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THE ROLE OF THE GOVERNMENT IN ENHANCING COMPETITIVENESS OF THE AGRIFOOD SECTOR

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1. Introduction

In this paper the concept of competitiveness is clarified and the role of government in strengthening the competitiveness of the agricultural sector is discussed. Further, Dutch policies are presented to illustrate how the Dutch government took its role in enhancing the competitiveness of the agrifood sector. This paper starts with briefly indicating the main factors determining competitiveness according to mainstream economic literature. Next, the role of government in improving the competitiveness of the sector is identified and elaborated. The guiding principle for government intervention is whether the market functions properly or not. Section 4 considers potential problems affecting competitiveness that may affect commodity sectors and reflect on whether and what type of government action may be most appropriate to overcome them. Then, the paper turns to empirics. Section 5 deals with Dutch policies applied to tackle issues identified as obstacles for agricultural development. Section 6 explains that changing market situations called for new policy directions. Section 7 indicates how the Dutch government has responded to those changes. The final section draws some conclusions and indicates the relevance of the Dutch approach to the Baltic States.

2. Factors determining competitiveness

The issue of competitiveness is highly complex and elusive. In general terms, competitiveness is understood as the ability of firms and farms to maintain and expand their market position in national and international markets. Competitiveness embraces issues of resource endowment and the quality of these resources (labour, capital land, human resources), but also the organisation and use of resources. Managerial capabilities and performances are important too, like international demand and supply conditions, and unpredictable physical conditions like climate. Also, the consequence of policy interventions affects competitiveness. Further, competitiveness can be assessed at the levels of a country, sector or firm. It can be also assessed at different market levels.

A very brief reference to the economic literature on this subject may act to illustrate the various approaches that can be followed to indicate competitiveness. Trade theories are so-called macro-economic theories focusing on reasons of international trade between countries. All trade theories

emphasise costs and efficiency of resources, yet modern trade theories also indicate that economies of scale, product differentiation and innovation are important drivers of international trade and therefore important factors determining competitiveness.[1] Theories from the industrial economics approach refer mainly to sector level. The well-known industrial economist Porter and his followers distinguish six factors determining competitiveness: 1) production factor conditions; 2) demand conditions; 3) related and supporting industries; 4) firm strategy, structure and rivalry; 5) chance; and 6) government.[2] Strategic management theories emphasise the importance of competitive advantages linked to available resources on firm level. According to these theories firms should improve their level of knowledge and skills to face competition in future. Marketing, then, assumes a market-oriented approach in obtaining competitive advantage and stress aspects like product innovation, service and quality. Institutional economics highlights the impact of institutional structures (like markets, firms and governments) on economic performance. Institutions (defined as a set of formal and informal rules including their enforcement arrangements) affect incentives and the specific economic choices people make. Clearly the economic literature offers no general theory about competition; many factors may influence the competitiveness of a country, a sector or firm. Consequently, there is no single indicator of competitiveness.

Furthermore, competitiveness is a dynamic concept, meaning that changing market conditions change competitive positions. Market conditions change with changes in demand (due to higher incomes or changing preferences) but also with changes in government policies. For instance, after opening of EU markets and import tariffs and duties are abolished, the exporter from a CEEC country may be able to sell at lower prices and will be more competitive vis-à-vis the EU producer. In the *static* sense, therefore, a freer trading environment results in more opportunities for the exporting sectors that are likely to expand, and increased competition for the import-competing sectors that are likely to contract. This conclusion, however, is over-simple (although it may be true in the short term) because it neglects the dynamics of freer trade. Since, freer trade increases the flow of ideas and capital between countries. Cost structures of the industry respond to new techniques, new management methods, new sources of raw material supply and possible substitutes. In addition, the exposure to new products and marketing methods can lead to new cost-reducing approaches to the market and more innovative products being developed. It is, therefore, usually impossible to predict which sectors in the long term will be the winners and which will be the losers in a more liberal trade environment.

Further, it should be acknowledged that competitiveness has different implications for an individual farm than for a sector or industry as a whole. An industry can be competitive (in the sense that under changing market conditions, it can maintain or increase its sales) while individual businesses within the sector may be highly uncompetitive. Similarly, an uncompetitive industry may have highly competitive firms within it. Therefore, it is not possible to assert the sector's competitiveness from average numbers (like productivity, cost of production, farm price levels, and measures of protection), although this is mostly what is done in studies on this subject.

[1] See Van Berkum and Van Meijl (2000) for an extensive review of these theories and their relevance for agriculture.
[2] Key reference is Porter, 1990

3. Competitiveness and the role of government

More important than the exact measure of competitiveness is to determine the reasons for a potential lack of competitiveness. In other words, it is not necessary to measure the competitiveness of an industry precisely in order to identify problems that reduce its current and future competitiveness.

