LESSONS LEARNED FROM THE IMPACTS OF THE GLOBAL FINANCIAL AND ECONOMIC CRISIS ON THE AGRO-FOOD SECTOR OF HUNGARY

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The research aimed to assess the impacts of the global financial and economic crisis on the agro-food sector of Hungary, and to propose policy measures in order to lessen its undesirable effects. Interviews were conducted with stakeholders in two major supply chains, wheat and pigmeat. Although agriculture and the processing industries in Hungary had been in a long recession due to the general macroeconomic, legal and social environment, the crisis impacted the agro-food sector to a lesser extent than some other sectors of the national economy in the 2008/09 crop year. However, most stakeholders were expecting the situation to worsen in 2009/10. Our recommendations for policy measures to mitigate the impacts of the crisis included, inter alia, the distinguishing between agro-economic priorities and social policy issues; the targeting of investment subsidies at the professional enterprises; the expanding of credit guarantee funds and the supporting of credit insurance; the encouraging of use of risk management tools available on the market; the encouraging of horizontal and vertical integration along the agro-food supply chains, as well as consolidation, rationalisation and specialisation within the processing industries; the supporting of innovation and marketing; the increasing of R+D spending; the developing of logistics; and the improving of the transparency of policy making and communication.

Key words: Hungary, agro-food sector, financial and economic crisis

JEL classification: Q13

Introduction

Hungary was hit severely by the global financial and economic crisis: international trade receded, currency exchange rates became volatile, investors pulled back from riskier markets, tourism and money transfers from abroad declined [1]. The fiscal state of the country was already vulnerable as it depends highly on foreign investments and borrowing. In spite of the declining international economic boom, official data show that the Hungarian economy still managed to expand by 2% in the first half of 2008, and 1.4% growth was recorded even in the third quarter. The yearly data of 2008 showed a modest 0.6% increase, but in the last quarter the GDP turned to decline and was 2.5% less than in 2007. The recession accelerated in 2009 when in the first three quarters Hungarian GDP fell by 6.7%, 7.5% and 7.2%, respectively.

Hungarian agriculture has been losing its share of GDP since the beginning of transition in 1990, partly because it has developed at a slower rate than other sectors of the economy and partly because it carries unsolved structural weaknesses. In spite of its difficulties, Hungarian agriculture had a successful year in 2008: due to the favourable weather conditions following three consecutive years of decline, the volume of agricultural production increased significantly, by 28% according to the Economic Accounts for Agriculture. From the very low base of 2007, output volume of crop production grew by 48%, while output of live animals and animal products declined by 3%. Farmers could harvest a record yield of 16.8 million tonnes of cereals in 2008, over 40% more then in the drought year of 2007. Grain maize production grew from 4 to 9 million tonnes. Prices remained relatively high. After a rise of 22% in 2007, agricultural producer prices went down by only 3% in 2008. Compared to the very high base, the prices of field crops and horticultural products declined by 15%, while a 14% increase in the prices of live animals and animal products occurred which was 10% points higher than in 2007.

Most available data show that a strong correction was to be expected in 2009. According to the Economic Accounts for Agriculture, output of crops was down by 15% in volume and 26% in value. Animal production continued its decline with a further 2.4% drop expected in volume and 7% in value. Agricultural output value decreased in 2009 by 18% as a consequence of 9% lower prices and 11% lower volume. Input usage will declined significantly. For instance in the first half of 2009, AKI reported that the sale of fertilisers fell by 20% in terms of active ingredients, and over the full year the decline was 15%. In 2008 fertilizer prices went up by 60% and in the first half of 2009 a further increase was measured by the Central Statistical Office value decreased in 2009 by 2.4% accor
Office. In the third quarter the price declined but still remained about 60% higher than the level in the third quarter of 2007. Overall fertiliser prices dropped by 11% in 2009 but remained 43% higher than in 2007.

The research aimed to assess the impacts of the global financial and economic crisis on the agro-food sector of Hungary and in doing so (a) identify the most important factors have impacted on the sector which are either derived from or have gained in weight and importance due to the global financial and economic crisis, and (b) allow us to formulate some recommendations for measures which would lessen the undesirable effects of the current or future crises in the sector. Because the time to complete this report was relatively short, and there were still very limited data available to assess the impacts of the financial and economic crisis on the agro-food sector in Hungary, interviews were conducted with the stakeholders on their views and experiences. The questions focused on the effects of the economic downturn, indirect or direct credit constraints, trade and trade credit impacts on production and consumption.

Methodology

This study is part of an FAO-sponsored research project in four countries across Europe and Central Asia. In order to get a representative view of the agro-food sector, each looked at at least two major supply chains, one from crop production and from livestock husbandry. Given its importance, wheat was part of every country study. In Hungary, pigmeat was the chosen livestock sector.

