Impact of Services Liberalization on Industry Productivity, Exports and Development

Six Empirical Studies in the Transition Countries

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Abstract

Services as a share of gross domestic product and in foreign direct investment flows have increased in importance both globally and in the transition countries of Europe and Central Asia. So has the need for both academics and policymakers to understand the impacts of services liberalization in the transition countries. For this reason, the World Bank Institute, under a grant from the Government of Austria, commissioned seven studies under the auspices of the Economic Education Research Consortium (headquartered in Kiev, Ukraine) to investigate the impact of services liberalization on productivity, focusing on services reform in the transition countries of Europe and Central Asia. All of

the studies have been produced by authors from the transition countries of Europe or Central Asia. This paper summarizes six of these studies that will appear in a volume in Russian edited by the author of this paper. The studies contribute to the growing empirical literature establishing that liberalization of barriers against service providers can make an important contribution to increase total factor productivity, exports and growth in the economy. They also show that the issue of services liberalization is important for the transition countries in particular. Links to the English language versions of the papers are provided.

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**Impact of Services Liberalization on Industry Productivity, Exports and
Development: Six Empirical Studies in the Transition Countries**

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Impact of Services Liberalization on Industry Productivity, Exports and Development: Six Empirical Studies in the Transition Countries

David Tarr¹

I. Introduction

Services now constitute about 70 percent of global GDP.² Moreover, foreign direct investment (FDI) flows have shifted toward services, and now constitute almost half of total FDI flows in developing countries.³ Recognizing their importance and the need to have special rules to treat trade in services, the General Agreement on Trade in Services (GATS) was incorporated into the World Trade Organization (WTO) when it was formed in the mid-1990s. Further, services are now a key part of the regional agreements of both the United States and the European Union.

The theoretical literature linking services liberalization to productivity increases in the broader economy is well developed. While there is an important emerging empirical literature (briefly surveyed below) that shows that services liberalization leads to productivity improvement and growth, there is a need for additional empirical studies to investigate and test this hypothesis, including its relevance for transition countries. For this reason, the World Bank Institute, under a grant from the Government of Austria, commissioned seven studies under the auspices of the Economic Education Research Consortium (headquartered in Kiev, Ukraine) to

¹ Consultant and Former Lead Economist, the World Bank. I thank the Austrian Government for its support for this project through a grant to the World Bank Institute for development of services sector capacity in the Europe and Central Asia region. I thank Jean-Christophe Maur for encouraging this project, Tom Coupe, Natalia Bystrytska and Irina Sobetskaya of the Economic Education Research Consortium for their excellent coordination of the author reviews, and Diana Weinhold, Oleksandr Shepotylo, Volodymyr Vakhitov and Michael Beenstock for serving as expert reviewers of the papers in the project at various stages of their development. The views expressed are those of the author and do not necessarily reflect those of the Austrian Government, the World Bank or its Executive Directors.

² Francois and Hoekman (2010, p. 644).

³ See World Bank, *Global Development Finance*, 2004.

investigate the impact of services liberalization on productivity, focusing on services reform in the transition countries of Europe and Central Asia. All of the studies are produced by authors from the transition countries of Europe or Central Asia. These studies make a contribution to the growing empirical literature of establishing that liberalization of barriers against service providers can make an important contribution to increase total factor productivity, exports and growth in the economy. They also show that the issue of services liberalization is very important for the transition countries in particular, in order to improve their growth prospects.

Due to the general quality of the studies and to provide better dissemination of them, we decided to produce a book of the collected studies, edited by this author.⁴ Given the lack of materials in this area in Russian, we decided to produce the volume in Russian. At the same time, it would be valuable for English speaking authors to have access to these papers. In this paper, which is adapted from my introduction to the volume, I summarize the six studies in the volume and provide links to the website where the English language version all the papers may be obtained.

To place the six new empirical studies in the context of the literature, I first briefly survey the theory relating services liberalization to productivity and development. Then I survey the empirical literature testing the hypotheses and also discuss measures of services liberalization for the transition countries of Europe and Central Asia. I then provide an overview of the six empirical studies, starting with the three studies that use firm level data. The English language versions of these studies are available at the links below.⁵

⁴ David G. Tarr, editor (forthcoming), *The Impact of Services Liberalization on Industry Productivity, Exports and Development*, Moscow: Ves Mir Publishing Company for the World Bank.