Why might a particular sector **NOT** be competitive? There are several possibilities:

1. on-farm technical efficiency might be low because of:
- low quality inputs (e.g. breeding livestock, seeds, land in areas with major climatic or physical disadvantages);
- unexploited economies of scale;
- low managerial efficiency (because of lack of experience, training, education);
- lack of investment.
2. marketing efficiency might be low because of:
- lack of experience in marketing;
- unexploited economies of scale;
- lack of investment in on-farm storage and grading facilities;
- inadequate information about market prices, consumer preferences and supply levels.
3. market efficiency might be low because of:
- little competition exists at certain stages of the marketing system, leading to exploitation of market power which raises prices of farm inputs and/or lowers prices of farm outputs;
- inadequate competition gives rise to inflexible organisations unresponsive to market requirements;
- price signals in the market are suppressed: farmers are not paid on the basis of the quality of their products (as perceived by consumers) and in the end do not produce what the consumer wants;
- no commonly accepted grading systems exist which allow producers and buyers to sell/buy on the basis of description and to interpret market information regarding prices and supplies.
4. macro-economic conditions, sometimes the result of government policies, may put suppliers in unfavourable position vis-à-vis international competitors. Important examples include overvalued exchange rates (which make domestic produce too expensive on world markets) and interest rate policies (which limit availability of investment credits);
5. the industry might suffer none of the above specific disadvantage but is uncompetitive because of a different price structure (e.g. for labour) and/or inferior natural resources compared with those in competing countries.

Some of these problems are within the realms of government responsibility but some clearly are not. Government cannot make each and every farm or firm in any sector competitive, and neither can it expect necessarily to maintain the size of a sector (in terms of output) when market conditions change. Adopting different levels of protection and prices usually means some sectors expanding and some contracting. However, the size of any contraction can be minimised and the size of any expansion can be maximised by ensuring that, in those areas where the government does have a responsibility, barriers to competitiveness are eliminated. Thus, while individual farmers are responsible for their own production and marketing decisions and the efficiency and cost-effectiveness of their own operations, government is responsible for creating the right environment in which farmers (and wholesalers,

processors, distributors, etc.) can operate effectively. The government, therefore, will increase competitiveness by ensuring the proper working of the market.[3]

If market failures exist, the market outcome (production levels, technology used, production costs) is unlikely to be the most economically efficient at present. If not corrected, these market failures will also adversely affect the competitiveness in future. There are three types of market failures of relevance to the competitiveness of agriculture in Baltic States:

a) Monopoly or inadequate competition at different stages of the marketing system

Most agricultural production is characterised by large numbers of relative small businesses, so that at this level the exploitation of monopoly power is hardly a problem. However, farmers buy from and sell to industries, which are much more concentrated. In some new EU member states this is potentially an important source of market failure if the centralised state institutions involved in supplying inputs or purchasing farm output still exist to some extent and can wield considerable market power in certain regions. Privatisation of a state monopoly may not have solved the problem: if the monopoly still exists, then the monopoly power is only removed from the state and given to a private firm, and there is no necessary improvement in market efficiency. Market efficiency will only increase if there are several competing companies in the market. To achieve this, no barriers to entry the market should existing, which implies that new firms should be free to enter the market and compete on the same terms as existing firms. Thus, any requirement that a government wishes to impose on firms (with regard to production licences, taxes, food safety requirement, etc.) should be identical for all firms, existing and potential.

b) Public goods

Some goods or services would never be provided in sufficient quantities if their supply were left to the market. These public goods have the characteristic that it is impossible (or prohibitively expensive) to confine the use of the good to those that pay for it. Because people who do not pay can also enjoy the good, in the end nobody is willing to pay for the good, and therefore nobody provides it. Another characteristic of public goods is that the use of the good by one group often does not diminish the stock of the good for use by others. Very common are publicly provided private goods, i.e. those that are not completely non-rival or not completely non-excludable. Examples are the establishment of a market information system, or investments in research, extension, education and skills training, or investments in land reclamation projects. If left to the market, investment for these goods may be much lower than the optimum because those who pay for it may not be able to recoup their costs.

c) Market externalities

Correcting all market failures does not necessarily lead to an increase in efficiency and competitiveness. If farming or food processing produces negative external effects, then correcting them will impose costs on producers. Market externalities exist when the costs and benefits of production (or consumption) activities affect those who are not directly involved in the market. For example, intensive pig farming may produce slurry which pollute water or air, to the detriment of neighbours or even people living a long way off. The farmer receives no market signals to reduce or eliminate the pollution

[3] The assumption here is that real competitiveness from a national perspective is the objective. From a farmer's perspective, an extra subsidy will always make him more competitive, but this will reduce rather than increase national welfare.

which reduces the welfare of others, because there is no price penalty for producing pollution. When government intervenes to reduce pollution through either the imposition of regulations or taxes, production costs will increase. On the other hand, some externalities are beneficial (for example, the landscape produced by particular types of farming activity; grazing livestock or certain mowing regimes on pastures which produce a particular type of ecosystem). If government encourages the production of these positive environmental externalities through various payments (as the EU does increasingly) then effectively the costs of *agricultural* production are reduced. With respect to future competitiveness it is important to consider whether agriculture in the Baltic countries will face any increase in production costs due to (future national or EU) environmental, animal welfare and food safety regulations or may benefit from payments for positive externalities.

