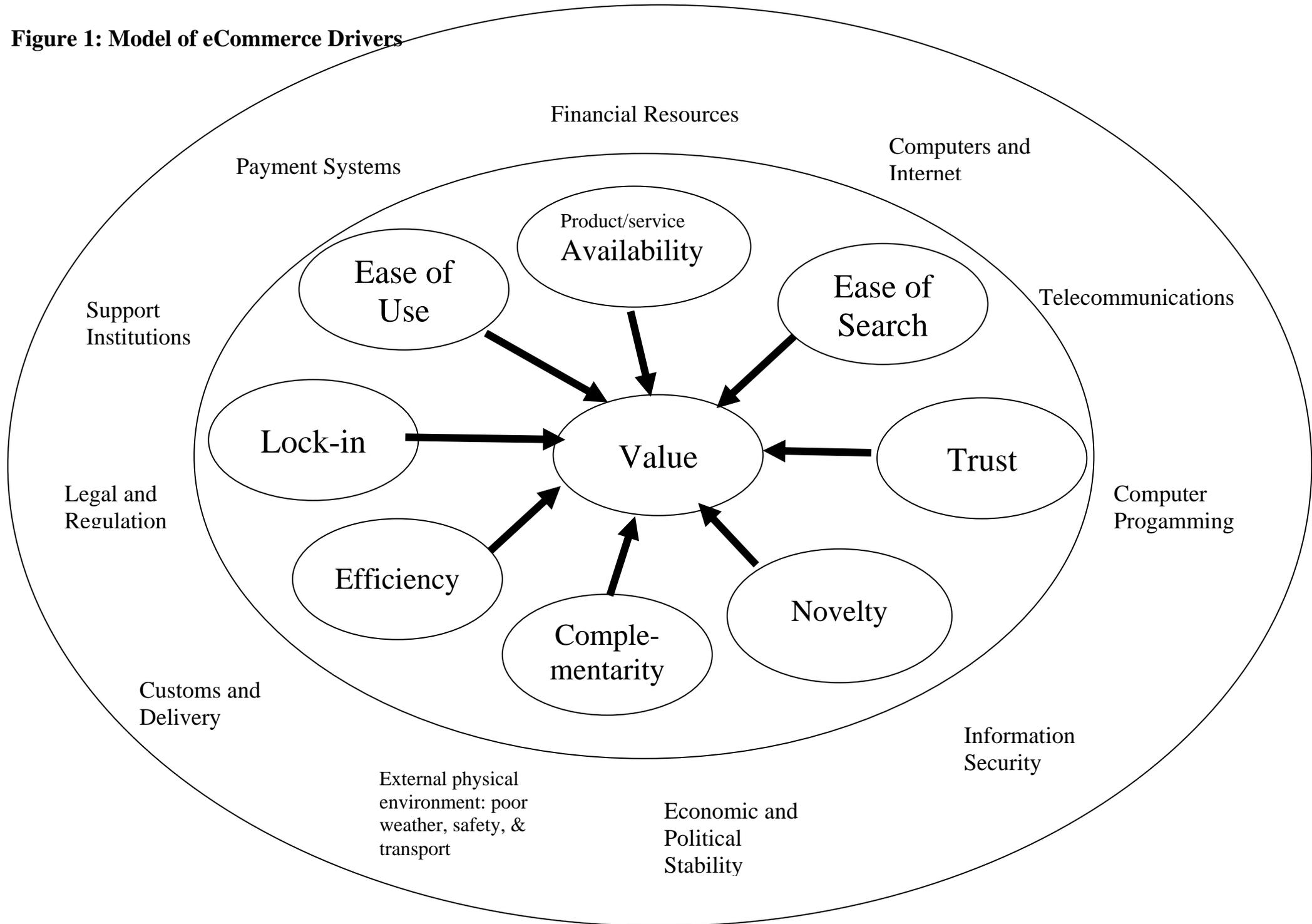
Note: 14 managers interviewed were asked to list the three most important factors

