ENABLING ENVIRONMENTS FOR AGRIBUSINESS AND AGRO-INDUSTRY DEVELOPMENT IN EASTERN EUROPE AND CENTRAL ASIA

Proceedings of FAO Workshop
ENABLING ENVIRONMENTS
FOR AGRIBUSINESS
AND AGRO-INDUSTRY DEVELOPMENT
IN EASTERN EUROPE AND CENTRAL ASIA

Proceedings of FAO Workshop
Budapest, Hungary
30 November - 2 December 2006

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PREFACE

Broad changes are taking place in food and agricultural systems worldwide. Although the nature and pace of change is varies among and within countries and regions, a common characteristic in developing regions is the transition to market-driven systems associated with greater reliance on input markets and growth of post-production enterprises. In essentially all developing and transition countries, the role of the private sector is increasing; smallholder farming is becoming commercialized, and agribusiness and agro-industry are increasingly affecting economic and social development.

The changes in agrifood systems have significant implications for growth, poverty and food security. On the positive side, trends show that there is a rapid increase of value adding opportunities in agribusiness relative to primary production. Agro-processing enterprises are increasing demand and the effective size of the market for farmers’ products. Exporters and agro-processing enterprises are furnishing crucial inputs and services to the farm sector for those with access to such inputs. This phenomenon is accelerating productivity and improvements in product quality. Furthermore, agro-industries are also stimulating market-generated innovation through supply chains and distribution networks. Domestic and export systems are becoming more mutually supportive.

While agribusiness and agro-industry development can increase competitiveness in international and domestic markets, the benefits are not automatic and will not be shared by all. The changes in agrifood systems pose particular risks for small-scale farmers, traders, processors, wholesale markets and retailers. For the small farmer, there will be short-term difficulties to meet agro-industry standards and contractual requirements. Small processors increasingly will have to compete with larger-scale food manufacturers that have the advantage from economies of scale in processing technologies. Traders and marketers in local markets will be squeezed by the growing importance of specialized procurement practices and certified products.

The growing amount of evidence reveals that through a set of proper policies, institutions and services, some countries have been very successful in promoting investments, attracting capital and thus engendering economic growth. While the essential elements that constitute an enabling environment are cross-cutting and not sector-specific, there are peculiarities in certain economic sectors that make it desirable to differentiate their nature and extent. This is particularly relevant for agribusiness and agro-industrial sectors in developing and transition countries which have not had their unique characteristics sufficiently examined in traditional assessments of enabling environments.

In response to these challenges, the Rural Infrastructure and Agro-industries Division of the Food and Agriculture Organization of the United Nations conducted a cross-country assessment of key factors that constitute enabling environments for agribusiness and agro-industry development. The appraisal consisted of over 20 country and cross-country studies from Latin America, Asia, Africa and Eastern Europe and Central Asia, which were presented and discussed at four regional multi-stakeholder workshops. The findings are expected to serve as a reference to future activities in support of decision-making processes and related policy reforms, and aim to provide a framework for assistance focused on strengthening the institutions that support the sustainable development of agro-based enterprises.
INTRODUCTION

Transition to market driven agriculture and related development of agribusiness and agro-industries can improve competitiveness, increase incomes of farmers, labourers and small entrepreneurs involved in input supply, downstream processing and distribution, improve conditions for poor consumers by reducing food prices as well as improve food quality and increase food accessibility.

In the light of recent changes and perceived importance of the latest trends, a large and growing number of governments have reformed their policies, adjusted programmatic priorities and increased investments designed to accelerate the pace of agribusiness and agro-industry development. Although such policies and programmes are intended to promote sustainable economic development and poverty reduction, agribusiness development carries the risk of resulting in marginalization of small farmers and small agro-enterprises with negative consequences for rural poverty and food security.

The development of competitive agribusinesses and agro-industries has been recognised as crucial for creating employment and income opportunities as well as for enhancing the demand for farm products. Agro-industry development has the potential to provide employment for the rural poor in the form of off-farm activities such as handling, packaging, processing, transporting and marketing of food and agricultural produce. Unfortunately, there are also risks and trade-offs in agro-industrial development, often affecting the most vulnerable countries and people. It is important therefore to build on the experiences of countries that have developed competitive agro-industries in order to improve the understanding of trends and contribute to the formulation of sound policies and strategies for fostering agro-industries.

The business environment represents one of the most important drivers of competitiveness for domestic and export-oriented agro-enterprises and agro-industries. Although many countries in Eastern Europe and Central Asia have implemented major policy reforms over the past two decades, the business environment today is often far from being conducive for agribusiness and agro-industries. When policies, institutions and support services provide a setting in which enterprises can easily be started and grow, the mix constitutes what is often referred to as an enabling environment for doing business.

Providing an enabling environment for enterprises to be started and to thrive is increasingly being seen as an essential prerequisite for economic development and poverty reduction. The trends toward increasing concentration, vertical coordination and contracting in agricultural sectors worldwide almost certainly will continue. A rebalancing of agricultural policies, institutions and services to focus on agribusiness and agro-industry development will be required sooner or later. Deliberate and strategic interventions on the part of governments can play an important role in fostering the development of agro-industries and the enhancement of their value chains.

To address these issues in Eastern Europe and the Central Asia Region, FAO Rural Infrastructure and Agro-industries Division and Sub-regional Office for Central and Eastern Europe organized a workshop on Enabling Environments for Agribusiness and Agro-industry Development which focused on nine countries, most of which are in the early stages of transition from a centrally planned to a market economy. The workshop took place in the FAO’s Sub-regional Office for Central and Eastern Europe located in Budapest from 30 November to 2 December 2006.
The primary objective of the workshop was to contribute to a better understanding of agribusinesses and agro-industry development patterns in selected Eastern European and Central Asian countries with the principal focus on:

- identifying, characterizing and assessing the set of policies, institutions and support services that constitute the enabling environment for agribusiness and agro-industrial development in the region;

- identifying lessons and best practices from induced changes in policies, institutions and support services that have led to increased investments and improved competitive performance in specific agribusiness and agro-industry sub-sectors.

The workshop was attended by participants from Armenia, Azerbaijan, Croatia, Georgia, Hungary, Serbia, Ukraine and Uzbekistan. In addition to FAO staff members and resource persons, participants included government officials and policy makers, distinguished researchers and analysts, private sector entrepreneurs and other stakeholders. The workshop helped to draw conclusions from a variety of experiences and to identify constraints that are affecting agribusiness and agro-industry development in Eastern Europe and Central Asia. As a result, participants identified priority areas which require additional analysis and/or support and technical assistance: (i) access to capital and financial services, (ii) risk management and related legal frameworks, (iii) food quality and safety standards and compliance; and (iv) policies, institutions and support services for improved market access and leverage of producers and agribusinesses in the value chains.

The proceedings, constituting one of the principal outcomes of the workshop, are comprised of a workshop summary, a keynote paper on the region, and case studies and reports for five of the countries (i.e. Ukraine, Hungary, Croatia, Armenia and Serbia).
WORKSHOP SUMMARY REPORT

The workshop on Enabling Environments for Agribusiness and Agro-industry Development in Eastern Europe and Central Asia was structured into three plenary sessions and two breakout sessions.

The first plenary session set the stage for discussion, by introducing main topics of the workshop and FAO activities in the region. Keynote papers on agribusiness and agro-industry development in Eastern Europe and Central Asia were also presented during this session.

The second plenary provided more in-depth analysis. Individual country presentations on specific experiences and practices were delivered (for example on agricultural risk management, food safety and quality management systems, educational and information infrastructure, maximization of investments and the improvement of logistical services and marketing channels) by participants from Armenia, Croatia, Georgia, Hungary, Serbia, Ukraine, and Uzbekistan, followed by breakout sessions, during which groups identified and discussed key issues affecting agribusiness and agro-industry development, as well as most important constraints, initiatives taken or planned and lessons learned.

Outcomes of the discussions in working groups were presented and discussed during the final plenary session, and most relevant aspects were prioritized according to their importance in different countries.

The context and potential for enabling environments for agribusiness and agro-industry development, as presented in keynote papers and country reports

The internationalization of food retailing and manufacturing that has swept through the agrifood system in industrialized countries is now moving into middle and low-income countries with large rural populations, causing significant institutional changes that affect small-producer agriculture and the livelihoods of rural communities all over the world. Farmers and policymakers are struggling to keep up with the wave of new demands being made by food manufacturers and retailers (B. Vorley, et al., 2006). Current orientation of the whole agribusiness and agro-industry sector in the region is highly driven by the need to comply with European Union (EU) and World Trade Organization (WTO) regulations in order to access more diversified markets. However, some of the countries in transition were generally dominated by a single major market orientation, e.g. the Commonwealth of Independent States (CIS). Nevertheless, in spite of the very different transition patterns and political, demographic, climatic and geographical conditions, a significant impact has been made on the food chain and related market relations throughout the region during the last decade.

Changing consumer requirements and purchasing habits as well as changing patterns in agricultural trade have created the need for new approaches to stimulate agribusiness and agro-industry development. Some important aspects of business enabling environments have already begun to take shape: good public governance; a stable macroeconomic climate; enforceable commercial laws; appropriate financial services; sufficient protection of property rights and adequate infrastructure. Even though policy and institutional constraints affecting farmers and agribusiness were identified as different for each country analysed, some similarities could be
found and conclusions drawn. The most important elements of a supportive agribusiness environment were recognized to be: fair and transparent regulatory framework; public-private cooperation; agribusiness institutions and services; quality and safety assurance; business linkages and value chains; product innovation and differentiation; producer skills; producer organizations and cooperatives.

In the countries under discussion, new forms of vertical coordination have emerged, filling the vacuum left by the collapse of the previous system. Contractual relations between private agents, especially producers and processors, have multiplied with recognized success. Their main purpose is risk management. The volume of international trade in food products has grown in many countries as both technical and trade barriers to food trade have been reduced, but this can introduce new sources of risk into the food supply. These trends converge to create both public and private demand for greater food safety. Transition countries moving toward a market economy and integration into the global economy are facing the challenge to fulfil and satisfy the increasingly strict compliance requirements that accompany food trade. Establishment of food quality systems requires external support as well as public and private cooperation. There is a need for innovation in production technologies, as well as for the adoption of new practices such as traceability, indication of durable life date, and more stringent health and hygiene standards.

Securing capital investment was identified as the most important challenge affecting the smooth functioning of SMEs. The importance of creating innovative mechanisms that link financial and service institutions, as well as the need to allocate financial services throughout the value chain and find alternatives to using farm lands as collateral have also been recognized. Diversified forms of credit and financial services could be offered to agribusinesses, combining the benefits of various mechanisms such as credit guarantees, warehouse receipts or agricultural cooperatives. This way the deficiencies that frequently exist in both the state banking sector and the newly emerging private sector could be overcome.

Transition from a centralized to a market economy implies the reassessment of the role of the state in order to redefine patterns of interaction in fields essential for cooperation in a civil society. Experience shows that the role of public policy is essential in promoting business and investment, enforcing contracts (i.e. through a functioning judiciary), encouraging cooperation and organization of producers and/or processors to reinforce their market power, especially for small and medium-sized enterprises, enhancing transparency of processes and development of infrastructure. The promising progress achieved through reforms of legislation however can be jeopardized by the lack of judicial enforcement that adversely affects land tenure, access to credits, the creation of producer groups as well as foreign investment.

Under these new set of circumstances, agricultural entrepreneurs in transition countries have to undertake a series of tasks related to business planning, production, marketing, financial management, legal risks and human resources as well as apply risk management practices to each of these phases or areas in the production process. Business success can be highly dependent upon increased awareness of the role of education in business performance and requires motivated, self-confident and efficient employees. The most effective method to achieve this is through investment in training and knowledge.

**Workshop presentations and discussions during the plenary sessions**

Plenary sessions consisted of a series of presentations related to agribusiness and agro-industry development as implemented by worldwide FAO projects and also included the introduction of specific experiences and practices in Eastern European and Central Asian countries. In addition
to providing an overview of the business environment, the most important obstacles were identified and illustrated with relevant examples.

Main topics of the presentations were centred around the importance of and the broad changes affecting the agribusiness sector; policy and institutional constraints affecting farmers and agribusiness; agricultural risk management; food safety and quality management systems; educational and information infrastructure; maximization of investments to improve logistical services and marketing channels; specific agro-industries and their value chains; involvement of the public sector and the role of the governments in influencing, regulating and supporting private sector investment; the need for international cooperation and harmonization of legal and institutional frameworks, policies and support services for agribusiness and agro-industries. More specifically;

The first presentation by Mr Doyle Baker set the stage for the workshop by providing an overview of relevant FAO projects from around the world emphasizing the importance of the agribusiness sector as a principal source of value-adding for primary products, as a catalyst for the development of efficient value chains, as an improver of product quality and safety, and most importantly as a provider of services. In addition, most important changes in consumer and trade behaviour were presented with a description of risks associated with agribusiness development.

Two presentations by Ms Sylvie Dideron introduced principal characteristics of the agribusiness sector in participating countries as well as key elements of the enabling environment for agribusiness and agro-industrial development, which were based on the analysis of policy, institutional and business environments for agribusiness and agro-industry development in nine Eastern European and Central Asian countries. In summary, the speaker highlighted the major challenges for the agrifood chain, relevant to raw materials and inputs; technologies; markets and the economical environment. The elements considered in this presentation were grouped according to the general aspects developed in OECD’s Policy Framework for Investment, and focused on specific issues connected to agribusiness and agro-industry development.

Discussions following introductory presentations raised a variety of issues that were of significance to the participants. The importance of environmental institutions in creating an adequate environment for agribusiness was discussed along with the necessity for each government to ensure its formation and functioning. Other participants were curious about the formulation and introduction of specific measures to facilitate credit to small and medium-sized processors in countries where different conditions exist regarding investment, such as governments themselves, tax systems and infrastructure. In response to this particular set of questions, the need for capital investment was acknowledged to be the main challenge affecting the functioning of SMEs. It was also mentioned that FAO is currently studying possibilities to encourage financial institutions to offer a wider range of services. As it was expressed by FAO representatives, it is necessary to create innovative mechanisms to utilize the linkages between large and medium-sized financial institutions in order to include the small financial and service institutions. It is also important to allocate financial services throughout the value chain and to find alternatives to avoid using farmland as collateral. In addition, focus group meetings including financial service providers, SMEs and large producers are essential in order to obtain a clear picture of specific client requirements. Participants and speakers made a distinction between vertical coordination and vertical integration. They defined vertical coordination as a set of activities aimed at reinforcing contractual relationships among various actors of the agrifood chain without physical intervention in the supply chain. On the other hand, vertical integration was delineated as the actual provision of services or inputs such as
fertilizers, training, technical advice, finance, transport, storage among others, to the supply chain actors.

The presentation on agricultural risk management as a tool to improve the agribusiness environment in Ukraine by Mr Walter de Oliveira, raised the issues of availability and reliability of data to facilitate forecasting of risk; insurance costs to be borne by producers; the state’s regulatory role with regards to the activities of insurance companies; available mechanisms to create or found insurance companies as well as the implications of the use of subsidies in agriculture. A wide range of risk management tools were described (including financial, market and weather-related) which can be used to guarantee the profitability of farmers in unfavourable situations. Due to the difficulties in calculating the real losses that farmers could face, indices have been created in order to estimate the probable occurrence of those unfavourable circumstances. These mechanisms are aimed at providing more information to insurance companies in order to diminish their risk and in this way make the farm business more attractive. However, a weak point identified in this methodology is the long time needed in order to compile the information and the costliness of this process. Furthermore, contract farming was mentioned as the most important risk mitigation mechanism as sales in advance have been demonstrated to be very useful when excessive production exists. Regarding the expected cost of insurance that might cover the farmers’ production, it was indicated to be around five percent of the commercial value of their produce. This price may vary, though, depending on the degree of coverage desired. Nevertheless, there are a maximum number of insurance policies allowed to be sold to one producer. This situation has favoured the appearance of a secondary market for agricultural insurance in which producers with less available capital can sell their policies to other producers. In addition, regarding the use of subsidies in agriculture, representatives of FAO pointed out that the Organization did not have a specific stance in favour of or against the use of subsidies. Experience suggests that subsidies can be helpful in the development of the agricultural sector; however if applied by wealthy countries, some subsidies have been regarded as trade barriers, interfering with the opportunities of poorer countries to compete.

Following the presentation on benefits of food safety and quality management systems for agribusiness development in Georgia delivered by Ms Tamar Labartkava, workshop participants raised questions related to the impact on producer costs resulting from the adoption of quality management systems (QMSs) and actions required in order to harmonize private and public initiatives regarding quality control, as well as about the time needed to formulate and adopt laws aimed at enabling the broad use of QMSs. Regarding the costs related to the adoption of QMSs, the speaker pointed out that at the micro level benefits can been achieved to offset the possible cost. However, in medium-sized enterprises these benefits have not been experienced yet. With regard to the second question, it was indicated that seminars with the participation of state and private sector representatives may be a very efficient approach in order to develop unified strategies aimed at obtaining more benefits from the adoption of QMSs. Finally, concerning the elaboration of the law and the time required to adopt the systems, it was agreed that with a good political environment, the process of change is facilitated and can work faster. In the case of Georgia, the process of development of the law for Food Safety and Quality Management Systems took two years. However, in the opinion of the speaker, a distinction had to be made between the time needed to adopt a law and the time needed to bring the law into effect; therefore it could not be stated that the same two-year period was sufficient for the satisfactory implementation of the above mentioned law in Georgia.
The presentation on educational and information infrastructure for agribusiness in Croatia by Mr Lari Hadelan generated questions related to the existing linkages between partners involved in the transfer of information to farmers, the role of the state in the process, as well as the mechanisms used in Croatia to achieve this goal. In response, it was pointed out that most farmers do not have access to the Internet or even computers, thus there is a lack of infrastructure to transmit information. Recently, the intervention of organizations with good connections to farmers has become vital in order to ensure an efficient flow of information. The activities of these organizations are also supported by other governmental entities, such as the Ministry of Economy through complementary support programmes for small enterprises and by allocating subsidies for such programmes. Moreover, it was indicated that all existing extension services in Croatia were owned and managed by the government, and focused on providing support solely to the primary sector (i.e. to producers). Even so, the lack of resources in many countries has been found to be one of the greatest obstacles to the proper functioning of support services. Additional impediment to the effectiveness in delivery of advisory services is the large proportion of elderly farmers who are not willing to accept new knowledge and the use of extension services. Therefore, the government should use its programmes to target young farmers in order to assist them to increase their business performance. A final topic was discussed related to the necessity of developing the country’s educational system in order to meet the requirements of the entrepreneurial sector. To achieve this goal, it is necessary to combine managerial skills with technical knowledge.

The discussion of the presentation on agribusiness and agro-industry in Armenia, delivered by Mr Andranik Petrosyan, covered aspects related to food safety in Armenia, mechanisms to coordinate activities between different institutions, contracts for agricultural processing and financial issues in agriculture. Regarding food safety enforcement, it was pointed out that a law was adopted in 2006. Shared efforts and similar standards with Georgia have helped build capacity for food safety in Armenia. Although certain mechanisms are in place to coordinate the activities carried out by the different institutions and cooperation does exist among ministries, there are still unresolved issues that create difficulties. For this reason, the establishment of a governmental body that would coordinate activities and act as a mediator among ministries was suggested. It was pointed out that Armenia still faced problems due to the extent of contracts used in agriculture while the government has been trying to enhance the utilization of very well regulated contracts in the supply chain. The branches that benefit the most from the use of these instruments and at the same time have been able to attract foreign investment are the meat processing and grape processing sectors. Moreover, as a result of extensive use of contracts, processing industries are also motivated to provide services and inputs to their producers in the form of seeds, fertilizers or technical assistance. Consequently, the quality and quantity of the raw materials received has also increased. Finally, it was mentioned that agriculture in Armenia was highly dependent on the financial sector which offers loans at relatively high interest rates. For this reason, in the past years enterprises have had to bear large losses due to the unavailability of capital. Lately however banks have decreased their interest rates for loans to the agribusiness and agro-processing industries.

In the presentation on the transformation and compliance of food quality systems in Hungary and some transition countries during the EU accession process, Ms Rita Novak Fejos developed the argument that from a standpoint of quality, GMOs\textsuperscript{1} are high quality products. However, there is a possibility that the consumption of these products could

\textsuperscript{1} Genetically modified organism
contribute to health problems among consumers. To date, this potential risk has not been proven. The EU legislation requires producers and traders to identify their products as GMOs to keep consumers informed of the potential inclusion of known allergens (e.g. gluten, peanuts). Another point addressed during the discussion was related to the impact of a QMS on the expenditures of an enterprise in that there are high costs associated with the adoption of a QMS and/or various standards. This may be a major problem for enterprises that need to adopt various standards in order to satisfy the requirements of different buyers. Nevertheless, in spite of the costs incurred, in most cases the only option for enterprises is to adopt these standards in order to keep or gain markets. Furthermore, it was mentioned that in Hungary, enterprises can implement a QMS with their own resources or via support from the European Union.

The presentation of the model of maximization of agricultural investments in Serbia and related agribusinesses as a tool of accession to the EU, by Mr Branko Ljutic, revealed that profit margins for agriculture in Serbia were very thin, and in many cases there was little, if any, profitability that results from these investments. However, people are accustomed to investing in agriculture because they consider it as an act for the 'common good'.

Regarding the usefulness of information generated by educational institutions, it was pointed out that there were interesting scientific projects underway at universities. However, in many cases scientific information is not being used by Serbian agriculture. One potential solution for this problem could be to provide of educational institutions with clear guidelines on what is needed by farmers so that the universities can create specific and detailed methodologies based on actual requirements.

The importance of working on futures markets in the region was highlighted in the presentation entitled 'Market development – supply chains and regulation: the example of Ukraine', delivered by Mr Richard Rozwadowski. In the speaker’s view, the enhancement of procedures to develop a target price, the incentive for traders to buy grain through more consistent grain policies and the development of a commodity exchange for futures markets, were seen as helpful strategies for the improvement of agribusiness and agro-processing industries. A separate problem discussed had to do with projects from the Ministry of Agriculture of Ukraine having a low impact due to their implementation in areas limited areas. It was suggested that projects should be better organized as well as more actively supported by the public sector and donors. Regarding warehouses, it was pointed out that at present there was only five to seven percent demand for the existing warehouse capacity in Ukraine. In the future this is considered to be one of the most important areas for investment in the country, especially warehouses for fruit and vegetables. In the same vein, it was argued that in the future Ukraine would constitute one of the WTO's largest agricultural traders. This fact needs to be carefully considered in order to facilitate an enabling environment for agribusiness and agro-industry in the country. Furthermore, it was highlighted that the competitiveness of the country’s agricultural sector needed to be improved in order to increase the country’s exports. Finally, it was pointed out that larger investments in land and new equipment would have a positive impact on agriculture in the country. Currently, investments in agriculture are not creating new employment. This is causing people to rent out their plots of land and leave rural areas, thereby creating a rural development problem in Ukraine.

The country presentation of Uzbekistan by Mr Mansurbek Talipov described the main tasks pertaining to transformation of Uzbekistan’s agricultural structure through learning from other countries. As a result, the continuing increase in the number of farms as well as the consolidation of cooperatives has been set as a goal and was achieved. When cooperatives were found to be unprofitable, they were transformed into farms which
proved to work more efficiently. In addition, during the process of land privatization, potential participants were invited to purchase their small plots of land in order to consolidate them into larger parcels as well as facilitating later investments. In order to support the agricultural sector, arable land was transferred to farmers under long-term leases and at the same time they were motivated by increased prices of cotton and grain based on the use of subsidies. Typical issues such as lack of support and services to farmers in the form of consulting, loans, capital and technology are present in the small farms in Uzbekistan. The government is making efforts to establish large farms, which are more efficient and provide them with packaging and storage facilities. In addition, around 50 percent of grain, cotton, fruit and vegetable producers maintain contracts with the government and receive its support in the form of preferential conditions for loans and funds for advance payment against crops. Other, completely privatized sectors that present fewer problems receive less support from the state; such as livestock, fishery and poultry.

**Synthesis of workshop findings**

The presentations of the plenary sessions were followed by breakout sessions aimed at creating a forum for discussion in the working groups in which participants continued to exchange information about the current situation in each participant’s country with regard to the major issues and constraints affecting the creation of enabling environments for agribusiness and agro-industry. The guiding principle was the use of a framework covering relevant aspects of public-private cooperation as well as those of institutions and services. A third issue covering various aspects of legal and regulatory frameworks was discussed during the final plenary session. A summary and findings of the working groups’ discussions are presented in Table 1.

Following the presentation of initial conclusions of the working groups, participants were further divided into four sub-groups. Using the framework of the first working groups (i.e. on public-private cooperation, institutions and services), participants were encouraged to identify four or five priority areas (out of twenty possible) that they considered to be the most important components of further work. In addition, for each of the areas, groups were given the task of identifying what work needed to be done, what potential benefits or outcomes and capacities to be addressed in order to generate enabling environments for agribusiness and agro-industry development. Table 2 summarizes the results of the four working groups.

In order to rank these aspects according to their importance, four panels were convened in which participants assigned one, two or three points (three points indicating highest priority) to each aspect in its role as a component for the creation of enabling environments for agribusiness and agro-industry. Out of 16 total aspects, three were considered as the most important by the majority of the countries’ representatives. These were: (1) access to capital in the form of investments, grants, loans and the improvement of banking and financial services; (2) risk management including insurance and legal frameworks; and (3) institutional support for food management and safety, standards harmonization and laboratory facilities.

Areas of secondary importance in which the public sector could have an impact were identified as: (4) the creation of consulting and information support services, information and knowledge management; and (5) the development of strategies and the legal framework to attract foreign direct investment.

Overall, the discussions resulted in the following ranking of the fields of intervention that may merit further investigation: (6) infrastructure development including wholesale markets;
(7) assistance with product marketing and organization of infrastructure; (8) improve business linkages through increased cooperation among producers to enhance value chain development; (9) clarify the role of the state in the creation of enabling environments for the development of the agribusiness sector; (10) public and private cooperation in the field of research and development, innovation, identification of partners and collaboration between science and agribusiness; (11) proactive participation at the village level in order to promote rural development; (12) encourage the development of inter-professional organizations; (13) tax reduction including strategies targeted at the support of SMEs; (14) support for contracts and their legal enforcement; (15) investment in factories and plants to increase efficiency; and (16) assist businesses through feasibility studies and capacity building.

Figure 1: Relative importance of priority areas as identified by participants

**Workshop conclusions and recommendations**

The workshop provided a useful opportunity to exchange information and experiences on enabling environments for agribusiness and agro-industry development in Eastern European and Central Asian countries. The keynote papers and presentations provided a methodological approach and the basis for further work to analyse issues and policies. Workshop discussions identified and classified key components of enabling environments for agribusiness and agro-industry development. As an outcome, a number of recommendations and actions related to support programmes and policies, as well as possible areas of technical assistance, were identified.
The most important aspects identified during the workshop were:

- **Access to finance.** Enterprises are in need of better access to capital coming from investments, and they also need grants and loans along with better conditions for borrowers. Borrowers require better credit mechanisms with regard to the treatment of collateral and a lowering of interest rates. Banks should also improve procedures and offer more information to increase transparency about the real risks faced by borrowers; this would also contribute to the goal of providing capital under better conditions. An increase of capital in the financial market, possibly through foreign investments, could help lower interest rates. Additionally, in the current situation in Eastern European and Central Asian countries, leasing has become a feasible mechanism when credit is required in order to circumvent collateral limitations.

- **Improvement of risk management strategies.** The development of contracts, improvements in the agribusiness linkages, the use of futures markets and more transparent intervention by the government in markets will lead to improved risk management mechanisms. The reinforcement of risk management is considered as an important factor to stimulate new investments in the agricultural sector.

Other important components of an adequate environment for agribusiness and agro-industry were:

- **Institutional support for food management and food safety systems.** Improvements in laboratory facilities, the support for public-private cooperation, as well as the harmonization of standards used in the food sector, are initiatives that must be addressed.

- **Consulting and information support services.** It is important to create consulting and information support services in order to make useful information available within the entire agricultural supply chain. Better development of information and knowledge management capabilities, as well as increased networking between scientific institutions and producers, will contribute to the benefits of the services.

Aspects which were also considered as relevant in the creation of enabling environments for agribusiness and agro-industry were:

- **Development of strategies and legal frameworks to attract foreign direct investment.** Legal frameworks, supporting and providing guarantees for foreign direct investments should be elaborated in order to attract capital for the agricultural sector. The resulting increase in the availability of money could also favour other components of enabling environments for agribusiness and agro-industry (such as infrastructure development and the decrease in interest rates for credit).

- **The development of infrastructure and wholesale markets.** In relation to improvements in infrastructure and the development of wholesale markets, the provision of cold storage facilities and improvements in roads are considered to be the most important aspects. Additionally, public-private partnerships are recognized as an effective mechanism to achieve the changes required in infrastructure as they allow a correct identification of needs and the surfacing of hidden capital constraints.

- **Creation of marketing organizations to assist producers and processors.** Among the institutions and services required for the creation of enabling environments for agribusiness and agro-industry, the foundation of agencies specialized in market development and marketing should be supported in order to help producers to become more market-oriented and facilitate sales.
Other aspects such as the reinforcement of vertical and horizontal business linkages, the clarification of the state’s role regarding the agricultural sector and public-private cooperation for scientific research and development are also factors to be taken into account in the creation of enabling environments for agribusiness and agro-industry.
<table>
<thead>
<tr>
<th>Food quality and safety management (norms and standards)</th>
<th>Recommendations</th>
<th>Country case</th>
</tr>
</thead>
<tbody>
<tr>
<td>• There is a lack of standards for fruit, vegetables and meat.</td>
<td>• To make national standards consistent with the EU regulations</td>
<td>• Presence of consumers’ organizations supplying information about their requirements and expectations regarding quality</td>
</tr>
<tr>
<td>• Absence of objective scientific data to determine the safety of consuming GMOs, and thereby the impossibility of developing adequate policies regarding these products</td>
<td></td>
<td>• Existence of government programmes supporting business through loans in order to allow them to comply with international standards in reasonable periods of time</td>
</tr>
<tr>
<td>• Deficiency in laboratory facilities</td>
<td></td>
<td></td>
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<tr>
<td>• High transaction costs</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Infrastructure development</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Wholesale markets are not very profitable and need cooperation.</td>
<td>• To develop guidelines showing infrastructure areas where investment is needed</td>
<td></td>
</tr>
<tr>
<td>• Producers face difficulties with the storage of fruit and vegetables.</td>
<td>• More efficient transport systems to supply cities with agricultural products</td>
<td></td>
</tr>
<tr>
<td>• There is lack of efficient and functioning irrigation systems.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• The dairy industry faces difficulties to obtain their raw materials from producers in certain areas.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk management (guarantees, insurance)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Absence of a price risk management scheme</td>
<td>• Strengthen enforcement of contracts.</td>
<td></td>
</tr>
<tr>
<td>• The role that the government plays as intermediary (buying and selling) does not work in all cases.</td>
<td></td>
<td>• In Ukraine the insurance premium is subsidized in order to make insurance more attractive to potential buyers.</td>
</tr>
<tr>
<td>• Futures markets are not functioning.</td>
<td></td>
<td>• Existence of foreign private companies working as intermediaries and enforcing the usage of contracts with their clients</td>
</tr>
<tr>
<td>• Contracts cannot be used as a risk management mechanism because their enforcement is not respected.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• There are countries (such as Georgia) where insurance is not used in the market.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issues and constraints</td>
<td>Recommendations</td>
<td>Country case</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>Investment, trade and industry promotion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Some countries consider that their membership in the WTO will be a complication in the future because many of the national tax schemes used are not accepted by the WTO.</td>
<td>• Support professional associations in order to promote future investments.</td>
<td>• Holding business fairs, forums and exhibitions such as “inter-food”</td>
</tr>
<tr>
<td>• VAT can be difficult to reclaim.</td>
<td>• Five-year tax waiver programmes should be used to promote investments and production.</td>
<td>• In Ukraine, the State Investment Agency is compiling relevant information in order to facilitate investments.</td>
</tr>
<tr>
<td><strong>Business linkages and value chains</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Even though in Ukraine, Georgia and Serbia donor projects exist to try to incentivize the development of agribusiness and agro-industry, there is also a lack of inter-institutional cooperation with the government.</td>
<td></td>
<td>• In countries like Ukraine, Georgia and Serbia, the national Chambers of Commerce are actively cooperating with multinational retailers in the development of initiatives to benefit the agricultural sector</td>
</tr>
<tr>
<td><strong>Inter-professional associations and organizations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Lack of legislation facilitating the formation and functioning of inter-professional organizations</td>
<td>• Establishment of better regulations and improvement of managerial skills for inter-professional service organizations.</td>
<td>• Self-supporting organizations should exchange services throughout the whole year to avoid seasonality.</td>
</tr>
<tr>
<td>• Difficulties to find agreements regarding the share and exchange of services as a result of the different nature and interests of businesses</td>
<td></td>
<td>• Adaptation of the type of services provided by organizations that depend on the requirements of producers and the market; This was observed with dairy producers’ organizations in Hungary which, in response to changes in the environment, began supplying services related to marketing and promotion.</td>
</tr>
<tr>
<td>• Lack of management skills that prevents donor-established organizations from working independently</td>
<td></td>
<td></td>
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<tr>
<td>• People refuse to pay for services because they consider them useless. They place more value on their own experience. There is a cultural/training problem.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issues and constraints</td>
<td>Recommendations</td>
<td>Country Case</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Financial services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Lack of capital in the financial market forces interest rates to rise. This situation makes it more difficult for agriculture to compete with other more profitable and less risky sectors of the economy.</td>
<td>• Attract foreign capital to the banking sector with the aim of reducing overall interest rates for borrowers</td>
<td>• Utilization of leasing as a mechanism to show the limitations that occur when borrowers present a lack of collateral</td>
</tr>
<tr>
<td>• Limited number of credits obtained from governmental programmes which are aimed at producing a restricted number of products</td>
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<td></td>
</tr>
<tr>
<td>• Donors play an important role supplying loans to small farmers; however, this system hasn’t been sustainable in the long run.</td>
<td></td>
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<tr>
<td>• Lack of transparency of credit procedures prevents borrowers from obtaining full information about the real risks involved. One example is the situation in which a financial institution increases the requested collateral and what the implications are for the borrower.</td>
<td></td>
<td></td>
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<tr>
<td>Business development and extension services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Even though in some countries legislation for the provision of support services exists, farmers are not interested in using them because they consider these services as irrelevant to the performance of their own activities.</td>
<td></td>
<td></td>
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<tr>
<td>• Lack of coordination between government agencies and other providers of extension services.</td>
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<tr>
<td>Product innovation and differentiation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Insufficient evidence that differentiation and introduction of labels and brands are profitable. Donors supported this kind of promotion at no cost and without systematic research.</td>
<td>• Better market research needs to be conducted.</td>
<td>• The coordinated support received by large companies from donors, foreign advisers and ministries of agriculture, is helping the introduction and promotion of new products.</td>
</tr>
<tr>
<td>• Most of the initiatives carried out have been targeted to export markets and ignoring local market potential.</td>
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</tbody>
</table>
Table 2: Identified priority areas to create enabling environments for agribusiness and agro-industry development

<table>
<thead>
<tr>
<th>Area</th>
<th>Requirements</th>
</tr>
</thead>
</table>
| Institutions and services                 | • creation of agencies specialized in marketing and market development  
• improvement of skills of financial institutions and banks in order to provide credits  
• creation of investment agencies that provide information about new opportunities for investment  |
| Public-private cooperation with regard to food safety | • improvement of testing and laboratory facilities  
• reduction of institutions which have overlapping functions  
• support the development of HACCP through the provision of information to potential users  |
| Infrastructure                             | • the development of wholesale markets  
• the creation of public-private partnerships  
• support the provision of cold storage facilities, irrigation systems and roads  |
| Risk management                            | • a more transparent intervention of the government in markets  
• the development of contracts and insurance systems  
• improvements in agribusiness linkages, vertical integration and the development of cooperatives between producers and agro-processors  
• analyse the agribusiness sector identifying key partners and users of insurance systems  |
| Legal frameworks                           | • enable the formation and functioning of professional organizations  
• facilitate free trade agreements between countries in the Balkans  
• facilitate the intervention of support services for SMEs in order to help these enterprises to increase their share of the market  
• simplify taxation schemes  |
| Inter-professional organizations           | • support established inter-professional organizations whose focus is the provision of services such as information and marketing. These organizations should assist producers to sell their produce.  |
| Access to finance                          | • diminish interest rates for credits  
• improve credit conditions for borrowers  |
| Investment and grants                      | • provide incentives to the processing industry to invest in new equipment  
• enforce the execution of laws in order to provide guarantees to attract foreign direct investment  
• establish a monitoring and information feedback system to show how foreign direct investment is being used  |
| Role of governmental agencies              | • governments should use more instruments to support the development of agribusiness and agro-industry.  |
| Information about business management and managerial knowledge | • create better networks to make information available to farmers  
• promote cooperation between scientific institutions, universities and the agribusiness sector; Farmers should be considered the final users of scientific information.  
• create more efficient systems to transmit information about the market, market prices, supply, demand and changes in infrastructure through the supply chain  |
The still ongoing processes of transition to a market economy and changes in political systems are undoubtedly specific features of great influence on the agribusiness and agro-industry in Eastern Europe and Central Asia. The significant impact they made on the food chain and related market relations throughout the region during the last decades is noteworthy in spite of the wide range of political, demographic, climatic and geographical conditions found in the region and the very different transition patterns followed varying from EU accession to the more gradualist sequence of reforms as adopted in Uzbekistan.

