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# The Restructuring of Agri-Food Supply Chains in CEE and the CIS: An Overview and Policy Implications

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## **ABSTRACT**

The recent restructuring of relationships between farmers and the buyers of agricultural output (principally processors and retailers) in Central and Eastern Europe (CEE) and the Commonwealth of Independent States (CIS) is reviewed. The interconnected growth of contracting, multiple food retailers, imposition of private standards and Foreign Direct Investment have contributed to the internationalisation of agri-food markets in the CEE-CIS region. The restructuring of supply chains is profoundly affecting the opportunities available to farmers in CEE and the CIS. The paper advocates that public support to the agricultural sector should be geared to enabling domestic farmers access restructured food supply chains, in contrast to much of the assistance to develop market infrastructure in the 1990s, which was geared to commodity spot markets, which in many cases are now in decline.

## **ACKNOWLEDGEMENT**

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## 1. INTRODUCTION

While the debate on the relationship between agricultural policy and the welfare of farmers has been lengthy, the impact of supply chains on the wellbeing of the agricultural sector has only recently been acknowledged. Despite its comparatively recent recognition, it is argued here that an essential aspect of understanding the future prospects of European farmers and for crafting agricultural policy is an understanding of farmer – processor and farmer – retailer relationships. In this review we seek to illustrate why the nature of food supply relationships matter for agricultural policy, how the linkages between farmers and the buyers of their output are changing in Western Europe, Central and Eastern Europe (CEE) and the Commonwealth of Independent States (CIS) and what are the implications of this restructuring for domestic policy makers and international agencies.

Particular attention is focussed on CEE and the CIS, where recent, dramatic changes in the structure of retailing and food processing are having profound implications for farmers. In general, food markets in CEE and the CIS have become more internationally contestable with the process of internationalisation occurring not just through trade and Foreign Direct Investment (FDI) but also via the incorporation of international standards and practices into domestic markets. It is argued that how domestic actors meet and cope with the challenge of internationalisation will shape the opportunities for farmers in CEE and the CIS over the short to medium term. We advocate that public support to the agricultural sector should be geared to enabling domestic farmers meet the challenge of internationalisation, in contrast to much of the market infrastructure financed by international agencies to support the transition in agriculture in the 1990s, which was geared to commodity spot markets. Such commodity markets are being superseded by rapidly restructured supply chains. In the review we adopt a broad scope, identifying key trends and their implications, rather than a narrow sectoral or country focus. The review draws several recent reports, including studies of organisational change in three CIS states (Ignat *et al.* 2005; Sardaryan *et al.* 2005; Skripnik *et al.* 2005), which were funded by EU INTAS.

## 2. WHY DO FARM - PROCESSOR - RETAILER RELATIONSHIPS MATTER?

The structure of supply chains impact both on the welfare of consumers and producers. For farmers, who deals with them and on what terms are important determinants of their livelihoods and, as we outline below, significant changes have occurred on both of these issues in the last decade in Western and Eastern Europe. As food manufacturing and retailing have become more concentrated, concerns have been raised surrounding farmers' access to final consumers and the dangers of monopsonies. The share of consumers' expenditure on food which gets back to farmers has steadily fallen in Western Europe, most notably in the meat sector, and this has prompted investigation into whether the present concentrated structure of food retailing acts against the interests of consumers and suppliers (Competition Commission, 2000).

Particular concern surrounds the future for small farms, which it is often argued may be excluded from restructured supply chains due to their inability to realise economies of scale, produce necessary volumes or make the investments in

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packaging or quality assurance that are often demanded by buyers. The future of small farms in an era of more concentrated supply chains matters greatly for CEE and, in particular, the CIS because of their number and contribution to welfare. For example, in Moldova, a radical land reform programme created a mass of small farms and 73 percent of the income of rural households comes from agriculture (World Bank, 2005). While the incomes generated from small-scale agriculture are low, approximately €40 per month, in an environment of impoverished social security and a weak Non-Farm Rural Economy (NFRE), such small farms provide a vital lifeline (Ignat *et al.* 2005). If market access was severely curtailed, leading to a sharp fall in prices, or denied entirely, the welfare implications would be momentous. In developing and transitional economies, restructured supply chains may present a serious threat to the traditional outlets of small scale producers (D'Haese and Van Huylenbroeck, 2005).

The question of the international competitiveness of a country's agriculture should also be considered from a supply chain perspective, as the competitiveness of one stage will affect the opportunities available to up or downstream actors. For example, in the mid-1990s the prices received by Ukrainian farmers for wheat and sunflower seeds were significantly below international levels. Despite this exports were modest. This apparent paradox was principally caused by inefficiencies in the downstream sector (excessive costs and poor reliability for the transport, storage and distribution of crops). Opportunities to develop arable export markets were therefore not so much limited by problems at the farm level but by downstream inefficiencies (Striewe, 1999; Skripnik *et al.* 2005).

The structure of supply chains also matters for consumer policy. To give an example, in the early 1990s Bulgaria introduced a policy of fixing a very low price for wheat on the domestic market with the objective of keeping bread prices down to help ensure food security in a time of painful macroeconomic transition (Ivanova *et al.* 1995). However, low farm-gate prices were not passed on to final consumers but were subsumed into high mark ups at the processing and retail level. The impact of agricultural policy on consumers cannot therefore be separated from an understanding of how food supply chains operate.

