



EVALUATION OF THE EUROPEAN SCHOOL MILK SCHEME

NOVEMBER 2013



FINAL REPORT

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Evaluation of the EU
School Milk Programme

Final Report



Prepared by:

AFC Consulting Group AG

Dottendorfer Straße 82
D-53129 Bonn

Anselm Elles
Dr. Christoph Kliebisch
Dr. Arno Becker

Phone +49-2 28-9 85 79 0
Fax +49-2 28-9 85 79 79
e-mail info@afc.net
web www.afc.net

and

CO CONCEPT Marketing Consulting

17, Rue Glesener
L -1631 Luxembourg

Dr. Marianne Altmann
Myriam Stenger

Phone +352-29 52 35
Fax +352 29 52 36
e-mail info@coconcept.lu
web www.coconcept.eu

For the

European Commission

**Directorate-General
for Agriculture and Rural Development**

Rue de la Loi 130
B-1049 Brussels

Bonn, Luxembourg, 19th of November 2013

Reference: AGRI-2012-EVAL-06

AFC PN: 3861



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LIST OF ABBREVIATIONS

AB	Administrative burden	kg	kilogramme
AT	Austria	LI	Lithuania
BG	Bulgaria	lt	Litre
CA	Control Authority	LU	Luxembourg
CAP	Common Agricultural Policy	LV	Latvia
cp.	compare	MA	Malta
CY	Cyprus	MS	Member State
CZ	Czech Republic	NL	The Netherlands
DG-AGRI	Commission's Directorate-General for Agriculture and Rural Development	No	Number
DK	Denmark	NVWA	Nederlandse Voedsel- en Warenautoriteit
E.g.	exempli gratia; for example	OB	Organisational burden
EC	European Community	p	page
EE	Estonia	p.a.	Per annum
ES	Spain	PDO	Protected Destination of Origin
EU	Europe	PL	Poland
EUR	Euro	PLN	Polish Zloty
EUR	Euro	PO	Portugal
FR	France	RO	Romania
GDP	Gross Domestic Product	SAP	Software, a structural analysis pro-gramme
GR	Greece	SCP	Single Contact Point - implementing body of the scheme in the Member State or Region
hl	hectolitre	SFS	School Fruit Scheme
HU	Hungary	SK	Slovakia
HUF	Hungarian Forint	SL	Slovenia
i.a.	inter alia, among others	SMS	European School Milk Scheme
i.e.	id est, that means	t	Tonne
IE	Ireland	UHT	Ultra-High temperature processing
IT	Italy	w/d	Working day



EXECUTIVE SUMMARY (ENGLISH)

▲ Background and Implementation of the SMS

Since 1977, Member States (MS) have access to Community aid through the EU School Milk Scheme (SMS) for providing children in educational establishments with milk and certain milk products. In the SMS Member States receive a fixed amount for every kg of milk equivalent distributed in the form of milk and certain milk products to children in educational establishments. Member States can give national top-ups.

The legal basis of the SMS within the Common Agricultural Policy can be found in Articles 39, 41(b), 43 and 168 of the TFEU. Council Regulation (EEC) No 1234/2007 and Commission Regulation (EEC) No 657/2008 create the legislative framework for the SMS with two core objectives:

- (1) Increasing EU milk consumption and milk demand to fight the declining trend and stabilising the market price for milk and milk products.**
- (2) Increasing consumption of milk and milk products of children and young people by providing them with healthy dairy products.**

The evaluation report assesses the SMS's effectiveness, efficiency, coherence, relevance and EU value added and covers the evaluation results for the school years 2004/2005 to 2011/2012.

The scale of the SMS in terms of total amount of subsidised products and total expenditure varies substantially over the years. It amounted to about EUR 110 million (68.86 million EU funds and 41.44 national top-ups) in the school year 2011/2012. The absolute number of participating children in the school year 2011/2012 was about 20 million. The quantity of distributed products in the school year 2011/2012 amounted to 385,000 tons of milk equivalent. The individual national and regional school milk schemes are very different with respect to relative participation of school children and distributed quantities.

National contributions ('top-ups') are voluntary and vary strongly across the Member States. The average uptake of the available EU subsidies reached approximately 17% in the evaluation period.

Regarding the type of products distributed in the SMS, drinking milk is mostly preferred, while cheese amounts to approximately 20% of milk equivalent provided in the SMS.

▲ Impact of the SMS on the European milk market

Compared to the total market volume of milk and milk products, the volume of the milk distributed in the SMS is by its nature very limited. However, this cannot serve as the sole indicator of the SMS's market impact. The SMS is based on the assumption that it affects the consumption behaviour of children which later become parents, passing on their milk drinking habits on to the next generations. **Such a long-term effect might result in a remarkable impact of the SMS on the market balance, in comparison with a counterfactual situation without a SMS.** Quantitative indicators for these long-term effects however



are difficult to define and statistical evidence on the magnitude of these effects is therefore hard to provide.

▲ **Impact of SMS on children's milk consumption**

In many Member States young children in kindergartens and Primary Schools meet - on average - the recommended intake of milk and milk products. However, milk consumption declines with increasing age and older children and adolescents often remain below intake recommendations. The SMS therefore addresses also Secondary Schools, yet the Member States focus in the SMS is mostly on younger children in kindergartens and Primary Schools.

Children who are already used to drinking milk show a higher tendency to participate in the SMS than children with low milk consumption. This is caused by taste preferences developed in the home environment and by the parental contributions (the part of the school milk price to be paid by the parents) required in most national or regional SMS programmes. Overall, the distribution of milk and milk products increases the milk consumption of the target group. The evaluation found that distribution in educational establishments is a step leading to a long-term impact on consumption of milk products under the condition that the provision of products is accompanied by measures fostering good eating habits.

▲ **Educational character of the SMS**

At present the EU Regulation concerning the SMS does not require educational measures. Messages on the role of milk consumption to substitute soft drinks and thus fighting obesity and overweight are not systematically communicated. A wide range of different educational materials and activities are offered voluntarily in the Member States, in particular by milk suppliers and dairy organisations. However, these measures are not designed to influence eating habits. The voluntary educational measures are often temporary and have a small scale. Neither their impact nor their success is documented, monitored or evaluated.

Where educational measures were carried out, it turned out that children liked to participate and to learn about healthy nutrition and the production and processing of milk. **SMS stakeholders and the majority of the interviewees in the surveys carried out for this evaluation are strongly in favour of obligatory educational measures in the SMS.**

▲ **Impact of the EU aid**

It has been observed that in most MS - due to slightly but continuously increasing milk prices in the last decades - the share of the EU subsidy in the price of school milk has been decreasing. Member States therefore justify their national top-ups by a "too low EU subsidy".

The milk prices that have to be paid by the parents influence the participation rate in the SMS. However, prices have only a limited impact if the parents have a high income. The evaluation has found that only a free distribution of milk in the SMS could result in a sharp increase in participation.



Beside the price subsidy, most MS indicate that the EU framework of the SMS was the main driver for launching and implementing a school milk scheme in their countries.

▲ Impact of socio-economic factors

According to 50% of the interviewees of the qualitative survey for this evaluation a higher parental contribution – the part of the milk price that parents have to pay in the SMS after the EU aid and national top-ups have been deducted - has a clear negative impact on the participation of children from less privileged social backgrounds.

The survey identified other important socio-economic factors influencing the participation in the SMS e.g. the family income and the knowledge on nutrition of the families that the participating children belong to.

Furthermore, the motivation of the administrations, of the school staff and of the dairy sector is a crucial factor for successful distribution of school milk in each country.

▲ Administrative and organisational burdens

Burdens in the SMS can be divided into those related to meeting legal obligations to provide information on the one hand – the administrative burdens – and those for actually distributing the school milk – the organisational burdens. Information on administrative costs caused by the SMS is in most cases not recorded and documented at Member States level.

For this reason the indicator for the administrative burden used in this analysis is only a rough estimate. It is primarily based on the assessment of staff costs required for all administrative tasks of the SMS. The resulting administrative costs are relatively high in some Member States and the variation of relative administrative costs among Member States is also quite high. **Administrative burdens are higher in Member States where the uptake of funds – the use of the EU budget available - is rather low.** Figures for France and Poland show that a higher amount of participating children or a larger range of distributed products in the SMS do not necessarily lead to relatively higher administrative costs.

While administrative burdens of the SMS are born by administrations (e.g. ministries) and dairy suppliers, organisational burdens are born by the participating schools, teachers, school staff and parents. Most school milk suppliers evaluate the burden they have to handle, like providing the security guarantee and applying the supplier licence, as disproportionally high. Product controls are also considered as burdensome. However, larger suppliers are able to reduce significantly administrative costs by process-automation and -standardisation through adequate software tools.

The organisational burden of collecting the parental contributions seems to be an obstacle for participation, if it has to be carried out by the schools (teachers).

The evaluation revealed the importance of monitoring closely the organisational burden of the persons involved in the operation of the SMS. Even small variations of the organisational burden influence the willingness of schools to participate in the scheme.



▲ Strategic programming

The evaluation has found that a strategic programming approach is lacking at present. Such an approach could improve the effectiveness of the SMS. It would adequately address weaknesses of the present scheme: lack of integration of all stakeholder groups and application of all the tools necessary to reach the SMS's objectives and use the synergies with the EU School Fruit Scheme.

It has been found that strategic planning is needed in three key areas in order to strengthen the SMS intervention:

- (1) Simplification of the access to the SMS.
- (2) Target-group specific SMS implementation and other approaches to increase the attractiveness of the SMS.
- (3) Better cooperation and communication between relevant stakeholders.

▲ Efficiency

In order to measure the SMS efficiency a common indicator for all MS has been developed in the evaluation. This indicator reveals that **comparable subsidies lead to quite different results in the Member States**.

The evaluation found a statistically significant correlation between the *spending per child and year* and the *share of participating children*. However, a high spending per child does not automatically lead to a higher participation share.

A problem in measuring the efficiency of the scheme results from the fact that one of the most important output indicators, the number of participating children, is not harmonised across Member States. The EU Regulation asks for reporting on the "number of participating children in the scheme" since the school year 2008/2009, but does not define this variable explicitly. Consequently, Member States have been rather free in their interpretation of participation. **The way in which Member States calculate participation varies strongly. To address this issue the Commission has already amended Regulation 657/2008 in August 2013.**

▲ Coherence

The evaluation has found that **the SMS is coherent with the overall CAP objectives**, especially with the specific objectives of contributing to farm income, maintaining market stability and maintaining a diverse agriculture in Europe. It has also found that while **the SMS and the Strategy for Europe on Nutrition, Overweight and Obesity-related Health issues are coherent**, there is room for further alignment of the SMS with that Strategy.

The evaluation has identified the complementary character of the SMS, the EU School Fruit Scheme and the EU information policy. The objectives of these three policies are coherent. Although the SMS and the School Fruit Scheme are quite similar with regard to their objectives and their intervention logic, both programmes are hardly linked at the moment, neither at EU level nor in the Member States.



▲ Relevance

The SMS is an adequate tool for increasing milk consumption of children and thus improving their eating habits. The relevance of the scheme for that purpose can be increased by adding to its policy design educational measures, free distribution of the milk products to the children and better information on the scheme for parents.

Interviewees identify the five most important success factors for school milk programmes to be: high frequency in offering milk and milk products, accurate delivery and reliable logistics, integration into the daily routine, collective consumption and voluntary educational measures.

While long-term effects of the scheme may contribute to the market balance, short-term market effects are found to be small.

▲ EU value added

EU value added of the SMS is recognised by the Member States. Most Member States indicated that the SMS was the main driver for launching and implementing a school milk scheme in their countries. The potential for higher EU value added has been identified in this evaluation e.g. through a stronger knowledge transfer between MS and with experts, a periodical review of the scheme and through better promotion and more active communication of the achievements of the SMS.

▲ Recommendations

Effectiveness

- **The SMS should be redesigned to permit for a sustainable stimulus of children's milk consumption.** The intervention logic should be based on a behavioural theory. A more strategic approach is required.
- **A set of monitoring and evaluation indicators should be defined** that allows an assessment of the implementation and impact of the SMS. Clear monitoring and evaluation obligations based on an adequate set of indicators should be introduced at the level of Member States and at the EU level.
- It is recommended to **introduce educational and communication measures** eligible for the EU aid as part of the SMS.
- **When targeting the SMS, adequate attention should be paid to children's age** since milk consumption declines with increasing age and adolescents show higher needs to meet the recommended intake. **Furthermore, age appropriate approaches are necessary to keep children's interest in the SMS.**
- **In view of the empirically observed trade-off in the scheme between spending per child and participation in the scheme,** it should be considered to establish minimum thresholds for spending per child and participation.



- **Free distribution (fully out of charge) of milk products to children should be explored to increase the participation of children in the scheme.** Therefore, it is advisable to **discuss alternative financing models**, for example a co-financing approach.

Efficiency, administrative and organisational burdens

- Administrative burdens of the SMS can be reduced by: (1) **Simplification of product checks and administrative controls through a risk-based, spot-check approach as well as a simplification of the registration procedure of suppliers.** (2) **Realisation of synergy-effects between the SMS and School Fruit Scheme e.g. by a combined administrative framework.**
- **Reduction of the organisational burdens should be sought.** This could e.g. be realised by better access of small suppliers to software tools to manage their SMS operations and by organising the collection of parental contributions outside participating schools.

Alignment of the SMS with other EU policies

- **The alignment between the SMS and the School Fruit Scheme should be improved. Merging the administrative frameworks or even the whole schemes may provide advantages such as reducing the administrative and organisational burdens as well as the costs of distribution.**
- **Since the SMS contributes also to the objectives of the EU information and promotion policy, it should be explored how to improve information campaigns.**
- **Further synergies should be sought between the SMS and the Strategy for Europe on Nutrition, Overweight and Obesity-related Health issues.**



DOCUMENT DE SYNTHÈSE (FRANÇAIS)

▲ Contexte et mise en œuvre du SMS

Depuis 1977, les Etats membres peuvent bénéficier d'une aide communautaire pour distribuer du lait et certains produits laitiers aux enfants dans les établissements scolaires via le programme communautaire « School Milk Scheme » (SMS). Les Etats membres participant au SMS reçoivent un montant fixe par kg d'équivalent lait distribué aux enfants dans les établissements scolaires sous forme de lait et de certains produits laitiers. Les Etats membres peuvent également accorder des subventions supplémentaires au niveau national.

Au sein de la Politique agricole commune (PAC), le SMS trouve son fondement juridique dans les articles 39, 41(b), 43 et 168 du TFUE et est encadré, sur le plan législatif, par le Règlement du Conseil (CE) N° 1234/2007 et le Règlement de la Commission (CE) N° 657/2008 avec deux objectifs essentiels :

(3) Augmenter la consommation de lait et la demande de lait en Europe pour lutter contre la tendance à la baisse et stabiliser le prix de marché pour le lait et les produits laitiers.

(4) Augmenter la consommation de lait et de produits laitiers des enfants et des jeunes en leur distribuant des produits laitiers sains.

Le rapport d'évaluation examine l'efficacité, l'efficience, la cohérence et la pertinence du SMS ainsi que la valeur ajoutée de l'UE sur la base des résultats observés lors des évaluations réalisées pour les années scolaires 2004/2005 à 2011/2012.

L'échelle du SMS en termes de montant total des produits subventionnés et de dépenses totales varie beaucoup selon les années. Pour l'année scolaire 2011/2012, le montant s'est chiffré à environ 110 millions d'euros (68,86 millions de fonds européens et 41,44 millions de fonds nationaux supplémentaires). Lors de l'année scolaire 2011/2012, près de 20 millions d'enfants ont participé et il a été distribué 385 000 tonnes d'équivalent lait. Les différents programmes de distribution de lait dans les écoles mis en œuvre au niveau national et régional varient fortement lorsque l'on compare la participation respective des enfants dans les écoles et les quantités distribuées.

Les subventions supplémentaires au niveau national sont octroyées sur une base volontaire et varient fortement d'un Etat membre à l'autre. Le niveau moyen d'absorption des subventions disponibles au niveau de l'UE est d'environ 17 % pour la période d'évaluation.

Quant aux types de produits distribués dans le cadre du SMS, la préférence va au lait à boire, tandis que les fromages représentent environ 20 % des quantités d'équivalent lait fournies au sein du SMS.

▲ Impact du SMS sur le marché du lait européen

Par rapport au volume total du marché du lait et des produits laitiers, le volume du lait distribué dans le cadre du SMS est très limité de par sa nature. Toutefois, cela ne saurait servir de seul indicateur pour l'impact du SMS sur le marché. Le SMS est basé sur l'hypothèse selon laquelle ce programme affectera la consommation de lait chez des enfants,



qui deviendront plus tard eux-mêmes des parents qui transmettront leurs habitudes de consommation de lait aux générations suivantes. Avec **un tel effet à long terme, le SMS pourrait avoir un impact considérable sur l'équilibre du marché par rapport à une situation inverse où il n'y aurait pas de SMS**. Il est néanmoins difficile de définir des indicateurs quantitatifs pour ces effets à long terme, ce qui ne facilite pas la présentation de preuves statistiques qui pourraient étayer l'ampleur de ces effets.

Impact du SMS sur la consommation de lait des enfants

Dans de nombreux Etats membres, les jeunes enfants qui vont à l'école maternelle et primaire consomment du lait et des produits laitiers, en moyenne dans les quantités recommandées. Toutefois, la consommation de lait diminue avec l'âge, et les enfants plus grands tout comme les adolescents ont souvent des niveaux de consommation inférieurs aux quantités recommandées. C'est pour cela que le SMS vise également les établissements d'enseignement secondaire. Cependant, les Etats membres concentrent essentiellement leurs efforts, au sein du SMS, sur les enfants plus jeunes dans les écoles maternelles et primaires.

Les enfants qui ont déjà l'habitude de boire du lait ont plus tendance à participer au SMS que les enfants peu consommateurs de lait. Cela est dû aux préférences en matière de goût que l'on développe dans le milieu de vie à la maison et à la contribution demandée aux parents (part du prix du lait scolaire à la charge des parents) dans la plupart des programmes nationaux ou régionaux. Dans l'ensemble, la distribution de lait et de produits laitiers permet d'augmenter la consommation de lait au sein du groupe cible, mais il reste difficile de vérifier si le SMS atteint réellement les enfants qui ont le plus besoin de cette distribution. L'évaluation a mis en évidence l'impact à long terme que la distribution dans les établissements scolaires peut avoir sur la consommation de produits laitiers à condition que cette offre de produits s'accompagne de mesures encourageant de bonnes habitudes alimentaires.

▲ Caractère pédagogique du SMS

A l'heure actuelle, les règlements de l'UE régissant le SMS n'exigent aucune mesure pédagogique. Il n'est pas prévu de communication systématique sur le rôle que la consommation de lait peut avoir en tant que substitut aux sodas, et par là même sur son rôle dans la lutte contre l'obésité et la surcharge pondérale. Il est proposé une offre variée de documents et d'activités pédagogiques – sur une base volontaire – dans les Etats membres, notamment par les fournisseurs de lait et les organisations laitières. Toutefois, ces mesures ne sont pas conçues pour influencer les habitudes alimentaires. Les mesures pédagogiques proposées sur une base volontaire sont souvent temporaires et réalisées à petite échelle. Ni leur impact, ni leur succès ne sont documentés, suivis ou évalués.

Là où des mesures pédagogiques ont été mises en œuvre, il a été constaté que les enfants aimaient participer et en apprendre plus sur une alimentation saine, tout comme sur la production et le traitement du lait. Les parties prenantes au SMS ainsi que la majorité des **personnes interrogées dans le cadre des interviews réalisées aux fins de la présente évaluation sont très en faveur de l'introduction de mesures pédagogiques obligatoires dans le SMS**.



▲ Impact de l'aide communautaire

Dans la plupart des Etats membres, on a pu observer une baisse de la quote-part de l'aide communautaire dans le prix du lait scolaire, phénomène dû à la légère mais néanmoins continue augmentation du prix du lait ces dernières décennies. Les Etats membres justifient ainsi la mise en œuvre de subventions nationales supplémentaires en arguant d'une « aide communautaire trop faible. »

Le prix que les parents doivent payer pour le lait influence le taux de participation au SMS. Cependant, les prix n'ont qu'un impact limité lorsque les parents disposent de revenus élevés. L'évaluation a révélé que seule une distribution gratuite du lait dans le cadre du SMS pourrait déboucher sur une augmentation sensible de la participation.

En plus du prix subventionné, la plupart des Etats membres ont indiqué que le cadre communautaire du SMS a été la principale force motrice dans le lancement et la mise en œuvre d'un programme de distribution de lait dans les écoles de leur pays.

▲ Impact des facteurs socio-économiques

Selon 50 % des personnes interrogées dans le cadre de l'étude qualitative réalisée pour la présente évaluation, une contribution parentale plus élevée – la part du prix du lait que les parents doivent payer dans le SMS après déduction de l'aide communautaire et des subventions nationales – a un impact négatif évident sur la participation d'enfants venant de milieux sociaux moins privilégiés.

L'étude a identifié d'autres facteurs socio-économiques importants qui ont une influence sur la participation au SMS, notamment le revenu familial et le niveau de connaissances en matière de nutrition dans les familles dont sont issus les enfants participant.

Par ailleurs, dans chacun des pays la motivation des services administratifs, du personnel des écoles et du secteur laitier est un facteur déterminant dans la réussite de la distribution de lait dans les écoles.

▲ Charges administratives et organisationnelles

Les charges dans le cadre du SMS peuvent être divisées d'une part en charges liées aux obligations juridiques à respecter pour assurer l'information – les charges administratives –, et d'autre part en charges directement liées à la distribution du lait dans les écoles – les charges organisationnelles. Dans la plupart des cas, les informations sur les coûts administratifs engendrés par le SMS ne sont ni enregistrées, ni documentées au niveau des Etats membres.

C'est la raison pour laquelle l'indicateur utilisé pour les charges administratives dans la présente analyse n'est qu'une estimation approximative. Il est essentiellement basé sur l'évaluation des dépenses de personnel nécessaire pour gérer l'ensemble des tâches administratives dans le cadre du SMS. Cependant, les coûts administratifs en résultant sont parfois relativement élevés dans certains Etats membres, et la variation des coûts administratifs respectifs est également assez importante d'un Etat à l'autre. **Les charges administratives**



sont plus élevées dans les Etats membres où l'absorption des fonds – à savoir l'utilisation du budget communautaire disponible – est plutôt faible. Les chiffres pour la France et la Pologne montrent qu'un nombre plus élevé d'enfants participant ou un plus vaste assortiment de produits distribués n'occasionnent pas forcément des coûts administratifs bien plus élevés.

Tandis que les charges administratives liées au SMS affectent les administrations (les ministères p. e.) et les fournisseurs de produits laitiers, les charges organisationnelles sont assumées par les écoles participant, les enseignants, le personnel des écoles et les parents. La plupart des fournisseurs de lait dans les écoles considèrent leurs charges disproportionnellement élevées, p. e. pour fournir la garantie de sécurité et être référencé en tant que fournisseur. Les contrôles des produits sont également considérés comme pesants. Toutefois, les gros fournisseurs sont capables de réduire leurs coûts de manière significative en automatisant et standardisant les procédures via des outils logiciels adéquats.

La charge organisationnelle de collecte de la contribution parentale semble constituer un obstacle à la participation lorsque la tâche d'encaissement incombe aux écoles (enseignants).

L'évaluation a montré combien il est important de surveiller de près les charges organisationnelles incombant aux personnes impliquées dans l'organisation opérationnelle du SMS. Même infime, toute variation des charges organisationnelles influence déjà la bonne volonté des écoles à participer au programme.

▲ Planification stratégique

L'évaluation a mis en évidence l'absence d'approche avec une planification stratégique à l'heure actuelle. Une telle approche permettrait d'améliorer l'efficacité du SMS. Elle s'attaquerait de manière adéquate aux faiblesses du programme actuel : les déficits dans l'intégration de tous les groupes d'acteurs, les difficultés à appliquer tous les outils nécessaires pour atteindre les objectifs du SMS et l'utilisation insuffisante des synergies avec le programme communautaire de distribution de fruits et légumes à l'école.

Une planification stratégique s'avère nécessaire dans trois domaines clés pour renforcer l'intervention du SMS :

- (4) Simplification de l'accès au SMS.
- (5) La mise en œuvre du SMS en fonction de groupes cibles spécifiques ainsi que d'autres approches renforcent l'attrait du SMS.
- (6) Une meilleure coopération et communication entre les acteurs concernés.

▲ Efficience

Afin de mesurer l'efficacité du SMS, il a été développé, dans le cadre de cette évaluation, un indicateur commun à tous les Etats membres. Cet indicateur révèle que des **subventions comparables mènent à des résultats très variés selon les Etats membres.**



L'évaluation a trouvé une corrélation significative sur un plan statistique entre les *dépenses par enfant et par an* et le *taux d'enfants participant*. Cependant, des dépenses élevées par enfant n'entraînent pas automatiquement un taux de participation plus élevé.

Un problème lorsque l'on souhaite mesurer l'efficacité du programme résulte du fait que l'un des plus importants indicateurs de résultat, le nombre d'enfants participant, n'est pas harmonisé entre les Etats membres. Le Règlement de l'UE demande l'établissement de rapports sur le « nombre d'enfants participant au programme » depuis l'année scolaire 2008/2009, mais ne définit pas cette variable de manière explicite. En conséquence, les Etats membres ont été plutôt libres dans leur interprétation de la notion de participation. **Il y a de fortes différences entre les Etats membres sur la manière de calculer la participation. La Commission a déjà modifié le Règlement 657/2008 en août 2013 afin de remédier à ce problème.**

▲ Cohérence

Dans le cadre de cette évaluation, il a été constaté que **le SMS est cohérent avec les objectifs généraux de la PAC**, notamment au regard des objectifs spécifiques de contribution aux revenus agricoles, de maintien de la stabilité du marché et de préservation de la diversité agricole en Europe. **Il ressort de l'évaluation que le SMS et la Stratégie européenne pour les problèmes de santé liés à la nutrition, la surcharge pondérale et l'obésité sont cohérents.** Il est possible d'améliorer encore l'alignement du SMS par rapport à cette stratégie.

L'évaluation a permis d'identifier le caractère complémentaire du SMS, du programme communautaire « School Fruit Scheme » et de la politique d'information de l'UE. Les objectifs de ces trois politiques sont cohérents. Bien que le SMS et le « School Fruit Scheme » présentent des similitudes au niveau de leurs objectifs et de leur logique d'intervention, les deux programmes ne sont guère liés à l'heure actuelle, que ce soit au niveau de l'UE ou dans les Etats membres.

▲ Pertinence

Le SMS est un outil adéquat pour augmenter la consommation de lait des enfants et améliorer ainsi leurs habitudes alimentaires. Il est possible d'améliorer la pertinence du programme par rapport à cet objectif en ajoutant certains éléments à son concept : mesures pédagogiques, distribution gratuite des produits laitiers aux enfants et meilleure information des parents sur le programme.

Pour les personnes interrogées, les cinq facteurs de réussite les plus importants pour les programmes de lait scolaire sont : la fréquence élevée de l'offre de lait et de produits laitiers, les livraisons précises et la fiabilité de la logistique, l'intégration dans la routine quotidienne, la consommation collective et les mesures pédagogiques organisées sur une base volontaire.

Tandis que les effets à long terme du programme peuvent contribuer à un meilleur équilibre du marché, il est constaté qu'il n'y a guère d'effets à court terme sur le marché.



▲ Valeur ajoutée de l'UE

La valeur ajoutée de l'UE pour le SMS est reconnue par les Etats membres. La plupart des Etats membres ont indiqué que le cadre communautaire du SMS a été la principale force motrice dans le lancement et la mise en œuvre d'un programme de distribution de lait dans les écoles dans leur pays. La présente évaluation a permis d'identifier un potentiel d'amélioration de la valeur ajoutée de l'UE, par exemple via un meilleur transfert de connaissances entre les Etats membres et avec les experts, l'examen périodique du programme et une meilleure promotion des accomplissements du SMS, assortie d'une communication plus active sur ces réalisations.

▲ Recommandations

Efficacité

- **Il faudrait revoir le concept du SMS pour stimuler durablement la consommation de lait des enfants.** La logique d'intervention devrait être basée sur une théorie comportementale. Il faut adopter une approche plus stratégique.
- **Il faudrait définir un ensemble d'indicateurs d'évaluation et de suivi** permettant d'évaluer la mise en œuvre et l'impact du SMS. Il faudrait introduire au niveau des Etats membres et de l'UE des obligations claires d'évaluation et de suivi, basées sur un ensemble d'indicateurs adéquat.
- Il est recommandé **d'introduire des mesures pédagogiques et de communication** éligibles à l'aide communautaire en tant que points de programme du SMS.
- **En ce qui concerne la détermination de la cible du SMS, il faudrait particulièrement tenir compte de l'âge des enfants** car la consommation de lait baisse au fur et à mesure qu'ils grandissent, et les adolescents ont des besoins de rattrapage plus importants par rapport aux quantités recommandées. **En outre, des approches appropriées en fonction de l'âge sont nécessaires pour maintenir l'intérêt des enfants à l'égard du SMS.**
- **Au regard du compromis observé de manière empirique dans le programme entre les dépenses par enfant et la participation au programme, il faudrait envisager d'établir des seuils minimums de dépense par enfant et de participation.**
- **Il faudrait approfondir la question de la gratuité, à savoir d'une distribution totalement gratuite de produits laitiers aux enfants afin d'améliorer la participation des enfants au programme.** C'est pourquoi il est conseillé de **débattre de nouveaux modèles de financement**, par exemple avec une approche cofinancée.