About two thirds of the 4.4 million hectares of arable land in Hungary is sown to cereals of which wheat and maize usually occupy 1.0-1.2 million hectares each. In 2007, 34% of the 193 thousand farms eligible for EU direct payments produced wheat. Grain production accounts for around 25% of the total agricultural output in Hungary, even with agricultural services included, with the wheat sector alone having 11.9% share of the total output in 2008. Livestock production in the country is dominated by the pig and poultry sectors and a proportion of the harvested wheat, 0.7-1.2 million tons a year, is used for feeding and also as the primary substitute for grain maize. The domestic milling industry processes 1.2-1.3 million tons of wheat every year. In 2008, wheat deliveries alone represented EUR 464 million of the EUR 5.7 billion total of Hungarian agro-food exports.

Pigmeat has about a 45% share in both meat production and meat consumption in Hungary. According to preliminary data, in 2008, 9.5% of the total agricultural output was produced by pig farmers. The pigmeat supply chain is one of the most complex within the Hungarian agro-food economy. On the one hand, many smallholders and households are still active in pig breeding and rearing, while on the other, the processing industry is predominantly supplied by large scale pigmeat producing enterprises. In June 2009, the 3.2 million pigs inventory, being 14% less than a year ago, was split between about 480 agricultural enterprises (a 10% decrease in numbers year-on-year) possessing slightly more than two thirds of the livestock and about 210 thousand individual holders and households (a 19% decrease in numbers year-on-year) with the rest.

Because the time available to complete this report was relatively short, and there were still very limited data available to assess the impacts of the financial and economic crisis on the agro-food sector in Hungary, interviews were conducted with the stakeholders on their views and experiences. The questions were formulated in consultation with the FAO Regional Office for Europe and Central Asia and focused on the effects of the economic downturn, indirect or direct credit constraints, trade and trade credit impacts on production and consumption. Besides agricultural producers (ten in the wheat sector and eight in the pigmeat sector), queries were made with input suppliers (three in the wheat sector, two of which are the largest integrators in the country, and two in the pigmeat sector), processors (two in the wheat sector and three in the pigmeat sector) and traders (two cereal and oilseed trading companies, and two pig slaughtering companies). Interviews were also conducted with retailers (Tesco and Profi retail chains), banks (the three major suppliers of credit to the agro-food sector) and government officials (from the Ministry of Agriculture and Rural Development, the Ministry of Finance and the Agricultural and Rural Development Agency). The interviews were conducted over the period 16 July to 9 November 2009.

Results

The findings of the research were as follows.

Wheat supply chain

Input suppliers. Farmers’ confidence changed a lot during 2009. At the end of the 2007/08 season, grain producers were very optimistic; they were prepared to invest properly in inputs, they had no cash-flow problems and banks were open to lending money. However, in the summer of 2008, i.e. the beginning of the 2008/09 crop year, the first signs of the crisis were already perceptible in arable production. As grain prices began to slip, banks were less open to lending more money. In the autumn, farmers were complaining about high fertiliser prices; nevertheless, their payments for inputs continued to be made promptly. Some distributors were becoming weaker financially but most did well until the spring of 2009.

In January 2009, most banks considered all agricultural operations as highly risky and pulled out of financing. As a consequence, integrators began to delay their payments to their suppliers. The demand for agrochemicals still appeared
to be stable in the first months of 2009, with the exception of fertilisers. Thus prices of most agrochemicals could even be increased by about 3-5% while prices of seeds were left unchanged. However, prices of fertilisers, which increased dramatically after the natural gas price rally in 2008, declined by 35% year-on-year in the third quarter of 2009. In late spring, as farmers were becoming less sure of their financial situation, and also due to the lack of precipitation, sales volumes of all inputs started going down. Grain producers began to look for cheaper seeds and agrochemicals and some even changed their crop rotations to reduce the need for inputs. According to industry estimates, in spite of early payment discounts, 10% less pesticides were sold year-on-year, and about HUF 3.4 billion (EUR 11.2-14.9 million) were taken out of crop protection in the first half of 2009.

Due to the limited selling opportunities on grain markets, producers favoured further cost saving production technologies after the 2009/10 harvest. Integrators claimed that, as a consequence of liquidity problems, low prices and weak demand, payments by farmers were overdue by a month at least. Distributors became more careful about which farmers to supply and put tough audit checks in place. Family farm businesses were thought to be less affected by the limited availability of financial resources, the rise in credit charges, the increased volatility of the HUF exchange rate, etc. because these were less dependent on bank loans. Besides the size and credit access of businesses, production structure (i.e. the share of livestock breeding and raising) was also referred to as a factor which could have made a difference in exposure to the crisis.

It was pointed out that market transactions shifted from trust and credit base towards cash base. Suppliers became more risk-aware and did not supply some farmers and distributors except on the basis of 120% security or cash before delivery. They tried to cut costs and collect outstanding debts. Besides evaluating collaterals more thoroughly, integrators decreased their credit ratio and got rid of their late paying debtors.

Market leading multinational input suppliers use EUR or USD based credits provided by their parent companies with a substantially lower interest rate than in the case of HUF based bank credits. The increase in interest rates of parent company credits was insignificant during 2008 and 2009. As opposed to the multinationals, domestic integrators largely depend on external credits. They had to bear tougher credit conditions, 2 to 4% higher charges, and were faced with the re-evaluation of their collaterals.