The existence of any market failure provides a *prima facie* case for potential government action to improve the workings of the market, or substitute for the market if the market does not exist. In addition, governments that strive at maximum social welfare (which comprises the benefits accruing to producers of different sectors in the economy as well as consumers) can do so by fostering favourable conditions and to facilitate: a government can play a welfare maximising role in adjustment processes.

4. Potential sources of uncompetitiveness due to market failures

This section considers potential problems affecting competitiveness that may have an effect on the different commodity sectors and identifies whether and what type of government action may be most appropriate to overcome them.

Low technical efficiency

Lower technical efficiency can be indicated by lower levels of physical output relative to inputs, compared with performance elsewhere in comparable physical circumstances. It may be that the market is better at solving the problem rather than government action. The key issue is the reason for the low technical performance. It may be that some inputs (like genetic material or machinery) are of low quality. Upgrading the inputs would improve economic gains but the question is who should encourage and finance the upgrading? In a normal functioning market, the encouragement to upgrade comes from the financial incentives from better economic performance. If a farmer believes that genetically better livestock or plants would give better returns, then the farmer invests in this more expensive input and subsequently derives the benefit. The benefit is a private one and the cost of the investment should be private too. There is little argument for government involvement here. If the farmer has not the foresight to invest, then he or she will eventually go out of business.

If, however, the market is not functioning normally then there may be a case for government intervening in some way to correct the market failure. Lack of investment in better genetic material or in better equipment may be due to the farmer not being able to borrow from a bank or because the farmer is not aware of alternative technologies. If the farmer cannot borrow from financial institutions, then the question is naturally ‘why not?’ The problem at present may be ‘solved’ by the use of credit subsidies, but this does not address the question why farmers cannot borrow from the banks on normal terms, and the policy of offering credit subsidies is at best a temporary solution. Very often, credit

problems at the farm level can be traced to problems in the credit market itself and the perceived creditworthiness of the farmer.

Creditworthiness depends *inter alia* on the borrower's collateral, the legal environment that makes it possible for the lender to obtain back his money if the farmer defaults on the loan, and the perceived profitability of the proposed investment. The first two are legal problems (ensuring the farmer's title to land is complete and secure, and ensuring contracts can be enforced). The third is linked to many issues, not least of which is the efficient operation of the market discussed later.

Clearly, the government has responsibility for the *legal environment* and correcting any failures in it would assist the functioning of the credit market - and with it the access of farmers to credit. The other side of the credit problem might lie with the banks themselves. In the first years after the economic transitions started in Central and east Europe, banks were relatively new to the ways of the market, and were not operating competitively. Large loans to organisations with historic connections have long counted (and may still count in some cases) for more than an objective view of profitability and a balanced portfolio of loans. Generally speaking, banks are still reluctant in lending to the agricultural sector. This is a reminder that problems in one sector might arise from problems in other sectors.[4]

Another reason for low technical efficiency may be poor managerial skills. Farmers who have moved from a planned to a market economy may not have the managerial skills to operate efficiently and effectively. These skills take time to acquire. The process of acquiring these skills and the knowledge about modern farm management can be speeded up by appropriate state-financed schemes, as *education* is often considered as a public good. In this case, there may be a role for government, through extension services, to foster the dissemination of best practices amongst farmers.[5]

Finally, in this sub-section, there is the possibility that farms are too small to produce economically. Whatever the reason for the existence of these small farms, there is little that can be done to overcome this particular problem. In the long term, these farms will merge with others to form larger more economic viable units. Provided it does not conflict with any rural social policy that the government might have, the most appropriate policy is *to develop a rural policy which encourages non-agricultural employment* in rural areas and which will provide the incentive for the less efficient farmers to leave farming.[6]

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[4] Alternatively, agribusiness companies have introduced contract innovations and programmes including trade credit and more extensive financial packages throughout the agrifood chain in order to overcome institutional constraints to farm finance. Empirical evidence from case studies indicates that the impacts are widespread and also important for small farmers (see Swinnen, 2003). However, there are also potential dangers in terms of imperfect competition and unequal distribution of bargaining power in the chain that may have impact on the benefits of vertical contracting for farmers.