Table 3: Ratings on the Model

Firm	Availability	Ease of Search	Comple-mentarity	Trust	Novelty	Efficiency	Lock-in	Ease of Use
Formoza	5.0	4.7	4.3	4.7	5.0	5.0	3.0	3.7
XXL	2.7	4.3	5.0	4.3	5.0	4.7	5.0	4.7
eHouse	4.7	4.3	4.7	4.0	4.7	4.3	4.0	4.3
Ozon	5.0	4.7	4.3	4.3	3.0	4.3	4.0	4.7

Note: each dimension was evaluated by three industry experts on a scale of 1= poor to 5= outstanding. The average rating is presented above.

Figure 1: Model of eCommerce Drivers



Endnotes

- ¹ eMarketer. 2001. The eGlobal Report. January issue. <http://www.emarketer.com>.
- ² De La Tore, J. & Moxon, R.W. eCommerce and global business: the impact of the information and communication technology revolution on the conduct of international business. *Journal of International Business Studies*, 32(4):617-635.
- ³ Lynch, P. & Beck, J. Profiles of Internet buyers in 20 countries: evidence for region-specific strategies. *Journal of International Business Studies*, 34(4): 725-748.
- ⁴ Amit, R., & Zott, C. 2001. Value drivers of eBusiness. *Strategic Management Journal*, 22: 493-520.
- ⁵ eMarketer. 2001. Russian Internet landscape still bleak. <http://www.emarketer.com>.
- ⁶ Brunswick Warburg. 2000. <http://www.brunswickwarburg.ru>, viewed June 1, 2001.
- ⁷ Nazarova, I. & Lakaeva, I. 2000. Overview of electronic commerce in Russia. U.S. Foreign Commercial Service, Moscow, Russia. <http://www.bisnis.doc.gov>, viewed May 7, 2001.
- ⁸ BISNIS. 2001a. Economic profile Russia. US Foreign Commercial Service (BISNIS): Moscow, Russia. <http://www.bisnis.doc.gov>, viewed July 16, 2001.
- ⁹ Ross Business Consulting. 2001. Telephone Density in Russia. <http://www.rbc.ru>, viewed July 15, 2001.
- ¹⁰ Ghosh, S. 1998. Making business sense of the Internet. *Harvard Business Review*, 76(2): 126-135.
- ¹¹ Amit et. al., op. cit.
- ¹² Please see Amit et. al., op. cit. for a detailed explanation of how multiple theoretical perspectives can be used to explain value creation in eBusiness. Both to avoid repetition and due to the more applied nature of this article, we do not include such a detailed discussion here.
- ¹³ Amit and Zott, op. cit., p. 511.
- ¹⁴ Amit and Zott, op. cit.
- ¹⁵ Expert RA. Rating of eCommerce firms in Russia. www.expert.ru, viewed June 15, 2001.
- ¹⁶ Yin, R. 1981. The case study crisis: Some answers. *Administrative Science Quarterly*, 26: 58-65.
- ¹⁷ Glaser, B. & Strauss, A. 1967. *The discovery of grounded theory: Strategies of qualitative research*. London: Wiedenfeld and Nicholson.
- ¹⁸ Porter, M. E. 1990. *The competitive advantage of nations*. New York: The Free Press.
- ¹⁹ In August 1998, several major Russian banks with extensive state short-term bond (GKO) portfolios (most of them Moscow-based) were temporarily forced to freeze assets, thereby breaking the chain of payments and failing to meet obligations to their clients. Many branches closed down, total bank asset values fell from \$88.7bn to \$32.3bn, and capital employed in the sector had shrunk from \$16.1bn to \$3.1bn by the end of 1998. For more details see, Doern, R. & Fey, C.F. 2002. The emergence of eBanking in Russia. *European Business Forum*, (8): 71-74.
- ²⁰ BISNIS. 2001a, op. cit.
- ²¹ BISNIS. 2001a, op. cit.