Input suppliers expected the use of agricultural inputs to decline further in the next few years. They expected to be hit hardest by the crisis in the 2009/10 crop year, but hoped that the strongest firms would recover by late 2010. Others, particularly the insufficiently professional distributors, were expected to drop out. Input distribution had been too fragmented in Hungary, thus a consolidation process was foreseen to begin at the end of 2009 as a result of the bankruptcies and mergers. It was stressed that in the long term, a more selective financing of the agricultural businesses can be expected and the rigorous screening of the financial situation of the partners will not be eased. On the other hand, farmers will use agricultural services (machinery, etc.) more economically, therefore more input suppliers and agricultural service providers may quit.

Producers. Farmers’ confidence deteriorated significantly in comparison with the first half of 2008 but this had more to do with the changes in produce prices and the general macroeconomic environment in Hungary than with the crisis directly. In the first half of 2009, there was no perceptible change in demand but then buying interest declined and, as a consequence, grain prices plummeted, despite the significantly lower yields in 2009. In addition to the sharp drop in demand, low prices were also supported by farmers who faced increasing liquidity problems and were unable to finance their inventories. Due to the limited availability of external financing and their cash-flow troubles, most processors preferred buying grains on a daily basis and holding smaller stocks thereby transferring the cost of storage on to the farmers and the traders. For producers it became hard to sell over the forward contracted volumes. In most cases, production contracts were renegotiated.

Most of the smallholders tried to exist without credits. These market players usually take short-term loans from integrators to cover their variable costs but, due to the crisis, these external financial sources became more expensive too. Smallholders use financial lease and bank credits almost exclusively for implementing relatively large-scale investments (i.e. buying a new machine or constructing a new grain store, etc.). Small regional banks were willing to finance more farmers, but their charges were usually very high (e.g. BUBOR +3%). Many of the grain producers delayed their investments; however, some of them tried to complete the already running projects partially financed from EU funds, but within an extended time period, whenever it was possible.

A slight increase in land prices was reported but this was not due to the crisis. There were very few owners willing to sell their agricultural land, thus it were mostly the bids pushing prices up. The value of investments including real estate and property shrunk quickly because the demand declined. Prices of new machinery increased, while used machinery became cheaper. Although the streamlining of operations was not possible in such a short time, as far as the input side of grain production was concerned, salaries were frozen or people were laid off, more attention was paid to fuel consumption, outdated machinery was disposed of and new crops were included in the portfolio. Most smallholders considered limiting or stopping the use of fertilizers and certified seeds in the 2009/10 season.

A growing number of buyers of grain had difficulties meeting payment deadlines and there was less willingness...
to pay on time. Some sought to impose an extended payment period such as 90 days, instead of the previously common 15 day period. Firms were declared bankrupt more frequently, as the online procedures and the low capital requirements make it easier to start a new business.

Smallholders were rather pessimistic about the short term prospects and did not expect much higher prices. A great number of the stakeholders, both on the demand and supply side, were expected to go out of business although those who were strongly capitalised could become even stronger. Producers who can make top quality milling wheat do not have to worry, because the market for such produce is thought to be almost limitless, but with lower quality (i.e. class B1 or B2) wheat farmers will make losses in the long-term.

Processors. Concerning raw material availability, under normal economic conditions millers and bakers would have been in a better situation than in the previous two years since, at the end of August 2009, the producer price of wheat was about 25% lower than a year ago, while bakeries could buy standard quality wheat flour 22% cheaper than in the middle of 2008. Despite the favourable prices processors faced difficulties in buying the necessary raw materials. First of all, until late August many producers were waiting for the prices to rise again. Only those facing liquidity problems were selling, so the turnover on the grain market was low. Processors known or rumoured to have financial problems had to ask others processors to buy raw materials for them too because producers were unwilling to deliver to them. Credit availability also influenced the procedure. Normally, millers would buy about 75% of the grain needed immediately after harvest and pay promptly after delivery. Stockholding would be financed by processors and traders. But due to the crisis, financing of stocks became too expensive. Millers could not cover their needs for more than a month in advance. They could buy wheat from the market relatively easily if they were willing to obtain credit in order to be able to pay producers within five days after delivery. Instead of obtaining credit, millers often tried to pay 30 days after delivery, which is the legal maximum, and sometimes with some special agreements (like taking in the grain and storing it for free) even try to extend the payment period to 60-90 days, but these options were open only for reliable partners. Some millers were buying feed quality wheat because of the lack of liquid assets. Contacting and price determination had not changed, although just as processors were trying to extend the deadlines for paying suppliers, their buyers (bakeries, retailers) were trying to do the same.

Millers sensed that demand for flour products had declined only slightly in the past few months. Buyers may have found other channels (i.e. the black market) for procurement. According to AKI statistics, the ex-factory price of wheat flour was unprecedentedly high in the middle of 2008 (close to 90 HUF/kg, over 0.35 EUR/kg), but since then it declined continuously, dropping to 60 HUF (EUR 0.23) per kg. The consumer price of packaged flour did not fall the same extent, a moderate 10% decrease was reported by the Central Statistical Office. Unlike other value chains, private label flour products were less common, so their share remained unchanged. Multinational retail chains paid promptly but bakeries were having more and more difficulties meeting their deadlines. Demand for bakery products did not change until April 2009, but since then, sales especially of high value added goods, declined. The higher value a processing firm added, the more it was affected by the crisis. Extreme exchange rate volatility disturbed exports, and contracts had to be adjusted in order to maintain profitability. The retail prices of bread and other bakery products reached their maximum in June 2008 the same time as the flour price, and surprisingly stayed firmly at this elevated level.

