

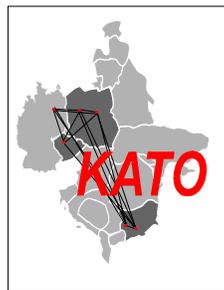
## Perspectives on Future Research in Central and Eastern European Transition Agriculture

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### **Abstract:**

*Measuring the Progress Toward Market* is proposed as the unifying theme for the next stage of transition research. The main areas included in the research agenda focus on land ownership and land markets, changes in farming structure and farm organization, agricultural labor adjustment, introduction of hard budget constraints and real bankruptcy procedures. The emergence of functioning market services should be studied in the perspective of demonopolization and competition, with special emphasis on development of service cooperatives.



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## 22 Perspectives on Future Research in Central and Eastern European Transition

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### **Introduction**

The 1990s is a unique decade. The transition in CEE and CIS (the so-called ECA region) is unprecedented in its scope and scale. More than twenty countries decided practically simultaneously, in 1989-1990, to abandon the common socialist model that had reigned supreme (for 45 years in CEE and for 70 years in CIS) and began a transition to market. The transition from plan to market covered all sectors of the economy and affected the entire fabric of society. The challenge is clearly without a parallel: nothing that we have observed in Africa, Latin America, India, and even China comes close to the magnitude of the undertaking in the ECA region.

We have the privilege of living in a laboratory. Unknown processes are unfolding in front of our eyes, and it is for us to grasp the opportunity and study these processes. Professionally, we have had a wonderful decade. This “we” encompasses a broad circle of individuals and institutions who, through sheer persistence and devotion, have emerged to the forefront of research in agricultural transition. In the West, a partial list of the active players includes the World Bank, the Policy Research Group in Leuven, IAMO in Halle, ZEF in Bonn, Humboldt University in Berlin, Rural Development Institute in Seattle, Land Tenure Center in Wisconsin, Wye College and Natural Resources Institute in the UK. OECD and FAO should be singled out among the international organizations for their contribution to transition studies. Many other research groups and organizations in Europe and North America are engaged in the same endeavor, and the value of their work is not diminished by the unintentional omission from this list. In the East, the players – both individual and institutional – are too many to enumerate, and Western scholars benefit from regular interaction with them in various international forums and joint research projects.

### **Publications and synthesis**

The last decade has generated a tremendous volume of transition-related research. This research is primarily in the form of narrowly focused papers, which is quite understandable: after all, we are only in the initial phase of knowledge building as far as the phenomenon of transition is concerned. Unfortunately, too many of these papers remain “gray literature”, what used to be called “mimeo” and what should now probably be called “www”. All too seldom are they brought to the stage of a journal article or a chapter in a book. This is a pity, and in the next decade a greater emphasis should be placed on making the results of our research more publishable than thus far. Perhaps a special journal (*Agricultural Transition? Rural Transition?*) could be sponsored jointly by a number of institutions; perhaps the *European Journal of Agricultural Economics* should regularly devote one or two special issues a year to topics of rural transition; or perhaps the *Quarterly Journal of International Agriculture*, published at the Humboldt University of Berlin, should pick up the gauntlet and reorient its mission.

Another task for the next decade is synthesis. From time to time, some of us should put the temptations of original research aside and focus on producing review articles that summarize and synthesize the work of a number of colleagues on a specific topic. KATO, for instance, should aim to produce three comprehensive synthetic articles, one on each of its key themes, covering perhaps also the work of non-KATO researchers and other countries beyond its core three. Eventually, the review articles will move one step up and graduate to become books. Such synthetic volumes – as distinct from collections of research articles – are an indication of a mature subject, and we probably still have a number of years until we reach that stage.

### **Research agenda for the future**

My task is to talk about future research in agricultural transition. I would like to start with two very general and perhaps very subjective observations. First, I feel that our future research should have a regional perspective much more than in the past decade. The building blocks will still be country studies, but these should always be conducted in a broader framework that will ensure their generalization and synthesis into a regional picture. Moreover, by regional I mean all the twenty-odd transition countries, and not only CEE. There is much to be learned from CEE–CIS comparisons, as has been demonstrated by Swinnen’s group and by my own work on commonality and divergence.

