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Center for International Business Education and Research

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Reforming Undergraduate Economics Instruction in the Former Soviet Union:
Curriculum, Personnel, and Clientele Issues in Russia, Belarus, and Ukraine

Alexander Kovzik, Belarus State University and the University of Osnabrueck
Michael Watts, Purdue University

Presented at the meetings of the American Economic Association in Boston, Massachusetts, January 6, 2000. We thank CIBER for travel support. We also thank Mikhail Chepikov at Belarus State University, Vera Rube at Moscow State University, and Sergei Gassanov at Kiev State University for their assistance in obtaining and sometimes in interpreting curriculum guidelines from their respective institutions. We hold them blameless for any errors in what we say here.

In this paper, we update several earlier articles dealing with the restructuring of undergraduate economics instruction at Moscow State University (MSU) since 1989, at the end of the Soviet period. We also extend the earlier studies be examining how closely the reforms at Moscow State are, or are not, mirrored by changes at Belarus State University (BSU) in Minsk, and at Kiev State University (KSU). Finally, we also extend this discussion by considering, and often offering an "insider's" perspective on, several issues related to curriculum reform that go well beyond what can be determined by looking only at published curriculum guides. Specifically, we consider such issues as the training and retraining of faculty members who teach courses in these departments; the use of translated textbooks from the United States or other Western nations vs. locally-developed textbooks; problems that arise in departments where some faculty members teach Western economics while others continue to teach Soviet-style economics; and a very brief discussion of some emerging trends for graduate study in economics in the former Soviet Union (FSU).

In many respects, Russia, Belarus, and Ukraine could be considered the "core" nations of both the Soviet economic and educational systems. Today, these three nations are still closely linked in many respects, and face many common problems in terms of economic and educational reforms. All three nations have lagged well behind the pace of economic reform and recovery in such transition economies as Poland, Hungary, and the Baltic nations; but their circumstances and policies also differ in some key respects.

The three universities we treat here are clearly the preeminent universities in these three nations. During the Soviet period, MSU was recognized as the flagship among all of the national flagships in the Soviet bloc, and it continues to serve as an educational benchmark for many universities across the former Soviet Union. Today, undergraduate economics instruction across Russia must meet a State educational standard that was adopted by the State Committee of Higher Education on March 28, 1994. However, as we discuss below, MSU has implemented many significant reforms in its economics program since 1994, which have been closely studied and often adopted by other Russian universities - and for that matter at many universities outside of Russia in the FSU. In fact, Belarus State University provides a clear example of such influence. The Ministry of Education for Belarus does not write its own standard for economics or other subject areas, as in Russia. Instead, the Ministry ranks all of the university departments in every educational field, and then the curriculum for the highest-ranked department is adopted by the Ministry and becomes compulsory for all other departments in that field at other state universities. The department of economics at BSU has been selected as the highest-ranked department in economic theory. But what is most important to note here is that, in the introduction to the 1998 BSU curriculum guide for economics, it is noted that the BSU curriculum was developed to reflect the Russian educational standard as it is taught at MSU.

MSU has played a key leadership role in the restructuring of the undergraduate economics program in several other ways since 1989, such as hosting several international conferences on this topic². But by the same token, there has been considerable decentralization in political and educational structures in the FSU countries in this period, which makes it interesting to compare the current state of the economics programs across some of these leading universities. Just as the economic transitions in these nations are providing natural experiments for institutional arrangements, incentive structures, and economic policies on a scale seldom seen, the teaching of economics at all levels in the FSU is undergoing its own transition. That transition, too, offers the chance to study institutional structures and reforms, and to better understand both academic and political views of economics in these countries.

I. A Brief Review of Earlier Studies

Several earlier articles by Western economists have traced the long and erratic history of bringing mainstream Western economics into the curriculum of universities in the FSU. Those initiatives date back at least to a highly restricted distribution of a translation of Paul Samuelson's principles textbook in the 1960s (see Gerschenkorn, 1978). Of course, officially the purpose of that "reform" was to permit better critiques of market economics, not to change the training or teaching of future generations of Soviet economists.

Until the late 1980s, the state policies establishing a uniquely Soviet style of economics were, for the most part, achieved. In their article on "Economics in the Former Soviet Union," Michael Alexeev, Clifford Gaddy, and Jim Leitzel (1992, pp. 138-39) concluded that "...in the mid-1980s, the principle role of Soviet economists had been to explain why the policies which the state had already implemented were in fact optimal." And they found that even in the early 1990s, "In reality, the training of economists in the Soviet Union and the United States is fundamentally different. The average Soviet economist has less in common with an American economist than do American economists with American sociologists or other social scientists."

There were two major types of economics training and research under the Soviet system, and these two groups are still represented in most university economics departments in the former Soviet Union today. Under the old economic and academic systems, the title economist generally referred to practitioners from the first and far larger group of political economists, whose work was typically

historical and descriptive, and completely devoid of mathematics. It uses a conceptual framework that is derived from the 'historical materialism' of previous decades of Soviet economics. There is no behavioral modeling, nor any appeal to individual rational economic behavior... (Alexeev, Gaddy, and Leitzel, p. 141)

In contrast, after 1960 a much smaller group of Soviet mathematical economists followed the work pioneered by L.V. Kantorovich, V.S. Nemchinov, and V.V. Novozhilov. Generally, this work features proofs and other sophisticated mathematics, often with very little verbal discussion. Two particular branches of this work deal with forecasting featuring non-behavioral models (such as Kondratiev waves), and models of the System of Optimal Functioning of the Socialist Economy (SOFE) that deal with

optimization methods of production, efficiency concerns, information flows among subsystems, and shadow price calculations. Traditionally, the system-wide objective function has been assumed to be determined by the highest level of the hierarchy, the central planners. Shadow prices generated within the optimization models of SOFE provided a guide toward economic reform proposals, but the system-wide objective function limited the scope of the proposals to the framework of a centrally planned economy. (Alexeev, Gaddy, and Leitzel, p. 142)

Not surprisingly, there have been many disputes between these two groups of Soviet economists about the usefulness or lack of success of each approach. That dispute includes charges against both approaches that are similar, in some ways, to recent complaints about the overemphasis of mathematics and statistics in the U.S. graduate training of Ph.D. students in

economics (see Krueger et al., 1991 and Hansen, 1991). Nevertheless, from a Western and more general perspective, in early 1992 Alexeev, Gaddy, and Leitzel concluded that

while political economists have significant institutional knowledge, and mathematical economists have outstanding quantitative skills, neither variety of Soviet economist has the mindset of a typical economist from a market-oriented country. Almost all Soviet economists that we talked with agreed that Soviet economists in general do not understand even the basic principles of the workings of markets. (p. 145)