Efficience, charges administratives et organisationnelles

- Il est possible de réduire les charges administratives liées au SMS par les mesures suivantes : (1) **Simplifier les contrôles des produits et les contrôles administratifs via une approche basée sur les risques, avec vérification ponctuelle, ainsi que simpli-**



fier la procédure de référencement des fournisseurs. (2) Profiter d'effets de synergie entre le SMS et le « School Fruit Scheme », p. e. avec un cadre administratif combiné.

- **Il faudrait chercher des moyens de réduire les charges organisationnelles.** Cela pourrait se faire p. e. en améliorant l'accès des petits fournisseurs à des outils logiciels adéquats pour gérer leurs opérations SMS et en organisant la collecte des contributions parentales en dehors des écoles participant.

Alignement du SMS sur d'autres politiques communautaires

- **Il faudrait mieux aligner le SMS et le « School Fruit Scheme ».** La fusion des cadres administratifs, voire de l'ensemble des programmes, pourrait apporter certains avantages comme, par exemple, permettre de réduire les charges administratives et organisationnelles ainsi que les coûts liés à la distribution.
- **Le SMS contribuant également aux objectifs de la politique d'information et de promotion de l'UE, il faudrait voir comment améliorer les campagnes d'information.**
- **Il faudrait rechercher d'autres synergies entre le SMS et la Stratégie européenne pour les problèmes de santé liés à la nutrition, la surcharge pondérale et l'obésité.**



1 INTRODUCTION

Background and objectives of the evaluation

Within the Treaty of Rome (1957) the EU partners agreed in Article 39 - 41 on measures to organise the common agricultural market, to stabilise the market for agricultural products and to promote the consumption of certain agricultural products. For the milk market these measures have been further specified in the Council Regulation (EEC) No 804/68 of 27 June 1968 on the common organisation of the market for milk and milk products, which enables Member States to subsidize the distribution of milk in schools. In 1977 the Council decided on Community aid for milk distribution in order to fight the general declining milk consumption. Council Regulation (EEC) No 1080/77 and Commission Regulation (EEC) No 1598/77 created the legislative framework for the “supply of milk and certain milk products at reduced prices to school children.”

The corresponding implementing regulation has been reviewed, specified and supplemented several times (1983, 1993, 2000, 2008, 2009, 2011 and 2013) in the last three decades. The current regulation, Commission Regulation (EC) No 657/2008, in the consolidated version of 2011, regularises for example the beneficiaries, the eligible products, the rate of aid, the obligations of the Member States that wish to participate and the mode of payments and controls.

The EU School Milk Scheme therefore looks back on a long tradition – a tradition that had to face changes in the milk market, in consumption habits and consumer lifestyles. It can be considered as one of the oldest promotion programmes in the EU. In the beginning, it was created to balance the milk market through stimulating milk consumption. Nowadays a shift towards stimulating milk consumption as a means of healthy nutrition can be witnessed.

The EU School Milk Scheme is characterised by its history as it can be seen for example by the development of eligible products¹ (Table 1).

For 30 years the decision on eligible products has focused especially on those milk products which may first of all have a remarkable impact on the market balance and second meet the consumption habits in EU Member States. Since 2008, the European Commission has strengthened the nutritional character of the scheme. The renewed versions of 2008 and 2011 cover a wider range of dairy products and cut down on added sugar. The European Commission stresses also the educational character of the programme as an instrument to fight health problems related to unbalanced and excessive food consumption². In addition, the versions since 2008 allow for secondary schools to participate in the programme as well.

Being aware of an on-going discussion about health effects of milk consumption the following report concentrates solely on the evaluation of effectiveness, efficiency, relevance and coherence of the School Milk Scheme as a policy instrument with respect to its objectives as defined in the underlying legislation.

¹ Data gathered from the Council/ Commission Regulations mentioned

² European School Milk Scheme
(http://ec.europa.eu/agriculture/markets/milk/schoolmilk/index_en.htm)



Table 1: Development of eligible milk products within the School Milk Scheme

EEC No. 1080/77	EEC No. 2167/83	EC No. 3392/93	EC No. 2707/2000	EC No. 657/2008 ³
	Raw-milk			
Heat treated whole milk and semi-skimmed milk	Heat treated whole milk and semi-skimmed milk	Heat treated whole milk and semi-skimmed milk	Heat treated milk that meets the requirements for one of the five mentioned fat contents	Heat treated milk including lactose free milk drink
Heat treated chocolate-flavoured milk (produced of whole milk or semi-skimmed milk; milk content at least 90%)	Heat treated chocolate-flavoured or flavoured milk (produced of whole milk or semi-skimmed milk; milk content at least 90%)	Heat treated chocolate-flavoured or flavoured milk (produced of whole milk or semi-skimmed milk; milk content at least 90%)	chocolate-flavoured or flavoured milk produced of the above mentioned milk categories (milk content at least 90%)	Heat-treated milk/ lactose free milk drink with chocolate, fruit juice or flavoured, containing at least 90% by weight of the milk and containing maximum 7% of added sugar and/or honey
Yoghurt (produced of whole milk)	Yoghurt (produced of whole milk or semi-skimmed milk; milk content at least 85%) pure or with added sugar, cocoa or fruits	Yoghurt (produced of whole milk or semi-skimmed milk)	Yoghurt produced of the above mentioned milk categories	Flavoured and non-flavoured fermented milk products with fruit, containing at least 75% by weight of the heat treated milk or lactose free milk drink and containing maximum 7% added sugar and/or honey
	buttermilk		Piimä/fil (Finnish/Swedish curdled milk)	
	Fresh and processed cheese with a fat content by weight in the dry matter of at least 40%	Fresh and processed cheese with a fat content by weight in the dry matter of at least 40%	Fresh and processed cheese with a fat content by weight in the dry matter of at least 40%	Fresh and processed cheese as well as other cheese plain or flavoured (maximum of 10% non-lactic ingredients)
	Other cheese with a fat content by weight in the dry matter of at least 45%.	Other cheese with a fat content by weight in the dry matter of at least 45%	Other cheese with a fat content by weight in the dry matter of at least 45%	
	Grana Padano- or Parmigiano-Reggiano-cheese	Grana Padano- or Parmigiano-Reggiano-cheese	Grana Padano- or Parmigiano-Reggiano-cheese	Grana Padano- or Parmigiano-Reggiano-cheese
			Halloumi cheese	

Note: For product categories listed in blue cells subsidies are obligatory. Subsidies for product categories listed in white cells depend on Member States' decision whether they are eligible in their national programmes.

³ Information presented considers the amendment in 2009 as laid down in Commission Regulation (EC) No 966/2009; online publication: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:271:0010:0011:EN:PDF>



Member States are invited to adapt the list of eligible products to regional consumption habits and to apply stricter quality standards⁴. In the school year 2011/2012 the European Union supports the SMS with subsidies of more than EUR 68 million for the distribution of almost 385,000 tons of milk (total whole milk equivalent⁵). The estimated number of participating children in the EU reaches 20.3 million⁶. Among the 26 participating Member States France (approx. EUR 14 million; 20% of total EU aid), Poland (approx. EUR 9.6 million; 14% of total EU aid), Romania (approx. EUR 8.3 million; 12% of total EU aid) Sweden (approx. EUR 8.9 million; 13% of total EU aid) and Germany (approx. EUR 5.6 million; 8% of total EU aid) rank on top of the recipients of aid. However, the highest per-capita consumption of school milk is noticed in Sweden, Finland, Estonia, Romania and Denmark⁷.

According to Article 27,4 of Council Regulation (EC) No 1605/2002 on the implementing rules of the Financial Regulation, it is necessary to evaluate all results of measures that cause budgetary expenditure. Thus, with the evaluation of the implementation and impact of the School Milk Scheme the Commission's Directorate-General for Agriculture and Rural Development contributes to meeting its evaluating obligations.

This evaluation has the objective to examine the implementation of the SMS and assess its

- ▲ **Effectiveness:** The extent to which measures can be expected to achieve the objectives of the intervention logic
- ▲ **Efficiency:** The extent to which objectives can be achieved for a given level of resources and at the lowest costs
- ▲ **Deadweight:** The effects which would have arisen even if the intervention had not taken place. A phenomenon that arises e.g. if the target variable of the policy shows very low reactions to the intervention instrument.
- ▲ **Coherence:** The extent to which the intervention does not contradict other interventions with similar objectives
- ▲ **Relevance:** The extent to which the intervention is an eligible instrument to reach the specific objectives of the intervention logic
- ▲ **and EU value added:** The extent of added value that has been accomplished by the fact that the scheme is actualised under the European Community and European legislation.

⁴ Commission Regulation (EC) No 657/2008, preamble paragraph 5 and article 3,1

⁵ Own calculation based on the school milk statistic of the European Commission

⁶ Estimation by the European Commission based on reported data from the Member States. Note: The number of participants is a rough estimation. Germany for example reports an estimated number of almost 800.000 participants, although the Federal States resume a participation of approximately 2.7 million pupils. The reason for this divergence arises from the distribution frequency of the school milk. For the quantity of school milk offered in Germany 800.000 pupils will be able to receive a daily portion of school milk throughout a "standard" school year of almost 200 days. However, school milk in educational establishments is offered most often only 1-2 times per week.

Since the basis for the estimation of the Member States remains unclear so far, the exact number of participants may vary.

⁷ Source: German Federal Ministry for Food, Agriculture and Consumer Protection (BMELV)



2 EVALUATION DESIGN

2.1 Methods of data and information collection

The evaluation methodology involves a multitude of different methods. A basic consideration for the choice of methods is based on cost versus effectiveness. Furthermore, the methodology involves recommendations and good practice examples within the Commission's framework for evaluations.⁸ These principles provide synergies within comparable evaluation frameworks on EU level and guarantee the integration of resulting data. The methods used are approved and adequate according to the evaluator's expertise and experience. For the evaluation of the School Milk Scheme the following methods are applied.

1) Methods of data collecting

The collection of data is carried out to provide valid information on behalf of the system of defined indicators. Depending on the indicator's complexity, information is differently available and valid. Specifically, the following methods of collecting data are used for the accomplishment of the evaluation of the School Milk Scheme:

▲ Desk Research

(Literature review and information gathering from secondary data sources)

- Analysing existing databases: e.g. Eurostat, FAO-Stat, WHO statistics, the EFSA Database, European Health Interview Surveys, etc. which provide market information (e.g. national and regional market balances of milk and milk products) or information on peoples' nutrition (e.g. daily intake per capita of milk and milk products).
- Analysing existing information on the implementation of the scheme in participating Member States, e.g. of such information delivered annually by the Member States to the Commission in accordance with Commission Regulation (EC) 657/2008, Article 17.
- Analysing the relevant legislation such as Council Regulation (EC) 1234/2007, Commission Regulation (EC) No 657/2008, the Strategy for Europe on Nutrition, Overweight and obesity related Health issues, and the EU 2020 Strategy.
- Analysing the relevant bibliography such as of national scientific papers and project reports focussing on the School Milk Scheme and European-wide studies or reports.
- Statistical data gathered in the Commission services and at Member State level
- Administrative data gathered in the Commission services and at Member State level

⁸ See e.g. Commission's concepts on Impact Assessment in: http://ec.europa.eu/governance/impact/index_en.htm; Commission's suggested evaluation criteria in: DG AGRI WORKING DOCUMENT FOR MANAGING THE EU SCHOOL FRUIT SCHEME; COMMISSION STAFF WORKING DOCUMENT accompanying the Proposal for a COUNCIL REGULATION amending Regulations (EC) No 1290/2005 (Impact Assessment Summary, http://ec.europa.eu/agriculture/markets/fruitveg/sfs/fullimpact_en.pdf)



▲ Primary Research

- Standardised **questionnaire** to gain basic information about the scheme in all 26 participating Member States. This step is carried out by a survey with standardised written forms, asking the Member States to indicate details on the implementation of the programme, e.g. number of participants, national financial top-up of the scheme, supply model, educational activities, budget spend on educational activities, on administration and on distribution, national evaluation of the programme, stakeholders involved, average weight per portion, average price per portion, duration and frequency of distribution, average consumption per child, communication and promotion measures, experiences with the scheme, etc. for the evaluation period 2004-2012.
- Structured qualitative personal **expert interviews** (face to face or via telephone) with Control Authorities, Single Contact Points, school headmasters and parents of participating children in selected Member State. The interviews are carried out by national experts of the evaluator's team who are familiar with the cultural background and the national language to ensure high quality and information gathering of the interviews. They are carried out in eight Member States specified for the case studies as described in Annex 8.8. The interviews provide insights on the different evaluation themes, e.g. on the effectiveness of the scheme. The interviews are carried out either personally or via telephone. The compendium for the interviews includes mostly open questions as it is typical for the qualitative method in order to gain new information rather than quantifying predetermined statements or aspects.

2.2 Data sources used

▲ Market information

The main data source used for the brief description of the European milk market is the agricultural statistic database provided by EUROSTAT and the milk market statistics of the European Dairy Association which covers amongst others information on production, consumption and prices of agricultural products.

In addition, to get insights of the consumption of milk and milk products per age group data of the *Chronic food consumption statistics* (per country, survey and age class) provided by the European Food Safety Authority (EFSA) is used.



▲ Preparatory assessment

The preparatory assessment is used to describe in detail the individual parameters of the School Milk Scheme implementation in the participating Member States. The starting point for the respective data and information gathering builds on the reporting obligations for Member States within the scheme which are specified in the respective Commission Regulations which lay down the rules for supplying milk and certain milk products to pupils in educational establishments. As the respective Commission Regulation has been amended several times (namely in 2000, 2008, 2009, 2011 and 2013) over the last decade, the reporting / notification obligations for Member States participating in the scheme have also changed several times. Therefore, a uniform and consistent database for key implementation parameters over a long-term ex post period is not or only in a very limited way available. Table 2 provides an overview of the reporting obligations for Member States from 2000 until today defined in the individual regulations.

Reporting variables up to 2008 were very rare and limited to information of quantities on which aid was paid, brief information and promotion measures for milk products undertaken in connection with the distribution of subsidised products in schools. In 2008 the reporting obligation was deepened and extended which allows for an investigation of detailed product information and numbers of participating pupils starting in the school year 2008/2009. Further extension of the reporting obligation was done in 2011 by enacting Commission Regulation No 996/2011. Until then a detailed information base had to be provided by the Member States which allows for a more detailed view on the schemes financing and control mechanisms (incl. national top ups) starting in the school year 2011/2012.

However, the information base is still limited to basic information and more restricted as for example in other nutritional programmes like the European School Fruit Scheme. Important information, e.g. the existence of private top-ups, the administrative burden or other costs than product costs, existence of voluntary executed educational measures, existence of additional national programmes, categories of participating educational establishments, specific target groups, overall number of children and establishments in the target group, participation shares in the country, details on the product distribution and the individual national strategies underlying the implementation of the scheme, supply model, additional product criteria / restrictions, etc. are missing which yet are very important within the evaluation procedure. For this reason a questionnaire (in the following “implementation survey”) has been developed which supplements the detailed interview survey carried out in the case study regions by asking especially for quantitative implementation parameters. The implementation survey corresponds to the requirements of the evaluation objectives and asks for a time period of 2004 – 2012. The survey which is attached in Annex 1 of this report has been sent to the Control Authorities (CA) in all participating Member State. A list of the CAs is also attached to this report in Annex 2.

In addition to the problem of limited data availability as explained above, further limitations result from the different interpretation and calculation of the monitoring variable “*number of participating children*” by the single Member States. As especially this variable serves as an important output indicator for the scheme’s effectiveness, the way of defining participants is crucial for the evaluation. For this reason inaccuracies noticed for this variable is discussed and explained in the following Box 1.



Table 2: Reporting obligations for Member States participating in the EU SMS

Regulation	Article	Reporting obligation for MS participating in the EU SMS
(EC) No 2707-2000 ⁹	Art. 15	<ul style="list-style-type: none"> Quantities on which aid was paid during the previous school year Brief account of any information and promotion measures for milk products undertaken in connection with distribution of the subsidised products in schools
(EC) No 657-2008 ¹⁰	Art. 17	<ul style="list-style-type: none"> Number of participating applicants and educational establishments, on-the-spot checks carried out and the related findings. Quantities of milk and milk products broken down by categories and sub-categories on which aid has been paid during the previous period running from 1 August to 31 July as well as the maximum permissible quantity and its calculation Estimated number of pupils participating in the school milk scheme
(EC) No 966-2009 ¹¹		<ul style="list-style-type: none"> According to (EC) No 657-2008
(EC) No 996-2011 ¹²	Art. 17	<ul style="list-style-type: none"> Number of applicants; Number of applicants controlled; Total number of educational establishments to which controlled applicants delivered the products eligible for Community aid and number of these educational establishments controlled on the spot; Number of checks on the composition of products; Amount of aid claimed, paid and controlled on the spot (in euro); Reduction of aid after administrative check (in euro); Reduction of aid due to late application according to Article 11(3) Aid recovered following on-the-spot checks according to Article 15(9) Sanctions applied in case of fraud according to Article 15(10) (in euro); Number of applicants withdrawn or suspended according to Article 10. Quantities of milk and milk products broken down by categories and sub-categories on which aid has been paid; Maximum permissible quantity; EU expenditure and national top-up Approximate number of pupils participating in the school milk scheme;
Amending Regulation of (EC) No 657/2008 (2013) ¹³	Art. 17	<ul style="list-style-type: none"> Number of applicants; Number of applicants controlled; Total number of educational establishments to which controlled applicants delivered the products eligible for Community aid and number of these educational establishments controlled on the spot; Number of checks on the composition of products; Amount of aid claimed, paid and controlled on the spot (in euro) Reduction of aid after administrative check (in euro); Reduction of aid due to late application according to Article 11(3) Aid recovered following on-the-spot checks according to Article 15(9) Sanctions applied in case of fraud according to Article 15(10) (in euro); Number of applicants withdrawn or suspended according to Article 10. Quantities of milk and milk products broken down by categories and sub-categories on which aid has been paid; Maximum permissible quantity; EU expenditure and national top-up The approximate number of pupils participating in the SMS The approximate number of children in regular attendance in all educational establishments participating in the school milk scheme; the approximate number of children eligible under the school milk scheme

⁹ Commission Regulation No 2707/2000 of 11 December 2000 laying down rules for applying Council Regulation (EC) No 1255/1999 as regards Community aid for supplying milk and certain milk products to pupils in educational establishments

¹⁰ Commission Regulation No 657/2008 of July 2008 laying down rules for applying Council Regulation (EC) No 1234/2007 as regards Community aid for supplying milk and certain milk products to pupils in educational establishments

¹¹ Commission Regulation No 966/2009 of 15 October 2009 amending Regulation (EC) No 657/2008 laying down rules for applying Council Regulation (EC) No 1234/2007 as regards Community aid for supplying milk and certain milk products to pupils in educational establishments

¹² Commission Implementing Regulation No 996/2011 of 7 October 2011 amending Regulations (EC) No 657/2008, (EC) No 1276/2008 and Implementing Regulation (EU) No 543/2011 as regards the notification obligations within the common organisation of agricultural markets

¹³ Commission Implementing Regulation (EU) No 756/2013 of 6 August 2013; amending Regulation (EC) No 657/2008, online publication: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:211:0001:0002:EN:PDF>



Box 1: Difficulties in measuring the number of participating children

“Number of participating children”

Within this evaluation it becomes obvious that Member States use different interpretations and calculation methods for the variable “number of participating children”. On the one hand, this situation is caused by the fact that the **EU Regulation which asks for reporting on the “approximate number of participating children in the scheme” since the school year 2008/2009 misses to define this variable explicitly. Consequently, Member States are free in their interpretation.** On the other hand it is a very **ambitious task to specify the accurate number of children participating in the scheme for several reasons:**

- The participation of an educational establishment does not necessarily mean that all children take part in the scheme. If the milk is distributed by school personal directly to children, the counting problem might be solvable. But if the milk is distributed in canteens or by vendor machines a counting per child is rather unrealistic.
- Consequently in some cases, children are able to consume more than one portion per day, so that *one portion* does not necessarily refer to *one child* per day.
- If the subsidised milk products are distributed during school meals this problem gets even worse.
- The accurate number of children participating in the scheme can vary within one school year.

Since Member States are faced with this problem they have refrained in most cases from a measurement in “accurate participation” indicating a more “theoretical participation”. The way they calculate the “theoretical participation” varies which diminishes the comparability of this variable. Measuring approaches which have been identified in this evaluation are:

- a) Number of all children in a country
- b) Number of all children in a defined target group in a country
- c) Numbers of all children in participating schools
- d) Number of children which are theoretically able to participate with respect to the actual subsidies product quantities in a school year and under the condition that only 250 ml per child and school day can be applied, which is in line with the EU Regulation.

It is obvious that each measurement leads to a different number of children which varies from a very high number of participants in case (a) to a limited number in case (d). In order to define a comparable output (effectiveness) indicator, it was considered to calculate a theoretical participation number based on approach (d):

$$\frac{\text{Total products amount (in litre per school year)}}{0.25 \text{ liter per head}} \cdot \frac{1}{200 \text{ (average length of a school year)}}$$

= Number of children participating each day per school year

However, the calculated number of participating children (about 7 million on EU level in 2010/2011) differs significantly from the number reported by Member States (about 17 million). Furthermore, this number - being based on parameter assumptions - is highly theoretical since implementation factors, like the number of days per school year and the portion sizes vary across Member States. A more precise estimation would require more information on the above mentioned parameters which is not provided by the information at hand. Even Member States themselves have serious problems to collect this information as in most cases the distribution days, the portion size and the distribution strategy vary on school level and documentation on a superordinate level is not carried out. Therefore, the evaluation team considered that such a calculation would lead to a similar degree of uncertainty and imprecision so that no additional benefit is gained. Consequently, when talking about the “number of participating children”, the evaluation report refers to the number of children reported by the Member States to the Commission within the obligatory monitoring procedure since the school year 2008/2009.

As the “number of participating children” is a crucial variable within future evaluations of the SMS, it is recommended that the Commission should provide a clear definition of this term.

An amendment of Regulation (EC) No 657/2008 has been published in August 2013.¹⁴ The revised regulation asks the Member States to report additionally to the currently required *approximate number of participating children* the *approximate number of children in regular attendance in all educational establishments participating in the SMS* and the *approximate number of children eligible under the SMS*. Hence it can be expected that comparable data will be available for future evaluations of the SMS.

¹⁴ Commission Implementing Regulation (EU) No 756/2013 of 6 August 2013; amending Regulation (EC) No 657/2008, online publication: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:211:0001:0002:EN:PDF>



▲ Additional information to answer the evaluation questions

Since the information requirements for answering the evaluation questions exceed the available secondary and primary data sources described above, numerous interviews with national control authorities, single contact points, selected school headmasters, and parents of participating children have been carried out. Therefore, four different interview guidelines for the interviewee groups involved are developed:

- a) for national control authorities and single contact points (CA+SCP),
- b) for participating school headmasters (SH),
- c) for non-participation school headmasters (NON-SH)
- d) for parents (PA).

In addition to questions which refer to the four evaluation themes the guidelines cover also questions about possible links between the School Fruit Scheme and the SMS and gives interviewees the possibility to provide suggestions for the improvement of the scheme.

As a starting point for the identification of interviewees the national Control Authorities have been contacted. For the case study in Germany, where the SMS is implemented on a regional level, “regional” control authority and important single contact points are identified additionally. Another group of promising interviewees, categorised as single contact points, are major milk suppliers, dairy organisations and organisations promoting the SMS. Especially in order to gain information on the implementation in educational establishments, the practicability of the scheme and the impact on children’s eating habits interviews with school headmasters and parents are executed. An overview on the interviews executed within this evaluation is illustrated in Table 3.

Table 3: Kind and number of interviews executed

Target group	No of interviews per target group in each country	Total number of interviews executed
Control Authorities	1	8
Single Contact Point*	2	18
School headmasters of participating schools	3-4	34
School headmasters of non-participating schools	1	8
Parents of participating children	5-6	47

**National experts like e.g. producer, consumer and parental associations as well as school milk suppliers. 115 persons have been interviewed across 8 Member States, out of which 47 were parents.*



3 THEORETICAL ANALYSIS

The following chapter provides a theoretical analysis of the instrument-impact relationship of the policy instrument *European School Milk Programme*.

The core objectives of this first evaluation step is to attain a clear and precise understanding of the theoretical functioning of the single intervention measures applied (instrument) and the core short- and long-term objectives which should be reached by the intervention (impact). This analysis enables subsequently to define explicit success indicators for the individual objectives which are essential to measure the efficiency and effectiveness of the policy.

A logic model which is a diagrammatic representation of the intervention's functioning, is developed to understand in detail the intervention logic. "Logic models provide the intervention description that guides intervention evaluation by identifying what and when to measure objectives. Logic models direct intervention evaluation by:

- Matching intervention strategies with associated objectives and indicators of success
- Assisting identification of success indicators that are critical for the evaluation
- Showing the funding institution(s) and stakeholders how specific programme activities contribute to the achievement of intervention goals and objectives." (JobNut: Public Health Nutrition Intervention Management")

Following this approach the explicit measures and activities of the intervention and the core objectives which should be reached have to be clearly defined. After this is done individual success indicators can be defined which help to measure the instrument-impact relationship. A sufficient information source for this definition provides the legal base of the SMS, the respective European strategy papers, Commission regulations and directions. In particular to clearly identify the scheme's objectives this information source is crucial.

3.1 Underlying legislation

With the Treaty of Rome (1957) the EU partners agreed in Article 39 - 41 on measures to **organise the common agricultural market**, to **stabilise the market for agricultural products** and to **promote the consumption of certain agricultural products**.

For the milk market these measures have been further specified in Council Regulation (EEC) No 804/68 of 27 June 1968 on the common organisation of the market for milk and milk products, which enables Member States to subsidize the distribution of milk in schools. In 1977 the Council decided on Community aid for milk distribution in order to **fight against the general declining milk consumption in Europe**.

Council Regulation (EEC) No 1080/77 and Commission Regulation (EEC) No 1598/77 created the legislative framework for the **"supply of milk and certain milk products at reduced prices to schoolchildren."**

Implementing regulations have been reviewed, specified and supplemented several times (compare e.g. Commission Regulation (EC) No 3392/93, No 2707/2000 and No 966/2009) in the last three decades. The current regulation, Commission Implementing Regulation (EU) No 996/2011, regularises for example the beneficiaries, the eligible products, the rate of aid, the obligations of the Member States that wish to participate and the mode of payments and controls.



The EU School Milk Scheme therefore looks back on a long tradition – a tradition that had to face changes in the milk market, in consumption habits and consumer lifestyles. It can be considered as one of the oldest promotion programmes in the EU.

Initially, the scheme was created to **balance the milk market through stimulating milk consumption**. Nowadays, especially in view of the *European Strategy on nutrition, overweight and obesity related health issues*¹⁵ a **shift towards stimulating milk consumption as a means of healthy nutrition** can be witnessed.

The nutritional benefits of milk as a source for calcium, proteins and vitamins (e.g. vitamin D, A and B12) are in the focus of attention, especially in the context of **fighting against overweight and health problems related to malnutrition**. Furthermore, the increasing milk consumption affects the market balance positively.

The EU School Milk Scheme is characterised by its history as it can be seen for example by the development of eligible products.

For 30 years the decision on eligible products has focused especially on those milk products which may first of all have a remarkable **impact on the market balance** and second meet the consumption habits in EU Member States. Since 2008, the European Commission has strengthened the **nutritional character of the scheme**. Since the amendment in 2008 the scheme covers a wider range of dairy products and cut down on added sugar. The European Commission stresses also the **educational character of the programme** as an instrument to fight against obesity (Rec. 2 of the EC Reg. 657/2008).

After this overview of the legal basis and the historical development of the scheme now the core objectives and the measures selected to reach them can be identified.

3.2 Objectives of the intervention

Following the above mentioned explanations, the European School Milk Scheme has two core objectives:

- (1) **Stimulating European milk consumption and thereby increase milk demand in Europe to fight against a declining trend in European consumption of milk and milk products and stabilising the market price for milk and milk products (market target).**
- (2) **Stimulating consumption of milk and milk products of children and young people by providing them with healthy dairy products and fight against overweight and obesity (health target).**

Both aspects touch to a large extent the overall economic and a socio-economic objectives of the European 2020 goals as formulated in COM(2010)2020¹⁶. Firstly, as a declining consumption of milk and milk products leads subsequently to a declining production of milk and milk products and thereby to a reduced agricultural income this measure intends to counteract this trend. Thus, the first target dimension is economic and constitutes an internal market support focussing on the agricultural sector, in particular the European milk market.