The second observation is probably more controversial. It has to do with the sequencing of empirical and theoretical research, or with the balance between empiricism and theory in our work on transition. We always tell our students to start with theory and then use empirical data to test the theory. This is perfect for an established discipline, where a well-developed and consistent theory exists. But this is not how Galileo, Copernicus, Kepler, and Newton worked. This is not how most of the frontier research in high-energy particle physics is done today. In new areas, and transition is definitely a new area, research starts with exploration; theory comes later. We first need to collect basic information, and then see if we can explain it. No lesser an authority than Bruce Gardner (private communication) has voiced this view to me on several occasions in the context of work in transition countries. We should keep this dictum in mind in designing our research for the next decade and in directing the work of our students. Let us not try to piece together some sort of a theory from many different sources and then use a little piece of local data to demonstrate that something holds or does not hold. Instead, let us start by collecting a broad spectrum of data and then see how a small, simple theory can explain it. Theoretical complexity and completeness will have to wait.

I would like to propose *Measuring the Progress Toward Market* as the unifying theme for the next stage of our research – the next decade or the next “five-year plan”. Measurement requires at least three things: the starting point, a benchmark representing the end point, and the dimensions of measurement. To decide on the dimensions of measurement, I would like to step back and briefly revisit the agricultural transition agenda.

**Table 1. Agrarian Reform Agenda**

Dimension	Pre-transition situation	Required action
Production	Centrally prescribed targets	Allow free decisions
Prices	Centrally controlled	Liberalize
Finances	State support, write-offs	Hard budget constraints
Inputs, sales, processing:	State-owned monopolies	(a) Privatize (b) Demonopolize
Ownership of resources	State, collective	Privatize
Farming structure	(a) Large size (b) Collective organization	(a) Downsize (b) Individualize

Table 1 presents, in a schematic form, the main dimensions in which socialist agriculture differed from agriculture in market economies. The required actions were determined back in 1990 by comparing the pre-transition situation (the starting point) with the market benchmark (the goal). This approach to the formulation of the transition agenda was based on a simple assumption, namely that the objective of transition was to replace the institutional and

organizational features of socialist agriculture with attributes borrowed from the practice of market economies. Although this table was constructed without any relation to the KATO project, the basic dimensions include the three main KATO themes: liberalization, privatization, and restructuring. This highlights the universality of the research program on which KATO embarked three years ago – unfortunately only in three countries.

I will not dwell on the first two topics of the transition agenda – elimination of centrally prescribed targets and liberalization of prices. Not that these topics are not important: they are in fact the macro source of inefficiency of socialist agriculture and as such are at the very foundation of transition. But it seems to me that central planning and centrally prescribed targets are really a thing of the past throughout the region, while price liberalization is unfortunately not in my scope of expertise. Outside of KATO, researchers at IAMO under the direction of Klaus Frohberg have done some excellent work on price liberalization; Alberto Valdez at the World Bank and OECD researchers are busy calculating subsidy and support components, each using his or her own unique and totally non-comparable methodology. Evgeniya Serova at the Institute for Economy in Transition in Russia is also studying price liberalization. I am sure that this important work will go on and hopefully we will be able to compare subsidy levels in countries across the region and with market economies – assuming that the calculations are finally done based on a consistent, agreed-upon methodology. But my personal interest and preferences lie elsewhere. I will accordingly focus on issues of land and farm organization.

### *Land Ownership*

Perhaps we should start with ownership of resources, or specifically ownership of agricultural land. The general picture is very well known: restitution in CEE (except Albania), distribution in CIS, private ownership in most countries, restricted private ownership in some CIS countries, no private ownership in a number of CIS holdouts (including, surprisingly, a dozen members of the Russian Federation). Where our knowledge is very deficient is on the rudimentary level of basic numbers. We really do not have a good picture of how much land remains in state ownership or is still managed by the state. This lacuna is particularly noticeable in the CEE countries. To what extent has the restitution process been completed? How much land was supposed to be restituted? How much land has been restituted? How much of that land has been titled (provisionally or definitively)? How much land is still owned or controlled by the state? How much of that land is leased out to private users? On what terms?

**Table 2. Share of state-owned land in selected CEE and CIS countries: 1997-1998 status**

	Privatization strategy	State-owned land, % of agricultural land*
CEE		
Lithuania	Restitution	63%
Estonia	Restitution	43% (target 36%)
Romania	Restitution	29%
Czech Rep.	Restitution	19% (target 9%)
Poland	Restitution	22%
CIS		
Russia	Distribution/shares	40% (estimated)*
Ukraine	Distribution/shares	31%
Moldova	Distribution/conversion of shares into plots	17%
Georgia	Distribution/plots	78% (54% excluding pastures)
Armenia	Distribution/plots	67% (35% excluding pastures)
Belarus	None/allocation of household plots	93%
Kazakhstan	Distribution/shares	>99%

\*Official country statistics for CIS; Csaki and Lerman (2001) for Poland; OECD country studies for other CEE countries.