But many things began to change for economics departments in the FSU during the period of *perestroika*, and especially during the mid- to late-1990s. Ironically, one of the last acts of the Communist government in the former Soviet Union was the approval to translate, publish, and use in the universities a basic textbook on market economics (see Brue and MacPhee, 1995, p. 182). A team of eight Russian economists, headed by Anatoly Porokhovsky, spent two years translating the 1990 edition of the best-selling U.S. principles textbook by Campbell McConnell and Stanley Brue. Unlike the limited distribution of the Samuelson translation some 30 years earlier, 500,000 copies of the McConnell and Brue textbook were published for widespread use at Russian universities, and pirated copies were soon available to the general public in bookstores and from street vendors. Many other textbooks at the secondary and university level, and a later edition of McConnell and Brue, have now been translated and widely distributed. For a partial list of these materials see Rushing (1994).

Changes in the curriculum for economics degrees have also been made. Comparing course requirements at Moscow State University in 1992 to those that prevailed a few years earlier, Brue and MacPhee concluded that:

Gone is the Marxist-Lenninist beginning course. Gone are the special seminars on Marx's *Capital*, the theory of imperialism, and the political economy of socialism. Gone are the state exams. It is relatively easy to substitute a standard Western title for each of the courses in the listing. That was not true for the old curriculum. (pp. 189-90)

In 1992 and now, there were and are several important caveats to this rather optimistic appraisal. First, there were still some courses in the MSU curriculum, such as a required course on the History of Religion (in the Soviet curriculum, this was the course on Scientific Atheism) that have no counterparts in most Western universities' economics majors. Second, the people teaching the courses in the new curriculum were, for the most part (with departments in the former East Germany providing a notable exception) the same people who taught economics courses in the old curriculum. What ultimately matters, of course, is what is actually taught in the curriculum, not just the new titles of various courses. Using instructors with little or no formal training in Western economics, and indeed who were trained in very different and often conflicting approaches may be, as Brue and MacPhee noted, "like assigning a creationist to teach evolution." (p. 189). Third, using translations of U.S. or Western textbooks to teach courses in Russia or Eastern Europe solves some problems, but creates others in terms of the relevance of examples used in the books and discussions of institutions, public policies, and economic circumstances. Fourth, there is considerable bureaucratic and individual faculty opposition to the wholesale and uncritical adoption of Western economics. Generally, as Rushing and others have pointed out (e.g., see the discussion of a 1992 survey by Boeva and Shironin in Lipton and Sachs, 1992), there is more support for market reforms among younger segments of the population in Eastern Europe and the former Soviet Union than there is among older groups.

That is hardly surprising, and in economics departments the pattern is even more expected given costs and benefits related to training, retraining, and the obsolescence of human capital built up under the Soviet system.

One response to these factors represents, at best, a more diplomatic reaction than outright rejection of curriculum reforms, while searching for a path that is feasible for and more acceptable to the majority of faculty members who were trained as political economists. This response has been frequent and persistent discussions about developing a new, "third way" for teaching economics that endorses neither capitalism and socialism. At the very least, it is argued, the new economics curriculum must stress historical and current conditions and institutions in Russia and the other transition economies. Some possible approaches to this "third way" were outlined as early as 1990 by A.R. Markov, who was then assistant dean of the school of economics at Moscow State University. The potential problems with these third way solutions are easy to see, and Alexeev, Gaddy, and Leitzel (1992) noted that the two such approaches described by Markov "sound suspiciously like a minor repackaging of the political economy of socialism" (p. 147).

With this general background, we now provide an update on current course requirements for the undergraduate economics degree at MSU, and compare that with the previous set of requirements that were described by Brue and MacPhee in 1995. We then compare the current requirements at Moscow State with those at Belarus State University and Kiev State University, to see how much consensus there is at those three leading universities from nations that were at the core of the former Soviet system. Beyond the simple listing of course titles, we also use curriculum handbooks from these three universities to discuss the actual content of these courses, what textbooks and other instructional materials are being used, and a number of issues related to testing and evaluation practices in these programs. Finally we discuss several factors that make the faculty and student bodies at these universities different from those at typical U.S. universities.

II. Current Degree Requirements at Moscow State, Belarus State, and Kiev State Universities

Table 1, below, lists required and elective courses for the four-year general economics program at MSU for the 1998-99 and 1999-2000 academic years. There are numerous changes here compared to the 1992 curriculum for MSU reported by Brue and McPhee (1995, p.189). As noted in the curriculum guide published in 1995, many of those changes took place from 1994-95, when the MSU economics department worked with representatives from the London School of Economics, the Sorborne University in Paris, and the University of Tilburg in the Netherlands, with the express aim of bringing the MSU curriculum as closely in line with international standards as possible.

Table 1 Here

But many of the changes noted here occurred after 1995. For example, in 1995 students had to chose areas of specialization in either General Economics or Mathematical Economics. Now there is a common program for all students until the 7th and 8th semesters, at which time students can choose to specialize in one of the six different areas listed at the end of Table 1.

In 1995, the baccalaureate program in General Economic Theory required coursework in two areas that were largely unrelated: 1) micro- and macroeconomics (148 hours), and 2) the theory of the transition economy (90 hours). After completing those courses, students took further coursework on economic theory and mathematical methods (166 hours). The current program requires separate courses on microeconomics (I and II), macroeconomics (I and II), and the theory of the transitional economy. In all of the micro and macro theory courses, students can choose from two alternative programs, featuring different emphasis on mathematics. All of the required micro and macro theory courses use translated American textbooks. For instance, in Microeconomics I students use the principles textbook by McConnell and Brue and an intermediate textbook (either the textbook written by David Hyman or by Hal Varian). Even more noteworthy, perhaps, is that the course on the theory of transition economies has become more focused on coverage of the same basic concepts, featuring textbooks written by MSU faculty with such titles as The Theory of Transitional Economy: Macroeconomics and The Theory Of Transitional Economy: Microeconomics.