¹⁵ Strategy for Europe on nutrition, overweight and obesity related health issues, Implementing Progress Report, December 2010 (http://ec.europa.eu/health/nutrition_physical_activity/docs/implementation_report_en.pdf)

¹⁶ COM(2010)2020: "EUROPE 2020: A strategy for smart, sustainable and inclusive growth", Brussels



Secondly, as the consumption of milk and milk products of European citizen shows a declining trend over the last ten years in most Member States, which might theoretically lead in the long-term to a declining health situation and an increase of overweight and obesity, this measure might be able to counteract this trend at a stage when the eating habits of human beings are formed. The link between milk consumption and the fight against overweight is built on the consistency of milk. Excluding butter, cheese and cream a lot of milk products, especially low-fat dairy products, are valuable components in the body weight management because the energy intake per serving size is rather low. Therefore, they add to a well-balanced diet and can also serve as substitute for high caloric foods, e.g. low-fat milk as substitute for soda. Furthermore, some milk components, e.g. calcium and whey proteins, can help to reduce body weight. Thus, the second target dimension is socio-economic and might be interpreted as a long-term investment in the future by tending to avoid or reduce health expenditure resulting from poor nutrition.

As displayed at the top of Figure 1 the global objectives of the School Milk Scheme follow from the two dimensions described above. Thereby, even if the direct target group are children, the overall and long-term target group are, on the one hand, all European citizens and, on the other hand, the European agricultural sector. As the health issue is a central policy aspect which according to the EU Treaty must be considered in each European policy field and as the stabilisation of the European agricultural market is a central element of the European Common Agricultural Policy (CAP) the funding of this programme by the Directorate General for Agriculture and Rural Development is obvious.

The legal justification of this funding is based on Article 39, 41(b), 43 and 168 of the Lisbon Treaty on the Functioning of the EU (TFEU) corresponding to the Common Agricultural Policy. Here, among other it is mentioned that measures have to contribute to the stabilisation of the market for milk and should tend to implement the objectives of the CAP. Article 41(b) of the TFEU specifically provides for joint measures within the framework of the CAP in order to promote consumption of agricultural products. Especially Article 168 of the TFEU states that a high level of human health protection should be ensured by the CAP.

The budget currently spent by the European Commission for the financing of the School Milk Scheme amounts 65 million EUR (school year 2010/2011). A participation in the scheme requires no national co-financing as it is for example applied in the European School Fruit Scheme where a co-financing share of 50% or 75% is obligatory for Member States participating in the scheme.

However, Member States and the private sector are free to add national financing based on public, private or parental funding.

3.3 Measures of the intervention

The measures covered within the European School Milk Scheme are explicitly described in Commission **Regulation (EC) No 657/2008** with focus on the detailed rules for applying **Council Regulation (EC) No 1234/ 2007** as regards Community aid for supplying milk and certain milk products to pupils in educational establishments.

Beneficiaries of the aid shall be pupils of nursery- or other preschool establishments, primary and secondary schools which are recognized by the Member State's competent authorities.



Products that are eligible to obtain the aid are listed in **Annex I of the Regulation No 657/ 2008**. Member States may apply stricter rules for the eligibility of products.

The aid rates are set out in **Annex II of the Regulation No 657/ 2008**. The aid rate that is valid at the first day of a month keeps its validity even if there are alterations of the rate during the month. The coefficient 1.03 is used to convert “litre” of milk into “kg”.

The maximum quantity of milk eligible for aid is 0.25 litres per school day and pupil. Various conditions have to be taken into account such as different categories of products, the number of school days or the fact that milk used for meal preparation cannot benefit from the aid¹⁷.

Only those applicants listed in Art. 6 of the Regulation are suitable for the supply of milk products. Applicants have to be approved by the competent authority of the Member State. In order to receive the approval, applicants have to commit (in a written form) to distribute promoted products only to pupils/ establishments that are entitled, to repay any unduly payments, to keep records of payments and to submit to any audits decided by the Member States competent authority.

If an applicant does not fulfil its obligations the approval can be suspended or withdrawn for at most 12 month depending on the gravity of the irregularity. Exceptions are irregularities of minor importance or those, based on force majeure.

The payment application must follow the Member State’s specifications and has to include at least certain information about the quantities distributed including contact information about the receiving educational establishment. Certain deadlines, set up by the Member State’s authorities have to be obeyed by the applicants in order to receive the aid. Detailed accounting of the amounts of money shown in the application form is requested. Further requirements have to be met by certain applicants in order to receive the aid.

Member States may pay an advance equal to the amount of aid applied for, against a security equal to 110% of the amount advanced. For certain applicants, different regulation according to payment of advances do exist.

Member States are committed to take care that the amount of the aid is duly reflected in the price paid by the beneficiaries. Member States shall take all necessary measures to ensure compliance with this regulation, including on-the-spot checks, checks of book-keeping records and much more. Educational establishments participating in the School Milk Scheme have to install a poster at the main entrance in accordance with minimum requirements laid down in **Annex III of the Regulation**.

Member States shall provide the Commission with summary details of the participating applicants, about the on-the-spot checks carried out and other related information. Furthermore, the quantities of milk and milk products as well as the estimated number of participating pupils shall be submitted up to a certain deadline.

¹⁷ Commission Regulation 657/2008, Article 5 (4)



3.4 Indicators to measure the instrument-impact relationship

In view of the objectives and measures of the scheme mentioned above, indicators of the instrument-impact relationship and thus of the schemes effectiveness can be identified.

The measures of the scheme are

- (1) **EU aid for certain milk products** offered in a participating Member State to children at educational establishments
- (2) **Information posters** of the scheme at participating educational establishments which provide basic information of the scheme and the EU aid and
- (3) **Measures to ensure compliance** of the programmes carried out in the Member States with the EU legislation, including on-the-spot checks, checks of book-keeping records, etc.

These three components represent the inputs or measures within the intervention logic. According to the overall or global objectives of the scheme (as mentioned above) the **intermediate outputs** of the programme which should be reached can be described as following:

- ▲ Reduced retail price of milk and milk products at educational establishments
- ▲ Increased share of milk and milk products in children's diet
- ▲ Increased knowledge about and interest of children in health and agricultural markets
- ▲ Awareness of EU financial support for milk and milk products in educational establishments.
- ▲ Target conform usage of EU aid in participating Member States.

From these intermediate outputs short-term success indicators can be derived which are exemplary displayed in Figure 1 and are described in detail in the following Chapter 5

The positive **long-term impacts** of the expected are:

- ▲ Increase total EU consumption and production of milk and milk products
- ▲ Increase share of milk and milk products in children's and parent's diet
- ▲ Decrease diseases and better physical conditions of EU citizen
- ▲ Reconnecting urban citizen with food and its producers
- ▲ Contribute to social cohesion.

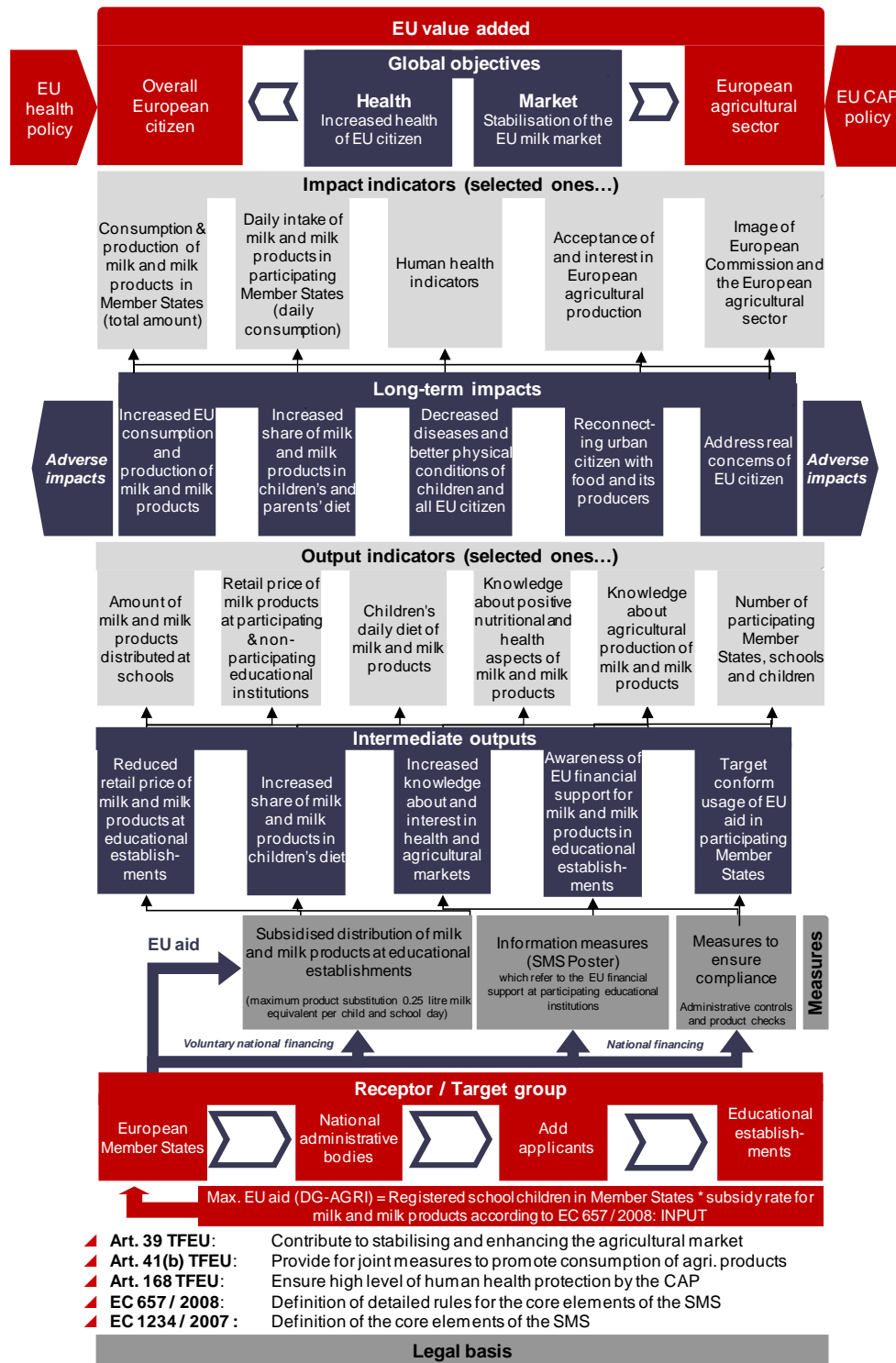
Again, long-term success indicators which are sufficient to quantify the progress of the scheme can be defined, again exemplary displayed in the intervention logic model (Figure 1).

At the top of Figure 1 the **overall / global objectives** of the scheme are displayed which result from the short- and long-term impacts: (1) Increased health of all EU citizen and (2) Stabilization of the EU milk market which both should lead to an **increased EU value added**.



3.5 Model of the intervention logic

Figure 1: Model of the intervention logic of the European School Milk Scheme



Source: Own illustration



4 DESCRIPTIVE CHAPTER

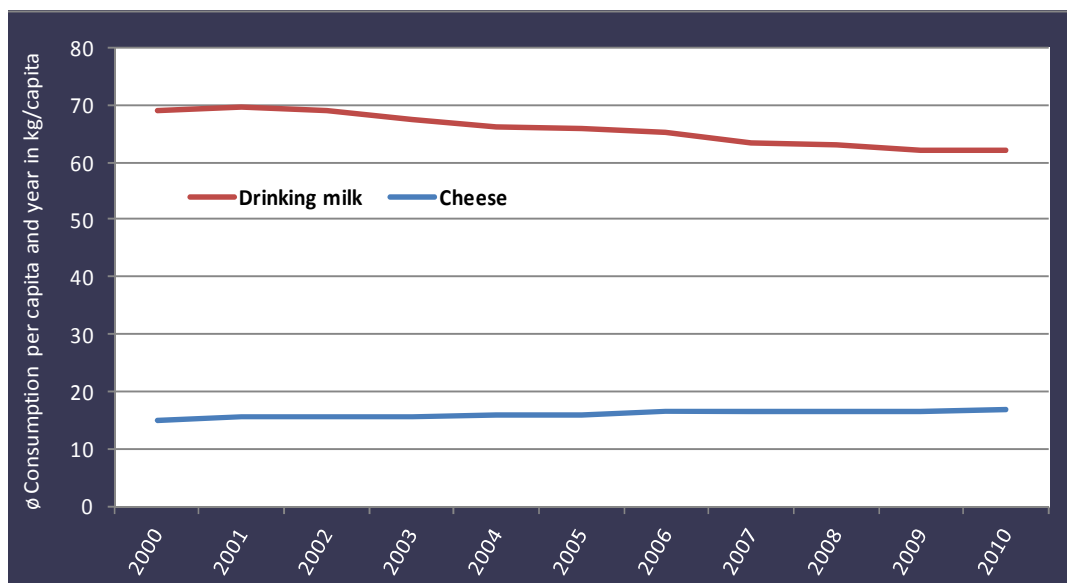
4.1 Market aspects

Although 26 countries of EU27¹⁸ participate currently in the EU SMS, the dietary role of milk and milk products varies among them. Reasons can be seen in regional consumption habits, in diversified traditional food patterns, in milk production and availability of milk and milk products.

Figure 2 illustrates the development of the estimated per capita consumption of drinking milk and cheese as average over all EU countries in the period 2000 to 2010. **Overall one can observe that the estimated per capita consumption of drinking milk in Europe shows a declining trend for that period.**¹⁹

However, estimated per capita consumption of milk products in Europe is still on a high level compared to Africa or Asia. Europeans and North Americans consume more than 200 kg milk and milk products (in milk equivalent) per capita and year while the population of developing countries consume 100 kg per capita and those living in least developing countries (LDCs) only 50 kg²⁰.

Figure 2: Consumption of dairy products per capita and year – EU trend 2000 to 2010



Source: Own illustration based on Eurostat (2013): Milk and milk products balance sheet.²¹

¹⁸ Greece applied this year. Please note: The EU SMS is either implemented at national or regional level (e.g. in Belgium and Germany).

¹⁹ Preliminary data for 2011 – 2013 signalise that per-capita consumption of milk products is stabilizing in recent years

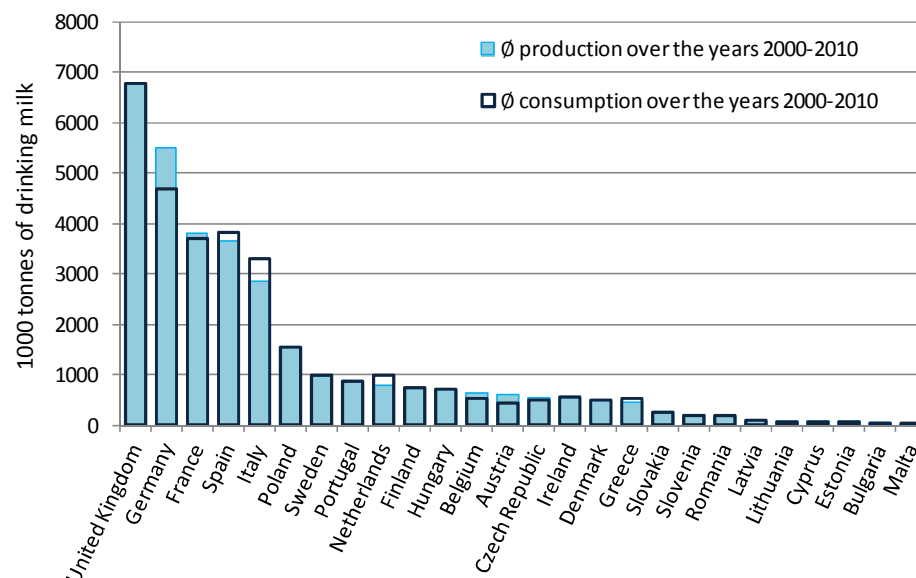
²⁰ OECD-FAO (2011): Agricultural Outlook 2011-2020. <http://www.fenalce.org/archivos/agricoutlook2020.pdf>. Download 20.01.2013

²¹ Eurostat (2013a): Milk and milk products balance sheet. http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=apro_mk_bal&lang=en. Download: 09.01.2013



By contrast, the estimated consumption of cheese shows a slightly increasing trend in this period. According to the OECD Agricultural Outlook 2012-2021²² the demand for milk and dairy products in Europe is expected to stay at a high level for the next 10 years. The estimated consumption of cheese in developed countries is even expected to be 15% higher compared to the base period 2009-2011. In general the main drivers of the increasing demand are increasing populations, increasing income levels and the growing popularity of dairy products, particularly in the developing world but also government programmes which promotes the consumption of dairy products²³.

Figure 3: Consumption and production of drinking milk per year (2000-2010)



Source: Own illustration based on Eurostat (2013): Milk and milk products balance sheet.²⁴

Note: Consumption of dairy products is estimated based on Eurostat data for domestic production, imports, and exports.

Figure 3 shows the estimated absolute consumption (and production) of drinking milk per year as average of the years 2000 to 2010 measured in 1000t for most participating Member States²⁵. Drinking milk is defined within Eurostat's Concepts and Definitions Database as "milk from different species, including cows, ewes, goats and buffaloes directly intended for consumption, normally in containers of 2 litre or less, which may contain vitamin additives"²⁶.

²² OECD-FAO (2012): Agricultural Outlook 2012-2021. http://www.keepeek.com/Digital-Asset-Management/oecd/agriculture-and-food/oecd-fao-agricultural-outlook-2012_agr_outlook-2012-en. Download 20.01.2013

²³ OECD-FAO (2012): Agricultural Outlook 2012-2021. http://www.keepeek.com/Digital-Asset-Management/oecd/agriculture-and-food/oecd-fao-agricultural-outlook-2012_agr_outlook-2012-en. Download 20.01.2013

²⁴ Eurostat (2013): http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=apro_mk_bal&lang=en. Download: 09.01.2013

²⁵ Eurostat (2013): <http://epp.eurostat.ec.europa.eu/portal/page/portal/agriculture/data/database>. Download: 04.01.2013

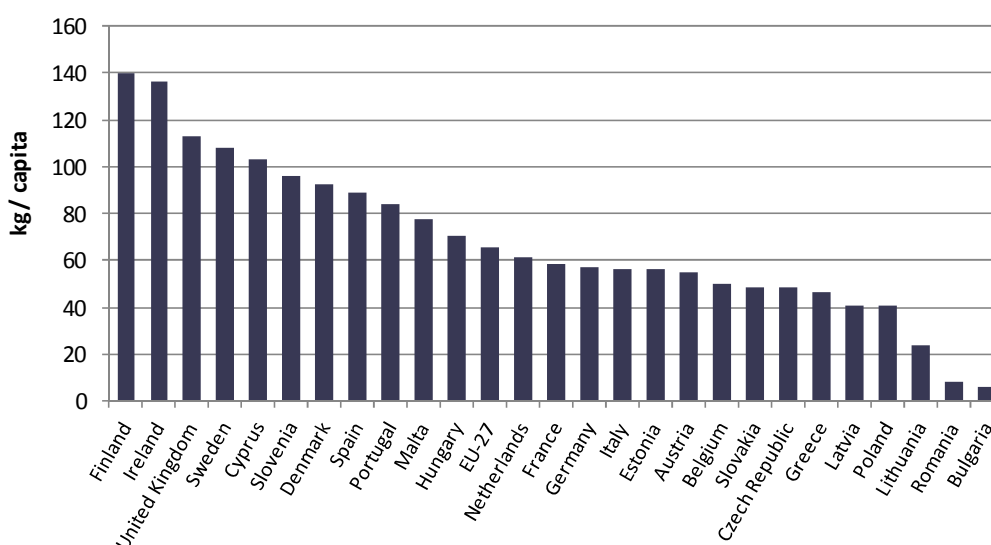
²⁶ Eurostat (2013b): http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_GLOSSARY_NOM_DTL_VIEW&StrNom=CO_DED2&StrLanguageCode=EN&IntKey=16662185&RdoSearch=CONTAIN&TxtSearch=milk&CboTheme=&IsTer=&IntCurrentPage=1&ter_valid=0. Download: 07.01.2013



As one can observe the five biggest consumers of drinking milk in Europe - in an absolute manner - are the United Kingdom, Germany, France, Spain and Italy, while Estonia, Cyprus, Bulgaria, and Malta show the lowest absolute consumption which is obvious taking into account the countries size and population.

Thus, the estimated consumption relative to its country's population (kg/capita) is more useful to get information of the citizen's average intake of drinking milk (Figure 4).

Figure 4: Human consumption of drinking milk per capita and year (2000-2010)



Source: Own illustration; estimates based on Eurostat (2013): Milk and milk products balance sheet.²⁷

Note: Per capita consumption of dairy products is estimated based on Eurostat data for domestic production, imports, and exports as well as population figures.

As expected, the ranking of Member States changes based on this approach. The Fins show the highest estimated consumption per capita, followed by Ireland, UK and Sweden.

The estimated consumption (and production) of cheese per year for most Member States as an average of the years 2000 to 2010 measured in 1000 t is shown in Figure 5²⁸. Figure 6 shows exemplary the estimated annual average EU consumption per capita (kg/capita) for cheese over the years 2000-2010²⁹. It can be observed that the average estimated consumption per capita of cheese in France, Italy, Greece, and Malta is on a high level compared to the estimated relatively low drinking milk consumption per capita in the same countries. Thus, there are likely traditionally driven preferences for milk and milk products in each Member State³⁰.

²⁷ Eurostat (2013a): http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=apro_mk_bal&lang=en. Download: 09.01.2013

²⁸ Eurostat (2013): <http://epp.eurostat.ec.europa.eu/portal/page/portal/agriculture/data/database>. Download: 04.01.2013

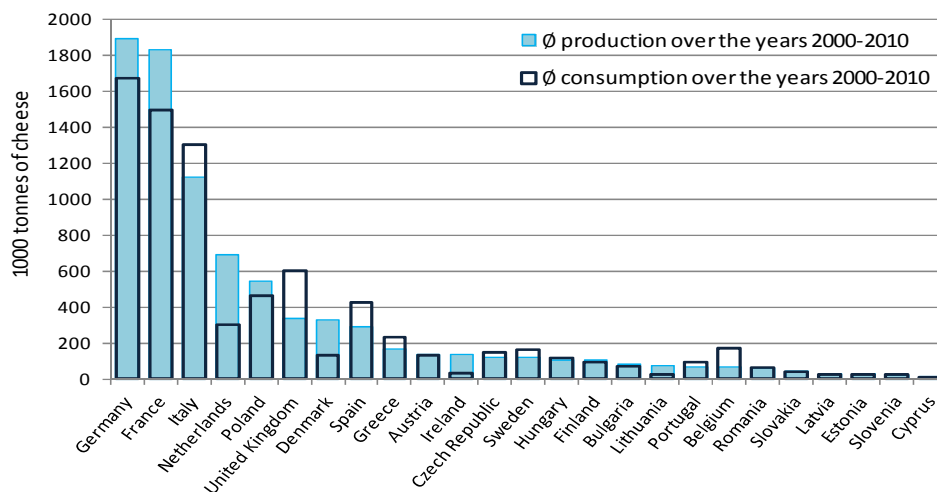
²⁹ Eurostat (2013b): Eurostat's Concepts and Definitions Database. http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_GLOSSARY_NOM_DTL_VIEW&StrNom=CO_DED2&StrLanguageCode=EN&IntKey=16663535&RdoSearch=CONTAIN&TxtSearch=Cheese&CboTheme=&IsTer=&IntCurrrentPage=1&ter_valid=0. Download: 07.01.2013

³⁰ EU COM, (2009). Modelling and Analysis of the European Milk and Dairy Market. <ftp://ftp.jrc.es/pub/EURdoc/JRC50915.pdf>. Download 19.01.2013



To consider the different nutrition preferences in each Member State, the Commission adapted the SMS in 2008 to subsidize a larger range of healthy milk products. Hence, besides various types of drinking milk the opportunity is given to offer among others “*certain fermented milk products with fruit or fruit juice, plain fermented milk products, such as yoghurt, buttermilk, kephir etc., and a wide range of cheese*”³¹.

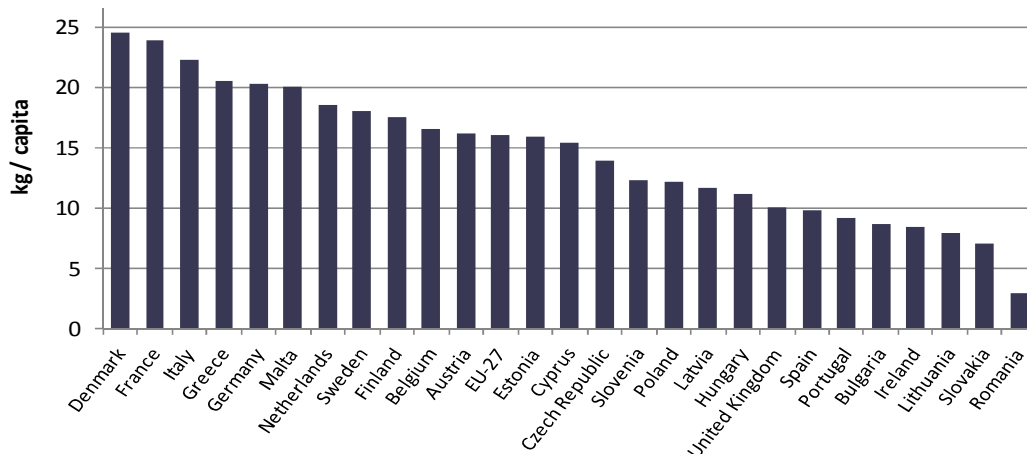
Figure 5: Absolute consumption and production of cheese per year (ø 2000-2010)



Source: Own illustration based on Eurostat (2013): Milk and milk products balance sheet.³²

Note: Consumption of dairy products is estimated based on Eurostat data for domestic production, imports, and exports.

Figure 6: Human consumption of cheese per capita and year (average 2000-2010)



Source: Own illustration; estimates based on Eurostat (2013)³³

Note: Per capita consumption of dairy products is estimated based on Eurostat data for domestic production, imports, and exports as well as population figures.

³¹ EU COM (2013a): http://ec.europa.eu/agriculture/markets/milk/schoolmilk/index_en.htm. Download: 09.01.2013

³² Eurostat (2013): http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=apro_mk_bal&lang=en. Download: 09.01.2013

³³ Eurostat (2013a): Milk and milk products balance sheet.
http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=apro_mk_bal&lang=en. Download: 09.01.2013



The target group of the SMS are pupils, hence children and adolescents. For this purpose it is useful to collect data on children's consumption of dairy products. However, collecting harmonized food consumption data by age-group on European level is very difficult as secondary data is rare. One on-going approach is the EFSA³⁴ *Comprehensive European Food Consumption Database* which started in 2005. A direct country-to-country comparison is not available yet as the database comprises data collected by different methodologies and / or independent surveys³⁵. Table 4 shows the results of various studies considered by EFSA which have been carried out to specify chronic consumption of milk and dairy products differentiated by age-class in 14 Member States³⁶. The selected age classes are defined by the EFSA³⁷ as follows:

1. **Infants:** up to and including 11 months
2. **Toddlers:** from 12 up to and including 35 months of age
3. **Other children:** from 36 months up to and including 9 years of age
4. **Adolescents:** from 10 up to and including 17 years of age

For a general impression of the consumption patterns, country rankings by age group and most current survey results may be helpful. However, it has to be mentioned that those comparisons allow only a rough impression of consumption patterns which is not scientifically valid as the methodology underlying the single studies differs. As one can see in Table 4, Spain, Belgium, the Netherlands, Finland, Italy, Bulgaria and Germany show the highest consumption levels of milk and milk products in the age-class *toddlers*. The biggest consumers in the age class *other children* come from Finland, followed by Denmark, Spain, Sweden, Belgium, the Netherlands, Greece, France, Czech Republic, Germany, Italy, Bulgaria and Latvia. Finally, the highest numbers in the group *adolescents* are found for Denmark, Spain, Sweden, Czech Republic, France, Italy, Cyprus, Belgium, Germany and Latvia.

Based on the data provided in Table 4 Figure 7 illustrates the consumption of milk and milk products differentiated for children and adolescents exemplary for two different groups of Member States (one of a high consumption level and one of a low consumption level compared to the EU average). It becomes apparent, that in general children consume more milk and milk products than adolescents. Similar results have been found for pupils of different age groups.³⁸

³⁴EFSA = European Food Safety Authority

³⁵EFSA (2011a): Use of the EFSA Comprehensive European Food Consumption Database in Exposure Assessment. <http://www.efsa.europa.eu/en/efsajournal/doc/2097.pdf>. Download 22.01. 2013: "The collection of accurate and detailed food consumption data derived from a harmonized methodology across Europe is therefore still a primary long term objective for EFSA and has been recognized as a top priority for collaboration with the EU Member States". Therefore, a project proposal, called —What's on the Menu in Europe? was launched in 2010 (EFSA-Project EU MENU).

³⁶ The Food Consumption Statistics provided by EFSA are reported for both *chronic* and *acute* consumption whereby "for calculation of chronic consumption, intake statistics have been calculated based on individual average consumption over the total survey period, whereas for acute consumption, statistics have been calculated based on every single reporting day".