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- ²² BISNIS. 2001b. Commercial overview of Russia: Foreign investment. US Foreign Commercial Service: Moscow, Russia. <http://www.bisnis.doc.gov>, viewed June 16, 2001.
- ²³ Nazarova et. al., op. cit.
- ²⁴ Kan, G. 2000. The Internet in Russia. Working paper, Vanderbilt University.
- ²⁵ Lakaeva, I. 2001. Internet security in Russia. U.S. Foreign Commercial Services: Moscow, Russia. <http://www.bisnis.doc.gov>, viewed May 7, 2001.
- ²⁶ BISNIS. 2001b, op. cit.
- ²⁷ Nazarova I. 2001. Russia announces blueprint of its telecommunications market. US Foreign Commercial Service: Moscow, Russia. <http://www.bisnis.doc.gov>, viewed May 7, 2001.
- ²⁸ Cohen, N. 2001. Russian internet landscape still bleak. eMarketer, <http://www.emarketer.com>.
- ²⁹ Cohen, op. cit.
- ³⁰ EITO - European Information Technology Observatory. 2000. Millennium report. ISSN 0947-4862. <http://www.eito.com>. Viewed June 15, 2001.
- ³¹ Breiter, M. 1999. Brief statistical analysis of the telecommunications market in Russia. U.S., and Foreign Commercial Service: Moscow, Russia. <http://www.bisnis.doc.gov>, viewed June 2, 2001.
- ³² Anonymous. 2001a. On telephone density in Russia. <http://www.rbc.ru>, viewed June 4, 2001.
- ³³ Nazarova & Lakaeva, op. cit.
- ³⁴ Breiter, op. cit.
- ³⁵ Investment Guide. 2000.
- ³⁶ Trofimenko, O. & Fey, C. F. 2001. Off-Shore computer programming in Russia. Stockholm School of Economics in Saint Petersburg: Working Paper.
- ³⁷ Enos, L. 2000. The new economy still faces hurdles around the world. eCommerce Times, <http://www.ecommercetimes.com>.
- ³⁸ Lakaeva, op. cit.
- ³⁹ World Bank. 2001. World Development Indicators, section 3.12, traffic and congestion. http://www.worldbank.org/data/wdi2001/pdfs/tab3_12.pdf, viewed March 1, 2001.
- ⁴⁰ Vigdorichik, M. 2000. Russia. Information from the 6th International Transport and Logistics Exhibition and Conference. <http://www.bisnis.doc.gov>, viewed July 12, 2001.
- ⁴¹ Gaverick, R. J. 2001. Overview of eCommerce development in Russia. American Embassy Moscow. <http://www.bisnis.dov.gov>, viewed July 16, 2001.
- ⁴² Mavrina, A. 2001. Russia: Customs Update. <http://www.bisnis.doc.gov>, viewed July 16, 2001.
- ⁴³ Vigdorichik, op. cit.
- ⁴⁴ Vigdorichik, op. cit.
- ⁴⁵ Gaverick, op. cit.
- ⁴⁶ Nazarova et. al., op. cit.

⁴⁷ Gaverick, op. cit.

⁴⁸ Davis, L.E. & North, D.C. 1971. *Institutional change and American economic growth*. Cambridge: Cambridge, UK: University Press.

⁴⁹ Institute for Financial Studies Moscow. <http://www.ifs.ru>, viewed July 1, 2001.

⁵⁰ Institute for Financial Studies Moscow, op. cit.

⁵¹ Anonymous. 2001b. Payment systems. <http://www.cbr.ru>, viewed May 20, 2001.

⁵² Anonymous. 2001b, op. cit.

⁵³ ROMIR 2000. Survey of how Russians use the internet. ROMIR Consulting: Moscow, Russia. <http://www.romir.ru>, viewed July 16, 2001.

⁵⁴ Amit & Zott, op. cit.

⁵⁵ Williamson, O. 1975. *Markets and hierarchies: Analysis and antitrust implications*. New York: Free Press.