This article is a case study of the educational resources and needs at the Center for Environmental Management and Planning in Tbilisi, Georgia, one of the republics of the former Soviet Union. It summarizes the challenges of teaching agricultural economics and marketing in a new college preparing students for careers in a market-oriented economy. The teaching experience is analyzed through the theoretical framework of human capital development.

Introduction
Recently, aid to Russia has received considerable political attention. President Clinton and leaders of the other G-7 industrialized countries propose to bolster Russia's market-oriented reforms. Private companies such as Coca Cola, Pepsi, McDonalds, and Procter & Gamble are already investing in the Russian economy.

Proponents of private and public aid recognize that any investment must have an impact on real people to be successful. This means an investment in human capital -- in business management, agriculture, and education. The Clinton Administration earmarked over half of its $1.5 billion aid package for people-to-people projects, including a capital-venture fund, a Democracy Corps of lawyers, accountants and judges, and a housing fund. While investment in Russia is important, many of the smaller republics of the former Soviet Union (FSU) have received less attention from business and political leaders. Businessmen, politicians and educators must recognize the diversity, complexity and opportunities that exist in these republics and inform the American public about their political and economic transformation as well.

Purpose and Objectives
This article provides a case study of the educational resources and needs in agribusiness and environmental management at the Center for Environmental Management and Planning in Tbilisi, Republic of Georgia, one of the republics of the former Soviet Union (FSU). The objectives of this article are to: (1) describe the educational objectives, resources and needs of the Center for Environmental Management and Planning, and (2) describe the contribution of the College of Agricultural and Environmental Sciences at the University of Georgia (UGA/CAES) to the economic literacy of the Center's students and faculty.

Conceptual Framework
The adoption of a new economic system in the republics of the FSU can be analyzed in a human capital framework (Peterson). The acquisition of knowledge and skills by individuals results in the creation of new human capital, leading to the production of other goods and services. The pace and success of reforms in the FSU depend upon the majority of the population acquiring a new human capital base. Norbert Walter, Chief Economist of the Deutsche Bank Group, argues that large corporations in the industrialized countries should send experienced, professional managers to help build a new business infrastructure in the former Soviet Union (Walter). "Investment in human capital is often a prerequisite for development and adoption of physical capital" (Broder and Couvillon).

In early 1990, educational leaders in the Republic of Georgia decided that they needed a new institution of higher education to teach market-oriented principles and to break away from the confines of Soviet central planning thus opening their country to trade with the West. However, they realized that they needed a clean break with the old educational system if they were going to succeed. Thus, they founded the Center for Environmental Management and Planning (CEMP) in Tbilisi, Republic of Georgia.

Data
The data base for this article consist of reports, documents and agreements signed by the UGA/CAES and CEMP, reports of University of Georgia faculty who have taught at the Center, and surveys of students who are attending the Center. Supporting documents used in grant proposals provide additional information.

Economic Conditions and Challenges
Georgia is a mountainous country of 5.4 million people strategically located at the eastern end of the Black Sea, in the Transcaucasia region. Although located at the same latitude as Chicago, its climate ranges from subtropical to alpine. About the size of South Carolina, Georgia is known for its wine, tea, tobacco, and citrus fruits marketed within the FSU. Its Black Sea resorts have been favorite vacation spots for Soviet tourists.

Under central planning, Georgia developed a multise-
tored industrial base, including ferrous metallurgy, machine-building capacity, some chemicals, and textiles. However, like other republics, it depends on external sources for raw materials and more than 80% of its energy requirements. Georgia’s comparative advantages probably lie in agriculture and tourism.

Grapes grow in abundance throughout the country. Symbols of Georgian culture, wine, cognac, and champagne are produced commercially and exported to Russia and other republics. Temperate-climate fruits and vegetables are available in the farmers’ markets, but the quality varies widely. Meat and dairy products are in short supply.

Prior to the current political and economic crises, tourism was an important industry and demonstrated substantial growth potential. In the mountainous regions, alpine sports also have considerable potential, but the civil strife hampers tourism development throughout the country. Christianity arrived in Georgia during the fourth century, and the Georgian Orthodox Church has contributed to cultural heritage, an additional tourism resource.

Georgia now faces some of the same structural adjustment problems as Russia, the Baltic states and other former Soviet republics. Food and fuel shortages are common, inflation is rampant, and communications are difficult. Georgians are currently making a determined effort to establish cultural, educational, and economic links with the West after nearly 70 years of isolation.