For me these are very real questions, because I do not have the answers. I have tried to construct a picture of the progress of land privatization, and the miserable results that I have been able to collect from a variety of sources are shown in Table 2. I invite the readers to attack and criticize these numbers, but above all I challenge future researchers to come up with a valid regional picture. There is only one solid fact that I can personally vouch for: with all the talk about the success of reforms in Poland, the share of the state in agricultural land ownership (ownership, not use!) declined from 26% in 1990 to 22% in 1998. There are very detailed numbers on the disposition of state land in Poland: how much is leased to individuals, how much is leased to corporate farms, how much is sold to each constituency each year, level of lease payments and prices, lease terms, even official plans for future disposition of state land (the source for these numbers in Poland is APA – the State Agricultural Property Agency and GUS – the State Statistical Authority). But we have this information only for Poland, where the system did not have to deal with restitution. We need to get a similar picture for all CEE countries. The data must be collected in a dynamic setting, for the entire decade from 1989 to the present. As a minimum, two time points are needed (1989-90 and 1999-2000). Once such data are available, we will be able to measure the progress achieved in this particular dimension. Of course, it would be interesting to go back to 1945 and see how state land was created in the CEE countries during the post-World War II land reform and how it later evolved during the 1950s and the 1960s, and even up to the beginning of transition, but this is obviously less relevant for current policy decisions.

*Land Markets*

The question of land ownership automatically leads to the question of land markets or, more generally, transferability of agricultural land. A reviewer recently accused me of overemphasizing the incentives associated with property rights and glancing over the issue of transferability, which the reviewer rightly regarded as the major source of productivity increases in the US (and probably elsewhere in the West). I want to redress the balance and try to clear myself of these accusations by putting land markets and transferability at the top of our research agenda. Again, what we need are hard numbers on transactions and their impact. The legal and institutional framework for land markets, including the various constraints on land transactions, have been described and evaluated in considerable detail. It suffices to mention the continuing work of Prosterman and colleagues at the Rural Development Institute (Prosterman and Hanstad 1999; Prosterman and Rolfes 2000) and the comprehensive treatise produced by Dale and Baldwin (2000) with ACE funding. But we have very little information on the actual functioning of land markets in the region, and we need to fill this lacuna in the next few years.

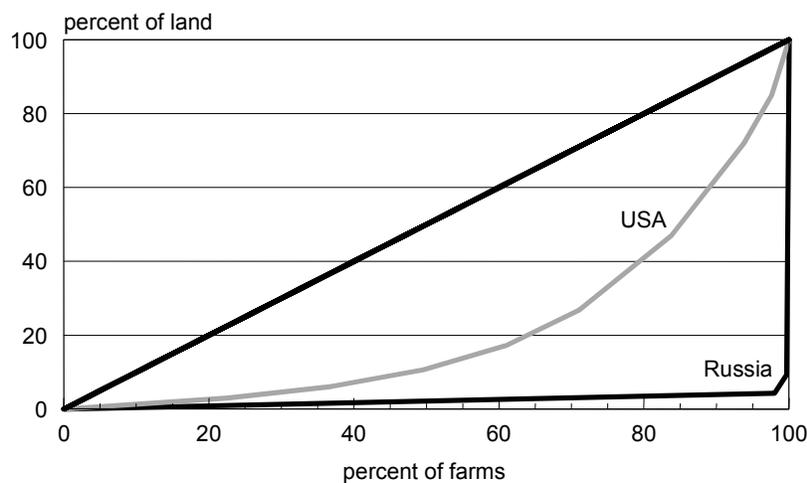
Wegren and Belen'kiy (1998) have collected some fascinating information on land sales in Russia. However limited their results, this means that somewhere in Russia somebody keeps records on land transactions and it is only a question of getting at these records. If this is the situation in Russia, then similar information probably also exists in other CIS countries. I know for a fact that land transaction records are kept in Moldova, but nobody so far has summarized and analyzed them (beyond some ad hoc attempts by land reform consultative teams). Armenia has embarked on an interesting experiment of selling land from its large state reserves. Surely there will be official records of these transactions. Surprisingly, we have very little quantitative information on land transactions in CEE. Back in 1992, Euroconsult made a valiant attempt to describe the frequency and magnitude of land transactions in four CEE countries (see Euroconsult 1994, 1995). This was baseline information, and it is now hopelessly outdated. Schulze and Tillack (1998) collected some numbers on land transactions in Poland, Czech Republic, and Slovakia. Dale and Baldwin (2000) give some numbers in their study. We have recently managed (with the cooperation of Anna Szemberg from IERiGZ – Institute of Agriculture and Food Economy in Warsaw) to put together numbers on land transactions among private farmers in Poland (Csaki and Lerman 2001). But these are disjointed, non-systematic attempts. The importance of the topic requires that we concentrate some of our attention on it in the future, probably in the context of the ongoing technical work with the development of titling and registration institutions.