In the pre-transition period, agribusiness and agro-industry formed an integral part of the centrally planned economy and agriculture was an important economic sector in the region. Basic production targets were formulated in the national plans, with a certain specialization per country or region, and self-sufficiency in food production as a priority goal to achieve. Reforms in the sector aimed at privatization and break up of monopolies. Transition was accompanied by a dramatic fall in output and a fragmentation in land ownership. A dual farm structure emerged throughout the region with a combination of a few large commercial farms and a multitude of small farms. In the region, one-third of the population live in rural areas while employment in agriculture decreased. Employment in the food industry remains low as well as its share in the GDP. The former agro-industry plants generally suffer from a gap between their excess capacity and the irregular and low farm supply, as well as from a lack of quality standards and control. The emphasis in these countries is to develop an efficient, productive, and sustainable export-oriented sector, based on comparative advantages. However, at present very few value-added segments are exported and local products are often cannibalized by imported products as local production cannot compete effectively with the imports.

The current orientation of the whole agribusiness and agro-industry sector in the region is highly driven by the need to comply with European Union (EU) and World Trade Organization (WTO) regulations in order to access more diversified markets. Until now, the focus countries considered in this review were generally dominated by a single major market orientation. Except Ukraine, which major market relations with both the EU and the Russian Federation, the Caucasian and Central Asian countries are still very dependent on the Commonwealth of Independent States (CIS) and the EU while the accession countries are streamlining their industries to operate efficiently within the EU.

In this context, the establishment of quality standards is considered by stakeholders as a priority for agribusiness and agro-industry development. Establishment of quality standards requires external support as well as public and private cooperation. There is a need for innovation in production technologies and for adapting to new trends such as traceability, conservation dates, and increased health and hygiene standards. The establishment of quality standards is supported in the framework of accession to the EU. In other countries, international agencies provide substantial aid. However, the costs for quality control procedures are high and hardly affordable.
for small and medium-sized enterprises (SMEs). There is a need to explore and develop new initiatives in order to address this problem, such as encouraging the creation of groups of producers.

The speed with which macroeconomic stability has been achieved plays a fundamental role in the creation of an enabling business environment. Access to financing, taxation, the judiciary and corruption are the sectors which continue to constitute the most significant obstacles to the operation and growth of firms in general. In spite of the progress achieved in reforms and legislation, lack of enforcement in the judiciary particularly affects land tenure, access to credits, the creation of producers groups, and foreign investment.

New forms of vertical coordination have emerged, filling the vacuum left by the collapse of the previous system. Contracts between private agents, especially producers and processors, have increased with a recognized success. Their main purpose is risk management. The motivation of processors is to ensure their supply base and to improve quality standards. In return, contracts provide the suppliers with a guaranteed market and predictable prices. Eventually, agro-processors facilitate input supply and access to credit and propose technical know-how to their suppliers. In the absence of sufficient domestic investment capacity, contracts between private agents in these new forms of vertical integration are closely linked with the inflow of foreign investment, at least in the earliest stages of economic recovery. The capacity to attract investment plays a fundamental role in this process and depends greatly on the achievement of macroeconomic stability and the creation of favourable conditions for business in general, particularly in case of procedures to set up and run a business. To this respect, on a worldwide comparative basis, there is much scope in the countries considered in this study for simplification of procedures for business registration, improvement of the taxation basis as well as measures regarding corporate governance and law enforcement.

The extent to which credit markets performed well played a decisive role in agribusiness and agro-industry development. The most successful experiences occurred when diversified credit forms were offered to the agribusiness, combining several tools such as credit guarantees, warehouses receipts, or agricultural cooperatives. This permits an opportunity to overcome the deficiencies in both the state banking sector and the newly emerging private sector.

Transition from a centralized to a market economy implies the redefinition of the role of the state. Experience shows that the role of public policy is essential in easing business and investment, enforcement of contracts (i.e. the judiciary), encouraging cooperation and organization of producers and/or processors to reinforce their market power, especially for small and medium-sized enterprises, enhancing transparency of processes, and development of infrastructure. After the collapse of the former system, disruption of transportation facilities and intermediate storage facilities created bottlenecks in most countries.

Successful experiences in creation of an enabling environment for agribusiness and agro-industry include the establishment of quality standards, contracts between producers and processors, access to credit and attracting foreign direct investment. These are not without risk for small and medium-sized enterprises which may be excluded from the process in favour of concentration. The greatest challenge may be to identify and encourage mechanisms for promoting business while reaping nationwide benefits in order to promote sustainable development in countries whose rural population accounts for one-third of the total population.

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2 Business Environment and Enterprises Performance Survey (BEEPS) carried out by the European Bank for Reconstruction and Development (EBRD) and the World Bank (WB).
Introduction

The purpose of this paper is to provide insight of the situation of agribusiness and agro-industries in Eastern Europe and Central Asia, with emphasis on nine countries in particular: Armenia, Azerbaijan, Croatia, Georgia, Hungary, Kazakhstan, Serbia, Ukraine, and Uzbekistan. This paper reviews the general aspects of an enabling environment for business in the region, and specific issues for agribusiness and agro-industry development. Special attention is given to the factors necessary for creation of an enabling environment for small and medium-sized enterprises, and on the ongoing processes and developments in this field.

This regional review for Eastern Europe and Central Asia is mostly based on a literature review and on analysis of the results of surveys provided by a variety of organizations. Results were presented during the workshop on enabling environments for agribusinesses and agro-industry held by FAO-SEUR in Budapest from November 30th to December 2nd 2006. The workshop offered the opportunity to enrich the content of this paper with the comments and views of different participants, including officials, academics and private sector representatives.

Documents cited in the literature review largely describe the changes that occurred since the beginning of the transition period. Few papers analysed the reasons for such change to occur, the relationship to each country's economy and the impact of the changes on population: Were these changes for the good or for bad? Studies largely cover the primary agriculture sector, the processing sector and the retail sectors, however the characteristics of the upstream sector have been considered less often.

The first section of this paper gives an overview of the characteristics of the agribusiness sector in the region, with special focus on the nine countries of concern. The first section highlights the impact of transition on the food chain and the major challenges for the agribusiness sector. The objective of the second section is to review and analyse the factors that constitute a favourable environment for agribusiness and agro-industry development. The approach adopted in the second section follows the same set of guidelines recommended in the ‘Policy Framework for Investment’ (PFI) developed by the OECD. Although the PFI is directed at improvement of the enabling environment for overall business in the countries considered, this paper attempts to highlight factors pertaining specifically to agribusiness. The third section proposes an in-depth analysis of selected elements of the enabling environment. It focuses on the topic of vertical integration and especially on contracting between stakeholders. Vertical integration has been highly praised for its positive impact on the development of agribusiness in Eastern Europe and Central Asia. Because of this, the mechanisms of its success are analysed in the case of the dairy subsector, highlighting both opportunities and constraints. While underlining successful practices identified during the review, the fourth section attempts to describe some lessons learned. Further conclusions are drawn and recommendations proposed in the fifth section.

Characterization of the agribusiness sector of the countries concerned

Transition and its impact on the food chain

The overall transitions to a market economy and changes in the political system have made significant impacts upon the various components of the food chain and related market relations in the region. In the pre-transition period agrifood policies in the Eastern European and Central

3 www.oecd.org/investment
Asian countries were based on the premise that agriculture formed an integral part of the centrally planned economy. Basic production targets were formulated in the national plans, with the overall policy goal to achieve self-sufficiency in food production. During this period of centralized planning, a certain ‘specialization’ per country or region existed, such as cotton in the Central Asian countries, cereals and other basic agricultural commodities in Ukraine and fruits and vegetables in the Caucasus. Expanding the local agro-base of each of these countries beyond the former specialization remains a major opportunity or bottleneck, depending on each country’s dynamism.

**Primary agriculture**

With the advent of reforms the role of agriculture, although still important, changed. Prior to 1989 agriculture had been an important sector in the region. However, the role of agriculture has declined sharply in most Central and Eastern European Countries (CEEC) during the transition period. With the exception of Bulgaria and Romania, the share of agriculture in the CEEC was below 10 percent in 2000. The decline in the relative importance of agriculture in the region has been largely due to a more rapid recovery in the non-agricultural sectors, as well as substantial growth in the service sector. With the exception of Kazakhstan, which benefits from oil revenues, the share of agriculture in the Gross Domestic Product (GDP) remains high in Caucasian and Central Asia countries: from 14 percent in Ukraine and Azerbaijan up to 28 percent in Uzbekistan.

**Table 3: Macroeconomic indicators**

<table>
<thead>
<tr>
<th>Population</th>
<th>Arme-</th>
<th>Azer-</th>
<th>Croa-</th>
<th>Geor-</th>
<th>Hun-</th>
<th>Kazak-</th>
<th>Serbia</th>
<th>Ukra-</th>
<th>Uzbe-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mill-ion</td>
<td>3.0</td>
<td>8.4</td>
<td>4.4</td>
<td>4.5</td>
<td>10.1</td>
<td>15.1</td>
<td>8.2</td>
<td>47.1</td>
<td>26.6</td>
</tr>
<tr>
<td>Rural/Total Population</td>
<td>%</td>
<td>33.0</td>
<td>50.0</td>
<td>41.0</td>
<td>48.0</td>
<td>35.0</td>
<td>45.0</td>
<td>48.0</td>
<td>33.0</td>
</tr>
<tr>
<td>Population Growth</td>
<td>%</td>
<td>-0.3</td>
<td>1.0</td>
<td>0.0</td>
<td>-1.0</td>
<td>-0.2</td>
<td>0.9</td>
<td>0.3</td>
<td>-0.7</td>
</tr>
<tr>
<td>Ag Labor Force</td>
<td>%</td>
<td>12</td>
<td>25</td>
<td>7</td>
<td>18</td>
<td>10</td>
<td>16</td>
<td>18.0</td>
<td>13</td>
</tr>
<tr>
<td>Unemployment</td>
<td>%</td>
<td>31.6</td>
<td>25.0</td>
<td>14.3</td>
<td>11.5</td>
<td>6.1</td>
<td>8.8</td>
<td>15.2</td>
<td>8.6</td>
</tr>
<tr>
<td>GDP</td>
<td>BN US$</td>
<td>4.90</td>
<td>12.56</td>
<td>37.41</td>
<td>6.39</td>
<td>109.15</td>
<td>56.09</td>
<td>27.06</td>
<td>81.66</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>%</td>
<td>14.0</td>
<td>26.2</td>
<td>4.2</td>
<td>9.3</td>
<td>4.1</td>
<td>9.4</td>
<td>6.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Agriculture GDP/Total GDP</td>
<td>%</td>
<td>24.0</td>
<td>14.1</td>
<td>8.4</td>
<td>20.5</td>
<td>3.4</td>
<td>7.8</td>
<td>15</td>
<td>14.1</td>
</tr>
<tr>
<td>GNI per capita</td>
<td>US$</td>
<td>1 470</td>
<td>1 240</td>
<td>8 060</td>
<td>1 350</td>
<td>10 030</td>
<td>2 930</td>
<td>3 280</td>
<td>1 520</td>
</tr>
<tr>
<td>Inflation, consumer prices</td>
<td>%</td>
<td>0.6</td>
<td>6.7</td>
<td>3.3</td>
<td>8.2</td>
<td>3.6</td>
<td>7.6</td>
<td>_</td>
<td>13.5</td>
</tr>
<tr>
<td>FDI, net inflows</td>
<td>% of GDP</td>
<td>6.1</td>
<td>41.0</td>
<td>3.6</td>
<td>9.7</td>
<td>4.6</td>
<td>9.5</td>
<td>4.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Time required to start business</td>
<td>Days</td>
<td>25</td>
<td>115</td>
<td>49</td>
<td>21</td>
<td>38</td>
<td>24</td>
<td>15</td>
<td>34</td>
</tr>
</tbody>
</table>

Sources: The World Bank 2005, FAOSTAT 2004
Transition was accompanied by a dramatic fall in output, fragmentation in land ownership, and an increase in non-farmers acquiring agricultural land. The level of production is 20 percent to 30 percent below pre-reform levels and many farms experience a limited degree of competitiveness even though agricultural productivity has increased significantly in recent years. A dual farm structure characterizes primary agriculture in the overall region with a combination of a few large commercial farms and a multitude of small farms. The overwhelming majority of small farms are part-time operations and produce mainly for self-consumption. In most of the region, agriculture is still clearly oriented to self-subsistence and plays a buffer role during the transition period. Throughout the entire region, including a new European Union (EU) Member State (Hungary) and EU accession candidates (Serbia and Croatia), the rural population represents more than one-third of the total population while labour employed in agriculture varies greatly from less than 10 percent in the new EU and EU accession countries up to 30 percent or more in Uzbekistan where privatization of collective farms (i.e. shirkats) is less advanced. During the decade of transition employment in agriculture has fluctuated widely. It increased substantially in several countries in the early 1990s, but generally declined afterwards. By 2000, the share of employment in agriculture had declined in most of the countries but remained remarkably higher than in Western European countries.

Table 4: Agricultural commodity production in nine countries under the review

<table>
<thead>
<tr>
<th></th>
<th>$ 1000</th>
<th>MT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CENTRAL ASIA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>5 484 833</td>
<td>24 178 344</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>4 525 144</td>
<td>16 272 340</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>10 009 977</td>
<td>40 450 684</td>
</tr>
<tr>
<td><strong>CAUCASIA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Armenia</td>
<td>594 075</td>
<td>2 469 319</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>1 532 679</td>
<td>6 506 710</td>
</tr>
<tr>
<td>Georgia</td>
<td>793 611</td>
<td>2 802 206</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>2 920 365</td>
<td>11 778 235</td>
</tr>
<tr>
<td><strong>EU &amp; ACCESSION COUNTRIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hungary</td>
<td>5 443 336</td>
<td>26 145 945</td>
</tr>
<tr>
<td>Croatia</td>
<td>1 111 467</td>
<td>6 234 576</td>
</tr>
<tr>
<td>Serbia-Montenegro</td>
<td>3 999 572</td>
<td>18 596 403</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>10 554 375</td>
<td>50 976 924</td>
</tr>
<tr>
<td><strong>UKRAINE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ukraine</td>
<td>17 293 396</td>
<td>98 717 102</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>40 778 113</td>
<td>201 922 945</td>
</tr>
</tbody>
</table>

Source: FAOSTAT 2005

The nine countries under review in this paper can be grouped into four major groups as shown in Table 4. Ukraine represents close to half the production of all nine countries, and its major trading partners are the Russian Federation and the European Union. The other three groups are dominated by a market orientation toward a single trading partner. Both the Caucasian and Central Asian countries are still very dependent on their integration into the Commonwealth of

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Independent States (CIS), whereas the European Union-oriented countries are streamlining their industries to operate more efficiently within the European Union.  

Upstream and downstream sectors

In the upstream and downstream sectors, reforms were aimed at break up of monopolies and privatization. This process occurred relatively rapidly in most of the region. However, the process resulted in the formation of private or regional local monopolies in several sectors, e.g. vegetable oil refining in Hungary; grain storage and distribution in Romania. In the meat and dairy processing sectors in particular, the early stage of transition was characterized by the emergence of many small private processing enterprises, which added to the already severe overcapacity in these industries.

The share of GDP for the food industry remains low, as well as employment in the food sector. In 2000, the food sector accounted on average for 4.2 percent of the GDP of EU candidate countries, and the share of employment in the food industry represented 3.2 percent of total employment.  

Privatization of food processing attracted significant Foreign Direct Investment (FDI) in Central and Eastern Europe, earlier in Poland, Hungary and the Czech Republic, later in Slovakia and only very recently in Romania and Bulgaria. Privatization and FDI resulted in significantly improved production technologies, higher product qualities and increased access to lucrative foreign markets. In Hungary, two-thirds of the capital in food processing is foreign-owned (and 80 percent of the exports of companies with majority foreign ownership go to EU countries), while countries like Romania which began privatization later and attracted less FDI, are less advanced in restructuring the food processing sector. Foreign capital first appeared in the tobacco, beverage and confectionary industries, and later became widespread across the whole food processing industry. The general trend is toward increased concentration, as illustrated by the example of the Hungarian dairy and vegetable processing industries. FDI and its impact remain low in the agrifood sector in the Caucasus and CIS countries.

The competitiveness of agriculture and the weakness of the food industry is a concern, most of all to farmers and the small and medium-sized enterprises. Major changes in production standards and in the quality of supply are noticeable. Despite recent recovery, profitability remains low and there is excess capacity in many countries, particularly in the primary processing sectors, such as meat and dairy processing and grain milling. Limited access to finance, the uneven quality and volume of supplies from primary producers and significant arrears in payments from retailers and wholesalers contribute to the industry’s difficulties. The greatest beneficiary of the transition period is the retail sector, having also received the largest share of FDI.

A major change in the agrifood value chain occurred in the retail sector through the entry of multinational trading companies and opening of supermarkets and hypermarkets, starting in the late nineties and continuing into recent years. Nevertheless, developments have not been uniform across the region. In the new EU Member States, the process is far more advanced than in Eastern Europe, the Balkans and some segments of the CIS countries. This transformation seems to follow the global phenomenon of concentration in retailing observed in the EU countries,

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5 Either as for Hungary, they have access to the Structural Funds or Rural Development Programmes or they are accessing TACIS-SAPARD funds, to be able to improve their convergence with the “acquis communautaire”.

with its ensuing restructuring, in particular in the supermarket segment. Markets and market relationships have been in constant flux and the process is continuing.

The emphasis now in all these countries is to develop an efficient, productive and sustainable export-oriented agriculture based on comparative advantage. However, recent FAO statistics show that except for the group of European Union-oriented countries, all other groups are still predominantly primary agricultural commodity exporters or importers. There are very few local value-added segments that are exported, except for the Caucasian countries where cigarettes, coffee and tea, appear to be major exports, even though they are not produced there... Ukraine remains focused on exporting cereals and vegetable oils. In the European Union-oriented countries, even though primary agricultural commodities (such as maize and refined sugar) remain important trade sectors, local value-added segments such as prepared meals, pet food, wafers, seem to be emerging.

**Major challenges for the agrifood chain**

There are a number of issues that pose significant barriers to agrifood business in the region. These can be categorized into three broad areas: raw material and inputs, technology and markets and the general economic environment.

**Raw material and inputs**

- Irregular and low farm outputs and livestock numbers have created a gap between primary processing capacity and supply. Major agro-concerns have given way to a number of small farm units. Quality of raw agricultural products is irregular. Grading of raw products and basic standards still need to be extended to the farming community. A limited number of agro-concerns still operate, controlling their own processing and/or providing an outlet for the neighbouring farmers.

- The disruption of transportation facilities, both infrastructure as well as the needed vehicles, and the lack of intermediate storage capacities to absorb excess production of raw products and streamline their distribution to the agro-production units have created bottlenecks in most of the countries.

**Technology and markets**

- Outdated processing technologies and a limited range of marketable products inhibit market expansion. There is a need for innovation in production technologies and the adoption of food safety standards such as traceability, use of stale dates and increased standards of health and hygiene.

- There is a gap between market demand or expectation for higher quality or diversified products and the products available on the market. The value-added segments of the chain are often occupied by imported products as local production can’t compete effectively in the absence of up-to-date production knowledge and the associated capacity to produce goods with a higher value-added component.

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Since the early sixties, Hungary produces food surpluses. Before 1989, the country had established a developed food industry and became the major supplier of processed food for Eastern Europe. There were no quality standards but quality selection. Best quality products went to Western markets, medium quality stayed on domestic markets, and lower quality products were oriented to Eastern markets.
• The remoteness of some countries is an obstacle to their access to major market partners. Central Asian and Caucasian countries are geographically remote and transport costs to the nearest seaports for access to the world market or to their major trading partner, the Russian Federation, are high because of long distances and multiple borders. A focus on additional markets such as other CIS partners or directly neighbouring countries, such as Iran, China or Turkey, still need to emerge.

• Environmental issues such as the disposal of wastes, water treatment and efficient energy use represent a major challenge. Depending on each country’s overall commitment to sustainable development, agro-processing plants will need to respond to this commitment. By doing so, plants that consume wasteful amounts of energy will need to be updated. At the same time there is an incentive to the producer as production efficiency and costs can be substantially improved.

**Economic environment**

• Privatization and restructuring of the agrifood chain during the recent years has caused major disruptions: long payment delays or non-payment for delivered products causing severe constraints on cash flow.

• Lack of public or private institutions necessary to support market-based transactions, such as: i) enforcing property rights and contracts; ii) providing ad-hoc financial means such as cash flow funding, promotion of ad-hoc improved technology long term investments and market oriented medium term credits; and iii) efficient and effective regulation and standard regulatory bodies.

• Comparatively more flexible and cheaper labour has underpinned a number of very localized ad hoc agrifood ventures, such as coffee, cigarettes and specific food preparation (see importance of chocolate products in most countries’ list of major imports or exports), which seem to have emerged in some countries. However, the resource-rich Central Asia Regional Economic Cooperation (CAREC) countries, Kazakhstan and Azerbaijan, will hardly be able to compete on price in labour-intensive products manufactured for the world market. They are in direct competition with China, in particular.

**General characterization and assessment of key elements of an enabling environment for agribusiness and agro-industrial development**

**General macroeconomic situation and stability**

The speed with which macroeconomic stability has been achieved in transition countries played a fundamental role in the creation of an enabling business environment. Macroeconomic stability largely determines demand, which serves as a catalyst for the start-up conditions necessary for recovery and further development of businesses in general, including agribusiness. Furthermore, macroeconomic stability is a key condition for investments and for supplier assistance programmes or chain-based finance. Different studies have shown that the investment flows, especially in the CEE countries, are preferentially directed toward branches with limited risks, possibilities for vertical integration and measurable domestic demand and not necessarily to subsectors which were likely to bring the biggest profits.

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7 With transport time between Tashkent and Paris, for example, at around 250 hours compared to 25 hours between Paris and Warsaw, it is much more difficult for Central Asian countries than for Central and Eastern Europe countries to expand exports by integrating into production networks operated by European firms.
The focus countries of this study present a wide range of political, demographic, climatic and geographical conditions. They are engaged in different paths of transition. For the EU and EU candidate countries (Hungary, Croatia and Serbia), the process of entry has been and will be an opportunity for integration into the free trade area that is emerging across much of Europe. The removal of trade and investment barriers has proved to have strong dynamic effects on investment and trade flows. It also presents an opportunity to take advantage of EU practices to better design laws and institutions, to facilitate the free movement of goods and the movement of services, capital and workers across Europe. In particular there is support to strengthen the rule of law, respect for individual rights, modernization of policy processes and strengthening the overall viability of a democratic state. Furthermore, entry to the EU includes measures of financial support to farmers, as well as investment and other support for marketing and processing in the agriculture sector.

Other countries in the region that are not currently on the path to EU integration are also engaged in economic and institutional reforms. Uzbekistan represents a specific case since the country has adopted a gradualist and slow sequence of reforms. The government plays a dominant role in the economy through centralized management control and allocation of resources.

Overview of the business environment as perceived by the firms

The joint European Bank for Reconstruction and Development (EBRD) and World Bank (WB) Business Environment and Enterprises Performance Survey (BEEPS) investigates the extent to which government policies and practices facilitate or impede business investment and development in Central and Eastern Europe and the Commonwealth of the Independent States. Firms are asked to assess how the functioning of state institutions, physical infrastructure and financial institutions affect their business operations considering seven broad areas: taxation, business regulation, corruption, crime, the judiciary, infrastructure and finance. Finance, taxation, the judiciary and corruption are the sectors which still continue to constitute most significant obstacles to the operation and growth of firms.

The overall survey results for 2002 showed that gains since 1999 were concentrated in five areas: finance, infrastructure, taxation, corruption and crime. In the same time period, the main obstacles for the nine focus countries were finance and taxation with corruption and the judiciary proving less of a problem.

The specific factors perceived as obstacles by firms in the nine focus countries of this regional review were economic uncertainty and instability, tax rates and administration, cost of and access to financing. Access to land, title or leasing land, infrastructure and communication were considered less serious constraints. Firms saw skills and education of available workers, anti-competitive practices of other producers, contract violations, corruption, business licensing, customs and trade regulations as well as labour regulations, as more moderate constraints to their
businesses. The countries that improved the most from 1999 to 2002 were Hungary, Armenia, Azerbaijan, Kazakhstan and Uzbekistan. Georgia and Ukraine were considered to need the most improvement.

**Graph 1: Main obstacles for operation and growth of business in the nine focus countries**

![Graph 1](image)

*Source: BEEPS 2002.*

**Investment policies**

All the focus countries are striving toward privatization of their economies though each has reached different levels of achievement. Most are engaged in the process of revising and strengthening laws for the protection of property rights. However, the overall tendency of poorly enforced rules, results in non-enforcement or non-compliance with the laws, and difficulties in enforcing contracts. The judiciary often lacks the capacity to administer and apply the new legal framework. The present conditions in Croatia offer a case in point. The Croatian government has not yet secured a functioning legal framework. While the Croatian Parliament has approved the necessary framework, its implementation is still lacking.

In the case of Romania, foreign investment is certainly possible in theory, although in practice numerous barriers block investment. In addition, the resulting impact on FDI shows hectic changes due to the unstable economic situation. Comparison between countries tends to illustrate that investment in agribusiness cannot take place under circumstances characterized by a lack of security for property rights or in the absence of key reforms, even if the political structure is stable. As mentioned earlier (in the discussion of Upstream and downstream sectors), a
comparison between Hungary and Romania serves as an example. In Hungary where major changes and reforms were introduced in the beginning of the nineties, business is well advanced while in Romania, where reforms are more recent, investment also appears later

Public Governance and Corruption
In the overall BEEPS survey in 2002, countries in which more than one-half of firms interviewed reported paying at least some bribes represented half of the countries surveyed. Among the nine focus countries, countries in which more than one-third of firms interviewed reported paying bribes were Azerbaijan, Georgia, Hungary, Kazakhstan, Ukraine and Uzbekistan. Only Armenia and Croatia reported rates lower than one-third, with no data available for Serbia. The rate of bribes paid in the nine focus countries ranged from 2.4 percent (in Hungary) to six percent (in Azerbaijan). The frequency and rate of payment for kick-backs was reported to be much lower across all countries surveyed. Within the nine focus countries the frequency of reported kick-backs ranged from 11 percent (in Croatia and Armenia) to 38 percent for Ukraine and 41 percent for Georgia. Rate of kick-back ranged from five percent (in Uzbekistan and Armenia) to 18 percent (in Azerbaijan).
It should be noted that while corruption is a problem, the BEEPS data is five years old and represents a certain degree of ‘self-selection; amongst the survey respondents as reporting is completely voluntary.

Enablers and constraints to operating a business
The Doing Business Project by the World Bank Group investigates regulations that enhance business activity and those that constrain it. It presents quantitative indicators that can be compared across 175 economies. Regulations affecting ten areas of everyday business are measured: starting a business, dealing with licenses, employing workers, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and closing a business.

Cost of business licences
The Doing Business Survey for the Europe and Asia Region 2006 reports that in 8 percent of the focus countries the cost to obtain a business licence ranges from 65 percent of per capita income (in Armenia) to 1237 percent in Croatia, 1326 percent in Azerbaijan and 2195 percent (in Serbia). No data was available for Uzbekistan. Amongst EU Member States in Central Europe, the lowest rates were 16 percent in Czech Republic and 18 percent in Slovak Republic compared with 129 percent in Slovenia and 279 percent in Hungary. Some of the highest rates can partly be explained by the method of calculation which relates the cost of obtaining a licence to the average income per capita in the country. In countries that still have an extremely low per capita income; the result is a very high proportional cost for obtaining a business licence.

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Simplicity of obtaining a business licence

Another criteria used to measure the simplicity of licensing is the number of procedures required during the licensing process. In this respect, eight of the nine focus countries are not in a favourable position. Only Ukraine, Armenia and Serbia stand above require fewer procedures than the European average of 21, with respectively 18, 20 and 21 procedures. Hungary, Croatia, Azerbaijan, Georgia and Kazakhstan lag well behind with 25 to 32 procedures required.

Lack of transparency of the regulations and a low level of legal awareness of small and medium-sized entrepreneurs is a concern as they contribute

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*) Value x 10

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* Data is not available for Uzbekistan.
to worsening the cost and lengthening the time for the licensing procedures. An example is given by the study conducted by International Finance Corporation (IFC) in Uzbekistan. While large companies can hire a lawyer to prepare the documents required and assist with registration, small and medium-sized enterprises (SMEs) with limited resources usually do it themselves. Without knowledge of the regulations governing the registration process, they cannot insist that officials discharge their mandated duties and have to complete registration procedures themselves that should be performed by registration inspectorates and the Ministry of Justice. In the opinion of the focus group participants, registration time limits are exceeded for the same reason. First, entrepreneurs often fail to prepare the required package of documents correctly, and the officials of the registration authorities return them for completion. Second, even if they prepare all the documents correctly, entrepreneurs cannot insist that officials comply with regulations if they are not aware of their rights. Moreover, entrepreneurs often have to pay either officials or consultants to prepare the package of documents required and to assist them in going through all of the procedures. This substantially increases registration costs for entrepreneurs.

Graph 3: Number of procedures to obtain licence


10 IFC-Uzbekistan- Business environment as seen by small and medium-sized enterprises- WB 2004
Corporate governance

The World Bank Doing Business Project assesses good governance as the sum of three indices measuring the liability of directors, disclosure information, and the ease of shareholder suits. The index ranges from 0 to 30, with higher values indicating better governance in companies.