Although the introductory course on Marxist-Leninist theory was dropped in the 1992 curriculum, as Brue and MacPhee pointed out, as late as the 1995 curriculum there was still a seminar on *Das Kapital* (96 hours). In the description of this course in the 1995 curriculum guide, Professor A.I. Yudkin and his colleagues stressed that "the method of *Das Kapital* allows one to get into the inside structure of bourgeois society and to understand the logic of modern social-economic processes" (p.125). Two other seemingly quite different seminars, on Alfred Marshall (51 hours) and J.M.Keynes (48 hours), were in fact taught by the same group of professors who taught the course on Marx. So it is very likely that in these courses, too, the method of *Das Kapital* helped instructors and students to understand the logic and inside workings of the major works by Marshall and Keynes. In the latest curriculum guide all these seminars are gone, although the elective course titled "Introduction to Political Economy" is still taught from the Marxist perspective.

Other "holdovers" from the old (Soviet) system of instruction are found in the required course on the history of economic thought. In this area the only Western textbook that has been translated into Russian is Marc Blaug's *History of Economic Analysis*. Consequently, students still read Russian textbooks written in the 1960s and 70s, obviously in the Marxist tradition. But imagine the different effect of such readings and courses on students today, who were 4-5 years old when *perestroika* began, and who now take these courses after completing courses on Western, market-oriented micro- and macroeconomics.

There are numerous other reforms that have taken place at the level of topic coverage in specific courses. For example, in the 1995 MSU curriculum guide the course description for economic history featured such terms as Lenin's "monopolistic capitalism." In the current guide many of those terms are gone.

The other major development is the first appearance of a wide range of new required and elective courses on such topics as international economics, industrial organization (starting in 2000), and the economics of the public sector. These courses are taught using translated textbooks by Peter Lindert, F. M. Scherer and David Ross, and Joseph Stiglitz, respectively. It is indeed now difficult to think of major topics covered in undergraduate economics programs at U.S. and other Western universities that are not reflected directly in the current MSU curriculum. The introduction of these courses and textbooks has also played a crucial role in changing the content and approach in some other courses that still sound different from U.S. course offerings.

For example, the course on socio-economic statistics now features a detailed description of the system of national income accounts that reflects mainstream, international standards.

There is a heavy emphasis on mathematics in the current undergraduate program at MSU, that generally exceeds that found in U.S. and other Western departments. Actually, this is not a new feature – during the Soviet period candidates for departments of political economy were expected to pass rigorous entrance exams in mathematics and then to complete approximately the same number of credit hours in mathematics courses as are currently required. But that led many students to ask why there such an emphasis on mathematics, because there was never a connection between the math courses they were required to take and their courses on political economy. Nor were they ever expected to use mathematics after they graduated and went on to teach or work as political economists. Instead, given the level of precollege mathematics education in the Soviet system, the high math requirements served as a way to screen out weaker students and promote the "scientific" status of political economy. Today; students can readily see the connection between the mathematics they take and their intermediate and advanced courses in economic theory, which often feature prerequisites in mathematics. There is also a new feature in the most recent MSU curriculum, in allowing students to take elective courses on various mathematical methods.

In the preface of the latest edition of the MSU curriculum guide, vice-dean A. Khodzhaev writes that the new curriculum is based on basic economic concepts and theory, but offers a much broader range of electives and specializations than the previous curriculum. He also notes that the faculty at MSU worked very diligently to insure both "vertical and horizontal coordination" between subjects. The long-time dean of the MSU Economics Department, V. Kolesov, then notes that there are many new institutions in the Russian educational market, offering "international" diplomas, and attracting students using courses with exotic titles. But Kolosov believes that, in truth, the level of instruction provided at these new institutions is well below international standards. It is clear to us that the level of economics instruction at MSU today is far above the average in the FSU.

Table 2, below, shows course requirements for the two basic economics degree programs now offered at Belarus State University (BSU). BSU continues to use a five-year curriculum for students majoring in economics, and while this program is less influential than the MSU program, it is perhaps also more representative in terms of the typical pattern or course offerings and requirements, and the level of rigor of undergraduate economics instruction in the FSU.

The Economic Theory specialization at BSU is the program that evolved from the Political Economy program of the Soviet period, which was then offered by the Philosophical Economics Department. That Department offered two other majors during the Soviet period,: Sociology and Philosophy. About 1995, following the revised structure at Moscow State University and other leading universities in the FSU, the department at Belarus State also began to offer a specialization or major in Management. Finally, in 1999, the economics group completely separated from the philosophy department. Related to that reorganization, a new dean (a mathematician who had worked for the national government with the National Bank of Belarus) decided to offer another new specialization, in Economics. It is not yet fully clear what will be included in this specialization, compared to the specialization in Economic Theory; but in general terms Economic Theory appears to be a mixture of economics and political economy, while Economics is described as a mixture of economics, mathematical economics and applied economics.

The first students were admitted to the new BSU specialization in Economics in the summer of 1999. At that time, to help distinguish between the two specializations, the Dean announced that the Economic Theory major is intended for future teachers of Economic Sciences (i.e., basically future university teachers), while the "Economics" major is more appropriate training for economic analysts who will work for the government or firms³. This process – which has left even BSU faculty members uncertain about what courses will be taught in each specialization, and who will teach them – might suggest a lower degree of faculty governance at Belarus State than might be observed at many U.S. universities. But on the other hand, that may be more a matter of appearance and process than practical reality, if one considers how fast deans in U.S. universities can have new courses and majors approved when they really want them. Perhaps some features of university life really are universal.

Table 2 Here

As in the MSU curriculum, there are several required basic theory courses in the BSU curriculum: Principles of Economics (70 hours), Microeconomics (140 hours), Macroeconomics (72 hours), and International Economics (68 hours). Half of these hours are lectures and half are seminars or recitation sections. The basis textbook for the principles course is the translated version of McConnell and Brue. In the first semester students cover the sections of the book dealing with fundamental concepts and microeconomics. The emphasis is more on intuition and the structure of the discipline, rather than technical matters such as graphs and algebra – but remember that these students generally are much better prepared in mathematics than their U.S. counterparts. The second semester is devoted to macroeconomics and the world economy. At the end of each semester students must pass an oral exam, to demonstrate their understanding of the main topics in the course and textbook.

During the second and third semesters students study microeconomics using a translated version of *Modern Microeconomics* by Hyman, or for those who understand English, *Microeconomics* by Katz and Rosen. In seminars/recitation sections, students solve questions from the study guides and workbooks for these texts. Sophomore students are also required to choose one major topic from the course and write an overview of the available literature on the topic in a 25-30-page term paper.

Starting in the third semester, students study intermediate macroeconomics using Russian translations of the textbooks by Mankiw and by Dornbusch and Fisher. Then students take a course on international economics that is closely correlated with the coursework on macroeconomics, and based on a translated version of Lindert's textbook. Third-year students have further coursework on macroeconomics, in which they work with macroeconomic data for Belarus. To pass these courses, students must receive high scores on written final exams.

