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Can a Monitoring Agency efficiently regulate the EU milk market?

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Can a Monitoring Agency efficiently regulate the EU milk market?

Sascha A. Weber und Heiko Hansen

Thünen Working Paper 34a

This report is the English version of the Thünen Working Paper 34, with the title “Kann eine Marktbeobachtungsstelle den EU-Milchmarkt effizient regulieren?”.

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1 Introduction

Within the 28 Member States of the European Union (EU-28), there are still two agricultural markets in which governments manage supply, namely the milk and sugar markets. In both of these markets, supply is restricted by a quota. After Agenda 2000 and the Luxembourg decisions ushered in a reform of the Common Agricultural Policy, the milk quota regime in the EU was only extended until the quota year 2014/15. The 2008 CAP Health Check set a date of 31 March 2015 for the abolition of the milk quota (Official Journal of the European Union 2013). In addition, the intervention prices for butter and skimmed milk powder were reduced gradually, thereby resulting in price convergence at EU and global market level. As a side effect, changes on the global milk market may have a more direct impact on national milk markets. This mechanism is reflected in the greater fluctuations in price on the milk market that have been witnessed since 2007. As far as market participants are concerned, an abrupt withdrawal from the milk quota instrument, which was first introduced in 1984, should be avoided. One of the measures included in the Health Check was an annual one per cent increase in milk quotas for a period of five years, thus facilitating a soft landing, or a gradual move to a free market system. The EU Commission has also launched a Milk Market Observatory. Dairy farmers can find information online relating to prices and volumes, market forecasts and EU trade data, the aim being to help them learn of market developments in a more transparent and quicker fashion.

The dairy market will not be abandoned upon the expiry of the milk quota. Government instruments will continue to be implemented in times of crisis and will act as a safety net. The European Commission may intervene where necessary, e.g. in the event of severe imbalances in the market. The safety net comprises public intervention for butter and skimmed milk powder as well as the granting of financial support (aid) for the private storage of butter. Export refunds can be reactivated if the European Commission deems this necessary, depending on the state of the market. Ad hoc measures may also be taken if required, although the Commission does not have unlimited funds at its disposal for such measures. The financial framework is set by the crisis reserve, which is available for all agricultural markets.

Against this background, in particular the expiry of the milk quota, the German Federal Association of Dairy Farmers (Bundesverband Deutscher Milchviehhalter e. V. (BDM)) and the European Milk Board (EMB) have published a strategy paper for managing crises in the milk market. The core element of this proposal is a Monitoring Agency which – following the example of the aforementioned EU Milk Market Observatory – will monitor the milk market on a permanent basis and will analyse developments. Furthermore, in the event of a crisis, this Monitoring Agency is also able to implement a Market Responsibility Programme which is designed to control raw milk supply in the EU-28 by means of various measures.

This Working Paper examines the proposal in terms of its suitability for managing supply in the EU milk market. The focal points of this examination are effectiveness and efficiency. However, the examination is restricted by the fact that there are crucial points in the BDM and EMB's

proposal which are not set out in detail. A comprehensive analysis of key elements of the Market Responsibility Programme is therefore not possible. Chapter 2 sets out the way in which the already existing monitoring body at EU level operates. A comparison is drawn between this body and the Monitoring Agency proposed by the BDM and EMB. In chapter 3, the likely effects on the milk market are discussed. This chapter also takes a critical look at the proposed measures for reducing supply in the short-term and identifies potential candidates for the voluntary suspension of production. The discussion here focuses in particular on the incentives required to encourage farmers to take part in such measures, as well as on the potential deadweight loss effects. Chapter 4 is devoted to funding for the proposed Market Responsibility Programme and the Market Management Programme. In Chapter 5, examples of private-sector measures for controlling supply and managing risk, which could be used as an alternative to government control of the market, are discussed. Chapter 6 provides a summary assessment of the proposal for a Monitoring Agency which will manage supply.

2 The Monitoring Agency – what can it really achieve?

2.1 The European Commission's idea of a Monitoring Agency

As announced by the European Commission in September 2013, the Milk Market Observatory began operating online in April 2014. The platform shows price trends both at European and international level. The range of information provided includes details on production, supply, costs and prices as well as short and medium-term market outlooks. This purely market-related data is supplemented by additional information provided by a body of experts (European Commission). The aim of this instrument is to evaluate and pool together market signals and transmit these to dairy farmers in a transparent manner. This will in turn enable them to recognise signals earlier and adapt better to changes in the market. The purpose of the Monitoring Agency is to provide information. Dairy farmers use this information to draw their own conclusions for their business operations.