³⁷EFSA (2011a): Use of the EFSA Comprehensive European Food Consumption Database in Exposure Assessment. <http://www.efsa.europa.eu/en/efsajournal/doc/2097.pdf>. Download 22.01. 2013

³⁸ Cooke, Lucy J. and Wardle Jane (2005): "Age and gender differences in children's food preferences", *British Journal of Nutrition* (2005), 93, p. 743f.

³⁸ Øvrebø, Else Marie (2010): „Food habits of school pupils in Tromsø, Norway, in the transition from 13 to 15 years of age“, online publication, <http://munin.uit.no/bitstream/handle/10037/3806/article.pdf?sequence=3>



Table 4: Consumption of dairy products differentiated by age-group (grams/day)*

Country	Survey	Period	Age-class	FoodExL1Name	N	Mean
Spain	enKid	1998-2000	Toddlers	Milk and dairy products	17	519,6
Belgium	FPDS_1	2002-2003	Toddlers	Milk and dairy products	36	446,2
Netherlands	VCP_kids	2005-2006	Toddlers	Milk and dairy products	322	407,8
Finland	DIPP	2003-2006	Toddlers	Milk and dairy products	497	383,1
Italy	INRAN_SCAI_2005_06	2005-2006	Toddlers	Milk and dairy products	36	345,4
Bulgaria	NUTRICHILD	2007	Toddlers	Milk and dairy products	428	253,3
Germany	DONALD_2008	2008	Toddlers	Milk and dairy products	84	243,3
Italy	INRAN_SCAI_2005_06	2005-2006	Infants	Milk and dairy products	16	419,6
Bulgaria	NUTRICHILD	2007	Infants	Milk and dairy products	860	139,2
Finland	DIPP	2003-2006	Other children	Milk and dairy products	933	588,3
Denmark	Danish_Dietary_Survey	2000-2002	Other children	Milk and dairy products	490	528,5
Spain	NUT_INK05	2004-2005	Other children	Milk and dairy products	399	487,3
Sweden	Riksmaten_barn	1997-1998	Other children	Milk and dairy products	1473	469,7
Belgium	FPDS_1	2002-2003	Other children	Milk and dairy products	625	428,2
Netherlands	VCP_kids	2005-2006	Other children	Milk and dairy products	957	416,4
Greece	Regional_Crete	2004-2005	Other children	Milk and dairy products	839	359,9
France	INCA2	2005-2007	Other children	Milk and dairy products	482	308,5
Czech Republic	SISP04	2003-2004	Other children	Milk and dairy products	389	281,0
Germany	DONALD_2008	2008	Other children	Milk and dairy products	223	265,6
Italy	INRAN_SCAI_2005_06	2005-2006	Other children	Milk and dairy products	193	259,2
Bulgaria	NUTRICHILD	2007	Other children	Milk and dairy products	433	234,0
Latvia	EFSA_TEST	2008	Other children	Milk and dairy products	189	163,0
Denmark	Danish_Dietary_Survey	2000-2002	Adolescents	Milk and dairy products	479	501,8
Spain	NUT_INK05	2004-2005	Adolescents	Milk and dairy products	651	455,9
Sweden	Riksmaten_barn	1997-1998	Adolescents	Milk and dairy products	1018	441,7
Czech Republic	SISP04	2003-2004	Adolescents	Milk and dairy products	298	270,8
France	INCA2	2005-2007	Adolescents	Milk and dairy products	973	260,5
Italy	INRAN_SCAI_2005_06	2005-2006	Adolescents	Milk and dairy products	247	230,1
Cyprus	Childhealth	2003	Adolescents	Milk and dairy products	303	228,7
Belgium	Diet_National_2004	2004-2005	Adolescents	Milk and dairy products	584	212,7
Germany	National_Nutrition_Survey_II	2005-2007	Adolescents	Milk and dairy products	1011	185,2
Latvia	EFSA_TEST	2008	Adolescents	Milk and dairy products	470	154,9

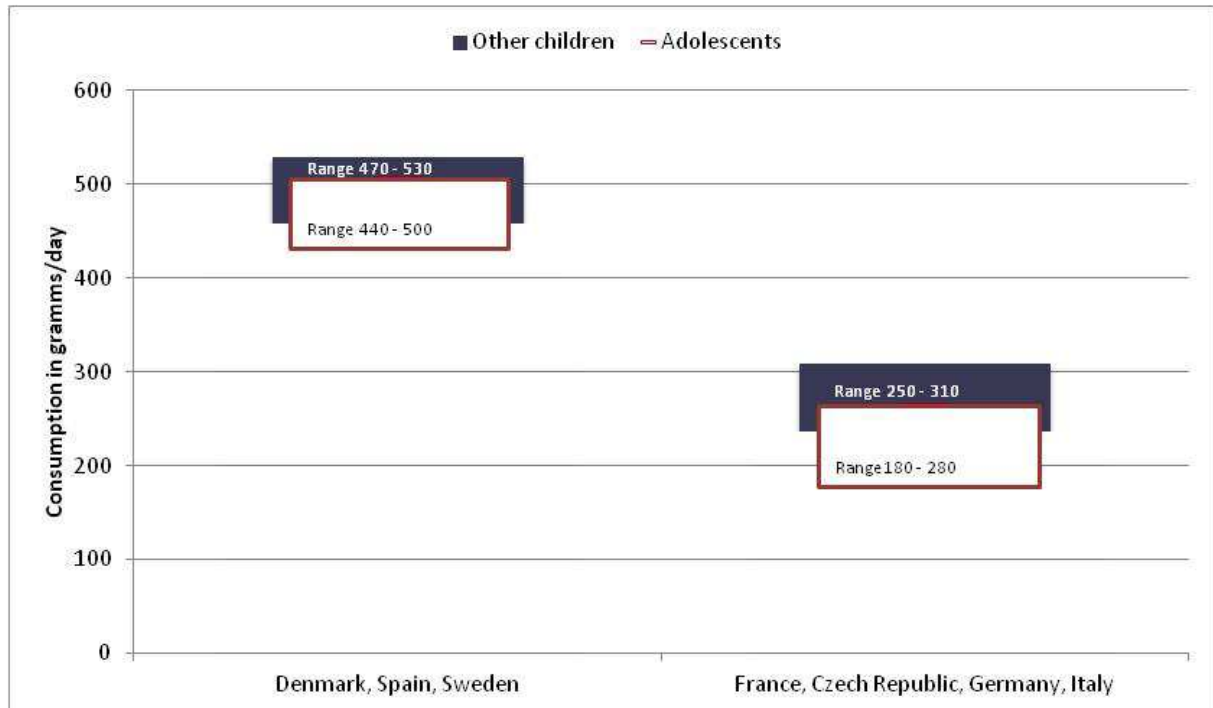
Source: EFSA (2011): Chronic food consumption statistics³⁹

*Note: N=Number of consumers; Mean=Average intake of milk and milk products in g/day over the respective survey period. The submitted consumption data by each MS is classified by a hierarchical system named FoodEx, "based on 20 main food categories that are further divided into subgroups up to a maximum of 4 levels"¹. Within the food category "milk and milk products" the considered subgroups are cheese, concentrated milk, cream and cream products, fermented milk products, liquid milk, milk and dairy products (unspecified), milk and milk products imitates, milk based beverages, milk derivatives and whey and whey products (excluding whey cheese).

³⁹ EFSA (2011b): Chronic food consumption statistics reported in grams/day.
<http://www.efsa.europa.eu/en/datexfoodcdb/datexfooddb.htm>. Download: 22.01.2013



Figure 7: Consumption of milk and milk products differentiated for children and adolescents in selected European Member States



Source: Own illustration based on EFSA (2011), compare Table 4

Looking at the production side, Europe is currently the biggest producer of milk worldwide, followed by India, the USA, China and Russia. The major quantity of milk is still being produced in the developed world.⁴⁰

The EU milk quota system - introduced in 1984 - has been defining a limit (quota) on production quantities for milk in the EU for a long time. Hence, the total EU production remained relatively constant over the last decades⁴¹. Within the EU milk market liberalization the European milk quota regime is currently phasing out and will be expired by 2015. This has led to an increase of EU production quantities continuously in the last years. Furthermore, "[...] *EU milk production is projected to continue increasing from 2012 onwards at a moderate growth rate but to remain below the potential growth rate provided by the phasing-out of the milk quota regime. Due to an annually increasing size of the milk quota, in most EU member-states the milk quota-price is decreasing towards zero or already at a level of zero. Therefore it seems to be predictable that for most EU countries a 'soft landing' will be feasible*"⁴².

⁴⁰OECD-FAO (2012): Agricultural Outlook 2012-2021. http://www.keepeek.com/Digital-Asset-Management/oecd/agriculture-and-food/oecd-fao-agricultural-outlook-2012_agr_outlook-2012-en. Download: 20.01. 2013

⁴¹European Communities (2006): Milk and milk products in the European Union. http://ec.europa.eu/agriculture/publi/fact/milk/2007_en.pdf. Download: 14.01.2013

⁴²EU COM (2013b): Evolution of the market situation and the consequent conditions for smoothly phasing out the milk quota system - second "soft landing" report. http://ec.europa.eu/agriculture/milk/quota-report/com-2012-741_en.pdf. Download: 16.01.2013



Figure 3 and Figure 5 already showed the absolute amount of drinking milk and cheese produced in the EU, measured as the average annual production of the years 2000 to 2010⁴³.

Production often correlates with large areas of rich grassland, as existent for example in the UK, France and Germany. In areas with relatively low area of grassland, cows' milk production is more often substituted by milk production from ewes and goats⁴⁴. Thus, six countries, namely the UK, Germany, France, Spain, Italy and Poland account for approximately 75% of the total drinking milk production in Europe⁴⁵.

A similar picture can be observed for cheese production (Figure 5). Here, the main producers within the EU are Germany, France, Italy, the Netherlands, Poland and the UK. Overall, according to the OECD–FAO Outlook the EU will continue to dominate over the next decade the global cheese production with a share of 44% of total global production⁴⁶.

An overview on production of different milk products differentiated for the years 2008 – 2012 in the EU27 is given in Figure 8. To provide a comparable picture across the different milk products they are measured in 1000 t of milk equivalent.

The drinking milk produced in the EU is mainly used for domestic consumption. In the period 2000 to 2010 the EU27 produced on average about 32 million tonnes of drinking milk per year. Even if the trade volume of dairy products between the EU27 and third countries is limited, it can be observed that the EU27 is net exporter of dairy products (additional information on the market balance is provided in Annex 8.3). They amount to 8% of the total value of agricultural exports.

Milk production and milk prices have been linked closely in the EU. In the long-term view the development of the EU milk market depends on a large number of uncertain determinants such as political or economic drivers. While the phasing-out of the milk quota system provides more production flexibility to EU dairy farmers, it increases also the risks of a high volatility in milk prices and thus, of dairy farmers income (additional information on the milk prices is given in Annex 8.4).

⁴³Eurostat (2013c): Milk collection (all milks) and dairy products obtained (annual data) (apro_mk_pobta). http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=apro_mk_pobta&lang=en Download: 10.01.2013

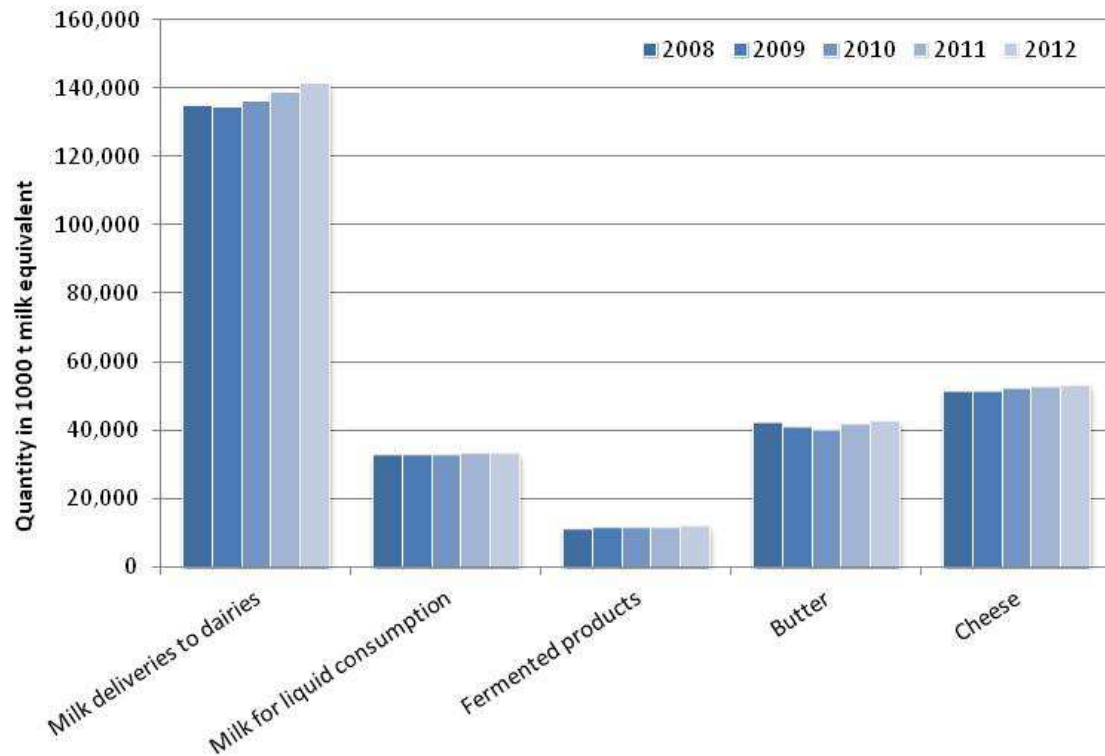
⁴⁴EU Com (2013c): Eurostat Regional Yearbook 2012 – Agriculture. http://epp.eurostat.ec.europa.eu/portal/page/portal/publications/regional_yearbook Download: 20.01.2013

⁴⁵Eurostat (2013): Milk collection (all milks) and dairy products obtained (annual data) (apro_mk_pobta). http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=apro_mk_pobta&lang=en Download: 10.01.2013

⁴⁶OECD-FAO (2012): Agricultural Outlook 2012-2021. http://www.keepeek.com/Digital-Asset-Management/oecd/agriculture-and-food/oecd-fao-agricultural-outlook-2012_agr_outlook-2012-en. Download 20.01.2013



Figure 8: EU27 production of dairy products (2008 – 2012)*



Source: Own illustration based on EDA (2013)⁴⁷

*Note: The initial data was measured in tons of product weight. For a better comparison across the different products the production quantities are transferred into tons of milk equivalent. For simplification standardised conversion coefficients were used for each dairy category.

⁴⁷European Dairy Association - EDA (2013): Major issues – 1st semester 2012, Volume 25
http://www.euromilk.org/upload/docs/EDA/EDA_MI_EN25-Website.pdf. Download: 30.01.2013



Box 2: European market for milk and milk products

Milk consumption

- ▲ Although per-capita-consumption of drinking milk in the EU is still on high level, it shows a declining trend in the last decades.
- ▲ Within Europe per capita consumption of drinking milk differs among MS based for example on traditional and cultural consumption habits.
- ▲ Per-capita-consumption of young children is overall higher than those of older children or adolescents and adults which results to a large extent from the onset of lactase non-persistence in the course of childhood, normally after weaning.

Milk production, trade and prices

- ▲ The EU27 currently is the biggest producer of milk products worldwide. However, internal demand meets to a large extent production, so that external trade is moderate.
- ▲ The UK, Germany, France, Spain, Italy and Poland account for about 75% of the total EU27 drinking milk production.
- ▲ Main producers of cheese within the EU27 are Germany, France, Italy, the Netherlands, Poland and the UK.
- ▲ The EU milk quota system defined for a long time a limit on the amount of milk EU dairy farmers are allowed to produce each year (quota). Hence, total production remained relatively stable over the last decades.
- ▲ The EU milk quota regime is currently phasing out and will expire by 2015. From this it follows that EU production quantities have slightly but continuously increased in the last years.
- ▲ While the phasing-out of the milk quota provides more production flexibility to EU dairy farmers, it increases also the volatility of the milk market price and thus, of farmers income.
- ▲ Although there was a price breakdown in 2009 the selling price of milk slightly increased in the course of the past decade.



4.2 Preparatory analysis and assessment

The preparatory analysis describes in detail the individual parameters of the SMS implementation in participating Member States. The data and information used for this assessment are based primarily on the reporting obligations of Member States which are specified in the respective Commission Regulations laying down the rules for supplying milk and certain milk products to pupils in educational establishments. The information, available at the Commission, DG-AGRI, does not provide a continuous basis since the underlying Commission Regulation has changed several times within the last decade. Therefore, the data submitted by Member States are not homogenous over the different school years and differ e.g. in product definitions. Furthermore, this information is still limited to basic information. For gaining sufficient insights a questionnaire has been developed within the evaluation (Annex 1) which complements important implementation details on Member States level. The questionnaire (implementation survey) was sent to control authorities (CAs) in all participating Member States. Some countries filled in the questionnaire very precisely and detailed while there is a lot of information missing in other countries. Since the data of the survey is far from being complete, analysis will often be of a more qualitative nature setting the results into context with the number of returns gained for each specific question.

4.2.1 Development of the SMS's implementation in the EU27 (2004-2007)

In the last decade the overall scale of the SMS on EU27 level in terms of total amount of subsidised products and total expenditure increased, with a maximum peak in the school year 2008/2009. This peak is primarily due to two facts:

New Member States (namely Cyprus, Romania, Malta and Bulgaria) entered the SMS between 2007 and 2008 which did not participate before (+ 25,000 t) and 2) three Member States significantly increased the scheme's scale in this time frame, namely France (+30,000 t), Italy (+ 8,000 t) and Poland (+ 35,000 t).

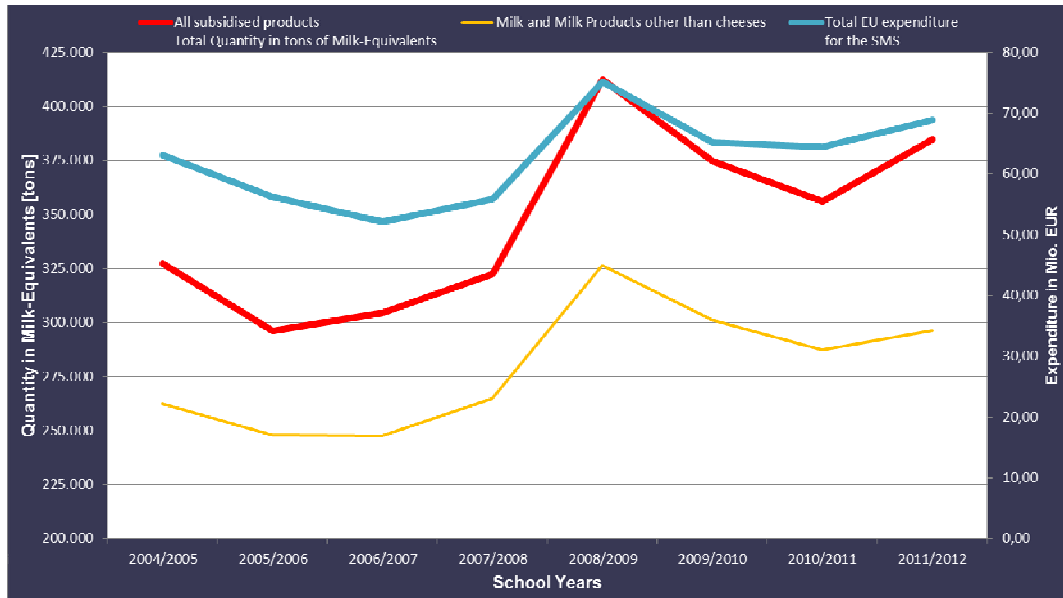
However, the schemes' developments in terms of participating children and subsidised quantities is rather different among the participating Member States and shows a long-term declining trend in participation and quantity in more than half of these since the beginning of the observation period in 2004. The development of the scheme's scale for each country is individually displayed in Annex 8.5.

Figure 9 illustrates the development of total subsidised products (measured in milk equivalents) and total expenditure for the scheme between the school years 2004/2005 and 2011/2012. It can be observed that the amount of subsidised products range between 300,000 and 410,000 tons with a minimum peak in the school years 2005/2006 and 2006/2007 and a maximum peak in the school year 2008/2009. The respective EU expenditure for the scheme shows a similar development and ranges from about 50 million EUR to 75 million EUR with a maximum peak in 2008/2009.

In the school year 2011/2012 about 70 million EUR were spent on the scheme. The yellow line in Figure 9 displays the amount of subsidised products excluding cheese. It shows that around 22% of the product volume is cheese.



Figure 9: Development of SMS implementation in the EU27 (2004 - 2012)



Source: Own illustration based on SMS data provided by European Commission, DG-AGRI (29.07.2013)

4.2.2 Categories of subsidised products

More information on the product differentiation provides Figure 10 and Figure 11.

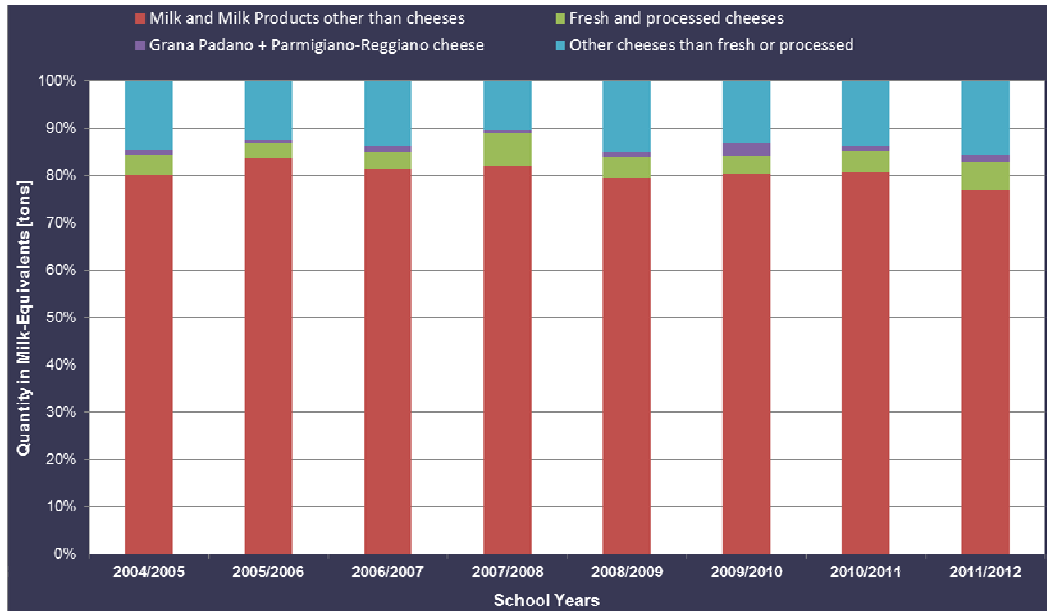
Figure 10: Subsidised products within the SMS (2004 – 2012) - absolute numbers



Source: Own illustration based on SMS data provided by European Commission, DG-AGRI (29.07.2013)



Figure 11: Subsidised products within the SMS (2004 – 2012) - relative numbers



Source: Own illustration based on SMS data provided by European Commission, DG-AGRI (29.07.2013)

The subsidised products in Figure 9 to Figure 11 can be categorised in four different groups, which have been defined to summarize the different classification of products described in chapter 4.2. While the classification until 2007 emphasized on the different fat contents of heat-treated milk (different categories for heat-treated milk with 1%, 1.5%, 2%, 2.5%, and 3% fat content), the amendments of the Regulation until 2008 set a stronger focus on the differentiation of products with and without flavour or sugar additives. A table about the allocation of the different categories to these four product groups can be found in Annex 6.

The amendment of the Commission Regulation in 2008 widened the range of eligible products under the scheme. The “new” products were regarded as “more attractive”⁴⁸ by the Commission and introduced in order to stimulate the participation of additional schools.⁴⁹ Since the amendment entered into force on the 1st of August 2008 first impacts of the new product range can be expected for the school year 2008/2009. The total amount of products in that year shows a maximum peak (Figure 9) and especially the group of cheese others than fresh and processed cheese gained their relative importance in this school year as well as in 2011/2012 (Figure 11). However, the wider range of eligible products since 2008 did not lead to a more diversified product assortment distributed in schools in the long run. Plain milk has been the dominant product category in the scheme and the plain milk amounts still to more than 60% since 2008. The share of Grana Padano and Parmigiano Reggiano cheese stays at a rather low level with a maximum of ca. 3% in 2009/10, mainly because Italy is the

⁴⁸Quotation taken from European Commission: „European School Milk Scheme”, online publication, http://ec.europa.eu/agriculture/markets/milk/schoolmilk/index_en.htm

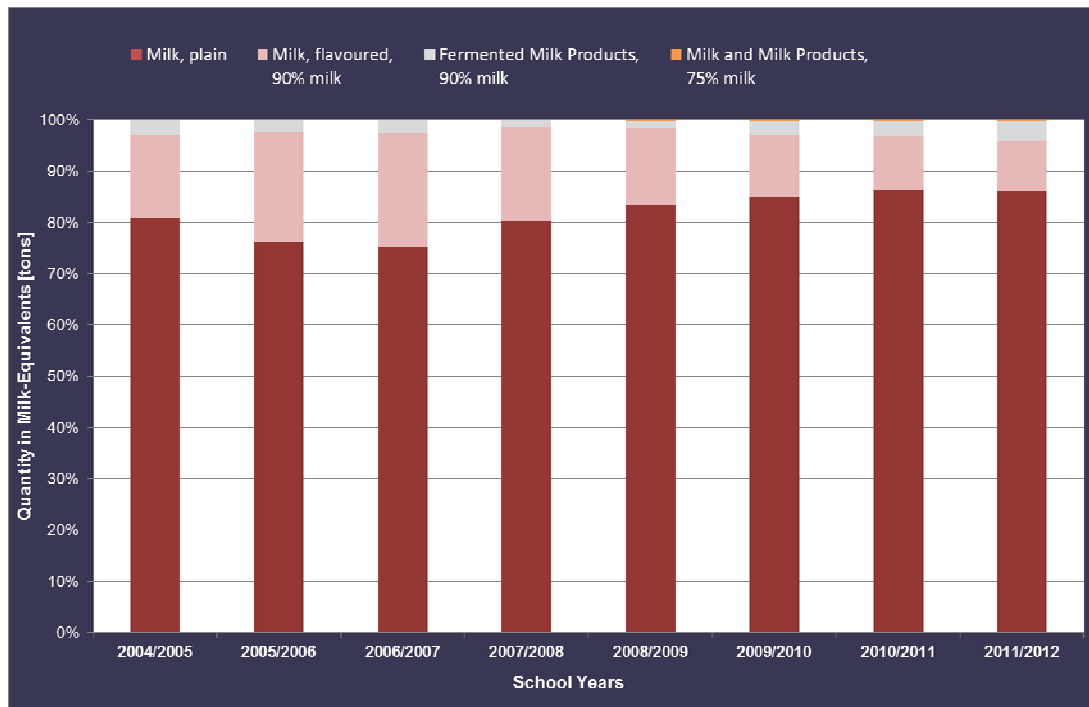
⁴⁹ Ibid.



only Member State constantly providing children with Grana Padano and Parmigiano Reggiano cheese.⁵⁰

While in most Member States drinking milk is the only distributed product, some Member States include cheese that is traditionally consumed in their regions. With Italy already mentioned above, Cyprus is the only country including Halloumi cheese in its scheme. Over the whole evaluation period Denmark, Finland, France, Ireland, Italy, Hungary, Lithuania ⁵¹Poland⁵² and Sweden offered cheese to children. Cyprus and Romania included cheese since the beginning of the scheme in their country in 2007, Bulgaria and Spain since 2008 as well as Czech Republic since 2009.

Figure 12: Shares of milk and milk products (2004 – 2012)



Source: Own illustration based on implementation survey's data

With data derived from the implementation survey it is possible to distinguish the relatively wide product group 'Milk and Milk Products other than cheese' summarizing around 80% of all products distributed. In Figure 12 they are divided into plain milk (drinking plain milk), flavoured milk, fermented milk products and other milk products with a higher non-lactic content. It has to be mentioned though, that just 23 out of 26 Member States answered this question. In some cases the summarized data of the implementation survey does not add up to the official figures, but these changes are not substantial. Therefore, Figure 12 gives a good overview of the sub-group's development over the years.

⁵⁰ Neglecting 1.3% of Grana padano and Parmigiano Reggiano cheese distribution in the school year 2009/2010 that took place in France and 22% in Finland for the school year 2007/2008

⁵¹ Lithuania did not offer cheese in 2007/08.