⁵ Full citations, including links, are in the references. The authors and the links to their papers are: Oleksandr Shepotylo and Volodymyr Vakhitov <http://www.eerc.ru/paperinfo/324>; George Berulava <http://www.eerc.ru/paperinfo/323>; Bogdan Klishchuk and Valentin Zelenyuk <http://www.eerc.ru/paperinfo/326>;

Theory and Modeling of Services Liberalization

There have been a number of theoretical papers that have argued that liberalization of barriers against foreign providers of services increases the productivity of the manufacturing and agriculture sectors and of the services sectors themselves. Among the most important papers have been Markusen (1989, 1990); Francois (1990a, 1990b); Markusen and Venables (1998) and Markusen, Rutherford and Tarr (2005). The key idea of these papers is that providers of services increase the productivity of users of services in manufacturing, agriculture and in the services sectors themselves. That is, they increase what economists call “total factor productivity.” Multinational providers of services are especially important in increasing total factor productivity because they bring technology or expertise to the local production process. Theory suggests that new domestic firms will typically also increase total factor productivity as access to a diverse set of services suppliers allows firms to use services that most closely match their specific needs. But liberalization of barriers against foreign suppliers of services is very important since foreign services suppliers are potentially a crucial source of new services, and the services they offer are more likely to differ in significant ways from domestic services thereby adding more to the productivity of those users whose production processes fit more naturally to the specialized services of foreign services suppliers.

These ideas have been implemented in computable general equilibrium models applied in several countries. The published journal articles in this genre include papers on Russia (Jensen, Rutherford and Tarr, 2006, 2007; Rutherford and Tarr, 2008, 2010), Kenya (Balistreri,

Petar Stankov <http://www.eerc.ru/paperinfo/327>; Aleksandr Knobel <http://www.eerc.ru/paperinfo/328>; Roman Vakulchuk, Farrukh Irnazarov and Alexander Libman <http://www.eerc.ru/paperinfo/329>. A seventh study in the project that is not in this volume is: by Peter Ondko, Jan Bena and Evangelia Vourvachaki <http://www.eerc.ru/paperinfo/317>.

Rutherford and Tarr, 2009); Tanzania (Jensen, Rutherford and Tarr, 2010), Kazakhstan (Jensen and Tarr, 2006) and Armenia (Jensen and Tarr, 2012).

Literature Review: The Impact of Services Availability and Services Liberalization on Productivity⁶

Studies Based on Firm Level Data. First, several studies using firm level data have established a link between increased access to services and increases in productivity. Using panel level data and controlling for FDI endogeneity, Arnold, Javorcik and Mattoo (2011) establish a positive link between total factor productivity (TFP) of manufacturing firms and liberalization of the services sector. They analyze the impact of liberalization of services on the performance of approximately ten thousand manufacturing firms in the Czech Republic in 1998-2003. The link is stronger for the firms that use services inputs more intensively. Employing a similar methodology, Fernandes and Paunov (2012) find that forward linkages from foreign direct investment in services to downstream manufacturing industries account for almost 5 percent of the observed increase in the Chilean manufacturing productivity growth. Employing a panel data set for India of about 4,000 firms, Arnold, Javorcik, Lipscomb and Mattoo (2012) find that services reforms in the telecommunications, insurance and transport sectors significantly increased productivity of manufacturing firms. Both Indian firms and foreign firms operating in India benefited from services reforms, but the foreign firms reaped the larger productivity increases. Arnold, Mattoo and Narciso (2008) find a statistically significant positive relationship between productivity in a sample of over 1000 firms in ten Sub-Saharan countries and the performance of the three service industries for which they collected data. Several papers have

⁶ See Francois and Hoekman (2010) for a more complete review of the literature on the impact of services availability and services liberalization on productivity and growth.

shown, e.g., Fink, Mattoo and Neagu (2005), that openness in a range of producer or intermediate service sectors is linked to increased export competitiveness and performance for high-technology sectors, for which services tend to be an important element of total cost.

Cross-Country Regressions. Second, using cross country growth regressions, several studies have found that open services regimes induce greater growth rates. Mattoo, Rathindran and Subramanian (2006) find (after controlling for other determinants of growth) that countries with open financial and telecommunications sectors grew about 1 percentage point faster than other countries.⁷ Eschenbach and Hoekman (2006) found that measures of services sector reform were statistically significant explanatory variables in explaining growth in their sample of twenty transition countries. Fernandes (2009) found that liberalization of services in transition countries had a positive and significant effect on labor productivity growth that was stronger the more distant the sector was from the technological frontier.