Environmental Management

In July, 1990, as a result of professional relationships developed between the UGA/CAES faculty and administrators and their Republic of Georgia counterparts, a cooperative agreement was signed between the UGA/CAES and the Georgian Academy of Sciences, Tbilisi, to revitalize a small segment of this country’s educational system. The agreement resulted in the establishment of the International Center for Environmental Management and Planning within the Georgian Agricultural Institute to offer graduate training in Agribusiness and Environmental Management. The Center has subsequently established its own separate facilities.

The first class of thirty students began their studies at the Center in November 1990. Students concentrate on English and micro computer applications in their first year. In the second and third years, students study microeconomics, marketing, agribusiness and resource management as well as English (Georgian International Center for Environmental Management and Planning 1991, pp. 5-9). An important, indeed essential, part of the agreement is the faculty exchange between the Georgian Academy of Sciences and the UGA/CAES. UGA faculty in food science, forest resources and agronomy have lectured at the Center, generally on one-month assignments. Thus, I volunteered to teach microeconomics and marketing at the Center in October, 1992.

Teaching in Tbilisi

After arriving in Tbilisi on October 4, 1992, I began teaching an introductory microeconomic principles course to approximately 25 students. The students had no access to textbooks, except for a Russian translation of Samuelson which one of the students had bought. I supplemented these meager resources with an English and Russian copy of Samuelson and another microeconomics textbook by Amacher, which I had brought with me and donated to the Center. Students copied lecture notes from the blackboard for their textbooks, a situation similar to other less developed countries.

The students, ranging in age from 24 to 32, worked at their regular jobs in the morning and attended class in the afternoon. Their educational background ranged from mechanical, chemical, and electrical engineering to cybernetics, mathematics and physics. Only three students had a background in economics, food processing or forestry. Nevertheless, they all shared a common trait -- a desire to learn English and market-oriented economics.

Accompanying me to Tbilisi, my wife lectured to undergraduates, consulted with the English instructors, and discussed the peculiarities of American grammar and culture. She found that the textbooks were British oriented and out-of-date, outside reading materials and supplementary texts non-existent, and teaching methods very staid (Ames and Ames, 1993). Developing a strong cross-cultural approach to teaching English will be essential for the students’ further progress.

Advanced students expressed strong interests in public library system management. My wife became a resource as she is the director of the regional public library system in Athens, Georgia. While individual students had private collections, the concept of a public library was practically unknown. The Center for Environmental Management and Planning had a very limited library. Even though their resources were extremely scarce, the Center and students were making tremendous efforts to change the Georgian educational system. The Center opened an undergraduate college, called the College of Agribusiness, Ecology and Environmental Sciences, in the fall semester 1992. Two hundred students began studying at the Center, and applications for admission are growing (Shubladze 1992b).

Georgian students easily understood the basic concepts of marginal utility theory, consumer behavior, elasticities, and costs of production. Certain marketing concepts which we consider basic were reinforced by conducting consumer surveys in class. Other topics, such as commodity markets, futures, and international trade, were extremely difficult for students to understand, since they had been exposed only to a system of central planning.

Economic Conditions in Georgia

The students and faculty faced a daily battle of scarcities. Bread lines were the most obvious expression of shortages in Tbilisi. Georgians have the highest per capita consumption of bread in the former Soviet Union, 184 kilograms per year, or 60% more than consumers in Russia (Zeimetz 1991, p. 22). This was confirmed by a survey of students and their families. The normal waiting time in the bread line was two hours. One student reported that she was in a bread
line at 2:10 a.m. when an earthquake struck in the nearby mountains on October 24th. The country is in a precarious political and economic situation, due to its dependence on wheat imports, lack of hard currency, and the political instability affecting the transportation and distribution system.

Housing shortages were quite evident. Students were asked to describe their households as part of a marketing assignment. Generally, households consisted of five individuals representing two or three generations living in one apartment. Housing units ranged from one- and two-bedroom apartments to older homes which were subdivided into living units with several families sharing a common kitchen and other facilities. Married couples often lived with their parents. On average, there were fewer than two children per family. Sixty percent of the students ranked better housing as the one item they desired most, followed by automobiles and other consumer goods.

Inflation is rampant in Tbilisi and other parts of the Republic. Gasoline prices rose from 50 kopecks (half a ruble) per liter in 1991 to 60 rubles per liter in October, 1992. Sugar prices rose 25% in September alone. Students often engaged in petits trading to supplement their meager salaries. It is not uncommon to see individuals selling a few liters of milk, a roll of toilet paper, or a few liters of gasoline on the streets of Tbilisi. Vegetables such as potatoes are often sold directly from delivery trucks as they arrive from rural areas.