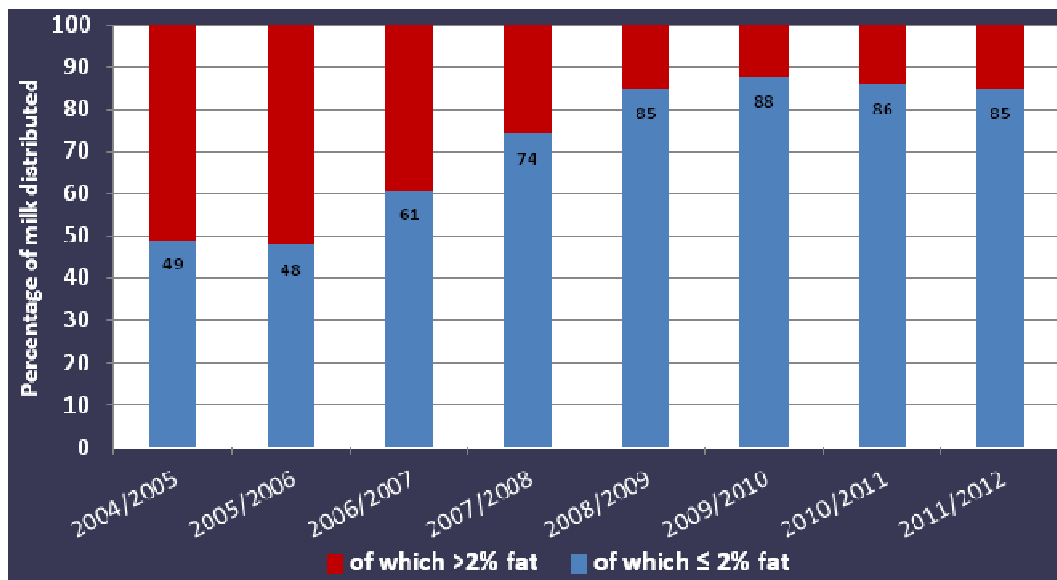
⁵² Poland includes cheese since the school year 2005/06.



Until the amendment of the regulation in 2008, no products with non-lactic content up to 25 % were included. Their share increases slightly over time as does the share of fermented milk products. All three sub-groups other than plain milk stay on a level of less than 25% over the entire evaluation time, with flavoured milk having a maximum share. These data show that the variety of products under the scheme stayed more or less the same before and after the amendment of the regulation. If it was the intention of the product extension in 2008 to give children the opportunity to discover different tastes of milk products the success is questionable.

The modification of the list of eligible products helps as well to avoid an emphasis on high-fat products which were in the past granted with larger subsidy rates than products with reduced fat content. Since 2008 the fat-content of products does not determine the subsidy rate.⁵³

Figure 13: Development of the fat content in plain heat-treated milk in Member States with a consistent declaration (2004-2012)



*Member States indicating the milk fat content since 2008: Austria, Bulgaria, Czech Republic, Finland, Hungary, Ireland, Luxembourg, Poland, Romania, Slovakia, Slovenia. Source: Own illustration based on implementation survey's data

Figure 13 shows the fat content of plain heat-treated milk, which is the product distributed the most within the School Milk Scheme (compare Figure 11 and Figure 12).⁵⁴ In Member States with a consistent declaration there was a relatively equal share between high and low fat milk supplied in the first two years of the evaluation period, the share of low fat plain milk increased constantly up to approximately 88% in the school year 2009/10 and remained above 85% in the two following years.

⁵³ Marianne Fischer Boel (2009): „EU commissioner launches healthy eating programme for kids”, online publication, http://www.theparliament.com/no_cache/latestnews/news-article/newsarticle/eu-commissioner-launches-health-eating-programme-for-kids/

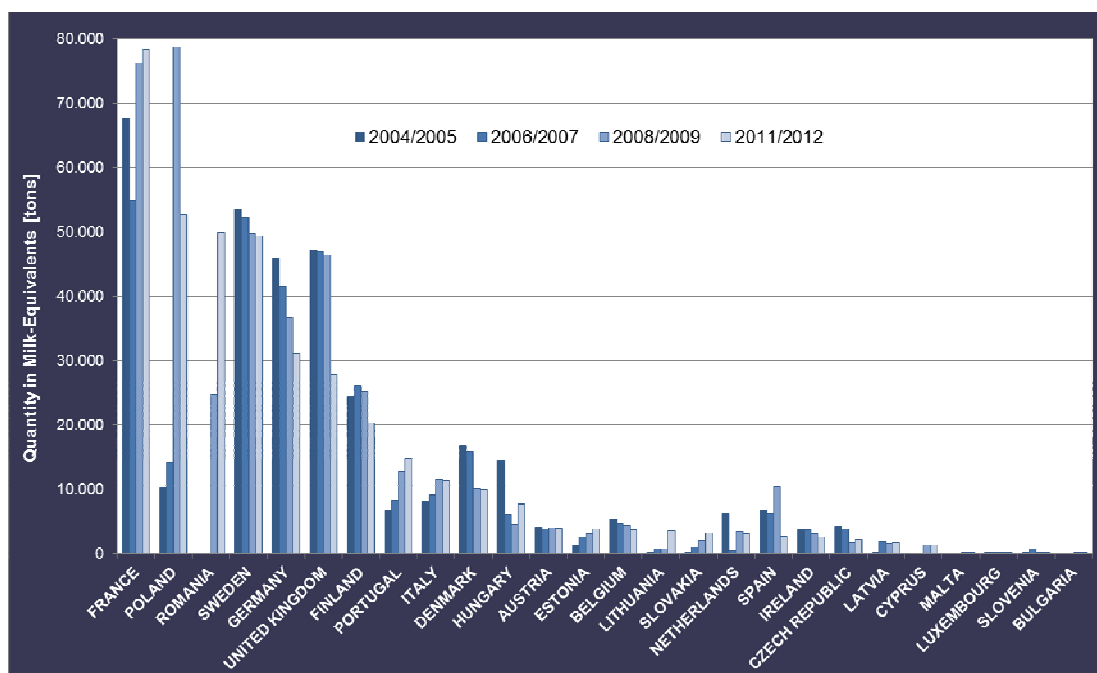
⁵⁴ While data from 2004/05 to 2007/08 was readily available for the Member States, since they had to declare products according to their fat content, not all Member States were able to provide a distinction of fat content from 2008/09 onward. Thus just the eleven Member States with a consistent declaration until 2011/12 are included in this graph, representing about 50 % of all plain milk supplied.



Even though the scheme's scale shows no significant variation on EU27 level, the implementation on Member States level partially varies strongly between 2004 and 2012. In Annex 5 the total amount of subsidised products in milk equivalents and total expenditure for the scheme are illustrated separately for each participating Member State. A declining trend can be observed for example in Czech Republic (Figure 51), Luxembourg (Figure 62) and Ireland (Figure 58) while an increasing trend is noticeable for example in Estonia (Figure 53), Lithuania (Figure 61) and Slovakia (Figure 66). As mentioned above, some countries show a relatively high share of cheese in the product portfolio of the scheme, e.g. France (Figure 55) and Italy (Figure 59).

There is a divergence between total quantity of subsidised products and the total expenditure in some Member States, e.g. Spain (Figure 68) or Malta (Figure 63). In most Member States both curves correlate rather well reflecting the fact that the subsidy rates per product category are fixed by the Commission Regulation. An increasing product amount should therefore lead to increasing expenditure and vice-versa. Therefore, the reasons for such deviations have to be further investigated in the process of evaluation. Under the assumption of a constant total product quantity, a supposable reason might be e.g. volatile market prices for milk products in a country.

Figure 14: Total quantity of subsidised products within the SMS in EU MS



Source: Own illustration based on SMS data provided by European Commission, DG-AGRI (29.07.2013)

Figure 14 shows the scales of the schemes compared across the Member States, where the Member States are ranked according to their distribution quantities in milk equivalents. High variation between the school years has been found for example in Poland, France, Italy or the Netherlands⁵⁵. Explanations for these changes refer to modifications in the national im-

⁵⁵ For the Netherlands interviewees in the administration of the scheme illustrated a lot of changes in the national implementation, e.g. the introduction of organic products, the abolition of maximum price levels, the creation and introduction of new



plementation. Poland for example introduced a strong national top-up in 2007 which led to a remarkable increase in milk consumption. For budgetary reasons the distribution pattern of milk was changed in the following year from a daily supply to three times a week causing a decline in the total amount of distributed milk. Italian's statistics of the SMS show a tremendous increase in the distribution of all kind of cheese (fresh and processed, Parmesan cheese and cheese other than fresh or processed) in the school year 2009/10. However interviewees are unaware of this development as they did not indicate any changes in the interview survey. The same observation has been found for France, where interviewees dealing with the scheme's administration reported about a dietary change for school meals in 2007/08 aiming at a reduction of milk products in school menus.

Table 5 displays the details quantities of subsidised products under the scheme on which Figure 14 is based.

Table 5: Development of subsidised milk products under the SMS (2004-2012)

All subsidised products Total Quantity in tons of Milk- Equivalents	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012
BELGIUM	5.380	4.897	4.660	4.387	4.348	4.163	3.786	3.655
BULGARIA	0	0	0	0	17	3	10	11
CZECH REPUBLIC	4.266	3.292	3.753	3.666	1.727	2.587	2.296	2.136
DENMARK	16.750	13.091	15.888	14.530	10.165	8.331	11.234	9.883
GERMANY	45.850	43.770	41.421	37.773	36.746	36.266	35.063	31.102
ESTONIA	1.364	2.397	2.655	2.603	3.045	3.306	3.524	3.726
GREECE	0	0	0	0	0	0	0	0
SPAIN	6.757	5.863	6.164	8.108	10.346	9.402	3.970	2.737
FRANCE	67.637	50.395	54.895	46.090	76.211	50.457	59.481	78.334
IRELAND	3.700	3.749	3.609	3.251	3.062	2.718	2.558	2.567
ITALY	8.175	3.494	9.167	3.603	11.607	23.030	8.933	11.298
CYPRUS	0	0	0	834	1.333	1.365	1.396	1.314
LATVIA	26	367	1.889	2.122	1.566	98	564	1.671
LITHUANIA	18	622	690	795	782	1.276	1.630	3.518
LUXEMBOURG	155	151	153	115	123	119	111	110
HUNGARY	14.484	11.452	6.038	4.702	4.469	5.822	6.022	7.699
MALTA	0	0	0	127	137	135	133	131
NETHERLANDS	6.239	573	462	2.534	3.473	3.561	2.825	3.034
AUSTRIA	4.067	3.988	3.756	3.624	3.987	3.916	3.928	3.923
POLAND	10.231	13.450	14.084	54.125	78.752	63.098	51.900	52.726
PORTUGAL	6.778	13.635	8.250	0	12.774	8.402	7.122	14.697
ROMANIA	0	0	0	6.102	24.663	44.632	49.129	49.863
SLOVENIA	0	16	693	15	10	11	6	36
SLOVAKIA	141	559	917	1.265	2.003	3.026	2.957	3.155
FINLAND	24.413	22.747	26.104	22.619	25.127	20.298	20.188	20.297
SWEDEN	53.576	53.081	52.319	55.440	49.731	47.851	48.382	49.359
UNITED KINGDOM	47.161	44.627	46.944	44.011	46.314	30.847	28.798	27.806
TOTAL EU 27	327.166	296.215	304.511	322.441	412.517	374.719	355.946	384.786

Source: Own illustration based on SMS data provided by European Commission, DG-AGRI, in the course of this evaluation

4.2.3 Implementation details

Results in this sub-chapter are derived from the implementation survey carried out among the Member States. The upper named problems concerning gaps in Member State's returns to the implementation survey have to be taken into account.

products and flavours, which correspond only poorly with the changes in the SMS statistics and therefore do not explain the variations.



4.2.3.1 Stakeholders involved

Only a minority of participating Member States answered the question, whether different stakeholders were participating in the implementation of the country's SMS.

On public level usually the Ministry of Agriculture is administrating the scheme. Six out of the ten Member States stated collaboration with the Ministry of Education. In Austria and Finland the National Nutrition Council was involved in the scheme as well. From the private sector most often dairies or dairy corporations and councils are integrated into the implementation of the programme. Only Austria mentioned an integration of parental organisations in the School Milk Scheme.

4.2.3.2 Target groups

Table 6 shows the amount of countries implementing the SMS on each of the different school levels. 24 Member States⁵⁶ answered this question. There is very little variation within the school levels over time in the reporting Member States. If there were changes, they were usually to include more types of schools into the scheme.

Table 6: Number of countries implementing the SMS on different school levels

School Year	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012
Nursery schools	8	8	8	8	8	10	10	12
Kindergarten and preschools	14	14	14	17	17	19	19	20
Primary schools	21	21	21	22	25	25	25	25
Secondary schools	16	16	16	18	19	20	20	20
Others	6	6	6	6	6	7	7	7
Answers to this question	25							

Source: Own compilation based on implementation survey's data

From 2008/09 onward all 24 reporting Member States participate in the SMS and it is evident that the Member States' focus lies on primary schools. These are in some cases even declared as special target group, e.g. in Poland, where plain milk in primary schools is provided free of charge. Most of the reporting Member States state as well secondary schools and kindergartens and preschools as target groups for the scheme. Other schools contain school forms like boarding schools, vocational schools or schools for children with special needs. These forms of schools as well as nursery schools have not been included in the programme by the majority of Member States. Reasons for focusing on these particular groups of pupils have not been stated in the returns to the implementation survey.

⁵⁶ Including Flanders and Wallonia as separate reporting regions.



4.2.3.3 Supply model (Frequency and duration of distribution, consumption time, portion size)

As the survey revealed, most of the reporting Member States distribute eligible milk and milk products to the children every day throughout the school year (Table 7). The only participants distributing less than 35 weeks during the school year are the Belgian region Flanders and Bulgaria. Some Member States (Slovenia, Italy and Bulgaria) indicated different durations of distribution within the year depending on different types of schools. Nursery schools for example have generally a longer supply period than other school forms, presumably because of longer holiday periods in later school forms.

Table 7: Frequency and duration of milk and milk product distribution

	Frequency of distribution (multiple answers)			Duration of distribution		
	Every day	3 to 4 times per week	Less than 3 times per week	less than 35 weeks	35 to 40 weeks	more than 40 weeks
No. of countries	20	2	4	2	12	5
Answers to this question	23			20		

Source: Own compilation based on implementation survey's data

The morning or the morning breaks are the preferred distribution times in the reporting Member States, but there are as well several countries in which eligible milk products are served at lunch in the canteens (Table 8).

Table 8: Consumption time during the day and supply models on school level

	Consumption time (multiple answers)			Way of supply in schools		
	Morning/ Morning Break	Lunch/ Afternoon	Throughout the day	School team (teacher, caretaker, etc.)	Canteen	Self ser- vice/ vendor machines
No. of countries	17	9	5	18	15	8
Answers to this question	23			21		

Source: Own compilation based on implementation survey's data

There are often several ways of supply within reporting Member States, because this depends in most cases on the schools, which establish their own ways of supply. The way of supply is as well determined by the age of children and the form of school. For younger children, a supply via the school team like the teacher in the class room or the caretaker in the breaks is very common, while elder children in secondary schools tend to have their portion of milk in the canteen or cafeteria. Some Member States made as well positive experience with vendor machines, where a supply is guaranteed throughout the day. There are other self-supply models like e.g. in Luxembourg, where one of the children in each class is entrusted with the task of bringing the milk to the class room at break time.



4.2.3.4 Links to the School Fruit Scheme (SFS)

There was not a lot of feedback in the survey concerning the link between the European SMS and the SFS. Just eight out of 26 Member States replied to this question. A theoretical comparison of administrative bodies and implementing agencies in both programmes show for those MS participating in both programmes that the agricultural ministries are involved in all schemes. As regards to implementing bodies the agencies in at least 16 out of 23 MS that applied both schemes are responsible for the SMS as well as for the School Fruit Scheme.

The answers in the survey indicate that connections between these two schemes are marginal and more coincidently than intended. In Lithuania, Malta and the Belgian region Wallonia for example both programmes are managed by the same institution, while in Spain the communication of the scheme is done by the same unit. While the schemes' management is in different hands, implementation and control of the two schemes is done by the same institution in Estonia. In Lithuania, Luxembourg and Spain both schemes focus on the same target group and only Lithuania states that all schools participating in the School Milk Scheme participate in the School Fruit Scheme as well. In Malta this is the case for most of the schools and in Poland, where the milk scheme has a much larger scale than the fruit scheme, 9,000 schools have both schemes, being 15% of all school participating in the milk scheme and 48% of all schools participating in the fruit scheme.

4.2.3.5 Communication and educational measures applied

Next to the obligatory poster, some countries state different other communication measures executed in relation to the School Milk Scheme. Austria, Belgium, Latvia, Lithuania, the Netherlands and Slovenia indicate to inform the schools and the parents of participating schools regularly, mainly via web sites, in the Netherlands via a circular and in Cyprus via a hand-out for the parents. In Lithuania this offer is enriched with phone consultations. Austria, Latvia, Lithuania and Slovenia offer seminars and workshops for schools and educational establishments. In Slovenia, the School Milk Scheme is "presented in certain radio and TV shows" and Latvia mentions certain mass-media coverage as well. In Austria the School Milk and the School Fruit Scheme are present on the Interpädagogica fair in Graz to inform schools about the programmes.

In addition to that, educational measures were mentioned by Austria, Cyprus, Ireland, Poland, Germany and the Belgian region Flanders.

In Austria the national agricultural marketing agency, Agrarmarkt Austria (AMA), is responsible for the coordination of educational measures. Educational material for the courses, drawing, riddle and singing material, educational video material and excursions to farms and dairy companies are the main points carried out at school level. Continuing education for teachers and headmasters takes place as well.

In Flanders educational material and activities for schools are provided through the public-private agricultural marketing organisation Vlaams Centrum voor Agroen Visserijmarketing (VLAM). There is a mascot in shape of a dinosaur called Calcimus integrated into the educational concept, an educational game box, material to read and a lexicon for children. Under the programme Melk4kids excursions to farms and dairy companies take place as well.



Cyprus states drawing competitions and games related to milk as well as lectures by professional dietician on the importance of milk as educational measures.

In Ireland the National Dairy Council, a private dairy promotion company representing dairy co-operatives, operates dairy education programmes like games and competitions for primary and secondary schools.

In Poland educational activities about healthy eating take place in schools. Furthermore there are collaborations at school level with private organisations and dairy suppliers to promote art contests (creating posters, cartoons, drawings), quizzes, workshops, sports activities and outdoor events.

To summarize, the share of Member States actually implementing additional voluntary educational measures in relation to the School Milk Scheme is rather small. In some countries these educational measures are provided partly or entirely by private organisations. It has to be taken into consideration that due to different long-term objectives of the public and the private sector it might come to conflicts of interest in these cases.

4.2.3.6 Administrative Costs

Since administrative costs do not have to be recorded by the participating Member States, an estimation of the costs was difficult for many respondents of the implementing survey. Most responding Member States nevertheless tried to estimate the administrative burden by providing the amount of workers needed to administer the scheme or to execute the controls, the amount of controls executed in the years of implementation or a combination of these indicators. There are 17 responses⁵⁷ out of 26 participating Member States to this question.

To achieve comparable numbers, an educated guess for the costs of a full time worker in administration and a full time worker to execute controls has been done. For full time workers in the programme's administration yearly costs of 60,000 €⁵⁸ are estimated, while for full time workers executing the controls these yearly costs are estimated to be about 42,000 €⁵⁹. With the basis of a full working year in Germany counting for 220 working days with 8 hours per day a calculation of an hourly wage is possible. In cases where numbers of controls per year have been indicated, the control of one school was estimated with half a working day for one person, thus counting for 4 hours. A table with exact numbers derived from these calculations can be found in Annex 7.

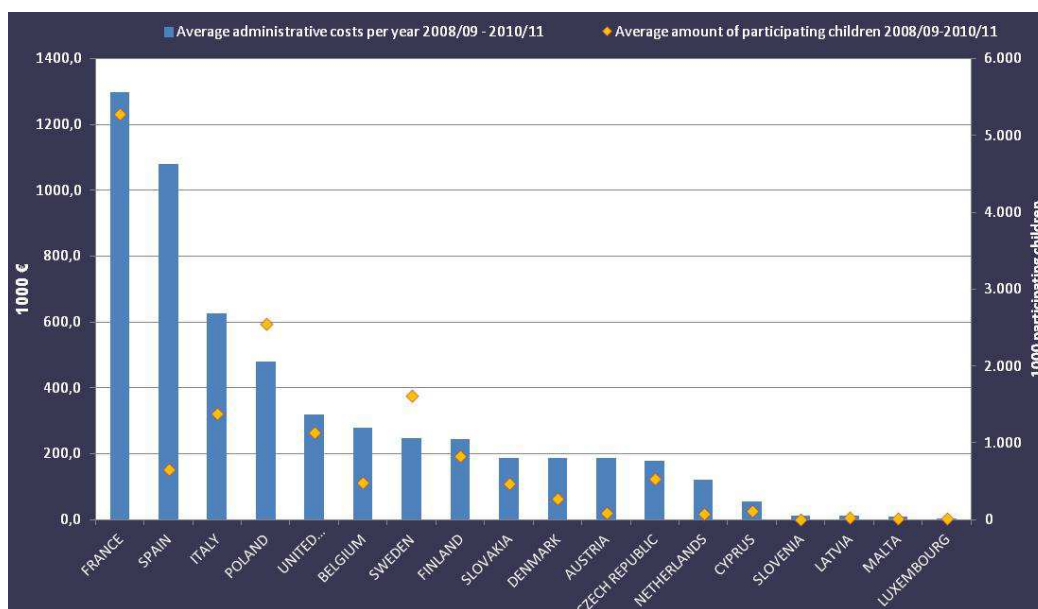
⁵⁷ Including Flanders and Wallonia as separate reporting regions.

⁵⁸ Average over all the categories from A13 to A16 and all age groups in German salary table for civil agents on national level

⁵⁹ Average over all the categories from A09 to A13 and all age groups in German salary table for civil agents on national level



Figure 15: Average administrative costs pear year 2008/09 - 2010/11



Source: Own illustration based on implementation survey's data participating children from SMS data provided by European Commission, DG-AGRI (05.02.2013)

Figure 15 shows the average administrative costs per year in the period from 2008/09 to 2010/11 in reporting Member States and the average number of children that participated every year in the same period. There is relatively few correlation between scale of the scheme in terms of participating children and the annual administrative costs occurring. Some Member States like Spain, Italy and Austria have relatively high costs compared to their amount of participating children per year, while others like Poland, Sweden or Czech Republic and have a relatively high amount of children.

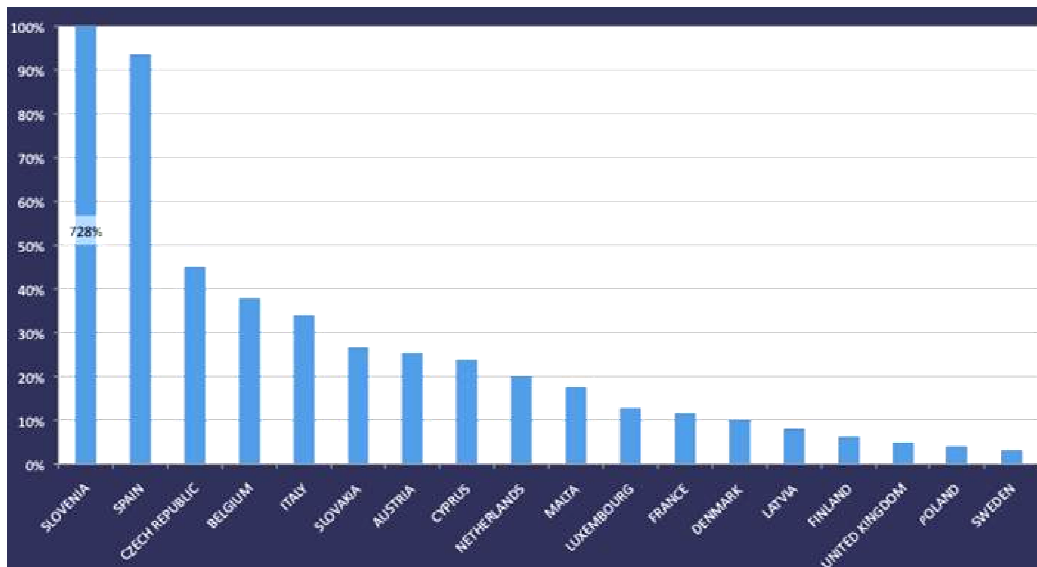
With the ratio of administrative costs over total product costs it can be estimated, which percentage of their EU-aid Member States had to invest additionally to run the programme and to consequently get and distribute this aid from the European Union (Figure 16).

Numbers derived in this way are very high in some Member States. In Slovenia, where administrative costs have been estimated by the financial department⁶⁰ and can thus be considered as reliable, administrative costs are actually not very high (Figure 15) and do not exceed 13,500 € per year. However, participation of schools is very low in Slovenia, because the organisational burden for the school is considered as remarkably high making the scheme unattractive for them. Nevertheless, the Slovenian government has to provide a basic amount of man-power to give schools the possibility of applying for the SMS. Since even 10% of the EU-aid as additional expenditure for the Member States' direct administrative costs can be considered as not very efficient, the graph shows that there lies a disproportionately high burden on many Member States in relation to this scheme. The cases of France and Poland show that the amount of children participating or the range of products distributed do not have to be reasons for relatively high administrative costs.

⁶⁰ Additional information to Slovenia in this stanza is derived from a telephone conversation with the Slovenian Ministry of Agriculture and Environment on 2013-03-14



Figure 16: Ratio of average annual administrative costs over average annual total product costs 2008/09 - 2010/11



Source: Own illustration based on implementation survey's data, total product costs from SMS data provided by European Commission, DG-AGRI (05.02.2013)

Many figures in the administrative costs are calculated theoretically. They should be nevertheless taken seriously, since they may even still underestimate the real costs participating Member States have to pay to organize the scheme. Most of the schools in the European Union are fully or at least to a substantial part publically financed. Organisational and administrative costs deriving from the programme at school level are therefore consequently paid by the Member States as well. These costs, however, are not included in the qualitative statements regarding the administrative burden of reporting Member States in the implementation survey. Moreover, many Member States could just either indicate the amount of controls or working time required for administration, not both.

The available data point to the conclusion that the administrative burden of the SMS is rather high and could have a negative influence on the overall efficiency of the programme. Statements from reporting Member States in the implementation survey suggest that the administrative burden was and still is an obstacle for schools to participate in the scheme and for Member States to expand it. Further investigation of this topic is conducted in the case studies (Annex 8.8), where qualitative interviews on all levels of the scheme within the different participating Member States may give deeper insights.



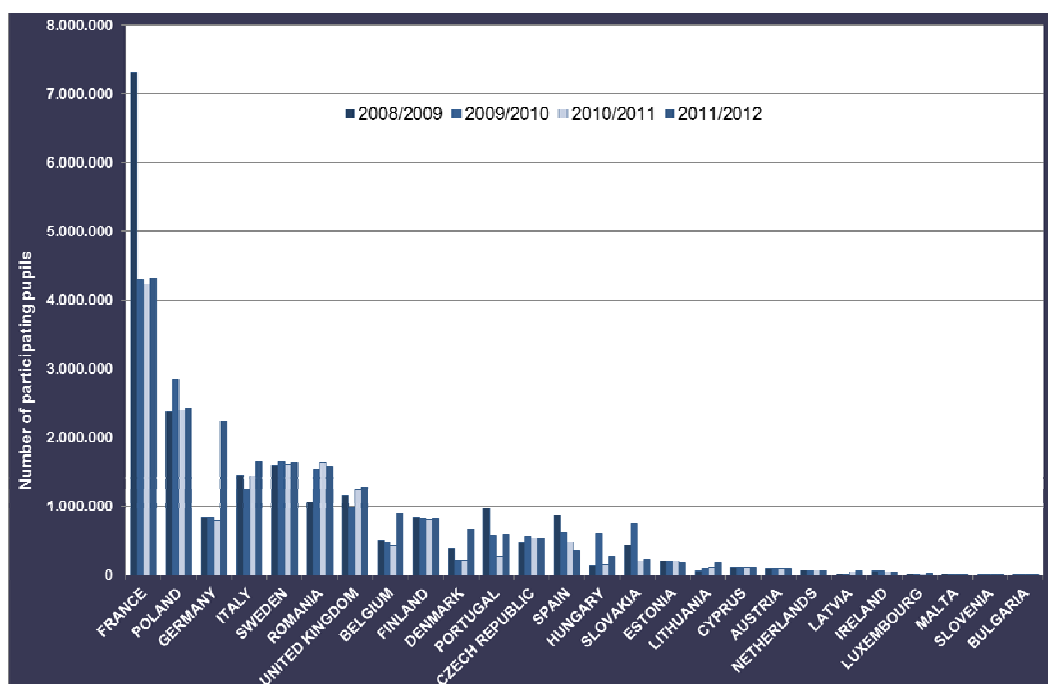
4.2.3.7 Participation in the SMS and types of aid applicants

Figure 17 shows the number of participating pupils in the scheme for the school years 2008/2009 to 2010/2012 for all participating Member States.⁶¹

Compared to Figure 14, which displays the development of total subsidized products in the scheme, the ranking of Member States is not very different, showing that the Member States' number of pupils and their distribution of products correlate relatively well.