Other Studies. Several other studies also show a link to services availability and productivity. Triplett and Bosworth (2004) calculate that productivity growth in distribution and financial services fueled much of the post-1995 overall expansion in U.S. productivity. Inklaar, Timmer and van Ark (2008) show that differences in aggregate productivity levels and growth rates in seven OECD countries are largely attributable to services sectors. That is, much of the differential in their sample is due to variation in business services performance. Ciccone and Hall (1996) show that firms operating in economically dense areas are more productive than firms operating in relative isolation. Hummels (1995) shows that most of the richest countries in the world are clustered in relatively small regions of Europe, North America and East Asia, while the poor countries are spread around the rest of the world. He argues this is partly

⁷ Their results are consistent with several other studies that find a positive relationship between financial sector openness and economic growth. See, for example, Levine (2005).

explained by transportation costs for inputs since it is more expensive to buy specialized inputs in countries that are far away. The high cost of using far away inputs is especially true of business services that are not provided locally, as Marshall (1988) shows that in three regions in the United Kingdom (Birmingham, Leeds and Manchester) almost 80 percent of the services purchased by manufacturers were bought from suppliers within the same region. He cites studies which show that firm performance is enhanced by the local availability of producer services. In developing countries, McKee (1988) argues that the local availability of producer services is very important for the development of leading industrial sectors.

Services Performance in Eastern Europe and Central Asia

At the beginning of the transition in Eastern Europe and Central Asia, measures of services performance for the transition countries indicate that services performance was extremely poor.⁸ Although the transition countries have made considerable progress in services sector performance since 1989, according to the “Transition Indicators” of the European Bank for Reconstruction and Development (EBRD), the average level of services sector performance in the transition countries remains considerably below the level of industrialized market economies. The EBRD Transition Indicators, however, show a rather diverse picture regarding the liberalization of the transition countries. Although there are clearly a few exceptions, these countries fit the following pattern. Those countries that have acceded to both the WTO and the European Union, such as Hungary, Poland, the Czech Republic and the Baltic countries show the greatest degree of liberalization and are not far off from advanced industrial market economies on many of the measures of services liberalization. Those who have acceded to the WTO, but not

⁸ See the Transition indicators of the European Bank for Reconstruction and Development. Available at: <http://www.ebrd.com/pages/research/economics/data/macro.shtml#ti>

the European Union, such as Ukraine, Armenia, Moldova and Georgia (and Russia soon)⁹ show an average level of services sector liberalization for the region. Those who have not yet acceded to the WTO, such as Uzbekistan, Belarus, Tajikistan, Azerbaijan and Turkmenistan show more limited services sector liberalization. While Hoekman and Mattoo (2011) have shown that for incumbent members of the WTO, the offers on services within the Doha Development Agenda are much less liberal than the actual policies, for countries that accede to the WTO or to the European Union, the accession process has induced real liberalization.

II. Summary of the Six Empirical Studies of Services Liberalization

Impact of Services Liberalization on Productivity of Manufacturing Firms: Evidence from Ukrainian Firm-level Data, by Oleksandr Shepotylo and Volodymyr Vakhitov

The paper by Oleksandr Shepotylo and Volodymyr Vakhitov is a state of the art econometric test of the impact of services liberalization on productivity, and they expand the frontier of empirical research in this paper. Using a data set of over 40 thousand firms in Ukraine for the years 2001 to 2007, they establish important new results for the positive impact of services sector reform on total factor productivity in Ukrainian manufacturing.

Results. Their key finding is that a one standard deviation increase in services sector liberalization leads to a 9 percent increase in total factor productivity of Ukrainian manufacturing. The estimated productivity gain from services liberalization is higher than the estimates of previous studies, but Ukraine started with more protected, less liberal services sectors than in other countries where comparable studies were performed. The larger estimates

⁹ Russia was invited to join the WTO in December 2011. But as of late February 2012, its Duma had not yet ratified the agreement, where ratification is required in order to become a member of the WTO.

are to be expected because, as with goods, the marginal returns to services liberalization should be greater for more regulated and protected countries. They find their results are robust to different estimation methods and to different sub-samples of the data.

Very interestingly, they find that the productivity gains from services liberalization are more pronounced for domestic and small firms, which emphasizes for policymakers the importance of services sector liberalization for the development of small and medium size domestic firms. Again this is consistent with theory, as large firms can often hire service sector specialists, like lawyers, accountants, truck drivers and courriers as employees. Small and medium size firms find full time employees too costly, and have to rely to a greater extent on the market for services.