[5] Although private action could also be taken to organize better dissemination of agricultural knowledge, this rarely happens on a sufficient scale. Consequently, most industrialised countries have comparatively large agricultural knowledge systems, with cooperation between public and private research institutions and with active knowledge promotion policies. Internationally, the CG institutes purport to create and disseminate publicly generated knowledge in low-income countries.

[6] See, for instance, suggestions made in OECD, 2003.

Low marketing efficiency
A farmer may be technically efficient at producing goods, but the benefit of this may be lost if the marketing is poor. This may occur because of a lack of economies of scale in the distribution of the product, which increases unit costs excessively, or the farmer may not be producing the product that the market wants. If the former, then governments can often *assist the formation of producer groups or marketing cooperatives* so that farmers can combine to get the necessary scale economies. Certainly, in the EU, producer groups are seen as an important way of reducing marketing costs (because there are scale economies in the shared use of storage and grading facilities and marketing expertise) as well as giving producers countervailing power in the market. Government help in establishing producer groups or cooperatives helps to overcome a market failure[7].

If the problem is that the farmer is not producing what the market wants, or the returns from the market do not reflect quality differences then this may be a symptom of a poor *market information system* or an inefficient market (discussed next).

Low market efficiency
An efficient market is one where prices effectively transmit information (about supply costs and consumer preferences) from one end of the marketing system (farmers) to the other end (consumers), and vice versa. An efficient market will also ensure that these prices are as low as possible. Ensuring the market is competitive usually attains this ideal state of affairs. That is, there are a number of players competing in the market to drive the price down to its lowest possible level (consistent with organisations in the system earning a 'normal' return on their capital investment).

One way of obtaining a competitive market is to *ensure that there are no barriers to entry into the market*. Firms should be free to enter the market and compete on the same terms as existing firms. Thus, any health and safety standards should be identical for all firms, existing and potential, as should any other requirements that the government wishes to impose. Again, in order to ensure that opportunities exist for businesses to develop (and maintain a competitive market) the government has to create the right investment climate.

Where an existing organisation already has a considerable market power, additional measures are often necessary, such as limiting by regulation the size of the market (regional and national), which any one firm can control. Then, the government can improve market efficiency by *setting rules and drafting laws on competition* (Competition policy).

A further indication of an inefficient market is the lack of price differentiation for different products. Consumer preferences will never be transmitted to farmers (and farmers will stop supplying the goods that consumers prefer) if the prices for the preferred goods are similar to prices for non-preferred goods. Preferences can cover variety, appearance, size, even method of production (organic!), and prices at different stages of the marketing system should reflect supply and demand. If a market pays one price for a product, good or bad, large or small, the right incentive cannot be provided to farmers to

[7] However, this help should not go beyond assisting the group's establishment (for example, by helping with the operational costs of such groups) because this would undermine the competitiveness of the market by discriminating against private traders.

produce what consumers prefer. Associated with this problem is the lack of grading schemes to classify produce. This is important not just for price differentiation purposes, but also to make buying and selling more efficient since goods can be bought and sold on the basis of description without necessitating a physical inspection. In both these areas, government may stimulate the establishment of *grading or classification schemes* and promoting their usage in the market. Commonly accepted grading systems may importantly contribute to transparency of the market and increase market efficiency.

Government regulation
Government has an important role in ensuring work practices and products meet certain minimum health and safety requirements. In fact, the importance and cost of compliance with the *Acquis* has been underestimated during the early stages of the EU accession process. It has now become clear this represents a major area of government involvement. Government may also specify measures that an industry has to comply with for environmental reasons. Government, in fact, can require firms to do a large number of things for various reasons. If those requirements become very burdensome and if there are no comparable benefits to weigh against the costs imposed on firms, the government itself may be contributing to a lack of competitiveness. The provision of data for statistical purposes, obtaining export licences via complex procedures, and various registrations of activities can all consume an organisation's time, which would be better spent on their business activity. If regulations are complex and numerous, their existence can also provide an effective barrier to entry to an industry for new firms. Governments should therefore always consider the private costs of any of their regulations as well as the public benefits.

5. Dutch policies to enhance competitiveness of the agrifood sector

The following three sections of the paper deal with policy instruments applied in the Netherlands to tackle the issues identified as obstacles for competitiveness in the first part of the paper. The following sections describe the circumstances in which the Dutch agricultural sector has developed and the role of government in this process. It shows also how in recent times the latter has changed as market situations have changed.[8]