Member States currently provide the European Commission with key data relating to price and volumes, based in part on the EU milk quota regime. Since milk quotas will expire on 31 March 2015, part of the legal basis on which data is sent to the European Commission will end. All information provided regarding payments, supply volumes within the framework of the quota and reports shall be discontinued. Although the forwarding of all other market information is regulated by EU law, it would appear that this has legislation has not been transposed in every Member State (German Federal Ministry of Food and Agriculture – BMEL 2014). In Germany, the directives have been implemented in national law. The Commission still hopes that Member States will continue to provide data (Agra-Europe 2014, EU-Nachrichten 1).

EU Milk Market Observatory

- **Market information:** publication of national and international statistics on prices and volumes, as well as EU trade data
- **Market outlooks:** short and medium-term
- **Expert body:** provides further information and market assessments

There is no guarantee that the current product coverage and other information will be maintained. A comprehensive assessment of the market can only be carried out on the basis of as broad a range of products as possible. This is due primarily to the complex processing structure of raw milk. Raw milk provides the basis for a large number of processed dairy products. The processed dairy products are not just stand-alone products on the market but are interlinked by means of complimentary or substitutive relationships. Accordingly, a market crisis does not have to affect all processed dairy products to the same degree. By contrast, developments in the market for one particular product may very well have an effect on other (complementary) dairy product markets. If information on key dairy products is no longer provided, this will considerably reduce the quality of information relating to supply that the Milk Monitoring Observatory can provide.

One serious problem in the work of the EU Milk Market Observatory is already becoming clear. The published information is at least two months old. If the recording of statistics has not yet been implemented in national law in all Member States, the fear is that this delay in terms of time will become ever greater. As a result, official data encompassing all 28 EU Member States would not be available. Any statements made on the basis of a market assessment carried out using information from only a few Member States could be distorted. In such cases, the information for dairy producers would be neither comprehensive nor, therefore, suitable in order to plan milk supply 'in line with market requirements'.

The Milk Market Observatory currently publishes short and medium-term price forecasts. Forecasts are always susceptible to unpredictable short-term trends (e.g. weather, national crises, data quality, etc.) and the relatively strong impact that these trends have on milk market prices. The 'sensitivity' of market prices can be explained primarily by the low volume of international trade and by the fact that production-related factors delay the time taken for the milk supply to adjust to price. Reliable short to medium-term price forecasts are therefore difficult. By contrast, estimating changes in volume can be done relatively reliably in the long term since supply and demand tends to remain balanced over a longer period of time. Any deviations from this long-term balance as a result of a short-term disruption rectify themselves. In other words, although volumes may increase or decrease in the short term, general market forces will help to restore a balance over time.

2.2 The BDM's idea of a Monitoring Agency

In addition to performing a monitoring roll, the BDM also wants a Monitoring Agency to manage the raw milk supply in the EU-28 in line with market requirements. An index is to be created using the available national and international quotations. This is to be published four times a year, at the end of each quarter (BDM 2014, p. 4 et seq.). Not all of the designated market information needs to be officially recorded. This relates in particular to international data on prices and volumes. The quality and reliability of this information could prove problematic insofar as it may form the basis for incorrect market forecasts. At the same time, under the proposal of the BDM, forecasts are to not simply be restricted to supply but also cover demand, for the global market as well as the EU single market (BDM 2014, p. 6).

As a basic principle, it must be stated that in terms of the availability of international data, there are the same restrictions as for data for the EU single market (see chapter 2.1). As a rule, either this data is not up-to-date, or it is only available after a certain period of time. This makes the fundamental work of the Monitoring Agency considerably more difficult and the goal of managing the market by means of the transparent and prompt passing on of information to milk producers is difficult to achieve. 'Regulating supply based on the current market' could therefore only take place after two months at the earliest.