### **3. A BRIEF OVERVIEW OF THE THEORY OF FARM – PROCESSOR - RETAILER RELATIONSHIPS**

Having established that the structure of supply chains matter, it is useful to briefly consider how the relationships between farmers and the buyers of their output may be governed. Relationships, broadly, may take three main possible forms, which are summarised, together with their advantages and disadvantages for buyers, in Table 1. Spot markets, such as livestock auctions and commodity exchanges, are governed by immediate market transactions with no prior and post-purchase commitments held by buyers or suppliers. Buyers have no prior involvement in terms of what is produced, when it is available for sale and the means of production. At the other extreme, is vertical integration where at least two stages of the same supply chain are owned by the same actor, for example a milk processor that also owns a dairy farm. In between these two extremes, are various forms of vertical co-ordination, of which contracting is the most common, where buyers and suppliers remain as distinct, separate actors but agricultural production is supervised to meet pre-arranged terms. Contracting is therefore an intermediate institutional arrangement which gives buyers the ability to influence and partially control the production process without owning or managing farms directly. Contracts may take a number of forms,

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with the most widespread being: *market specification* (an agreement by a buyer to purchase a seller's output), *production-management* (in addition to agreeing to purchase a seller's output the buyer also participates in production decisions, such as specifying input use) and *resource providing*. In the latter case, the buyer provides goods and / or services to the farmer, such as credit, physical inputs and technical advice. These goods and services are known as *contract support measures* and in return for their provision buyers typically specify minimum output quantities required and quality thresholds.

**Table 1: Evaluation of Possible Relationships between Farmers and their Buyers**

	<b>Spot Markets</b>	<b>Contracting</b>	<b>Vertical ownership integration</b>
<b>Advantages for buyer</b>	<ul style="list-style-type: none"> <li>• Lack of prior financial commitments on the part of the buyer</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce uncertainty over product availability and quality compared to spot markets</li> </ul>	<ul style="list-style-type: none"> <li>• Greater control over product quality and guaranteed supply</li> <li>• Limit opportunistic behaviour by other actors</li> </ul>
<b>Disadvantages for buyer</b>	<ul style="list-style-type: none"> <li>• Lack of secure supply</li> <li>• Difficult to pre-specify and control quality</li> <li>• High transaction costs</li> </ul>	<ul style="list-style-type: none"> <li>• Dependence on other actors and potential for hold up problems</li> <li>• Often high start-up &amp; monitoring costs</li> <li>• Difficulty of contracting for every possible outcome</li> </ul>	<ul style="list-style-type: none"> <li>• Dissipation of managerial resources</li> <li>• High demand on capital</li> <li>• Rigidity of organizational structures</li> </ul>

Contracting seeks to solve the problem of securing reliable supplies at a pre-defined quality without making an organisation too rigid. While ownership integration is likely to give the greatest degree of control, it often places too high a demand on the firm's capital, dissipates managerial resources and dulls incentives if one part of the supply chain knows it has a captive, guaranteed buyer. The objective of contracting is therefore to gain some of the advantages of vertical integration without incurring these risks.

While contracting has several theoretical advantages over sourcing supplies via spot markets or ownership integration, its practical implementation can be complex.<sup>1</sup> Contracts can rarely specify obligations for each potential eventuality and will usually involve each party making relationship specific investments. However, the cost of these investments and the degree to which the relationship is valued is unlikely to be shared equally. As a result, one actor may be vulnerable to another's opportunistic behaviour. To deter opportunistic behaviour, contracts may incorporate private enforcement capital – whereby the long-term benefits of fulfilling the contract are greater than the expected potential benefits from renegeing on it. For example the availability of physical assets (such as seeds) as part of a contract relationship may induce a farmer to remain loyal to a particular processor, even if she is offered a

higher price for her output, because a breach in the contract would lead to her being denied access to such assets, which may be difficult to obtain in poorly developed markets, in the future. For example the provision of working capital as part of contract arrangements has aided contract adherence in an FAO project to stimulate production of tomatoes and peppers in Macedonia (FAO, 2005a). However breaches, on both the buyer and producer side, are still common, particularly in unstable markets and where legal enforcement mechanisms are weak and the monitoring of compliance is difficult or expensive. Such an environment characterises most of the CIS (Ignat *et al.* 2005; Sardaryan *et al.* 2005; Skripnik *et al.* 2005).

#### 4. THE RESTRUCTURING OF SUPPLY CHAIN LINKAGES BETWEEN FARMERS - PROCESSORS - RETAILERS IN WESTERN EUROPE

While precise figures are often difficult to obtain, a broad switch from spot markets to contracting is apparent in the relationships between Western European farmers and the buyers of their output (Rehber, 2004). The degree to which contracting has grown varies from sector to sector – in pork and poultry and centres of the European horticultural industry (Holland) and vegetable packing and processing (East Anglia in the UK, Belgium and Holland) it is now standard. These agreements have clearly defined quality standards: for example contracts for peas and beans typically specify tenderness thresholds, the maximum number of defects permitted on delivery, size at the time of harvesting and whether cleaning and chilling is required. In some cases, larger farmers deal directly with multiple retailers<sup>2</sup> and in other instances pre-packers and processors act as intermediaries between farmers and supermarkets. As part of their contracts with farmers, there have been some instances of retailers providing contract support measures (as evidenced for Croatia by Reardon *et al.* 2003) but they are usually provided by processors or as part of a wholesaler's out-grower scheme. Such contract support measures are well established in the sugar industry but less common for other crops.