Other upper-level courses complement this stress on mainstream economics. Since 1999, BSU students have also been required to take a one-semester course in Industrial Organization using a translated version of the textbook by Scherer and Ross. Since 1997, there has been a required, one-semester course on the Economics of the Public Sector using the textbook by Stiglitz. The course on the economy in transition, which deals with problems of economic policy in the FSU, is closely linked to the macroeconomics and international economics courses. In this course, seniors are required to prepare an essay or case study on the economic role of government. Their basic task in this paper is to apply theoretical models to the real-world problems facing transition economies.

There are many frustrations facing the BSU professors who teach courses on labor economics, the economics of the firm (or enterprise) and agricultural economics. Substantively, they would like to change their course content to fit the new emphasis on economic theory, but the unavailability of suitable textbooks is a major obstacle. Some courses, such as the course on "Basic Principles of Entrepreneurship and Management," are taught by professors whose background is definitely not in these areas. Such problems remain very common at almost every university in the FSU.

As in the MSU curriculum, the Marxist courses on Political Economy and the seminar on Das Kapital are still taught in the Economic Theory specialty (for future university economists) at BSU, the first as a required course and the second in the specialization in history of economic thought Furthermore, the course on Economic Policy in the Economic Theory specialization has nothing in common with economic policy courses that are taught in the West – instead it is based partly on articles and books by Lenin. In the Economics specialization, the economic policy and transition economy courses are taught from a Western perspective. Again as at MSU, the courses in the specialty area on the history of economic thought (208 hours) are still taught using textbooks written from 1960 to the 1980s, featuring Soviet-style economics.⁴

Table 3 shows course requirements for the economics program at Kiev Sate University. Except for courses that deal specifically with Ukraine rather than Russia or Belarus, and the addition of an internship, the program is very similar to those at BSU and MSU. Indeed, many of the same Russian and Western textbooks are used in key courses. The same courses on Marx's *Capital* and the history of economic thought are still included as a specialty area. Some apparent differences are, in fact, only a matter of differences in course titles, rather than content. For example, the KSU course on "Theory of Finance" covers the same material as the BSU course on "Economics of the Public Sector."

Table 2 Here

Summarizing our comparison of the three programs, we find that while there are minor differences relating to general education requirements, courses on national institutions and policies, and the length of the degree programs, all three programs are very much alike in terms of the amount of "holdover material" from the Soviet period, and how much Western economics – and even what Western textbooks – are covered. It those key respects, it is almost as if there were no borders between three countries. But in fact it is probably more accurate to say that MSU is still the flagship that other leading universities in the FSU emulate, just as they did 10-20 years ago.

III. Issues Beyond Course Requirements

A. Who Teaches, and What They Teach

There were three required ideological disciplines in the curriculum of every university in the USSR: political economy, Marxist-Leninist philosophy, and scientific communism. The textbook for coursework on the political economy of capitalism was nothing more than a simplified version of *Das Kapital*, with descriptions of some modern problems and issues. The principal goal of this textbook and coursework was to prove that all of Marx's major conclusions about the failures of capitalism and its inherent exploitation of labor still held.

If you examine any thesis that was defended as a doctoral dissertation in political economy anywhere in the USSR, you will read in the conclusion that the author claims to have found some new evidence of the deepening crisis of capitalism. Over time, this left Soviet professors of political economy in a rather remarkable position that provided the subject for a lot of jokes among students: The professors taught courses criticizing capitalism, but most of them had never been in any capitalist country even once to see these deepening crises firsthand. Nevertheless, it is important for Western observers trying to understand the current reform of economics in the FSU to realize that there were two groups of Soviet professors of political economy, especially after the late 1970s and early 1980s. The first group truly believed what they wrote and taught, and for them *Das Kapital* was a kind of religious text. The second group was far more pragmatic: they taught Marxist-Leninist political economy only because that was what they were required to teach. This group was, admittedly, in a pretty two-faced position, because "in the kitchen" they told very different stories about the Western economy to each other, or even to their students. But predictably, the readiness to reform economics coursework and curriculums at the beginning of 1990s differed greatly among these two groups.

In many key respects, the professors of political economy who were disenchanted with the Soviet curriculum were the natural choice to teach the restructured courses. As students and professors they worked in courses on the history of economic thought. Ideologically these courses had to prove the crises of the bourgeois political economy, but perhaps even more important, as it turned out, these were the only courses where the names and ideas of Marshall, Keynes, Joan Robinson, and other Western economists were discussed. In the BSU Department of Political Economy, for example, in the late 1970s the history of thought courses entailed 110 hours of lectures and 110 hours of seminars. At least half of this time was devoted to Western economists. Students in these courses could also attend a special, 36-hour course on consumer behavior, which covered some basic topics of mainstream economics.

Therefore, while it may seem paradoxical, in early 1990s when the time came to teach economics using the McConnell and Brue textbook, the vanguard of supporters of mainstream economics was largely made up of professors who had specialized previously in the critique of bourgeois political economy. These professors were also the first group to edit translated Western textbooks into Russian, and to publish their own articles on teaching, students guides, etc. Many of these professors had also studied English, which naturally gave them a major advantage in reading Western economics.

When governments in the FSU nations proclaimed the transition to a market economy as a main goal of society in the early 1990s, it became untenable for Marxist political economy to maintain its former place in the university curriculum. Most departments of political economy were soon renamed as departments of economic theory. But then the problem became one of defining what was really meant by economic theory. There is still a strong belief among some faculty that it is more important for students to know "Why is the economy structured as it is?" rather than "How does the economy work?" These faculty members also claim that Western economics does not provide "economic laws" to explain the transition from one kind of economic system to another. They therefore do not agree to treat mainstream economics as a substitute for Soviet-style political economy in the curriculum. Instead, they often try to incorporate some current topics into the old political economy textbooks and publish them as "Economic Theory". Such books were widely published in Russia, Ukraine and Belarus, especially in the early 1990s.

One example of such a textbook is a second edition of an economic theory textbook that was published in Belarus in 1999 by some members of the faculty of Belarus State Economic University (not BSU), and approved by the Ministry of Education as a textbook for students majoring in economics and business. There are four sections in the book: Fundamentals of Economic Theory, Microeconomics, Macroeconomics, and International Economics. The structure of the Fundamentals section is:

Chapter 1. Economic theory as a science.

Chapter 2. Economic system of society.

Chapter 3. Social-economic essence of property relations.

Chapter 4. Production: main features, factors, and results. Reproduction and its phases.