The index will provide the basis for a price range. Fluctuations in price within a defined range will be tolerated. If prices deviate from the index by more than 7.5 percent, an early warning should be issued. This means that market information should now be published on a monthly basis. If the price falls by 15 percent, a market crisis is to be established and requisite steps to adjust the market should be taken (Fink-Keßler A 2013, p. 25 et seq., BDM 2014, p. 6). The average milk production costs and the volume of raw milk required to influence price form the basis for calculating the price range. The BDM proposes that average production costs be calculated by the MilchMarkerIndex (Fink-Keßler A 2013, p. 26). This newly created index is not without controversy among market experts. Criticism of this method of calculation is directed in particular at the flat rate allocation of costs, which is not carried out on the basis of a distribution key, the considerably higher wage rate and the fact that figures from 2009 (base year) are extrapolated to the costs in the autumn of 2012 using index values (Dorfner G 2013, p. 98 et seq., Martinsohn M, Lassen B 2013).

Monitoring Agency and Market Responsibility Programme

- **Index:** Quarterly publication of national and international quotations for prices and volumes
- **Market forecasts:** Short and medium-term
- **Classification of milk production:**
 - Basic volume: Based on past production figures
 - Supply rights: 3 to 5 percent of the basic volume granted for a limited time period and can be revoked
- **Market regulation fund:** Fixed amount per kg milk
- **Milk production costs:** MilchMarkerIndex
- **Price range:** Index and milk production costs
- **Early warning:** If the price of milk deviates from the index by 7.5 percent
- **Market crisis:** If the price of milk deviates from the index by 15 percent
 - Market withdrawal: 1 to 2 percent of EU milk production
 - Withdrawal of supply rights
 - Remunerated voluntary suspension of volumes
 - Strategic storage

This system requires the introduction of a basic volume and supply rights. Depending on the market situation, supply rights amounting to 3-5 percent of the existing (basic) supply rights will be granted to or withdrawn from dairy farmers. As an additional intervention measure, a remunerated scheme for the voluntary suspension of production in the tendering or bidding process should be implemented, together with strategic storage. Furthermore, in order for this system to function, the existing regulation on protection at the EU's external borders on the basis of the Uruguay Round must be maintained (Fink-Keßler A 2013).

Two different options for implementing the Market Responsibility Programme are being proposed. Under the governmental solution, the Monitoring Agency notifies the European Commission of any need for action, which the latter then carries out. The European Commission issues relevant stipulations. Under the non-governmental option, national milk boards should pass information regarding this need for action as determined by the Monitoring Agency on to dairy farmer associations or individual milk producers. In addition, the national milk boards carry out the tasks of the customs authorities, namely the administration of supply rights (Fink-Keßler A 2013, p. 27). A legal examination of the second option is required. The question arises as to whether national law is violated as the non-governmental option requires stipulations from the

national milk boards to be universally applicable. However, in Germany, for example, this is not legally possible since universal applicability runs counter to competition and anti-trust law. As a result, both political and legal adjustments would be necessary.

2.3 Monitoring Agency – preliminary conclusion

Influencing milk production by means of the systematic pooling of information can only succeed if milk producers receive the relevant information in a prompt and correct manner and the information is of consistent quality. Experience gained to date shows that there is no uniform coverage of products from all relevant producer regions, nor is the information up-to-date. As a rule, the data is at least two months old. A market crisis can therefore only be established belatedly. By the time the proposed measures (cf. chapter 3.1.2) take effect, the crisis may already be subsiding or be over.

The Monitoring Agency should be entrusted with further tasks and extended legal bases should be put in place. This relates in particular to the recording of data on raw milk production at individual farms. The expiry of the quota regime also means that the official recording of data on raw milk production at individual farms is no longer required. However, this is a prerequisite for the work of the Monitoring Agency in the event of a crisis if decisions are to be taken regarding production increases, levies and a voluntary reduction of volumes. A non-governmental solution would probably run counter to national law. Steps must also be taken to prevent any sharp increase in the direct marketing of milk and dairy products. The payment of a levy to the market regulation fund also requires the total volume of raw milk produced by individual farms to be officially determined.

The proposal put forward by the BDM does not set out how a "fair balance of interests between Europe's dairy farmers" is to be implemented in practice; selecting the farms which wish to voluntarily reduce their production volume is a hugely important task. In this regard, it is irrelevant whether the withdrawal from the market takes place through a bidding process or based on a fixed price tender. The decisive criteria must be which farms are especially affected by the market crisis and therefore particularly in need of support. However, need is difficult to determine. Milk production costs are very individual (cf. chapter 3.1.1) as are the effects of a market crisis. Not all dairy products and not all regions in the EU need to be equally affected by the impacts of a market crisis.