Six of the focus countries were below the average of 4.9 for the region. These were Ukraine, Croatia, Azerbaijan, Georgia, Uzbekistan and Hungary. Kazakhstan was just above the average with a score of 5.0, while Serbia, at 5.7, obtained the best score. No data was available for Armenia.

Graph 4: Good governance index for Europe and Central Asia region

![Graph showing the good governance index for different countries in Europe and Central Asia]


Trade policies

Trade policies vary within the region, a major factor being the existence of a strong commitment to international agreements. In Croatia, a significant removal of trade and investment barriers is taking place within the context of the EU accession process. Signing of the Stabilization and Association Agreement (SAA) facilitates the integration of Croatia into the free trade area that is emerging across much of Europe. Croatia signed Free-Trade Agreements (FTAs) with European countries after joining the Central European Free Trade Agreement (CEFTA) in March 2003. Some of the agreements were superseded over the last two years by the single FTA with CEFTA members.
In Hungary, imports of agricultural products are regulated by ad valorem tariffs and tariff rate quotas. In the period 1997 to 2000 Hungary lowered its Most Favoured Nation (MFN) tariff rates for most agrifood products in accordance with the Uruguay Round Agreement in Agriculture (URAA). In 2000, only in the case of rice was the applied tariffs lower than the binding rate. For all other products the commitments of the URAA are binding. In 2000 applied MFN tariff rates amounted to 32 percent for all grains (except rice at 10 percent) to about 50 percent for dairy products (except butter at 101.8 percent), to about 50 percent for all fruits and vegetables grown in Hungary, and to 62.9 percent for wine.

Ukraine’s accession to the World Trade Organization (WTO) is considered of vital importance for agriculture trade. Compared to other countries with similar agriculture capacity, such as France and Poland, the ratio of food exports to gross agricultural output is low; respectively 14, 25, and 53 percent for Ukraine, Poland and France. Significant changes in agricultural trade policy already took place in Ukraine since the early 1990s ‘moving exports from largely barter-based bilateral agreements with countries of the Newly Independent States (NIS), to a more diversified set of export destinations based on private market transactions.’ Export quotas have largely been removed, and in 2004 the use of “indicative prices” and export taxes remained for only a few selected products including sunflower oil and live animals. Imports were still restricted by a large number of tariff and non-tariff barriers.

State control on foreign trade in Uzbekistan is still maintained. Exports contracted and export diversification is limited, apart from raw material, while import substitution is encouraged.

Exchange rate policies

The exchange rate is rather stable in the focus countries, with efforts made in tightening their monetary policy. Armenia provides a positive experience of strong remittance inflows and tight monetary policy, which resulted in appreciation of the local currency.

Azerbaijan and Kazakhstan, the two resource-rich countries covered by this review, face the possibility of “Dutch disease”\(^\text{12}\), which would result in even higher level of imported foods, and enhanced competition with countries producing similar products for export to the same market. At present, the exchange rate does not appear to hamper competitiveness and has been rather stable in Azerbaijan. In Kazakhstan, a concern is the volatility of the local currency (World Bank Economic Report 2005), which is lower than in neighbouring Russia and Ukraine, but much higher than in the EU-8 countries. A challenge in the future for Azerbaijan and Kazakhstan will be to stabilize their monetary policy.

In Uzbekistan, the local currency is not freely convertible. This is considered as the country’s greatest obstacle to doing business. Foreign exchange risks are high and restrictions are imposed on the circulation of cash.

Tax policies

Both tax rates and tax administration are mentioned by firms as a main obstacle for business in both the BEEPS and the Doing Business results. The Doing Business project assesses the level of tax payment in terms of percentage of a firm’s gross profit. Uzbekistan leads the focus group with the highest tax payable, accounting for 75 percent of the gross profit of business firms. The average in the region stands at 50 percent, and most of the focus countries’ rates are near this

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\(^{12}\) The term ‘Dutch disease’ originated in the Netherlands after the discovery of North Sea gas. It refers to a situation when the discovery of natural resources raises the value of the nation’s currency, making domestically manufactured and agricultural products less competitive on the world market.
average. Five of them show slightly better performance: Azerbaijan, Kazakhstan, Serbia, Croatia and Georgia (between 41.4 and 49.7 percent). The other three show slightly higher levels of taxes: Ukraine, Armenia, and Hungary (ranging from 51 to 56.8 percent). It is noteworthy that Hungary, the only EU member country in the group, at 56.8 percent has the second highest level of taxes. Only Uzbekistan has a higher rate.

Graph 5: Tax payable in percentage of gross profit

In Uzbekistan, the taxation level is perceived as an onerous burden on SMEs. Heavy rates and complicated taxes are imposed on firms, together with restrictions on foreign exchange, trade and banking regulations. These areas are considered as the main examples of an increasingly formalistic economy. Competition exists on both global and regional levels. Uzbekistan’s main competitors are

In Armenia, there are privileges related to income tax for enterprises operating with foreign investments. There are also favourable conditions for importing technological equipment, and exported food products are exempted from Value Added Tax.
Kazakhstan and Russia, which are carrying out phased reduction in tax rates. For example, the value-added tax is 20 percent in Uzbekistan, but 10 to 18 percent in Russia and 15 percent in Kazakhstan.

International experience has shown that tax systems based on a small number of taxes and contributions are most effective. The Baltic countries provide an example. Their taxation systems are simple, transparent and highly effective. In Latvia for example, there are nine taxes; and only seven in Estonia. The simple tax system and the low total tax burden have permitted Latvia to eliminate the practice of granting tax concessions. This has made the taxation system even more transparent. Some countries like Georgia, pay attention to tax enforcement and to the reduction of the rate and number of taxes, with special concessions made to the agricultural sector.

**Laws and regulations regarding land tenure**

The extent to which land and property rights were clearly defined has played a major role in the development of agriculture and gains in productivity in the sector. There were indirect effects on the development of the upstream and downstream sectors. The ability to consolidate tracts of land and the legal environment to support land-use rights are directly linked with the decision of farmers to make investments on their land (tillage, infrastructure and others) and increases access to a range of support services, particularly financial ones. The intention to reach both an equitable and an economically sustainable distribution of land has driven the reforms and privatization process. This has most of the time resulted in allocation of land to a multitude of small owners, sometimes absentees. On one hand this played a buffer role during the economic transition process, providing subsistence resources for the majority. On the other hand, the widespread fragmentation of land has led to difficulties in consolidating plots into economically viable units and to slow recovery in productivity. Another common problem is the unresolved disputes over the boundaries of land ownership.

In parallel to the privatization of land, laws need to be well-defined and fully enforced. In the context of countries with fledging institutions, the whole process of distribution and establishment of credibility took time and is still an ongoing in most of the countries considered. Law enforcement means registration and the elaboration of a reliable cadastre. High registration costs and complicated procedures represent an obstacle to land sales and hamper full privatization.

While secure and transparent land ownership and land-use rights are the basis for the development of a productive and dynamic agricultural sector, the privatization process is still deficient in some countries. In some cases, even though the privatization process is ongoing, the land laws need to be enforced more strongly. Croatia is still struggling with cadastre problems while land ownership remains largely unresolved. Armenia recently improved accessibility to cadastre, allocated state land to communities and began moving toward the establishment of a land market. In Uzbekistan, land has been given out on long-term lease, while the remaining collective farms (i.e. shirkats) are in the process of restructuring. The majority of land users in Uzbekistan are very small-scale farmers (i.e. dekhat) with less than 0.2 ha on average. They are usually not registered as commercial farms and therefore have limited or no official access to major resources including financing and irrigation water. Nevertheless, these farmers contribute to a great part of the vegetable production. In Serbia, the restitution law came into force in 2004. Lack of transparency in land titling and property rights still remains and the cadastre office does not have reliable information. In Georgia, land privatization is an ongoing process.
**Infrastructure**

In most of the Eastern European and Central Asian countries, small farms in remote areas represent the majority of the suppliers of the agrifood chain. The challenge is the maintenance and improvement of farm-to-market infrastructure to hasten delivery of products and lower transport costs. More problematic might be the reported existence in some countries of informal road use taxes levied on farmers who transport their products to markets (e.g. Azerbaijan).

The additional challenge for a country like Uzbekistan and Kazakhstan, which are landlocked and remotely located relative to large markets, is to improve the country-wide network of roads and provide access to the transportation infrastructure. A further impediment to market when physical distances are great is the lack of or weakness of communication and access to information through the telecommunications network. International organizations encourage privatization of infrastructure services together with the introduction of competition and new ways of financing in the sector.

The World Bank’s International Finance Corporation Poverty Reduction Report for Armenia praises the country’s good performance in improving services and accountability in energy and water, and the elaboration of plans to reform rural roads, water, and energy and telecom sectors.

Failure in provision of infrastructure services leads to losses in productivity. These are particularly great in Uzbekistan, the Caucasus and Ukraine. Hungary and Croatia are far ahead in this respect.

Additional measures of the extent to which infrastructure services create business obstacles comprise delays encountered in obtaining connections to electricity and telephone services and the proportion of firms that are perceived to pay bribes to obtain or expedite such connections. Countries with the longest time needed to obtain connection are Belarus, Serbia, Tajikistan and Kyrgyz Republic and the countries with shortest delays are Czech Republic, Croatia, Bosnia and Herzegovina and Lithuania. Most of the focus countries are closer to the midpoint.

In the region, and especially in the arid and semi-arid climates, a wide variety of crops are tied to reliable irrigation systems. Under the former centralized political regimes, most irrigation systems were large scale and designed to serve vast areas managed by the collective farms with little attention to economic cost, maintenance and management aspects. After the disruption of the collective or centralized management system, the schemes suffered from lack of maintenance and were inappropriate for the new small-scale individual type of users. The result is a need for massive sums of money to rehabilitate the systems, some of which are provided by a number of international donors or banks. The challenge is to establish the appropriate structures and institutions/organizations to maintain them. Furthermore, the fundamental question remains of the relevance of the concept of large-scale irrigation and drainage schemes and the need for transformation of the whole system.

In the process of accession to the EU, measures have been taken to subsidize the improvement of the irrigation system. In Hungary, up to 40 percent of the investment for irrigation systems and other improvements could be subsidized if 25 percent of the total investment came from the farm’s own financial resources. In addition, 40 percent of the interest on loans for improvement of irrigation systems was granted interest-free under this program.
Research and development institutions supporting technology transfer to agribusiness and agro-industrial enterprises

Research and development as well as agricultural extension services in the former socialist system relied on public investments and were mainly based on centralized research and advisory institutions linked to related Ministries. This system still predominates and professional organizations or private extension services do not seem to emerge.

Traditional areas of public investment such as research and extension services, market information systems, veterinary services and animal surveillance programmes need to take into account the new organizational form of a cluster and particularly the increasingly important role vertical integration plays in these areas. In this field, debates are continuing regarding the most appropriate way to provide ‘best practice’ services to producers and processors. Some advocate focusing on strengthening collaboration between public authorities, NGOs and private companies. The possibility and conditions of emergence of economic clusters would be worth investigating as a number of examples (the classic case often mentioned is the Californian wine industry) tend to show that clustering is a strong tool to tighten the links between different actors.

In the process of EU accession, services to farmers are supported mostly through government services. In Hungary, grants for advisory work are distributed to counties and the decisions are made by the county authorities. Special attention and support is given to the creation and development of producers’ marketing organizations.

Norms, standards and regulations related to the production, processing and distribution of agrifood products, especially those related to quality and safety.

Improvement of the standards regime is of great importance for any export led development. Again, in the EU candidate countries, the process of accession requires and supports improvements in norms, standards and regulations. The administration of the Common Agricultural Policy (CAP) requires the establishment of a number of institutions to guarantee the establishment and application of grades and standards such as an Integrated Administration and Control System, a Unified Veterinary and Food Control Authority, a Central Agency to manage plant protection.

At present, most countries in the region lack international food safety and quality standards. Within the CIS countries, the former mandatory standards (i.e. GOST) are still in place, which is more a control system for the final product than a process-oriented quality management system. In addition, this regime does not meet world market requirements and does not comply with other regional market standards, or with EU or other international standards requirements. In addition, there is evidence of lack of rigorous application of standards, and sometimes even degradation of the quality of products delivered to agro-industries, better quality products being sold to the export market.

In 2005, the Georgian Parliament adopted the law on «Food Safety and Quality» harmonized with the EU legislation and based on the following major principles: risk analysis, alert, transparency, and protection of consumers’ rights. All food operators are due to fulfil the requirements by January 1st, 2011 and the national food safety service will start initial inspections in 2007.
Some countries like Armenia put emphasis on the establishment of measures in plant protection and seed production, state vaccination campaign. However once standards are on paper, the next step is to enforce their application. First conformity assessment needs to be established by law. Second, necessary resources to test conformity needs to be deployed. When they do exist or when older facilities are still operational, laboratories may lack the capacity in terms of instrumentation, material and training to conduct the testing needed for international standards.

There is a need for stimulation and certification of quality and safety standards and for investment in projects, institutions, and technical assistance stimulating higher quality. Again, enhanced ties between public and private services, as well as with professional associations can play a determinant role in this process.

Financial services to agriculture

The extent to which credit markets performed played a major role in the development of agriculture and agribusiness. Along with the collapse of the agrifood chain integrated in the centrally planned economy, input supply and distribution, and machinery services were disrupted. Together with the deterioration in terms of trade in agriculture (for example in Hungary relative terms of trade in 2000 were 79.2 compared to1990), this led to an increased need for short and long–term finance in agriculture and agro-industries. Lack of capital has often hampered the attempts to increase productivity, leading to the use of inappropriate machinery and equipment and restricting the use of inputs such as fertilizers, pesticides, high yielding crop varieties, and compound feed.

The lack of, or limited access to, credit has been a major impediment to the development of primary agriculture as well as the upstream and downstream sectors in all transition economies. Credit markets had to be created or to adjust to the rapid changes in the macroeconomic environment, privatization and the implementation of structural reforms.

In parallel, the banking sector itself is undergoing reform. Previously it was geared to serving mostly large collective enterprises. The banking sector lacks experience and adequate information for working with small-scale borrowers. Dealing with such small clients also involves higher transaction costs. The transformation of the financial services offered to the agribusiness and agro-industries through banking and non-banking systems used different instruments and took a variety of paths in the region, which led to a catalogue of errors and successes.

Only a small number of countries have succeeded in creating a private banking structure. Among the nine focus group countries, only Hungary succeeded. Likewise, Hungary was the only member of the group that supported the creation of rural or agricultural credit cooperatives. In part of the region, the CIS in particular, but also Croatia and the Caucasus, the debt in large-scale farm enterprises is growing because of inadequate farm profits. Not only are inadequate farm profits to blame but also the lack of financial discipline, the persistence of soft-budget constraints and the weak enforcement of bankruptcy procedures. In Croatia, the public scheme produced mixed results in the rural areas. There was little involvement of the commercial banks and no

other initiatives, like credit cooperatives, occurred. Among the focus group, countries with the lowest level of banking efficiency are Armenia, Azerbaijan and Uzbekistan\textsuperscript{14}.

**Commercial banks**

The privatization of the banking sector is still underway in many countries of the region. The government keeps control of the banks in Uzbekistan. The lack of competition in the banking sector has often resulted in high interest spreads, which in turn has restricted lending. Lending to agriculture has been further impeded by the lack of collateral, low profitability and higher perceived risk associated with the sector. In general, commercial banks have taken a rather conservative approach in lending to agriculture and often lack the in-house expertise to adequately assess the risks associated with lending to the sector. Moreover, agricultural land is generally not accepted as collateral for loans as an active land market does not yet operate in the region.

Credit and banking cooperatives can have advantages in delivering financial services to rural areas. These advantages include: proximity to clients; integration into the local community and good knowledge of local circumstances; high flexibility in adapting financial services according to the changing needs of their clients; peer pressure; ability to mobilize savings, including from non-members; operating in a network that permits the consolidation of certain functions and the enlargement of the scope and efficiency of services. While it is recognized that credit cooperatives can mobilize savings and provide credit, the concept can face resistance. In some countries, there appears to be resistance towards such organizations that are perceived as a relic of the communist era\textsuperscript{15}.

**Large state agricultural banks**

In many cases privatization of state agricultural banks was implemented as part of a macroeconomic stabilization package. This process was dominated by short-term goals, while longer-term perspectives of the banks’ business were not given sufficient attention. Furthermore, restructuring of the banking sector in many transition economies led to substantial inflows of foreign capital into the system, but also to a tendency to divert lending from agriculture and rural investment.

In all Central and Eastern European countries, governments play an important role in providing credit to agriculture and often also to enterprises in rural areas. The role of governments has been twofold: they have improved credit access, often through a credit guarantee fund, and they have subsidized interest rates. Hungary even set up two funds: one for small and medium-sized holders and one for large farms.

During the first years of transition the effective interest rate for farm credits was lower than the rate of inflation in most countries. Hungary is a classic example: interest rates were subsidized by 30 percent to 50 percent, making the real interest rate even negative.

**Large-scale enterprises debt**

The accumulation of debt in large-scale farm enterprises in CIS is regarded as a major obstacle to successful privatization and restructuring of the agricultural sector\textsuperscript{16}. The practice of soft budget constraints continues to persist in CIS countries. Unprofitable farms with steadily rising levels of debt do not go bankrupt. They are able to continue borrowing from suppliers, from the state, and sometimes even from commercial banks. Beyond aggregated tendencies, it is important to

\textsuperscript{14} BEEPS 2002  
\textsuperscript{15} J.D. Von Pischkle  
\textsuperscript{16} Csaba Csaki and Zvi Lerman
stress that different countries face different levels of macroeconomic burden associated with the outstanding farm debt. In Moldova, the farm debt reached 29 percent of GDP and 83 percent of total budget revenues in 1998 - a much higher burden on the economy than in other CIS countries. Farm debt also appears to have reached the level of a serious a macroeconomic problem in Ukraine and Kazakhstan.

Government initiatives have proven successful in some countries. For example, credit guarantees on warehouse receipts was supported by the government of Hungary. There has been considerable government intervention in agricultural credit markets since the beginning of reforms in 1989/90. Intervention has often been justified in response to the perceived market failure and length of business start-up with respect to the lack of access to finance and credit for developing the agrifood sector.

**Non-banking sector**

Developments in the agrifood sector forge closer relationships between farmers, input manufacturers, processors and retailers, including foreign companies, which offer sources of funding and/or other in kind contributions to farmers. In a transition economy, such credit mechanisms develop as a way to overcome the scarcity of primarily shorter-term bank credit and reduce mutual risks. Non-bank credit plays a unique catalytic role for the recovery and further development of the farm sector. Examples include service packages provided by multinational agro-industrial companies in transition countries. As well as providing a source of credit, these service packages address a number of constraints simultaneously, including the supply of inputs, a guaranteed outlet for products with prompt payment and access to production technology. Trade and supplier credit has always existed in parallel with formal finance, even in developed financial markets. Upstream and downstream operators may often be better placed than banks to offer operating credit because of better local knowledge, proximity to farmers and the ability to provide credit in a package with other tailored services. Under certain conditions, trade and manufacturer credit has lower transaction costs and is more efficient in terms of contract enforcement than traditional bank credit.

**Vertical coordination**

Vertical coordination (VC) refers to contracting agreements between different actors in the agrifood chain. VC is a widespread practice in European countries and in the United States where 30 percent of farmers are concerned. Recent research and studies put much emphasis on VC in agrifood supply chains in the transition countries of Europe and Central Asia. This growing phenomenon is an example of a major factor of an enabling environment of the development of agribusiness and agro-industry.

VC emerged in the transition countries in order to overcome the disruption of the agrifood chains after the collapse of the socialist system (and described earlier in this paper). In particular, the insufficient supply of agricultural products both in quantity and quality, and on the producer side, the lack of inputs (such as fertilizers and credit), delays in payment from the downstream sector, and insufficient technical expertise presented serious obstacles to the agrifood entities. In

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17 See chapter on vertical coordination below.

18 Swinnen, J. 2005. When the market comes to you- or not. The dynamics of vertical coordination in agrifood chains in transition, ECSSD, the World Bank, Washington, D.C.. A great part of the information contained in this review about VC is based on research carried out or supervised by J. Swinnen, in particular for the World Bank.
its early stages, VC focused on securing supplies and prompt payment. That was the case of the cotton supply chains in Central Asia, the dairy and fruit and vegetable supply chains in Hungary and the Caucasus. In more advanced situations, more emphasis was put on product quality, which involved provision of extension services, farm-level investments in technology and equipment, bank loan guarantee, investment assistance, etc. A survey conducted in five CIS countries found that three-quarters of the agrifood processors surveyed used contracts with suppliers. However, in Azerbaijan the percentage of such agreements was very small.

Case studies carried out by the World Bank\(^{19}\) showed the dominant role of different types of contracts in various subsectors. In the dairy and sugar sector, extensive contracting arrangements developed between processors and farms, including the provision of credit, investment loans, feed, inputs, extension services, bank loan guarantees. In the cotton sector, gins contract with farms to supply seed cotton and provide them with credit, seeds, fertilizer, etc. In the fresh fruits and vegetables sector, retail chains created supplier contracts with farm assistance programmes, as a result of demanding quality and timeliness of delivery. In Kazakhstan there is strong integration in the grain sector.

Contract forms reflect different constraints faced by farmers, e.g. in Central Europe guaranteed access to markets is a contract motivation, in Central Asia, and access to finance is the motivation as credit constraints are most important. Companies try to create “self-enforcing” contracts by designing the terms of the contracts in such a way that neither party has an incentive to break the contract.

Vertical coordination requires capital, and, given the lack of domestic capital, the appearance of VC seems to be driven by and closely related to foreign direct investment (FDI). In the absence of FDI, VC may occur, but slowly. Initiators of contracting with supplier assistance may also include companies investing profits from other sectors (e.g. profits from financial-industrial groups), processors or traders who have liquidity from sales executed in international markets (e.g. grain traders in Kazakhstan) and processors who have contracts with international companies (e.g. cotton gins in Central Asia). This tends to show that VC in its new form is definitely linked to the access to international markets and trade. However, in reality the domestic resources are often blocked by insufficiently developed or inappropriate credit policies, as in the case of Hungary.

Positive effects of VC are a direct impact on increased output and productivity of the processing companies. Indirectly, contract supported measures resulted in an increase of farm productivity through specialist storage (e.g. cooling equipment in the dairy sector), veterinary support and physical inputs. Prompt payments, guaranteed prices and market access also had a positive effect. Quality of outputs improved sharply. However, there is a concern that VC would exclude small farmers and encourage concentration. In this respect, studies arrive at different conclusions. The World Bank Study tended to show that companies worked with a large number of suppliers, and of small size. Other studies highlighted the growing phenomenon of concentration.

\(^{19}\) Id. Case studies.
In-depth analysis of selected elements of the enabling environment: is vertical coordination in the dairy sector a factor of an enabling environment for small and medium-sized enterprises?

The Eastern European, Balkan and CIS countries account for around 20 percent of milk production worldwide according to FAO estimates. In 1997, milk production in Eastern European, Balkan and CIS countries was reduced by 49 million tonnes compared to 1970. In the 1990s the number of milk cows decreased dramatically, followed later on by a general increase in productivity. Other countries are only small players on the international dairy market, but with a substantial domestic consumption, generally increasing with an improved standard of living. The rate of local demand is more or less satisfied by local production, which accounts for an important part of the main agro-commodities in value. Croatia became an exporter again in recent years Armenia now exports cheese.

In the CIS, Russia and Ukraine are the two largest milk producers. Ukraine is traditionally Russia’s second largest butter supplier. In Kazakhstan, Uzbekistan and Azerbaijan, milk production is equivalent to roughly one-fifth of the value of production of the main food commodities. Again, domestic production is mainly geared to local consumption. Uzbekistan, in contrast, is a net importer of dairy products.

Milk production

Milk production in the region is characterized by a dual structure: a few large farms, either collective or privatized, and a multitude of very small producers with less than five or 10 cows. A variety of situations occurred in the different countries. In Hungary, 95 percent of private farms have less than 10 cows while 74 percent of agricultural enterprises have more than 100 cows.

<table>
<thead>
<tr>
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<th>Production (MT)</th>
<th>Percent in value of main agro-commodities</th>
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<tbody>
<tr>
<td>Armenia</td>
<td>548 000</td>
<td>24.5%</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>1 226 700</td>
<td>21.3%</td>
</tr>
<tr>
<td>Croatia</td>
<td>728 000</td>
<td>17.4%</td>
</tr>
<tr>
<td>Georgia</td>
<td>756 000</td>
<td>25.3%</td>
</tr>
<tr>
<td>Hungary</td>
<td>2 000 000</td>
<td>9.8%</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>4 650 000</td>
<td>22.5%</td>
</tr>
<tr>
<td>Serbia</td>
<td>1 825 000</td>
<td>12.1%</td>
</tr>
<tr>
<td>Ukraine</td>
<td>13 484 500</td>
<td>20.7%</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>4 200 000</td>
<td>25.1%</td>
</tr>
</tbody>
</table>

Based on FAO country statistics for 2005 and 2002

Large agricultural enterprises and the few large private farms produce for processors. Average-sized private farms (i.e. 10 to 30 cows) try to produce for the processor market. Small private farms (i.e. 3 to 10 cows) produce and sell through businesses that specialize in collecting mild, while the majority, the very small farms with less than three cows, and produce for self-
consumption or direct sale. Production of small farms is estimated to be 10 percent of the total milk production.

**Processing sector**

Though concentration is an ongoing phenomenon, the processing sector is much more fragmented in some parts of Central and South-eastern Europe than in Hungary. In Hungary, the concentration in the milk processing sector started in the middle of the nineties. The ten largest companies represent almost 80 percent of the net sales and the five largest represent 57 percent. The concentration in the dairy export market has already reached quite a high level, with the ten largest processors responsible for 89 percent of total export.

A number of Western European dairy companies, whose home markets for milk production were limited by quotas, invested in low cost Eastern European and CIS countries in the early 1990s. They built dairy processing facilities for use of locally produced ingredients. They also promoted products at more affordable prices and modified products to cater for traditional local tastes.

There is evidence that the largest inflow of foreign direct investments was in countries where the processing and supply base have been more concentrated\(^20\). The political and macroeconomic situation in a country is a crucial aspect of the attractiveness of that country for foreign investment.

**Vertical coordination: Dairies support programmes to farmers**

A great proportion of raw material is bought using contracts with farmers in the dairy industry. Plants that principally pasteurize liquid milk have contracts with large and small farmers as their core supply line and source additional supplies through spot markets and from other agents (i.e. wholesalers and intermediaries). Contracts are mainly in writing. In most cases, prices are set and the payment method arranged. Milk delivery contracts are generally documented on a notary’s deed. However, this is often not the case for small farmers because the transaction costs are too high. Many farmers consider contracts as rather noncommittal, especially when the local market offers better prices. Terms change frequently and prices are re-negotiated, as well.

Assistance programmes that dairies offer to their suppliers help farmers gain access to capital, make investments, and upgrade the quality of their deliveries. The motivation for dairies to provide such programmes is to upgrade milk quality and to secure their supplier base against loss to other dairies that already offer these valuable services.

Dairy plants offer a range of support programmes: input supply such as feed or seeds and fertilizers for on-farm feed production, credit program, particularly focused at fixed investments (such as cooling tanks or milking equipment in the case of dairies). Most companies also provide extension services to their suppliers. Another form of support is guarantees by the dairies on

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\(^{20}\) L. Dries and N. Noev.
bank loans made to farmers, most of which include preferential interest rates. Dairies also co-sign bank loans when farmers lack sufficient collateral. Vertical integration starts first with input support, extension and simple credit programmes. Later on the most sophisticated programmes, such as bank loan guarantees and investment loans, are developed.

Generally dairies offer contracts to both large and small farms. Assistance contracts are only offered under conditions such as minimum size and the regularity and volume of delivery, which excludes small farmers. Some successful cases of cooperatives or associations are mentioned in the literature which shows the possibility for small farmers to form groups and through collective investment to remain competitive with big companies. This has been particularly successful for dairy farmers that invest in cooling and collecting equipment. The producer associations provide a wide variety of services to their very small members on the basis of conditions that do not differ fundamentally from those used by the large dairy companies. Support programmes are based mostly on mutual trust and a thorough knowledge of local conditions.

The share of companies offering assistance increased in all countries as a result of increased inflows of FDI. Programmes initiated through the use of FDI may have forced local dairies to implement assistance programmes in response. In the case of Armenia, a high proportion of output is exported and studies show a correlation between increased exporting and the mean number of support measures.

Vertical coordination and contracting developed rapidly with inflows of FDI. For example, little change occurred in Azerbaijan due to its absence of FDI. Vertical linkages are almost non-existent in the dairy markets, and the local industry remains weak. A particular problem of the Azeri production system is the lack of basic infrastructure such as reliable energy supplies. Regular electricity disruptions in rural areas prevent investments in basic milk cooling and processing equipment. FDI in the agribusiness sector is almost non-existent and hampered by the poor structure of the existing production environment as well as poor infrastructure development.

The improvement of milk quality is a crucial aspect of the dairy companies’ policies. The introduction of different measures, in particular price premiums, has an important impact on the delivery of high quality milk. In addition, EU integration or the general wish to access international markets drives a change in the quality requirements of the supply chain. Domestic quality requirements set by governments in transition countries tended to be much below the EU standards. Firms which continue to produce milk at low quality standards and are not able to upgrade their facilities cannot be included in EU support programmes for improvement. In countries on the path toward EU accession, the majority of these firms will have to close down their operations mainly due to lack of finances to invest in the necessary modernization of equipment. As an example of the magnitude of the problem, out of 550 dairies in Romania, only 17 produced according to EU standards in 2004.

**Summary of key points**

Vertical coordination is strongly influenced by reform policies. In the dairy sector vertical coordination already exists and is growing in the region.

In the CEE and CIS countries, the rehabilitation or establishment of modern, better equipped and upgraded dairies definitely required investments that domestic actors could not afford in the early stages of transition. The entrance of foreign companies in these countries initiated the process. Later on, local investors also started to operate in various new forms of business. At the same time associations of producers began to emerge.
FDI played the role of catalyst. This not only provided the start-up capital necessary for further development, but it introduced quality standards and management forms that did not previously exist. However, the entrance of foreign enterprises was not the only factor influencing quality improvement. In some countries, the former collective farms, due to their large size and capacity, had already achieved significant progress in this field before economic changes occurred.

The role of foreign investors should be considered as an independent factor for improvement of the dairy chain as it is largely influenced by the local context. In the absence of strict regulation of milk quality control, dairies that establish high quality standards cannot compete on the basis of price with dairies that supply milk with lower quality standards. With respect to this issue, the role of government and state institutions is fundamental. Without establishment of clear rules and disseminated regulations on quality standards and law enforcement measures, the improvement of quality standards takes place slowly.

Impact on SMEs: Larger farmers are the primary beneficiaries of assistance programmes offered by dairies. The new forms of vertical coordination and the entry of foreign investors in the dairy sector have opened debates. The concern is whether small farmers, who constitute the majority of the milk producers at present in the CEE and CIS, are excluded from the process or not. Some studies have concluded that there is no evidence of their exclusion. However, larger farmers have the advantage of access to the more sophisticated assistance programmes offered by the dairies, while small farmers are only included in the simplest form of contract which guarantees price and time of delivery, but hardly any form of support regarding bank loan guarantees or input supply.

Will small and medium-sized dairies disappear? In the context of the harmonization of norms for the world market, dairies which do not meet the required standards of hygiene are likely to disappear from the marketplace (e.g. as occurred in Hungary). These are, in general, relatively smaller dairies.

This process of concentration at different levels of the sector is not surprising since it is the common evolution of the dairy sector in many Western European countries. In the context of transition countries, are there other paths of development which would avoid the negative impact of concentration in countries with large rural populations and high unemployment rates? Some examples show that organizations of producers can be both competitive in terms of quality while providing support to small farmers.

Strengthening of institutions could play a strong role in assisting different types of farms and enterprises, and especially those who do not actually have access to the services provided by the private dairies because these services would be too costly for the enterprises. Two initiatives are of particular importance:

- **Facilitate the creation and operation of producers’ associations.** Cooperation could be advantageous to small-scale dairy farms. It is a way to alleviate the major obstacles faced by small farmers in quality improvement through the establishment of collection centres by shared investment. It also strengthens the bargaining power of the farmers with other stages of the chain and reduces transaction costs for the dairies. The creation of producers’ associations requires, however, a legal framework which does not always exist. For example, in Romania, the law prohibits commercial activities for cooperatives.

- **Establish extension and information services.** A well-functioning public or private extension and information service can contribute importantly to improving the general knowledge level in the sector and increasing quality awareness. On-farm training should be tailored to the
specific needs and constraints of different types of farmers and focus on how to change working practices so as to improve milk quality. Public or private extension services could also help increase farmers’ awareness of the benefits of associations.

**Best practices and lessons learned**

Finally the main concern is to highlight which practices have contributed to create an enabling environment for agribusiness and agro-industry, with primary focus on small and medium-sized enterprises.

**The establishment of a stable macroeconomic situation is the basis for any further development and the state plays a fundamental role in this process.** This includes the reform of fiscal and monetary institutions, as well as the establishment of a well-functioning regulatory institution, capable to apply the law and to enforce it. The example of Georgia shows that after the Rose Revolution the situation improved considerably. This requires a redefinition of the role of the state, which does not mean withering away but playing key roles in establishing the rule of law, an appropriate tax collection system and basic conditions for macroeconomic stability.