Historical context for the policy framework
To understand the Dutch policies and their particularities with respect to agriculture one has to go back more than 150 years. Europe found itself in an agricultural crisis in the second half of the 19th century. This was mainly due to massive amounts of cheap grain being shipped in from the new world by steamboats instead of sailing ships. The response of England was to liberalise the market while absorbing the laid off farmers in industry. France and Germany protected their feudalistic system and their farmers by import levies. The Netherlands and Denmark, however, went a different route. Complete liberalisation was impossible because of the absence of alternatives for labour in industry. Protection was not viable since these countries were then already trading nations, heavily dependent upon open borders. The Netherlands and Denmark strengthened their competitive power through improving conditions for agriculture (infrastructure, water management, etc.), by improving positions on markets and by stimulating technological progress. Market positions were improved by

[8] See for a more extensive analysis of the role of government policies in the Dutch agricultural developments: Douw and Post (eds.), 2000.

organisational innovation (the development of producer co-operatives) and technological progress was promoted through research, extension and education. Since the end of the 19th century, several agricultural crises occurred and the reaction of the various European countries was largely consistent with earlier policies: liberalisation in the UK, protection in Germany and France and strengthening of competitive power and innovation in the Netherlands and Denmark.

The economic crisis of the 1930s and World War II set the stage for the economic policies in Western Europe with respect to agriculture in the post-war period. Food security and income parity became two major issues in economic policies of most Western countries. Food shortages during and in the first years after the War encouraged national states (and later also EU) to target their policies at increasing agricultural production. As a trading nation, the Netherlands kept to its liberal tradition and sought to develop the agricultural sector mainly by improving the quality and use of the factors of production and by improving the provision of inputs and the distribution of outputs. This attitude has remained also after the formation of the European Economic Community in 1957 and market price support became a corner stone of the common agricultural policy. National policy to achieve food security and income parity can be summarised in structural policies and policies with respect to knowledge and technology transfers.

Agricultural policy part of general economic policy
Before pointing at specific sector policies, it should be emphasised that in the Netherlands agricultural sector policy has never been separated from other elements of governmental policy: the farm sector in the Netherlands has always been considered part of the (whole) economy. In the post- (second world) war period the agricultural sector was assumed to help realise the general economic goals such as economic growth, full employment, productivity improvement and balance of payments equilibrium. The agricultural sector's role was to guarantee supply of food against reasonable prices. Supportive to the export-oriented agricultural sector has been a macro-economic policy that aimed at a stable exchange rate against the German Mark (the main market for Dutch agricultural and other products) and low inflation. A cautious fiscal and monetary policy contributed much to stable exchange rates and low inflation rates over the years. Inflation rates also depend on the development of labour wages. The Netherlands has a long history of fixing wages by (collective) agreements between representative organizations of employers and employees (trade unions).

Policies aimed at structural improvement of the sector
National policy in the 1950s and 1960s aimed at creating employment opportunities outside agriculture for labour leaving the agricultural sector by supporting industrialisation on a regional scale. This policy has been very important to relieve structural problems in agriculture. [9] At the same time capital investments were encouraged, by fiscal (tax) system and special measures. Dutch farmers pay taxes based on their income account. In this system depreciation on investments and paid interest stimulate investments. In addition, like other branches of industry, agriculture could make use of a system with premiums on investments (Industrial Investment Act WIR) in the 1970s and 1980s. This stimulated investments in (e.g.) cowsheds and greenhouses. Bonuses linked to policy objectives, such as small-

[9] In 1960 the average acreage of a farm was 7 hectares, with farms much smaller in regions in the South and East of the country. Also important in improving the sector's structure has been the establishment of the social security system in the Netherlands that took shape above all in the 1950s. Schemes on pension and disability made it easier for farmers to leave the business and to make way for younger ones.

scale activities, energy saving and environmental requirements were important incentives for specific investments. Some specific fiscal facilities for independent entrepreneurs (not only farmers), as well some specific regulations (fiscal facilities) for the farm sector on the value of land and production rights (quota) support the continuity of the farm (succession).

In addition, two specific sector funds were created to improve farm structures. The Agricultural Development and Reorganisation Fund (1963-1972) provided grants for farm investments and also incentives for those who wanted to leave the sector. From 1972 onwards, many schemes (such as interest subsidies) were incorporated in the EU structural policy. The Loan Guarantee Fund (set up in 1951) targeted profitable investments with inadequate securities for skilled farmers with little capital at their disposal. The Fund guarantees interest payments and loan repayments. The Fund is supplementary, meaning that all normal avenues for sureties for loans should have been exhausted first. The Fund is still in operation. In recent years, many guarantees have been issued for investments in improved working conditions, the environment and animal welfare.

A last policy measure to be mentioned in this context is land reclamation. Since the first Land Consolidation Act in 1924, this act and its successors made it possible to improve land conditions for agricultural production. During the process of re-allotment in a region, many boundaries between small irregular plots of land (such as ditches, hedges) were removed and water control as well as the infrastructure (roads, supply of electricity and so on) was improved. The act enabled large-scale projects in the field of (re)development, accessibility and water management of agricultural land. By now, the whole Dutch countryside has been modified at least once; in total more than 1 000 large and small areas were reorganized. The projects were publicly-privately financed. Farmers and landowners can obtain necessary funds for their investments on favourable terms (long-term finance, attractive interest level); in fact the government pays some 60% of costs. Currently, land reclamation projects not only aim at improving production conditions for farms, but also at allocating land for nature and recreation.