"In view of the great diversity of the European dairy farmers, it is particularly important that the stipulations of the monitoring agency ensure a fair balance of interests between Europe's dairy farmers." (Fink-Keßler A 2013, p. 26)

The BDM's vision of a Monitoring Agency involves a high bureaucratic burden. On the one hand, it will require volumes of raw milk produced by individual farms (basic volumes) to be recorded and distributed, and additional temporary production volumes (supply rights) to be assigned. On

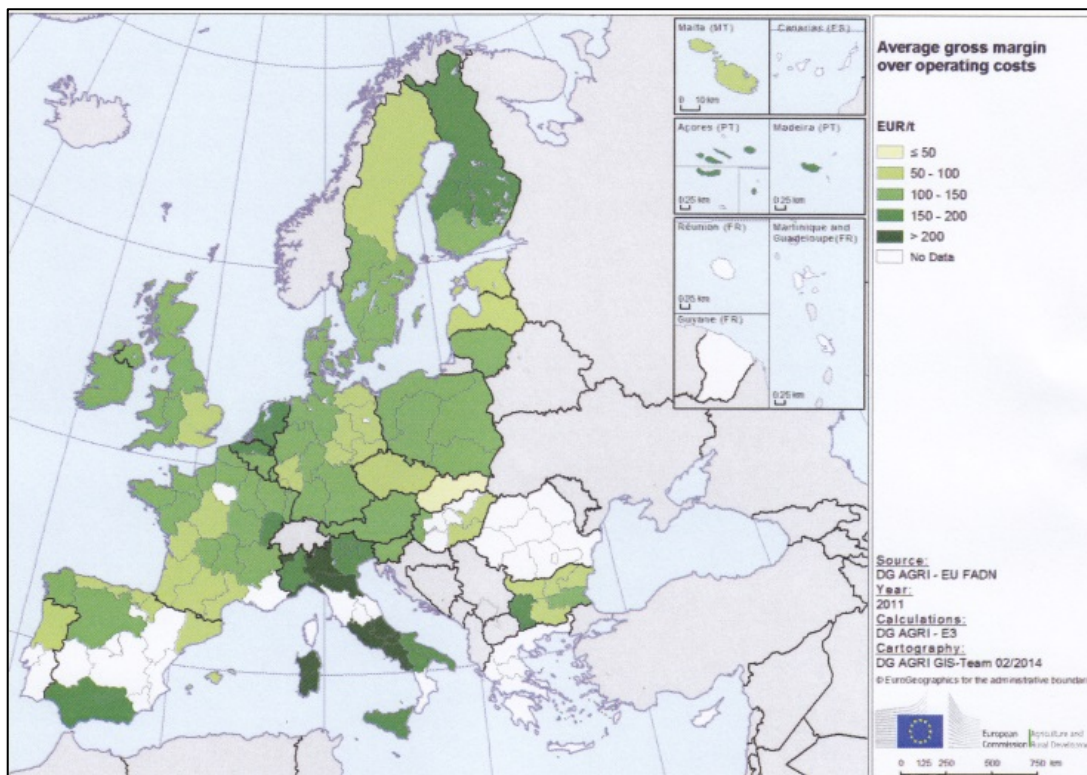
the other hand, further tasks for the Monitoring Agency would include the monitoring of a reduction in supply as well as the management of the market regulation fund (incoming and outgoing payments), and would represent a bureaucratic burden.

3 What effects should be expected?

3.1 Market effects

Based on historical production a guaranteed basic production volume is provided within the the proposed Market Responsibility Programme. This proposal is therefore essentially a continuation of the hitherto EU milk quota regime. One improvement to the existing system is the supply rights (3-5 percent of the basic volume), which are granted for a restricted period and which can be revoked. These rights may be assigned to or withdrawn from farmers depending on the market situation. No further details are provided as to how the additional supply rights are to be assigned to milk producers that are willing to expand and whether any such assignment should be carried out in accordance with regional criteria of market supply. The use of supply rights in particular represents an additional planning risk for dairy farmers, since it is unclear how much milk is allowed to be produced in the long-term. This will not only have effects on current production decisions but also on plans for farm development. Another question that is raised as a basic principle is that of the ability to trade supply rights.