Chapter 5. Types of formations (the natural economy and the commodity economy).

Chapter 6. Markets: functions and structure.

Chapter 7. Transition economies: essence, peculiarities, and tendencies. The role of government.

It is obvious that this section of the textbook was written by Marxist economists. The labor theory of value and surplus value are still central to the analysis, and it is stated flatly that "the methods of economic theory are based on dialectical materialism."(p.15) Commodities, money, and the reproduction and circulation of the aggregate stock of social capital are described as they always were in Marxist textbooks. In 140 pages, there is only one graph. But there is one very important difference to note, compared to Marxist textbooks written in earlier decades: The authors include many quotes from Western economists without criticizing them. In fact, this is done so often that it appears the authors are not so much opposed to the market system as they are unable to explain it, except in the ways they were taught to do so 30-40 years ago.

Certainly this section of the textbook does not prepare students to read the three later sections. In truth, it is often the case for this kind of textbook that the different sections are written by different authors, with little or no coordination and cross-referencing across sections. Typically, the fundamental and methodological parts of the book are written by professors who are 60 years old or older, who either fear, do not know, or simply do not want to dive into all the graphs and math of Western economics. The micro- and macroeconomic theory sections are usually written by economists who are about forty years old, and mostly self-educated in mainstream economics.

In the former East Germany, Soviet-style professors of political economy were simply fired and replaced. But in the rest of the FSU, these professors are still on the faculty, occasionally still fighting to teach Marx and Soviet-style economics, but more often simply trying to hold on to their jobs until they can retire. In either situation, this makes it more difficult to reform and restructure the curriculum. For that matter, so too does the continuing influence of Communists in the national legislative bodies of these three countries, and throughout society. In Belarus, the President himself is often openly pro-Soviet and anti-Western – certainly not someone likely to fire or accept the firing of Soviet-style economists at state universities. As a result, university economics departments in these nations must face a long, and sometimes contentious, period of transition to teaching only mainstream economics.

In considering these personnel issues, it is also very important to consider the different backgrounds and roles of mathematical and political economists. In the early 1990s economists and lawyers were in great demand across the FSU. A large number of private colleges and

universities sprouted like mushrooms offering only two majors, business and law. This provided more lucrative career opportunities for economics and law professors, although the new positions were often taken on a part-time basis while maintaining a full-time position at the established and more prestigious state universities. During this same period, the demand for specialists in natural sciences, physics, and mathematics sharply decreased, partly due to changing patterns of government expenditures, particularly in the area of national defense and defense-related scientific research. Many of these displaced academics desperately tried to find new positions – it was not at all uncommon for Western visitors in the FSU to find that their driver was a Ph.D. physicist. Moving to economics departments offered a better substitute for some mathematicians, who claimed it was appropriate for them to teach economics because they understood algebra, graphs, and advanced mathematics better than political economists, and were not tainted by a history of teaching Marxist ideology. There was some truth in that, as we have suggested above; but not surprisingly to economists, there was even more self-interest and rivalry. Initially, the position of political economists seemed more favored, especially in terms of teaching at the principles level. But soon, at the intermediate level and beyond, they began to loose ground to the mathematicians.

Today, if you look at the composition of the faculty for departments of economic theory at any major university in the FSU, you will almost always find at least several professors whose university training (and often whose first career) was in mathematics. The extent of the role in mathematics in a department's curriculum, and in terms of what kind of person (mathematician or political economist) will be assigned to teach a particular course often depends on the background or beliefs of the chief of the department. At MSU, most of the intermediate and advanced courses in economics are taught by mathematicians. There is also a strong chair in Mathematical Methods of Economic Analysis that offers students the option of enrolling in mathematically-based courses in Microeconomics I and II, and Macroeconomics I and II. Largely because of this, many of the required courses at MSU now also require students to take quizzes, and midterm and final exams that feature multiple choice questions, problems, and essay questions. The final grade/score in the course depends on the scores of all the tests and home assignments taken during the semester. This is common in the U.S. and other Western universities, but it differs sharply from common practice during the Soviet period. The new practice, together with rigorous entry requirements, helps to insure that seniors at MSU are able to get high scores on the GRE field exam in economics.

At most universities in the FSU that use a five-year degree program, there is a final state exam for students who major in Economic Theory. Although these are called state exams because they are officially approved by the Ministry of Education, and because the Chief of the state examining commission must be an outsider – usually a professor from another institution who is appointed by the Ministry – in practice the exams are written and administered by the faculty of the Economic Theory department at each university. Not surprisingly, the structure and content of the exam typically reflects the balance of power between Marxist and market-oriented professors in the department. To consider one such case, it took several years for professors at BSU to implement changes in the procedures for the state exam. Currently the exam consists of two parts. First, students take a written exam that includes 50 multiple choice questions that are essentially identical to the questions from the GRE field exam in economics. Then, on the next day, students must pass an oral exam that includes questions from classical political economy (mainly Marxist economics), microeconomics, macroeconomics, international economics, economic policy, applied economics, and history of economic thought. The state

commission that administers the oral exam includes five professors, at least two of whom do not teach economics. Strong answers are required for a passing score. But the questions asked of an individual student are chosen at random, so it is quite possible for a student to receive a high score on the written exam, to be very familiar with microeconomics and macroeconomics, but fail the oral exam because she is given a question on the oral exam dealing with the structure and logic of the second volume of *Das Kapital*. Ironically, in recent years some students who received low grades on the BSU state exam for this reason were later admitted to prestigious graduate programs in Great Britain or the United States.

It is also worth noting that some members of the state commission whose field is political economy are not really able to evaluate students taking the exams, because they have only a basic level of knowledge on market-based economics. This was an especially severe problem during the early 1990s, when most faculty members in economics departments were rewriting their courses, restructuring departmental curriculums, and intensely engaging in self-training or retraining. Because economics departments in the FSU are highly specialized and include business subjects, some professors were working on various fields of economics, others on management, and others on statistics, etc. But while professors were retraining in one highly specialized area, students were taking the revised courses in all of the subject areas. Therefore, by the time a fifth-year student took the state exam, he or she often had better general training than some of the members of the examining commission. Students also often complained – then and now – that there was poor coordination of content across different courses and subject areas, resulting in both coverage gaps and redundancies.

B. Formal Training and Retraining Programs

There was a law in the USSR requiring university professors to take a one semester retraining course every five years. This was a strictly enforced requirement for keeping a position in a university chair. Several retraining institutes dealing with humanities education were opened at the largest universities in Moscow, Leningrad, Kiev, Minsk, and some other capital cities. In the area of political economy, these retraining institutes played very important ideological and methodological roles. Faculty members from smaller cities and universities used these opportunities to obtain new publications, teaching materials, and course syllabi.