The authors note that the EBRD indices of services sector liberalization for their sample period of 2001-2007 show that there was substantial liberalization in Ukrainian services during this time period, including toward foreign direct investment. In 2001, 48 percent of the inward FDI stock in Ukraine was in manufacturing. By 2007, the share of the FDI stock in the services sector (excluding utilities) had reached 53 percent, while the share of the FDI stock in manufacturing had declined to 30 percent. As a result, the output produced by foreign-owned services providers grew in almost all services sub-sectors. Likely spurred by foreign ownership, labor productivity in the services sector more than doubled between 2001 and 2007.

Methodology. In view of the important methodological innovation of the Shepotylo and Vakhitov paper, it is worth devoting some additional space to its methodology in this summary chapter. Their paper builds on the methodology developed in the heretofore frontier papers by Arnold, Javorcik and Mattoo (2011) and Fernandes and Paunov (2011). Shepotylo and Vakhitov, however, extend the methodology by applying the newly developed methodology of

De Loecker (2011). That is, they control for market structure and demand shocks and take into account the dynamic effect of the liberalization on investment and exit decisions, and, as a result, on future productivity. As a general problem, there are several methodological issues which make it difficult to pin down the effect of services liberalization on productivity in manufacturing. First, although it is less likely, theoretically, services sectors reforms could be induced by increased manufacturing productivity, rather than causality running from services sector reform to manufacturing productivity increases (the so called “endogeneity” problem). The authors argue, however, that the liberalization of services in Ukraine was exogenously imposed by its trading partners as part of Ukraine’s WTO accession package. If this is valid, the authors do not have an endogeneity problem. The data cited above suggests that countries in Eastern Europe and Central Asia that have acceded to the WTO or the EU are more liberal than those who have not done an accession to either the WTO or the EU. This provides some credibility to the authors’ claim. Second, for many countries, it is hard to disentangle the effect of services liberalization from the effect of other factors, because services liberalization rarely comes alone, without labor market deregulation, trade liberalization and other economic reforms. The authors maintain, however, that during the time period of their sample, the reform package in Ukraine was limited to services liberalization. The study by Copenhagen Economics *et al.* (2005) provides some credibility to this claim, as it finds that the principal changes that Ukraine made as part of its WTO accession were the changes to liberalize the services sectors. The conclusion in the study -- the liberalization of FDI in services would be the major contributor to welfare gains and would stimulate development of the manufacturing sectors (machinery and equipment would expand by 4.7 percent) – is well in agreement with results of Shepotylo and Vakhitov. To strengthen the conclusion and to respond to remaining concerns about the

endogeneity of services liberalization, the authors run an instrumental variable regression, instrumenting the services liberalization variable by FDI outflows in the services sectors of the EU, which does not change the main conclusion. Third, it is necessary to estimate a production function in order to extract consistent estimates of TFP that account for selection bias and endogeneity of inputs.

The authors estimate the production function by using the Olley-Pakes methodology, which controls for selection bias and endogeneity of inputs in production. For robustness checks, they tried several other methods, without changing the main conclusions of the paper. Finally, the majority of existing studies which investigate the effect of deregulation on firm performance ignore the dynamic effect of the deregulation on investment and exit decisions, and, as a result, on future productivity. The authors modify the traditional approach to explicitly deal with the dynamic nature of the effect by applying a newly developed methodology (De Loecker, 2011).

As pointed out by De Loecker (2011), the standard two-stage procedure of estimating the impact of a policy change on productivity does not allow liberalization to dynamically impact the evolution of productivity. However, the findings in the literature contradict these assumptions. In particular, an increase in contemporaneous total factor productivity (TFP) due to services liberalization induces higher capital accumulation due to the expectation of even higher TFP in the future. It also has an effect on the exit decision - higher capital accumulation lowers the probability of exit by the firm. Shepotylo and Vakhitov modify the model by allowing the productivity process to depend on services liberalization. This creates two effects: a contemporaneous effect on current level of productivity and the dynamic effect on future productivity due to current investment decisions. The results indicate that allowing services liberalization to dynamically influence productivity generates even higher productivity gains.

The estimation is performed in two steps. First, the authors obtain an estimate of TFP by estimating the production function for each manufacturing industry. They amend the Olley-Pakes (1996) procedure by controlling for sub-industry-specific demand and price shocks following De Loecker (2011).