The variation in the Member States' ranking and the variation between the different years within the Member States can be explained inter alia by variances in the portion sizes of distributed products. In most of the cases they are probably smaller than the maximum amount per child and day (0.25 litre milk equivalent per day). Italy for example reaches obviously a relatively high amount of pupils with rather small portions, while this seems to be the other way round in Germany. However, also here more information is required to identify the explicit reasons.

Figure 17: Number of participating pupils in the SMS in EU MS



Source: Own illustration based on SMS data provided by European Commission, DG-AGRI (29.07.2013)

Between 2008 and 2011 the total number of children participating in the scheme in the EU27 has decreased from 21 million to 17.2 million children. However, in the school year 2011/2012 again around 20 million children were reached.

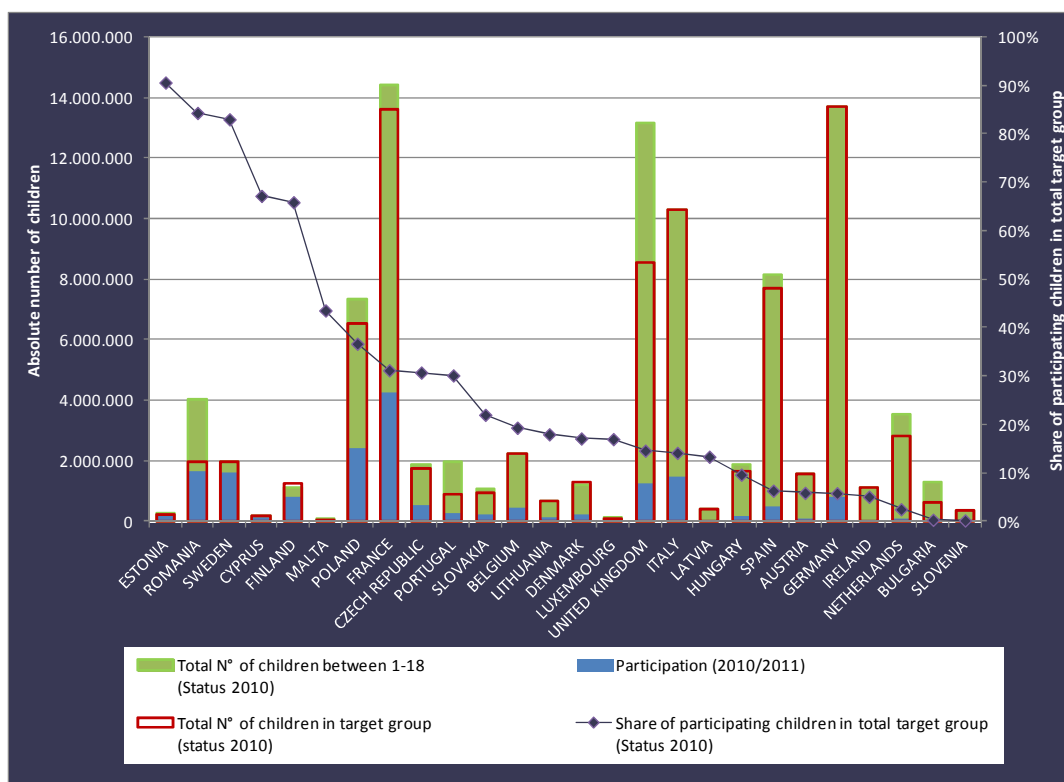
⁶¹ At the current stage of the evaluation it is not possible to quantify the number of participating children explicitly for the years before 2008 as the MS were not obligated to report on it before the 2008 amendment of the EU regulation. The evaluators have asked for this information within the basic questionnaire survey but not all Member States have delivered reliable information yet.



However, to provide a comparable picture of the participation level across the Member States one has to consider that (1) Member States feature different numbers of children and (2) have defined individual target groups which vary strongly. Therefore, Figure 18 provides a snapshot on the participation of children in the SMS for the school year 2010/2011, differentiated by single Member States. The red pillars display the number of children in the individually defined target group on national level, the green pillars display the total number of children in the country (1-18 years). It can be observed that some Member States have defined their target group more restricted, meaning that the programme is offered only to certain types of educational establishments, e.g. primary schools.

When evaluating the effectiveness of the scheme at national level, using e.g. the participation as indicator, it is questionable if the total number of children in a country or the number of children in the defined target group in the country should be applied as the reference group to calculate this indicator. Figure 18 illustrates both reference groups (red and green pillars). Divergences occur especially in UK as all children aged less than 5 years participate in the national “nursery milk scheme” and thus, are not in the target group of the EU scheme.

Figure 18: Target groups and participation in the school year 2010/2011



Source: Own illustration based on SMS data provided by European Commission, DG-AGRI (05.02.2013) and EUROSTAT for total “number of children by age” (18.03.2013)

The dark blue squares in Figure 18 show the share of participating children in a country of all children in the target group which the respective Member State has defined. The light blue pillars display the absolute number of participating children. Table 10 provides further information on the participation level as well as the specific target groups for the SMS in the Member States which were reported by the countries within the implementation survey.



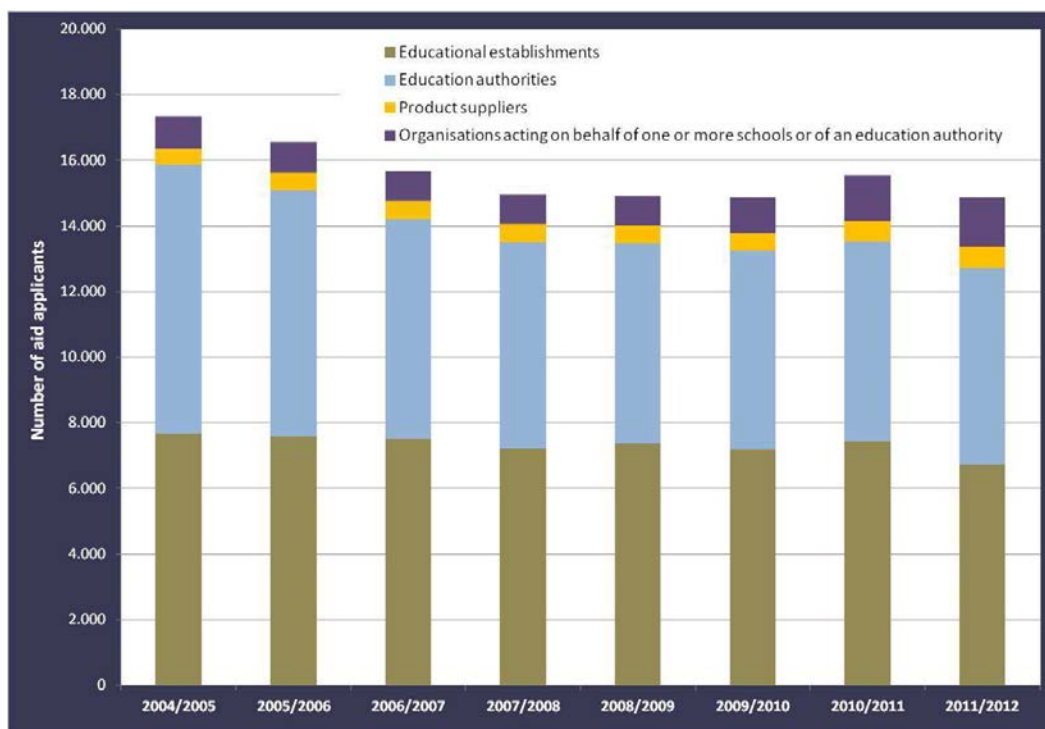
The number and types of aid applicants can also provide useful information to evaluate the participation development within the observation period.

Basically four different groups of applicants can be differentiated:

- ▲ Educational establishments
- ▲ Education authorities
- ▲ Product suppliers
- ▲ Organisations acting on behalf of one or more schools or education authorities

When interpreting the results displayed in Figure 19 one has to consider two aspects: (1) the absolute numbers displayed by the figure do not cover all Member States. This results from the fact that not all Member States have collected and stored this sort of information since 2004 and thus, were not able to provide the explicit number of aid applicants for the evaluation process. (2) The absolute number of applicants in each type does not provide information on the number of children which are covered per applicant. A supplier - for example - who acts as a direct applicant might supply milk products to a couple of schools and thus might reach a significantly higher number of children than an individual school which acts directly as aid applicant. Therefore, the total number of applicants (at least in the covered countries) showing a declining trend since 2004 does not necessarily mean less quantities of milk distributed or less participating children. More information on the detailed numbers of aid applicants is provided by Table 9 and Figure 19. Thus, the fact that the absolute number of suppliers displayed in Figure 19 is significantly lower than the number of schools does not necessarily mean that the number of children reached by the suppliers is lower than those reached by school applicants. The relatively high number of applicants of the type "Organisations" results mainly from France.

Figure 19: Number of aid applicant in the EU SMS (2004 – 2011)*



Source: Own illustration based on results of the implementation survey. *Note: Figure does not cover Germany.



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Table 9: Number of aid applicants in selected EU MS (2004 - 2012)

Aid applicants	2004/2005					2005/2006					2006/2007					2007/2008					2008/2009					2009/2010					2010/2011					2011/2012							
	Total N° of aid applicants	Educational establishments	Education authorities	Product suppliers	Organisations	Total N° of aid applicants	Educational establishments	Education authorities	Product suppliers	Organisations	Total N° of aid applicants	Educational establishments	Education authorities	Product suppliers	Organisations	Total N° of aid applicants	Educational establishments	Education authorities	Product suppliers	Organisations	Total N° of aid applicants	Educational establishments	Education authorities	Product suppliers	Organisations	Total N° of aid applicants	Educational establishments	Education authorities	Product suppliers	Organisations	Total N° of aid applicants	Educational establishments	Education authorities	Product suppliers	Organisations								
AUSTRIA	120				120	111				111	107				107	98				98	94				94	87				87	86				86	84				84			
BELGIUM (Flanders)	67				67	65				65	65				65	65				65	61				60	1	59				58	1	57				56	1	58			57	1
BELGIUM (Wallonia)	31				31	29				29	26				26	18				18	24				24	23				23	21				21	27				27			
BULGARIA																					4	3			1	2	2				4	3				1	8	7			1		
CYPRUS																																								22			
CZECH REPUBLIC				7						6					7					7					6						6								6				
DENMARK																									6						6								6				
ESTONIA				348						377					376					402					436					464									496				
FINLAND	321	78	232	11		307	84	214	9		361	135	216	10		299	96	197	6		316	120	188	8		290	130	153	7		262	114	141	7		257	115	135	7				
FRANCE	12.205	6.115	5.110		980	11.901	5.996	4.961		944	11.522	5.903	4.713		906	11.031	5.705	4.454		872	10.229	5.298	4.128		803	10.063	5.186	4.062		815	9.810	5.024	3.989		797	9.469	4.820	3.888		761			
HUNGARY	1535		1.535			1045		1.045			489		489			348		348			307		307			351		351			488		480	8		432		419	13				
IRELAND	22			22		21			21		20			20		19			19		17			17		18			18		17		17		16		16						
ITALY	1168	496	651	21		1051	435	597	14	5	1016	410	586	15	5	961	379	563	15	4	915	348	549	13	5	916	336	555	16	9	891	320	551	12	8	877	308	553	10	6			
LATVIA	40	13	10	17		59	19	13	27		110	35	18	57		96	31	17	48		92	30	16	46		16	6	1	9		72	14	8	50		84	15	10	59				
LITHUANIA	155	124		31		258	198		60		273	210		63		305	229		76		173	136		37		234	174		60		284	204		80		341	239		102				
LUXEMBOURG	1			1		1			1		1			1		1			1		1			1		1			1		1			1		1		1					
MALTA																1		1			1		1			1		1			1		1			1		1					
NETHERLANDS	84	25		59		83	25		58		76	25		51		68	20		48		59	22		37		52	22		30		42	18		24		38	15		23				
POLAND	264	164	16	83	1	283	170	11	101	1	304	179	14	110	1	335	200	13	120	2	348	192	12	142	2	338	178	10	149	1	336	184	7	144	1	328	177	7	143	1			
ROMANIA											30				30	98					98				98	263				263	587				587		721			721			
SLOVAKIA	4			4		5			5		4			4		3			3		8			8		8			8		8			8		8							
SLOVENIA	1	1				7	7				2	2				2	2				1	1				1	1				1	1			9	9							
SPAIN																																											
SWEDEN	963	659	285	19		948	642	288	18		919	608	291	20		861	540	299	22		846	533	295	18		796	477	302	17		795	459	312	24		799	440	336	23				
UNITED KINGDOM																					187	15	166	5	1	172	19	148	4	1	214	77	134	3	0	232	96	133	3	0			
TOTAL EU 27	16.981	7.675	8.187	493	981	16.174	7.576	7.506	525	950	15.295	7.507	6.703	556	912	14.541	7.202	6.294	560	908	13.781	7.354	6.114	544	910	13.691	7.187	6.063	524	1.090	14.023	7.423	6.107	610	1.395	13.839	6.733	5.991	644	1.494			

Source: Own illustration based on EUROSTAT and results of the implementation survey



Table 10: National target groups and participation level in EU MS (2010/2011)

Age ranges of children in educational establishments by MS and specific target groups of the SMS	Nursery schools		Kindergarten and preschools		Primary schools		Secondary schools		Total age range	Participation (2010/2011)	Total N° of children in target group (status 2010)	Total N° of children between 1-18 (Status 2010)	Share of participating children in total target group (Status 2010)	Share of participating children in total children of MS (Status 2010)
	Age range	Target group SMS	Age range	Target group SMS	Age range	Target group SMS	Age range	Target group SMS						
AUSTRIA	0-3	X	3-6	X	6-13	X	13-18	X	1-18	92.000	1.568.514	1.568.514	6%	6%
BELGIUM		X		X		X		X	1-18	428.771	2.221.937	2.221.937	19%	19%
BULGARIA		-	2-6	X	6-10	X		-	2-10	1.713	622.233	1.270.431	0%	0%
CYPRUS	1-2	-	2-6	X (start 09/10)	6-12	X	12-18	X	2-18	115.485	171.987	181.429	67%	64%
CZECH REPUBLIC	0.5 - 3	-	3-6	X (start 09/10)	6-15	X	15-19	X (start 09/10)	3-19	538.885	1.756.282	1.859.197	31%	29%
DENMARK	0-2	X (start 08/09)	3-6	X	7-16	X	17-19	X	1-19	220.000	1.289.068	1.220.483	17%	18%
ESTONIA	1-3	X	3-7	X	7-10	X	10-17	X	1-17	209.500	231.244	248.671	91%	84%
FINLAND	1-2	X (start 11/12)	3-6	X	7-15	X	16-20	X	1-20	809.045	1.228.113	1.094.911	66%	74%
FRANCE		X		X		X		X	2-18	4.237.500	13.593.509	14.394.332	31%	29%
GERMANY	0-3	X	3-6	X	6-10	X	10-18	X	1-18	794.725	13.698.558	13.698.558	6%	6%
HUNGARY	0-3	-	3-6	X	6-14	X	14-18	X	3-18	160.000	1.661.901	1.858.242	10%	9%
IRELAND	1-5	X	3-5	X	4-12	X	12-18	X	1-18	55.790	1.102.062	1.102.062	5%	5%
ITALY		X (start 09/10)		X		X		X	1-18	1.449.329	10.268.586	10.268.586	14%	14%
LATVIA		X		X		X		X	1-18	52.810	396.973	396.973	13%	13%
LITHUANIA	0.5-3	X	4-6	X	7-10	X	11-18	X	1-18	116.698	651.112	651.112	18%	18%
LUXEMBOURG		-		X		X		X	3-18*	16.279	95.938	107.387	17%	15%
MALTA		-	3-4	X	5-10	X		-	3-10	14.241	32.742	82.084	43%	17%
NETHERLANDS		-		-		X		X	5-18*	69.196	2.795.448	3.535.743	2%	2%
POLAND		-	3-5	X	6-12	X	16-18	X	3-18	2.399.326	6.546.946	7.348.026	37%	33%
PORTUGAL		-	3-5	X	6-10	X		-	3-10	265.392	881.560	1.965.686	30%	14%
ROMANIA		-	6-7	X	7-10	X	10-14	X (start 08/09)	6-14	1.646.963	1.953.447	4.002.648	84%	41%
SLOVAKIA		-	3-5	X	6-14	X	15-18	X (start 08/09)	3-18	208.076	948.216	1.059.614	22%	20%
SLOVENIA	1-3	X (excl. 08/09 - 10/11)	3-6	X (excl. 08/09 - 10/11)	6-14	X	14-18	-	1-18	538	348.362	348.362	0%	0%
SPAIN	0-5	X		-	6-11	X	12-17	X	1-17	484.795	7.676.147	8.134.318	6%	6%
SWEDEN		-	1-5	X	6-15	X	16-18	X	1-18	1.611.335	1.941.740	1.941.740	83%	83%
UNITED KINGDOM		-		-	5-11	X	11-16	X	5-16	1.243.572	8.523.364	13.152.411	15%	9%
Total notifications		12		21		25		20	* assumption as age ranges of educ. establishments have not been committed by MS					

Source: Own illustration based on results of the implementation survey and EUROSTAT for total "number of children by age" (18.03.2013)



Box 3: Implementation of the scheme in Member States

- ▲ In the last decade the overall scale of the SMS on EU27 level increased, with a maximum peak in the school year 2008/2009. This peak is primarily due to two facts: (1) Some MS (Cyprus, Romania, Malta and Bulgaria) newly entered the SMS between 2007 and 2008 and (2) three MS significantly increased the scale of their schemes in this time frame, namely France, Italy and Poland.
- ▲ The schemes' development in terms of participating children and subsidised quantities is rather different among participating Member States and show a long-term declining trend with respect to participation and quantity distributed in more than half of these since the beginning of the observation period in 2004.
- ▲ The category of drinking milk (plain and flavoured) is most subsidised within the scheme (each year between 70-75%) while cheese amounts for approximately 20-25% of milk equivalent provided under the scheme. Plain milk remains also the most important product after 2008 although the amendment of the Commission Regulation in 2008 widened the range of eligible products.
- ▲ The divergence between total quantity of subsidised products and the total expenditure in some Member States, e.g. Spain or Malta, has to be further investigated as expenditures and total quantities should increase/decrease proportionally since subsidy rates per product category are fixed by the Commission Regulation.
- ▲ There are high variations in the scheme's scale on Member States level between the school years found for example in Poland, Portugal or the Netherlands.
- ▲ Not traceable at first sight are high participation numbers combined with a relatively low total product amount like for example in France. That fact can only be reached by collecting a portion size smaller than the maximum amount of 0.25 litre milk equivalent per day and child.
- ▲ The total number of children reached by the scheme has been decreasing in the period 2008 to 2011 from 21 million to 17.2 million children, yet increased in the school year 2011/12 to 20 million.



4.2.4 Financing of the SMS (total expenditure and uptake of aid)

In order to give a first impression on Member States' uptake of EU aid (the part of the available subsidies that is used) in the SMS a discussion is needed on suitable indicators to measure the level of uptake. This is of particular importance as the legislation of SMS – contrary to similar programmes like the EU School Fruit Scheme – defines no explicit maximum aid (in EUR) per country. Thus, the total EU expenditure asked by the participating Member States per school year cannot be used directly to measure the level of uptake.

Consequently, alternative variables have to be investigated for this purpose like the total quantity of products subsidised within the scheme per country and year compared to the maximum subsidisable quantity of products which is in general eligible for subsidy in a country per year. In line with the Commission Regulation 657/2008 this maximum subsidisable quantity has to be defined by the Member States itself and reported annually to the Commission.

Following Commission Regulation 657/2008 the maximum quantity eligible for aid is 0.25 litres of milk equivalent distributed per pupil per school day. This applies to all kind of educational establishments. Thus, entitlement of aid (the maximum subsidisable quantity) can be calculated as:

$$Quantity_{max} = Quantity_{pupil,day} \cdot Days_{School\ Year} \cdot Pupils$$

where:

$Quantity_{max}$ = maximum subsidisable quantity (tons / school year)

$Quantity_{pupils,day}$ = maximum quantity eligible for aid per pupil and school day (0.25 lt/day)

$Days_{School\ Year}$ = number of school days in a school year

$Pupils$ = number of pupils in regular attendance during the school year covered by a payment application

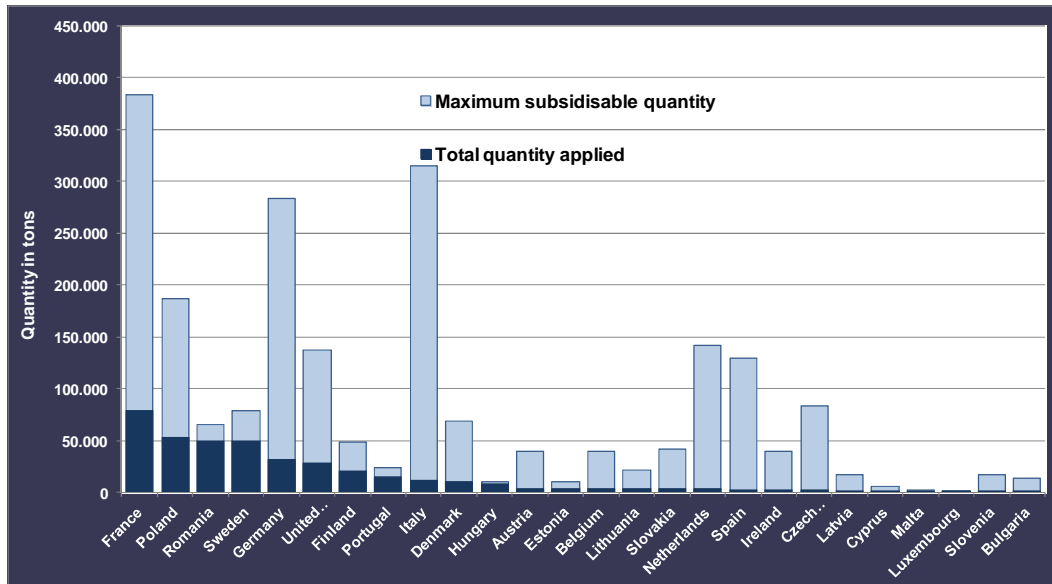
Following Rec. 13 of Regulation 657/2008 the maximum subsidisable quantity for aid "should be made on the basis of the number of pupils in regular attendance as established in the applicant's roll". The interview survey, especially interviews with CAs in participating Member States, indicate that this variable is differently interpreted across Member States: (1) total number of pupils in a country which are theoretically eligible for participating, (2) total number of pupils in the participating educational establishments and (3) number of participating children in participating educational establishments. The calculation which is done in this chapter and on which Figure 20 is based defines the variable *Pupils* as total number of pupils in a country which are theoretically eligible for participating since this information is available for all Member States and permit a consistent cross-country comparison.

The quotient of the total quantity really applied in the scheme by a country and the maximum subsidisable quantity of a country can be used as a sufficient indicator to measure Member States' uptake of aid within the scheme. Exactly this is displayed in Figure 21, exemplary for the school year 2010/2011 and all participating Member States.

In addition to the above mentioned indicator for Member States' uptake Figure 20 displays also the absolute quantities of products subsidised within the scheme and the maximum subsidisable quantities exemplary for the school year 2011/2012.

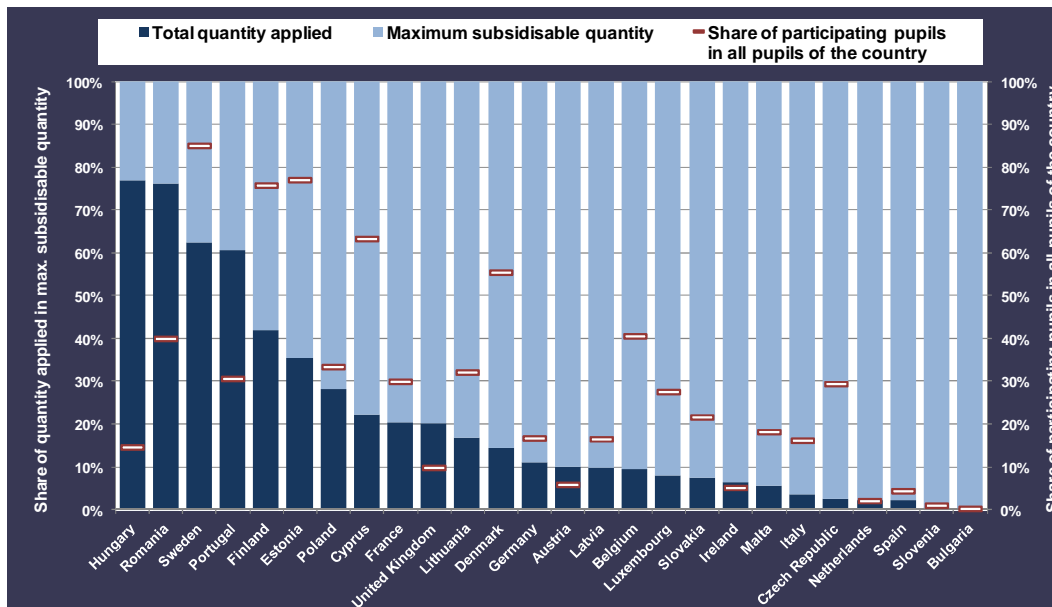


Figure 20: Quantities distributed in the SMS (2011/2012)



Source: Own illustration based on SMS data provided by European Commission, DG-AGRI (01.07.2013)

Figure 21: Uptake of aid and share of participating children in the SMS (2011/2012)



Source: Own illustration based on SMS data provided by European Commission, DG-AGRI (01.07.2013)

It is eye-catching that the total quantity applied by the Member States within the scheme remains in most Member States significantly below the maximum subsidisable quantity. This is especially true for populous countries like Germany, France, Italy and Spain.

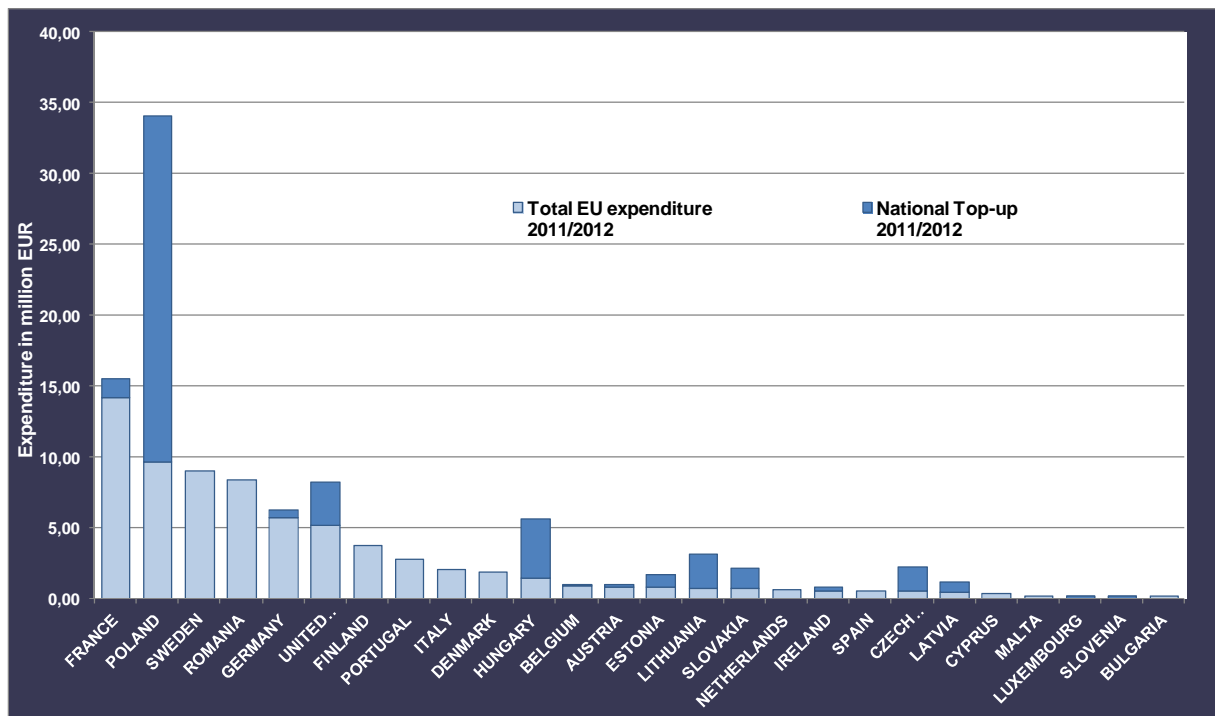
Figure 21 underlines the observed low level of Member States' uptake in the SMS. Only 11 Member States exceed the level of 15% uptake in the school year 2011/2012. The average uptake in the EU27 reaches approx. 17%. However, the absolute number of children reached by the scheme is high (20 million in the school year 2011/2012) compared to the children



reached by the EU School Fruit Scheme in the same school year (about 8 million). As the target group of the School Fruit Scheme focuses more on young pupils (mainly in kindergartens and pre- and primary schools) the share of participating children in the target group is in turn higher (25%). The share of participating children in the SMS in all pupils of a country (1-18) is also shown in Figure 21. 13 Member States do not reach a share of participating children above 25% which is again especially true for the populous countries (by the exception of France). For the EU27 the share of participation is at a level of approx. 22%.