Usually the best professors in political economy were invited to give the lectures at the retraining programs. Therefore, when the Economic Development Institute (EDI) of the World Bank launched its own retraining program (titled "Introduction to Market Economy: Principles and Policy") in 1992, it was quite natural for them to affiliate with the leading retraining institutes.

The primary goal of the World Bank program was to present instruction on the basic features of market economies for government officials from economic ministries across the FSU. But first, teams of professors from the FSU nations were invited to Washington DC for several seminars at the World Bank and the International Monetary Fund (IMF), providing intensive instruction on teaching micro- and macroeconomics. The EDI retraining centers were then established in various countries at the retraining institutes, and the programs for ministry officials were taught jointly by World Bank and IMF economists, and by the university economists from these nations who had been trained in the first phase of the program. Eventually, at least in some nations, the training programs were taught only by local economists.

These programs had very good multiplier effects in several dimensions. In Belarus, for example, four BSU professors were involved in the EDI retraining programs. They immediately redirected their own courses and students towards textbooks that were recommended by the EDI staff and at the Joint Vienna Institute. They also tried to involve as many of their colleague as possible in several retraining activities, although there are still many courses at BSU that are taught very traditionally (i.e., as in the Soviet period). The Minsk EDI center has, to date, conducted 20 three-week courses for government officials, and also organized a two-year retraining program for university and college professors, and for high school economics teachers. These programs greatly helped to accelerate and smooth the restructuring of economics courses and curriculums at most Belarusian universities, and at other educational institutions.

The Moscow EDI office, which is affiliated with the MSU retraining institute, played an even more significant role in restructuring the economics curriculum. As discussed in the following section, several MSU professors have translated Western economics textbooks into Russian, and/or have published their own textbooks, which are very popular in Russia and across the FSU. Not surprisingly, many of these same professors are involved in numerous international projects in economics. The same group of professors also prepared the first Russian Internet textbook on economics.

C. Textbooks

Many authors in the FSU, especially in Russia, now write economics textbooks with no ideological or methodological influence from Soviet-style political economy. Good examples of this include textbooks on *Microeconomics* by M. Loukin and R. Emtsov, on *Macroeconomics* by T. Agapova and S. Seregina, and on *International Economics* by N. Miklashevskaya and A. Kholopov. All of these economists were involved in the EDI retraining programs for university professors and government officials. For several years they taught micro and macroeconomics at MSU using translated versions of the textbooks by Katz and Rosen and Mankiw. In fact, Emtsov was the chief editor of the Mankiw translation. With this background, it is easy to see why the textbooks these authors have written in Russian feature content and structures that are very similar to these U.S. textbooks.

Not all of the new textbooks written in Russian, Ukrainian, or Belarusian meet these high standards, however. In fact, most are probably still of lower quality than American textbooks, so it often makes sense to continue to use translations in many courses, and even to translate additional Western books in many other subfields. This is a somewhat controversial topic in the FSU, however, with many economists claiming that U.S. textbooks do not explain the current FSU reality, and arguing that it is therefore necessary to cover the main topics in the U.S. textbooks using local examples. But all too often, in practice, local examples only mean that instead of John and Mary authors talk about Ivan and Maria. In the textbook on Economic Theory written by faculty from the Belarus State Economics University, described earlier, there are only five or six rather minor examples dealing with the FSU in 330 pages of material on micro and macroeconomics.

It is also important to remember that textbooks on economic theory are not textbooks for the FSU courses on the economy in transition. Rather, these texts and courses play a different role in the curriculum by demonstrating how to construct and use the most basic models of rational economic behavior. That is, of course, the same role that these courses and books play in the United States, or in any other mainstream economics curriculum, so the importance of local examples, institutions, and data should not be overstated.

Another important issue related to the use of translated or locally written textbooks in the FSU, which is probably not widely appreciated in the West, is the relative prices of these books. In Minsk in August 1999, the price of the textbook written by Belarusian faculty members was 374,000BLR, the price for a Russian textbook published in Russia was 1,550,000BLR, and the price for a translated U.S. textbook was about 4,000,000BLR. In many cases, these relative prices are also a reasonably accurate measure of the relative quality of these textbooks.

The demand for these different kinds of textbooks varies greatly, depending on whether students are majoring in Economic Theory or some other field. There is almost no demand for the higher priced and higher quality textbooks from students who are not in economics departments, and even among that group there is quite limited demand from the students who specialize in business. Most non-economics majors try to use the simplest and cheapest textbooks on economics. In other words, the students majoring in economic theory departments, and of course the professors who teach economics courses, are the main consumers of the translated textbooks. Even among this group, not all can afford the translated volumes.

Workbooks present several additional problems. First, the traditional pedagogical method of Soviet instruction was even more heavily lecture oriented than U.S. teaching of economics – without discussion or student questions in class, and few if any written assignments or mid-term quizzes or exams. Political economy was taught like a catechism, not as something to be used to solve practical problems. Today, many professors who now teach market-based economics still teach in the same manner: Once I prove the law of demand, why waste time solving multiple choice questions? This naturally affects the demand for workbooks.

Another problem limiting the use of workbooks is that some faculty members are not psychologically or technically prepared to solve the questions and problems themselves. In the retraining programs described above, it was soon evident that test scores for university professors were not always higher than most student scores on the same exams.

Even when workbook materials are available and a professor wants to use them, there are serious problems in distributing the materials. Students who can barely afford textbooks are even more reluctant to buy workbooks. And aside from any copyright concerns, duplicating copies of such materials to hand out to students is beyond the budget for most departments. As a result, it is not unusual now to find professors reading multiple-choice questions to their students, in some cases for up to half of a class period.

D. Faculty and Student Issues Concerning Graduate Study

We conclude by very briefly discussing how the restructuring of undergraduate economics programs in the FSU has affected the opportunities for students at these universities to pursue graduate-level instruction. There are currently three main options:

1) Some universities in the FSU, particularly those that have gone from five-year to four-year undergraduate programs, have recently launched master's programs. By 1996, MSU offered master's programs in Economic Theory, International Economics and Management, Mathematical Methods of Economic Analysis, and State Policy and Management. Kiev National Economic University has master's programs in all the major fields, including: the Economics of the Firm/Enterprise, Finance, Banking, Auditing, Marketing, Institutional

Management, Management of Labor Resources, Economic Statistics, Economic Cybernetics, International Economics, and Business Law. BSU briefly offered a one-year master's program in Economic Theory, to supplement its five-year undergraduate program, but soon dropped the program.