Second, following Arnold et al. (2011), they assume that firms that use services more intensively benefit more from services liberalization. The authors start with the EBRD indices of services reform which they aggregate into four sectors: telecommunications; transportation; finance and insurance; and other business related services.

They then construct an index of services liberalization that is firm-specific, reflecting the variation in firm-level intensity of usage of various services inputs, i.e.,

$$servlib_{it} = \sum_j a_{ijt} \cdot index_{jt} \quad (1)$$

where $servlib_{it}$ is the firm-specific index of services liberalization, a_{ijt} is the share of input sourced from the services sub-sector j in the total input for a firm i at time t , and $index_{jt}$ is the EBRD measure of liberalization in the service sub-sector j at time t .

Then the estimated TFP is further regressed on their firm-specific index of services liberalization and several other variables, including a firm-specific effect to control for the *within firm effect* of liberalization on productivity.

Impact of Services Liberalization on Firm Level Productivity in Eastern Europe and Central Asia by Bogdan Klishchuk and Valentin Zelenyuk

Bogdan Klishchuk and Valentin Zelenyuk examine the impact of services sector liberalization on the labor productivity of firms in 21 Transition countries. Their study employs data on 19,912 firms in Eastern Europe and Central Asia with an average of 4 observations per

firm, for a total number of observations in their study of 76,903.¹⁰ This study is an important contribution to the literature, since there are no studies of the impact of services sector *liberalization* on firm level productivity using firm level data across several countries. The closest study to this one is the study by Arnold, Mattoo and Narcisco (2008). Arnold et al. (2008) found that improved services sector *performance* (as opposed to services liberalization in the Klishchuk and Zelenyuk study) increased total factor productivity in 1,000 firms in 10 Sub-Saharan African economies. The Klishchuk and Zelenyuk study is an advance of the literature for several reasons. First, Klishchuk and Zelenyuk examine the impact of services sector liberalization, rather than performance, on firm level productivity. Second, it uses panel data that allows the use of fixed effects in the empirical work; fixed effects allow the authors to capture firm heterogeneity that is not captured by other variables in the model, and this is important in the results of their paper. Third, the large sample size in this study justifies the asymptotic distribution theory in some of the estimators they employed. Finally, it is the first such study to be conducted on transition countries, and provides support for the applicability of the casual link between services liberalization and productivity on data from transition countries.

The authors use seven separate categories of services performance from the EBRD Transition Indicators as their measures of services sector performance. The EBRD performance measures they use are for the following sectors are: banking, non-bank financial services, telecommunications, railways, electric power, roads, water and waste water. They control for liberalization of the trade and foreign exchange regime, and several other variables of importance to firm level productivity. They estimate labor productivity as a function of these many variables in both a pooled ordinary least squares regression and in a model with fixed effects for each firm in the sample. Their statistical tests indicate that the fixed effects model is the preferred model.

¹⁰ Their data source is a randomly selected subset of the Orbis dataset supplied by Bureau van Dijk.

Their key results are that firm level productivity is positively affected by liberalization of transportation services, specifically roads and railways. On the other hand, banking reforms have a negative effect on firm level productivity, on average, in the short-run. They explain the result for banking reform by noting that banking reform in Transition countries often combines liberalization with the introduction of more stringent capital requirements. More stringent capital requirements often induce a shrinking of bank assets, a reduction of lending and increase in interest rates.

The authors use labor productivity, rather than total factor productivity, as their dependent variable. Consequently, it is necessary, as they do, to control for assets and materials costs of the firm; otherwise an increase in the capital intensity of the firm would be measured as an increase in productivity. The authors believe that with such adjustments the use of labor productivity as the dependent variable is useful; but they acknowledge that future research that develops a measure of the total factor productivity of the firms would be a useful extension.

Services Inputs and Export Performance of Manufacturing Firms in Transition Economies

by George Berulava

The growth experience of the development miracle countries, including the East Asian tigers and China, have often been characterized as export led development miracles. Consequently, ensuring a favorable environment for exporting is seen as one of the key challenges for transition economies on their path to economic development. Given the perceived importance of exporting in economic development, Berulava summarizes a large literature on the factors that determine the success of export performance. The literature can be divided into papers that investigate factors that are under the control of the firm and factors that are external

to the firm. However, the role of the services sector as one of the external factors in promoting exports of downstream sectors has not been studied. The existing research on the consequences of services sector liberalization is limited mainly to the analysis of the impact of this sector on the on the productivity in downstream industries. (See the above literature summary.) Berulava helps to fill this void. He uses a firm level dataset to explore the impact of services inputs on export performance of manufacturing firms in transition economies.