Education is a key ingredient in the successful resolution of Georgia’s political and economic problems. Eduard Shevardnadze called for a system of free education, the holding of scientific conferences in Georgia, and the training of students abroad in his pre-electoral address at the Georgian Academy of Science. Certainly, the restructuring of business and government will require managerial skills and training quite different than those utilized under central planning and state control. The CEMP is designed to provide these skills for its graduates in environmental and agribusiness management, despite its meager resources.

Educational Resources and Needs

The Center for Environmental Management and Planning has few resources to support its educational program in agribusiness and environmental management. Its textbook needs range from mathematical programming for natural resources management to accounting and the principles of agribusiness management (Shubladze 1993). Other textbook needs reflect Georgia’s natural resource base and comparative advantage in fruit and vegetable production.

Foreign language education is an important part of the Center’s curriculum. Students are required to study English for six semesters as well as write and defend their theses in English. Georgian-English dictionaries, teaching materials for English as a second language, and cultural materials are in short supply. The student-teacher ratio in the Center’s language classes ranges from 5 to 10, because there is a heavy emphasis on conversation, verbal comprehension, and direct student-teacher interaction. There are no language laboratories as such but the University of Georgia purchased and donated six tape recorders to the Center funded from private foundation grants.

The Center’s computer facilities are limited to three IBM PC/AT 286 computers and four SI Soviet Computers, 8088 models, and associated dot matrix printers (Shubladze 1993). Software programs are limited to word processing, spreadsheets, and English language tutorial programs. The need for higher capacity computers is obvious, as is the need for software to support teaching and research programs.

The Center had 16 faculty members in 1992, not including 20 English teachers (Shubladze 1992a). The majority graduated from Tbilisi State University. Faculty specialties included agronomy, biology, economic geography, computer science, cybernetics, marketing, and viticulture (Shubladze 1992a). The major faculty weaknesses were in economics, accounting, and business management, crucial subjects for the Center’s agribusiness management curriculum.

What observations or lessons can be learned from teaching in the Caucasus? The challenges of creating a market economy are formidable. U.S. colleges and teachers of agriculture cannot assume that markets as we know them exist in the CIS. Professor Bromley argues that creating market economies and fostering economic development in the former Soviet Union requires legal and political institutions that are just being developed. “It is through the establishment of institutions that societies create markets. Indeed, markets can only exist within a legal system that has consciously set out to create ordered domains of exchange’” (Bromley 1993, p. 3).

In the Caucasus region, the necessary institutional arrangements for orderly markets may not exist or be fully developed due to recent political conflicts. Rules that governed the centrally planned economies no longer apply. Freed from the heavy hand of centralized planning, administered prices, and compulsory deliveries, the market in which Georgia’s entrepreneurs operate is indeed a volatile place. The legal foundations of these economies is clearly in transition. A lecture on marketing management also requires an explanation of the institutional arena in which these principles apply. Teachers cannot assume that students will understand basic marketing without some knowledge of the legal framework that governs the exchange process.

What Role for the West in Georgia?

The question immediately arises, what role, if any, does the U.S. have to play in Georgia? Like many former republics, Georgia has much regional economic and political importance, given its strategic location in Transcaucasia.

In 1992, the U.S. and four European countries estab-
lished embassies in Tbilisi. These ambassadors have expressed moral support for the democratic process in Georgia, but much more than moral support is needed. Georgia’s human capital base is excellent, with a literacy rate of 98%. However, a lack of financial resources, civil disturbances and isolation from the West weakened higher education in the 1980s. While the labor force possesses good scientific and technical skills, government leaders and factory managers lack knowledge and experience with conventional western business practices, banking and commerce, (2) which severely limits foreign investment, trade and economic development.

Whoever invests in the revitalization of Georgia’s higher educational system, banking, communications, and public services will determine the country’s future political and economic orientation. The cost of aiding a small, strategically-located country is relatively small. A major benefit of such aid would be a prosperous and stable multi-ethnic society that could be a lasting influence in the region. Georgia has made a commitment to democratic principles, but to ignore the country’s needs would not be in the best interests of either the U.S. or Western Europe.

References
2. Among the academic subjects that are needed in the former Soviet Union (FSU) are banking and accounting systems. Many of the former socialist bloc countries had no banking system. Moreover, "They have no accounting system as Americans know it, no way of assessing risks or creditworthiness of borrowers" (Ashley 1993, p. A15). Under central planning, governments automatically covered losses of state-owned enterprises. The republics expected high levels of services and significant transfers or subsidies under the Soviet system (Johnson and Nikonov, 1991, p. 5). Since the creation of the Commonwealth of Independent States (CIS), the Russian central bank continues to print money and subsidize state-owned enterprises, contributing to near hyperinflation throughout the region.

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