- 2) Some universities have joint masters' programs with British and American Universities. Often students in these programs can take some coursework at their home university and part abroad (e.g., in the joint program of Novosibirsk State University and the University of Maryland, or in a program on the Management of Technology offered by the BSU Management of Technology Institute and the Economics Institute at the University of Colorado). In other cases FSU universities invite foreign professors to teach courses for these programs on site.
- 3) Today, the best undergraduate students across the FSU usually study English or occasionally some other Western language, and devote considerable effort to preparing themselves for the GRE and TOEFL exams. They obviously hope to do their graduate study abroad, and many are able to do so. This has led to a serious "brain drain" problem for graduate programs at FSU universities that is particularly pronounced in economics and business. It is also a serious long-term concern for the FSU nations, because few of the students who go abroad for graduate study return to their home nations after completing their advanced degrees.

IV. Conclusions

While remarkable progress has been made in restructuring economics courses and curriculums at the leading universities in the FSU, that progress is not uniform, nor is the process complete. It had been hampered by resistance from those professors of political economy who truly believed what they taught under the Soviet system, and by the substantial costs of retraining other faculty members both in areas of content and pedagogy. It has also been impeded by the substantial costs of translating, developing, and distributing new instructional materials. Furthermore, while student populations at these universities are typically very well prepared by their elementary and secondary educational programs, particularly when compared to their Western counterparts, the FSU universities' financial positions are very strained – reflecting economic conditions in these nations. This has led some faculty and many graduate students to seek more rewarding careers, including positions at Western universities.

TABLE 1

Coursework for the General Economics Degree at Moscow State University, 1998-2000 (# of hours of coursework shown in parentheses)

Required courses:

Microeconomics I (102)

Microeconomics II (68)

Macroeconomics I (96)

Macroeconomics II (64)

Theory of the Transitional Economy (68)

History of Economic Thought (132)

Economic History (115)

International Economics (68)

Industrial Organization (68)

Institutional Economics (30)

Economics of Public Sector (68)

Environmental Economics (64)

Economics of Agrarian Sector (30)

Economics of the Firm (68)

Accounting (64)

Financial Markets (64)

Firm's Finance (68) [Corporate Finance]

Banking (40)

Economics of Population and Demography (64)

Economics of Labor and Labor Resources (68)

Management (32)

State Regulation of National Economy [Macroeconomic

Forecasting and Stabilization

Policies (64)

Economics of Foreign Countries (64)

Econometrics (66)

Statistics (general theory) (68)

Statistics (socioeconomic statistics) (64)

Mathematical Statistics (64)

Operations Research (64 +68)

Game Theory (34)

Economic Cybernetics (32)

Mathematical Analysis (132 + 132)

Linear Algebra (115)

Probability Theory (68)

Informatics [management information systems] (132)

Economic Geography (68)

History of the Fatherland (51) Polito-logics (40)

Philosophy (68)

Foreign Languages (636)

Elective courses:

Natural Science for Economists (64)

Discrete Mathematics (64)

Introduction to Political Economy (64)

History of World Civilizations (64)

Economic Systems in the Economy Structure (68)

Theoretical Analysis of Economic Systems (132)

Theoretical Seminar on Transitional Economy (64)

Theory of Economic Development (68)

Multidimensional Statistical Analysis (68)

Applied Operation Analysis (64)

Introduction to Project Analysis (64)

Basics of Risk Management and Insurance (64)

Sociology (64)

Mathematical Sociology (64)

Modern System of Market Economy (51)

Economics of Services (51)

Areas of Specialization (7th and 8th semesters)

Economic Theory (216)

Mathematical Methods of Economic Analysis (216)

Economic and Social Policy (216)

International Economics (216)

Financial Economics (216)

Economics of the Firm and Industrial Organization (216)

TABLE 2 Coursework for the General Economics Degrees at Belarus State University, 1999-2000 (# of hours of coursework shown in parentheses)

SPECIALTY #1: Economic Theory (for future teachers of university economics)

General Humanities and Social Courses

Philosophy (88) Logic (36) Political History (34) Polito-logics (36) Ethics (72) Social Psychology (54) Religion (34) International Law (36) Pedagogics (54) Culture-logics (36) Foreign language (770) Civic Law (34) History and Ethnology of Belarus (34) Physical Training (210)

Mathematics and Science Courses

Principles of Ecology (34) Mathematics (210) Probability Theory and Mathematical Statistics (104) Informatics and Programming (104)

Modern Technologies (34) General Professional and **Special Courses**

Economic Sociology (34) Environmental Economics (34) Economic History of Belarus and Foreign Countries (104) Economics of Countries and Regions (72)

History of Economic Thought (208)

Economic Statistics (122) Principles of Marketing (34) Principles of Management (72) Pricing (54)

Economic Psychology (34) Introduction to the Specialty (18) Introduction to Economics (36) Econometrics (68)

Principles of Economics (70) Microeconomics (140) Macroeconomics (72)

International Economics (68) Economics of the Firm

(Enterprise) (122) Economics of Agrarian Sector

Accounting and Audit (122)

Labor Economics (54) Money, Banks, and Credit (68) Political Economy (54)

Business Analysis (68) Macroeconomic Planning (104) Financial Law (34)

Business Law (36)

Finance (of State and Enterprise) Economic Policy (68)

Methods of Teaching Economic Sciences (54)

Economics of Public Sector (68) Courses recommended by the University Council (72)

Specialization - 610 hours Specialization in "Economic

Policy" Macroeconomic Problems of

Transitional Economies Antimonopoly Regulation Economic Education and Literacy(Analysis of Investment Projects Theory and Practice of Taxation

Specialization in "History of Economic Thought" Institutional Economics Seminar on A.Marshall,

J.M.Keynes, A.C. Pigou, V.Leontiev Seminar on Marx's Das Kapital

Internet in Teaching Economics **Elective Courses**

Modern Belarusian Language

System of State Regulation (20) Regional Integration (20) Theory of State Debt (20)

SPECIALTY #2: Economics (for government or firm economic analysts)

General Humanities and Social Courses - 1174 hours Philosophy (102)

Logics (34) History and Culture of Belarus (34)Polito-logics (34) Ethics of Business Relations (68) Social Psychology (52) Economic Sociology (68) International Law (34) Pedagogics (34) Demography (34) Foreign language (408) Civic Law (68) Physical Training (204) Mathematics and Science