Figure 22 displays also the absolute EU expenditure and the national top-ups for the scheme, as an example this shown for the school year 2011/2012. Total EU expenditure and national top-ups vary strongly across Member States. It is striking that some populous countries like Germany, Spain or Italy show a relatively low spending for the scheme while some of the small and medium size countries like Romania, Finland or Sweden show a relatively high spending. As national co-financing is not obligatory in the SMS, national top-ups are voluntary and vary strongly across Member States. While the bulk of countries provides hardly any or only small top-ups in 2011/2012, some Member States spend significant budgets on the scheme. Eye-catching with regard to the national top-ups is Poland which has provided an additional budget of 24.5 million EUR in 2011/2012. The sum is 2.5 times higher than the EU aid spent for the Polish scheme in this year. Table 11 and Table 12 present in detail the development of EU expenditure and national top-ups within the SMS for the school years 2004/2005 to 2011/2012. National top-ups are currently only documented within EU statistics from the school year 2008/2009, due to the changes in the Commission Regulation in 2008 which incorporated a reporting obligation for this variable.

Figure 22: Total EU expenditure and national top-ups in the SMS (2011/2012)



Source: Own illustration based on SMS data provided by European Commission, DG-AGRI (01.07.2013)



Table 11: Funding of the SMS (2004/2005 - 2007/2008)

Total EU expenditure for the SMS in Mio. EUR	2004/2005	2005/2006	2006/2007	2007/2008
BELGIUM	1,00	0,87	0,72	0,72
BULGARIA	0,00	0,00	0,00	0,00
CZECH REPUBLIC	0,72	0,51	0,53	0,58
DENMARK	2,00	2,00	1,47	1,15
GERMANY	10,10	8,82	8,82	9,19
ESTONIA	0,51	0,40	0,43	0,45
GREECE	0,00	0,00	0,00	0,00
SPAIN	2,20	2,10	2,20	1,50
FRANCE	13,89	9,89	9,66	7,96
IRELAND	1,05	0,90	1,15	0,91
ITALY	1,75	0,73	1,69	0,65
CYPRUS	0,00	0,00	0,00	0,14
LATVIA	0,00	0,06	0,30	0,34
LITHUANIA	0,00	0,10	0,13	0,44
LUXEMBOURG	0,03	0,03	0,03	0,02
HUNGARY	1,90	2,40	0,99	0,80
MALTA	0,00	0,00	0,00	0,05
NETHERLANDS	1,10	0,10	0,08	0,43
AUSTRIA	0,80	0,80	0,69	0,64
POLAND	1,60	2,40	2,22	9,35
PORTUGAL	1,30	2,60	1,20	0,00
ROMANIA	0,00	0,00	0,00	1,05
SLOVENIA	0,00	0,00	0,00	0,00
SLOVAKIA	0,03	0,10	0,16	0,20
FINLAND	3,80	3,10	3,40	3,20
SWEDEN	9,46	8,70	7,80	8,20
UNITED KINGDOM	9,80	9,60	8,43	7,84
TOTAL EU 27	63,04	56,21	52,10	55,81

Source: Own illustration based on SMS data provided by European Commission, DG-AGRI (05.02.2013)

Table 12: Funding of the SMS in million EUR (2008/2009 – 20011/2012)

Funding of the SMS	2008/2009					2009/2010					2010/2011					2011/2012				
	Total	National top-up (absolute)	National top-up (percentage)	EU aid (absolute)	EU aid (percentage)	Total	National top-up (absolute)	National top-up (percentage)	EU aid (absolute)	EU aid (percentage)	Total	National top-up (absolute)	National top-up (percentage)	EU aid (absolute)	EU aid (percentage)	Total	National top-up (absolute)	National top-up (percentage)	EU aid (absolute)	EU aid (percentage)
BELGIUM	0,79	0,00	0%	0,79	100%	0,76	0,00	0%	0,76	100%	0,74	0,06	8%	0,68	92%	0,84	0,09	10%	0,75	90%
BULGARIA	0,00	0,00	0%	0,00	100%	0,00	0,00	0%	0,00	100%	0,00	0,00	0%	0,00	100%	0,00	0,00	0%	0,00	100%
CZECH REPUBLIC	0,31	0,00	0%	0,31	100%	2,22	1,75	79%	0,47	21%	2,16	1,74	81%	0,42	19%	2,13	1,74	82%	0,39	18%
DENMARK	1,78	0,00	0%	1,78	100%	1,51	0,00	0%	1,51	100%	2,04	0,00	0%	2,04	100%	1,79	0,00	0%	1,79	100%
GERMANY	7,26	0,09	1%	7,17	99%	6,57	0,09	1%	6,48	99%	6,36	0,03	1%	6,33	99%	6,14	0,52	8%	5,62	92%
ESTONIA	1,37	0,82	60%	0,55	40%	1,28	0,68	53%	0,60	47%	1,47	0,83	57%	0,64	43%	1,60	0,93	58%	0,68	42%
GREECE	0,00	0,00	0%	0,00	0%	0,00	0,00	0%	0,00	0%	0,00	0,00	0%	0,00	0%	0,00	0,00	0%	0,00	0%
SPAIN	1,54	0,00	0%	1,54	100%	1,21	0,00	0%	1,21	100%	0,70	0,00	0%	0,70	100%	0,42	0,00	0%	0,42	100%
FRANCE	14,71	1,18	8%	13,53	92%	9,92	0,85	9%	9,07	91%	11,70	0,98	8%	10,72	92%	15,46	1,34	9%	14,13	91%
IRELAND	1,15	0,30	26%	0,85	74%	0,76	0,26	35%	0,49	65%	0,71	0,25	35%	0,46	65%	0,72	0,25	35%	0,47	65%
ITALY	1,69	0,00	0%	1,69	100%	2,07	0,00	0%	2,07	100%	1,62	0,00	0%	1,62	100%	1,99	0,00	0%	1,99	100%
CYPRUS	0,24	0,00	0%	0,24	100%	0,25	0,00	0%	0,25	100%	0,25	0,00	0%	0,25	100%	0,24	0,00	0%	0,24	100%
LATVIA	0,92	0,64	69%	0,28	31%	0,04	0,02	50%	0,02	50%	0,32	0,22	68%	0,10	32%	1,09	0,78	72%	0,31	28%
LITHUANIA	0,62	0,48	77%	0,14	23%	0,92	0,69	75%	0,23	25%	1,85	1,55	84%	0,30	16%	3,02	2,38	79%	0,64	21%
LUXEMBOURG	0,03	0,01	41%	0,02	59%	0,04	0,01	37%	0,02	63%	0,03	0,01	38%	0,02	62%	0,03	0,01	38%	0,02	62%
HUNGARY	2,58	1,78	69%	0,80	31%	3,66	2,62	71%	1,05	29%	4,31	3,24	75%	1,08	25%	5,52	4,17	75%	1,36	25%
MALTA	0,09	0,00	0%	0,09	100%	0,10	0,07	75%	0,02	25%	0,02	0,00	0%	0,02	100%	0,02	0,00	0%	0,02	100%
NETHERLANDS	0,63	0,00	0%	0,63	100%	0,65	0,00	0%	0,65	100%	0,51	0,00	0%	0,51	100%	0,55	0,00	0%	0,55	100%
AUSTRIA	0,91	0,21	23%	0,70	77%	0,71	0,00	0%	0,71	100%	0,71	0,00	0%	0,71	100%	0,92	0,20	22%	0,71	78%
POLAND	54,02	39,96	74%	14,06	26%	38,44	27,01	70%	11,43	30%	32,53	23,12	71%	9,41	29%	34,06	24,50	72%	9,56	28%
PORTUGAL	2,32	0,00	0%	2,32	100%	1,52	0,00	0%	1,52	100%	1,29	0,00	0%	1,29	100%	2,67	0,00	0%	2,67	100%
ROMANIA	4,48	0,00	0%	4,48	100%	8,09	0,00	0%	8,09	100%	8,92	0,00	0%	8,92	100%	8,29	0,00	0%	8,29	100%
SLOVENIA	0,00	0,00	0%	0,00	100%	0,00	0,00	0%	0,00	100%	0,00	0,00	0%	0,00	100%	0,01	0,00	25%	0,01	75%
SLOVAKIA	2,18	0,91	42%	1,27	58%	1,54	1,00	65%	0,55	35%	2,01	1,48	73%	0,54	27%	2,00	1,43	71%	0,57	29%
FINLAND	4,60	0,00	0%	4,60	100%	3,70	0,00	0%	3,70	100%	3,67	0,00	0%	3,67	100%	3,68	0,00	0%	3,68	100%
SWEDEN	9,03	0,00	0%	9,03	100%	8,69	0,00	0%	8,69	100%	8,78	0,00	0%	8,78	100%	8,96	0,00	0%	8,96	100%
UNITED KINGDOM	12,67	4,46	35%	8,21	65%	9,14	3,55	39%	5,60	61%	8,25	3,02	37%	5,23	63%	8,16	3,11	38%	5,05	62%
TOTAL EU 27	126	51	40%	75	60%	104	39	37%	65	63%	101	37	36%	64	64%	110	41	38%	69	62%

Source: Own illustration based on SMS data provided by European Commission, DG-AGRI (01.07.2013)



Box 4: Uptake of EU aid in Member States

- ▲ The scheme defines no explicit maximum aid (in EUR) per country but a maximum quantity of permissible products which are in general eligible for subsidy in a country and year.
- ▲ The quotient of the total quantity applied by a country and the maximum permissible quantity of a country can be used as a sufficient indicator to measure Member States' uptake of aid.
- ▲ The total quantity applied by the Member States is in most Member States significantly below the maximum permissible quantity.
- ▲ Only 11 Member States exceed the level of 15% uptake in the school year 2011/2012. The average uptake in the EU27 reaches approx. 17%.
- ▲ The absolute number of children reached by the scheme is high (about 20 million in 2011/2012) compared to the children reached by the School Fruit Scheme in the same year (about 8 million).
- ▲ As national co-financing is not obligatory in the scheme, national top-ups are voluntary and vary strongly across Member States.



5 REPLIES TO THE EVALUATION QUESTIONS

Replies to the evaluation questions are based on all secondary data available as well as on results of the previous chapter. In addition eight case studies have been carried out in order to gain an understanding of the scheme's implementation in real-life context and the stakeholder's perspectives. Table 13 provides an overview on relevant features of the SMS design in the case study countries.



Table 13: Features of the School Milk Scheme design in the case study countries

Criteria	France	Germany	Hungary	Italy	The Netherlands	Poland	Sweden	UK
Main developments in the SMS	1954 MP, since 2000 national financial aid	Participation of federal states declining since 2008	1927 first milk programme; 2004 implementation of the School Milk Scheme	Participation increased slightly	more products since 2008	2004: implementation of the SMS 2007: top-up raised	rather stable; online application introduced	1940 first milk programme; nursery milk
Products offered	Liquid milk Yoghurts Cheese Flavoured liquid milk	Flavoured liquid milk Other products less important	Liquid milk Yoghurts	Liquid milk Yoghurts Cheese Fresh cheese Flavoured liquid milk	Liquid milk Yoghurts	Mainly drinking milk Free of charge in primary schools Sometimes flavoured milk Others less important	Liquid milk Filmjöl	Liquid milk Yoghurts
Distribution and payment	<ul style="list-style-type: none"> Schools pay to supplier Payment included in school fees 	<ul style="list-style-type: none"> Distribution in classrooms, kiosks and canteens Payment in schools 	<ul style="list-style-type: none"> Schools pay to supplier Distribution during breaks 	<ul style="list-style-type: none"> Canteens pay to supplier Payment through admin. 	<ul style="list-style-type: none"> Direct payment to suppliers Milk distributed in cartons in breaks 	<ul style="list-style-type: none"> School pay to supplier Payment in schools 	<ul style="list-style-type: none"> School pay to supplier Payment by schools 	Various forms of distribution and payment
Supply strategy	<ul style="list-style-type: none"> canteen classroom 	<ul style="list-style-type: none"> classroom canteen vendor machines 	<ul style="list-style-type: none"> no vendor machines 	<ul style="list-style-type: none"> according to the age vendor machines 	<ul style="list-style-type: none"> canteens vendor machines 	<ul style="list-style-type: none"> in some cases canteens mainly classroom 	<ul style="list-style-type: none"> "milk bars" 	<ul style="list-style-type: none"> small cartons Containers vendor machines
Effectiveness	<ul style="list-style-type: none"> 50% of children part. Subsidy rate not sufficient Appropriate to increase children's consumption Helps to buy high quality products 	<ul style="list-style-type: none"> Appropriate to increase children's consumption 	<ul style="list-style-type: none"> Increased consumption Subsidy rate not sufficient Stabilise the dairy market 	<ul style="list-style-type: none"> Subsidy rate not sufficient no relevance for market target May help fighting against obesity No Accompanying Measures No link to SFS 	<ul style="list-style-type: none"> Subsidy rate not sufficient Helps to provide healthy milk products 	<ul style="list-style-type: none"> Subsidy rate not sufficient Increase consumption Depends highly on national funding Impact on eating habits 	<ul style="list-style-type: none"> Effects the quality of school meals Effects children's eating habits No direct educational measures 	<ul style="list-style-type: none"> Providing healthy milk products Depends on the EU-subsidy rate No educational measures



Criteria	France	Germany	Hungary	Italy	The Netherlands	Poland	Sweden	UK
Impact on eating habits	Moderate quality of school-meals rises	Positive peer groups, awareness rises	Moderate parents are not used to consume milk	No impact	Moderate marginal impact	Positive peer groups, reversal of consume trend	Moderate Quality of school-meals	Moderate marginal impact, raise of about 57ml
Weaknesses	<ul style="list-style-type: none"> High administrative burden Not enough educational measures 	<ul style="list-style-type: none"> High administrative burden High organisational burden Insufficient subsidy rate package size waste disposal 	<ul style="list-style-type: none"> High administrative burden insufficient subsidy rate 	<ul style="list-style-type: none"> High administrative burden High organisational burden insufficient subsidy rate 	<ul style="list-style-type: none"> High organisational burden insufficient subsidy rate 	<ul style="list-style-type: none"> insufficient subsidy rate missing obligatory educational measures 	<ul style="list-style-type: none"> High administrative burden Low awareness and knowledge on-the-spot checks 	<ul style="list-style-type: none"> High administrative burden no educational measures not enough guidance
Suggestions	<ul style="list-style-type: none"> Easier declaration Higher subsidy Educational measures Communication to parents 	<ul style="list-style-type: none"> Higher subsidy promotion advanced training Communication to parents 	<ul style="list-style-type: none"> Higher subsidy Higher participation 	<ul style="list-style-type: none"> Promotion and communication Additional milk breaks 	<ul style="list-style-type: none"> Clearer targeting Stronger focus Communication to parents 	<ul style="list-style-type: none"> Meet children's taste Educational measures Free distribution 	<ul style="list-style-type: none"> Reduce administrative burden in schools Online application Communication to parents 	<ul style="list-style-type: none"> Focus on certain areas More aid applicants No poster



5.1 Theme 1: Effectiveness

5.1.1 Evaluation Question 1

▲ Understanding of the question

The SMS has two main objectives:

- (1) Balancing the milk market and stabilising the market prices for milk and milk products and
- (2) Stimulating young people's consumption of milk to fight against obesity.

Answering Evaluation Question No. 1 “**To what extent has the School Milk Scheme reached its objective of balancing the milk market and stabilising the market prices for milk and milk products?**” focuses on the first central objective of the scheme by asking explicitly for the scheme's impacts on market related aspects. In this context “balancing” can be interpreted as a support to equalise the demand and supply of milk and milk products in the European Union by increasing internal milk consumption. Thereby, the demand of milk might not fall far below milk supply and strong increasing exports or decreasing production quantities can be avoided. Stabilizing the milk market prices means that a high volatility of prices should be reduced, so that short-term peaks on a high or low level are diminished which is strongly connected to the quantity stimulation aspect of this measure.

▲ Method of measurement

Two methodological approaches are applied to answer this evaluation questions. On the one hand a **quantitative approach** is carried out based on a collection, comparison and statistical analysis of ex-post time series of market variables of milk and milk products in European Member States. This data is to a large extent available through official statistical databases like EUROSTAT or national agricultural statistical databases.

On the other hand, to generate further information on the existence of a possible market impact of the SMS additional **qualitative methods** are added. This is done by adding explicit questions within the **interview survey** in the case study regions. Target groups which have been interviewed with respect to market issues are national Control Authorities and Single Contact Points. In most cases CAs are employees of the national Agricultural Ministries and the respective department for dairy products. It is obvious that those interviewees have a profound knowledge about the milk market and can serve as competent experts.

Both results, from the quantitative and qualitative analysis, are discussed and summarised below. Main indicators for the market impact of the SMS are summarised within Table 14.



Table 14: Indicators and Methods for Evaluation Question No. 1

Objectives of the question	Indicators	Methods of measurement
Working Package 3: Answers to the evaluation questions		
Question 1 “To what extent has the School Milk Scheme reached its objective of balancing the milk market and stabilising the market price for milk and milk products?”	<ul style="list-style-type: none"> • Development of milk and milk products production in Europe and European Member States under the SMS • Development of milk and milk products consumption in Europe and European Member States under the SMS • Development of milk and milk products imports and exports (net-trade situation) under the SMS • Development of milk and milk products whole sale and retail prices under the SMS 	<ul style="list-style-type: none"> • Quantitative approach: Statistical analysis of ex-post time series in all European Member States (EU27). Regression analysis between market and SMS implementation variables. <u>Information sources:</u> Official statistical data bases e.g. EUROSTAT National statistical databases related to the agricultural sector • Qualitative approach: Standardised expert interviews with national Control Authorities in the 8 case study regions

▲ Answer to the evaluation question

To answer the question on how the presence or the scale of the SMS has an impact on the EU milk market, **it has firstly been recognized that the volume of the supplied milk under the scheme compared to the total market volume of milk and milk products in the EU (represented e.g. by the total amount of raw milk delivered to EU dairies) is very small if not marginal.**

As displayed in Table 15 the **share of subsidised products within the EU SMS in total volume of raw milk supplied to dairies (both values in milk equivalent) is approximately 0.3%**. This situation has not changed within the evaluation period. Thus, already without carrying out any statistical analysis it can be supposed that the market impact of this intervention is very low if not marginal or negligible taking into account the absolute amount of subsidized products under the scheme. This finding underlines the results of the first evaluation analysis of the School Milk Programme carried out in 1999.⁶² Here it is mentioned that “[...] overall, the volume of milk and milk products supplied under the scheme is extremely small relative to the size of the EU market. It is also declining in relative importance. This suggests that any net positive impact of the scheme on consumption levels identified in the study should be seen within this broader context of total EU consumption. At best, any impact of the scheme has been very small relative to the context of its primary objective.”

⁶² CEAS Consultants (1999): Evaluation of the school milk measure - final report.



Furthermore, the 2011 Report of the European Court of Auditors⁶³ on the effectiveness of the school milk and fruit scheme stated a similar outcome in its investigation. It is also mentioned that “[...] *in both cases, even if these amounts were spent effectively, the volumes to which they correspond are not likely to have a significant direct impact on market equilibrium.*”

Table 15: Share of products subsidized under the SMS in total dairy market volume

in 1.000 tons	2004			2010			Trend	
	Total products under SMS	Total milk supplied to dairies (A)	Share of SMS in (A)	Total products under SMS	Total milk supplied to dairies (A)	Share of SMS in (A)	Development product amount under SMS	Development milk supplied to dairies
AUSTRIA	4	2,617	0.2%	4	2,771	0.1%	-3%	6%
BELGIUM	5	2,845	0.2%	4	3,067	0.1%	-30%	8%
BULGARIA		798		0	565	0.0%		-29%
CYPRUS		2,563		1	2,312	0.1%		-10%
CZECH REPUBLIC	4	140	3.1%	2	151	1.5%	-46%	8%
DENMARK	17	4,433	0.4%	11	4,830	0.2%	-33%	9%
ESTONIA	1	536	0.3%	4	621	0.6%	158%	16%
FINLAND	24	2,373	1.0%	20	2,289	0.9%	-17%	-4%
FRANCE	68	22,915	0.3%	59	23,576	0.3%	-12%	3%
GERMANY	46	27,113	0.2%	35	29,076	0.1%	-24%	7%
HUNGARY	14	1,542	0.9%	6	1,322	0.5%	-58%	-14%
IRELAND	4	5,268	0.1%	3	5,327	0.0%	-31%	1%
ITALY	8	9,994	0.1%	9	10,500	0.1%	9%	5%
LATVIA	0	478		1	625	0.1%	2087%	31%
LITHUANIA	0	1,140	0.0%	2	1,278	0.1%	8922%	12%
LUXEMBOURG	0	258	0.1%	0	282	0.0%	-28%	9%
NETHERLANDS	6	10,561	0.1%	3	11,626	0.0%	-55%	10%
POLAND	10	8,151	0.1%	52	9,002	0.6%	407%	10%
PORTUGAL	7	1,873	0.4%	7	1,829	0.4%	5%	-2%
ROMANIA		1,019		49	904	5.4%		-11%
SLOVAKIA		937		3	800	0.4%		-15%
SPAIN	7	5,880	0.1%	4	5,877	0.1%	-41%	0%
SWEDEN	54	3,229	1.7%	48	2,862	1.7%	-10%	-11%
UNITED KINGDOM	47	14,114	0.3%	29	13,582	0.2%	-39%	-4%
Total EU	327	130,777	0.3%	356	135,074	0.3%	9%	3%

Source: Own calculation based on EU SMS statistics and the evaluation's implementation and interview survey

However, this absolute quantity of subsidy cannot serve as the sole indicator for the SMS's market impact. The SMS (and the School Fruit Scheme, too) is based on the assumption that it affects the consumption behaviour of children which later become parents and then grandparents, passing on their milk drinking habits on the next generations, so that milk consumption of generations increases over the entire life span. This may result in a remarkable impact on the market balance, in comparison with a counterfactual situation without a SMS. Due to these multiplier effects the relevance of this intervention with respect to its market target may increase over time.

⁶³ European Court of Auditors (2011): Are the school milk and school fruit schemes effective?. Special Report No. 10



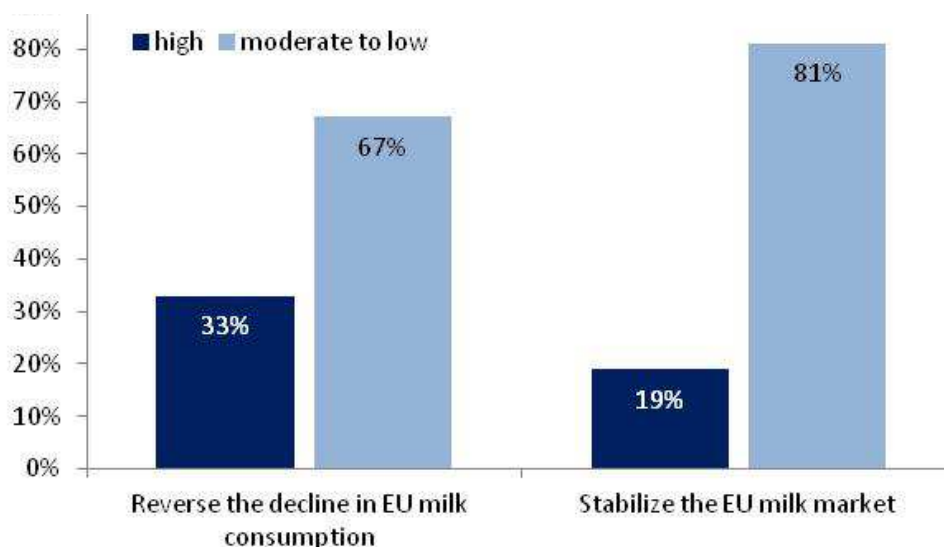
On the one hand such supposable multiplier or leverage effects lack often of quantitative indications and statistical evidence for their existence. On the other hand it is also difficult to find evidence for their non-existence.

To further investigate the theoretical market impact of the scheme a **statistical regression analysis** is done. Thereby, the hypothesis is corroborated that the presence and in particular the scale of the scheme has a positive impact on total drinking milk consumption and raw milk prices in the participating Member States. As variable representing the scale of the scheme the *total amount of subsidized products* within the scheme (in tons of milk equivalent) is used as this variable is to a large extent available for all participating Member States and in each year of the evaluation period (2004 - 2012). A detailed description of the statistical analysis carried is given in Annex 8.10.

As displayed in Annex 8.10., **the regression analysis carried out for the independent variables “drinking milk consumption” and “raw cows’ milk price” show, that no significant impact of the SMS - neither a direct nor an indirect (leverage) one - on the overall milk market in the participating countries can be verified.** The main reason for this might be the large number of milk market drivers, in particular the on-going milk market reform, which makes an explicit identification of the supposable low if not moderate market impact of the scheme very difficult.

However, this finding is not an ultimate evidence for the non-existence of a market effect! For this reason additional qualitative methods have been applied by adding explicit questions on the scheme’s market impacts within the interview survey in the case study regions. Main target groups have been national Control Authorities (CAs) and Single Contact Points (SCPs) since they have a profound knowledge about the milk market and can serve as competent experts. However, also the opinions of school headmasters and parents have been taken into account. Overall about 75 interviewees in the eight case study regions have been asked. The results of the question “What do you think: To what extent is the scheme relevant in order to achieve its objective to (a) reverse the decline in EU milk consumption and (b) to stabilize the EU milk market?” are displayed in Figure 23.

Figure 23: Relevance of the scheme for the market target – interviewees’ evaluation



Source: Own illustration based on the evaluation's interview survey



As one can observe the impact on the EU milk consumption and the overall impact on the milk market is differently evaluated by the interviewees. Following the intervention logic (Figure 1), impact (a) “*reverse the decline in EU milk consumption*” can be interpreted as a short- or medium-term impact, whereas impact (b) the “*stabilization of the EU milk market*” can be interpreted as a long-term or global output of the scheme. **From this perspective it seems to be considerable that the interviewees believe stronger in the short-term impact (33%) of the scheme than in the more uncertain long-term impact (19%).** However, for both objectives of this intervention the majority of interviewees (67% and 81%) stated that they evaluate the relevance of the scheme as moderate if not low or negligible. Main reason for this rating mentioned by the interviewees is the low product volume of the scheme in relation to the total market volume of milk products. Those who mentioned a high relevance with respect to the market target refer to the supposable multiple- / or leverage effects of the scheme which was already discussed above.

Box 5: Conclusions on the scheme’s market impact

- The volume of the supplied milk under the scheme is very small compared to the total market volume of milk and milk products in the EU (about 0.3% on EU level).
- However, this relative quantity cannot serve as the sole indicator for the SMS’s market impact. The SMS is based on the assumption that it affects the consumption behaviour of children which later become parents and then grandparents, passing on their milk drinking habits on the next generations, so that milk consumption of generations increases over the entire life span. This may result in a remarkable impact on the market balance, in comparison with a counterfactual situation without a SMS. Due to these multiplier effects the relevance of this intervention with respect to its market target may increase over time.
- Quantitative indicators for these long-term multiplier or leverage effects are however difficult to define and statistical evidence on the magnitude of the long-term effects is therefore hard to provide.
- The statistical analysis carried out in this evaluation provided no significant results to verify the existence of a market impact beyond the quantities purchased for distribution in the SMS. The interview survey carried out for this evaluation in eight MS shows that most of the involved stakeholders evaluate the immediate market impact of the SMS as moderately relevant and small.



5.1.2 Evaluation question 2

▲ Understanding of the question

The second main objective of the SMS is to stimulate the consumption of milk and dairy products, in particular among children and young people. Answering Evaluation Question No. 2 **“To what extent has the School Milk Scheme reached its objective of stimulating consumption of milk by young people by providing them with healthy dairy products?”** aim at measuring the following aspects:

- Does the implementation of the SMS increase children’s consumption of milk products?
- Is it possible to identify particular milk products that especially increase children’s consumption? What kind of milk products are preferred by the children?
- Does the scheme’s implementation have an impact on children’s diet and eating habits?
- Does the scheme have a continued impact on children’s consumption of milk and milk products in the long run, even after they do no longer benefit from the scheme?
- Is there a potential to expand the SMS and to further stimulate the consumption?
- What are main drivers and constraints for stimulating milk consumption within the SMS?

▲ Method of measurement

The answer to Evaluation Question No. 2 will be based on three kinds of information sources: (1) a literature review on milk consumption of children and existing evaluation reports, (2) an analysis of national statistical data on the consumption of milk and (3) the expert interviews.