In the case of beef, despite the decline in the throughput of live auction marts, contracting has grown more slowly. For example, in the UK only around 15 per cent of farmers have a written contract either with a single buyer or a collective agreement as part of a co-operative marketing arrangement. Similarly, in the French wine industry, the majority of grapes are still sold through co-operatives without the aid of contracts. However, in both the beef and wine cases, contracting and greater vertical co-ordination is occurring. In Bordeaux, for example, instead of relying on the spot market for bulk purchases, more wineries are now backwardly integrated or use contracting (Swann, 2002).<sup>3</sup>

This shift to greater vertical co-ordination has been stimulated by a number of factors of which the desire of processors and retailers to have greater control over the quality and availability of farm level output has been most important. Greater control requires much closer relationships and within the food industry such practices are commonly known as Efficient Consumer Response (ECR), the main premise of which is that through co-operation, supply chain actors can more effectively respond to changes in demand and identify cost savings. While the outcomes of ECR are controversial, it has become critical to the fresh fruit, vegetables and meat sectors, where own (retailer) brands dominate.

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To become a supplier of own branded goods in much of continental Western Europe (e.g. France, Germany, Italy, Benelux countries), compliance with EUREPGAP standards on good agricultural practice, are commonly used as a precondition.<sup>4</sup> In contrast, most UK and Scandinavian retailers insist that firms have gained British Retail Consortium (BRC) accreditation. BRC is the main trade association for multiple retailers in the UK, and its Food Technical Standards are applied to suppliers.<sup>5</sup> The application of such private standards results in retailers having a far greater say in upstream activities and the level of detail should be appreciated: for example, BRC standards for fruit and vegetable packing specify the types of hats, gloves and clothes workers should wear. While industry wide standards should reduce the need for each retailer to conduct their own audits, many have additional company specific requirements and implement their own inspections.

Producers operating to standards such as EUREPGAP face, in general, higher production costs and the expense of certification and training. These costs can be prohibitive for small producers particularly when certification may not be accompanied by a price premium. Certification may also lead to disappointing returns as it is unlikely to be the only requirement of buyers, who may already be able to procure sufficient certified supplies from other sources. However to ignore the growing importance of private standards would also be a mistake in that those left uncertified are in danger of only being able to market their products to less demanding destinations at significantly lower prices.

As the degree of vertical co-ordination increases, the traceability of produce from a retailer back to individual farmers also becomes a possibility. This not only gives retailers greater ability to monitor the performance of its suppliers but also aids them in meeting their obligations under food safety laws and standards, which often mandate them to demonstrate due diligence in that the produce that they market is fit for human consumption. As the market share of multiple retailers in Western and Eastern Europe has risen and their sourcing strategies become internationalised, so their impact on farmers has grown.

## 5. THE RESTRUCTURING OF FOOD SUPPLY CHAINS IN THE CEE AND CIS

A striking characteristic of restructuring in CEE, and to lesser extent the CIS, is the degree of innovation that has occurred in the last decade. Beginning in the mid-1990s processors began experimenting with new contractual relationships with farmers and the first foreign owned retail chains entered the region. These twin drivers of change -the growth of contracting and foreign owned multiple retailers - are considered below in turn.

### *Contracting*

By the mid-1990s, supply chains in much of CEE and the CIS were in a state of collapse. Problems concerning the quality of output and the reliability of supplies, which were manifest during the socialist era, were exacerbated by the dislocation caused by privatisation and macroeconomic instability (Csáki, *et al.* 2004; Franks and Davydova, 2005). State owned food processors have been privatized and lost their exclusive rights to supply. During the socialist era such plants were guaranteed supplies from designated state and collective farms, under a system of vertical co-ordination orchestrated by the state. However after the downfall of communist

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regimes and privatisation in the early to mid-1990s, established horizontal and vertical relationships were broken up (Sardaryan *et al.* 2005). Processors had to implement their own procurement practices in an environment of poor legal enforcement of business relationships. Private enforcement of relationships was hampered by sharp falls in real incomes, rampant inflation and the loss of real government support. Agricultural output plummeted and much of the food processing industry became insolvent. As a result, late payment plagued food supply chains leading to a further deterioration in the quality and quantity of agricultural output. It was in this particular historical context that contracting as a supply chain management tool emerged.

From the mid-1990s onwards, processors in CEE sought to rebuild relationships with farmers to improve the quality and quantity of supplies. These initiatives often, but not in all cases, followed FDI. Based on case study evidence from CEE, Gow and Swinnen (2001) note how relationships were reformed with processors incorporating contract support measures, typically the provision of physical inputs and prompt payments, into contracts with farmers. Processor financed agricultural extension and training became relatively common. The impact of these innovations was highly variable. In some cases, such as Juhocukor (a sugar beet processor) in Slovakia (Gow *et al.* 2000), the impact was spectacular: contracting and support programmes led to a doubling of contracted hectares for sugar beet and a sharp rise in farm yields. To protect their supply base other sugar processors in Slovakia had to match the terms offered by Juhocukor so that an industry wide spillover effect occurred. However in other cases reforms failed as credit or inputs were diverted to alternative uses or farmers reneged on contractual agreements when offered a higher price by competitors. While such failures offer an important cautionary note, nonetheless the use of contracting and contracting support measures has risen throughout CEE. In fact, as it was developed in CEE to overcome some transition specific problems, in some supply chains contracting is more developed and complex than in North America and Western Europe (Swinnen, 2005).