The major problem due to the crisis that affected all millers, regardless of their size or market power, was the credit availability and credit conditions. In a year the requested collateral value has at least doubled. Credit rates were raised significantly, e.g. in the case of working capital loans they were between 10-14%. Compared to the profitability of milling, this high level was unacceptable. A year ago, presenting a contract was enough for obtaining credit. Despite the difficulties, trusted millers could still obtain credit; however, because of the conditions above, they tried to avoid it as much as possible. The same applied to bakeries, though bakeries carried smaller stocks than mills. Processors claimed that obtaining bank guarantees also became problematic. They had to obtain credit from the bank supplying the guarantee, for collateral with a value five times of the credit amount. Since a bank guarantee is a condition for the approval of applications, a significant part of EU investment support funds may not be used.

The milling industry responded to the crisis by minimising costs and some companies directing more mills decided to close some of them temporarily. Millers delayed their investments. They became very cautious with new business partners: they thoroughly checked their financial situation before signing a flour delivery contract in which payments are not in cash. It became common practice in the sector. As a response to the crisis, some of the bakeries turned to innovation in order to increase labour efficiency, to extend shelf life of the products, or thought forward to after the crisis and developed more functional products. In the short term fiercer competition was expected. More of the smaller mills were thought to operate illegally in the future. At the time of the study, approximately 50 mills were operating in Hungary and their total capacity was about 35-50% above production. In the long term a number of these will drop out. In previous years many newly built hypermarkets attached mini baking facilities to their store. Bread
and other bakery products function as bait for customers so they are sold at a very low price in the stores. This marketing strategy had already put a strong pressure on bakeries. As an impact of the crisis, demand for bakery products on the domestic market was expected to shrink further in the short term.

Agro-food traders. According to grain traders, the crisis had no significant impact on grain production in Hungary in the 2008/09 crop year. Most farmers were still able to finance their business, although it had become more difficult to obtain money from the banks even if credit applications were approved. Some of the crops (e.g. maize but not wheat), of which inventories were less easy to finance, had been marketed earlier than usual. By contrast, in the 2009/10 crop year, grain supply and demand changed dramatically and prices dropped due to oversupply. Traders were expecting a strong selling pressure in the domestic and EU grain markets in the last months of 2009 and in the first quarter of 2010, because banks were thought to be unwilling to finance inventories.

In 2009, the prompt buying of grains became dominant, while forward contractors preferred deliveries in 3-6 months rather than 6-12 months as before. This made markets more nervous and greatly increased price volatility. Foreign buyers had been aiming to cover their needs from their domestic markets as much as possible, thereby minimising grain imports. Large market players were well aware of the pressure from the supply side therefore delayed their purchases in the second half of 2009. It was also noted that importers in some countries, also within the EU, became more sensitive to swings in the USD-EUR exchange rate and cancelled tenders more often than before. This made the organising of logistics very difficult for exporters. In addition, business trust between farmers and traders weakened considerably. With the creditability of buyers declining, and due to their liquidity problems, most suppliers had been demanding pre-payment or other guarantees.

Traders experienced difficulties in obtaining credit to cover the cost of their stocks, therefore only limited quantities of grain were procured in the 2009/10 crop year and these could be stored for only a short period of time. Not only were grain prices low but, due to their increased volatility, and also because of the HUF exchange rate volatility, banks valued grain inventories of traders only at 40-70% of their futures markets quotations (instead of 80-95% as in the previous years), plus they required additional cover. Besides, banks preferred to finance the stocks of producers than traders, especially when the producers had an account at the financing bank.

Smaller grain trading firms believed that market and price determining multinational trading companies could strengthen their positions, especially in the oilseeds markets. This is not only due to their reputation, credit history, own equity, liquidity, ownership, etc. but also to their access to information, to their structures and capabilities which makes them more efficient in processing and evaluating any information, and to the speed at which they can react to market developments. In the case of grains, especially wheat, the EU market is less dominated by these multinational companies. Trading is more fragmented thus the impacts of the crisis could be greater. As regards risk management, traders were, in general, aiming to reduce credit risk on clients, to secure payment conditions and to use credit insurance whenever possible.

Traders expected that, as a consequence of the liquidity crunch and due to the loss of business trust, it will be more difficult to reach deals and there will be more breaches of contracts and more bankruptcies in the sort term. Opportunists traders, whose number increased in recent years when grain prices were high, were going out of business as they were unable to pay to farmers and finance inventories even at low prices. This was thought to be beneficial for most of the stakeholders because transaction costs may decline; however, smallholders could suffer from being cut off from their main source of financing. Relationships between surviving businesses will certainly be stronger and business trust will be slowly restored. As the long term effect of the crisis, it was mentioned that traders, except for multinational companies, due to the lack of financial resources may become mediators between producers and end users instead of procurers of grains. They could guarantee quantity and quality towards end users, while providing producers with assistance in what and how to produce in order to satisfy the demand of certain markets. Multinationals were judged less effective in this role because of their complicated hierarchy.