**General reforms have strongly affected agricultural transition and performance.** For example, inflow of foreign investment and the associated infusion of technology, know-how and capital in the agrifood chain have been most important in countries where more progress in general reforms, improvement of the macroeconomic situation and the prospect of EU or WTO accession has been achieved. Privatization of the upstream (input providers) and downstream (food processing and distribution) companies as well as the banking sector has had a major impact. The way transformation of the previous socialist system has been carried out has had a direct impact on the speed of recovery of the agro-industry. Studies show that privatization of state companies through direct sale, as in Hungary, has been more successful than free distribution of property rights 21, as in Ukraine.

Economic reforms are not sufficient without a transparent, well-defined and operational judiciary: a pre-requisite for the agribusiness to operate properly. Establishing the rule of law takes time. The enforcement of the judiciary affects a number of aspects in the sector among which land tenure, access to credits, creation of producers’ groups and foreign investment are of major concern. A strong system of land-use rights is essential if agriculture is to be efficient. Legal enforcement of land-use rights is more important than how land has been allocated 22 as far as efficiency is concerned. This means assuring a strong system of land rights that is both transparent and enforceable, providing a stable macroeconomic environment and strengthening the institutions necessary to support competitive markets. Producers who feel their property or use rights are not secure have less incentive to make long-term investment in the land. Well-functioning financial services depend closely on the establishment of supporting regulations and their application in order to ensure arrears payment, hard-budget constraints and bankruptcy regulation. If law enforcement is not sufficient, contracts between producers and processors can hardly be respected. Cases are often reported of non-compliance by farmers with delivery contracts for raw products in the event of increased market prices.

**Once the legal background is established, new institutions can be developed to ensure contract enforcement and access to capital.** The emergence of new institutions to replace the central planning system in providing information, enforcing contracts and facilitating exchange of

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products between various agents of the chain is necessary. However, the vacuum left by the collapse of the previous system is not always filled or it takes time to replace and create a new operating environment. The best successes occurred when flexibility to adapt to the changing environment was shown. An example can be found in land tenure, when land lease contracts initially agreed for one season could informally be prolonged to longer-term and formal contracts. Another institutional progress is the availability of leases for agricultural or processing equipment which solves farmers’ collateral problems in borrowing to purchase equipment. With the new forms of vertical coordination, contracts between private agents expanded, especially between processors and producers. The motivations of agro-processors are to ensure their supply base and to improve quality standards. Agro-processors in turn approach banks and input suppliers in order to negotiate contracts to provide their raw material suppliers with inputs and better credit conditions than the farmers themselves could obtain. Contracts provide farmers with a guaranteed market and predictable prices for their products. Contracting between processors and producers is a way to manage risk related to a variety of issues (e.g. availability of products, weather, and prices).

There is a need for comprehensive measures to be taken: Partial reforms are not sufficient to stimulate agriculture growth and productivity. All transition economies of Central and Eastern Europe (CEE) and the former Soviet Union experienced declines in agricultural output in the initial years of the transition, but the drop in agricultural production was much sharper in some countries (e.g. Ukraine). Moreover, in most CEE countries, the initial recession in agriculture was followed by economic growth after about five years, while the decline in agricultural output continued in Ukraine and Russia. Reforms have been more successful when comprehensive measures have included various aspects of the environment: trade, land policy, farm restructuring, agribusiness privatization, credit markets and a governmental administrative role in markets.

Offering a variety of financial support products. The extent to which credit markets perform plays a decisive role. Privatization in the financing sector takes time since it is closely related to other factors, particularly to changes in the judiciary, the clear definition of property rights, the development of privately-owned assets and the emergence of new forms of credit institutions. The most successful experiences during the period of transition are when diverse forms of credit are offered to the agribusinesses that permit them to overcome the deficiencies of both the state banking sector, which reduces its services, and in the newly emerging private sector which is not yet fully-operational. For example in Bulgaria several tools were offered including some under government initiatives like credit guarantees and warehouse receipts, others including the creation of agricultural cooperatives. Not all were successful but what is more important is to try approaches and leave enough flexibility to adapt to the changing environment and circumstances.

In the case of non-bank credit, the challenge for public policy is to stimulate the desirable effects of such financing schemes and prevent possible harmful impacts. This task is particularly relevant under the conditions of transition. When institutional and regulatory bases are not sufficiently developed and producers have limited supply and marketing alternatives, dependence on a particular stakeholder may represent the potential risk of monopolization. Thus, competition policy is an increasingly important component of the policy mix. At the same time, and like all forms of credit, trade and manufacturer credit must be based on mutual trust and transparency.
Internationalization of trade imposes standards which encourage quality improvement.

Access to WTO, EU enlargement and access to the EU market impose quality standards for agricultural and agrifood which become more and more demanding after recent outbreaks of animal and food-borne diseases and other threats to the food supply. This forces necessary change and adaptation of the agrifood chain to the prospect of exports as well as increasing demand from domestic customers. International organizations including the EU, the World Bank, the FAO, the SIDA and the GTZ provide significant support to governments in the elaboration of the necessary legal environment and the establishment of quality management systems at company levels.

The integration of multinationals into the company business strategy as part of regional specialization and concentration programmes contributed to the improvement of technologies, product quality and access to lucrative markets. However, it has not always been welcomed within the countries, particularly by workers and suppliers who are negatively impacted.

The widely recognized success of vertical integration in different chains shows the impact of providing services: upstream (e.g. fertilizers, technical expertise, training, finance) and downstream (e.g. pre-processing, storage, transport). The involvement of firms in vertical coordination necessitates that some aspects of the overall environment must exist: contract enforcement (i.e. a functioning judiciary), transparency, good governance and reasonable levels of simplicity of the business registration system.

**SMEs are at risk in the internationalization process: Organization of producers, processors or retailers must be viable and efficient to overcome this threat.**

The internationalization of food retailing and manufacturing that swept through the agrifood system in industrialized countries is now moving into the region. Small and medium-sized producers, processors and retailers are struggling to keep up with the wave of new demands being made on their supply chains by large food manufacturers and retailers. Initiatives have arisen to remain competitive and meet the challenge of corporate giants.

**Organization of producers** into cooperatives or NGOs has proved to be very successful as it helps to improve product quality through investment in collective equipment that small farmers could not afford individually. It also increases the bargaining power of small-scale farmers and might help to reduce transaction costs that prevent processors or retailers from dealing with small entities. This is illustrated by the example of milk producers’ cooperatives in Romania which succeeded in remaining competitive with large processing plants.

**Hungary started its EU harmonization programmes including food safety and quality control in 1991.** The main public sector responsibility was to prepare and publish the Parliament and Ministries Acts, and to ensure the implementation of the related regulations. The Ministry of Agriculture started to define the quality policy for the food sector in 1997 and issued a document listing all necessary quality improvement measures required to allow Hungarian products to maintain a favourable position on the single market. This process was intended to assist the companies which were applying ISO systems. As a result, the adoption of the EU food legislation was completed by the end of 1998. Further evaluation showed that quality management of the food chain has improved in more than 4 000 food companies.
Infrastructure development is a key issue

Firstly, the development of rural roads has a major effect in improving marketing opportunities and reducing transaction costs. Marketing of agricultural commodities, excluding processing costs, can account for 25 to 60 percent of the final price of foods in some countries\(^\text{23}\). About half of the marketing costs are attributable to transport. Appropriate public investments need to be considered to decrease transaction costs by facilitating construction of rural infrastructure including roads, markets and collection centres. Such measures have been supported by EU accession programmes (e.g. SAPARD) and more widely through loans by the World Bank, Asian Development Bank, other international donors and banking institutions.

Secondly, the more sensitive issue is the dependency on large-scale irrigation and drainage systems designed for operation under the former centralized system. Though their rehabilitation has been supported through aid programmes, their efficiency and sustainability is often not proved in the context of new production systems. The future challenge will be to assess possibilities to adapt these systems for better efficiency under conditions of privatization and for users to organize their maintenance and operation.

The establishment of extension services and of links with research institutions is essential to ensure transfer of information and technologies and to tailor specialist advice to the needs of all types of actors. The importance of extension services in quality improvement has been demonstrated by the services provided by agrifood companies to their suppliers when they required quality products they could not find. Though proving very successful, extension services provided by companies to suppliers in the context of contractual arrangement in the vertical chain remain selective since they are targeted at those producers who can provide substantial and regular quantity of products. Additionally, state-organized extension services are also in process of reform. There is scope for development of more diversified forms of extension services which could even prove to be mutually cooperative. An example of a successful attempt to develop private extension services is given by the Agro Information Centre of Azerbaijan (AIM). Though successful, this type of initiative has generally been started with the financial support of international donors (Germany and the Netherlands in the case of the AIM). One of the major challenges in the development of extension services is to become financially independent. This

\[^{23}\text{E. Bethe, 2006.}\]
depends mostly on the capacity of the extension agents to deliver appropriate services targeted to the needs of the clients in order to encourage a change in attitude towards fee-based services and the reluctance to pay for such assistance.

Areas of public and private cooperation

Examples of successful public and private cooperation exist in several fields. The joint organization of business for fairs, exhibition, or “inter-food” events subsidized by the government are a widespread practice in the region and proved to play a significant role in promoting local products and enterprises. As far as risk management is concerned, initiatives were taken by several governments. For example, in Croatia crop insurance premiums were subsidized for the harvest of primary agricultural producers. Another example of a successful step toward development of risk management mechanisms was the establishment of a price management scheme in Poland that allows traders to buy grain at slowly increasing target prices accompanied with a refund system in case of price decreases. A number of government programmes and grants for support have met with success for firms that want to implement compliance programmes for quality standards systems.

Conclusions and recommendations

The public sector can have an impact on some of the key issues identified for the region

Participants in the workshop held in Budapest at FAO-SEUR premises were from eight of the focus countries and included government officials, academics and private sector representatives. The participants identified key areas of intervention for setting up an enabling environment for agribusiness and agro-industry development. The three priority areas identified were i) food safety and management with the setting up of specialized agencies, laboratories and support to enterprises; ii) risk management through the development of insurance mechanisms, adoption of an orientation toward the needs of the market, and the establishment of an appropriate legal framework; and iii) broader access to financing through investments, grants and the availability of more diversified banking services as well as greater access to loans.

The development of strategies as well as the legal framework for attracting FDI and creating consulting and information services was identified as secondary priorities areas in which the public sector could have an impact.

Other areas of potential intervention were the following: i) development of wholesale markets; ii) tax reduction including strategies targeted at support of SMEs; iii) public and private cooperation in terms of research and development, innovation, identification of partners and collaboration between science and agribusiness; iv) assist businesses through feasibility studies and capacity-building; v) assistance with product marketing and organization of infrastructure; vi) investment in factories and plants as well as upgrading of equipment; vii) clarify the role of the state and how the public sector can help; viii) encourage the development of inter-professional organizations; ix) improve business linkages through increased cooperation among producers enhanced value chain development; and x) support for contracts and law enforcement.

In countries where procedures are still a major obstacle, measures need to be taken in order to simplify the opening of businesses as well as other administrative procedures such as payment of taxes. Overall the rules need to be transparent and the information clearly communicated to enterprises and the population in general. Strengthening the judiciary to the extent possible and carrying out the practical enforcement of laws are concerns. To promulgate appropriate laws
regarding property rights and other fields pertaining to business is essential, but not sufficient. The bottleneck comes with the implementation of the laws.

The establishment of producers, processors, and retailers associations could be strengthened through the following actions:

- Create conditions that encourage vertical and horizontal coordination.
- Reduce the number of transactions/exchange between farm and processor by investing in intermediary institutions.
- Reduce transaction costs, enhancing suppliers bargaining position vis-à-vis processors and governments, and by improving information distribution.
- Provide an attractive partner for food processors and producers to counterbalance the market power of modern retailers, especially hypermarkets.
- Reduce investment costs through leasing of equipment.
- Enhance competition at each level of the vertical chain.

Various types of farms and agribusinesses face different types of problems. A tailored approach is needed. For instance, specific disadvantages of small and medium-sized enterprises are low investment capacity and high transaction costs. Several factors can contribute to the reduction of high transaction costs: 1) public investment in infrastructure for improved access to both input and output markets; 2) encourage investment in post-harvest activities (such as storage, packaging and pre-processing), and in intermediary organizations; and 3) enforce contracts to establish trust in their use.

Establish extension and information services to target specific problems of different actors

A well-functioning extension and information service can contribute importantly to improving the general knowledge and increasing quality. On-farm training is essential to focus on how to change working practices given the available resources and production factors. The question remains however of which are the most suitable forms of extension services: a public or private service, or a mixture of both. The successful case of AIM in Azerbaijan shows the potential impact of private extension services. Nevertheless, in their initial phase, these services need financial support in order to become fully independent from the financial point of view. It takes time to develop a client base to demonstrate the benefits the recipients can get from technical and managerial expertise, and to convince the clients that it’s worth paying for the service. There is certainly more than one solution and extension services could also be part of the cooperatives or associations. This has been demonstrated in several Western European countries (e.g. France) where professional organizations played a leading role in the field of extension. The development of extension packages tailored to the needs and capacities of small and medium-sized farmers and processors could do much to improve their performance.

Ensure that transfer of knowledge and technology from the research and education sectors is provided efficiently. This can be enhanced by the development of an “entrepreneurial skills course” or professional training and vocational training within the existing education structure. The possibility for researchers and teachers to be directly involved in “action research” programmes and to directly provide services (such as studies, expertise and direct intervention) to groups of producers and companies is another way to strengthen links between research and agribusiness.
Need for a more holistic approach to the sector: facilitate the emergence of clusters?

The overall lack of ties and exchanges between different stakeholders in the agrifood chain could be stimulated through the emergence of clusters. This could create synergies between the public and private sector and the various levels of the agrifood chain.

In addition, market opportunities for niche products (such as organic food) and for overall agrifood products need to be identified throughout the entire region. In order to provide a better opportunity for stakeholders to compete more successfully in the various markets (i.e. local and regional, a more export-oriented approach should be adopted. More attention needs to be paid to the development of local ‘food chains’ or sectors/clusters.

Entire sectors in the agrifood chain such as meat, dairy, vegetable oil, and cereals need to be reviewed, from producers to processors and consumers, and viewed in a more holistic way. The former ‘Objective 5A’ of the EU structural fund had precisely this approach. It was intended to provide structural adaptation funds to a number of critical regional and/or national agrifood sectors. It could serve as a guide to define ad-hoc sector policies in Eastern Europe and Central Asia.

The essential role of the state: Redefine patterns of interaction in fields essential for cooperation in a civil society.

During transition, the state sometimes withdrew or diverged from its role. Reforming the former socialist system does not mean that the state should become weak. This had enormous consequences on the agriculture and agrifood sectors, as well as detrimental impacts on health and educational services. These areas are of benefit to the public interest. They represent areas where the state cannot withdraw completely but should at least play a regulatory role or a role in making sure that all actors have access to the necessary minimum of services. A fundamental role of the government is to enhance transparency of the process, enforce the rule of law (programmes and exclude corruption from different levels of the public sphere.

This review highlighted specific fields related to agribusiness and agro-industry, which are of particular concern for state intervention or at least facilitation. These fields are: infrastructure (particularly as far as decisions need to be made regarding large-scale irrigation systems), extension and information systems, research and education and their links with the sector.
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- [www.fao.org](http://www.fao.org)
- [www.oecd.org](http://www.oecd.org)
- [www.worldbank.org](http://www.worldbank.org)
AGRICULTURAL RISK MANAGEMENT AS A TOOL TO IMPROVE
THE AGRIBUSINESS ENVIRONMENT IN UKRAINE

WALTER DE OLIVEIRA

Introduction

This paper was written on the basis of existing literature, documents and personal experience on
the status of risks in agriculture and their management in general, and in particular, in the case of
Ukraine. The objective is to provide further information and support to policy-makers when
undertaking activities related to risk management in agriculture.

The continuous shift towards freer global trade, less government intervention in production
decisions and increased environmental regulation has created more risks for agriculture. This
translates into more variability in prices, yields, legal liabilities and human relations. Risk
management involves choosing among alternatives that can reduce risk, transfer risk outside the
business or increase the business’s ability to bear the risk. There are many alternatives to choose
from and many aspects of the business which require assessment, planning, decisions and
implementation of strategies to address risks.

Risk management is, therefore, a continuous process that the manager must work at just like the
production process. The key to incorporating risk management into the daily operation of the
business is to incorporate the process in each phase of the operation. This means the agricultural
producer has to address business planning, production, marketing, financial management, legal
risks, human resources and how risk management might be addressed in each of these phases or
areas in the production process.

The paper describes the risks agricultural producers face and current key risk management
programmes and tools available to producers through the private sector and government and
provides some general policy alternatives. The conclusions represent generalized approaches to
address some of the key concerns raised in several meetings with public and private stakeholders
in Ukraine.

Risk management as a component of an enabling environment

The term “enabling environment” is used to describe all the factors that are external to the
agribusineses itself but which affect the way businesses operate, and impinge on the development
of the private sector.

We, as development experts, should be concerned with the programmes that governments
undertake, with or without the support of donors, to change the enabling environment so that it
is more conducive to development of the private sector, encourages economic growth and

24 The views expressed in this paper do not necessarily reflect the views of the European Commission or the opinion
of the Ukrainian Government. They express solely the opinion of Mr Walter de Oliveira.
investment, and contributes to sustainable development. A well-functioning agricultural market and a competitive private sector are critical to agricultural growth. Efficient agricultural markets provide the basis for capitalizing on market opportunities and benefiting from increased farm productivity.

The incidence of risk in agriculture is important to policy-makers at national and international levels. Fluctuations in producer incomes, and particularly the threat of catastrophic loss, may present difficult welfare problems for producers, governments and the international community.

It is, therefore, the role of government to provide an enabling environment for business by removing obstacles to the private sector (e.g. inappropriate legislation, institutional deficiencies and market failures) and allowing markets to work with the minimum interference. Equally, it is the role of the private sector to provide appropriate services to business.

Enabling environment programmes should, therefore, focus on three main areas of change:

- The **legal and regulatory framework** within which business operates;
- The **policy framework** for business and private sector development;
- The **institutional and organizational framework** for the design and implementation, and compliance with, policies and programmes concerned with the regulation and promotion of business.

Agricultural risk management is directly related to all the above areas. For the purpose of this paper, I will try to review risk management strategies within an institutional and organizational framework.

The thematic of risk management requires a multi-sectoral and integrated approach of a wide cross-section of actors from different sectors (e.g. agriculture, natural resource management and the environment). For example, the following enabling mechanisms could be put in place:

- A clear and comprehensive policy defining government objectives and commitment to risk management in relation to development strategies and goals;
- A strategy that enables risk reduction measures to be adopted in both development and disaster management contexts. This would facilitate the development of a risk management plan and its integration into local development plans;
- The establishment of organizational structures and systems that would facilitate the coordination of stakeholders and concerned agencies and of organizations at various levels to ensure efficient and effective risk management strategies and responses.

**What is agricultural risk management?**

Risk management is mostly concerned with reducing the possibility of unfavourable outcomes, or at least softening their effects. Rural dwellers make decisions in a risky and ever-changing environment. The consequences of their decisions are generally not known when the decisions are made and outcomes may be better or worse than expected. Variability of prices and yields are major sources of risk in agriculture. Changes in technology, legal and social concerns, and the human factor itself also contribute to the risky environment.

Risk management is, therefore, the systematic application of management policies, procedures and practices to identify, analyse, assess and monitor risk. For any organization, whether a large corporation, a government agency, or a family farm, risk management is, or should be, an integral
part of good management. It is a way for an organization to balance the chance of serious loss against the opportunity for profit-making.

It is well-known that rural business people are not inclined to get into risky situations unless there is a probability of making money. Higher profits are typically associated with higher risks. It is to the business person’s advantage that these risky, but potentially profitable situations are managed as carefully as possible. Effective risk management involves anticipating possible difficulties and planning to reduce their consequences, not just reacting to unfavourable events after they occur.

Risk management strategies enable businesses to effectively deal with uncertainty and associated risk and opportunity, enhancing the capacity to build value. Value is maximized when management sets strategy and objectives that strike an optimal balance between goals for growth, return on investment and related risks, and efficiently and effectively deploys resources in pursuit of the business’ objectives. Therefore risk management, although considered as an external factor to the agribusiness, directly affects the way agribusinesses operate.

The full implications of the relationship between natural disasters, risk management and economic and social development are seldom fully understood. To incorporate this relationship into development planning there is a need for further research into the long-term development impact of natural and man-made disasters.

Addressing problems of risk within an agricultural production system requires an understanding of the critical issues and of the multiple approaches to risk management. These include market development and access, crop diversification, irrigation and intensification of farming, and development of financial and social capital, etc. Changes in the agricultural system, including changes in risk management strategy, can have both beneficial and damaging effects. It is therefore critical that interventions have clear goals based on reliable information and sound analysis.

On one hand, farmers’ efforts to avoid risks through on-farm management practices (e.g. crop diversification and use of traditional varieties and crops) help maintain stable but lower production and income levels. On the other hand, production instability increases domestic food price variability and uncertainty for rural producers.

There are several mechanisms to deal with the risky business of farming:

- Using and improving information available for decision-making, such as market prices, regional rainfall probabilities, new crop varieties and markets.
- Using less risky techniques, such as growing lower yielding but more reliably drought-resistant crops or choosing to produce crops with more stable markets over crops with potentially higher but less certain returns.
- Production diversification by planting a variety of crops for separate markets to mitigate climatic, disease, pest, and market vulnerability.
- Financing farm activities with credit and borrowing in cash or in kind.
- Using informal and formal insurance tools.
- Using, where available, contract marketing and futures trading mechanisms (such as forward contracting to sell all of a crop at an agreed price, futures contracts) to reduce price risks for commodities not yet produced, or for future inputs.
Rationale for risk reduction and investment in agriculture

Risk is a function of the exposure and capacity of rural communities in relation to the vulnerability they confront. The increased vulnerability and lack of formal management training within rural communities have definitely increased the impact of perils on their lives and livelihoods.

This trend can be attributed to inconsistent development practices and continued emphasis on reactive approaches to handling risks. Risk management must be mainstreamed in policies and programmes for sustainable rural development.

“Risk” and “uncertainty” are two basic terms in any farm decision-making framework. Risk can be defined as imperfect knowledge where the probabilities of the possible outcomes are known, and uncertainty exists when these probabilities are not known. Taking a risk can therefore be defined as exposing one’s self to a significant chance of loss.

Risk is omnipresent in agriculture and the major risks, as perceived by farmers, are weather, price, marketing risks and changes in government regulation and legislation. Producers try to manage weather risks by using farm diversification (seasonal crop types, crop rotation and combination of crop production with animal husbandry), crop insurance and seasonal finance. Most farms have no financial reserves or liquid assets that can be employed in case of critical loss due to unfavourable weather conditions. Households are, therefore, vulnerable to those risks when a significant loss threatens the sustainability of their livelihood - a common situation for many small-farm households in transition economies.

Improving the investment climate should be one of the strategic pillars in rural development strategy. The business environment in which agricultural producers operate today is constantly changing and the responsibility to manage risk is increasingly placed upon the agricultural producer. Risk management strategies should, therefore, be designed to reduce risk within the
farm (e.g. product diversification), transfer risk outside the farm (e.g. crop/livestock insurance) and build the farmer’s capacity to bear risk (e.g. maintaining/increasing liquid assets).

Risk management is not a single action that can be applied to all farms indiscriminately. There are several key decision-making criteria to be taken into consideration, including the goals established for the operation, the risk-bearing ability of the farm and the farmer’s attitude towards risk. Each of these items will be different for the individual farm.

The development of tools for reducing risks in agriculture is very much a process of learning by doing and requires careful consideration of the various strategies available and the possible outcome of each. The process can be broken down into several steps:

In general risk responses, or methods of dealing with variability, are grouped into production, marketing, and financial responses. Production responses generally act to reduce risk by reducing the variability in production. Marketing responses may reduce risk by narrowing the range of possible outcomes or may involve transferring price risks to other individuals or institutions. In contrast, financial responses generally emphasize the firm's capacity to bear risk and do not reduce the probability of an unfavourable event. Financial responses, such as insurance, may also transfer risks to others and provide the means with which the farm business can withstand adverse consequences should they occur.

The most common sources of marketing risk for the farm operator are as follows:

a) Market or price risk is associated with the purchase of inputs as well as the sale of commodities. Fluctuations in input and output prices cause income gains or losses. These fluctuations can occur within a marketing year as well as between years. Net worth may also be affected if prices of investment inputs such as land and machinery change. Availability of inputs is also a risk. In addition, the variability of prices, interest rates and relative prices are risk factors that influence many decisions over time.

b) Production risk is random variability inherent in the production process. Weather, diseases, and pest infestations lead to production risk in crop and livestock activities. Fire, wind, theft, and other casualties are also sources of production risk.

c) Technological risk is the potential that current decisions may be offset by dramatic technological improvements in the future. There is the risk that durable assets will become obsolete. The rapid changes in farm machinery and cultivation techniques are current examples.

d) Legal and social risks include things like government pricing and income programmes, taxes, trade, credit and environmental policies, all of which have impacts on the operating environment. These risks may increase as firms get larger. New risks may result also from, for example, forward contracts and minimum price contracts, which can introduce an additional risk dependent upon the integrity of the contractor.

e) Human sources of risk are associated with the labour and management functions in farming. Health problems of key individuals can severely disrupt farm performance. Furthermore, changing objectives of individuals and family members can have major effects on a farm's long-term operations and viability.

In risk management, expectations about the future are also important risk-response factors. For instance, expected prices for sunflower and potatoes have some impact on farmers' planting decisions. Investment decisions implicitly or explicitly involve expectations about future prices, costs, yields and a number of other factors. No doubt the past has a significant impact on most expectations for the future. However, exactly how individuals form their expectations is unknown. Furthermore, all individuals probably use somewhat different procedures.
Farmers, like other business people, may tend to have selective memories. If the tractor recently broke down, the tendency is to overestimate the probability of another breakdown. Extreme events are sometimes remembered and given excessive weight in expectations. However, farmers who have not experienced a particular event, like severe droughts or hurricanes, may underestimate the probability of that event.

Recent past events tend to be weighted more heavily than those events that have occurred some time ago, and when circumstances have changed, the past may provide very little basis for future expectations. Basing future expectations on the past implicitly assumes that the factors responsible for past events will continue in the future. However, long-term expectations based on recent changes can be especially misleading.

Formulating expectations is an important phase of the decision-making process as it involves judgement. Most farmers rely heavily on personal experience and supplement this with other information. Futures prices and forecast information, as well as a view to the past, can be helpful in formulating price expectations.

Short-term expectations are generally more precise than the long-term ones because more information is available. Expectations are personal and each individual has differences in goals, attitudes toward risk and the ability to withstand risk.

Therefore, the most useful tool a producer can use in risk management is good information. There are several sources of information that might be available to the farmer:

a) **Farm records**: The best source of historical production and marketing information are (or should be) the farm records. Farm records may be supplemented and complemented by off-farm information, forecasts and predictions. Crop yield, livestock production and cost information generated by farm records reflect the production capabilities of the specific assets controlled by the business. The business management capability is also reflected in both the production and marketing aspects of the business. As such, this recorded information should provide insights into the actual production and price variability experienced by the farm business in the past. The records should also indicate how successful past risk management efforts have been. The combination of historical results and the risk preferences of the individual producer should point out what, if any, changes in risk management should be made in the future.

b) **Off-farm information**: Information from sources other than the farm can prove useful in the management of all aspects of business risk. Agricultural statistical services, extension services and other government agencies as well as consulting/advisory services, newsletters, magazines, agricultural suppliers and neighbouring farmers can all prove to be valuable sources of information for a producer.

c) **Production and market information**: Historical yield and price information should be available from the national statistical service. This information can prove useful when compared to the data generated by farm records. It is important to keep in mind that as the geographic base of observations is enlarged, the variations tend to decrease. As it is made smaller, the variations tend to increase. This is true simply because the larger number of observations tend to balance against results. Comparing historical farm business performance to that of similar farms in the same area provides additional insights into which aspects of the risk management function may need improvement.
Market situation and outlook information can be available from many sources. National or local extension services, marketing advisory services, farm magazines, etc. all provide analyses of the current situation and market outlook for most agricultural products.

The major difference between information pertaining to production and market risk is that the latter is qualitative in nature. A farm manager can get "hard numbers" to quantify yield and price. The same cannot be said about market risks. The best available information will only indicate general trends that are taking place at local, national and international levels.

Trends concerning technical, human, social and legal risk can be very important in the management of the farm business. Examples of topics on which information of this nature might prove important could include environmental legislation, resource conservation, food safety, water quality, animal welfare and farm programmes and policies.

Realization of the importance of these issues and good information about them could help the producer avoid detrimental decisions in both the short- and long-term. Elimination of detrimental decisions should improve the farm manager's technical, human, social and legal ability to manage risks.

**Roles of government and private sector in agricultural risk management**

The overall objective for an agricultural risk management system should be a private sector-led and demand-oriented system in which farmers are able to access appropriate and affordable services supplied by the private sector. Given this, and given the frequent market failures associated with private sector supply, public sector involvement in risk management is important and needed, especially at the initial phase of the process of developing the system.

Once the system is established and working properly, the public sector involvement should be limited to: establishing a favourable environment for private sector initiative, establishing mechanisms for management of catastrophic risk that the private sector is unable to cover and building the capacity of the private sector.

A first step would be to recognize the strengths and limitations of existing institutions (e.g. insurance companies, credit unions and farmer associations) able to help farmers cope with production and marketing risks. In some countries, risk-sharing institutions are basic and informal and commercial institutions are not always available for most of the producers. Informal risk-sharing strategies (e.g. share tenancy contracts, traditional money lending and risk sharing within extended family and other community networks) work well in most years and locations where risk events are independent and vary widely. While these approaches do not pool risks as efficiently as, for example, a nationwide crop insurance or credit scheme, they normally are available to most of the farmers.

We can all agree that as a business, risk management and agricultural insurance should belong to the private commercial sector for reasons of efficiency. However, the very nature of risk management in agriculture means that it is inevitable to have strong governmental involvement. For this reason, the public sector should place much attention in designing risk management and crop insurance programmes with the objective of optimizing the role of the public sector, while harnessing the drive and efficiency of the private insurance sector.

The public sector should also be more pro-active not only in an overall policy sense, but also intimately involved in various ways ranging from initial investigation of the feasibility of
introducing a new crop insurance product, marketing promotion and even financial participation. For example:

- Government’s objective in promoting risk management must be clear. Is it purely an additional risk management mechanism, or is it also a possible programme to subsidize the farming sector?
- Establish strong linkages, at an early stage, with international risk management agencies. These agencies can assist not only with technical advice, but can also be instrumental in ensuring the necessary adherence to correct application of state support, premium setting procedures, etc;
- Ensure that existing insurance companies (or new entities) have a sound legal basis on which to offer insurance products, with the required level of business competence;
- Work closely with representatives of the farming and SMEs sector. This will help ensure that the services and products are suitable and therefore in popular demand.

The public sector must create an institution (or a department within an institution) that will have the mandate to operate in the agricultural risk management sector (including agricultural insurance market segment) and which will implement adequate practices similar to other state institutions which are dedicated to rural development.

The most developed risk management systems exist in countries where the governments have established specialized agencies or introduced partnership programmes with the private insurance sector. This strategy requires an active government role and an allocation of substantial budget funds. Risk management systems allow governments to have better control over allocation of subsidies.

The specialized agencies define which programmes should be introduced and play an active role in formulating the country agricultural risk mitigation strategy. Such a government agency is a costly initiative and requires permanent budgetary support.

The agricultural risk management partnerships are less costly for the state budget since many functions are transferred to the private insurance sector. The partnerships allow private companies to increase the calculated premium with a percentage that should be sufficient for covering the companies’ administrative costs and some reasonable profit.

The most effective system for management of risks in agriculture seems to be the creation of a specialized agency within the Ministry of Agriculture. A state institution for agricultural insurance has operated successfully in Spain for a number of years and since 2003 a similar state institution has been operating in the Russian Federation.

The creation of an agency for agricultural risk management is very much desired. The agency could have, amongst others, the following functions:

- Gather information for the analysis of the state of risk management and agricultural insurance and the development of strategic plans. The information obtained should be used to prepare state subsidy programmes for agriculture.
- Be in charge of the development of requirements for licensing companies wishing to engage in risk management programmes (e.g. participation in subsidized agricultural insurance programmes). Companies would be required to create a regional network for the servicing of agricultural insurance subsidy programmes which should include sufficient expertise capable of evaluating losses as well as a sufficient number of agents.
Implement standards for agricultural risks in the development of subsidized insurance products and regularly review the technical parameters of insurance products to ensure the adequate quality of insurance products offered to agricultural producers.

Establishment of conditions for the creation of a partnership between the state and private insurance companies. The partnership programme should create conditions which support the interests of the state as well as of the private insurance sector in the development of agricultural risk management strategies and the creation of a system of managing risks within the agricultural sector.

The agricultural sector and risk management in Ukraine

Ukraine is one of the world’s largest producers of sugar beet, grain and oilseed crops. The agricultural sector accounts for approximately 15 percent of the country’s GDP with an annual production volume of approximately US$10 billion.

Of a total land area of 60 million hectares, roughly 42 million is classified as agricultural land, which includes cultivated land (grains, industrial crops, fodder, potatoes and other vegetables and fallow), gardens, orchards, vineyards, and permanent meadows and pastures. Winter wheat, spring barley, and maize are the country’s main grain crops. Sunflowers and sugar beet are the main industrial crops. There are about 40,000 private and 16,000 commercial farms. Private households produce approximately 60 percent of fruits, vegetables, milk and meat per annum. The Ukrainian agricultural sector annually supplies about 40 million tonnes of grain, 16 million tonnes of sugar beet, five million tonnes of oilseeds and 27 million tonnes of fruits and vegetables.