An interesting body of research deals with the impact of land titling on farm productivity in Latin America, Africa, and Asia. These issues should be examined also in transition countries, especially in view of the emphasis that international donors place on funding land titling and registration technologies. In addition to land titling, it is also relevant to study the impact of land leasing on farm sizes and farm performance in CEE and CIS. Land leasing is actively developing in the region, despite or perhaps because of the constraints on buying and selling of land. Is land leasing a productive and profitable strategy for farmers to follow? Does it increase family incomes and alleviate rural property?

*Farming Structure*

Lorenz diagrams can be used to compare the distribution of farm sizes in transition countries and in market economies. Figure 1 shows such a comparison between USA and Russia in 1997 (Lerman 2001a). These patterns have important implications for our future research. If the market pattern is the benchmark, then the farm structure in many transition countries has a long way to go toward final adjustment (Lerman 2001b). If the market pattern is not the benchmark – a somewhat paradoxical statement in the context of transition to market – we have to understand why. What specific factors in the region justify a non-market pattern of farm sizes? And what is the efficiency outcome of this pattern?

Figure 1. Land Concentration: Russia and USA (1997)



My Lorenz curve analysis is based on the crudest of data. Maybe I am doing something wrong. Indeed, colleagues in Russia and Hungary (which also has a dual distribution pattern

like Russia in Figure 1) do not accept my Lorenz diagrams for their countries, but somehow they cannot come up with an alternative picture. Although the full data for the analysis of farm size distribution and land concentration in Russia exist in the statistical system, these data are not accessible to western researchers. Hopefully, the data will be acquired and analyzed in the process of a forthcoming USAID/BASIS research project managed by IRIS at the University of Maryland in College Park in cooperation with a team of Russian and American scholars (IRIS 2000). To move forward on this issue in countries other than Russia, we need good information about farm size distributions, especially in CEE. This will enable us to measure the progress toward market in this important dimension. In a technical aside, I have to stress that to construct a proper farm size distribution we have to make sure that our data cover the total amount of agricultural land in the country and that we have numbers for farms of all categories – corporate farms, private farms, household plots. All too often distributional data cover only specific subsets of the farm population, and this of course does not constitute 100%.

The analysis of farm size distribution is particularly important because of the persistent complaints about excessive fragmentation that we keep hearing in all CEE countries. The “Russian” dual pattern is indeed characterized by extreme polarization between a large number of very small farms and a relatively small number of very large farms. But the pattern in Romania, Poland and the Baltics is essentially different: it is much closer to the market pattern (although still with clear differences at both tails of the distribution). To deal with fragmentation claims and suggest rational consolidation policies, we need to study the operating profile of farms as a function of size. Are there differences in product mix and in specialization/diversification? Is there a commercialization threshold for small farms? What is the intensity of resource use for small versus large? Is there substitution of capital for labor in larger farms? Are there differences in value added between small, medium, and large? Finally, can we get some efficiency estimates as a function of size?

The tremendously important topic of small-scale subsistence farming – what I usually call household plots – probably falls in this category. Von Braun with colleagues have done some work on this subject (Braun, Qaim, and the Seeth 2000). O’Brien from the University of Missouri has been studying it from the socio-economic perspective with a group of American and Russian colleagues (O’Brien, Patsiorkovski, and Dershem, 2000). IAMO is beginning to look at this issue with a special conference organized in May 2001. There is a large volume of work on household plots by Russian researchers – which is understandable given the growing importance of the phenomenon throughout CIS. This topic needs to be formally

placed on our research agenda. We first need to collect, review, and synthesize what has been done. After a systematic review, we can design a good research program for the future. We cannot avoid looking at a subsector that is today responsible for close to half the agricultural product in Russia, Ukraine, and Moldova and is an important source of income for millions of rural families. We need to establish if household plots are an anachronistic dead end, as some believe, or a natural transition phase to productive and efficient individual agriculture.