Pigmeat supply chain

Input suppliers. One interviewee perceived no crisis in agriculture except the credit crisis. The two credit insurance companies, Hermes and Cofas, basically zeroed the credit lines of 30-40 big Hungarian agricultural companies. Over the insured limit there was no delivery. Companies responded by not taking out new short term loans and by trying to pay back the banks in advance. The objective of investments became cost reduction, not the enlargement of capacity, with strict cost reductions and cut backs in employee numbers with more to follow. The use of public warehouses declined because they were considered to be slow and expensive. Banks also refused business with most of the public warehouses due to their outdated infrastructure and weak financial background.

Although one of the companies interviewed had not noticed a considerable decrease in the domestic demand for its product (weaned pigs), it did note astonishing price volatility and an unpredictable income situation. The perceived problem was the solvency of the domestic buyers, apparently because the banks were not financing them
properly. It was difficult to recover money from several domestic partners. Pig farmers were expecting compound feed producers to finance the breeding and raising of their livestock, and to receive payments after some delay. A compound feed producer said the demand was still there but it was not serving current customers who were considered to be a risk, so production output was somewhat lower than previously.

As regards export markets, the demand for weaned pigs was massive in Italy and the contracted price was very high until July 2009. Then it fell back significantly, but at the time of the interviews it was considered still acceptable, and the Italian clients were paying as in the past years. Similarly, there was a huge potential to sell feed grains and compound feed abroad to pig breeders and raisers within a 150 km radius from the Hungarian border (e.g. in Slovakia and Romania).

The long term effects can be severe for producers who are less efficient, produce low quality products and are not able to adapt to the volatility of the market. But in the long term, others can even be winners in this situation, especially if they appropriately rationalise their work.

**Producers.** Although pig farmers were expecting serious consequences as the financial and economic crisis developed, seasonality, i.e. the classical pig cycle, had a stronger impact. Food consumption did not drop as much as the demand for other goods did, and with feed prices slipping, pig farmers were able to improve their margins in the first three quarters of 2009. There was no perceptible change in demand for slaughter pigs in the first half of 2009 but the number of transactions declined. Prices were still at an acceptable level – it should be noted that they were above the EU average – but buyers began to delay their payments, thereby weakening the liquidity of pig farmers towards input suppliers who were requiring prompt payments.

Most farmers tried to avoid using credits. Many of them, owing to input suppliers, tried to extensify production. Concerning streamlining of operations and cost cutting in production, adjustments in such a short time were not possible. However, as far as the input side was concerned, salaries were frozen and people were laid off. The feeding of grains produced at the farm and food scraps became more frequent. Modernisation was postponed by most of the small farmers because of the lack of financial sources. Investments were delayed, especially for manure storing and handling.

Views were mixed on whether the crisis had impacted asset values. One interviewee stated that the crisis had not affected the value of assets. Another noted that prices of new machinery had increased, while used machinery had become cheaper. A third said that the assets of animal husbandry had devalued. Two said that there had been an increase in land prices (by 10-15%) but this was not due to the crisis while another stated that the land market was practically frozen.

A growing number of buyers had difficulties in meeting payment deadlines because they had no access to credits. Companies included conditions in the contracts which urged partners to pay on time, including high interest rates on overdue payments and also the right to quit freely after a longer delay. Farmers preferred cash transactions because money transfers had been delayed. Foreign buyers did not ask for extending the deadline for payment, and they did not default in paying. Some of the middlemen (i.e. integrators, distributors, etc.) tried to take advantage of the situation by taking deliveries and not paying. Those stakeholders who operate illegally were also thought to be benefited from the crisis.

Individual pig farmers were rather optimistic about the future; they were expecting higher prices and hoped that the market would finally recognise the quality of Hungarian pig meat. In the long term, profitability in agriculture will presumably remain low, while the increased financial burdens will ease only very slowly. Since some investments have been postponed, competitive disadvantages will become greater. Some of the financially weak small farms will go bankrupt. Large and cost-efficient producers should experience no problems as long they can keep their production cost of slaughter pigs below HUF 280 per kg live weight.

**Processors.** The crisis impacted on the supply of raw materials for processing. Processors expected worse conditions in the first half of 2009, but in fact not only the pig market but also the entire meat sector was in a better and more stable situation than the crisis would suggest. The consumption of basic food did not seem to decrease to the same extent as for other products. Therefore the decrease in consumption had a smaller effect on producer prices than the characteristic seasonal fluctuation.

The supply of live slaughtering pigs had been decreasing in Europe independently from the crisis and prices jumped from HUF 240 to 330 HUF per kg live weight in Hungary within a year until August 2009. Imports stop at an exchange rate over HUF 300, and exporters’ profit grows. However, in the first half of 2010, many pig producers who purchased their piglets at a high price were expected to quit production due to declining prices since the summer of 2009. (According to the projections by the European Commission, the fall in pig prices will continue on the European pig market until May 2010). The supply of pigs for slaughter in Hungary was influenced by the general disadvantages of the pig meat supply chain rather than the effects of the global financial and economic crises. The peak producer price was not supported by fundamentals, thus the imports of live pigs started to rise again in the second half of 2009.