His principal data source is a firm-level unbalanced panel dataset from the “BEEPS” surveys.¹¹ The surveys were conducted by the European Bank for Reconstruction and Development (EBRD) and the World Bank in 2002, 2005, 2007, and 2008/09 for firms in 29 countries in the Europe and Central Asian region. Since his objective is the export performance of manufacturing firms, he limits the sample to only the manufacturing sector. He is able to use 11,293 observations on individual firms.

Berulava employs two measures of services sector performance. The first, based on the BEEPS surveys, is the subjective measure of individual manufacturers as to how much of an obstacle for their business they consider the performance of the following three service sectors: electricity, telecommunications and finance. The second measure he used was the EBRD policy reform indices, which reflect the overall liberalization of services sectors.

To deal with selection bias problems, Berulava employed a two-stage estimation process. First, he formulated a model for the probability of exporting and used the predicted individual probabilities as an additional explanatory variable in the second stage panel regression equation. To address the problem of endogeneity of the services input variables, the second stage panel regression for export intensity was estimated by applying the Hausman-Taylor IV estimation

¹¹ These are the enterprise survey panels known as the Business Environment and Enterprise Performance Surveys (BEEPS) available at: <https://www.enterprisesurveys.org/>

procedure, which uses information on the variation between and within the exogenous variable as instruments.

The key finding of the study is that (based on the BEEPS measures of services performance) improvement in services sector performance would bring the enhancement of the export performance of manufacturers in transition economies. In particular, the study results suggest that reducing constraints and obstacles due to inefficiencies in electricity and telecommunication will encourage export performance of downstream industries. Similarly, Berulava finds a positive and significant effect of improvement in the EBRD indexes of infrastructure and banking sector reforms on exporting (although this result is not as robust to various model specifications). Thus, the results suggest that advancing liberalization in telecommunications, electric power, railway transport, road transport, and water distribution sectors as well as in banking sector will stimulate expansion of export activities of manufacturers.

Berulava also finds that firm specific characteristics, including the introduction of new products, investments in research and development, use of advanced technologies (high-speed, broadband internet connection), and employee skills, are key drivers of export performance in the manufacturing sectors of transition economies. These factors increase competitiveness of the manufacturing firms in global markets and thus encourage export intensity.

He finds that larger firms and foreign investment in a firm positively affects not only the decision to export, but also export intensity. He argues that foreign ownership facilitates transfer of advanced managerial expertise, skills and technologies that makes the firm more competitive on international markets. Clearly other factors such as trade facilitation, regulatory quality, degree of competition and membership in European Union also affect exporting.

Berulava argues that developing an efficient service infrastructure represents a strategic and underexploited source of export enhancement for policy-makers. Further reforms and liberalization in the services sectors would stimulate export performance of manufacturing industries by reducing the costs of doing business in downstream industries. The reforms should include creating favorable conditions for attracting foreign direct investment in services. Moreover, he argues that entrepreneurs should realize that investments in innovation, research and development, and employment of advanced technologies are likely to lead to additional exports. Finally, his results confirm earlier studies that show that reducing trade related costs, through trade and customs procedures facilitation, will increase exports.

Cross-Country Differences in Credit Market Liberalization Outcomes, by Petar Stankov

Petar Stankov employs cross country growth regressions to assess the impact of a specific form of services liberalization on growth, namely credit market liberalization. Stankov uses a dataset of 108 countries to test the hypothesis that countries that liberalized credit faster grew faster. Following Estevadeordal and Taylor (2008), Stankov divides his dataset into two time periods: 1975 to 1990; and 1990 to 2005. Based on his data on credit market liberalization, he assigns countries to one of four groups: those that liberalized in the early period only; those that liberalized in the later period only; those that liberalized in both periods; and those that did not liberalize in either period.

His key finding is that the earlier and more consistent is the credit market liberalization reform, the stronger is the positive impact on per capita GDP. That is, countries that either did not reform in either period or reformed only in the later period had lower per capita GDP levels than the early reformers and those countries that reformed extensively in both periods.