Once we clear the two hurdles of describing the farm size distribution and characterizing the operating profiles of farms of different size categories, we will be ready to shift to the institutional level of farm size analysis. Tarditi (2001) reported at the World Bank/FAO accession workshop in Sofia in June 2000 that larger farms had a clear performance advantage over small farms in one of the regions in Italy. So why were the small farms not increasing their size to achieve higher returns? It turned out that there were institutional constraints on land leasing and land sales in that region (this links back to the previous topic of land transactions on our agenda!). In pre-transition Poland, although land was privately owned and controlled by individuals, the relatively fragmented farm structure was frozen in place by very high fees and taxes on land transactions (Csaki and Lerman 2001). But transferability of land is not the only institutional factor relevant for our purposes. Unequal access to supply and marketing channels, price discrimination, availability of credit, special relations with local and regional authorities, the traditional power of farm managers and government officials – all these are institutional factors that affect performance and act to maintain a certain farm size distribution. Amelina (2000) has recently argued, for instance, that preferential attitude of regional government and the special human capital accumulated by collective farm managers are among the factors that contribute to what she calls “the persistence of kolkhozes”. All these institutional factors must be studied in detail to address questions of fragmentation and consolidation.

### *Farm Organization*

There is a large overlap between farming structure and farm organization. Everything that we need to study for farms of different sizes needs to be studied also for farms of different organizational forms. Under this new heading I would like to address specifically the transition from the traditional collective or cooperative form of organization to alternative forms.

Before 1990, we had two main organizational forms across the region: large socialized farms (I am lumping collective and state farms into one category) and small household plots.

Today, the socialized farms have largely disappeared, and various corporate forms have emerged instead. These corporate forms are definitely smaller (see the downsizing objective in Table 1!), but they are still large by market standards and contribute to the persistence of the sharply dual farm size distribution in many countries. The household plots remain the main component of the individual sector, certainly in CIS, but there is now a new component of medium-sized full-time family farms with a much stronger commercial orientation.

Since individual farms are the dominant organizational form in market economies, individualization of former socialist agriculture can be regarded as a valid goal. The individual sector has grown substantially since 1990 in both CEE and CIS, but large corporate farms still control nearly half the land in CEE (much more in CIS) and presumably account for a substantial share of agricultural product (see, e.g., Lerman 2001b). Policy makers across the region proudly regard these corporate farms as private agriculture. Formally, this is perfectly correct. But what about substance? How are these farms organized internally? How is their operation different from that of collectives and cooperatives? Survey data for Russia and Ukraine often reveal that the new organizational form is nothing more than “a change of the sign on the door”: the new joint stock companies and limited liability partnerships continue to be managed and operated like former collectives. The World Bank is now examining this problem in Moldova through a new survey of privatized farms. But we really have no information about the internal structure of corporate farms in CEE. It is important to study their organizational and operational features. In this way, we will be able to assess the extent of organizational progress from socialist to market structure.

To operationalize this line of research, we need to identify the characteristic features of the collective form of organization (which incidentally were among the factors responsible for the chronic inefficiency of socialist agriculture) and how they differ from the attributes of farms in market economies. This is done in Table 3, which lists the basic operating decisions of farms in the two economic systems. This table can be used as a checklist for measuring the substantive organizational changes during the transition from collective to corporate agriculture.

**Table 3. Operating Decisions of Farms in Socialist and Market Economies**

Business component	Decisions in a market economy	Decisions in a socialist economy
Sales	Produce in response to consumer demand	Produce to meet centrally imposed targets
Costs	Institute cost controls	Cost-plus accounting
Labor	Adjust labor force to changing production volume/mix	Labor force fixed: workers guaranteed lifetime employment
Purchased inputs	Seek best suppliers, control purchase quantities	Inputs push-delivered at state-fixed prices and in quantities determined by production quotas
Depreciation	Acquire new equipment only if added depreciation is justified by increased volume or by savings in other costs	New equipment deliveries determined by central planning; depreciation treated as an active source of cash
Credit/financial expenses	Borrowing limited by risk of bankruptcy (hard budget constraints)	Credit allocated centrally to cover deficits (soft budget constraints)
Profit	Maximize profit by controlling sales and costs	Profit uncontrollable

This organizational analysis will lend a new dimension to the interpretation of productivity and efficiency comparisons between individual and corporate farms. This is a topic of the greatest importance, and we must dramatically extend the work in this direction. We need greater country coverage, larger samples in each country, good farm-level data (that can be obtained only through large surveys), and, above all, consistent methodology. Fortunately, we all have access to the same standard software for technical efficiency calculations: Coelli's data envelopment, stochastic frontier, and total factor productivity programs (see, e.g., Coelli, Prasada Rao, and Battese 1998). But what about input and output variables? Here there has been very little standardization, and each researcher typically uses what is available in the particular data set. The results are not comparable, almost like subsidy equivalent calculations done by different researchers. We have to try and standardize our variables in addition to our software. This will require some cooperation among researchers in the design of country surveys that provide the data for farm efficiency analysis.