One of the companies interviewed had shifted the production and sales from standard quality products to premium meat preparations using traditional recipes and flavours. This company believed that it could not be competi-
tive with mass products on the market. Otherwise, retailers’ private label products undoubtedly benefited from the changes in consumer behaviour (consumers had become even more price sensitive). In the retail chains, the share of private label products was growing and their share reached 60% of the total sales. However, retailer brand products yield less profit than producer brand products.

Processors cut back on spending where possible but invested in improving efficiency. They laid off a few employees but recognised that if they were to expand production in the future, it could be extremely difficult to find skilled and experienced work force on the labour market. Those who invested in fresh meat production slowed down this process and other planned investments were delayed. One company interviewed planned to invest into direct marketing and retailing by buying small shops in its region.

The domestically owned and legally operating meat processors were mainly hit by the consequences of the financial and economic crises. The increase in the rate of VAT was to the advantage of the illegal market players in the food supply chain. Crop prices were low which was good for the pig and poultry sector, but this was only a temporary advantage which would not offset all the disadvantages faced by livestock producers. In Hungary, the retail sector was said to be in favour of the financial crisis because they had a strong bargaining power over suppliers.

In the future it will be difficult to access bank credit; contract conditions both from the retailers and towards suppliers will be tougher; new business partners will represent more risk than before. Because of the lack of credit and cash flow going down many agricultural enterprises were close to insolvency and it was expected that this trend will continue in the next few years. Those processors who will go bankrupt may temporarily exercise a strong downward pressure on fresh meat prices. Because of the lack of financial sources many investments aimed at improving the effectiveness of production have been cancelled, worsening the competitiveness of the sector. Despite successful applications, in many cases no investments were made, therefore the utilisation of the European Agricultural Guarantee Fund was uncertain.

Agro-food traders. Interviewees claimed that Hungarian producers were not willing to fulfil their contracts when they saw opportunities for greater profits by selling their pigs abroad (i.e. in Romania). In spite of this and the crisis, contracting practices with domestic producers did not change and payment and delivery conditions were not modified. The demand for premium fresh meat parts declined due to the crisis.

In the autumn of 2009, pig prices dropped moderately as a consequence of the release of pigmeat stocks which had been stockpiled because of the H1N1 hysteria in the USA and Canada to the Ukrainian and Russian markets. Thus, due to the increasing oversupply on the EU market, the opportunities for exporting Hungarian pigs have shrunk, and the pressure on abattoirs was relieved. A problem of the processing industry is the discrepancy between production capacities, domestic supply of pigs for slaughter and demand. While the total capacity of slaughterhouses reaches 7.5-8.0 million pigs a year, their utilisation is only about 60%. The number of pigs in Hungary has declined to 3.2 million from over 5 million during a decade. The main external markets in Europe (such as Russia) and Asia had shrunk due to the crisis, while strong competitors (i.e. the USA, Brazil or Chile) had been pressing prices down with their competitively priced products.

Retailing

According to the interviewees, due to the financial and economic crisis, consumer purchasing power declined drastically in Hungary. This is well illustrated by the example of Tesco Global Kft. where FMCG (fast moving consumer goods) sales dropped by 12% year-on-year in November 2009. The crisis impacted first the demand of goods/brands which can easily be substituted by less expensive alternatives. Many of the food products belong to this category, and consumers in Hungary are believed to be less loyal to brands than their Western European counterparts.

Price is the most important factor in the decision of consumers, and it had even been more so in the crisis situation. Therefore, and also because competition is very tough due to the presence of many retail chains in the country, the choice of relatively cheap food products increased and special price offers became more frequent. As a consequence, suppliers of low priced mass products had to deliver greater volumes while others were forced to change their production structure. The demand for private label products increased considerably, and these will definitely have a larger share in the total turnover in the future. It was also underlined that, due to the crisis, consumers had been spending less on high value added processed goods, while the demand for basic foods (e.g. flour, sugar, bakery products, fruits and vegetables) remained rather stable.

Retailers claimed that contract terms and conditions with suppliers were not changed, and stakeholders were expecting no major changes in front and back margins in the near future. The interviewees pointed out that in Hungary, some sectors, in particular pigmeat production and processing had long been facing difficulties, and thus the decline of production and sales was only partly due to the crisis.

Banks

In general, banks lowered their credit/deposit ratio, thus the available credit declined. Banks looked more carefully at the total credit portfolios of enterprises. They re-
quired a much higher share of own sources (at least 10-15% for the financing of 20-25% of a project), even when an investment was supported from EU funds. This was not easy, because most, if not all, of their assets were already mortgaged. The placing of investment credits had declined by 5-10%. Also the total debt of the agribusiness sector was thought to have dropped by 5-10% during the second half of 2008 and the first half of 2009. However, in the autumn of 2009, the total debt of agriculture increased again. This was mainly due to the fact that the paying of direct support to producers was brought forward to 16 October, instead of 1 December, and that the Agricultural and Rural Development Agency speeded up the transfer of Rural Development aids, presumably as a pre-election campaign move, prompting banks to grant more credit.