The growth in contracting has been documented in a study of food processors in five CIS countries (Armenia, Georgia, Moldova, Russia and Ukraine), which found that in 1997 around 40 per cent of firms contracted with at least some of the farms that supplied them but by 2003 the respective figure was 77.4 per cent (White and Gorton, 2004). The study, which collected data via face to face interviews with senior managers of leading food processors, also found that the use of contract support measures grew over the same time period and by 2003 over 43 per cent of processors in the sample offered credit to at least some of the farms that supplied them. Significant numbers also offer physical inputs and prompt payments (see Table 2). The growth of contracting has been biased to industries with higher levels of FDI and greater value added. The worst terms and conditions offered to farmers are where FDI and restructuring have been absent, for example in provincial Russia, where not a single processor reported that they offered prompt payments or guaranteed prices to any of the farms that supplied them.

It is important to understand the impact of this growth in contracting, particularly regarding its effect on agricultural productivity, quality and opportunities for small farms. In the White and Gorton (2004) study, processors were asked to estimate for each of the contract support measures they have introduced the impact of the measure on agricultural yields and product quality. The mean impact for each contract support measure was a rise in farm yields by 9.6 per cent and an average increase of 10 per cent in the amount of farm level output reaching higher (extra class / premium class) standards. However, the impact of support measures varied considerably (Table 2). The measures with the greatest impact on yields were

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specialist storage (especially cooling equipment in the dairy sector), veterinary support and physical inputs followed by a set of market measures (prompt payments, guaranteed prices and market access). The impact of credit has been erratic, reflecting how credit can easily be diverted to alternative uses and contract compliance is difficult to monitor. Investment loans face similar problems.

**Table 2: Distribution and Impact of Contract Support Measures in 5 CIS countries (Armenia, Georgia, Moldova, Russia and Ukraine)**

<i>Measure</i>	<i>% of sample offering particular support measure</i>	<i>% of firms offering measure that operate a minimum farm size for measure</i>	<i>Ave. % change in farm yields due to measure</i>
Credit	43.4	60.8	9.3
Prompt payments	41.5	0.0	11.1
Transportation	39.6	45.0	6.3
Physical inputs	36.0	61.1	12.5
Quality control	34.0	16.7	8.1
Guaranteed prices	24.5	14.3	11.6
Agronomic Support	20.8	10.0	6.1
Farm loan guarantees	20.8	27.3	6.8
Machinery	16.9	66.6	3.4
Specialist storage	13.2	28.6	24.3
Business / financial management	11.3	50.0	6.2
Market access	11.3	0.0	11.2
Veterinary support	9.4	40.0	17.0
Harvest / handling	9.4	60.0	8.0
Investment loans	5.7	66.7	5.7
<b>Average</b>		34.0	9.6

Source: White and Gorton (2004)

These findings are important on two counts. First, low yields and insufficient product quality have been identified as major barriers to improving the international competitiveness of agriculture in CEE (Gorton and Davidova, 2001) and, especially, in the CIS (Ignat *et al.* 2005; Sardaryan *et al.* 2005; Skripnik *et al.* 2005). While not successful in all cases, the introduction of contracting and contract support measures, overall, has made a positive contribution to improving yields and quality. Second, credit and loans remain the mainstays of most private and publicly funded development projects in the region. However, credit and loans have not been the most successful measures in improving farm performance and both public and private sector support in the region have suffered from resources being diverted from the intended use. Programmes that improve market access and the dissemination of veterinary and quality control advice are likely to have beneficial effects on yields and quality, while also being easier to monitor and thus less likely to suffer from diversion of resources.

A commonly expressed concern about the spread of contracting is that it can lead to the marginalization of small farms (Escobal *et al.* 2000). This debate can be considered in terms of (a) an exclusion of small farms from formal food supply chains and (b) small farms being offered significantly worse terms and conditions. The evidence on the first of these questions is mixed but on the latter is more conclusive. Reardon *et al.* (2005), in their work on South America and Asia have found that processors prefer to contract with larger firms, and that smaller firms are often

excluded because they cannot fulfil the terms offered. However, for the CIS, White and Gorton (2004) found that food processors were dealing with more small farms in 2003 than 1997.<sup>6</sup> In part this was due to decollectivisation, and small farms are less likely to be excluded in countries where there is an absence of larger farms (Swinnen, 2005) and where demand is expanding, as it has done since 1999 in the CIS. Regarding terms and conditions, the evidence is far more certain – processors do discriminate against small farms in the provision of contract support measures such as credit and physical inputs. For example, in the CIS survey, 60 per cent of processors that offered credit and physical inputs to farmers did so selectively - they had a minimum farm size below which support was not offered.