*Individual Production and Agricultural Employment*

There is an annoying lacuna in our knowledge of the shares of individual and corporate farms in CEE. We know the share of agricultural land controlled by each farm sector, but we do not know the share of agricultural product that each sector produces. Surprisingly, this information is available in considerable detail for all CIS countries. We know, for instance, that in Russia the individual sector produces more than 40% of agricultural output on 15% of

agricultural land (see, e.g., Lerman 2001b). Before we launch into detailed calculations of technical efficiency scores for individual and corporate farms, we need a rough productivity index based on sectoral shares of output versus shares of land and labor. This is certainly a task that official statistical organs should be able to handle. Can we somehow help them through our research? At a certain stage, the Hungarian statistical system was planning to adopt for routine use the survey questionnaires developed at the Catholic University in Leuven within the framework of the ACE project. I do not know if anything has come out of it, but surely this could be the way to generate the necessary information in Hungary and also in other CEE countries. I suggest that we put the item of increasing such active cooperation with national statistical institutions on our agenda for the future.

Another highly important topic that requires the cooperation of the research community with national statistical services in CEE is adjustment of agricultural labor. Flexibility of farm-level hiring and firing decisions is one of the characteristics of market-oriented farms in Table 3. Changes in the agricultural labor force during transition have an immediate impact on productivity. Unfortunately, the agricultural employment data for CEE are inadequate and inconsistent. We need to focus our research efforts in the immediate future so as to achieve significant improvement in our knowledge of processes involving agricultural labor adjustment. This, as everything else in the proposed research program, requires good data.

Having mentioned agricultural employment, I should bring up a new topic that is gaining progressively more attention among labor and development researchers, as well as sociologists and anthropologists. This new topic is broadly known as non-farm rural employment opportunities. In the transition context, it is possible to reduce the level of agricultural employment without reducing the level of output and probably without incurring significant capital investments. Yet this policy on no account must be allowed to produce massive rural-to-urban migration: the fragile social support systems of transition countries (East Germany excluded) will simply not be able to cope with the resulting increase in unemployment. Adjustment of agricultural employment therefore must be orchestrated as a shift from farming to non-farming activities in rural areas. There is evidence of considerable diversification of income sources in smallholder farms in some transition countries. We need to study this question systematically and in detail, linking it to opportunities for emergence of non-farming rural occupations. With its potential impact on poverty alleviation, this is a highly fashionable topic that will probably generate a favorable response from various sources of research funds.

*Farm Finances*

In the course of a recent World Bank study that dealt with farm debt in CIS, we tried to make comparisons with, and draw lessons from, the situation in CEE (Csaki, Lerman, and Sotnikov 2001). We failed miserably. There were simply no systematic financial data for CEE either at the sectoral level or at the farm level. In addition to land, labor, production, and farm organization, we need to study agricultural finance as one of the basic farm inputs. The available agricultural finance studies generally focus on financial institutions and their agricultural loan portfolio. I think we should change our approach and apply the tools of corporate finance to study the financial decisions of farms, not banks. Martin Petrick of IAMO is trying to implement this approach in a couple of countries (Petrick and Ditzges 2000; Petrick and Szychalski 2000). Lech Goraj of IERiGZ in Warsaw has been monitoring the financial situation of a panel of Polish farms for years: some of his unique data are cited by Csaki and Lerman (2001). The World Bank has tried to analyze farm finances in a couple of cases. Epshtein from St. Petersburg has been working on this topic with Tillack and myself (separately), but unfortunately his data set is very limited (Epstein and Tillack 1999; Lerman and Epstein 1995). I am not aware that there has been much more in this line of research. Yet farm finances are no less important than finances of non-agricultural business organizations and they deserve to be studied thoroughly and seriously.

Financial analysis of farms in transition is particularly important for our program of measuring the progress to market. Soft budget constraints encouraging lax financial discipline and irresponsible behavior were a characteristic of socialist farms (see Table 3). Has this changed in any way? Are farms becoming financially more responsible? Is there a real threat of bankruptcy that imposes the necessary checks and balances on the financial behavior of farms?