Credit conditions were made tougher, especially for traders and integrators. Due to the drop in agricultural prices, the maximum amount of credit per hectare land was cut from about HUF 100,000 (EUR 374) to HUF 70,000 (EUR 262). No restrictions were placed on enterprises which were good customers before the crisis. Banks may have been unwilling to finance new, unknown customers and certainly new customers were examined more thoroughly, but at least one bank tried to win the best costumers of those who withdrew from agribusiness and, in fact, granted more credit than a year previously. Banks did not face problems in financing the approved credit applications.

The crisis definitely impacted credit costs. Depending on the duration, the form of financing and the costumers’ record, credit costs increased by 2.0-2.2% on average. At the time of writing, agribusinesses could borrow money at a 12-14% interest rate. HUF credit cost increased by 2.0-2.5% for durations beyond five years, while for less than a year by 0.5%. Risk premiums and interest rates became significantly higher, inter alia as a consequence of higher refinancing rates from the HCB and higher basic rates from the Hungarian Development Bank (HDB) as well as from foreign parent banks. Warehouse receipts, if accepted at all, were financed at a lower rate: while a 90% cover was provided the previous year, the financing rate was only 75-85% in 2009.

Government

Government officials shared the view that the financial and economic crisis impacted the agro-food sector significantly in the 2008/09 crop year; however, to a lesser extent than some other sectors of the national economy. The high share of the black economy (mainly due to high taxes) made both agriculture and food industry an elusive target for policy makers [2]. In response to the global financial and economic crisis, the Hungarian government introduced a number of measures. These were designed to deal with various problems such as limited credit availability or increasing unemployment and social discontent. In addition, similarly to other EU member states impacted by the financial and economic downturn, Hungary had adopted Council Regulation (EC) No 473/2009 that allowed for higher co-financing rates for 2009 [3]. Already in October 2008, a HUF 1,400 billion (EUR 5.23 billion) national economic recovery package was set up. Most of this had been financed from EU sources and by the HDB. Of this total, the government expended HUF 900 billion on non-refundable aids and HUF 500 billion on the financing of credits and guarantees [4].

Given the seasonality of most expenses and revenues, agriculture generates a significant demand for credit. As a consequence of the financial and economic crisis, credit availability became limited, which led to serious liquidity problems in the production and processing of agricultural goods in Hungary. To tackle these, the government launched the HUF 48 billion (EUR 179 million) New Hungary Agricultural Development Credit Programme through the HDB for farming enterprises, and switched HUF 5 billion (EUR 18.7 million) from the New Hungary Rural Development Programme to provide, also through the HDB, working capital loans for producer organisations (POs). The activities of the HDB were extended by law to allow for the financing of long-term (over 1 year) working capital loans, and for the providing of guarantee and surety towards commercial banks. The HDB offered new loan constructions, and from May 2009, the access to credit had been eased for POs and integrators.

In order to provide incentives for development and investment, the Ministry of Agriculture and Rural Development (MARD) introduced a 20% advance payment scheme in April 2009 [5]. For the food industry, a special bank guarantee programme was set up, and HUF 30 billion (EUR 112 million) for working capital loans ranging from HUF 200 million to HUF 2 billion (form EUR 750 thousand to EUR 7.5 million) were made available [6]. However, this programme proved to be less successful, since due to the strict conditions and requirements as well as to the high interest rates (14-16%), only about 27% of the total had been applied for until November 2009 [7].

The HDB launched a HUF 15 billion (EUR 56 million) working capital loan programme for cereal producers, in addition to which the government later on announced the purchasing of 200 thousand tons of wheat from producers before the start of the EU intervention buying period from 1 November, at HUF 24,500 (EUR 91.5) per tonne [8]. (No offers were made, although warehouse receipts were valued only HUF 18,000 per tonne of wheat. The intervention price was about HUF 27,000 (EUR 101.3) per tonne in November.)

Ministry of Finance officials pointed out that the negative effects of the crisis (i.e. limited credit availability, liquidity problems, high FX risks, the drop of demand, the decline of prices, the accumulation of commodity stocks, the further loss of business trust etc.) had
been amplified to a large extent by the inflexibility of the decision making and administration system of the EU. The inefficiency and the weak communication of the Hungarian administration had also contributed.

In the long term, since the crisis is likely to give a strong push to mass production, placing quantity over quality (added value) on the priority list, it was suggested that more effort should be made to educate consumers and children about agriculture, nutrition and kitchen culture. The crisis proved that the Hungarian administration is unable to react fast enough to, and the CAP, due to its inflexibility, is not suitable for the managing of serious market disturbances, thus both of them need to be reformed and modernised.

**Discussion and policy recommendations**

Many interviewees were not aware of, or did not perceive, the existence of government responses to the financial and economic crisis in the agro-food chain. When they were aware of them, they frequently criticised them as being ineffective or incorrectly targeted. Equally, many stakeholders, with the exception of multinationals, called for measures such as more subsidies, more state intervention, more protectionist measures and even the creation of state owned monopolies, which we understand in a deteriorating economic situation but cannot support. Such measures are not a way out of the crisis situation and are not able to avert the occurrence of crises in the future.