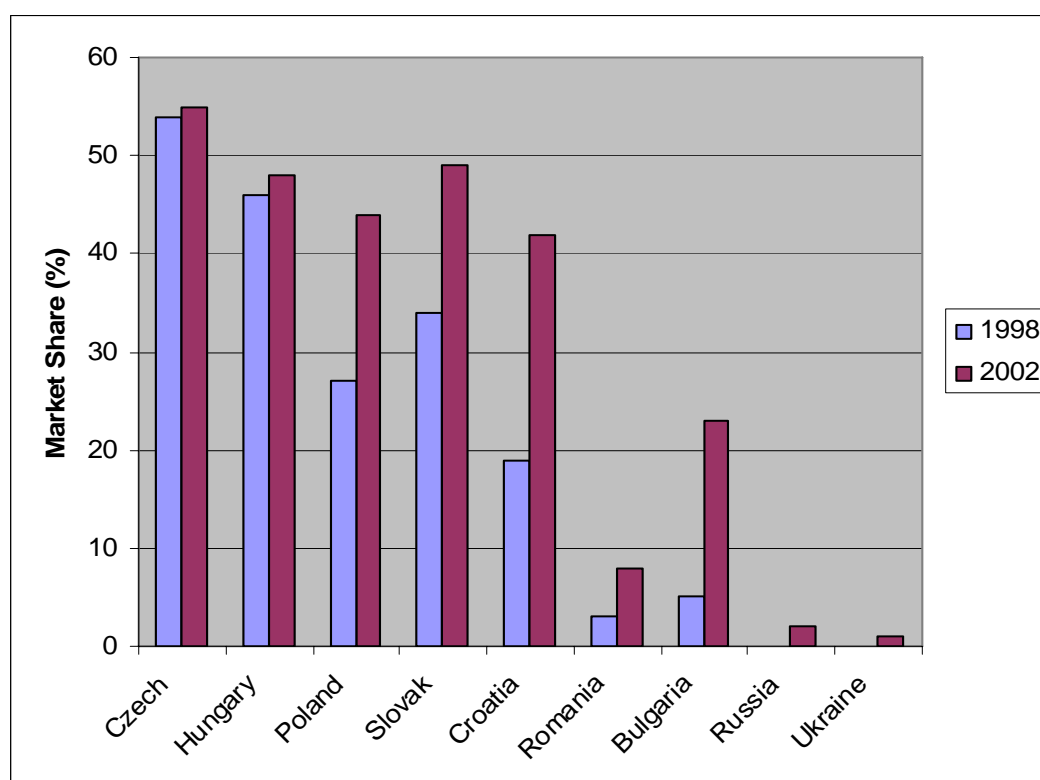
### *Retailing*

Concurrent with, and in some cases precipitating, the growth of contracting between processors and farmers has been the rapid penetration of foreign owned retail chains (Csáki *et al.* 2004). This process began in the most economically developed parts of CEE, that were receptive to FDI, in the early 1990s (Hungary, Czech Republic and Poland) and rapidly accelerated in the mid and late-1990s (see Figure 1). As these countries became saturated with foreign entrants, attention turned to what Dries *et al.* (2004) term *second wave* countries such as Croatia and has now reached states in the *third wave* such as Russia and Ukraine (Dries *et al.*, 2004). In some cases the growth of food retail chains has been spectacular: in Croatia between 2000 and 2002 the share of total food sales accounted for by supermarkets jumped from 25 to 51 per cent (Reardon *et al.* 2003).

Supermarkets and hypermarkets have proved popular with consumers in CEE – in the Czech Republic, 47 per cent of shoppers visit a supermarket at least once a week and 15 per cent visit a hypermarket (GfK, 2003). Tesco reported that in Hungary over one weekend in November 2004, 2 million people (one-fifth of the total population) visited its stores. In these *first wave* countries the total number of retail outlets, particularly of specialist food stores such as greengrocers and butchers, has fallen as independent and co-operative stores have been squeezed out by multiple chains. While independent retailers still account for the vast majority of food purchases in the CIS, sizable multiple chains are emerging. For example in 2006, Russian grocery retailer Pyaterochka announced plans to buy fellow supermarket chain Perekriostok, creating a combined business of 880 stores with a turnover of \$2.4 billion. Markets, kiosks and traditional shops have witnessed a fall in their share of retail turnover while the leading Russian multiple retailers achieved a 20 per cent year-on-year sales growth over the period 2000-2003 (Euromonitor, 2004).<sup>7</sup>

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**Figure 1: Share of supermarkets and hypermarkets in total food retail sales**



Source: Dries *et al.* (2004)

In CEE, foreign owned food retailers have transferred procurement practices from Western Europe and have significantly different relationships with their suppliers compared to the independent retail sector (Dries *et al.* 2004). Foreign owned retail chains have shifted to centralised procurement practices with store managers having little autonomy over what is stocked. Individual stores are increasingly supplied with goods from distribution centres that are either owned by the retailer or managed on their behalf by specialist logistics companies (Dries *et al.* 2004). When these distribution centres are in place, retailers bypass the general wholesalers who serve independent retailers. Many Central European distribution centres service stores in a number of countries and retailers look to procure on an international basis. Cross-national procurement has been aided by enlargement of the EU and retailers as a result have a wider range of suppliers from which to procure and, hence, lower costs.