In Ukraine, farmers are becoming more “commercial”, with increasingly higher levels of financial investment. Banks are more and more frequently examining the feasibility of using financial mechanisms, such as crop/livestock insurance, in order to disburse loans. Ukrainian farms and agribusinesses still have a limited choice of risk management instruments. The major risks, as the farmers indicate, are weather, price, marketing risks and changes in government regulation and legislation. Producers try to manage weather risks by using insurance, farm diversification (seasonal, crop types, crop rotation and a combination of crop production with animal husbandry) and seasonal finance. Most of the farms in Ukraine, however, have no financial reserves or liquid assets which can be employed in case of critical losses.

Unfortunately agricultural risk management in Ukraine is underdeveloped. Crop insurance represents only a modest segment of the general insurance system in the country and

As of 31 December 2005, the country had a total of 426 insurance companies registered and most of these companies were small and operate either in several regions or work with selected types of insurance products. Although approximately 180 companies have received licences for agricultural insurance, most of them keep the licences as an option for working in the agricultural sector in the future. About 30 companies regularly underwrite agricultural risks. Most of these companies operate nationwide with regional offices established in most

![Ukraine - Winter crops 2005/2006](image-url)
administrative regions. In spite of that, only 6.4 percent (representing 388,430 hectares) of the total planted area (6,059,000 hectares) in the winter crop season of 2005/2006 were insured.

It could be estimated that about 20 percent of Ukrainian producers could insure 25-30 percent of the annual crop production volumes (approximately US$3 billion total insured value). The potential annual premiums could be estimated at US$250-300 million, also being equal to the current Ukrainian government’s annual budgeted support to the agricultural sector.

The Ukrainian insurance companies have tried to develop agricultural insurance products since 2001 when the Government of Ukraine declared its interest in establishing a national agricultural risk mitigation system. However, the overall efforts had limited success until the introduction of a government insurance subsidy programme in late 2005.

Also, according to Ukrainian legislation all property used as collateral should be insured. This has resulted in the fact that approximately 90-95 percent of insurance contracts written in 2002-2005 were purchased by farmers as a requirement by commercial banks in order to obtain seasonal and mid-term credit.

The project “Improvement of Risk Management Capacity of Farmers and SMEs in Agriculture” – funded by the European Union - is supporting the Ministry of Agriculture Policy in:

- Assisting the drafting of legislative and normative acts in the fields of risk management, agricultural insurance and reinsurance in line with the EU and international best practices;
- Improving provision of agro-insurance/reinsurance services and to increase knowledge-base of target groups about methodology, tools and procedures available and/or developed within the project framework;

The project started in June 2005 and will run for 24 months. It is expected that, by using proven agricultural risk management techniques, the Ministry will be in a better position to assist in improving profitability and the standard of living for rural communities in Ukraine. It is anticipated the project will contribute to the consolidation of private sector activities in rural areas through improvement of risk management and particular insurance services provided to farmers and SMEs.

The direct target groups are the Ministry of Agrarian Policy of Ukraine and the Association of Farmers and Private Land Owners of Ukraine. The indirect target groups are farmers, SMEs and all stakeholders in the agricultural sector.

- The project is supporting the target groups through the dissemination of information and advice on:
  - Consultancy on agro-insurance and reinsurance services;
  - Increased knowledge-base about methodology, tools and procedures available and/or developed within the project framework
  - Assisting farmers and SMEs in securing their collateral while borrowing money from banks
  - Support to secure income base against risks associated with agricultural production;
  - Advice on diversification.

To achieve this, the project is implementing four interlinked components:

Component 1: **Development of the Legal Base**
Component 2: **Development of Agro-insurance Procedures, Systems and Products**
Component 3: **Improvement of Risk Management and Agro-Insurance Practice in Pilot Regions**
Component 4: **Increasing Target Groups’ Knowledge Base and Understanding of Risk Management and Agro-Insurance**

There is also a lack of trust by farmers in the insurance sector. The insurance companies just recently started to publicise their claims payout results and this information for the most part doesn’t reach the farmers. Producers suffered large crop losses in 2003 due to winterkill and severe drought in May-June but the insured farms had several problems with claims because of contract wording and unclear definitions of terms used in the contracts. There is an additional
complication in that most farm managers and owners don’t have a good understanding of insurance principles.

The Government of Ukraine, through the Ministries of Agrarian Policy, Economy and Finance as well as with the support of the European Union Programme for Ukraine, is committed to the development of an agricultural risk management system, based on the European experience in general and the Spanish experience in particular.

As mentioned before, agricultural insurance, as a business, should belong to the private commercial sector. However, the very nature of risk management in agriculture means that it is inevitable to have strong governmental involvement. For this reason, the Ukrainian Ministry of Agricultural Policy is required to participate in the design of risk management programmes with the objective of optimizing the role of the public sector, while harnessing the drive and efficiency of the private sector.

The government of Ukraine introduced mandatory crop and animal Multi-Peril Insurance programmes in cooperation with insurance companies in 2002. The government also provided subsidies for major field crops in 2003 and 2006 to compensate farmers for winter crop loss. A similar subsidy is also occasionally provided for spring crops. In 2006 the government adopted a resolution allocating UAH529 million (approximately US$106 million) in subsidies of major winter and spring crops. Furthermore an allocation of UAH5.8 million (US$1.16 million) was made as subsidies for the winter crop insurance programme at the end of year 2005. Another UAH10 million (approximately US$2 million) is allocated in the state budget for the multi-peril crop insurance subsidy for the spring crop.

**An agency for agricultural risk management for Ukraine**

The development and implementation of risk management strategies are an indispensable condition in the creation of an enabling environment for agribusiness in Ukraine. Risk management strategies are critical in stabilising production and revenue, increasing farmers’ participation in management of production risk and in the promotion of the most appropriate production technologies.

International experience in agricultural risk management includes large-scale models and forms of cooperation among stakeholders tailored to the objectives, conditions and traditions of each particular rural environment. At the same time, more and more countries follow the positive experience of other countries (e.g. Spain) where risk management systems have been successfully implemented.

So far, the strategies adopted to cope with agricultural risk in Ukraine (i.e. mainly agricultural insurance) are not representative of effective risk management mechanisms. The reasons can be found in the characteristics of agro-insurance development in the country:

1) Low levels of demand for agro-insurance products by farmers (insignificant percentage of participation in insurance; insurance is not perceived as a tool of risk management, but rather as a requirement for receiving bank credit; farmers’ lack of trust in insurance companies);

2) Limited products and service offerings from insurance companies (very small percentage of agro-insurance products in the portfolio of insurance companies);

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25 The regulation Nr 1000 of 11 July 2002 obliged all farms to insure their crops under Multi-Peril Crop Insurance Program (MPCI).

26 Regulation Nr 239 of 2 March 2006.
insurance companies do not include a suitable range of insurance products that truly respond to the needs of the market; insurance companies’ lack of trust of farmers);

3) The public sector has not implemented important actions to support the stabilization of production and revenue in the agricultural sector.

As international experience shows, rural development schemes require a systematic approach to agricultural risk management. The systematic approach requires clear definition of the legal basis for cooperation between the main stakeholders – agricultural producers, financial and credit institutions, service providers (including insurance companies) and the government.

The government should represent the interests of society. Given, however, the lack of trust between farmers and insurance companies in Ukraine, it would be sensible for the public sector to play a leading role in consolidating participants’ efforts and their interests. The adoption of a Concept on the Development of an Agro-Insurance System in Ukraine would be a starting point in the definition of a government strategy in this sector.

Based on international experience, the main criteria required when implementing risk management strategies are:

- Transparency and trust between participants;
- Voluntary participation in the system. In case of government support, the public sector should regulate and control the participants’ activities;
- Accessibility of insurance services and products to all agricultural producers. The market should provide a wide variety of insurance products that comply with producers’ needs and at affordable prices;
- Economic suitability of the agro-insurance market for private insurance companies;
- Efficient use of public funds for risk management support;

Risk management strategies should be developed in the following directions:

- Promotion of agricultural development, with the aim of increasing the sector’s use of risk management tools and services;
- Improvement of legislation regulating the provision of insurance services and public support for rural development;
- Institutional development, aimed at increasing the public capacity and knowledge of risk management strategies;
- Stimulation and promotion of the private agro-insurance sector in order to increase the capacity to provide qualified services and products.

Aims, responsibilities and functions of an agency for agricultural risk management

The aims of a Risk Management Agency should be based on the implementation of a functional management system of state support for agricultural insurance. This national institution should allow the creation of a systemic approach to the management of agricultural risk and the effective utilization of state funds to this end.
The fundamental responsibilities of the Agency would be:

- the organization of resources required to ensure state support of agricultural insurance in accordance with the laws of Ukraine;
- the collection of required operational information in the field of agricultural insurance;
- the acquisition of experience and proficiency in agricultural insurance, leading to the development of recommendations to optimize the mechanisms of state support for agricultural insurance.

The functions of the Agency should be as follows:

1) Develop insurance programmes and products.
2) Provide actuarial analysis of subsidy products.
3) Train experts in agricultural insurance.
4) Oversee performance indicators for insurance products.
5) Provide arbitration services for dispute resolution.
6) Train producers in the principles of risk management and insurance.
7) Provide a forum for additional information and educational activities.
8) Coordinate strategies for reinsurance.
9) Collect and analyse data.
10) Share information with other state institutions regarding the existing situation in the agricultural sector.
11) Calculate the cost of insurance subsidy programmes for future periods of time.
12) Provide oversight of the distribution of insurance subsidies.
13) Accumulate insurance statistics.
14) Develop procedures for estimating losses and monitoring of crop sowing for the mandatory utilization of insurance companies.
15) Support the joint creation by the state and private companies of a reinsurance fund. The reinsurance fund should only be used to cover exceptional losses within subsidized insurance programmes for crops and livestock. The reinsurance fund should have clearly defined indicators for the utilization of reinsurance reserves and be independent of possible political decisions of other state bodies. The fund should ensure payouts only on statistically-verified losses (e.g. inspection of fields, meteorological indices, peer data) and only after the expenditure of all the risk coverage resources of private insurance companies.

The successful execution of the Agency’s designated functions depends on its authority, organizational structure and competent staff. The Agency should hire Ukrainian and international experts to establish standards of professional competence and ask the assistance of international institutions and other countries to train staff in the fundamentals of risk management.
Conclusions

Risks create inefficiencies in markets and the use of effective risk management tools and strategies are important for improving the efficiency of the farming sector. If risk management tools are not adequately provided by the private sector, the public sector may need to act. All forms of government support should be evaluated based on the situation in the country’s agricultural sector, the objectives of government support and their impact on the state budget. It is always advisable to undertake risk management programmes which the state budget can support.

In the case of Ukraine, the government supports and participates in agricultural risk management. However, government support is a cost for the national budget and careful attention should be paid not to raise the incomes in a particular sector in the economy to a level above that created by simple market forces.

Participation in the agricultural risk management programmes should be on a voluntary basis. Mandatory agricultural insurance, as is still the case in Ukraine, is perceived by producers as one more tax to pay. Therefore it is important to provide other incentives and to make crop/livestock insurance voluntary. It is also very important not to force farmers to reduce risk. For example, if farmers recognize the value of crop insurance subsidies, the effects on risk-taking behaviour could become contrary to their expectations. Farmers with subsidized risk management might begin to take on more risks and allow subsidized crop insurance to replace many management practices that farmers could use to manage risk.

The government of Ukraine should also set clear rules for assistance in case of catastrophic risk. This kind of assistance should not be mandatory but must be based on clear eligibility criteria. The allocation of these forms of assistance must be fair and free from administrative bias. In other words, everyone who has sustained a loss and meets appropriate requirements should be eligible for indemnity.

The ultimate objective for an agricultural risk management strategy should be based on a private sector-led and demand-oriented approach. In this context, good practices for promoting and establishing a public/private sector-led risk management system should include:

- **Public sector initiates agriculture risk management services**

  A critical issue is to address large systemic risks affecting agricultural production, and allow the private sector to develop services (e.g. insurance products) for less severe events and for individual, independent farm risks. Large systemic risks must then be identified, and appropriate mechanisms to manage these risks, where markets fail to do so, must be developed. It is essential to make public intervention in this area explicit and transparent. A definite threshold to prompt government payout must be clearly specified. This must be quantifiable, and ideally measured by an independent, competent, and credible third party. Farmer participation in publicly supported schemes should be voluntary and the private service provider should purchase reinsurance on international markets where possible and administrative costs must be controlled.

- **Subsidies for crop insurance**

  Individual crop insurance often requires heavy government subsidization: one important form is through subsidized insurance premiums. As mentioned before, this could,
However, create several problems since it might encourage farmers to assume greater risks and it might benefit large commercial farmers disproportionately.

- **Data collection**

In designing risk management strategies, including insurance products, insurers (both public and private) must understand the relevant statistical properties. This requires both credible long-term statistical information and actuarial models to define the relevant risk probabilities and to predict the likelihood of various events. Various indices may be particularly attractive for their practicality and cost-effectiveness. An important area for the Ukrainian government to support could be the development of information sources such as risk maps that improve the institutional capacity of both public and private sector providers to identify and analyse risk. This information can form a common foundation upon which the transparent identification and pricing of risk (premium rates) can be based. Donors can support both the development of information systems and the building of the capacity of institutions to build databases that can overcome information-related constraints to private sector participation.

- **Creating a favourable regulatory environment**

To encourage private sector participation, the policy and regulatory environment must be reckoned by all stakeholders as fair, credible, stable and enforceable.

- **Education of stakeholders**

Education of stakeholders is important if they are to understand the benefits of risk management strategies. Workshops, information packages, media and other mechanisms are needed to explain the characteristics of risk management schemes and the different opportunities available. Furthermore, technical assistance should be provided to both public and private sector suppliers to ensure that the needs of producers are met. Such assistance might be best provided through co-financing for business service providers.

- **Develop effective financial systems**

In Ukraine, farmers do not have appropriate access to financial markets. Development of financial markets should be promoted where possible to facilitate saving and borrowing in order to complement existing risk management schemes. The ability of farmers to access these services should be at the forefront of public sector involvement. This should also contribute to improving access to funds required for managing price risk. For example, linking finance to index-based insurance is an innovative approach that has emerged in several countries.
TRANSFORMATION AND COMPLIANCE WITH FOOD QUALITY STANDARDS IN HUNGARY AND SOME TRANSITION COUNTRIES DURING THE EU ACCESSION PROCESS

RITA NOVAK FEJOS

Executive summary

In many countries numerous trends are bringing greater attention to food safety regulation. Science is identifying new food-borne pathogens and understanding their potential for serious consequences. Demand for safer food is growing as consumers become more affluent and better understand the links between diet and health.

The proportion of food obtained from food services is increasing, even in middle-income countries, and this reduces consumer control over food handling and preparation. International trade in food products is a larger source of supply in many countries as both technical and trade barriers to food trade are reduced, and this can introduce new sources of risk into the food supply. These trends converge to create both public and private demand for greater food safety. At the same time, governments everywhere are trying to make more efficient use of public resources.

During the last few years, several food safety problems arose that were connected to foodstuffs produced and marketed in the European Union. This resulted in loss of consumer confidence. These emergencies have exposed weaknesses which call for action by the concerned authorities to enforce, improve and further develop existing systems.

This paper examines why food safety and food quality can be a factor of competitiveness and market access. It also assesses the changes of the European Union food safety policy and institutional background as well as the strict requirements which need to be met by the new EU member states.

The subject of this paper is to examine the compliance with food quality and safety standards and regulations in some CEE countries. Four countries have been chosen for this purpose: Hungary, Bulgaria, Serbia and Montenegro. The impact of different stages of accession can be seen by examining these four countries. Hungary already joined the EU and the whole transformation process can be studied. Bulgaria is an accession country and due to join in 2007. Serbia and the newly independent Montenegro are potential candidate countries.

Food safety, quality and standardization as a factor of competitiveness and market access

Global food trade is expanding, providing consumers with access to a wider year-round variety of foods at lower prices. Expanding trade has brought into sharper focus the divergence among countries’ food safety regulations, quality systems and standards.

Standards regarding food production and processing can be classified into three different categories. Classifications of standards are shown in Table1.
Table 1: Classification of standards

<table>
<thead>
<tr>
<th>Standards</th>
<th>Purpose:</th>
<th>Function:</th>
<th>Level of compliance:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>social</td>
<td>product</td>
<td>compulsory (e.g. technical regulations)</td>
</tr>
<tr>
<td></td>
<td>environmental</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>animal welfare</td>
<td>process</td>
<td>voluntary</td>
</tr>
<tr>
<td></td>
<td>quality/safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(sanitary, phyto sanitary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>purity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>classification</td>
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<td></td>
</tr>
</tbody>
</table>

First, depending on the purpose that is to be achieved, there are distinctions between social, environmental, animal welfare, quality/safety standards and purity classifications. The second classification scheme functions with respect to the purpose of the standards: product standards are generally measurable and often easy to control (either in laboratories or even by the consumer). Process standards cannot be determined by an examination of the end product; they are intended to manage and control the processes that actually produce the end product. These process standards are the quality management standards/systems, e.g. ISO 9000. In the third classification, the level of compliance, a differentiation can be made between compulsory and voluntary standards. Compulsory standards-setting bodies are the EU and the national legislatures, for example. Voluntary standards are those proposed by the food industries themselves.

Growing consumer concerns about the safety and quality of foods have increased the value of quality standards and quality assurance systems to firms. The cost of traditional quality control methods rises proportionally with additional quality control requirements, as they are primarily based on final product testing. Consequently, competitive pressure on agricultural and food markets provides incentives for cost reduction in this area. New concepts of process control, benchmarking and documentation are needed for certification and quality assurance to third parties. The decision to implement a voluntary quality management system is determined by a complex array of strategic goals and organizational capabilities and constraints. There are a number of different motives to seek ISO 9000 certification, such as improving internal communication and documentation, gaining competitive advantage, meeting regulatory requirements, improving quality or increasing efficiency. But for various reasons it is difficult to make a clear distinction between internal and external motivations.

The primary objective of certification should be to gain competitive advantage. Depending on the company’s strategy, this might mean to become either the least-cost supplier or a customer-oriented supplier of differentiated products. Secondly, a motive may be internal in one case, while external in another, e.g. reducing costs when it is also part of a customer’s requirements.

Finally, the reduction of transaction costs touches upon both internal and external factors, so that the distinction between internal and external motivation diminishes. Determinants of motivation for adopting ISO 9000 are shown in Table 2.

Voluntary food standards are predominantly commercial standards such as those of the British Retail Consortium (BRC), International Food Standard (IFS) or private standards of supermarkets, whose importance has also grown recently. There are several reasons for this. Without a doubt, higher product quality and safety are being treated as competitive tools to attract consumers. Another important reason is the goal to bring local supply into conformity with the private standards of European retailers, several of which are also the leading chains in
the CEE countries (such as Tesco, Ahold, Carrefour, Metro). Standardization both reduces cost and allows more efficient of product flow in the procurement system. Centralized procurement, with better monitoring ability, qualified specialized wholesalers and preferred supplier programmes of selected producers, raises the capacity of retailers to apply higher standards than it would be possible when purchasing from general-purpose wholesalers who buy from and sell to a wide variety of firms. In general, public food regulations for the domestic market, whether they exist or not, are not easily enforced by governments in the region. Consequently, private standards and private enforcement are currently the principal means of ensuring food safety at retail outlets. Large retailers on the other hand are also easy targets for liability, should a problem be experienced by a consumer.

Table 2: Determinants of motivation for ISO 9000 certification

| External requirement:                          | ISO was a customer requirement;  |
|质量:                                           | ISO would be required in the future;  |
|Efficiency:                                     | ISO was standard business practice.  |
|Expansion:                                      | Improve product quality;  |
|Clarify information:                            | Increase flexibility to meet customer requirements.  |
|质量:                                           | Improve efficiency;  |
|Efficiency:                                     | Reduce costs.  |
|Expansion:                                      | Gain market share;  |
|Clarify information:                            | Access foreign markets.  |
|质量:                                           | Improve communication;  |
|Efficiency:                                     | Improve documentation.  |

Source: Davis (1997), Wiele and Brown (1997), Zaibet and Bredahl (1997)

Marketability and competitiveness of foodstuffs on the market are determined by the quality of products. However, the lack of hygiene or safety limits marketability. Food safety is such an important factor of product quality and consumer safety that the international organizations have adopted positions on the subject. According to the Codex Alimentarius Commission of FAO/WHO:

“Food safety means the assurance that food will not cause harm chemically, microbiologically or physically to the consumer when prepared or eaten according to its intended use.”

Most countries have developed their own food safety regulations, however, differences in food safety regulations and standards among importing and exporting countries can create obstacles in the international food trade.

Harmonization takes place within the framework established by the 1994 GATT agreement on sanitary and phytosanitary standards. This agreement seeks to reduce trade conflicts and barriers for food products. It specifies that countries may set their own risk standards, but that these must be science-based, transparent and applied equally to domestic and imported products. The agreement provides new mechanisms for dispute resolution and recognizes the Codex Alimentarius as the mechanism for developing scientific consensus regarding sanitary standards. A key element in setting standards that will stand up in the dispute resolution process is carrying out a risk assessment of the hazard. The growing adoption of Hazard Analysis and Critical Control Points (HACCP) by many industrialized countries has led the Codex to consider guidelines for setting microbiological safety criteria and for establishing HACCP programmes. One difficulty in setting these criteria is that there is no internationally agreed procedure for carrying out a microbiological risk assessment. In the absence of such an agreement, the Codex has recommended the application of HACCP as the preferred method for ensuring microbiological safety. One trend that may influence such recognition is the use of HACCP as a private standard for international trade. The ISO 9000 certification series for food companies is
being adapted for certification of private HACCP programmes. Such private developments may facilitate eventual harmonization of HACCP regulation among countries.

Countries, however, tackle food safety and trade issues by learning from each other's successes in managing food safety to narrow regulatory differences, collaborating to adopt common or international standards set by a third party, or reaching compromises on conflicting standards. Building common ground for food safety regulation through public and private initiatives helps achieve the simultaneous goal of improving food safety and quality while enhancing trade.

**Policies, institutions and support services that constitute the food quality system in the European Union**

During the last few years, a variety of food safety problems occurred in foods produced and marketed in the European Union. This resulted in a loss of consumer confidence. These emergencies exposed weaknesses that require action by the responsible authorities (i.e. the European Commission, governments of member States and the European Parliament), to enforce, improve and further develop the existing systems for regulating food safety. Today, food is increasingly produced by commercial growers, feeding long and sophisticated supply chains which market processed and branded products to mostly urban consumers.

Food safety needs to be organized in a more co-ordinated and integrated manner. This will allow existing weaknesses to be addressed, whilst at the same time creating a genuinely world-class food safety framework to deliver a high level of public health and consumer protection in accordance with the requirements of the EC Treaty.

**Table 3: Differences between “old” and “new” policy**

<table>
<thead>
<tr>
<th></th>
<th>Food policy “old”</th>
<th>Food policy “new”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment in the food sector</td>
<td>Mostly in food production and primary marketing</td>
<td>Mostly in food manufacturing and retail</td>
</tr>
<tr>
<td>Actors in food marketing</td>
<td>Grain traders</td>
<td>Food companies</td>
</tr>
<tr>
<td>Supply chains</td>
<td>Short – small number of food miles</td>
<td>Long – large number of food miles</td>
</tr>
<tr>
<td>Typical food preparation</td>
<td>Mostly food cooked at home</td>
<td>High proportion of pre-prepared meals, food eaten out</td>
</tr>
<tr>
<td>Typical food</td>
<td>Basic staples, unbranded</td>
<td>Processed food, branded products. More animal products in the diet.</td>
</tr>
<tr>
<td>Purchased food bought in</td>
<td>Local stalls or shops, open markets</td>
<td>Supermarkets</td>
</tr>
<tr>
<td>Nutrition problems</td>
<td>Under-nutrition</td>
<td>Chronic dietary diseases (obesity, heart disease, diabetes)</td>
</tr>
<tr>
<td>For ???food policy</td>
<td>Ministries of agriculture, relief/rehabilitation, health</td>
<td>Ministries of trade and industry, consumer affairs</td>
</tr>
<tr>
<td>Focus of food policy</td>
<td>Agricultural technology, reform, supplementary feeding, food for work</td>
<td>Competition and rent-seeking in the value chain, industrial structure in the retail sector, future markets, waste management, advertising, health education, food safety</td>
</tr>
</tbody>
</table>

*Source: Maxwell, S., Slater R. (2003)*
The food system can no longer be understood simply as a way of moving basic commodities from farm to (the often local) plate. In Table 3, the industrialization and globalisation of the food system is pointed out.

However, even the most comprehensive system cannot function without the full participation of all parties involved. The proper functioning of any system depends on the commitment of EU member states, as well as third countries and agribusiness operators. Consumers should be able to rely on a wide range of safe and high quality products coming from all member states. This is one of the essential roles of the internal market.

An effective food safety policy must recognize the interlinked nature of food production. It requires assessment and monitoring of the risks to consumer health associated with raw materials, farming practices and food processing activities. It requires effective regulatory action to manage this risk and it requires the establishment and operation of control systems to monitor and enforce the operation of these regulations. Each element forms part of a cycle, thus developments in food processing can require changes to existing regulations, whilst feedback from the control systems can help to identify and manage both existing and emerging risks. Each part of the cycle must work effectively if the highest possible food safety standards are to be enforced.

These facts, therefore, demand a comprehensive and integrated approach to food safety. This does not mean that the EU should be exclusively responsible for all aspects of food safety. However, it demands that all aspects of food safety are addressed at EU level. For example, EU legislation has to be enforceable in an efficient manner in the member states in line with the principle of subsidiarity. Responsibility for enforcement above all should remain primarily a national, regional and local responsibility. However, the concept of the internal market means that these are not exclusively national responsibilities: each member state has a responsibility towards not only its own citizens but to all citizens of the EU as well as third countries for the food produced on their territory.

Regardless of the nature of the measure or food law, all must be underpinned by strong science, especially measures relating to food safety. The White Paper on Food Safety was elaborated in 2000. The EU had also been at the forefront of the development of risk analysis principles and their subsequent international acceptance. Regulation EC 178/2002 establishes in EU law that the three inter-related components of risk analysis (risk assessment, risk management and risk communication) provide the basis for food law as appropriate to the measure under consideration.

The guiding principle throughout the EU 2000 White Paper on Food Safety is that food safety policy must be based on a comprehensive, integrated approach. This means throughout the food chain (i.e. from 'farm to table'); across all food sectors; between the member states; at the EU external frontier and within the EU; in international and EU decision-making fora, and at all stages of the policy-making cycle. The pillars of food safety contained in the White Paper (scientific advice, data collection and analysis, regulatory and control aspects as well as consumer information) must form a seamless whole to achieve this integrated approach. The renewed public and regulatory focus on food safety is an exogenous shock to the agrifood sector. An exogenous shock (such as concern over food safety) leads to both increased transaction costs for food firms and consumers in ensuring that food is safe, and to a regulatory response to create a new policy institution. A change in a key policy institution with respect to food safety can have far-reaching (and probably unintentional) effects in terms of the move toward closer vertical coordination widely observed across many segments of the agrifood sector.
Changes have also occurred within EU policy institutions in response to the increased public policy priority accorded to food safety. The need to restore public confidence in EU regulatory institutions has been a motivating factor. The EU 2000 White Paper on Food Safety proposed a number of new pan-European policy institutions, including new legal frameworks for food safety and for animal feed, enhanced monitoring and reporting requirements for food-borne diseases and zoonoses and revamped food hygiene regulations. The establishment of a European Food Safety Authority (EFSA) was proposed as a conduit for generating and disseminating independent scientific advice on matters related to food safety. This Authority is entrusted with a number of key tasks embracing independent scientific advice on all aspects relating to food safety, operation of rapid alert systems, communication and dialogue with consumers on food safety and health issues as well as networking with national agencies and scientific bodies.

The EU’s integrated approach to food safety aims to assure a high level of food safety, animal health, animal welfare and plant health within the European Union through coherent farm-to-table measures and adequate monitoring, while ensuring the effective functioning of the internal market.

The implementation of this approach involves the development of legislative and other actions:

- to assure effective control systems and evaluate compliance with EU standards in food safety and quality, animal health, animal welfare, animal nutrition and plant health sectors within the EU and in third countries in relation to their exports to the EU;
- to manage international relations with third countries and international organizations concerning food safety, animal health, animal welfare, animal nutrition and plant health;
- to manage relations with the EFSA and ensure science-based risk management.

A successful food policy demands the traceability of feed and food and their ingredients. Adequate procedures to facilitate such traceability must be introduced. These include the obligation for feed and food businesses to ensure that adequate procedures are in place to withdraw feed and food from the market where a risk to the health of the consumer is posed.

Operators should also keep adequate records of suppliers of raw materials and ingredients so that the source of a problem can be identified. It must be emphasized however that unambiguous tracing of feed and food and their ingredients is a complex issue and must take into account the specificity of different sectors and commodities. The implementation of all the measures proposed in the White Paper would enable food safety to be organized in a more coordinated and integrated manner with a view to achieving the highest possible level of health protection.

The roles of all stakeholders in the food chain (feed manufacturers, farmers and food manufacturers/operators; the competent authorities in the member states and third countries; the European Commission; consumers) must be clearly defined: feed manufacturers, farmers and food operators have the primary responsibility for food safety; competent authorities monitor and enforce this responsibility through the operation of national surveillance and control systems; and the Commission concentrates on evaluating the ability of competent authorities to deliver these systems through audits and inspections at the national level.

**Characterization of developments in the CEE countries’ food and agribusiness sector during transition and EU accession**

Both for the countries of the EU as well as those in Central and Eastern Europe, eastward enlargement of the EU was a major event. The political decision to pursue eastward enlargement
was already taken in 1993 at the European Summit in Copenhagen but for many years the EU adopted a reluctant attitude regarding when and how accession would be possible. Its reservations were closely tied to the speed of progress in transforming the economic systems of the CEE countries into market economies.

"A competitive market is seen as contributing to total economic welfare by restraining price increases, encouraging firms to minimise costs and promoting an efficient allocation of resources" (OECD, 1996c).

Porter (1990) considers that the performance of an industry depends on a strong competition policy. The reverse of this was experienced by the CEE countries under the communist regime: the total lack of competition and the organization of most industries into monopolies led to very poor performances and subsequently, to the urgent need to restructure them when transition began.

Whether industrial and market structure is conducive to proper functioning of the market is a multidimensional question which depends, to some extent, on the very nature of the industrial branch under investigation. The need for enforcement of strict policies concerning competition and the break-up of monopolies can vary according to the specific features of the various economic sectors and of the considered markets. Namely it depends on the following factors, among others:

- Significance of the size effect on the economic performance of enterprises;
- The nature of firms in the sector considered;
- Level of openness of the economy. In protected sectors (such as in the food sphere), appropriate competition policy could be considered as a decisive factor since foreign companies have limited possibility to compete on the domestic market;
- Barriers to entry and exit of the market. The lower the barriers, i.e. the more the market is open to competition, the lower the necessity to enforce strong competition/regulations;
- Significance of foreign direct investment;
- In the case of mergers and acquisitions, the actual situation of participants has to be carefully taken into consideration;
- In the case of the food industry specifically, it is crucial to take into account the risk of monopsony or oligopsony power because food enterprises deal with a large number of suppliers of raw materials.

Taking into consideration the above-mentioned factors and analysing the changes and the role of the food industry in the CEE countries, a distinct pattern can be observed, showing that countries fall into two groups with regard to the development of the total number of food firms. For the time period considered (generally 1995-99), the majority of countries experienced a rapid increase in the total number of firms, especially when the difference in the data relative to the time period is taken into account. This group includes Estonia, Lithuania, the Czech Republic, Hungary and Romania. The second group of countries includes Slovenia and the Slovak Republic, where the number of food firms remained stable or even decreased. One hypothesis is that there was a sharp increase in the number of enterprises at the start of the transition period until the mid-1990s, but since then the numbers have fallen due to consolidation and rationalization.

A fragmented structure does not allow firms to reap benefits from economies of scale. Closely linked to this phenomenon, small businesses may not have the money to invest in new
technologies necessary to fulfil the stricter sanitary and phytosanitary rules implemented in these countries.

Delays in privatization were considered as reasons for the price-cost squeeze the farm sector experienced at the start of transition. It could be argued that if primary producers had been totally neglected in the privatization process, as happened in Hungary, scrutiny of the public agencies in charge of market functioning would be of primary significance to prevent the occurrence of monopsony or oligopsony market power which might be damaging to agricultural producers.

In transition countries, barriers to entry can be considered as rather low at the start of reforms compared to stronger market economies for the following reasons: 1) Inherited monopoly firms were mainly equipped with outdated or obsolete technologies, while new competitors were more likely to have modern production facilities. This made it difficult for the monopolies to threaten competitors with lower prices. 2) Consumer markets were not highly differentiated. 3) Branded products were rather scarce at the beginning of transition.

The food industry in CEE countries is now recovering from the sharp drop in output in the early years of transition. However, food industry employment in most countries, Poland being the notable exception, is still on a downward trend as a result of restructuring through bankruptcies and consolidation of operations, despite new entries. Industry profitability remains low and many countries continue to experience excess capacity. Access to finance for investment and modernization remains a problem for many food enterprises. The uneven quality and volume of supplies from primary producers and significant payments arrears from retailers and wholesalers for supplied food products in some countries contribute to additional difficulties that the industry faces.