Research, extension and education

Corner stone of the government policies towards economic development of agriculture is a well-functioning knowledge and innovation system. The production and transfer of knowledge and technology was considered an important instrument in improving productivity, reducing costs, encouraging rationalisation of primary production and easing structural adjustments. The roots of this system lie in the agricultural crisis of the 1880s, when the Dutch government saw it as its task for the future to promote technical and economic development of agriculture in an open market. The knowledge system is a product of close collaboration between the private sector and the government. In the Netherlands the three elements research, extension and education (REE/ in Dutch the OVO triangle) are developed in a close relation and with much coherence.

Fundamental *research* by institutes and by Wageningen University is financed (mainly) by the government. The private sector (through Agricultural and Commodity Boards) and the government both fund practical research, executed by regional centres and practical experimental farms. Applied and strategic research, as for instance by LEI, is financed primarily by public funds (around 70%). Recently applied research institutes have a private character (foundations).

Currently, agricultural *extension* is mainly provided by private organisations. Technical extension, however, was for a long period organised and financed by the Ministry of Agriculture. The farmers' unions organised socio-economic extension on economic, social and legal questions on, for instance, succession of the farm, investments and retirement, but it was (and still is) co-funded by the state.

Agricultural *education* provides schooling and courses on all levels, from lower professional education in the region to university level. Secondary and lower professional education is combined with part-time training courses in Agricultural Training Centres. Such courses are very important to keep the farming population in touch with new technical and management developments (for instance, on ICT, mineral management, use of pesticides).

6. Agribusiness' responses to a changing world

Since the 1950s the development of knowledge and technology plus the policies aiming at improving the structure of the sector have contributed to a growth in labour productivity in Dutch agriculture of more than four percent per annum. A first sign of decline appeared in the mid-1980s but productivity and production growth figures fell to relatively low levels since the mid-1990s. Old formulas explored by policies enhancing further rationalisation of agricultural production apparently did not work anymore. What had happened?

During the 1980s and first years of the 1990s it became increasingly clear that in most Western economies markets for agricultural commodities and food products were saturated. Consumers increasingly gained influence on what the sector supplied: the traditional supply market situation in which farmers could sell all their produce turned into a demand market where consumer preferences matter. At the same time, as internal borders in the EU disappeared, competition among European companies – both processing, trading and retail companies – increased strongly. A third accompanying, yet important, aspect, was the gradual reduction of market price support by the EU. All three factors contributed to an increase in competition on the agricultural markets.

While in the previous decades the government, farmers, traders and food processors shared common interests in a guaranteed and ample supply of homogenous products of good quality for reasonable prices, interests between all those concerned have grown apart during the last decade, due to the increased competition.

On the side of the agricultural sector, a greater differentiation has arisen in interests between the different firms. The increased importance of consumer demands is a powerful engine behind the drive for market segmentation and product differentiation. Another factor is the fact that power has shifted within the chain to the food processing industry and to retail business. This leads to new coalitions within food-producing networks, in which vertical forms of co-operation between retailers, processors and farmers gain in importance at the expense of horizontal co-operation among farmers.

Vertical coordination between two partners in the same chain is one of the major competitive tools in today's agrifood industry. Vertical coordination implies a strong and intensive cooperation between two partners in the supply chain. Business relations are laid down in contractual arrangements between the supplying and demanding partner. These arrangements not only consist of agreements on prices and

quantities, but also on qualities, product presentation, fulfilment of food safety and health requirements, logistics, market information exchange and many more. Vertical coordination or supply chain integration reduces not only transaction costs but also the institutional barriers that decouple individual links in traditional distribution channels.

There are many examples of successful supply chain developments in the Dutch agrifood sector. All examples and efforts to build supply chains aim at producing products and services that fulfil consumer requirements and ever-changing preferences. The advantage for supply chain members is that their cooperation creates synergies in one of three ways (e.g. Van Roekel et al., 2002): i) they expand traditional markets beyond their original boundaries and thus increase sales volumes for members; ii) they reduce the delivered cost of products below the cost of competing chains and thus increase the gross margin for the working capital committed by members of the chain; and iii) they target specific markets segments with specific products and they differentiate services, product quality or brand reputation of the products they deliver to these market segments and thus increase consumer perception of delivered value. In this way they allow chain members to charge higher prices.