While in most food supply chains, retailers will not have direct relationships with farmers because of intermediate processing, for Fresh Fruit and Vegetables (FFV) relationships may be closer. While evidence to date is limited, it does appear that multiple retailers in CEE have shifted to more direct supply relations for FFV, either dealing directly with larger growers or, more commonly, contracting out the supply of particular products to specialist wholesalers who co-ordinate farm level production through out-grower schemes (Dries *et al.* 2004). These arrangements are designed to minimise transaction costs and ensure more consistent supply that conforms to pre-set standards imposed by the retailer. As a result of these arrangements, far less produce is being sourced through wholesale markets and more farms must learn to operate according to the private standards of the retailers. Most of the private standards used in CEE have been transferred from the retailer's home country, either

replicating the company's own guidelines or applying the relevant BRC or EUREPGAP standard.

## 6. POLICY ASSISTANCE AND CHALLENGES FOR THE FUTURE

The impacts of greater vertical co-ordination and the penetration of foreign owned retail chains have already been significant in the New Member States of the EU and similar trends are starting to be felt in the Balkans and the CIS. This restructuring of supply chains has profound implications for how both farmers operate and policy makers address development issues. It offers both opportunities, for growers to reach new markets but also threats, particularly to small farmers. In this final section we first outline the main policy issues and perspectives beginning with a discussion of how much of the market infrastructure developed in the 1990s is being rendered less relevant or obsolete as a result of the restructuring of food supply chains.

### *International Assistance in the 1990s*

During the 1990s international agencies and bilateral donors concentrated on improving market infrastructure for assisting the development of agriculture in CEE. Key elements of market infrastructure were seen to be wholesale markets and Market Information systems (MIS). Such investments were geared to improving the efficiency of commodity production.

Wholesale markets were taken to be a key element of such infrastructure and EBRD, FAO, USAID, PHARE and the World Bank funded their (re)construction in several CEE states including Hungary, Poland and Romania.<sup>8</sup> Such support has been based on a belief that wholesale markets can lower transaction costs, improve market transparency and raise farm incomes by providing better trading opportunities (World Bank, 1998). However, many of these new wholesale markets have failed to become self-financing. There have been a number of reasons for this including the reluctance of traders to move from previously unregulated 'primitive markets', which were deemed to be safer for tax avoidance, but a key factor has been the growth of retail chains that bypass such markets. Many wholesale markets currently operate at far below full capacity and exist as a sink for produce that fails to meet the private standards set by the multiple chains. For such produce farm-gate prices are depressed. While in much of the CIS, the importance of traditional retail and wholesale markets remains, in metropolitan Russia a movement away from kiosks and wholesale markets is already noticeable.<sup>9</sup> It is vital that previous policy mistakes are not replicated and that donors appreciate that wholesale and retail markets are increasingly becoming a second-tier outlet for produce which cannot be marketed through multiple food retailers.

Similar problems are apparent for *Market Information Systems (MIS)*, which were funded to improve market transparency. These systems are largely based on monitoring at wholesale and retail markets and seek to improve price discovery on spot markets. However as contracting becomes more widespread and spot markets thinner, data from such systems will become less reliable or appropriate in helping farmers to make decisions. This is related to a wider question of how prices are discovered in markets where long-term contracts predominate and spot markets are weak. As the percentage of production under contract increases the market clearing (spot) price is likely to become more volatile and less representative as many facets of the contractual relationships will not be captured in spot market prices (Hobbs and Young, 2001). MIS as they are currently configured may do little to help producers in deciding whether to enter or exit contractual relationships.

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International assistance to help countries in CEE and the CIS to evaluate the international competitiveness of their agriculture has been widespread (Gorton and Davidova, 2001; Keyser, 2004). While measuring international competitiveness should be an important component of policy support, its composition needs to be rethought. For example most existing studies have analysed the competitiveness of *commodity* production, typically assessing the ability of domestic producers to compete against imported goods at the wholesale market (for example import parity Domestic Resource Cost [DRC] ratios). These assessments are limited as they are linked to commodity markets and fail to consider how meeting the private standards of multiple retail chains may affect the cost competitiveness of agriculture.

The inability of farmers in CEE and the CIS to meet private quality standards has been one of the reasons why the relationship between DRC ratios and trade has been weak. For example, a recent World Bank (2005) study on Moldova reported that farmers of high valued-added crops receive some 10 to 40 per cent less for their output than international parity prices. However despite low costs and output prices, exports have been disappointing (Ignat *et al.* 2005) because, in the Moldovan case, the primary impediment to access to international supply chains has not been price based but quality. In future, conventional commodity studies should be adjusted to reflect the reconstruction of supply chains with attention paid to contract conditions and understanding what proportion of farmers could meet such obligations and if they did, what would be the impact.

Having outlined how elements of the market infrastructure developed during the 1990s should be rethought, we move on to the main future challenges for domestic and international policy makers in the region.