The relative importance of the food industry can be measured in a number of ways. The two most important indicators are the shares of the food industry in value added and in employment (Table 4). These can be calculated either relative to the whole economy (where the usual measure of value added is GDP) or to the manufacturing sector.

**Table 4: Role and importance of the food industry, 2000**

<table>
<thead>
<tr>
<th>Country</th>
<th>Food industry share in GDP, %</th>
<th>Food industry share in total employment, %</th>
<th>Food industry share in manufacturing GVA, %</th>
<th>Food industry share in manufacturing employment, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>2.8</td>
<td>3.5</td>
<td>17.4</td>
<td>17.3</td>
</tr>
<tr>
<td>Latvia</td>
<td>4.1</td>
<td>2.6</td>
<td>31.6</td>
<td>16.3</td>
</tr>
<tr>
<td>Lithuania</td>
<td>5.6</td>
<td>4.1</td>
<td>26.9</td>
<td>23.3</td>
</tr>
<tr>
<td>Poland</td>
<td>3.9</td>
<td>5.0</td>
<td>18.7</td>
<td>18.9</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>3.6</td>
<td>2.6</td>
<td>13.0</td>
<td>11.3</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>2.9</td>
<td>2.2</td>
<td>11.4</td>
<td>9.7</td>
</tr>
<tr>
<td>Hungary</td>
<td>6.5</td>
<td>3.2</td>
<td>13.8</td>
<td>13.2</td>
</tr>
<tr>
<td>Slovenia</td>
<td>2.8</td>
<td>2.3</td>
<td>11.1</td>
<td>9.2</td>
</tr>
<tr>
<td>Romania</td>
<td>6.6</td>
<td>2.3</td>
<td>30.4</td>
<td>11.5</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>3.6</td>
<td>3.7</td>
<td>25.0</td>
<td>17.0</td>
</tr>
</tbody>
</table>

Note: * Food industry shares are quoted for industry rather than manufacturing in Lithuania. Source: LAMO 2003.
On average, the food industry accounted for 4.2 percent of GDP in the EU candidate countries in 2000. Employment in the food industry accounted for 3.2 percent of total employment. The food industry shares in manufacturing value added averaged 19.9 percent in 2000, varying between 11 and 31 percent. The shares were highest in Latvia and Estonia and lowest in Slovenia and the Slovak Republic. On average, labour productivity in the food industry was higher than in the manufacturing sector as a whole.

The economic environment and policy surrounding food processing in the EU accession countries (i.e. Bulgaria and Romania) and potential candidate countries (i.e. Bosnia and Herzegovina, Serbia and the independent Montenegro) are currently in a state of flux. The economic transition caused immense structural changes at all stages of the agrifood chain. Additionally, membership in the European Union requires that the applicant countries fulfil the Copenhagen criteria, which refers to the adoption of the *acquis communautaire*. For food chains, this means that all EU standards concerning a particular food product, its production process and retailing have to be met by the day of accession. In parallel with adoption of the relevant EU rules and establishment of the institutional background of food safety it is essentially important to create and apply food safety and quality systems in the enterprises operating in the food industry. To meet the strict food safety rules is not only the question of the adequacy of control authority but it is the main condition for market presence, growing market shares and trading results and competitiveness.

These processes have intensified the competitive pressure on food processing firms. At the same time, both consumer awareness of product characteristics and disposable income have been increasing, resulting in higher demand for quality, functionality, convenience and safety of food products.

### Some experiences in harmonization of food regulations, institutions and quality systems in selected CEE countries

#### Laws and regulations

Recent changes in the food regulatory environment in Bulgaria have been driven by the EU accession agenda. New food laws, approximating EU legislation have been enacted but specific regulations and implementation mechanisms are still under development. The food safety policy of Bulgaria is based on the current legislation in this area. The basic legislation includes the Law on Foodstuffs, Law on Public Health, Veterinary Law, Plant Protection Law and Fodder Law.

The Bulgarian Parliament adopted the Law on Foodstuffs which entered into force on 15 October 1999. This law is a framework regulatory act providing for the issuance of a number of sub-law acts (i.e. ordinances) which regulate the requirements for foodstuffs at all stages of the food chain in view of providing the consumers with safe foods and protecting their right to information. These regulations and ordinances are transposed into the national legislation of the *acquis communautaire* in this field.

By adopting the Veterinary Framework Law (VFL) Bulgaria has established the basis for transposing into its national legislation the *acquis* concerning animal health, animal welfare, veterinary public health and veterinary control instruments. The VFL entered into force on 1 May 2006. The legislation on transmissible spongiform encephalopathy (TSE) and animal by-products has been transposed. The ban on feeding certain processed animal proteins to farm animals has been in place since early January 2006. The Veterinary Framework Law provides the legal basis for enforcing legislation on veterinary public health in establishments.
The transposition of legislation on the veterinary control system in the internal market remains to be completed, in particular with regard to the registration requirements for stakeholders involved in the trade. Transposition of the principles of the legislation on the veterinary control system in the internal market is covered by the VFL. Legislation transposing the acquis on the identification and registration of animals is now in place for all relevant species as well as for sanctions and control issues. Alignment with the new EU hygiene package and upgrading of establishments is continuing.

The transposition of phytosanitary legislation is at a rather advanced stage with the exception of implementing measures concerning aspects of plant hygiene.

As regards enforcement of the acquis concerning common measures (including zoonoses), Bulgaria has identified its upgrading needs and is working on eliminating the deficiencies. As for veterinary public health, enforcement of controls on residues, veterinary medicinal products, contaminants and zoonoses has not been verified, in particular with regard to the diagnostic methods and standards applied in laboratories. Implementation and enforcement of the animal welfare rules at farm level during transport and slaughter have started, accompanied by training on application of the new legislation. The EU norms and standards on animal welfare are not yet fully enforced.

On 3 June 2006, Montenegro decided to withdraw from the State Union of Serbia and Montenegro and become an independent state. The European Commission recommended that it continue negotiations on the basis of the results achieved thus far but with a view of concluding two separate agreements, with Montenegro and with Serbia, respectively. For Serbia, this meant negotiations in the future would be based on amended directives whereas for Montenegro on the basis of new directives.

In the case of the former Serbia and Montenegro, responsibilities regarding food laws were divided between the two republics, Serbia and the newly independent Montenegro. Each republic followed older federal (i.e. Yugoslav) laws on food safety with separate enforcement and implementation mechanisms. Serbia and Montenegro formed a working group involved in the preparation of a new joint food safety law that was finalized in 2004. This law was WTO-compliant and laid the groundwork for possible EU membership application. Even as republics, these two countries had separate customs, tax, veterinary, phytosanitary and sanitary services. These differences were partially harmonized under pressure from the EU as Serbia prepared for a pre-accession agreement. The “Law on Foreign Trade” in both Serbia and Montenegro promotes the free trade of goods and services. Officially, restrictions and import bans were applied to protect public health and guard the domestic market against subsidized or dumped products.

In terms of administrative capacity, the Ministry of Agriculture in Serbia has strengthened its capacities by establishing a policy unit, which drafted the recently adopted strategy for the agricultural sector. In the food safety and veterinary area, a food safety law, a law on animal welfare and a new veterinary law are still to be adopted. The reorganization of food chain laboratories and sanitary inspection is still pending the adoption of relevant legislation. Animal identification and setting up of the animal registration system has not started. Good progress can be reported in the phytosanitary sector where a new law on plant health was adopted in May 2006. Laws regulating seeds and seeding material for agricultural plants and pesticides have been adopted. Their implementation will require the establishment of a separate phytosanitary directorate with functional independence. Veterinary and phytosanitary services, however, need additional equipment and training in order to be able to carry out the enforcement of legislation.

Serbia should also urgently adopt the new food safety framework law and reorganize food chain laboratories and sanitary inspections. Further improved coordination is needed within the government to find a coherent approach to the rules and regulations in the phytosanitary and veterinary sectors.
Montenegro is also working on an overall strategy for the agricultural sector. Montenegro’s Veterinary Law, adopted in 2004, enabled the establishment of the Veterinary Directorate and veterinary laboratory (for food quality control) to deal with consumer health and protection. The veterinary laboratory is now operational, but needs further strengthening.

However, final adoption of strategies and key legislation and its respective implementation is lagging behind. A "Strategy on Food Production and Rural Development – Montenegro’s Agriculture and the European Union", defining the future course of development of Montenegrin agriculture in view of further approximation to the acquis and integration to EU markets, was adopted. Progress has been registered in the preparation of a food safety strategy. A new draft wine law has been prepared. In the food safety and veterinary area, a food safety law and law on animal welfare are still to be adopted. Animal identification and setting up of the animal registration system has not started. Good progress can be reported in the phytosanitary sector where a new law on plant health was adopted in May 2006. Laws regulating seeds and seeding material for agricultural plants and pesticides have been adopted.

In the phytosanitary and veterinary sectors, both legislation and administrative capacities need to be further aligned with European standards.

**Institutional framework**

In order to coordinate the state policy for food safety in Bulgaria, (i.e. Art. 34, Paragraph 1, of the Law on Foods) a National Council on Food Safety was established with the Council of Ministers. Its members are one Deputy-Minister of Agriculture and Forests, two Deputy-Ministers of Economy, the Vice-President of the State Agency for Standardization and Metrology, and four representatives of professional associations of food producers. The Chief State Sanitary Inspector chairs the National Council. The competent authorities implementing the food safety legislation are shown in Table 5.

**Table 5: Competent authorities for implementing food safety legislation in Bulgaria**

<table>
<thead>
<tr>
<th>EU legislation</th>
<th>Competent authorities</th>
<th>Assistant authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food legislation</td>
<td>Ministry of Health</td>
<td>Health Prophylactics and State Sanitary Control Directorate; 28 Hygiene and Epidemiological Inspectorates; National Centre of Radiobiology and Radiation Protection.</td>
</tr>
<tr>
<td>Phytosanitary legislation</td>
<td>Ministry of Agriculture and Forests</td>
<td>National Service for Plant Protection, Quarantine and Agrochemistry</td>
</tr>
<tr>
<td>Veterinary legislation</td>
<td>Ministry of Agriculture and Forests</td>
<td>National Veterinary Service Central Research Institute on Veterinary Medicine Central Laboratory on Veterinary Control and Ecology</td>
</tr>
<tr>
<td>Animal nutrition legislation</td>
<td>Ministry of Agriculture and Forests</td>
<td>Feed Control Inspection within the National Grain Service</td>
</tr>
</tbody>
</table>

The greatest challenge to regulatory services will be implementation of Bulgaria's new food control legislation. A farm-to-table approach to ensuring food safety requires that all participants in the food system adopt practices that identify and control potential hazards and that regulators audit practices on a regular basis. Bulgarian producers and processors have little or no training in such systems and regulators are not yet organized and trained to conduct audits in a market economy.
The institutional framework in Serbia and Montenegro since May 2003 was regulated on three levels:

- Level of State Union
- Level of Republic of Serbia
- Level of Republic of Montenegro

Until now, according to the relevant Laws for Ministries in Serbia and in Montenegro, responsibilities in food control were handed over to each republic so that they could independently control food in domestic production, as well as conduct import and export on their own territories. Republics accepted certificates given out in each of them.

As in the case of customs and foreign trade regulation, separate authorities in Serbia and Montenegro were in charge of food safety control. In accordance with the joint agreement for creating a union of Serbia and Montenegro, both republics signed in April, 2003 a “Protocol on Harmonization of Actions and Procedures in Foreign Trade of Goods Subject to Mandatory Veterinary-Sanitary and Phytosanitary Control at the Border.” As a result, the two republics agreed to mutual recognition of official actions taken on imported food items, including when products enter one republic for transit to the other. Responsibility for food safety was thus shared between the Serbian and Montenegrin Ministries of Health, Agriculture and Trade. The Ministries of Health in Serbia and Montenegro had both domestic and border (i.e. import) sanitary inspection units safeguarding the reliability of imported foods.

Following Montenegro’s proclamation of independence on 3 June 2006, the Serbian Parliament adopted a decision confirming the status of Serbia as the successor state to the former State Union of Serbia and Montenegro. Serbia inherited the international legal personality of the State Union, its membership in international organizations as well as the participation in international treaties ratified by the State Union. Currently there is no contractual framework between the European Union and Montenegro. Contractual relations between the EU and Montenegro are to be established through the conclusion of a Stabilisation and Association Agreement (SAA).

**Status of harmonization of quality systems with international standards**

According to the Law on Foodstuffs of Bulgaria, for the compliance with the requirements for producing and trade of safe foods, the food operators and traders may develop recommendations for good hygiene practices (GHP) according to subsectors, and can also implement and apply HACCP. Manufacturers in this field must comply with HACCP requirements by end-2006. Certain groups of food operators already faced an end-2005 deadline. The Meat Producers Association drafted guidelines on the application of good manufacturing practices (GMP) in the slaughterhouses and meat-processing enterprises.

The professional organizations of food operators are working actively for training their members on the problems of food safety by organizing seminars with the participation of foreign consultants and Bulgarian experts. Branch standards for the different types of food are being developed with a view to harmonizing the criteria for their production.

Industry organizations of food producers and traders jointly in partnership with consumer associations could develop manuals for GMP and GHP in food production and trade in terms of sub-industries. These manuals could be implemented through coordination with the National Council on Food Safety. The HACCP system is also being introduced and implemented in coordination with the authorities of state food control. Industry organizations of food producers started the development of process descriptions for the implementation of GMP and GHP as a first step toward the introduction of HACCP in Bulgaria.
Food safety law prescribes implementation of GHP and GMP in food production and production of inputs for food industry in the Serbia and Montenegro. It also supports HACCP in production of food as a mandatory requirement. However, many adjustments have to be made in food processing and production in order to implement HACCP. The new food safety law (i.e. in its Provisional articles) gives a period for transition of all food producers to HACCP management systems.

Only the very large production facilities and those which produce foods for export have introduced formal quality management systems. Mostly they have introduced ISO 9001, very few have attempted ISO 14000 implementation, while a small number of producers have already implemented HACCP. However a number of producers have already begun HACCP training, organization of HACCP teams, or have plans to do so in the near future.

Transformation of food policy and food quality standards in Hungary during transition

Characteristics of food policy before transformation

The most important aim of Hungarian food policy is to provide the country's inhabitants with a sufficient amount of food. Contrary to most Central and Eastern European countries, food shortage in Hungary was eliminated from the beginning of the 1960s. As a result, Hungary had a food surplus which went to the Eastern European markets without any quality restrictions. Hungary was a major supplier of processed foodstuffs to other socialist countries prior to 1989 and had developed a well-established food industry. However, general and continuous development of quality did not take place. Within the companies there was 'quality selection' instead of 'quality assurance': the best quality products went to Western markets, products with medium quality stayed in the domestic market, and the rest ended up in Eastern markets. Enterprises exporting outside of the Eastern Bloc had subsidies to earn hard currency. Therefore, even before the end of Communism, many companies were used to meeting Western quality standards.

During the period between 1989 and 1992, Hungarian companies redirected the bulk of their foreign trade from the depressed Central and Eastern European countries to Western European markets. This changed the entire orientation of the Hungarian economy in the long run. Today, developed market economies play a dominant role in Hungarian foreign trade.

The volume of trade, including exports, grew during 1989-1992 and served to stabilize the Hungarian presence in the newly-acquired markets. This, in turn, caused strong trade relations with the West to become a permanent feature of the economy.

Quality control and quality assurance in Hungarian agriculture and the food industry look back upon a past of more than a hundred years. Due to the high level of development of the Hungarian economy and the country’s upcoming EU membership coupled with increasing consumer needs, the issue of quality had already been prominent prior to 2000. For the Hungarian food industry, improvement in the level of product quality was indispensable for the country’s national economy and still supports its primary interest with respect to both the domestic and international food markets.

Prior to 1989, most Hungarian exports were shipped to countries of the Former Soviet Union that did not always impose the more stringent quality and safety standards of the EU. In 1991, Hungary embarked on a process bringing food safety and quality control programmes in line with EU requirements. Another concern of the Hungarian food industry was the increased competition from EU imports after Hungary joined the EU. The opportunity for domestic
consumers to purchase a wider variety of high quality foods at competitive prices presented a serious threat to the ability of traditional Hungarian firms to survive.

In terms of Hungary’s accession, it was significant that the enterprises operating in the food industry meet the requirements of food law, food trade and consumer needs. To meet the strict food safety rules was not only the question of the adequacy of control authority but it was the main condition of market presence, growing market share and increased trading results and competitiveness.

Competitiveness involves a number of important elements such as: the development of quality, the improvement of the regulatory environment, the development of education, and the redistribution of research and development resources. Accordingly, it is essential for the small and medium-sized enterprises to meet the strict requirements of food safety and hygiene conditions to apply food safety and quality systems. In addition, implementing quality management systems and following quality strategies result in significant growth of market position and improvement of profitability.

As a result, the majority of food processing companies in Hungary implemented up-to-date systems of quality assurance in order to ensure uniform food quality. As a result of the growing importance of food safety, in 1996 more than 50 companies introduced several elements of HACCP in order to comply with the recommendations of the Hungarian Food Law. By the end of 1997 more than 122 food processing companies introduced the ISO quality management system.

**Quality policy prior to EU accession**

Hungary’s accession to the European Union was also significant inasmuch that as a result of the country’s extensive cooperation and commercial relations as well as due to its ownership structures, the Hungarian food industry has become economically fully integrated into the EU’s food industry. Investors from the EU currently hold more than half of the food industry’s registered capital in the Hungarian food industry. The EU’s internal market is the destination of around 80 percent of the exports of companies with a majority foreign ownership.

In the pre-accession period, the primary aim of the food industry was to comply with EU regulations. This involved the assurance of technical conditions required for compliance with food safety and hygiene regulations; the modernization of environmental protection and waste management; implementation of the provisions of the EU’s animal welfare regulations and the technological development necessary for improvements in the level of product quality. Although EU accession was the motivation for a renewed emphasis on regulation and improvement of food quality, it led to technical and economical developments that helped improve the competitiveness of the Hungarian food industry.

Quality should be the central element of any business strategy formulated for individual farms and companies in a given sector, including the whole agrifood product chain. Without a successful, quality-oriented development plan, Hungary could not have been successfully integrated into the EU.

In order to assist and provide guidance for companies seeking to apply ISO systems, the Ministry of Agriculture and Rural Development started to elaborate a quality policy for the agrifood sector in 1997. This document listed all quality improvement measures necessary for Hungarian products to achieve a good position in the internal market of the EU.

The quality policy defined:

- the establishment of the framework of harmonization and declaration of the methods of harmonization;
• those quality assurance principles and methods which can help food producers to meet the new quality requirements;
• those continuous measures which ensure that these methods are used in the food sector;
• tasks and methods of food quality control.

The main aims of the quality policy were the following:
• build on the basic principles and food policy of the EU;
• assist the agrifood sector to develop its own (internal) quality control systems;
• set an example for food producers and professional associations to work out their own quality policy;
• assist and improve the competitiveness of the food industry;
• harmonize the quality policy with the principles of consumer protection.

Tasks for the implementation of the food policy
The tasks required for the implementation of the food policy can be divided into two groups: those direct tasks that must be performed according to various timeframes, and a second group of tasks that represent overall actions that should be taken. This group is categorized as the indirect tasks of the state.

Direct tasks
Short-term tasks (shown below) were carried out in the mid-1990s:
• bring the Regulations of Act XC of 1995 on Volume I Foods into force;
• adopt technical regulations of the EU i.e. of the Hungarian Food Codex (Codex Alimentarius Hungaricus);
• define Volume II and III of the Hungarian Food Codex;
• specify the requirements to align the quality infrastructure with other national systems.

Medium-term tasks were:
• revise those Hungarian regulations which are not included among the EU food regulations;
• promote the application of GHP in the agrifood sector;
• coordinate activities for sharing the preparatory work with the representatives of the economy and society in general (e.g. consumer protection associations, various chambers of commerce)

There are ongoing tasks that need support, as well:
• continuously monitor changing EU regulations;
• prepare for a more pro-active role in the EU legislation.

In order to define and develop common regulations and tariffs for food control according to the food law, a set of recommendations was developed for how the tasks could best be accomplished:
• members of the administrative control systems should participate in the control of companies applying HACCP food safety and ISO9000 quality management systems;
• authorities must use risk analysis;
• testing laboratories need to be accredited;
• more attention must be paid to risk management and communication of risks;
• unite the administrative control system of the EU and its member states;
• communicate known risks: prepare national statistics based on the data of the relevant authorities and inform the local population.

Indirect tasks:
• assist in the preparation of methodological textbooks for establishing and applying quality assurance systems;
• organize workshops and campaigns to disseminate information and technical assistance for the implementation of quality assurances systems and tools for ISO9000, HACCP and other total quality management (TQM) systems;
• workshops, seminars and other information campaigns need to target agricultural producers and food companies, with special regard to SMEs in the vertical product chain;
• assist with dissemination and policy support for the principles and methods of TQM;
• give direct state support to the implementation of quality assurance systems.

Results and principles of implementation of food policy
In 1991 Hungary began its EU harmonization programmes including those for food safety and quality control. The following steps were taken: became familiar with the mechanisms of the EU; collected and analysed the EU food legislation; studied the EU regulatory system; established the framework of harmonization and defined procedures for harmonization. The purposes of harmonization were: 1) the improvement of the competitiveness of Hungarian foodstuffs in the marketplace; 2) the preparation of the industry for EU accession, allowing sufficient time to study and apply the necessary regulations and changes.

In these tasks, the main Ministerial responsibilities to the Public were the preparation and publication of the Parliamentary and Ministries Acts. Furthermore, three ministries (Agricultural and Rural Development, Public Welfare, and Economy) had the duties of implementing the regulations. In fact, The Hungarian Office of Standardization had the full responsibility in the field of food standardization. Different civil organizations were involved in the work of the Food Safety Advisory Board, managed by the Ministry of Public Welfare who also organized the National Food Safety Program.

The main law, the Third Food Act, came into force on 1st January 1996. It determined the conditions for the production and marketing of raw, semi-processed and processed food intended for public consumption. The Act had the following aims: protection of consumer health; fair market competition and free movement of goods. The Food Act was established as a framework for further harmonization with EU food legislation and for the first time incorporated a number of EU regulations. For example, the labelling and official control of foodstuffs was established. The legal framework has three levels: law, regulations and the Hungarian Food Codex. Within the framework of, the harmonization Food Act contains five decrees and several provisions of the Hungarian Food Codex, as well.

The Hungarian Food Codex (i.e. Codex Alimentarius Hungaricus) is a collection of obligatory provisions and recommended guidelines concerning raw and processed foods. Volume I of the Hungarian Food Codex sets out some 130 detailed technical regulations of the EU. The provisions of Volume I are mandatory. Volume II of the Codex set out guidelines for various
foods and groups of products, which are not regulated by the EU but which are important for Hungarian producers or customers. Application of the guidelines is voluntary – but, if the product is sold under the name indicated in the Hungarian Food Codex it should be in accordance with the description contained in the Food Codex. Volume III of the Codex – the Official Food Testing Methods – contains the methodology to be used by inspectors in enforcing the rules set out in the first two volumes. This methodology can be adopted from EU rules, Hungarian inspection regulation or can be independently drafted.

**Food policy after EU accession**

Hungary joined the EU on 1st May 2004. From that time the Hungarian food policy has been determined by EU food policy and legislation. The EU rules and regulations have gone into effect, and being on a higher level, do not need to be implemented into the Hungarian Food Act. The food law aims at ensuring a high level of protection of human life and health, taking into account the protection of animal health and welfare, plant health and the environment. This integrated "farm to fork" approach is now considered a general principle for EU food safety policy. Food law, both at national and EU level, establishes the rights of consumers to safe food and to accurate and honest information. The EU food law aims to harmonize existing national requirements in order to ensure the free movement of food and feed in the EU. Fundamental principles of the consumer oriented Hungarian food safety policy are: transparency, science-based risk analysis, independence, effectiveness and willingness to participate in international cooperation. Hungary as an EU member state has taken part in the EU legislation from the time of accession.

Hungary has upgraded its food and veterinary laboratories, streamlined the organization of its food and feed control systems, started control of GM-food, trained its inspectors and laboratory staffs. The appropriate authorities perform detailed inspections that extend from the farm to the point of sale. The principal objectives of the national food control systems are:

- protecting public health by reducing the risk of food-borne illness;
- protecting consumers from unsanitary, unreliable, mislabelled or adulterated food;
- contributing to economic development by maintaining consumer confidence in the food system and providing a sound regulatory foundation for domestic and international trade in food.

The Hungarian Government issued Decree No. 66/2003 on the establishment of the Hungarian Food Safety Office on 15 May 2003. The supervision of the Office was assured by the Minister for Agriculture and Regional Development, in agreement with the Minister for Health, Social and Family Affairs. From 2005 the Hungarian Food Safety Office belongs to the Ministry of Health.

The Office is helping to make the operation of the institutions and authorities in the food safety process more efficient. Among other professional tasks, the Office is responsible for collecting, analysing and, if necessary, publishing the results of food and feed safety monitoring tests carried out by the authorised laboratories and providing detailed information to the European Food Safety Authority. The EU harmonized data collection process in Hungary is achieved within the framework of the Rapid Alert System for Foods and Feeds.
Characterization of developments in the Hungarian food industry during transition and EU accession

The effect of transition and EU accession on the Hungarian food industry

The Hungarian food industry plays an important role in Hungarian foreign trade. Based on the former stable COMECON-export system with considerable state subsidies and a secure position in the domestic market, the food industry developed rapidly before 1990. The rapid collapse of COMECON, the decline of domestic purchasing power and liberalization of imports created a new situation that caused difficulties for a number of major companies.

Transition brought a radical change to the food sector. Privatization began and the number of small enterprises operating in the food industry increased from several hundred to more than ten thousand.

Transformation of the food industry was intended to occur in a manner that was modelled on the Danish cooperative scheme. Agricultural producers could obtain ownership shares in food processing companies, thus reconciling the interests of agricultural producers and food processors. But in practice, this goal was not achieved, as the agricultural producers were not financially able to improve the economic position of industrial food plants. The result was that the purchase of shares in the plants via the voucher system didn’t lead to any inflow of capital in the food industry. As the majority of Hungarian food processors were already in difficulties, the ownership change only exacerbated the situation of agricultural producers.

Hungarian privatization was unique in Central and Eastern Europe. Since 1989 a significant change occurred in the structure of Hungarian agriculture that impacted future production and trade. Privatization brought real investors to Hungary with the necessary financial means for restructuring. In addition, approximately half of the foreign direct investment (FDI) to Central and Eastern Europe took place in Hungary. Those were mostly medium or long-term investments. While FDI increased substantially, state ownership of businesses declined to approximately two percent. International companies that acquired a stake in the Hungarian food sector during privatization brought with them modern methods of production and processing. Just as significant was the world-class expertise they brought in marketing and new product development. FDI also helped to stabilize many companies that were in bad financial condition and helped them regain the export market that was lost in the early 1990s.

In 1998 the share of companies with majority foreign ownership accounted for 51 percent of total food sales, and 68 percent of equity in the industry. These firms accounted for only 14 percent of the firms in the industry. Firms with majority foreign ownership control production and processing of vegetable oil, sugar, beer and tobacco. Foreign ownership was not significant in the Hungarian milling and wine industries.

By 2000 Hungarian investors owned just one-third of the firms with the remainder being owned by foreign investors. The firms that remained under Hungarian ownership tended to be smaller and less efficient. The total number of enterprises operating in the food industry in 1999 was 9,300 and 8,070 by 2002. Yet 80 percent of the value added was produced by 180 of the largest companies. Small and medium-sized food producers still struggle with a weak financial position, insufficient resource development and structural problems.

The accession to the EU and the implementation of the Common Agricultural Policy (CAP) have also affected the food-processing sector. While the number of enterprises in food processing increased at the beginning of the 1990s due to decentralization and privatization, more recently the trend has been reversed, with declining numbers of enterprises and employees in the dairy
and meat processing sectors. This concentration process is not related exclusively to accession but also to adjustments typical of economic transition. The causes can be traced to: the obligation to fulfil EU hygiene and quality standards; EU support through SAPARD and rural development funds for restructuring and modernization of food processing; and the adoption of EU standards have also contributed to this development.

EU enlargement improved the conditions for FDI in food processing. FDI in food processing is not only attracted by low labour costs and cheap raw materials, but also by market access to EU internal market and the potential for easy access to the new markets to the east of the enlarged EU. Hungary’s accession to the EU in May 2004 began a new chapter for the country’s food industry and food trade.

A large percentage of Hungarian exports are aimed at the EU internal market which was a form of market expansion that resulted from accession to the EU. At the same time, the proportion of imported raw and processed foods from the other EU Member States is significant. The Hungarian food distribution system has changed drastically in the past six years with hypermarkets and large shopping centres developing quickly. Hungarian consumers are becoming more quality conscious. As a direct result of accession, this market segment (i.e. quality-conscious consumers) is growing faster than that of exports.

There are approximately 8,000 enterprises involved in the food industry. In the recent past, it can be observed that the number of enterprises has slowly decreased, as well as a switch from sole proprietors to the limited liability form of business ownership. Among enterprises in the food sector, 79 percent employ fewer than 10 people. Another 19.8 percent have between 10 and 249 employees, while only 1.2 percent have 250 or more people employed. Viewed from the standpoints of production and export, the situation is reversed. The largest companies (i.e. the 1.2 percent with 250 or more people) have a 64 percent share of production and 72 percent share of exports.

**Reasons for implementing the Hungarian national food policy after EU accession**

The food production chain is becoming increasingly complex. Every link in this chain must be as strong as the others if the health of consumers is to be adequately protected. This principle must apply whether the food is produced within the EU or imported from third countries.

This comprehensive, integrated, approach leads to a more coherent, effective and dynamic food policy, which is the aim of Hungary. It needs to address the shortcomings that flow from the current rigid sectoral, approach, which has limited the ability to deal rapidly and flexibly with risks to human health. The policy needs to be kept under constant review and, where necessary, be adapted to respond to shortcomings, to deal with emerging risks, and to recognize new developments in the production chain. At the same time, the development of this approach needs to be transparent, involving all the stakeholders and allowing them to make effective contributions to new developments.

By implementing the aims and basic principles of a national food policy built around high standards of food safety, the production and consumption of food has economic and social consequences. It results in the improvement of the competitiveness of the Hungarian food industry. It maintains and strengthens the good reputation of Hungarian foods and improves the prospects for international trade.

Although health protection must always take priority, other issues must also be taken into account in the development of food policy. For instance, the state and quality of the environment, in particular the ecosystems, may affect different stages of the food chain. Environmental policy, therefore, plays an important role in ensuring safe food for the consumer.
Since Hungary’s accession to the EU, responsibilities for food quality and safety have not changed. The nature of these tasks, however, has altered considerably. In the area of food standardization, not only substantial changes in form have been registered in newly issued statutes and food book specifications, but the harmonization of community law, as well. As early as the mid-1990s the EU food laws were applied to Hungarian standards. This early start gave ample opportunity to the food manufacturers and distributors to become acquainted with the new regulations and prepare for their implementation.

Firms’ and food industry responses to the new food safety regulations

Given the need for rapid response to food safety emergencies, the firm’s response to food safety regulation becomes absolutely central to the firm’s strategic and organizational response, and should be expected to have impacts throughout the internal and external operations of the firm.

Loader and Hobbs (1999) conceptual framework is presented in Figure 1: Conceptual model of strategic compliance process for food safety legislation to show the compliance process a food firm might follow when faced with changes to food safety legislation. By its nature, this model is generic. Compliance procedures of individual firms may differ, but broadly speaking, will tend to follow this path.

Figure 1: Conceptual model of strategic compliance process for food safety legislation
The strategic process has a number of steps, with corresponding firm-level activities. First, a firm must identify the regulation. This it may do itself or through a supporting organization, such as an industry association. The firm must then interpret the regulation to establish whether any of its products or processes are affected and to what degree. These three are preliminary steps and are “administrative” activities and depending on the nature and scope of the legislation they would likely involve all major functional areas of the firm, (i.e. production and operations management, distribution, marketing and information management).

If this process indicates that the firm will be affected by the new legislation, it might then establish a corporate position either supporting or opposing the proposed legislative change. A supporting position would likely initiate a previously defined process for adopting the new legislation and implementing the relevant changes in the firm’s operations. If the firm opposed the regulation, additional strategic responses might be the lobbying of industry associations and regulatory agencies to have the legislation dropped or amended. Assuming the firm is unable to circumvent the proposed legislation, strategies for compliance should be formulated, involving administrative and analytical activities, and possibly reinforced by marketing activities. The method of compliance will depend on the nature of the legislation.

Hungarian firms must comply with regulations as compliance is a condition of market entry. The complexity of the EU regulations had a big impact on the firms’ strategic responses, with more complex changes involving a coordinated response among several functional areas of the firm. All enterprises, working in the food industry, must develop food safety systems, like HACCP and other up-to-date systems of quality assurance (e.g. ISO 9000) in order to ensure uniform food quality and food safety.

As a result, the adoption of EU food legislation was completed in Hungary by the end of 1998, but the task of keeping up with changing EU regulations remains a challenge. The European Commission evaluated the status of adaptation of EU food legislation in Hungary. The conclusion was that quality management in the food chain improved in more than 4,000 food companies as a result of the legislation. The Hungarian government has partially financed the implementation of HACCP in more than 400 companies and ISO in 300 companies. From 2002 it is compulsory to apply HACCP in every food processing industry. Figure 2 shows the number of enterprises applying HACCP.