However, to build and manage supply chains involves investments and commitment of the partners involved, for instance in production methods and in quality-increasing techniques, but also in product development, marketing strategies and information flows. Investments in these issues are often relation-specific (asset specific) and exclusive to the supply chain one belongs, as specific investments are required to optimise chain performance. Asset specificity is a key issue in chain and network developments. Due to their characteristics – relation-specific – they potentially add to market failure. An additional source for market failure may be asymmetric information, indicating that one partner in the supply chain has access to more and better market information than others in the chain.

The two latter sources of market failures are matters that mainly have to be solved by private actors in the production chain, by developing systems to generate and share information and by drawing up smart contracts that provide the incentives to comply with agreements. However, the functioning of contracts is determined by the legal and institutional environment, which is a matter of government policies.

The reason that asset specificity and information asymmetries have surfaced over the last decade as important sources of market failure in the agricultural production chain, is to be found in the saturation of consumer markets. In saturated markets, the process of competition concentrates on quality rather than quantity (as in a saturated market, producing more output undermines prices and therefore does not contribute much to profits). Quality has various aspects (apart from physical attributes like taste, freshness, colour, etc.), like: differentiation: being tuned to the particular preferences of specific consumer groups; timeliness; availability; being produced in a sustainable manner; being accompanied with information about production conditions. Quality competition requires extensive information flows (about product qualities) and investments in relation specific assets (chain integration).

7. Dutch government's response to changing market situations

Changing market conditions and perceptions of public interests have also led the Dutch government to redefine its role in society over the last decade. As a result of this process, agricultural production is hardly regarded as a separate economic activity any more for which the government bears special responsibility. The interests of the primary agricultural sector and those of society as a whole are no longer considered to be parallel. Society's interests and the role of government are defined by the Dutch Ministry of Agriculture first and foremost in terms of the care for public goods such as the landscape, nature and the environment, the care for a basic (knowledge) infrastructure, and the establishing and maintaining of standards of practice for food production based on food safety or ethical motives (animal welfare).[10] Interfering in the operation of the free market, for example through government investments in knowledge production and innovation, is only legitimate in response to market failure. The government assumes less and less responsibility for the economic well being of farmers and their income; it increasingly leaves this up to the entrepreneurs themselves.

Government responsibilities for food and the rural environment have, however, not declined: public interests and values are evident. What has changed, however, is the way in which responsibility is elaborated. The Dutch government is increasingly looking for and experimenting with outsourcing 'operational responsibility' to private as well as public organisations. This especially concerns the rules, regulations and implementation of standards regarding environment, food safety, animal welfare and the like. Of course, the government bears final responsibility at all times, but other bodies than the government may be more effective and efficient in safeguarding the public interest. The government is seeking for new institutional formats in which private organisations implement and control measures on food safety, environment, etc. At the same time, the government has to adequately build in checks to ensure that the sector organises its production processes in such a way that they can guarantee to their customers that their products and production methods meet the official criteria.

Besides defining clear standards on public issues, the government (still) plays an important role in supporting and creating favourable business conditions for the agrifood sector. Thus, policies to improve the farm structure and to increase the knowledge base of those working in the sector remain important. However, while for a long time the focus of facilitating policies has largely been oriented towards more production against lower costs (technology push), present Dutch government supportive policies are increasingly focused on encouraging investments in quality and new market perspectives (demand pull). This implies a shift in policy focus from the primary sector towards other actors in the agrifood supply chain, and beyond.

To remain competitive requires innovation, the integration of new developments into the business operation and the ability to adapt business strategies to changing circumstances. Investments in the future are primarily the responsibility of the agrifood sector itself. Yet, the Dutch government supports the sector by cooperating in close consultation with all relevant elements of society through a number of actions. Innovation, then, is the buzzword and government actions mainly concentrate on the development and transfer of innovative knowledge. Meant is not (just) 'hard' technological knowledge, but (especially) 'soft' knowledge about organisation and managing supply chain networks. Already in 1994 the foundation 'Agro Chain Knowledge' was established, with the government, the agrifood

[10] MANF, 2000.

sector and research institutes as partners, in order to realise cooperation among each other, share knowledge and encourage market-oriented initiatives of partners in the agrifood supply chain. Later, the programmes were enlarged by integrating the issues of logistics and information technology into agrifood supply chain developments. Government and private funds finance these innovation stimulation programmes. Government involvement is partly through the allocation of risk capital, but the major public involvement is through the deployment of the public knowledge system.

8. Summary and concluding remarks

Competitiveness of the agricultural sector can be affected by many factors. The economic literature shows different schools of thought that try to explain competitiveness from different angles. This paper argues that more important than to measure competitiveness is to determine the reasons for a potential lack of competitiveness. The paper concentrates on technical inefficiency, marketing inefficiency, market inefficiency and government interventions that distort price signals as major obstacles for competitiveness. Most of the obstacles can be removed by the sector itself (among others through vertical coordination). The government's role in enhancing competitiveness of the sector is to ensure the proper working of the market. The existence of any market failure is a reason for government action to improve the workings of the market. Market failures occur when monopoly power is exploited, public goods are not provided and when market externalities are not taken into account.