*Functioning Market Services*

The research topics that I have covered so far generally fall in the broad category of land reform and farm restructuring – my two favorite subjects. But as we always stress, land reform and farm restructuring are only one dimension of the essentially multi-dimensional process of agricultural transition. While allocation of land, individualization, and internal restructuring are basic necessary conditions for transition, success or failure of new farming structures ultimately depends on availability of functioning market support services. It is sometimes argued that Israeli production cooperatives (the kibbutzim) were successful (up to a point) precisely because they were embedded in an essentially market environment. It can

be similarly argued that the socialized farms failed not only because of inherent organizational weaknesses but also because of the centrally planned, non-market environment in which they were forced to operate.

The importance of studying the emergence and development of functioning market services – processors, marketers, input suppliers, trade intermediaries, providers of farm machinery – is clearly recognized by everybody. Similarly to farm reorganization, we have to go beyond the formal pretense of privatization of former state monopolies. What is important is demonopolization and competitiveness of service providers. This is the main issue that has to be investigated and established. There are standard tools for measuring competitiveness, and many among our profession with great expertise in applying these tools to a variety of issues. Now these tools and this expertise has to be brought to bear on transition agriculture.

A broad issue related to the development of market services concerns service cooperatives (as distinct from production cooperatives). Cooperative theory suggests that service cooperatives are particularly suitable in situations where the market environment is under-developed. The Israeli experience with a very extensive and highly active network of service cooperatives has demonstrated that these organizations tend to shrink and disappear as the market environment becomes more developed: they tend to be replaced with investor-owned firms that take over the provision of the same services on non-cooperative principles. The market environment in CEE and CIS is clearly under-developed. There is clearly room for the emergence of service cooperatives, and I am sure that they are emerging (survey data in CIS support my conviction). Perhaps they are not called cooperatives, because of psychological resistance bred by years of collectivization, but they certainly have the characteristics of common or joint action. This is one of the important topics that we need to study. What is the scope of joint action among farms and farmers in CEE and CIS? How does joint action come about? What are its impacts and benefits in the present environment? Is there justification for strengthening and expanding cooperative activities?

## **Conclusion**

The future research agenda for agricultural transition proposed in this article under the general title of *Measuring the Progress Toward Market* is summarized in Table 4. It lists the specific topics that need to be covered in seven main areas of research: land ownership, land markets, farming structure, farm organization, farm labor, farm finances, and functioning market services.

**Table 4. Measuring the Progress Toward Market: A Research Agenda**

Main areas of research	Topics
Land ownership	Extent of completion of restitution
	Extent of titling and registration
	State owned land
	What landowners do with their land?
Land markets	Frequency of land transactions
	Land leasing: sources, terms, scope
	Use of own land versus leased land
	Impact of titling and leasing on farm performance and family income
Farming structure	Shift from dual distribution pattern to market pattern of farm sizes
	Fragmentation and consolidation of farms
	Operating profile and performance for farms of different sizes
	Subsistence farming and poverty alleviation
Farm organization	Changes of decision making and operating practices
	Comparative performance of different organizational forms
	Institutional factors for persistence of large corporate farms
Farm labor	Adjustment of agricultural employment
	Non-farm rural employment opportunities
Farm finances	Use of debt and equity
	Transition from soft to hard budget constraints
	Frequency and experience with bankruptcy
Functioning market services	Privatization, demonopolization, and competition
	Service cooperatives

We have achieved a lot during the last decade, but a lot remains to be learned. Our knowledge of transition is still very partial. We need much more real data before we can start putting together a theory. To me, agricultural transition, with its immediate impact on people, is a fascinating topic. I would like to see the research efforts continue into the next decade at an increased pace, and I would encourage young scientists from other areas and disciplines to join the transition force. For new researchers, there is a large potential for making their mark in this new field and a considerable scope for almost instant gratification as research results quickly come together into a coherent (albeit admittedly partial) picture.