**Figure 2. Number of enterprises applying HACCP system**
However, it is suggested that firms will all respond quickly to food safety issues (indeed the legislation often forces them to do so), because they have a particularly direct bearing on the marketability of the product, and are the source of increasing consumer concerns. Compliance with food safety legislation may impose disproportionately larger costs on small firms because they lack the advantage of economies of scale. The economics of quality and safety at the firm or facility level are extremely important. This allows the plant manager to analyse the costs and revenues from operating the plant at various levels of scale in order to maximize net profit. Quality and safety, and thus HACCP, affects the costs and revenues of each facility.

It is widely known that the impact of food quality and safety improvement in the Hungarian economy has an important role to play because the cost of public health care and absenteeism from work decreases, as the health of the population improves. Improvements in production and efficiency within the country will improve national trade and will show positive benefits to Hungarian society. Fortunately, in the food industry, the loss caused by bad food is decreasing and social responsibility for employment, revenue and welfare are increasing. Much of this improvement in quality can be traced directly to those steps required to comply with membership in the European Union.

The role of industry associations also changed after EU-accession. In Hungary the food associations and the Federation of Hungarian Food Industries have significant roles. Furthermore they operate as special interest groups, contributing to the development of a legislative framework and lobbying to have the legislation dropped or amended. The Federation of Hungarian Food Industries has actively cooperated with the Confederation of the Food and Drink Industries of the EU (i.e. CIAA) since 1992. This cooperation has become stronger following accession and via the CIAA the Hungarian association can also take part in EU legislation.

In 1998, the Ministry of Agriculture and Rural Development launched a programme to support Hungarian producers offering quality products. The programme permits a special trademark (i.e. the “High Quality Hungarian Food” label) to be used. The trademark not only indicates the Hungarian origin of the product, but also that it complies with EU norms, has been regularly inspected during the production process and possesses at least one outstanding characteristic in comparison with other similar products.

The cultural future of a nation is determined by the awareness of, respect for and safeguarding of its own traditions. The French “Euroterroirs” programme has been running in Western Europe for several years. The programme of “Traditions-Tastes-Regions” is the Hungarian adaptation of the Euroterroirs programme. The products in the “Traditions-Tastes-Regions” programme are parts of our national cultural heritage and they are linked to the European food heritage.

Conclusions and recommendations

The EU food policy results in a reasonably homogenous level of food safety within the European Union countries. This should facilitate trade within the internal market. It could also make trade between EU member countries and third party countries easier as long as the third party countries can meet the EU standards.

Compliance with EU food safety standards constituted a major challenge in the context of accession. The implementation of all EU food safety rules and the development of efficient control mechanisms proved to be a challenging task. Indeed, EU legislative actions regarding food safety are very abundant. The relative legislative acts are broad in scope and demanding in terms of transposition, implementation and enforcement.
For the CEE countries’ food industry, improvements in product quality and safety were indispensable to the countries’ economies, primarily with respect to the domestic and international markets. In these countries new regulations and institutions have affected the transaction costs for food firms by forcing closer monitoring of supply chain partners. In the long term, these higher transaction costs are expected to result in closer vertical coordination.

There were significant changes in the Hungarian Food Policy during the last decades. Before 1990’s the quantity policy was the top priority for the nation. In the pre-accession period it was obvious that without a successful quality oriented development Hungary cannot be integrated successfully into the European Union. So the quality policy came into prominence. With EU-membership, the adoption of relevant EU regulations, food safety as a condition of market presence and competitiveness became priorities.

It is widely accepted that the impact of food quality and safety improvement in the Hungarian economy has an important role to play because the cost of public health care and absenteeism from work decreases, as the health of population improves. The production and efficiency within the country will improve and will show positive benefits to Hungarian society.

Implementing the aims and basic principles of a national food policy is built around high food safety standards, the production and consumption of food has economic and social consequences. It results in improving the competitiveness of the Hungarian food industry. It also strengthens the reputation of Hungarian foods and improves international trade. In addition, the state and quality of the environment, in particular the ecosystem, may affect different stages of the food chain. This comprehensive, integrated approach leads to a more coherent, effective and dynamic food policy, which is the aim of Hungary.

The shortcomings need to be addressed which flow from the current rigid sectoral approach. This has limited the ability to deal rapidly and flexibly with risks to human health. The policy needs to be kept under constant review and, where necessary, be adapted to respond to shortcomings, to deal with emerging risks and to recognize new developments in the agrifood chain. At the same time, the development of this approach needs to be transparent, involving all stakeholders and allowing them to make effective contributions to new developments.

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**Acts and regulations**


EDUCATION AND INFORMATION INFRASTRUCTURE FOR AGRIBUSINESS IN CROATIA

LARI HADELAN*, KRISTINA HOJANIC**, MARIO NJAVRO*, VJEKOSLAV PAR**

Executive summary

The Croatian agribusiness sector, comprised of agriculture and the food and beverage processing industry, plays a significant role in the Croatian economy. In terms of total GDP the Croatian agribusiness sector holds an 11 percent share. According to business indicators for 2005 (e.g. net profit of EUR 320.3 million) Croatian agribusiness companies achieved much better results than during the previous year. Successful business results can be highly connected with increased awareness of the role of education in business performance. Due to this increased awareness, agribusiness companies investment in educational programmes.

In many theories of economic growth, intellectual capital is defined as the knowledge, capability and skills of individuals/employees. Intellectual capital is recognized as one of the most important factors of growth and development of the company.

According to the Global Entrepreneurship Monitor, Croatia still needs to improve the quality of education in its post-secondary school system. The same observation was made by the National Competitiveness Council. It stated that the educational system did not prepare Croatian citizens adequately for the challenges of a knowledge-based society.

One of the proposed initiatives for improvement was the ongoing project of Agribusiness Higher Education Development in the Faculty of Agriculture in Zagreb (AHEAD). At the same time, the leading Croatian agribusiness companies (e.g. Podravka) recognized the importance of intellectual capital (knowledge and skills of employees), and introduced some internal education programmes in cooperation with some well-known business schools.

One of the prerequisites for stimulating an entrepreneurial environment is institutional support. As an example, the role of the Croatian government's information support system for the decision-making process in agribusiness is presented based on the use of TISUP (Market Information Service in Agriculture).

Croatian agriculture and food processing industry

Mostly because of the country's favourable agro-ecological conditions, agriculture and agribusiness are important components of the Croatian economy. Together, they represent a relatively large proportion of both GDP and employment.

Croatia has a total of 3.15 million hectares of agricultural land. About two million hectares of the total are cultivated and the rest consists of pastures, moors, reeds and fish farms. Vineyards cover 50,000 hectares. Nearly eighty-two percent of the cultivated land and a little more than 80

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percent of the total livestock are privately owned. During the 1990s, agricultural production decreased significantly due to the war and transition to a market economy. Plant production has been increasing continually since 1995, but cattle production is still 30 percent lower than in 1990. There are 1,407 companies registered in agriculture and they employ a total of 22,105 employees.

Croatian agriculture and agribusiness play a significant role in Croatian economic activity. Statistics show its relatively high share of Croatian GDP to be about 11 percent (Croatian Agriculture, Food and Food Processing Industry, 2003). Within the entire Croatian processing industry, this segment generates the largest total income and provides the highest number of workplaces. The output of the food, beverage and tobacco industry dropped with the beginning of the war for independence. Gradual recovery began after 1993 (CCE 2006).

Today the food and beverage producers make up 19.3 percent of the gross value added in the Croatian manufacturing industry, while tobacco production accounts for 2.7 percent. The food, beverage and tobacco sector contains over 1,000 registered companies which employ about 45,000 persons, i.e. about 18 percent of the total number of employees in the total manufacturing industry.

Although Croatia’s production potential is significant, food imports still exceed exports. The most important export destinations are the markets of the neighbouring countries: Bosnia and Herzegovina, Italy, Slovenia, Serbia and Montenegro. The majority of export products are from the food and tobacco industry: sugar, cigarettes, Vegeta (food seasoning), soups and soup preparations, beer, confectionery and chocolate, canned fish, canned beef and others. Major import products are oil and oilcakes, meat, cheese and soft drinks.

Agricultural and food products account for approximately nine percent of total Croatian exports and imports. The most significant export products of the food industry make up to 88 percent of total agricultural and food industry exports (CCE, 2006).

<table>
<thead>
<tr>
<th>Table 1: Export-import product value of food, beverage and tobacco industry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Export (US$ million)</td>
</tr>
<tr>
<td>Import (US$ million)</td>
</tr>
</tbody>
</table>

Source: Central Bureau of Statistics (CBS), compiled by CCE - Agriculture, Food Industry and Forestry Department

Some of Croatia’s the best known food products are slavonski kulen (Slavonian salami), dalmatinski pršut (Dalmatian smoked ham), istarski pršut (Istrian smoked ham) and paški sir (cheese from the Island of Pag). Fishing and fish processing have traditionally been the most important activities along the coastal part of Croatia and on its islands.

In 2005 the food, beverage and tobacco industry earned EUR 320.3 million of net profit, an astounding 130 percent more than in 2004. The total income of the food, beverage and tobacco companies for 2004 was EUR 3.51 billion, while in 2005 this same income level was achieved by the 100 largest companies of the group. Although the industry is generally successful, there are indications of strong characteristics of concentration. According to the latest figures for the food and beverage group, there are 1,134 active companies. More than one-third of them (384) operated at a loss.

This group (i.e. food and beverage) is strongly impacted by polarization due to their size. In terms of total number of companies, the highest share (85 percent) is comprised of small companies with fewer than ten employees. Medium-sized companies (i.e. with 11 to 249
employees) account for nine percent and large companies (i.e. with 249 or more employees) represent seven percent. Within this sector, the activities with the largest revenues are the production and processing of tobacco, production of beer and soft drinks and processing of milk, tea and coffee.

**Relating knowledge and company development**

The role of intellectual capital in economic growth appeared initially in research of the 1960s. Babić (2004) marks research of Abramovitz from 1956 and Solow from 1957 who showed that technological progress was one of the most important factors to economic growth, contributing as much as 75 percent. Technological progress consists of an intangible growth factor: improving and introducing new technologies and changes in intellectual capital.

Intellectual capital is defined as the knowledge, experience, capability, skills, creativity and the capacity for innovation of the individuals or employees. These elements are interlinked and altogether they contribute to business success (Kolaković and Holmik, 2006).

Additional research led by Chen (Chen et al., 2005) found similar results. They investigated the connection of intellectual capital with profitability and company value. The research was conducted on the companies listed on the Taiwan Stock Exchange in 2005. The results of the research showed that: intellectual capital increases the market value of a company; and, it’s the most important factor contributing to the growth and development of the company.

Overall, as many have observed in the modern business environment, there is a shift towards a knowledge-based economy. In this context, education and training need to be linked as part of the strategy and objectives of the organization (Parton, 2002).

New knowledge leads to innovation and higher productivity. Innovation in agriculture in developing countries still depends largely upon public investment into research (Global Entrepreneurship Monitor, 2006). Agricultural development and support for small farmers are regarded primarily as a public task. However, new information systems and faster access to knowledge, also increasingly available in developing countries, would seem to call for a rethink about the role of public research in agriculture.

**Table 2: Shifts in the economy**

<table>
<thead>
<tr>
<th>Old Economy</th>
<th>New Economy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual skills acquired</td>
<td>Lifelong learning</td>
</tr>
<tr>
<td>Labour versus management</td>
<td>Teams</td>
</tr>
<tr>
<td>Business versus environment</td>
<td>Encourages ecologically sound growth</td>
</tr>
<tr>
<td>Security</td>
<td>Risk taking</td>
</tr>
<tr>
<td>Monopolies</td>
<td>Competition</td>
</tr>
<tr>
<td>National</td>
<td>Global</td>
</tr>
<tr>
<td>Status quo</td>
<td>Speed, change</td>
</tr>
<tr>
<td>Top-down</td>
<td>Distributed</td>
</tr>
</tbody>
</table>

Source: Parton, K.A: Agribusiness Education and the Impact of the Internet
Education and competitiveness

In February 2002, at the initiative of the business sector and with the technical assistance of USAID, the government of the Republic of Croatia established the National Competitiveness Council (NCC). This body includes representatives of four different interest groups: the economy, the government, trade unions and science and education. It promotes ideas and principles that enable long-term sustainable economic development. For that purpose, the NCC published the document entitled “55 Policy Recommendations for Raising Croatia’s Competitiveness”. Those recommendations consist of seven parts, the first of which emphasizes the role of education in economic growth and development. Each national economy and its level of competitiveness depend mostly on its human resources. Education has a role to play in increasing national competitiveness and ensuring adequate intellectual capital.

Therefore, NCC sets five goals for increasing education’s contribution to Croatian competitiveness:

1. Improvement of the educational level of the working population primarily by increasing the number of individuals with a post-secondary education in the workforce.
2. Continuous improvement of educational content and methods of instruction across all levels of the educational system, with a focus on the development of key competencies.
3. Establishment of a system of quality control of educational processes and learning outcomes.
4. Increase in total expenditure (public and private as well as other non-state sources) for education.
5. Maximization of the number of children in pre-school care offering an educational format.

According to the data of the Statistical Yearbook 2005, 18.5 percent of the Croatian working population have a university or postgraduate education. The NCC considers higher education as imperative for the Croatian economy and has set a goal to increase the percentage to 29 percent by 2010.

Table 3: Education levels of the working population in Croatia in 2004

<table>
<thead>
<tr>
<th>The share of working population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncompleted elementary school</td>
</tr>
<tr>
<td>Elementary school</td>
</tr>
<tr>
<td>Secondary school</td>
</tr>
<tr>
<td>University and postgraduate degree</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>

Source: Central Bureau of Statistics – Statistical Yearbook 2005
Global Entrepreneurship Monitor research

Global Entrepreneurship Monitor (GEM) is the world’s largest research organization devoted to the topic of entrepreneurship. It monitors the entrepreneurial activities of the 18-to 64-year-old segment of the population in 35 countries. These countries comprise 65 percent of the world’s population and 90 percent of the world’s GDP.

Croatia has participated in GEM research since 2002. The historical data permits a good basis for comparison of the entrepreneurial environment in Croatia compared with the other GEM countries related to specific points in time. According to data collected from entrepreneurs, scientists, governmental and non-governmental institutions, between 2002 and 2005 Croatia’s results could be compared with the rest of the GEM countries as follows:

Table 4: Average rankings for specific factors that facilitate an entrepreneurship environment (1 is the lowest and 5 is the highest rank)

<table>
<thead>
<tr>
<th>Factor related to a conducive entrepreneurial environment</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Croatia GEM</td>
<td>Croatia GEM</td>
<td>Croatia GEM</td>
<td>Croatia GEM</td>
<td>Croatia GEM</td>
</tr>
<tr>
<td>Education in primary and secondary school</td>
<td>1.63</td>
<td>1.97</td>
<td>1.59</td>
<td>2.06</td>
</tr>
<tr>
<td>Education after secondary school</td>
<td>2.01</td>
<td>2.83</td>
<td>1.97</td>
<td>2.79</td>
</tr>
<tr>
<td>Research and development transfer</td>
<td>2.05</td>
<td>2.47</td>
<td>2.11</td>
<td>2.49</td>
</tr>
<tr>
<td>Business and professional infrastructure</td>
<td>2.43</td>
<td>3.17</td>
<td>2.75</td>
<td>3.23</td>
</tr>
</tbody>
</table>

Source: Global Entrepreneurship Monitor: Expert Questionnaire

As shown (above), there is a significant difference between the scores for primary and secondary schooling compared with the level of post-secondary education. Although, the rank for post-secondary education in Croatia has improved over time, the rankings for Croatian primary and secondary school have grown more rapidly. Against the total GEM rankings Croatia is in 22nd place in terms of primary and secondary education and 29th place for post-secondary education. It can be concluded that the Croatian educational segment contributes insufficiently to the development of an entrepreneurial environment. One result of this could be a lower level of understanding of market mechanisms within the young entrepreneurs in Croatia (than in other GEM countries). A similar observation about the Croatian education system was noted by the NCC: “Higher education in Croatia is inefficient (students take twice the expected time to complete their studies and an alarmingly small number of students reach graduation), and is therefore too expensive (relative to the outcomes), out of date (conceptually, in terms of equipment and age of the teaching staff) and of insufficient capacity to be able to seriously alter the educational attainment of the population. If Croatia wishes to reach its goal of becoming a knowledge society, it must undertake significant changes in the fields of higher education and research”.

According to the latest data, the ratio of university graduates to first year students is 40 percent, indicating a low success rate for students pursuing higher education. NCC suggested that the Bologna process that provides a new duration structure for award of degrees (i.e. 3+2+3 years), will reduce graduation time since the first three-year cycle ends with an employable qualification.
One of the aims of development in Croatia is to increase the percent of the population that are university graduates. The main obstacles to that are the small share of Croatian students in total population and the fact that only one student out of forty in Croatia finishes their studies successfully. According to data from the World Education Report (Vjesnik, February 2005), Croatia has nine students per population of 1,000. In EU countries the number is considerably higher (e.g. Hungary 19 students, Italy 33, Belgium 35, and Ireland 37).

**Knowledge and managerial development**

Today’s successful manager must have certain knowledge and skills. Often these competencies are grouped into a set of categories proposed by Katz\(^28\):

- technical (i.e. expert) knowledge;
- social knowledge – the ability to create a positive working atmosphere between employees;
- conceptual knowledge – the ability to have a long-term vision of the goals of the company coupled with the ability to translate them into tasks, often within the framework of adapting to complex and rapid change external to the company.

The 1990 collapse of Communism in Central and Eastern Europe created both opportunities and problems for companies and managers in the region (Clement *et al.* 1994). The opportunities lie in the movement towards a market economy and political democracy while the problems are adjusting business performance for an unprotected and free market, together with stronger competitors from developed countries. In interviews and surveys (Clement *et al.* 1994), managers in Central and Eastern European said they needed assistance in learning how to manage their companies. They referred to the full range of management skills needed to run a business operation – especially human resources, marketing, and financial management. In most of these countries, the managers needed to learn how to downsize their companies – quite literally, how to get rid of an excess number of employees, many of whom were not very productive. But these managers also needed to know how to plan and implement marketing strategies – skills that were not often needed in command economies. Finally, they needed to learn how to evaluate and control financial performance. Until 1989 few of them had any reason to do so – the political system prevented them from taking any necessary financial actions anyway.

However, Croatia had some advantages because its economic system allowed limited private ownership. Croatian managers were linked with managers in developed countries and that enabled them to adjust much more rapidly to modern business practice.

In 2002, the typical manager in Croatia had the following characteristics (Sikavica, Bahtijarević, 2004):

- Gender – male (74 percent)
- Age – 41-45 years old (41 percent)
- Qualification – college degree (90 percent)
- Profession – economist (49 percent)
- Number of subordinates – 10.

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The data was collected in research led by Professors Sikavica and Bahtijarević from the University of Zagreb, Faculty of Economics. The research was conducted by survey using a questionnaire that investigated many of the professional and social characteristics of Croatian company managers. One question showed the managers’ opinion about the importance of various types of expertise, or knowledge, needed in their work.

Recently the majority of Croatian companies have begun different training programmes directed at knowledge development. These programmes are intended mostly for managers. There are many reasons for participating in these programmes: awareness of the importance of knowledge development, modernizing the existing level of knowledge, tracking modern business trends.

Table 5: Structure of needed knowledge for managers (according to the managers’ responses in questionnaire)

<table>
<thead>
<tr>
<th>Knowledge type</th>
<th>Top management responses</th>
<th>Middle management responses</th>
<th>Operational management responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic knowledge</td>
<td>26</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td>Management theory knowledge</td>
<td>18</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>Organization knowledge</td>
<td>15</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>Human relations knowledge</td>
<td>13</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Technical knowledge</td>
<td>11</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Informatics knowledge</td>
<td>7</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>Psychological knowledge</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Sociological knowledge</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Sikavica, Bahtijarević: Menadžment, p. 235

The questionnaire also asked the managers to rank their preferences for various types of learning opportunities. The question was designed to identify both the preferred learning format as well as the likelihood of actual participation.

Table 6: Frequency of attendance by type of training opportunity available to managers in Croatian companies

<table>
<thead>
<tr>
<th>Programmes</th>
<th>Frequency of attendance in programme</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>none</td>
<td>once</td>
</tr>
<tr>
<td>Internal company education</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>Professional meetings</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>Faculty seminars</td>
<td>47</td>
<td>15</td>
</tr>
<tr>
<td>Professional programmes for managers</td>
<td>39</td>
<td>21</td>
</tr>
<tr>
<td>Professional education abroad</td>
<td>52</td>
<td>17</td>
</tr>
<tr>
<td>Business simulation software</td>
<td>66</td>
<td>18</td>
</tr>
<tr>
<td>Independent literature review</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: Sikavica, Bahtijarević: Menadžment, p. 255
Reform of higher education

Changes in the global economy require flexible study programmes designed for permanent change. Croatia is pursuing reform in higher education in response to needs of the economy. For this purpose Croatia signed the Bologna Declaration in Prague 2001, joining the group of 33 countries supporting the Bologna process. The main goals of the Bologna Declaration are:

- To create a system of higher education based on two main cycles (undergraduate and graduate);
  Instead of a nine-semester “undergraduate study programme” teaching will be carried out in two independent cycles: undergraduate cycle lasting a minimum of three years, with the degree of “bachelor” awarded; and the graduate cycle lasting two years which leads to award of the master degree. (The system is commonly referred to as “3+2” to indicate the three-year cycle followed by the two-year programme.) The current postgraduate study programme will be modified and transformed into a “PhD study programme”.

- To establish the European Credit Transfer System (ECTS);
  Introduction of ECTS provides student mobility between faculties and universities by mutual recognition and the ability to make comparisons of student workloads.

- To establish new, multidisciplinary studies with ample choice of optional modules;
  Students will have opportunities to choose different modules and create their own educational profile.

- To adopt a system of easily comparable degrees;

- To promote mobility of students and teachers;

- To promote a European dimension in higher education.

Educational agribusiness projects

The following two texts present examples of projects that were designed for agribusiness knowledge improvement. The first one is a project in higher education development conducted by the Faculty of Agriculture in Zagreb. The second one is a programme for management development conducted in-house by Podravka – one of the leading food industries in Central and Eastern Europe.

Agribusiness higher education development (AHEAD)

In 2005, intensive activities related to implementation of the TEMPUS AHEAD Project began. The Project applied for funding from the TEMPUS Program of the European Union in December 2004, and was approved mid-2005. The AHEAD Project includes a variety of partners: four universities from EU countries, the University of Zagreb, and another eight partners from the Croatian governmental and non-governmental institutions.

Specific objectives of the AHEAD Project are curriculum development for agribusiness as well as food safety and quality in Croatia. The target curricula relate to three levels: undergraduate (BSc),

29 The partners include the University of Debrecen, Wageningen University, University of Stuttgart, Scottish Agricultural College, University of Zagreb, Ministry of Agriculture, Forestry and Water Management, Institute for Adriatic Crops and Karst Reclamation, Institute of Agriculture and Tourism, Croatian Agricultural Extension Institute, Agrokor d. d, Croatian Chamber of the Economy, Croatian Employers Association;, Croatian Society of Agricultural Economists, Zagreb.
graduate (MSc) and an international MBA programme in English. The main project activities include:

1) Develop and improve the bachelor (BSc) training programme for agribusiness (Agricultural Economics),
2) Establish and develop the bachelor (BSc) training programme for food safety and quality management as a joint effort with the University of Zagreb Faculty of Agriculture and the Faculty of Food Technology and Biotechnology,
3) Develop and improve the graduate (MSc) programme for agribusiness (Agribusiness and Rural Development)
4) Establish an Executive MBA training programme at the University of Zagreb Faculty of Agriculture
5) Provide training in food safety, quality management and equipment procurement
6) Analyse training needs in order to meet the requirements of the national agribusiness sector.

Ongoing tasks during the project implementation include effective dissemination of information about the project, ensuring sustainability of implemented outcomes, quality control and overall project management.

a) Development and improvement of agribusiness bachelor (BSc) programme

With the cooperation of professors from several EU universities and the University of Zagreb, the first priority was the improvement of individual modules of the existing bachelor programme in Agricultural Economics. The activity covered most modules from the current programme, and considered the possible introduction of new modules. This project activity relied on direct contacts between the teaching staff and exchange of information through the internet-based communication platform of the AHEAD Project. Implementation of this activity should result in improvement of structure, contents, teaching techniques and teaching material for the target programme. Thus far, the partners have exchanged information on the current module structure and contents.

b) Establishing executive MBA training at the Faculty of Agriculture

The primary purpose of this activity is to establish a pilot international executive master of business administration (MBA) training for professionals and managers in agribusiness and related professions.

A secondary objective of the MBA programme is to retrain the University of Zagreb staff for the programme’s implementation, particularly their preparation to teach in English. Since the main objective of this TEMPUS programme is to develop educational infrastructure, most of the students in the pilot programme are University of Zagreb staff. The curriculum is based on the principles of the International MBA Network, which supervises implementation and decides on accreditation of the programmes within the network. The majority of the students are agricultural engineers with the rest coming from different professions, from economists to medical doctors.

c) Training in food safety, quality management and equipment procurement

Considering the interest of the public and professional community in food safety and quality and the related requirements imposed by the planned accession of Croatia to EU, one of the activities within the AHEAD Project is training of the University of Zagreb staff in food safety and quality management. The activity is performed through direct interaction between foreign and local scientists and professionals. The foreign partners visited the University of Zagreb twice, establishing communication and an exchange of information on the following topics:
- Modern bio-analytical methods in food analysis
- The present status and future of GMOs
- Advanced toxicology
- Food regulation in the EU
- Quality assurance and management systems
- Traceability.

d) Analysis of training needs in order to meet the requirements of agribusiness

Development of quality education in the field of agribusiness cannot be designed and planned without an insight into the actual needs and requirements of this business sector. Therefore, a training need analysis (TNA) was initiated in order to examine the situation and requirements for education of managers, professionals and executives in the agribusiness sector.

A questionnaire was created and 430 respondents were surveyed across all of Croatia. Production and trade companies, state institutions and local governmental institutions, educational and research institutes were included. The questionnaire was distributed in collaboration with the various Croatian TEMPUS AHEAD Project partners.

Collected data was prepared for computer processing, and the final report of the results is being drafted. The results will be disseminated to all those involved in the development and implementation of higher education in agribusiness.

Podravka's Management Academy (POMAK)

Podravka is an agribusiness company centred in Koprivnica near the border with Hungary. In terms of market size it is one of the largest companies for processed foods in Croatia and the surrounding countries. Its Vegeta brand of seasonings is well known throughout Central and Eastern Europe, including Russia. Among its assets are its strong brands and its modern, efficient and highly automated processing facilities.

Podravka's management stressed the importance of education by establishing Podravka's Management Academy (POMAK). The POMAK programme was launched in 2003. POMAK students belong to the executive and senior management levels of the Podravka Group. They have been recognized and assessed as persons with high leadership potential that is worth the investment in time and money to further develop their talents.

Podravka worked together with the Faculty of Economics to design suitable educational programmes. The aim of POMAK is to develop the management knowledge and skills of the employees in order to successfully achieve Podravka's business goals.

The educational programme consists of two basic modules:

Module one is the Fundamentals of Business Administration Programme (FBA). The FBA presents the main concepts from the academic theory of management. Courses consist of topics such as General Management, Financial Management, Marketing Management, Strategic Management and International Business Management.

The lecturers of these courses are professors from the Faculty of Economics in Zagreb as well as visiting foreign professors, lecturers from various business schools, MBA programmes, etc.

Module two covers Leadership. The aim of this module is to develop the personal leadership talents of each participant. This module presents both managerial knowledge and skills, and course topics consist of the following: Leadership, Motivation, Management of People, Effective Communication, Negotiation Skills, etc.

Teachers for this set of courses are independent lecturers, psychologists, and other professional training specialists.
Institutional support for agribusiness – the TISUP example

The main task of institutional support in agribusiness is to provide a policy and regulatory environment conducive to efficient production and distribution of agribusiness commodities.

All the participants in the agricultural market, whether they come from small family-owned farms or large processing industries, need a wealth of timely information in order to be successful and to survive strong competition. Today’s agribusiness participants must be familiar with rapid developments in the marketplace, both domestic and foreign, and must be especially aware of prices and other basic supply and demand indicators.

In the last ten years of its existence, Market Information Service in Agriculture (in Croatian TISUP) has become the best known and most reliable source of agricultural market information in Croatia. It is an information service that provides a variety of market data and prices for the agricultural market. The market for a variety of agricultural products is regularly scanned on a regional, national and international level, and then impartial reports are published. The reports are aimed at various target groups and contain data on prices, tendencies and the global situation with regard to the agrifood market.

TISUP started its activities on 21 November 1995. At the outset it was connected to the Marketing Institute of the Faculty of Agriculture, University of Zagreb. The activities were expanded through project funding (i.e. via a Farmer Support Services Project) from IBRD and the Croatian Ministry of Agriculture and Forestry. By 2002, the TISUP group had already significantly surpassed the performance benchmarks expected by the IBRD experts. Although the formal project finished in 2002, TISUP continued its operations.

Today, TISUP specializes in several agricultural sectors: grains and oilseeds, livestock, fresh fruits and vegetables, fish and fish products and the agricultural inputs market. TISUP works with approximately 350-400 volunteers that provide information on prices for various agricultural products. The volunteer staff is comprised of people from the Agricultural Extension Service, veterinary inspection stations, grain storage facilities, agricultural cooperatives, representatives from the meat industry, fish farms and fish redemption stations, small independent traders, wholesalers, vendors in the open-markets and retail shops.

The cooperation goes beyond Croatia’s borders as TISUP is part of the European AgrimisNet network that includes more than 15 members from Central and Eastern Europe. TISUP also has a series of other commodities databases, e.g. cereal and oilseeds pricing on major commodity markets, meat prices in the EU.

Regularly collected information on prices, tendencies and the status of the agricultural market in Croatia, Europe, and to a certain extent the world market, provides very useful data for the preparation of marketing studies, business plans, and investment feasibility studies. At the same time, TISUP has developed a loyal set of users who are interested in the price data that TISUP collects: i.e. larger companies, public institutions, hotels, restaurants, and retail shop chains. These users already use the TISUP data to set purchase conditions and check the competitiveness of their suppliers. Information on prices is equally interesting whether they are “bidder” or “purchaser”.

Via regular market surveys, TISUP has become a vital source of information needed for formulating certain measures regarding the state agricultural policy. It’s a source of information for insurance companies, banks, custom offices, wholesale traders and producers, as well as a valuable library for academic research. The information it offers helps to answer a variety of questions that are important to all those who work in the field of agriculture. Some questions are especially important to individual farmers, for instance: Should I sell everything later? Should I...
sell on the local market or possibly in another region, or abroad? Will it pay to invest in a technology for bringing my crops to market a few weeks earlier than most competitors? TISUP also provides all market participants (i.e. family farms, producer associations, special interest groups, wholesale traders, retail traders, producers, restaurants, hospitals, and other small and large consumers of agricultural products) with an easy and quick way of purchase and sale of agricultural products. Agriculture presents a number of unique market risks. To help offset these risks, the financial markets offer a variety of options and forwards contracts for purchase and sale of commodities. TISUP developed a web application that allows all users to access a free of charge service showing the offers and bids for a variety of agricultural commodities. In addition there is detailed information on the buyer and seller. Background data is also available such as a survey of all current reports regarding the specific commodity market, prices and annual crop reports. The website provides free of charge the ability to search through the databases, execute analyses, monitor trends and read the advertising of the companies and their products and services.

TISUP distributes reports, analyses and other data by post and via its website (i.e. www.tisup.mps.hr). All of the TISUP databases (e.g. showing prices, trends, offers, bids and other data) may be found on the website. Information is accessible as well by specialized magazines, radio broadcasts and by the staff of the agricultural extension service.

The prospect of EU membership introduces new challenges to TISUP. In keeping with its role as a department of the Ministry of Agriculture, Forestry and Water Management. The plan is to develop TISUP to provide information in two directions. One will be according to EU regulations regarding market price notification. TISUP will communicate with the Commission and send requested prices of specific agricultural products. Prices in other member states will be received from the Commission, and forwarded to interested users in the Croatian market. Via the TISUP service, transparency in the domestic market will be strengthened, and competitiveness of agriculture, one of the most significant sectors in the Croatian economy, will be increased.

**Conclusion**

In many theories of economic growth, intellectual capital is defined as the knowledge, capability and skills of individuals or employees. Intellectual capital is recognized as the most important factor for the growth and development of a company. Together with research, knowledge has a key role in achieving a range of economic and social objectives in all business activities, as well as in agribusiness. According to the Croatian National Competitiveness Council, Croatia needs to improve its educational system to be a catalyst for new ideas, initiatives and to support overall economic competitiveness. Certain issues in education are negatively impacting Croatian business:

- low share of students in the Croatian population;
- low percentage of students that succeed in completing higher education;
- insufficient contribution from the Croatian education system to an entrepreneurial environment.

Introduction of the Bologna process should introduce significant changes within the system of higher education in order to satisfy the needs of Croatian companies as well as the needs of students.
The most significant reasons for relatively good business results of Croatian agribusiness companies in 2005 can be traced back to the drive to complete the privatization process and the activities related to the EU integration process that will open new market possibilities. The awareness of the contribution of education and knowledge, and the companies’ investments in intellectual capital should be added to this list. Key factors of the future agribusiness environment will depend on further development of programmes of higher education in agribusiness and the internal education programmes of Croatian companies.