Courses - 486 hours

Analysis (204) Algebra, Geometry, and Programming (170) Economic Informatics (154) Probability Theory and

Mathematical Statistics (102)

Numerical Methods in Economics (102) Operations Research,

Optimization, and Games (136)

Computer Mathematics for Economists (68)

Ecology and Environmental Economics (52)

General Professional and Special Courses - 2102 hours

Economic History (136) Economic Geography (68) Principles of Economics (86) Microeconomics (136) Macroeconomics (102) History of Economic Thought

(136)Introduction to the Speciality (18) Econometrics and Forecasting

International Economics and Finance (102)

Management (68) Economics of the Firm (102)

Statistics (120) Marketing (68)

Money, Banks, and Credit (102) Economic Policy and the Theory of Transitional Economy (68) Pricing (52)

Agricultural economics (68) Accounting and Financial Analysis (136)

Labor Economics and Management of Labor Resources (52) Strategic Planning (86)

Business Law (34) Tax and Budget System (68) Financial Markets and Investments (68)

Financial Law (34) Mathematical Economics (72) Courses recommended by the

University Council (72) Specialization - 692 hours

Special Courses (276) Special Seminars (208) Laboratory Work (208) Specialization in "National

Economics" Theory of Transitional Economies **Budget Planning**

Indicative Planning and

Forecasting Foreign Markets State Funds **Urban Economics**

Industrial Policy Analysis of Economy

Development Economics of the Public Sector System of State Regulation

Regional Integration Specialization in "Economics of the Firm"
Economic Theory of the Firm

Production Management Personnel Management Controlling

Business Analysis Logistics Labor Law Taxation

Industrial Policy

Analysis of Investment Projects s **Business-Planning Economic Informatics**

Specialization in "Banking and Financial Economics"

Actuary Mathematics Investment and Financial

Markets Analysis of Investments Insurance and Risk Financial Analysis **Evaluating Bank Performance** Capital Management Financial Programming

Credit Risks and Business Plans **Analysis**

Bank Management Financial Informatics Specialization in "Economics of

Foreign Trade" Customs Policy

International Trade and Banking Law

State Regulation of International Economic Relations World Economy International Marketing and World Markets

Balance of Payment and State Debt Analysis

Elective Courses

Modern Belarusian Language

Methods of Teaching Economics

TABLE 3

Coursework for the General Economics Degree at Kiev State University, 1999-2000 (# of hours of coursework shown in parentheses)

Humanities: 1656 hours

History of Ukraine (108)

Ukrainian Business Language (54)

Ukrainian and Foreign Culture (108)

Philosophy (108)

Basics of Psychology and Pedagogy (54)

Religion (54)

Polito-logics (108)

Basics of Law (54)

Foreign Language (630)

Sociology (54)

Basics of Constitution Law (54)

Logic (54)

Physical Training (54)

Fundamental Courses: 3439 hours

Economic Theory (315)

Microeconomics (135)

Macroeconomics (135)

History of Economic Thought (181)

Economic History (108)

Mathematics for Economists (432)

Mathematics (216)

Probability Theory (108)

Mathematical Methods of Operations Research (108)

Econometrics (81)

Theory of Statistics (108)

Economic Statistics (108)

Informatics and Computers (216)

Systems of Processing of Economic Information (81)

Economics of the Firm (Enterprise) (162)

Management (108)

Marketing (108)

Theory of Money (54)

Theory of Finance (81)

Theory of Credit (81)

Firm's Finance (54) [Corporate Finance]

Theory of Accounting (108)

Accounting of the Enterprise (108)

Economic Analysis (81)

Insurance (81)

Investments (81)

Allocation of the Productive Resourses (81)

Labor Economics (81)

International Economics (108)

Industrial Organization (68)

Business Law (81)

State Regulation of the Economy (81)

Professional Courses: 987 hours

Modern Economic Systems (108)

Ukrainian Economy in Transition (108)

Microeconomics: Analysis of the Market Behavior (108)

Macroeconomic Analysis (108)

Economic Policy (108)

Economic Integration and Global Problems (54)

Economic History of Ukraine (90)

History of Ukrainian Economic Thought (60)

Information Systems and Technologies in

Macroeconomics (81)

Philosophy and Methodology of Scientific Cognition

(81)

Methods of Teaching Economic Sciences (81)

(KSU-selected) Elective Courses: 792 hours

Introduction to the Speciality (54)

Institutional Economics (81)

Welfare Economics (135)

Basics of Environmental Economics (108)

Economic Risk and Methods of its Calculation (108)

Special Seminar on J.M. Keynes (108)

Special Seminar on Das Kapital (108)

International Economic Relations (90)

(Studen- selected) Elective Courses: 417 hours

Theory of Economic Development (81)

or Economic Systems of Theoretical Analysis

Social Policy (108)

or Concept of Human Development

Small and Medium Business (108)

or Enterprise

Theory and Practice of Competition (60)

Inflation and Unemployment

Foreign Investments (60)

or Finances of Foreign Countries

Internships: 468 hours

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ENDNOTES

- ¹ Many leading universities in the former Soviet Union continue to use a five-year program with no distinction for bachelor's and master's programs, although Moscow State and Kiev State now use a four-year program. Regardless of the length of their baccalaureate program, the best students can apply directly to Ph.D. programs across the former Soviet Union, which typically do not assume that students have completed any specific courses. Ph.D. students majoring in economic theory are then required to pass a series of exams and to defend a dissertation.
- ² Some of these conferences have been described in the earlier papers on the economics curriculum at MSU.
- ³ Both specializations are taught by the BSU fakultet of economics, which is equivalent to a Western department of economics. Within the BSU facultet there are currently three areas, or otdeleniya, which the faculty at BSU refer to as departments: Economic Theory, Economics, and Management. Students must apply to one of these three specializations, which have separate entrance exams and degree requirements. We do not consider the management specialization in this paper.
- ⁴ Some of this may change very soon. The Economic Policy course was taught by the former head of the department, a 75-year old man who was not likely to retrain in Western economics, but who was killed in an automobile accident in August, 1999.
- ⁵ The state exam still appeared in the 1995 MSU curriculum guide, but is not mentioned in the current guide. Nor is such an exam mentioned in the current KSU guide. This may well reflect the fact that both of these universities have now adopted a four-year degree program.

PURDUE CIBER WORKING PAPERS

No. 93-101	Gordon M. Phillips, and Robert J. Weiner "Information and Normal Backwardation as Determinants of Trading Performance: Evidence from the North-Sea Oil Forward Market." 1994. The Economic Journal.
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