Average gross margins in milk production



The dairy sector in the EU-28 is very heterogeneous (cf. graphic above on gross margins). This concerns all levels of the sector – starting with milk production at farms which range from being very small (average of 3.9 cows in Bulgaria) to very large (average of 133.7 cows in Denmark). In this regard, dairy farming is generally carried out in favourable regions where there is a high

proportion of pastureland, as well as in less favourable areas (e.g. mountainous areas). The same applies to milk processing establishments. There are many small dairy farms in the EU which collect and process raw milk locally. These small establishments are competing with large (international) dairies which collect milk on a cross-border basis. All of the dairies process raw milk into specialty products, branded products and/or products with low value added. Sales may be regional, national, and both within and/or outside of the EU.

The purpose of this very brief description of the sector is to highlight how "market risks" do not necessarily have to extend to the entire sector or to all 28 Member States of the European Union, nor be of the same degree. This is currently illustrated by the crisis in Ukraine, for example. Whereas milk processing establishments mainly from the Netherlands, Denmark, France, Finland and the Baltic countries are affected by the trade restrictions imposed by Russia, these sanctions (continue to) play a directly secondary role (AZ 2014, S. 7, Grossarth J 2014, Wohlfarth M 2014). These companies export their processed dairy products to other regions of the world and are therefore not directly affected.

The present proposal assumes that a reduction in total EU production of 1-2 percent will be enough to stabilise the farm gate price at an adequate level (Fink-Keßler A 2013, p. 27). The influence of the raw milk supply on prices can be judged best in terms of supply elasticity. This describes the direct effect on the market price of a change in volume. For the EU-27, supply elasticity averaged 0.4 (Jongeneel R, Tonini A 2009, p. 275). Consequently, from the perspective of market theory, there is no confirmation that a reduction in the milk volume of 1-2 percent will be sufficient to achieve the goal of price stabilisation.

This is complicated by the fact that in the United States, for example, the long-term milk supply elasticity falls over time (1975-2005) (Bozic M, Kanter CA, Gould BW 2012, p. 524). This means that over time, fluctuations in price will have to be ever greater before milk producers respond by changing the supply volume. It can therefore be concluded that US milk producers have adapted to fluctuating prices and are able to easily bridge periods during which farm gate prices are lower.

The reaction of consumers should not be underestimated when using such an instrument. This is particularly so if price increases are to be established on the market. A fall in the consumption of certain dairy products was already observed during the period of high prices in 2007/08, as shown by empirical evidence. Studies for Germany and the United States show that the uncompensated price elasticity of demand for milk and dairy products is negative and is at least 1 or greater (Thiele S 2008, p. 262, Davis C, Blayney D, Cooper J, Yen S 2009, p. 19). Within these product groups, consumers therefore respond in a relatively sensitive manner to changes in price and adapt their demand sharply. As a result of consumer behaviour, the desired price stabilising effect is therefore weakened. The anticipated reduction in consumption will mean that even greater reductions in market supply would be necessary in order to achieve a certain price level.

The final point to note is that a short-term reduction in supply by the EU as the world's largest producer of cow's milk would certainly lead international markets to respond by taking adaptive measures. From a market theory perspective, a higher price in the EU compared to the global market is expected to lead to an increased level of imports and a reduced level of exports. The specific impact this will have on the EU market would have to be explained in more detailed analyses. In order to compensate for this effect, the planned withdrawal from the market would consequently have to be on a much greater scale.

3.2 Less farm-gate milk – but how?

The strategy paper for milk market crisis management lists a number of different measures for managing supply at individual farms (see box). As a basic principle, these measures can be used to reduce the volume of milk produced. However, a range of complex physiological (and nutritional) relationships should be borne in mind when actually implementing the measures (with the exception of the early sale of older cattle). In individual cases, these relationships may considerably restrict the effectiveness of the measures or even make their feasibility seem unlikely.

For example, using smaller amounts of concentrated feed for high yielding cows may lead to (serious) metabolic disorders (Kirchgeßner M 1997, p. 56, Weber S 2013, p. 4). Any such animal health – and by extension economic – risk would only be taken by dairy farms to a limited degree. It should also be noted that, depending on the stage of lactation, reducing the use of concentrated food has different effects on the amount of milk produced each day (Die Landwirtschaft: Tierische Erzeugung DLT 1999, pp. 254-255). At the start of lactation, this may provide an inadequate energy intake, which can cause a number of illnesses for dairy cows (ibid.). Here too, it is apparent that reducing the use of concentrated feed for the dairy farms brings with it animal health and economic risks which cannot be predicted.