Shifts in the economy of the twenty-first century toward a more dynamic and changeable business environment require motivated, self-confident and efficient employees. The most effective method to achieve this is through investment in knowledge.

**Bibliography**


AGRICULTURE AND AGRO-INDUSTRY IN ARMENIA

ANDRANIK PETROSYAN

Agribusiness and agro-industry have been one of the most important and effective branches of the Armenian economy since Soviet times. They are also the primary source of employment for the rural population and ensure the incomes of the rural areas. The agro-processing industry of Armenia is diverse and directed toward export expansion. It includes nearly all spheres of the food industry, the most developed of which are viniculture, dairy production, tobacco production and production of fruits and vegetables.

Agribusiness enterprises have established long-term contracts with peasant farms which give strong guarantees for proper organization of production and an increase in production volumes.

The market competitiveness, modernization of technology and investments in quality management systems made it possible to attract large investments, to establish joint-ventures and to develop opportunities for loans and credit.

The agro-industrial sector has a large potential for growth due to its dynamic development. Favourable conditions for investment have been established by the state. Armenian legislation provides the same legal guarantees and protections for foreign businesses as it does for its own citizens and businesses. Foreign investors have the right to create any form of enterprise. Armenian Civil Code provides for the following types of businesses: Sole Proprietorship, Limited Liability Company, Company With Supplementary Liability, Joint-Stock Company, Open Joint-Stock Company, Closed Joint-Stock Company, Partnership, Full Partnership, Limited Partnership, Commercial Cooperative, Representative Office and Branch, Subsidiary Business Company, Dependent Business Company. Different international financial organizations have promoted the establishment and development of the small and medium-sized enterprises (SMEs). As a result, during the last two years many SMEs engaged in dairy production, wine-making, meat production, fruits and vegetables preservation have been established and modernized.

In particular, there are privileges related to income tax for enterprises operating with foreign investments. There are also favourable conditions for importing technological equipment and export foodstuffs are exempted from VAT.

Armenia is undergoing legislative and institutional reforms to harmonize its existing legislation and standards to WTO and EU standards, which will increase consumer confidence regarding Armenian food quality and food safety. This in turn will foster an increase in exports and broaden the opportunities for additional export.

Registration procedures

According to Armenian legislation an enterprise or entrepreneur can conduct business in Armenia only after getting a registration certificate from the State Registry. Business registration requires the following procedures:

- to pay stamp duties for registering a legal entity and registering the company name;
- to register the company name at the intellectual property agency by submitting an application to the State Registry;
• to prepare and sign the incorporation documents;
• to open a temporary bank account. The bank provides a verification document that should be included in the registration package;
• to deposit a certain amount as the founding capital depending upon the type of company;
• to submit the registration application to the regional branch of the State Registry;
• to register at Armenia’s Tax Service to get a tax identification number;
• to register with Armenia’s Social Security Fund;
• to obtain permission from the local police department to apply for a company seal.

**Legal Documents**

According to the Armenian Law “On the State Registration of Legal Entities,” the following documents should be submitted by legal entities for the purpose of state registration:

a. application for the registration;

b. records of the founder’s (founders’) on establishing a legal entity, which should be signed by the chairman or secretary, except in the case when a legal entity is being created by one natural person. If there is a legal entity among the founders of the creating legal entity, the decision of the authorized body of such a legal entity should be submitted;

c. two copies of the charter approved by the meeting, conference or any other body having adequate power by law;

d. a receipt confirming the payment of the stamp duty.

**Licences**

Licensing in Armenia is regulated by the Civil Code of the Republic of Armenia, the Law on Licensing, the international treaties of the Republic of Armenia and other legislative acts, and granted by either a simple or compound procedure.

A simple licence is granted without the decision of the Licensing Commission and is given in three days from the day of submitting the relevant documents by an applicant. Simple licences are given with no time limits, unless otherwise stipulated by law. The following documents are necessary for receiving a simple licence:

• For ‘legal persons’ (i.e. legal entities) to make a request to receive a licence, the request should be made with information about the name and the legal form of the business, place of business and the type of activity the business will perform; for ‘natural persons’ (i.e. a physical person, an individual entrepreneur) the request should be made with information about the person’s full name, place of residence and the type of activity the business will perform; and the type of activity subject to licensing, which the applicant intends to perform;

• for a legal person - a copy of its Charter and a copy of the state registration certificate, and for an individual entrepreneur - a copy of the state registration certificate;
other documents provided by law or the licensing procedures.

A compound licence shall be given within thirty days from the day of submitting all the relevant documents. A compound licence is given with no time limits, unless otherwise stipulated by law. Compound licences are given based on the conclusions drawn by licensing committees established by the licensing bodies. An applicant shall submit the following documents to a licensing body for receiving a compound licence:

1) a request to receive a licence, stating that it’s for a legal person with the name and legal form of the business, place of business and the type of activity the business will perform; for a physical person and an individual entrepreneur, the request should be made with information about the person’s full name, place of residence and the type of activity the business will perform; the type of activity subject to licensing which the applicant intends to perform and any other information provided by law or licensing procedures;

2) for a legal entity - a copy of its Charter and a copy of the state registration certificate, and for an individual entrepreneur - a copy of the state registration certificate;

3) a document certifying the professional qualifications of a person, in the event of submitting a request for engaging in a type of activity requiring professional qualification;

4) other documents provided by law or the licensing procedures.

Small and medium-sized enterprises

Small and medium-sized enterprises (SMEs) are considered one of the priorities for development of the Armenian economy. The Armenian government continuous steps towards the development of SMEs, particularly through the creation of a state support system for SMEs. SME development policy is aimed at full utilization of the economic, social and political potential of SMEs in the context of development of Armenia overall. One of the basic documents that defines support for this policy is the “Concept for SME Development Policy and Strategy in Armenia” adopted by the government in August 2000. In this document the economic, social and political objectives of the SME development policy as well as the main directions for their achievement are introduced. The adoption of the above-mentioned document provided preconditions for adoption into law of the “State Support of Small and Medium Entrepreneurship”, which for the first time defined the criteria for SMEs as entities in the Republic of Armenia as well as the basic direction for state support of SMEs.

Since 2001 annual programmes for state support of SMEs have been drafted and implemented. These programmes are aimed at achievement of the main priorities for state support of SMEs as fixed by the Armenian law on “State Support of Small and Medium Entrepreneurship”.

The Ministry of Trade and Economic Development is authorized to create an SME development policy and strategy in Armenia as it is considered to be the responsible body for creation of such programmes.

Within the scope of the Program for State Support of SMEs for 2002, the Fund “Small and Medium Entrepreneurship Development National Centre of Armenia” was established. It is considered the unit with primary responsibility for implementation of state policy for SMEs as well as programmes directed towards their development.

In April 2004 the Ministry of Trade and Economic Development formed the “Coordination Council for Support of Small and Medium Entrepreneurship”. The council is responsible for
consolidation of the work from the various organizations that implement projects and other measures towards the development of SMEs. The focus of this Council is aimed at enhancing the efficiency of implementation of the SMEs development policy in Armenia. The Council is composed of representatives of governmental organizations in charge of the SME development policy and programmes directed towards the further development of SMEs. Institutions providing support to SMEs as well as some foreign and international organizations that also implement projects aimed at the development of SMEs in Armenia are also included in the Council.

**Investment policy**

Investment policy is part of the general economic policy of the Armenian government and is considered as one of the most important means of economic development. The investment policy is directed at the formation of a favourable investment environment for business, growth of transparency in the regulatory environment, identification of competitive advantages of the country, growth in the volume of investments, development of market infrastructures and the solution of problems related to economic development, with regard to all the above mentioned areas. The further process of scientific and technical and industrial development of the country in many respects is conditioned by developing of purposeful investment policy and its effective realization. As in all developed countries, maintaining growth in investments solves the important issues such as the creation of jobs, attraction of special expertise for a market economy (e.g. general and financial regulation, marketing, new technologies, skills.) and access to new markets and opportunities.

The government of Armenia maintains an “open door” policy toward investments. This liberal approach is specified in the legislation, in particular in the law “On foreign investments” adopted in 1994, and in the policy “Concept of an Investment” adopted in 2005 and in other legislative acts regulating the economic environment concerning investments. Investment policy of Armenia was directed at the integration of Armenia into the world economy.

The main principles of investment policy in Armenia are:

- application of liberal principles of economic activities in the investment sphere;
- maintenance an attractive investment climate through stable legislation regulating investments;
- maintenance of equal, not discriminatory, economic conditions for foreign and internal investors;
- granting of national treatment and most favoured nation treatment toward foreign investors and investments;
- protection of legitimate interests of investors and investments.

The basic purposes of Armenian investment policy are: maintenance of stable economic growth and an increase in the living standard of the population by means of increasing economic activity, increasing the volume of investments and the creation of a favourable investment climate.

The formation of a favourable investment environment that will increase the volume of foreign and internal investments requires that special attention be given to the problem of overcoming unnecessary bureaucratic obstacles in the investment environment.
Stimulation of investments and their presence in significant volume in the economy remains a primary criteria for the economic development of Armenia.

With the purpose of improvement of the investment environment and stimulation of investments, the government plans to carry out the following steps:

- Ensure that all regions of the country develop equally. The government presently carries out a program for regional development of infrastructure. This program will be continued but additional emphasis will be placed on making sure that all regions receive equal treatment. Also stimulation of investments targeted at specific regions and for specific measures – (e.g. development of telecommunications infrastructure projects) will be encouraged.

- Leverage the competitive advantages of the country to attract more foreign direct investment (FDI). Progressively increase the investment volumes in scientific branches where natural resources and a cheap labour force should gradually decrease. At the same time there should be development of knowledge-based activities (e.g. qualified personnel, scientific and technical structures, the development of an infrastructure for communications and information technology). Today the development of communications and information technologies are one of the basic strategic directions of the policy for state development.

- Cooperate more actively with the Armenian Diaspora by forming a favourable environment based on mutual trust.

- Establish a world-class insurance system to protect investors from potential risk.
Executive summary

Investments are the tool of efficient restructuring of the agribusiness sector in the transition process and Serbia’s intention to join the EU. Transition of Serbia toward a market economy, integration into the global economy and accession to the EU are strategic interests to Serbia. Agriculture is faced with the challenge to fulfil and satisfy the strict requirements that accompany a full EU membership. Serbia places a high priority on accession to the EU. Therefore, deregulation, price liberalization, restructuring of agribusiness firms and a forced privatization are already underway. The legal system and a suitable framework are not adjusted yet in the fields of agricultural investments, finance and banking in compliance with the strict requirements of full EU membership. Maximization of investments in Serbian agriculture should be approached as a tool of economic and agricultural policy in the restructuring of food chains in Serbia during the process of accession to the EU. Agricultural finance, banking and investments, as well as mechanisms, instruments and institutions, are needed in order to assist restructuring of the agricultural sector and related agribusiness in Serbia. It is necessary to create significant policy guidelines for the reformist economic policy in the field of credit for trade, programmes of financial assistance, farm investments and sources of credit as well as with regard to the role of international and domestic financial institutions.

Characterization of the agribusiness sector in Serbia

In Serbia, the economic system for nearly 50 years has been centrally planned, both in ideology and perspective. The logical consequence has been a dominant emphasis on industrial development and on big industrial state-owned farms and state-controlled cooperatives, while all other enterprises have been controlled by the central planning agency. Only the small farmers remained in private hands. The official statistics and accounting system only monitored the agricultural sector, but the indicators and statistical surveys have been dominantly oriented to report on the physical data, rather than on the financial. As an example the Statistical Office of the Republic of Serbia is still mainly reporting statistics on primary agriculture, but not on the financial performance of the agribusiness sector. From the methodological point of view, it is only an example of the fact that in Serbia the agribusiness sector has not become a real government priority either for management or for monitoring.

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31 Statistical Office of the Republic of Serbia reports on plant production and agricultural production indices. Apart from the data of agricultural production, the databases are expected to soon also include data on prices, exports and imports, industrial and household consumption of certain agricultural produce. At the moment there are databases on crop production, livestock breeding, industrial consumption and import and export of agricultural products. See: http://webrzs.statserb.sr.gov.yu/axd/en/druastrana.php?Sifra=0003&izbor=tabela
Even though the term agribusiness has been in use in Serbia since the late 1980s, even today Serbian agriculture is treated as something completely separate from other types of businesses. In Serbia, agriculture shows a trend toward creating industrial farming companies to replace traditional production plots. The agribusiness sector in Serbia can be observed and analysed from two points of view; one is that of large-scale production, processing, and marketing of food and non-food farm commodities and products. Agribusiness is becoming more and more of a major commercial business and Serbia will probably become the largest agribusiness area in South-eastern Europe. A second point of view, but of primary interest for the development of the sector, is related to private farming, cooperatives and small and medium-sized enterprises (SMEs) in agribusiness.

One of the key priorities of the Serbian democratic governments (more precisely, two) at the beginning of the twenty-first century is to increase the attractiveness and transparency of private and foreign direct investments (FDI) into Serbian agricultural sector. This effort is aimed at establishing and developing the credit market in order to create a more competitive sector. However, representatives of international agencies and bodies, especially the EBRD and FAO, have stressed the need to research and define more precisely the potential to finance agribusiness and the agricultural sector in Serbia, with a special focus on the mechanisms to attract international partners and banks to actively invest in the agricultural sector. The official position of the Ministry of Agriculture has been concentrated on improving financing in order to increase international competitiveness. For Serbian agribusiness it is of the utmost importance the positive role that the EBRD and World Bank contribute in the process of restructuring the sector. These efforts not only support the strategic objective of joining the EU, but at the same time help to develop agribusiness SMEs in Serbia. EBRD has financed nearly 40 projects in the agribusiness sector with approximately EUR 450 million invested in 2004 alone. The emphasis of the EBRD on financing food chains is extremely helpful in restructuring the primary agricultural-producing sector, from food processing, food safety and storage to the marketing of final products. The results of this EBRD policy orientation has also been independently confirmed by preliminary results of a research project focused on the maximization of investment in agriculture and agribusiness in Serbia as a tool for joining EU.

The official statistical data shows that Serbia has 5 734 000 hectares of agricultural land, with arable land per capita at 0.56 hectares and 4 867 000 hectares of cultivated land. Land is 87 percent privately owned and the number of private small farms is almost 700 000 with an average size of three hectares per farm. Some 44 percent of the country’s population lives in rural areas. Large industrial agro-processing plants and factories have been mostly privatized, while the rest will finish this process not later than mid-2007. In 2005, out of 599 enterprises ready for privatization, 402 were privatized. In the same year, a further 319 entered the privatization process. The process is more efficient and effective in the Vojvodina region than in central Serbia. This is logical, given that Vojvodina is more developed in terms of traditional agricultural and agribusiness sector, has better-educated managers and a more efficient public administration and institutions.

The objectives of the Ministry of Agriculture are to implement a food safety policy, and to provide better access for small private farmers, cooperatives and SMEs to commercial inputs and markets, These are practical and reasonable objectives. At the same time, this encourages the transformation of agriculture towards commercial farming and entrepreneurial activities as a partial step towards stimulating SMEs in the sector. Sustainable growth of the sector and

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32 Even in these most recent efforts of the Ministry of Agriculture it is clear that ministers speaks about agriculture, not agribusiness. In SL see: Cooperation: Potential of Agricultural Sector of Serbia, Seminar of the Ministry of Agriculture, EBRD, FAO, EASTAGRI and WB, www.minpolj.sr.gov.yu 20/50/05.
33 The Serbian Ministry of Science and Environmental Protection have financed the multi-year scientific and research project under the same title (2006-2010). Project web-site: www.invest.co.yu/ag-invest
increasing exports are excellent goals. However, there is a significant lack of practical knowledge and implementation experience that will make it difficult to achieve these goals. The process of restructuring and privatization is unavoidable, although the instability, turmoil, non-transparency and visible corruption reflect negatively, especially in the agribusiness sector. Statistical data about the agricultural sector are inconclusive given that the EUROSTAT methodology has not been applied. In addition, financial accounting and reporting standards are applied only formally, and real market valuation is not a widespread practice in Serbia.

**General characterization and assessment of the key elements of an enabling environment for agribusiness and agro-industrial development in Serbia**

Major problems facing contemporary agribusiness in Serbia are found in the area of primary agriculture, specifically in the low rates of activity shown by the land market. This situation could be explained by negligible rates of profit and unclear business perspectives. The credit market is almost non-existent while other commodity markets exist more in published papers and newspapers than in reality. Farmers are poorly educated, not well represented for lobbying and some old-institutions, like the "socialist-cooperative" that formerly supported their interests, have almost disappeared. Even though the negative aspects of a centrally planned economy have disappeared, huge variations in agricultural production and an aging population of farmers, are not a promising scenario for the future.

The Ministry of Agriculture has begun a number of initiatives to create more reliable statistical data on agricultural production, and based on models of the data will define the proper strategy for agricultural development. This is praiseworthy because it’s the only way to continually increase competitiveness and to integrate Serbia into the EU and other global institutions such as IMF, World Bank, WTO. Preliminary research has shown that there is no political or public perception of the importance of this strategy. Thus, the right action to be taken by Serbia is the restructuring of agribusiness through maximization of investments in the vertical food chains as a tool to prepare the county to join the EU.

**Agricultural budget** The agricultural budget was adopted in Serbia in the mid-1990s. It has been a very good "cash cow" for the short-term political purposes of the government. The budget methodology is based fully on the OECD guidelines and harmonized with contemporary practice in the OECD member countries, but the implementation is inconsistent. The goal is agriculture modernization and adjustment to the EU. Expenditure items are not transparent while nominal recipients are: market intervention, structural support, administration, financial infrastructure, rural incentives, environmental payments and area payments. The real problem is that the Ministry of Agriculture instead of supporting institutional building and inducing structural changes in the area of agricultural credit, banking and financial institutions, has introduced a judged from the market efficiency criteria.

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34 On the transparency of privatization process see /in SL/ the E- book with the same title from 2001: [http://www.transparentnost.org.yu/publikacije/privatizacija_i_transp.pdf](http://www.transparentnost.org.yu/publikacije/privatizacija_i_transp.pdf) Conclusions are still valid, even more so for the agribusiness sector.

35 International financial reporting and accounting standards were introduced as legally binding in Serbia from 2005, and from the formal point of view are applied in full. But objectively judged, it should take one or even two to three decades to teach local accountants, managers and government officials to think that way and to use the data properly. Although the available statistical data are the only source of information, other commercial and non-commercial sources are non-existent. Therefore, caution should be used when analysing official statistics.
Ministry of Agriculture as agricultural banker The Ministry of Agriculture introduced a programme of granting loans to farmers and broadcast the news on the national and commercial TV stations. The perception of potential borrowers was that these loans would probably never need to be repaid. From the professional point of view, it would seem to be much wiser if the Ministry of Agriculture had commissioned this project to a commercial bank or consortium of banks.

**Rural and SME financing in Serbia** The process of privatization of the banking sector in Serbia is almost finished. Only a few banks remain partly owned by domestic investors (i.e. shareholders). The preparation and implementation of regulations for the central bank and other financial institutions is also nearly finished. The regulatory institutions could be judged as weak and lacking a strongly positive public image. There is a general lack of credibility regarding banks because political influence in the banking structure is still widespread.

The number of banks is increasing, as well as market competition. While the exchange rate of the Serbian dinar is considered overvalued, there is a widespread fear in the public that loans are granted with a more favourable exchange rate for the banks. Operating costs and profit margins of banks are squeezed more and more, and the banks are doing their best to improve competitiveness and efficiency. Market competition gives an impression of market instability. Banks are doing their best to increase the loan portfolio to the private sector, but based on an analysis performed by the EBRD in 2005, only 4.8 percent of total lending goes to the agricultural sector; a percentage judged as very low even by regional standards.

Because local capital markets are underdeveloped, there is also limited trust in the banking sector. Consequently there is a shortage of long-term sources of funding. Agribusiness in all of this is damaged even more. Investments in agriculture and SMEs are low, characterized by little funding going directly to private farmers and smallholdings. Commercial banks, as is logical, prefer to work with input suppliers and big producers. But at the same time, the banks put undue pressure on the local farmers and small entrepreneurs by charging them very high interest rates, much higher than the nominal or real market interest rates.

Due to budgetary constraints and Serbia's obligations vis-à-vis international creditors, donor agencies and governments, the opportunity for a subsidized credit line to local farmers is nearly over. The banking sector completed privatization and the regulatory guidelines and monitoring processes are strict and transparent. The government is even less able to finance state-owned guarantee schemes that bear most of the loan risk, while banks take much more secure and favourable positions that result in a less-risky loan portfolio. The culture of credit, the practice of risk management and the model of loans and repayment procedures are gradually becoming accepted in society and economy.

The government is faced with a two-fold problem first, how to provide credit to the farmers and SMEs; and secondly, how to collect the loans, given that there is an evident lack of adequate agricultural banking infrastructure and operating systems. Banks have not adopted standard practices for risk management or for proper legal and financial due diligence reporting. On the other side, agribusiness managers and small farmers do not possess adequate practical skills to formalize their approach to the banks and the loan application process. Another problem arose

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when farmers submitted unreliable business plans to local banks obtaining loans; a fact that later turned into arrears or bad loans.

The banking system is not specialized nor tailored for the present agribusiness in Serbia. But more significantly, the system itself presents a constraint, given that the practice of banks is primarily to grant loans without asking for business information but based upon excellent collateral. In Serbia banks should be immediately relieved of the role of subsidizing farmers with loans that are not supported by an effective and realistic business plan in order to avoid a chain of uncontrollable bankruptcies or future restructuring of repayments. The next step is to propose a new system integrating agricultural loans and banking which would serve the narrowly focused agribusiness in Serbia that could be productive and constitute a long term solution. Commercial banks are reluctant to loan directly to farmers for many reasons ranging from the lack of liquidity, inadequate administrative and banking procedures and lack of farm lending methodologies. In addition, farmers and SMEs are notorious for not keeping adequate accounting data; their financial reports are often substandard, and the performance indicators are often not satisfactory.

**Access of farmers and rural entrepreneurs to financial services** The government in Serbia should, without any doubt, continue the reform process and complete the privatization process. At the same time, the government should strengthen the regulatory and supervisory environment. Simultaneously, in preparation for EU accession, Serbia should do its best to broaden the range of financial institutions, to create more open and free financial markets where liquidity becomes the primary condition.

**Consultancy services** Consultancy services in Serbia are flourishing, and are very lucrative but totally unregulated. Competition is fierce with clients more interested in the informal, or even formal, connections of consultants and consultancy firms with the government; client expectations are based less on receiving information than on the full support and subsidized money from the budgetary coffers. This leads to another problem in that even the most professional consultancy businesses cannot survive, and that is a reason why quality of service is diminishing rapidly. One of the feasible and at the same time attractive and low-cost solutions is to refocus agricultural and agribusiness colleges and faculties to transform themselves into a type of network of agricultural extension and development services. This approach would give the country the opportunity to standardize agricultural accounting and farm record-keeping. In addition to improving financial reporting practices on the farm and at the SME level, hopefully the process could bring practices up to the standards and requirements of the FADN methodology of the EU (i.e. Farm Accountancy Data Network – FADN). Some research in this area has been done in Serbia in the late 1990s, but afterwards the Government lost interest, at least in the desire to test the methodology in practice.

**How to address constraints in agribusiness lending?** in the coming years the Government of Serbia should become more intensely engaged in eliminating constraints in the flow of credit and financing to agribusiness. This is the only way to improve the competitiveness of the sector, but this can only be done based on the use of new, improved, reliable and realistic working practices on these issues. One of the possible steps is the introduction of a new programme in rural business environment planned for implementation at the end of 2006 in close cooperation and assistance with the World Bank. The consultancy services which could be beneficial and helpful to Serbian farmers and SMEs are still not capable of assisting them in accessing the most attractive export markets, even less capability exists to support foreign credit sources and relevant advice (e.g. agricultural extension service, research and development, technical consultancy.).

**National Investment Plan for 2007** As the end of 2006 and new election campaigns approached, the Government of Serbia announced its intention to invest a budgetary surplus of
39.5 billion dinars (EUR 500 million based on the official exchange rate). The public debate is still open, with the presence of two opposing groups; one in favour of the National Investment Plan (NIP), and the other strongly opposing it. The opposition considers the whole process prone to corruption, non-transparent, arbitrary and not based on actual market criteria but on political loyalties.

Some cynical critics even argue that the only remembrances of the NIP after the outcome of elections will be the press clippings from the end of 2006, but nothing more. There is a very real danger that this budgetary surplus will be disbursed in vain. Plans are already underway to establish and equip milk quality testing laboratories based on the EU standards and soft-loans for agricultural equipment (i.e. construction of new farms, reconstruction of the existing farms, warehouse construction, and related investment). In terms of financing incentives for rural development, the Government envisions improvements to the electricity network, reconstruction of local roads and sewage system as well as improvements to the rural water supply systems, as well as other infrastructure projects.)

New agribusiness cooperatives - an initiative by USAID in Serbia with ADF as the project’s implementation partner was a very interesting development at the end of 2005. USAID made an inventory of all available resources and assets which were not adequate to satisfy the demand for agricultural produce in Serbia and for prospective foreign markets. USAID and ADF developed and proposed a new model for cooperative management and operations with the assistance of Hungarian experts, Government, NGOs and experts from the EU. The basic approach covered all activities needed, from packaging and branding, local socio-economic development, the establishment of business incubators to support local, regional and international cooperation. Specific advice was offered for introduction and implementation of information technology for agro-cooperatives and how to intensification of cooperation, education and joint activities by all participants.

**Analysis of selected elements of enabling environment in Serbia**

**Agricultural and agribusiness investments as a role model** Investments in agribusiness are very specifically needed for many reasons in the transition from a planned economy to an open market in Serbia because agriculture and rural development are not only significant for the country, but for the economic sector itself. Agribusiness investments should be based on solid market criteria, but also there is a need to counterbalance and correct some social and inequitable factors. Agribusiness investments, as well as any other investments, could be channelled toward strengthening the resource base of the sector and the economic prosperity and well-being of the nation. In Serbian agriculture and agribusiness, the SME investments are dominated by direct investments in physical assets and working capital, while most investments are in the form of credit instruments and cash injections. Securities, IPO’s and related instruments are extremely rare as a form of financing agribusiness in Serbia.

Democratization of Serbian society is also forcing a strong argument in favour of the maximization of agribusiness investments as a tool for restructuring the vertical food chains on the path towards EU accession. The prerequisite on that path is a strong public administration,
independent judicial system and regulatory bodies and an open market. Agribusiness investments which are based on the strategy to restructure the vertical food chains as part of the EU accession process are the only way to prepare the sector for the already-announced deregulation, price liberalization and business restructuring. The legal system in the area of agricultural investments, financing and banking is not adjusted and adequate to the strict requirements for full EU membership. A reliable econometric model of agriculture in Serbia has not been established yet, so the effects and expected results of various options have not been tested in advance with modelling tools. Future research in this area in Serbia should give some very simple and straightforward answers like practical recommendations of how the general economic policy mix should treat agriculture, how agrarian policy should be created and implemented, how financial agribusiness development should be supported and a definition of the proper role of domestic and international financial institutions.

Towards the creation of the model of maximization of investments. Intensification of political and economic ties between Serbia and the EU and the US stress the significance of agribusiness investments. These investments more precisely should be a tool of efficient restructuring and growth of the agricultural sector, also to enable Serbia’s economy a faster and more efficient transition and integration into the EU. Given that agriculture, SMEs, large agribusiness corporations and related businesses are significant generators of GNP and growth in Serbia, and even one of the dominant forces of growth; it is very important to have active participation from these stakeholders in all discussions on economic policy at governmental levels. This will also encourage full respect and mutual trust between the stakeholders and the ministries and other departments. There is one more very important reason why it is necessary to improve the process of agribusiness investments and to maximize its efficiency in order to attract FDI. The role of the agribusiness restructuring process is vital to attract foreign investors who will invest only when the country can assure them that their investments are safe. In this way the country will increase the likelihood of additional investments of capital from domestic sources. Therefore, the special status afforded to foreign investors is only the first and prerequisite step towards a more stable and safe national investment climate.

The strategy of sustainable agricultural growth should give clear-cut answers to the questions of how farmers and SMEs should solve the problems of marketing their produce to the EU market, increase their access to production inputs, and secure suitable financing for development and access to new technologies. At the same time, investments made by the large wholesale and retail sales chains in agribusiness should be seen as a tool with positive effects and impact on farmers and SME-food producers.

General aspects of favourable environment to agricultural development in Serbia, broadly defined:

- **Create, suggest, adopt and implement new investment policy.** A primary goal should be to protect private ownership. The measures should not be discriminatory towards foreign or domestic investors in agribusiness. Rather, they should be transparent and contribute to the full practical implementation of international agreements which are obligatory for Serbia to respect the full protection of foreign investors and contract obligations;

- **Improve the effectiveness to facilitate investments.** Assess and evaluate the efficiency of the public agencies that promote investments (e.g. Ministry of Agriculture, national and regional agencies for SME development, National Agency for Promotion of Foreign Investments – SIEPA);

- **Propose measures to stimulate investment.** A two-pronged approach is needed by the government and at regional levels to attract foreign and domestic investors to the
agribusiness sector. At the same time, the approach must be designed to attract foreign and domestic investors to Serbia, both nationally and regionally, for general investments;

- **Develop responsible public government.** The focus should be on improving the processes and institutions that deal with formulation of public policies, laws and regulations that influence the business environment, especially to eliminate corruption and strengthen open dialogue between the private and public sector;

- **Establish laws to improve corporate governance.** Laws and business regulations should be adopted that improve behaviour of businesses, especially to protect the rights of investors and to encourage transparent and reliable financial reporting, e.g. use of OECD standards of good corporate governance; 41

- **Develop human resources.** Policies of fair and equal treatment of the workforce should be supported, taking into account factors such as availability of the workforce based on different levels of skills and education, labour market regulation and laws which affect the employment and work of foreigners, children and gender equality;

- **Policies should be applied which improve the ways in which business is conducted.** especially by taking into account internationally recognized practices for doing business;

- **Reform of the exchange rate policy.** A more thorough exchange rate policy should be elaborated that includes the regulation and control of foreign exchange flows;

- **Improve taxation policy.** Improvements should be made on the state and local levels, with a stress on controlling the costs of operating a business in Serbia (e.g. taxation of profits, taxation of property, VAT, other forms of taxation);

- **Create policies for improving competitiveness.** Policies that will enable more competitiveness, especially with respect to specific segments of agriculture, and which are non-discriminatory between investors and comply with antitrust legislation.

**Some specific aspects of growth of agribusiness and agro-industry in Serbia** Emphasis should be placed on some specific mechanisms in order to increase growth of agribusiness and agro industry in Serbia, as described in the following:

- **Financial services** which include a comprehensive approach and terms of short and long-term financing and mechanisms of risk management in agriculture and agri-industry as a tool of development;

- **Foreign trade policy** that promotes and simplifies agricultural exports from Serbia;

- **Policies, tariffs and quotas for import products** which are directly in competition with products from the local industry should be implemented selectively with regard to their impact on availability and access to inputs and equipment relevant for agribusiness and agro-industry;

- **Simplification of the procedures for obtaining licences and also simplification of the procedures to register SMEs in agribusiness**;

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41 Dedic P. /In SL/ (2004) Legal and Financial Standards of Corporate Governance as a Way of Protection of Interest of Shareholders. PhD in Law written thesis. Belgrade: Faculty of Law – University of Belgrade. Excellent five-year research results based on the OECD standards on corporate governance; presents model practice in OECD countries, but also very relevant and applicable to the Serbian circumstances surrounding the needs of agribusiness investments.
• *Infrastructure*, which covers aspects like availability and condition of transportation networks, public warehouses, packaging plants, processing and freezing facilities, telecommunications and energy;

• *Enabling services for business development and consultancy* (including agricultural extension and advisory services) to small and medium-sized agribusinesses by identifying key suppliers of such services (NGOs, government, private sector) and their success rate;

• *Business connection between SMEs and large agribusiness enterprises.* Create incentives for large firms to develop cooperation with SMEs in order to improve the transfer of technology, inflow of innovation, arrangements and sub-contractor contracts;

• *Institutions for research and development* which stimulate the transfer of technology to agribusiness and agriculture;

• *Norms, standards and regulations which are related to production, processing and distribution of food products,* especially those related to quality and food safety, taking into account different requirements on domestic, regional and international markets;

• *Laws and regulations related to the use of agricultural land.*

**Conclusions and recommendations**

The logical framework of this paper and of the research that is just beginning in Serbia is to assess the impact of the maximization of agricultural and agribusiness investments as a tool of restructuring the vertical food chains in order to fulfill the strict regulatory and market operational requirements and standards for the accession to the EU. It is necessary to create adequate and well designed and balanced guidelines for the agrarian policy at the level of Ministry of Agriculture and of the general economic policy at the level of Serbian Government.

Future scientific research and study in this area should be viewed as a logical sequence of the previous recent research of international scholars and researchers in other countries and regions given that the Republic of Serbia has not been the subject of serious research for a long time. Results of the continuation of this research should produce practical and responsible suggestions on how to resolve bottlenecks in the vertical food chains with minimal agribusiness investments, taking into account the criteria of the target economic structure of agriculture and agribusiness which is approaching the negotiations of Serbia to enter the EU. Better cooperation, exchange of ideas, resources and researchers will be the best way to assist in the process of modelling the investments needed in agriculture, agribusiness and agro-industry. This should help Serbia to join the EU more rapidly and with the minimum of costs and the most efficient results.
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