The analysis takes into account that the growth of countries depends on a large number of variables in addition to credit market liberalization. The author therefore includes several variables in his econometric analysis that are expected to impact on the growth of countries. These include the capital stock of the country, investment and other components of GDP, initial GDP and population growth. Following Abiad and Moody (2005), Stankov includes a “liberalization gap” measure as a possible explanation for growth: the difference between the maximum level of liberalization within the region and the initial liberalization within the country.

Stankov also finds that countries with a larger liberalization gap in credit market liberalization had a lower increase in their per capita GDP levels than the reform leaders. He explains this result as due to an international competition for capital flows and the establishment of a reputation as a country as a favorable destination for foreign direct investment. That is, countries that liberalized their credit markets early and established favorable initial conditions for FDI, attracted a higher share of international capital flows. The Central and Eastern Europe and the Commonwealth of Independent States region is one of the regions where the initial leaders in credit market liberalization reform attracted a higher share of the capital flows and increased their per capita GDP more than those countries further away from the reform leaders within the region.

The Influence of Services Trade Liberalization on Service Flows and Industry Productivity in CIS Countries and Russia, by Alexander Knobel

Alexander Knobel notes that in Russia in 1990, like in other Transition economies, services as a share of GDP was relatively low--only 35%. But services as a share of the economy

grew to 57% in 2008. On the other hand, services imports as a share of total imports did not grow during this period: service imports as a share of total Russian imports were 23% in 1994 and 21% in 2008. In this paper, Knobel estimates three models and his key results are the following. Knobel estimates that Russia's trade in services (and the Commonwealth of Independent States (CIS) trade in services) with its partners is substantially below what would be predicted for countries (or regions) with similar conditions. He also estimates that liberalization of the services sector in Russia would have a significant positive impact on Russian manufacturing productivity.

First, Knobel develops a gravity model employing methodology developed by Francois and others.¹² He estimates cross border trade in services for a limited set of regions of the world as a function of the usual set of variables in a gravity model, including exporter and importer GDP, common border, common language, distance, relative prices and dummy variables for trade between various regions (especially if there are preferential arrangements are present between them) and corruption measures. His first set of results indicates that CIS services imports from OECD countries is considerably lower than his model predicts for a region with the characteristics of the CIS. Total services imports would have to be 2.7 times larger to be at its predicted level. Computer and information services and personal cultural and recreational services are only one-third of their predicted level, while insurance services, financial services, travel, transportation, communication services and other business services would have to be between 1.5–2.5 times larger to reach levels predicted for a region with the characteristics of the CIS.

¹² (Francois, Wooton, 2001); (Park, 2002); (Blanchard, 2007); (Francois, Pindyuk, Woerz, 2008)

Knobel next estimates a similar gravity model on services trade data for all countries in the world for which data are available. His results also indicate that service imports into Russia are well below predicted levels for countries with similar characteristics. Knobel argues that it is highly likely that the lower level of services trade is due to existing barriers to services imports. Knobel estimates, at the sector level, the countries that import the most services after adjusting for their characteristics. He finds that the country most open to service imports overall is the U.S., but the result differs across sectors. Relative to their predicted levels of services imports, the countries that import the most, by sector, are the following: transportation services, communication, computer and information services, personal cultural and recreational services, other business services — USA; travel — Armenia; construction — Kuwait; insurance — United Arab Emirates; financial services — Luxembourg. Knobel calls these countries the world leaders in services imports and develops a measure of distance from the world leader in each sector. He finds that Russia is very far from the world leader in services imports in all sectors. Russia is closest to the world leader in transportation, travel and personal and cultural services, and furthest from the leader in insurance, computer and other business services. Knobel expects a substantial increase in imported services in Russia due to services liberalization, since Russia is so far from world leaders, and, as a consequence, Russia would benefit from a large increase in competition and an introduction of foreign best practices in the Russian market.

Finally, Knobel develops a model in which he estimates labor productivity as a function of services sector liberalization in Russia and a set of industry variables that might affect industry productivity. He uses the EBRD indices of services sector liberalization for the years 2000-2008. Like Fernandes (2007), he develops an index that takes into account that the impact of services liberalization in different sectors that depends on the intensity with which a sector

uses services. That is, Knobel calculates the index of service input liberalization for industry i in year t as:

$$INDEX_{i,t} = \sum_k a_{i,k} INDEX_{k,t},$$

where $a_{i,k}$ is the input-output coefficient for industry i and service sector k , and $INDEX_{k,t}$ is the index of liberalization for service sector k in year t . As discussed above, Shepotylo and Vakhitov develop a similar index, but for each firm, not each industry.