## References

- Amelina, M. (2000). "Why Russian peasants remain in collective farms: A household perspective on agricultural restructuring" *Post-Soviet Geography and Economics*, 41(7): 483-511.
- Coelli, T., Prasada Rao, D.S., and Battese, G. (1998). *An Introduction to Efficiency and Productivity Analysis*, Kluwer, Boston.
- Csaki, C. and Lerman, Z. (2001). *Poland Rural Factors Markets Study: Land Module*, World Bank, Washington, DC, pre-publication draft.
- Csaki, C., Lerman, Z., and Sotnikov, S. (2001). *Farm Debt in the CIS: A Multi-Country Study of Major Causes and Proposed Solutions*, World Bank Discussion Papers series, World Bank, Washington, DC.
- Dale, P. and Baldwin, R. (2000). "Emerging land markets in Central and Eastern Europe," in: C. Csaki and Z. Lerman, eds., *Structural Change in the Farming Sectors in Central and Eastern Europe, Lessons for EU Accession—Second World Bank/FAO Workshop, June 27-29, 1999, Warsaw*, World Bank Technical Paper 465, World Bank, Washington, DC.
- Epshtein, D. and Tillack, P. (1999). "How Russian agricultural enterprises are surviving: The financial status of large agricultural enterprises in the St. Petersburg Region," *Eastern European Economics*, 37(5): 52.
- Euroconsult (1994). *Farm Restructuring and Land Tenure in Reforming Socialist Economies: A Comparative Analysis of Eastern and Central Europe, Annex V: Report on Land Market Issues*, Euroconsult and Center for World Food Studies, Arnhem and Amsterdam, mimeo.
- Euroconsult (1995). *Farm Restructuring and Land Tenure in Reforming Socialist Economies: A Comparative Analysis of Eastern and Central Europe*, World Bank Discussion Paper 268, The World Bank, Washington, DC.
- IRIS (2000). *Land, Labor, and Purchased Input Market Constraints on Economic Growth in Russian Agriculture: Analysis of Current Conditions and Policy Options*, BASIS CRSP Phase II Research Proposal, IRIS Center, University of Maryland, College Park.
- Lerman, Z. (2001a). "A decade of land reform and farm restructuring: What Russia can learn from the world experience," *Quarterly Journal of International Agriculture*, 5(1): 5-28.
- Lerman, Z. (2001b). "Agriculture in transition economies: from common heritage to divergence," *Agricultural Economics*, forthcoming.
- Lerman, Z. and Epshtein, D. (1995). "Agriculture in Leningrad Oblast during restructuring and reform," *APK: Ekonomika i Upravlenie*, No. 12: 44-50.
- O'Brien, D., Patsiorkovski, V., and Dershem, L. (2000). *Household Capital and the Agrarian Problem in Russia*, Ashgate, Aldershot, UK.
- Petrick, M. and Ditges, C. M. (2000). "Risk in agriculture as impediment to rural lending: the case of north-western Kazakhstan," Discussion paper 24, IAMO, Halle.
- Petrick, M. and Spychalski, G. (2000). "Are Polish farmers credit constrained? Theoretical considerations and first results of a survey in Western Pomerania," Paper presented at the International Scientific Conference *Regional structural*

*transformation of agriculture and rural areas with regard to Poland's integration with the EU*, Kraków, Poland, December 7-8.

- Prosterman, R. and Hanstad, T., eds. (1999) *Legal Impediments to Effective Rural Land Relations in Eastern Europe and Central Asia: A Comparative Perspective*, World Bank Technical Paper 436, World Bank, Washington, DC.
- Prosterman, R. and Rolfes, L. (2000). "Review of the legal basis for agricultural land markets in Lithuania, Poland, and Romania," in: C. Csaki and Z. Lerman, eds., *Structural Change in the Farming Sectors in Central and Eastern Europe, Lessons for EU Accession—Second World Bank/FAO Workshop, June 27-29, 1999, Warsaw*, World Bank Technical Paper 465, World Bank, Washington, DC.
- Schulze, E. and Tillack, P. (1998). *Development of Land Markets in Some European Transition Countries*, CCNM/EMEF/CA(98)11, Emerging Market Economy Forum, Forum on Agricultural Policies in Non-Member Countries, OECD, Paris.
- Tarditi, S. (2001). "Structural funds and rural development: Suggestions from the Italian experience," in: C. Csaki and Z. Lerman, eds., *The Challenge of Rural Development in the EU Accession Countries—Third World Bank/FAO Workshop, Sofia, June 17-20, 2000*, World Bank Technical Papers series, World Bank, Washington, DC.
- Von Braun, J., Qaim, M., and the Seeth, H. (2000), "Poverty, subsistence production, and consumption of food in Russia: Policy implication," in: P. Werheim, K. Frohberg, E. Serova, and J. von Braun, eds., *Russia's Agro-Food Sector—Toward Truly Functioning Markets*, Kluwer Academic Publishers, Boston, pp. 301-321.
- Wegren, S. and Belen'kiy, V. (1998). "The political economy of the Russian land market," *Problems of Post-Communism*, 45(4): 56-66.