Measures for reducing supply in the short term

- Using concentrated feed less so as to eliminate the risk of ketoacidosis;
- Calves should be fed using full milk instead of milk replacers;
- Extending the dry period for cows;
- Insemination of heifers at a later stage;
- Selling older dairy cattle earlier than planned.

(Fink-Keßler A 2013, p. 27-28)

As far as the proposed measure for inseminating heifers later is concerned, it should be noted that this will have no short-term effects on the volume of milk produced. With the gestation period of a dairy cow being approximately 9½ months, the measure would only take effect after a considerable time delay. Managing the milk volume produced is not possible in the short-term.

Depending on the number of additional animals for slaughter, the early sale of older cattle can also have effects on the slaughter market for beef. A crisis in the milk market could therefore

spread indirectly to the beef market and may in some circumstances have a negative impact on beef farmers. Any excess supply could lead to a fall in the price of meat (cf. also Fink-Keßler A 2013, p. 36).

3.3 Participation – which parties are involved?

The proposed withdrawal of supply rights is obligatory and shall apply to all milk producers. Dairy farms are to be remunerated for voluntarily suspending production. The relevant instrument for the voluntary suspension of production, as a way of withdrawing a certain volume from the market, is not set out in detail in the BDM's expert report. Here in particular, information on whether minimum volumes are planned and how long tender periods and their subsequent reduction commitments will last, would also be of interest. The question also arises as to whether tenders are to be organised throughout the EU or in individual Member States, and whether remuneration will be differentiated at regional level.

3.4 Participation – how high do financial incentives need to be?

As a basic principle, the statements made in the appraisal of the bonus-malus system (Weber S 2013) remain valid. Since the proposal by the European Parliament and the Market Responsibility Programme under discussion here do not differ significantly, direct costs and financial incentives can be assumed to be of a similar amount. The differences between individual farms are considerable.

In the interests of simplification, it is assumed below that production of all dairy farms will be at an economic optimum, i.e. they produce an optimum supply volume with the aim of maximising profit. In view of the fact that the individual farms are very heterogeneous, their respective supply curves also differ considerably. In the event of a voluntary suspension of production, a farm would demand compensation amounting at least to the loss of income suffered as a result of the suspension. This loss tends to be greater at successful farms than at those which are less successful. The loss of income also depends on which measure the dairy farm implements in order to suspend production (reduction in the use of concentrated feed, sale of old dairy cows, etc.). As a result, an undifferentiated estimate of the loss of income is not possible; the amount of the loss depends instead on a range of factors relating to the individual farms.

3.5 Deadweight loss effects

Deadweight effects are expected in principle. In this way, dairy farmers wishing to cease their milk production in the short term can participate in the voluntary suspension of production mechanism. The reason for doing so may be due to the fact that milk production is not profitable,

or because they wish to retire on age grounds, for example. Even without financial incentive, the suspension in production brought about through the tender or bidding process, and which incurs costs (market withdrawal costs), would have occurred in these cases (in the long term). The individual market withdrawal costs resulting from a suspension in milk production would thus spread to all milk producers.

4 Costs and funding of the Market Responsibility Programme

Funding for the Monitoring Agency and the instruments is to be provided by a market regulation fund. Milk producers are to pay a fixed amount into this fund per kilogramme of milk. The question arises as to whether the levy should be the same for all milk producers in the EU, or whether there should be regional differences that are adjusted to milk prices and production costs. Neither is there any firm guarantee that such a levy system is legally feasible. In this connection, it is important to note the annulling judgement of the Federal Constitutional Court in relation to the agricultural marketing fund of the Central Marketing Association for German Agriculture (CMA) (BVerfG 2009). Although it is possible to guarantee an appropriate use of funds, clarification would still be required as to how to deal with aspects of discrimination.