His principal result from this model is that liberalization of the services sectors in Russia has had a positive impact on productivity in the manufacturing and mining sectors: full services sector liberalization could raise labor productivity an average of 20%, and partial liberalization — halfway to full liberalization — would raise labor productivity by 10%.

Liberalization of Trade in Services in Kazakhstan and Uzbekistan: Analysis of Formal and Informal Barriers, by Roman Vakulchuk, Farrukh Irnazarov and Alexander Libman

In this paper, Roman Vakulchuk, Farrukh Irnazarov and Alexander Libman present the results of their survey research intended to provide information about trade in services in Central Asia. They focus on barriers, including informal barriers, which impede companies in Kazakhstan and Uzbekistan from successful expansion of services abroad. The authors maintain that little is known about barriers to trade in services in Central Asia, especially in Uzbekistan.¹³ To help to fill the void in our knowledge about trade in services in Central Asia, the authors constructed and conducted a survey of 73 firms in Kazakhstan and Uzbekistan. In addition, they led three round-table discussions in the two countries. They focus on three important sectors: financial services, telecommunications and business consulting.

¹³ The Business Environment and Enterprise Survey (BEEPS) conducted jointly by the World Bank and the European Bank for Reconstruction and Development focuses on the internal business environment.

Kazakhstan has implemented more substantial market reforms than Uzbekistan and, in the author's sample, is more advanced in terms of cross-border activities of its companies in the service sectors. The share of cross-border services trade in the revenue of their companies in Kazakhstan is about 25%, but is almost zero in Uzbekistan. Those countries who export services have a relatively short experience—one to two years on average.

Regarding the characteristics of companies that engage in trade in services, they find that companies with foreign ownership dominate the trade; domestic companies play a smaller role in this process. Consistent with the theory of heterogeneous firms (Melitz, 2003), trade linkages have been more successfully developed in business consulting, where business does not require large fixed costs, as opposed to telecommunications where substantial fixed costs are required. Similarly, cross-border trade is most successfully implemented by relatively large companies, where the fixed costs of exporting are a smaller share of total costs.

The survey respondents listed the key reasons they limit their cross border services exports. Some are regulatory barriers subject to policy-maker actions and some are fundamental market conditions not readily amenable to a government policy response. Among the regulatory barriers, the most important are bribes, excessive bureaucratic costs, the burden of taxation, foreign currency surrender requirements in Uzbekistan and foreign regulations. Further, a lack of knowledge about foreign markets was mentioned as a crucial issue in limiting cross border sales of services. In spite of the common Soviet past and existing economic linkages, respondents indicated a significant lack of information about the markets for their services exports in Central Asia. Thus, overcoming information asymmetries was a central theme of the respondents in terms of enhancing international trade in services in the region.

Companies that export services in Central Asia indicate that they rely on inter-personal contacts and networks while developing cross-border trade: friends and family are crucial for expanding commercial activity abroad for both Kazakhstani and (to somewhat greater extent) Uzbekistani companies. Many firms reported that links to the government would reduce barriers in trade, but far fewer indicated they had such links. The authors do find, however, that companies relying on contacts with the state are significantly less likely to encounter problems caused by the inefficient functioning of governments (like corruption, legal barriers or bureaucratic restrictions).

The authors draw three conclusions from their study. First, in order to advance the limited cross-border trade in services in Central Asia, the government should help encourage institutions that would provide information about foreign markets. Second, the predatory behavior of the governments constitutes a serious obstacle for international trade in services: it is necessary to reduce this pressure on companies to realize an expansion of trade in services. Third, Uzbekistani companies lag behind their Kazakhstani counterparts regarding exports of services, but are interested in closing the gap. The existing political, legal and regulatory environment in Uzbekistan is a limiting factor now; but the responses of the companies indicate that changes in government policies would likely result in significant increases in cross border trade in services.

III. Conclusion

The increasing importance of services both globally and in the transition countries of Europe and Central Asia emphasizes the need for both academics and policymakers to understand the impacts services liberalization in these transition countries. The volume makes a very substantial contribution to the empirical literature and shows that liberalization of services

is important for the expansion of productivity, exports and GDP. Given the lack of any studies in Russian on this subject, it provides researchers with examples of studies they could emulate in other applications. Finally, in a time of lagging economic growth due to the financial crisis, the policy recommendations of the study provide policymakers with tools to stimulate growth.

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