#### *Meeting the Challenges of Internationalisation*

From the 1970s onwards, meeting private standards have become an increasingly important entry requirement to supplying multiple retailers in international markets (Rehber, 2004; Reardon *et al.* 2005). As a result of the rapid development of the predominantly foreign owned food retailers in the CEE-CIS region, private standards are becoming an important entry ticket to domestic markets as well (Dries *et al.* 2004). While the agri-food sector remains the main source of gainful activity in most rural areas in the CEE-CIS region, the region's record on agri-food trade has been disappointing (OECD, 2001). There are a number of reasons why trade performance has been poor but a contributing factor has been an inability to meet private standards. The main barriers to meeting such standards are inadequate quality control systems, a lack of understanding of the requirements of retailers, a paucity of suitable managers for managing out-grower and contract arrangements and a lack of capital to make necessary investments (Reardon *et al.* 2003; Dries *et al.* 2004). While much attention has been focused on reform of government trade regimes and implementation of national food standards, for producers assistance in meeting private standards may be of more practical benefit.

A major barrier to meeting private standards is the lack of experience of farmers in CEE and the CIS in negotiating and fulfilling contracts. This is particularly the case in countries which have had radical land reform programmes which broken up former collectivised structures and created a mass of new, small farms, such as in Armenia and Moldova. In Moldova, small-scale farmers typically only have superficial understanding of their obligations in contracts regarding terms of delivery, quality and applicable law. As a rule contracts are developed by processing companies and are written in their favour, with farmers often signing agreements without reading them and thus subsequently they lack a clear understanding of their rights and obligations

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(Ignat *et al.* 2005). This problem is compounded by the fact that, notwithstanding some notable exceptions, higher and vocational education in agriculture in CEE and the CIS is still geared to a production orientation of commodities and this ethos still pervades most Ministries of Agriculture and, where they exist, extension agencies. This means that farmers and other supply chain actors often cannot obtain practical advice on signing contracts, meeting the obligations of out-grower agreements and quality control from local educational and state bodies (White and Gorton, 2004). Degree and vocation programmes and agricultural extension agencies have to be reformed to meet the realities of contemporary agri-food markets.

While most processors and retailers are not against small farms *per se* they are not development agencies and would prefer to deal with a small number of key suppliers (Skripnik *et al.* 2005; Swinnen, 2005). Processors and retailers may deal with small farmers directly if there is no alternative or if demand is rising rapidly in a protected market, but as international procurement becomes easier, the “no alternative” defence of small farms is likely to apply in fewer and fewer countries. This implies that critical to avoiding the marginalisation of small farms will be intermediary organisations such as specialist wholesalers, appropriate village collecting stations and marketing co-operatives which can co-ordinate small farm production, provide a single point of contact for buyers and may offer support measures which would not be forthcoming directly from the processor / retailer. These agreements are still in their infancy in many states in CEE and the CIS and there is a need to learn lessons from the first experiences and from other regions of the world where their history is longer. Establishing such institutions requires overcoming the reservations of small farmers, who, in part for historical reasons, have been suspicious of co-operative arrangements (Csáki *et al.* 2004).

In stimulating intermediary organisations and marketing co-operatives it is important to acknowledge that the record of public agencies has at best been mixed (Anderson and Henehan, 2003). Two factors are important in delineating what role support agencies should take. First, there is a need to avoid unnecessary replication of what the private sector is already doing regarding contract support measures, which is already advanced in some countries and sectors but poorly developed or absent in others. A better approach is to help enable groups of farmers to meet private standards within existing channels, particularly for higher value-added goods. This approach has been adopted by USDA in its milk marketing projects in Armenia (Hakobyan, 2004; Sardaryan *et al.* 2005) and by FAO (2005b) in its attempts to stimulate contract farming for higher value added fruits and vegetables in Macedonia. In the latter case, it has been recognised that without small-scale farmers being strongly linked to a consortium ‘contract farming would remain an illusion’ and that consortiums of local farmers should be linked to a service provider, headed by a specialist, that ensures that the scheme works to both the advantage of farmers and buyers (FAO, 2005a).

In establishing marketing co-operatives there is a temptation to rely solely on loans and credit. However, credit and loans are difficult to monitor, often easily diverted and therefore their impact may be modest. More appropriate measures may be leasing equipment. For example, leasing milk cooling tanks to farmers has helped to significantly improve the quality of output on small-scale farms in Poland (Dries and Swinnen, 2002) and Moldova (Gorton *et al.* 2006). Such initiatives, by improving quality can allow farmers better access to supply chains and meet private standards. In the dairy case, the supply of clean milk to consumers has significantly improved. However, any physical capital projects will require adequate investment in human capital, none more so than in agribusiness management.

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Before concluding, it is worth addressing two counterarguments that have been put forward for downplaying the importance of improving access to international supply chains. The first, which is often heard in the CIS, focuses on how margins for small scale producers are higher on informal urban and green markets than contract production with processors. For example, in 2005 Ukrainian farmers could receive between 2 and 3 Ukrainian Hryvnia (UAH) (€0.31-€0.47), dependent on location and quality, if they sold their milk directly at urban markets (Skripnik *et al.* 2005). However if they sold their milk to village collecting stations they were likely to receive only 0.6-0.7 UAH (€0.09-€0.11) or if, of sufficient size, under contract with a processor up to 1.25 UAH (€0.20) dependent on fat content (Skripnik *et al.* 2005). Clearly one must also consider variations in marketing and transaction costs between the different outlets but it is fair to say that for some producers ignoring contract production in favour of green / urban market may currently make sense. However, it is important not to ignore structural change in retailing. In Ukraine as in CEE and the Western part of the CIS, multiple retailers are rapidly increasing their market share. As multiple retailers advance, urban markets are and will continue to be squeezed. The argument that farmers are better served by distribution through urban and green markets is therefore short-termist and policy makers have to consider alternative future supply chain arrangements.