The overall costs in the event of a crisis are determined directly by the volume of milk that is deemed necessary to be withdrawn from the market. The greater this volume, the more funding that is required. It is therefore impossible to put an exact figure on the actual costs, based on the information that is available. This would require many specific details regarding the structure, the selection criteria for programmes, the amount of milk needed to be withdrawn in order to have an impact on the market, as well as the intervention prices for strategic storage and the amount of compensation for participating in the scheme for the voluntary suspension of production. However, it can be assumed that, for the instrument of remunerated voluntary suspension of production at least, the statements regarding direct costs that were made in the assessment of the bonus-malus system (Weber S 2013) remain valid. The costs calculated in this assessment exceed the crisis reserve's available budget many times over.

In addition to the direct costs of the Programme, the administrative costs must also be taken into account. These arise from the direct work carried out by the European Milk Market Observatory (data procurement, data processing and publication), the (official) collection of data regarding the volume of raw milk produced by individual farms, the launch of the required market support programmes, payments to such programmes, as well as from monitoring activities to ensure that the programmes are implemented in a compliant manner. Given that the key specifications in terms of the design of the programmes are still unknown, it is not possible to give a reliable estimate of the amount of the indirect costs.

It is not possible to assess whether these additional funding requirements can/are to be covered solely by the EU budget or whether national governments will have to provide additional funding. The proposal would need to be specified in further detail in order to make such an assessment.

It is already clear that the administrative costs will be considerable, due to the high bureaucratic burden associated with this proposal. This therefore places a question mark over the efficiency of such a programme. This is also due in particular to the fact that the reduction in supply that is required to influence prices needs to be greater than the figure of 1-2 percent of EU raw milk

production that has been discussed thus far. More efficient alternatives are already the subject of both sector and public debate (see chapter 5).

Neither is it possible to draw any conclusion regarding the level of costs for the individual milk producer, based on the information available, as the extent of the market levy is not specified. Compared to the "super levy" which continues to apply at present, there is no calculable planning framework in place for European milk producers.

5 What can the sector itself do?

A constant observation on markets, especially those for agricultural products, is that the effectiveness and efficiency of governmental measures suffer not only from the relatively high costs due to the huge bureaucratic burden, but also from the systemic delay in implementing the measures. Added to this is the fact that the implementation of governmental

"In a market economy, private banks undertake the selection. The question is whether the government can address the selection process better than a private bank."

(Forstner B, Koester U 2014, p. 667)

programmes requires structures and individual cases to be generalised. The overall effect of this is often a welfare loss for society as a whole (cf. Koester U 1992, Wöhlken E 1991). By contrast, private-sector measures were implemented more effectively with regard to criteria such as regionality, costs or speed (cf. Forstner B, Koester U 2014). For milk producers, measures were therefore implemented in a manner which was both more individual and which tended to be "fairer" (cf. Fink-Keßler A 2013, p. 26).

Examples of private-sector measures which are already being carried out or are being publicly debated are listed briefly below:

- (1) In view of the withdrawal of quotas and the possible expansion of milk production, the principle of the unrestricted purchase guarantee that is applied in those milk processing establishments organised on a cooperative basis is often subject to critical scrutiny. This is especially the case against the background of whether the purchase guarantee, which was established at the time for a good reason, continues to fulfil its purpose today or is still required. Private milk producers control their raw material needs directly in the form of contracts which have been entered into (on volume, time period and prices) and are therefore not only able to plan better but also be more flexible in the way they respond to changes in market situations.

So-called dairy quotas (A, B and, if necessary, C milk) have been introduced in Switzerland and by Austria's largest dairy (Berglandmilch). This is the case whenever the purchase guarantee is to remain in place for the processor, but where also remuneration of raw milk supplies is to be brought more in line with the market (top agrar 2012).

- (2) The setting aside of strategic reserves by milk processing establishments is repeatedly discussed. Due to the tendency and planning horizon of many cooperative members, either all of the income generated, or at least a very high share thereof, is distributed directly as increased payment prices (e.g. annual rebates). No funding or only insufficient funding is made available for strategic measures such as a liquidity buffer, brand building or the development of alternative sales markets.
- (3) Another topic which is frequently discussed is that of margin protection by means of insurance and government aid based on the US model (Dairy Margin Protection Program). Milk producers participating in the programme voluntarily receive financial aid to help

them protect their gross margin. This is defined as the difference between milk revenues and costs of feed and is calculated each month by the US Department of Agriculture. This type of insurance is limited when production is increased and the premium is based on the annual volume of milk produced. The aim of the programme is to prevent surplus supply (USDA 2014, Agra-Europe 2014, country reports 38).