This paper presents a number – and surely not an exhaustive list - of suggestions for government policy. Monopoly power in the upstream and downstream industries can be counteracted by clear rules on competition and by encouraging the establishment of producer groups and farmer associations. The latter will have a positive impact on marketing efficiency and market efficiency. Public goods such as a sound legal environment (for property rights, for contract enforcement), education and extension, and market information provisions may contribute to the improvement of technical efficiency at farm level and of market efficiency. With respect to market externalities, the government has an important role in ensuring that products and production methods meet health and safety requirements and to tackle environmental issues (good and bad). If government policies are to improve the competitiveness of its agricultural sector, it is very important for decision makers to identify very carefully the constraints (the market failures) to increased efficiency within the agricultural sector and to identify what policies could help overcome them.

Dutch policies to enhance agrifood competitiveness have to be evaluated in their historical context. As a trading nation, the Netherlands has always sought to respond to agricultural development problems by improving the quality of and access to inputs and to markets. A strong knowledge infrastructure and policies to improve the agricultural structure has been the core ingredients of Dutch policies in the post-war period. These policies importantly encouraged production and productivity growth and the rationalisation of the production process. However, the world has changed: increased competition on a saturated food market and public concerns on issues as environment, landscape and food safety call for new directions both for the agrifood supply chain and the government.

The Dutch policy approach at present is to create favourable conditions for private firms to deal with the issues of chain integration, i.e. asset specificity and asymmetric information. This is done by investments in the public knowledge infrastructure and by supporting public-private projects in chain

integration. These projects serve as experiments and are intended to deliver proofs of principle. They add to experiences en to publicly available knowledge and thereby help firms to move along the learning curve in matters of chain organisation.

Relevance to the Baltic countries
Many of the Dutch policies mentioned fall into the category of creating favourable conditions – they do not correct for market failure as such. The question in these cases is always: what is the legitimacy of these policies – are they in the public interest or do they just support a particular sectoral interest? Examples are:

- supporting innovation diffusion and providing technical advice;
- providing credit guarantees;
- providing information, training and education;
- establishing grading or classification schemes (labels, quality guarantees).

Obviously, these policies can contribute to competitiveness, but why would a society invest in these arrangements and not leave it up to the private sector. A possible argument in favour of these policies could be the "infant industry" argument – this could be relevant in the Baltic context too. This argument says that it is dynamically inefficient to expose an industry to competition on international markets overnight – there should be time and room for an adjustment process, supported by government. For this kind of transitory support, it is much harder to find legitimisation than for policies to correct market failure. It is particularly difficult to determine how much should be spent on these policies and how long they should be maintained.

As the Baltic countries are integrating into the EU, the agricultural sectors in these countries will be confronted with similar market conditions as in Western Europe. Whereas at present, the markets that are being served by Baltic farmers may still be characterised as suppliers markets (high price elasticities of demand – flat demand curves), they may quickly turn into buyers markets as agricultural produce from abroad starts to pour in. Increased competition will be the result and in order to survive the Baltic farm sector has to increasingly search for vertical forms of cooperation with processors and retailers. Supply chain integration will become an issue in due time in the Baltics too. Dutch policies to help the agrifood supply chain to adjust to changing circumstances then may offer some valuable examples to the Baltic governments.

References

Douw, L. and J.H. Post (eds.), 2000, *Growing Strong. The Development of the Dutch Agricultural Sector; background and prospects*, LEI, The Hague

MANMF (Ministry of Agriculture, Nature Management and Fisheries), 2000, *Food production and rural areas. The Dutch agrifood complex in perspective*, The Hague, July

OECD, 2003, *Agricultural and rural development policies in the Baltic countries*, OECD, Paris

Porter, M., 1990, *The competitive advantage of nations*, The Free Press, New York

Swinnen, J. F.M., 2003, Vertical integration, interlinking markets, and growth in the Central and East European agrifood markets, In: *Importance of policies and institutions for agriculture*, Liber Amoricum Prof. Dr. ir. Laurant Martens, Academia Press, Gent.

Van Berkum, S. and H. Van Meijl, 2000, The application of trade and growth theories to agriculture: a survey, *The Australian Journal of Agricultural and Resource Economics*, vol. 44, issue 4.

Van Roekel, J., R. Kopicki, J.E. Broekmans en D.M. Boselie, 2002, Building agri-supply chains: issues and guidelines, in: *A guide to developing agricultural markets and agro-enterprises*, edited by Daniele Giovanucci, World Bank, Washington D.C.