The second argument for downplaying this issue is to stress that the real objective of economic policy is to improve consumer welfare and that as multiple retailers have become enormously popular with consumers the question of access for farmers is of secondary importance (Timmer, 2004). In countries where farming is a minor gainful activity and the NFRE is strong such assertions are merited. However in much of the CIS in particular, agriculture is by far the most important source of rural income and acts as a vital social safety net. In these cases producer welfare cannot be ignored and Moldova neatly encapsulates the need to take the restructuring of supply chains seriously. The country had a strong reputation for FFV production during Soviet times and agri-food exports are vital to its prosperity. However, overall, Moldova has not capitalised on its inherited position since independence. It has found it hard to reorient its trade to Western markets and it is being squeezed out of its traditional main market, Russia. For example, Moldovan FFV are not currently sold through the rapidly developing Russian retail chains due to their variable quality and poor packaging (World Bank, 2005). Similar problems have emerged on the domestic market. For example, the foreign owned retailer Metro Cash & Carry entered the Moldovan market in 2004 saying that it was willing to procure agricultural products from local producers. However to date it has deemed that all local suppliers fail to meet its quality and quantity requirements and therefore the company imports all of its FFV (Ignat *et al.* 2005). Moldovan goods are increasingly sidelined into low-value added outlets, further depressing rural incomes and stimulating out-migration. While in the long-term the development of a strong NFRE will be essential, improving access to international supply chains is a critical current challenge.

## 7. CONCLUSIONS

This overview commenced from the assertion that the welfare of farmers cannot be divorced from the restructuring of food supply chains and has illustrated how practices and patterns from Western markets have been transferred to CEE and, more recently the CIS. The restructuring of supply chains in CEE and the CIS, driven by the growth of multiple retailers, the greater internationalisation of procurement and contracting has occurred at a startling pace. Understanding the implications of this

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restructuring and helping farmers in the CEE and the CIS to access restructured food supply chains represents a major challenge confronting policy makers. If this challenge is failed the welfare of excluded farmers will undoubtedly suffer and there is already evidence that agricultural output that fails to meet the growing raft of private food safety and production standards is destined for second tier markets with low value added (Ignat *et al.* 2005).

Improving access to restructured supply chains for small farms will hinge on the development of sustainable intermediary organisations and marketing co-operatives, to co-ordinate the activities of farmers and provide a link between them and processors and retailers. This is not typically a straightforward task and requires an understanding of how collective action problems can be overcome. It also requires a different type of policy intervention from those that prevailed in the 1990s, which were most commonly linked to investments in market infrastructure and are now tied to declining commodity spot markets.

Farmers in the CIS are, as a whole, poorly prepared for the rights and obligations of contract farming. Dealing with this difficulty will also hinge on the role of intermediary organisations but can also be ameliorated by wider adjustments in agricultural education and training. Extension systems should be refocused away from a pure production orientation to training in how agricultural producers can meet private food safety standards. This will involve improving the ability of extension agencies to provide technical expertise to farmers to fulfil international certification schemes such as EUREPGAP. Overall, support infrastructure in the region should be restructured so that it better prepares farmers for the new realities of restructured food supply chains.

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<sup>1</sup> A more detailed guide to different types of farm contracting and the costs and benefits associated with each is provided in Eaton and Shepherd (2001).

<sup>2</sup> A multiple retailer is typically defined as an individual retailing concern which operates more than 10 branch premises (Morelli, 2004).

<sup>3</sup> These trends are not restricted to Western Europe: the USA and Canada led the switch to contracting particularly in the poultry, pork and cattle and Australia led this trend in the wine industry. For example in the 1990s, 90% of broilers, measured by volume, in the USA were produced under contract (Hobbs and Young, 2001). In the Californian wine industry between 75 and 85% of grapes are grown on contract and wine experts have noted a global shift to the 'Australian' model of either per hectare agreements for mature vineyards or open-ended contracts, where certainty of sale is guaranteed but price is negotiated each year (Swann, 2002).

<sup>4</sup> EUREPGAP is an initiative of retailers belonging to the Euro-Retailer Produce Working Group (EUREP).

<sup>5</sup> The BRC standard has also been adopted by certification bodies in 23 countries spread across Europe, Africa, the Middle East, Asia, the Far East, Australasia and North and South America.

<sup>6</sup> Small farms were defined as those of less than 1 hectare in size or 5 milking cows in the dairy sector.

<sup>7</sup> Euromonitor (2004) reports that between 1999 and 2003 the number of kiosk outlets in Russia declined from 91,400 to 44,100. The main reasons for the fall were the sharp growth of other retail outlets, changes in consumer purchasing habits and in some cities urban regeneration projects.

<sup>8</sup> For example, the World Bank financed projects in 1998 to construct new wholesale markets in Gdansk and Lublin (Poland). For an overview of internationally funded wholesale markets in CEE and CIS see Mittendorf (2001).

<sup>9</sup> Euromonitor (2004) reports that the share of retail sales accounted for by street markets and kiosks in Russia fell from 50 per cent in 1999 to no more than 25 per cent in 2003. In Moscow alone the number of street markets declined from 244 in 1999 to 117 in 2003.

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