- (4) The creation of liquidity reserves is also discussed as a way for individual farms to manage risk. This could be done directly via a tax-free risk compensation reserve, for example. In the event of a crisis, milk producers could gain access to liquid funds at short notice (cf. also German Farmers' Association 2014).
- (5) An instrument which can be used to help reduce extreme price fluctuations already exists, namely the commodity futures market for dairy products. Contracts for butter, skimmed milk and whey powder can be traded on Eurex in Frankfurt, which means that future prices can be locked in or hedged. The way in which these contracts are structured (product choice and the fact that each contract is for five tonnes each) means that they are aimed more at dairies, milk traders and processing companies and less so at milk producers. In the past, demand for these contracts was only very modest. However, this year Eurex has repeatedly posted new turnover records (Agra-Europe 2014, Markt + Meinung p. 9-11).

6 Synopsis

In light of the expiry of the EU milk quota in April 2015, the German Federal Association of Dairy Farmers (Bundesverband Deutscher Milchviehhalter e. V. (BDM)) and the European Milk Board (EMB) have put forward a proposal for the future management of the dairy market. The central element of this proposal is a Monitoring Agency which will not only monitor the milk market on a permanent basis and analyse developments but also implement a Market Responsibility Programme in the event of a crisis.

Both the number and amount of market adjustments should be carried out in a flexible manner, depending on the market situation. Based on the calculated milk production costs, a target price range is defined in which the average European milk producer price should move. This system requires the introduction of both a basic volume and supply rights. Depending on the market situation, supply rights amounting to 3-5 percent of the existing (basic) supply rights will be granted to or withdrawn from dairy farmers. As an additional intervention measure, a remunerated scheme for the voluntary suspension of production in the tendering or bidding process should be implemented, together with strategic storage. The costs of the instruments are to be covered from a market regulation fund. Furthermore, in order for this system to function, the existing regulation on protection at the EU's external borders on the basis of the Uruguay Round must be maintained (Fink-Keßler A 2013).

The proposal of the BDM and EMB to establish a Monitoring Agency at European level, which also performs a role controlling the market, should be rejected for the following reasons:

- In theory, the proposal is not only a continuation of the existing EU quota regime, but also a much more complicated version of the scheme. It would introduce a degree of flexibility to the raw milk supply (supply rights), the voluntary suspension of production and a target price range based on milk production costs. The method for calculating production costs (Milch Marker Index) is not without controversy either (Dorfner G 2013, p. 98 et seq., Martinsohn M, Lassen B 2013).
- In principle, the same regulatory concerns apply as for the existing quota system (cf. Koester U 1992, p. 293 et seq., Wöhlken E 1991, p. 160):
 - Producers' individual choice is restricted.
 - Access to the market access is made more difficult for new producers.
 - Impacts are likely on other agricultural commodities markets.
 - The overall welfare effects are negative (especially consumer welfare).
 - Structural change is hampered and resources cannot be allocated efficiently.
 - The sector is not efficient.
 - Decoupling of the domestic sector from the global market.

- Extensive administration brings additional costs.
- The desired price-stabilising effect of the proposal can be called into question. Much more than the suggested 1-2 percent of the EU raw milk volume would in actual fact have to be withdrawn from the market before prices stabilised. This is due both to the elasticity of the raw milk supply as well as to the elasticity of consumer demand and the elasticity of import supply.
- Implementation of the proposal for the decisions of a Monitoring Agency to be universally applicable can only be legally acceptable if the Agency is operating on behalf of the government. A private-sector solution would fail in Germany, for example, on the grounds of competition and anti-trust law.
- In terms of the structure of producers, milk processors and sales markets, the EU-28 is very heterogeneous. Consequently, the 'milk crises' mentioned have different effects on market players, depending on region. Any generally binding control of the market would not do justice to this heterogeneity and would unnecessarily penalise many milk producers and processors and reduce their ability to compete (internationally).
- The market can only be controlled efficiently if reliable market information is available promptly. This is not the case for the EU dairy market and the global market. The system in place means that the information relating to prices and volumes is at least two months old. By the time a market crisis is detected and the relevant measures can be taken, the help provided to the market participants will already be too late. Not all international market information is subject to an official listing so the quality of the information should be critically examined. Using such information carries with it the risk of incorrectly estimating actual market developments.

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