Most of the competitive disadvantages of the Hungarian agro-food sector are due to the macroeconomic, legal and social environment [9]. Taking into account that the room for further agro-food sector specific policy measures is strongly limited by the CAP and national budget, our recommendations, based on the frequent observation of interviewees that companies with adequate financial reserves were not suffering from the crisis, and their ideas, are as follows:

- In order to have resilient, economically viable, diverse and innovative agro-food chains, the government should distinguish between agro-economic priorities and social policy issues.
- Target the limited funds for investment subsidies at the professional viable enterprises with a long-term business plan. The economic downturn may add further impetus for policymakers to re-evaluate the uses to which agricultural expenditure is put, and to re-focus it where it might provide the greatest level of benefit.
- Expand credit guarantee funds and support credit insurance in order to improve the financial circulation within the agro-food supply chains.
- Encourage the use of risk management tools available on the market and provide risk management subsidies to farmers to help them to cope with increasing price volatilities.
- By ensuring a simple, stable and credible legal environment, reducing the administrative burden as well as providing preferential taxation and state guarantees, encourage horizontal and vertical integration along the agro-food supply chains in order to facilitate cooperation, to strengthen business relations and restore business trust, to lessen transaction cost and to increase bargaining power.
- With similar instruments as mentioned above, encourage consolidation, rationalisation and specialisation within the processing industries in order to have viable market players which can competitively supply retailers both regards quantity and quality.
- Support innovation and marketing and increase spend on R+D to strengthen the market position of domestic stakeholders upstream. Tax simplification could encourage new entrepreneurs into the market.
- Support the development of logistics to lessen the costs of handling, storing and transporting goods and thereby increase competitiveness.
- Improve the transparency of policy making and communication in order to improve government credibility. The trading environment for all stakeholders in the supply chain would be encouraged by a more helpful public administration, respect for laws by public officials and other stakeholders, and transparency in government and government measures.
- Facilitate niche markets for speciality products. The consumer shift to cheaper products has clearly benefited own label brands and may have strengthened the position of the major retailers, who can call on strong negotiating positions and economies of scale, in the agri-food chain. However, some stakeholders have already responded by exploiting ‘niche’ market opportunities Support for producing goods with ‘added value’, bearing in mind the long-term trend towards safe, healthy foods mentioned above, may help smaller players in the supply chain to exploit new business opportunities. Associated with this efforts need to be made to educate consumers and children about agriculture, nutrition and kitchen culture.
- Avoid the offsetting of debts, taxes and other liabilities since such measures would further weaken business trust and increase political and legal risks perceived by stakeholders, would nurture corruption and weaken social integrity.

These recommendations focus on the developing of resilient, economically viable, diverse and innovative agro-food chains agro-food chains which are capable of meeting changing market needs such as consumer desire for safe, healthy foods, perhaps coupled with issues such as lower environmental impact farming and improved animal welfare. In the longer term, rising food prices and efficient and productive agro-food chains could help rural communities in Hungary to escape poverty by increasing farmers’ incomes.
Conclusions

Although agriculture and the processing industries in Hungary had been in a long recession due to the general macroeconomic, legal and social environment, the crisis impacted the agro-food sector to a lesser extent than some other sectors of the national economy in the 2008/09 crop year. However, the following factors have impacted on the sector which are either derived from or have gained in weight and importance due to the global financial and economic crisis. Most stakeholders were expecting the situation to worsen in 2009/10:

- **Limited credit availability and liquidity problems:** Credit stimulates business and drives the economy. Reduced credit availability increases the pressure on cash flow, sets back demand and trade, and hampers investments. High interest rates impair the competitive position of domestic enterprises both in the domestic and foreign markets. The consequences are the decline of production and services, the loss of jobs and increasing poverty.

- **Decrease in consumer incomes:** The decrease in consumer incomes suppresses demand, contributing to the shrinking of the economy, to the decline in production and services.

- **High foreign exchange risk:** The high FX risk scares off foreign capital from a country and obstructs the substantial growth prospects. In short, it impacts on the income of domestic enterprises while increasing trade volatility, and slowing down investments.

- **Increasing price volatility:** The increasing amplitude and speed of price swings affect the income of all stakeholders of a particular supply chain. Dependence on commodities coupled with high volatility of prices results in significant fluctuations in trade. In general, trade volatility worsens income distribution, raises poverty, and impedes economic growth and domestic investment.

- **Loss of business trust:** Market transactions shifted from trust and credit base towards cash base. The lack of business trust weakens contract relations, renders integration and concentration, and throttles down investments and technical progress. In a crisis situation, market players value trust more than property or money.

- **Retail chains:** Most of the discount chains, targeting consumers with average or below average income levels, and some of the large multinational retail chains, offering a wide choice of private label products or pursuing an aggressive expansion policy, strengthen their market positions. Due to their market share and bargaining power, retail chains have already become the ultimate price setters in most of the agro-food supply chains. Undoubtedly, there is a strong push towards mass production which represents a huge challenge for the suppliers which calls for restructuring.

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