Table 16: Indicators and Methods for Evaluation Question No. 2

Objectives of the question	Indicators	Methods of measurement
Working Package 3: Answers to the evaluation questions		
Question 2 “To what extent has the School Milk Scheme reached its objective of stimulating consumption of milk by young people by providing them with healthy dairy products?”	<ul style="list-style-type: none"> ● Development of milk consumption in Europe under the SMS ● Development of school milk consumption since 1988 with particular emphasis on the period 2000-2010 in Europe under the SMS ● Children’s preference on milk products in comparison to distributed products under the scheme ● Average school milk consumption among participants and among all children in the target group ● Main promoter for the distribution of school milk ● Main constraints for the distribution of school milk 	<ul style="list-style-type: none"> ● Quantitative approach: Statistical analysis of ex-post time series in all EU Member States Literature review of evaluation reports about school milk <u>Information sources:</u> Official statistical data bases e.g. EUROSTAT, Data on the SMS gathered by the Commission and at national level ● Qualitative approach: Standardised expert interviews with national Control Authorities in the 8 case study regions



▲ Answer to the evaluation question

The German *Forschungsinstitut für Kinderernährung* recommends a daily intake of milk and milk products of 300-350g for children under 7 years; the department of health in the United Kingdom 360-480ml⁶⁴ if no other calcium-rich food is eaten. 7-year-olds and older children as well as adolescents are recommended to eat or drink at least 400g of milk products per day (Table 17). **When comparing these recommendations with the data available for children's milk consumption in several Member States⁶⁵ the averages lay either above or below the recommended intake.** While Bulgaria and Germany (243g of milk products per day) do not meet the recommendation for toddlers, daily dairy intake in Spain (520g), Belgium, the Netherlands, Finland and Italy exceeds the reference values. For children aged 3-9 years, Greece, France, Czech Republic, Germany, Italy, Bulgaria and Latvia (163g) remain below the recommended intake. In the same age group Finish (588g), Danish, Spanish, Swedish, Belgian and Dutch children consume more milk and milk products than recommended. Among adolescents the consumption rate is too low for Czech Republic, France, Italy, Cyprus, Belgium, Germany and Latvia (155g) and is in agreement on the main lines for Spain (456g) and Sweden.

Milk consumption⁶⁶ as well as the liking of milk products⁶⁷ are declining with increasing age, independent of higher recommended intake values. Thus, although milk and milk products belong to the most important nutrition category for children under 12 month,⁶⁸ data suggest that **adolescents can be regarded as a target group with special needs.** Since 2008, the SMS supports milk distribution in secondary schools. The majority of EU Member States has introduced the scheme in secondary schools, with the exception of Bulgaria, partially Belgium (Flanders), Malta, Portugal and Slovenia. Nevertheless, all of the Member States mainly focus on the participation of primary schools (compare Chapter 4.2.3.2), likely keeping in mind that eating habits are formed at an early age.

Table 17: Recommended intake of milk products (g/day) for children

Age-group	1 year - under 2 years	2 - under 4 years	4 - under 7 years	7 - under 10 years	10 - under 13 years	13 - under 15 years	15 - under 19 years
Recommended intake	300	330	350	400	420	Girls:425 Boys:450	Girls:450 Boys:500

Source: Forschungsinstitut für Kinderernährung (FKE) 2008, a German research institute for child nutrition

⁶⁴ Family Health Service, Department of Health (2012): "Recommendations on Milk Intake for Young Children Information for Health Professionals", p. 2, online-publication:
http://www.fhs.gov.hk/english/reports/files/Info%20for%20HP_Milk%20Feeding_final_Feb%202012.pdf

⁶⁵ For the interpretation of the data described one has to keep in mind that information about children's milk consumption is not available for all EU Member States and that data are based on different methods of analysis.

⁶⁶ Deutsche Gesellschaft für Ernährung (2008): „Ernährungsbericht 2008“, Bonn, p. 56-79;
Øvrebø, Else Marie (2010): „Food habits of school pupils in Tromsø, Norway, in the transition from 13 to 15 years of age“, online publication, <http://munin.uit.no/bitstream/handle/10037/3806/article.pdf?sequence=3>,

⁶⁷ Cooke, Lucy J. and Wardle Jane (2005): "Age and gender differences in children's food preferences", British Journal of Nutrition (2005), 93, p. 744

⁶⁸ Deutsche Gesellschaft für Ernährung (2008): „Ernährungsbericht 2008“, Bonn, p. 55

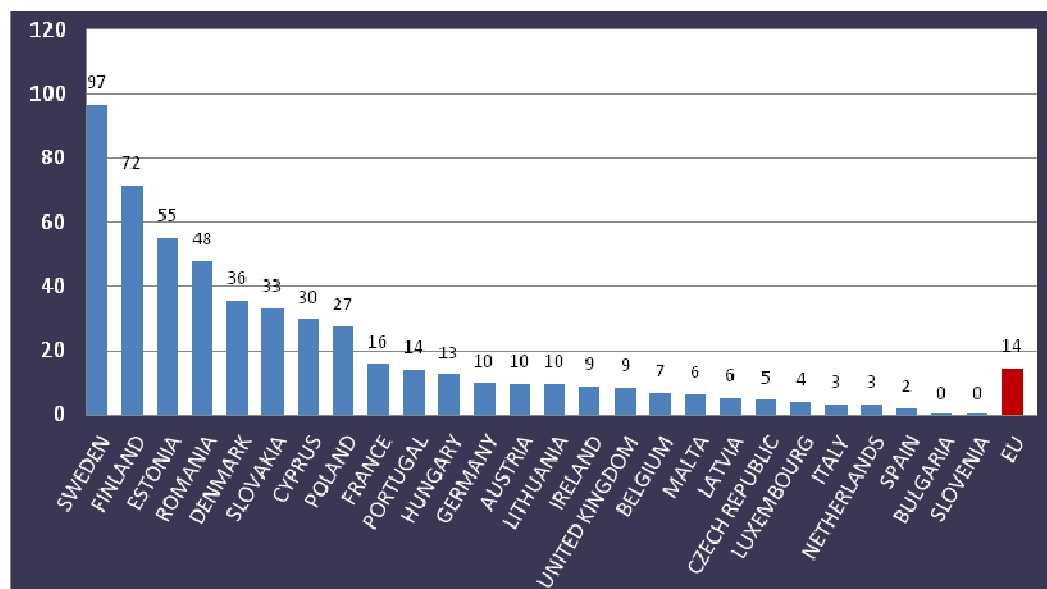


▪ **Does the implementation of the scheme increase children's consumption of milk and milk products?**

Against the background of a declining milk consumption in the EU, the low consumption of milk and milk products among children in several Member States and among adolescents in almost all Member States as well as the increasing need to implement healthy eating habits, the relevance of the scheme's objective to stimulate the consumption of milk and milk products of young children becomes obvious. In order to evaluate to which extent the scheme has reached its objective, children's additional consumption resulting from the participation in the SMS has to be analysed. Since the Member States are not legally obligated to monitor and evaluate the impact of the SMS, the report cannot rely on a comparable data base. The national studies and analysis of the SMS were reported in three Member States.⁶⁹

A theoretical approach shows a rather marginal increase of children's milk consumption (Figure 24).⁷⁰ **On an EU average, a child received approximately 3.5 litres of milk (14 portions per 250ml) throughout the programme during the school year 2010/11. This adds up to a contribution of approximately 4.5% to the daily recommended intake. The average however does not properly represent the situation in the Member States because the provision differs greatly among the participating countries. Children in Sweden receive almost 100 portions of milk, while the distribution in Bulgaria and Slovenia does totals to less than 10ml per child and school year.**

Figure 24: Number of distributed milk portions (250ml) per child (2010/11)



Source: Own illustration based on the basic survey among the Member States and on SMS data provided by European Commission, DG-AGRI (05.02.2013)

⁶⁹ In the working process of this evaluation all participating Member States have been asked for studies and reports about the impact of the SMS. Only 3 Member States refer to analyses of the scheme.

⁷⁰ In this approach, the number of portion provided, using the maximum subsidisable quantity of 250ml, has been calculated based on the quantities in tons of milk equivalent which were distributed under the scheme in 2010/11. The number of portions has been divided by the number of children in the specific target group of the scheme as presented in Table 10. For Belgium, France and Germany the reported number of participating children in the scheme have been used since these Member States did not specify a particular target group.



The few available reports on the SMS deal in particular with economic aspects of the scheme; only two studies include aspects of the scheme on milk consumption which are presented exemplary in the following:

A research project in Germany⁷¹ analysed primarily price influences but also other drivers on the consumption of school milk.⁷² A price reduction for school milk from 35ct. per portion to 25ct. stimulated the average consumption per capita of pupils from 0.31 to 0.39 portions per day. A further reduction of additional 10ct. did not result in a higher up-take. A remarkable additional demand was found if the school milk was provided free of charge.⁷³ **The report concludes that a reduced price affects the demand for school milk positively while a free provision is able to substantially expand the scheme.** Since the EU grants community aid for the implementation of the SMS, leading to reduced prices for milk and milk products provided in participating educational establishments, it can be concluded that the scheme stimulates the consumption of school milk. The study however misses to evaluate the increase in milk consumption as baseline/follow-up measurement as well as potential substitution effects meaning that children drink more milk in school but less at home. Hence, based on these data it is not possible to prove an increase in children's general milk consumption.

Among other drivers for milk consumption, the study identified that eating habits at home, in particular **the regular consumption of milk and milk products, and the image of milk products influences the intake of school milk.** Children who are used to drinking milk on a regular basis believing that it is a healthy refreshment are more likely to choose school milk than children with little milk consumption, thinking of milk as a product for "babies" or a disgusting liquid.⁷⁴ **Considering the link between consumption at home and in school as well as the influence of the product image, the EU SMS can be a tool to stimulate children's consumption of milk products if it adds to a positive image,** e.g. through modern packaging or hands-on activities in school, or by motivating children to drink milk in school as part of a social event or classroom ritual. Experiences from the EU school fruit scheme suggest that eating fruits and vegetables together with fellow pupils leads to a stronger demand for these foods at home. A similar effect can be expected for dairy products.

This assumption is also confirmed by the results of a study on school milk which was carried out in 2005 in the United Kingdom.⁷⁵ The evaluation of children's milk consumption demonstrated that children whose schools participate in the EU SMS drank almost 20% more milk

⁷¹ Salamon, Petra; Weible, Daniela; Bürgelt, Doreen; Christoph, Inken B.; Peter, Günter; Gonzalez, Aida; Rothe Andrea and Weber Sascha A. (2010): "Ökonomische Begleitforschung zum Bundesmodellvorhaben „Schulmilch im Fokus“, Endbericht, online publication: <http://www.ti.bund.de/?id=6639>

⁷² The methodological approach implies quantitative and qualitative research in 600 primary schools (intervention and control group) in the school year 2008/09; of which 125 schools are analysed in depth (detailed interviews with pupils, headmasters and parents). Ibid p. 43

⁷³ Ibid, p. 188

⁷⁴ Ibid, p. 160

⁷⁵ London Economics, New, Susan (2005): "Evaluation of the National Top-Up to the EU School Milk Subsidy in England", p. 61, online publication: <http://archive.defra.gov.uk/evidence/economics/foodfarm/evaluation/schoolmilk/Fullreport.pdf>

The study design included 404 pupils (50% intervention group) aged 5-11 in 11 schools. Pupils were asked to fill in a questionnaire together with their teacher answering among other questions about the occasions when they had consumed milk. The quantities of milk were then calculated as qualified estimate.



per day (517ml) than children in non-participating schools (432ml).⁷⁶ However the statistical significance of the participation effect is reported only at a 10% level, thus missing a strong evidence. **The increase in milk consumption as an impact of the SMS was stated on an average of approximately 57ml although the individual consumption of school milk is likely to deviate from the average since not all pupils in participating schools drank school milk.**⁷⁷ Further analyses of the total milk consumption among participating pupils demonstrated that a high increase in ratios is found for children who usually drink milk, while the impact on children with little milk consumption remained on a lower level.⁷⁸

Summing up the statements from the interview survey it can be said that **the impact of the scheme on children's consumption is depending on its scale. If the up-take is as high as in the case of Poland, positive effects are noticed.** Polish interviewees point out an increase in the general milk consumption of 14% within the period of 2004-2012.⁷⁹ **In Member States where only few schools participate**, e.g. in Germany, United Kingdom and the Netherlands, **interviewees expect hardly any effect.** However, both groups agree that the scheme contributes to children's diet, namely by means of repetitively providing access to milk and milk products in educational establishments leading to a higher acceptance of these products.

Taking the low coverage of the target group,⁸⁰ the theoretical increase in consumption⁸¹ and the recent subsidy rate into consideration, a high potential for expanding the scheme becomes evident. The question whether this potential will be turned into a greater up-take depends - among other things - on the scheme's support in the Member States and the participation of educational establishments.

- **Is it possible to identify particular milk products that especially increase children's consumption? What kind of milk products are preferred by the children?**

The SMS offers Member States to select a variety of milk drinks and milk products for the distribution in schools. These products differ in consistence, ingredients, appearance and taste. The SMS allows Member States to respond to certain regional preferences in taste, which become obvious for example by the fact that Sweden includes "filmjök" (a type of soured milk) under the scheme, Italy distributes parmesan cheese and Cyprus Halloumi cheese.

Studies on children's preferences in taste as well as on children's actual consumption illustrate that children do not like all dairy products in the same way. For example cottage cheese and processed cheese belong to the most disliked foods within those food items

⁷⁶ Ibid p. 61

⁷⁷ Ibid p. 62

⁷⁸ Ibid p. 63

⁷⁹ According to the CSO and the IAFE, the consumption of milk in 2004 was equal to 174 l per capita, and reached 196 l per capita in 2012.

⁸⁰ More than 13 Member States do not reach 25% of their specified target group and only 2 Member States reach more than 75% of all children aged 1-18 years.

⁸¹ The increase in consumption totals to approximately 10% on average in the specified target groups.



that at least 75% of the school children have tried.⁸² Furthermore, **taste preferences change during children's development.**⁸³ Statements from the interview survey suggest that **children prefer products which are rather neutral in taste and smell: milk, yoghurt, cream cheese and curd. Less attractive are sour milk products, e.g. kefir and sour yoghurt, as well as strong cheese.** Nevertheless, schools in France offer strong cheese in various forms to get children used to the taste. Cyprus and Sweden report that children like cheese on sandwiches; in Italy, children eat Parmesan on pasta although they do not care for hard cheese as such. Member States which offer flavoured and unflavoured milk, for example Germany, Hungary, the Netherlands and Poland, found that flavoured milk meets children's preferences better than plain milk. The most popular flavour is chocolate, followed by vanilla and fruit flavours. Opinions whether children prefer semi-skimmed milk or full-fat milk are diverse.

Children's stronger preference for milk and milk products compared to products categorised as cheese and curd becomes evident from the EsKiMo- study and is illustrated in Table 18.⁸⁴ In general, the share of cheese and curd does not exceed 10% of the consumption of other dairy products, but the share rises while the children grow older.

Table 18: Actual average consumption of milk products among German children

Average consumption of milk and milk products [g/day]								
Age-group	1 year - under 4 years	4 – under 5 years	6 – under 7 years	7 – under 10 years	10 - under 12 years	12 - under 13 years	13 - under 15 years	15 - under 18 years
Boys: Milk and milk products	271	293	317	277	274	376	370	378
Girls: Milk and milk products	230	239	252	246	232	302	277	301
Boys: cheese and curd	25	28	28	27	25	27	31	43
Girls: cheese and curd	25	24	22	26	28	32	37	38

Source: Deutsche Gesellschaft für Ernährung 2008

In a study in North Rhine-Westphalia, a German federal state, pupils were asked which kind of the milk products listed they would like to eat during school breaks.⁸⁵ 45% answered not to wish for any of the products. Out of the 6,103 pupils who would choose a product, 62% preferred cheese bread, 38% yoghurt and 24% liquid yoghurt (Figure 25).

⁸² Cooke, Lucy J. and Wardle Jane (2005): "Age and gender differences in children's food preferences", British Journal of Nutrition (2005), 93, p. 743f.

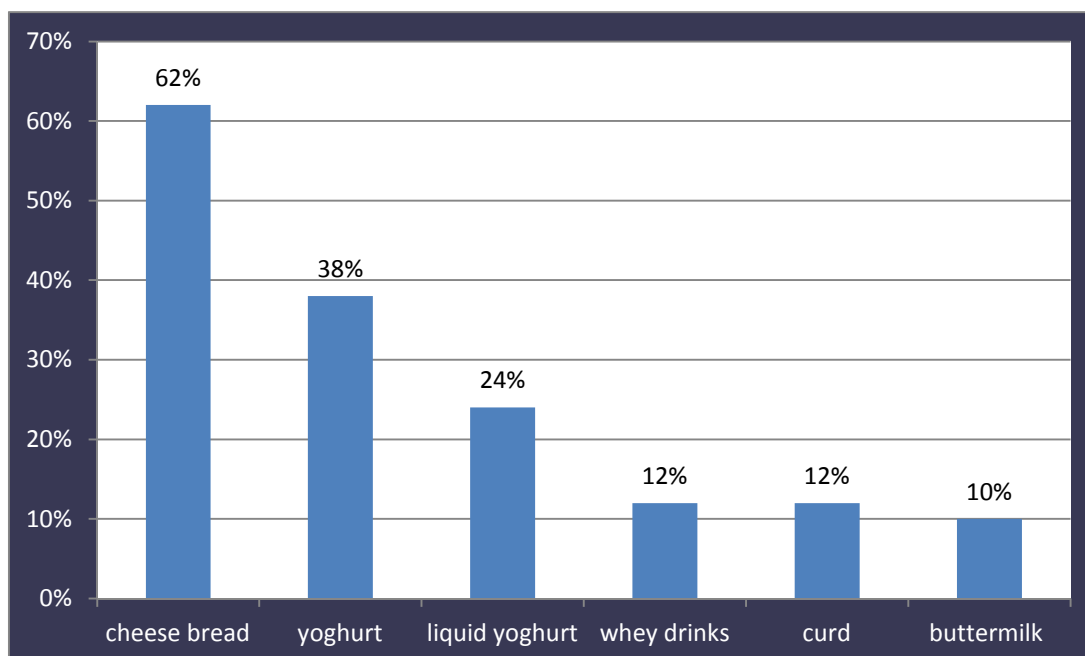
⁸³ Ibid, p. 744

⁸⁴ Deutsche Gesellschaft für Ernährung (2008). „Ernährungsbericht 2008“, p. 60-93

⁸⁵ Pfau, Cornelia; Bonfig, Julia; Clobes, Melanie; Gerber, Franka; Goos-Balling, Eva; Grillenberger, Monika; Kaiser, Josa; Lang, Claudia; Lehmann, Stefanie; Schlecht, Inga and Strassburg, Andrea (2011): "Einflussfaktoren auf die Nachfrage nach Schulmilch in Grundschulen in Nordrhein-Westfalen – Ergebnisbericht", Karlsruhe, p. 61



Figure 25: Milk products that children would like to eat during school breaks



Source: Pfau, Bonfing, Clobes et al. 2011

In the same study 6,725 pupils stated to drink school milk and gave taste preferences as the most important reason for their decision.⁸⁶

Although some children do not like the taste of liquid milk in general, **milk appears to be the least rejected product.** With regard to yoghurt, the statements found in the interviews either point out concerns that plain yoghurt does not consent with children's taste or in other cases mentioned among the products children like best was yoghurt. **This general impression corresponds very well with the products provided under the scheme,** taking into account that milk and milk products other than cheese allocate for more than 80% of the total provision (compare Chapter 4.2.2).

- **Does the scheme implementation have an impact on children's diet and eating habits?**
- **Does the scheme have a continued impact on children's consumption of milk and milk products in the long run, even after they do no longer benefit from the scheme?**

In the interview survey parents, headmasters, suppliers and administrative authorities of the scheme have been asked whether they have noticed that the scheme contributes to a higher consumption of milk and milk products also at home or during holidays. The majority of control authorities and suppliers agree that additional measures, e.g. ensuring parental support at home and including educational measures, have to be undertaken to gain a sustainable impact. Nevertheless, they highlight that the scheme creates a routine to drink milk, which is an important step to develop a habit of drinking milk outside schools.

⁸⁶ Ibid, p. 53f.



As regards to long-term effects, the interviewees point out a lack of evidence since no data are available. From their personal point of view the majority does not believe that the scheme has an impact on the consumption habits in the long run for several reasons:

- The scheme's scale is too small and only few children are covered
- Simply offering milk in schools does not create a habit
- Other factors that are not integrated or controlled by the scheme influence eating patterns, especially consumption at home, parental provision of food and food marketing activities
- School canteens would provide milk and milk products anyway even without subsidies.

Most stakeholders agree that eating habits are formed at an early age and that therefore the availability of milk and milk products in educational establishments is important in order to influence children's food preferences. Furthermore, **a comparison of the statements from Sweden and United Kingdom presents a link between the duration of milk distribution and a possible long-term effect.** Whereas most children in the UK cannot continue the programme in secondary schools since the scheme is rarely implemented in this type of educational establishments, students in Sweden profit from the scheme until they are almost grown-up and leave school. By that time the eating habits are settled, in contrast to drinking habits after attending primary school. Parents mostly cannot identify any changes in their children's consumption. They explain that their children have always drunk milk and eaten milk products and that the participation in the SMS thus neither changes dietary patterns at home nor the menus offered in schools. Only in Poland, parents are convinced that their children like milk and milk products more since they are participating in the programme. **If substitution effects occur they are rather noticed for sodas than for sweets and snacks.** Milk then replaces sodas, other soft drinks and fruit juices. **The effect is limited as food and school policy** in France, Sweden and United Kingdom does not allow sugary beverages on school ground. Substitution effects vary from child to child; they are in particular reported for Germany, the Netherlands and Poland if milk is available in school canteens or part of a common breakfast time in the class room. In Poland, the SMS also motivates schools to offer a healthier assortment of beverages.

- **What are the main drivers and constraints for stimulating the milk consumption within the programme?**

The results of the interview survey show that participants appreciate the SMS primarily because it ensures children's access to milk and milk products and provides them with refrigerated milk products at a temperature that meets children's preferences. Several Member States highlight that schools and children of all parts of the society can participate in the programme, although the effect on children with a general low consumption of milk products remains uncertain. As in France, Sweden and the Netherlands, the SMS adds to the quality of food available in school canteens. It also offers alternatives to sodas, e.g. in the Netherlands and in Germany. School personnel recognises that children like to participate in the programme and to consume milk and milk products; however a lot of them are unaware of the scheme. Hence, schools do not receive a lot of direct feedback from the children. Still the distribution of products becomes part of their normal routine. Parents state that in general children like milk. **Children do not report about the scheme at home, probably because they are not aware of it.** Some children do not like milk at all; one child decided not to participate in the scheme any longer but kept on drinking milk at home. Her mother



explains this decision by the fact that only few children in the class participate in the programme and her daughter probably would feel like an exception. The product range under the scheme covers theoretically a wide assortment; however several Member States restrict the assortment remarkably while other products, e.g. fruit yoghurts that fulfil the specification of the EU legislation are not included in the assortment of the milk suppliers on a regular basis and are therefore not included in the implementation of the programme.

Box 6: Conclusions on the scheme's impact on the consumption of milk by young people

- ▲ Among adolescents, milk consumption does not meet the recommended intake, making them a target group with special needs, yet out of focus in most Member States.
- ▲ Children who are used to drink milk on a regular basis and regard milk as healthy and desirable are more likely to choose school milk than children with little milk consumption.
- ▲ The impact of the scheme on children's consumption is depending on its scale. In countries where the up-take is high, positive effects are noticed.
- ▲ High potential for expanding the scheme by higher coverage of the target group, a theoretical increase in consumption and a higher subsidy rate.
- ▲ Children prefer products which are rather neutral in taste and smell like milk, yoghurt, cream cheese and curd. Sour milk products like kefir and sour yoghurt, as well as strong cheese are less attractive to them. Plain milk is the product less rejected, even though flavoured milk is more popular, especially chocolate milk.
- ▲ Additional measures like ensuring parental support at home and including educational measures have to be undertaken to gain a sustainable impact from the scheme.
- ▲ Regularly providing school milk leads to a habituation to milk products, which is an important part of developing the habit of drinking milk outside school.
- ▲ Long term effects of the scheme on the milk consumption cannot be assessed. The scheme's scale is limited, it focuses on product distribution and does not encourage other measures to form eating habits.
- ▲ Substitution effects may be rather noticed for sodas than for sweets and snacks.
- ▲ Children like to consume milk and milk products at school, but children and parents are often not aware of the scheme since school milk is provided as part of the normal catering.
- ▲ Constraints against the scheme are a low cost-benefit-ratio by the organisational burdens in schools, administrative processes, waste management and logistics.



5.1.3 Evaluation question 3

▲ Understanding of the question

Evaluation Question No. 3 **“To what extent has the SMS fulfilled its educational purpose by contributing to fighting against obesity? To what extent has the educational purpose of the scheme been effectively conveyed?”** refers to the logic of the SMS that the distribution of milk products in educational establishments will stimulate children’s milk consumption and will, once the children get used to a regular milk intake, generally lead to an increasing milk consumption. The logic is based on the approach to turn milk consumption into a behavioural pattern. The answer therefore needs to take into consideration:

- The educational character of the relevant EU legislation of the SMS
- Educational measures undertaken by the Commission in the framework of the SMS
- The educational measures undertaken by the relevant stakeholders and Member States

▲ Method of measurement

The question is answered by analysing the educational character of the SMS. Educational elements in the legislation are identified. In addition, measures carried out under the scheme are taken into account. The effectiveness of the educational impact of the SMS is examined in three steps: (1) By a **literature review the most effective approaches for changing behaviour** and turning certain activities into behavioural patterns are identified. (2) The educational contribution of **the SMS is compared to** the educational measures of a similar scheme, namely **the School Fruit Scheme**. (3) The **impact on the target group is analysed** through qualitative expert interviews.

Table 19: Indicators and Methods for Evaluation Question No. 3

Objectives of the question	Indicators	Methods of measurement
Working Package 3: Answers to the evaluation questions		
Question 3 “To what extent has the School Milk Scheme fulfilled its educational purpose by contributing to fighting against obesity? To what extent has the educational purpose of the scheme been effectively conveyed?”	<ul style="list-style-type: none"> ● Educational character of the relevant EU legislation ● Educational activities carried out under the scheme ● Educational elements that are in line with recent findings of behavioural change ● Educational elements compared to the elements in the SFS ● Links to the fight against obesity ● Impact on the target group, e.g. increased knowledge about milk (products) or the benefits of milk consumption 	<ul style="list-style-type: none"> ● Qualitative approach: Analysis of the relevant EU legislation (SMS and SFS) Literature review of research on behavioural change Expert interviews <u>Examples of information sources:</u> EC No. 657/2008 Strategy for Europe on Nutrition, Overweight and Obesity Studies on behavioural changes



▲ Answer to the evaluation question

A literature review on the most effective approaches for school-based interventions towards a more balanced diet shows that educational measures are likely to have an impact on eating behaviour. However, their relevance depends on the intervention design.

Early studies based on an **information approach** report a significant increase in nutritional knowledge and an impact on attitudes towards healthy eating, but **did not lead to a change in behaviour**.⁸⁷ **Sharma (2006) underlines the need to base school interventions on behavioural theories, of which the social cognitive theory turns out to be the most common**.⁸⁸ This theory describes how people develop and keep certain behavioural patterns depending on the social and physical environment, people and behaviour.⁸⁹ The theory takes into consideration personal and social influences on behaviour, such as experiences and reinforcement.⁹⁰ Self-regulation and reinforcement are regarded as the main mechanisms towards a desired behaviour.⁹¹ In line with the social cognitive theory, **more recent interventions are often designed as a multi-component approach modelling environmental, social and personal determinants of eating habits**.⁹² Although Sharma's review of different approaches identified successful single-component interventions, multi-component strategies have been found to be more effective than strategies based on single components, a finding that can partly be explained by synergistic effects between educational and environmental strategies.⁹³ Multi-component intervention designs may include class-room activities, self-goal setting, information for students and parents, rewards,⁹⁴ increased access to certain foods, an enjoyable eating environment, workshops for teachers and various other measures.¹⁹⁸ **Systematic and holistic approaches go a step further by integrating the**

⁸⁷ O'Dea, Jennifer (2005): "School-based health education strategies for the improvement of body image and prevention of eating problems. An overview of safe and successful interventions", Health Education, Vol. 105. No. 1, p. 14;
Carvalho, Graça S.; Vieira, Margarida and Anastácio Zenlia (2012): "A healthy lifestyle and school intervention: conceptual and attitudinal change but no behavioural change", XV IOSTE Symposium (International Organisation for Science and Technology Education) – The use of Science and Technology Education for Peace and Sustainable Development. Hammamet, Tunisia, p.1-10; online publication: http://repositorium.sdum.uminho.pt/bitstream/1822/20883/3/IOSTE_HealthyHabits.pdf

⁸⁸ Sharma, M. (2006): "School-based interventions for childhood and adolescent obesity", obesity reviews (2006), 7, p. 267

⁸⁹ Bandura, Albert (1998): "Health Promotion from the perspective of social cognitive theory", Psychology and Health, 13, p. 623

⁹⁰ Bandura, Albert (1971): "Social learning theory", p. 3, online publication: http://www.jku.at/org/content/e54521/e54528/e54529/e178059/Bandura_SocialLearningTheory_ger.pdf

⁹¹ Bandura, Albert (1991): "Social cognitive theory of self-regulation", Organisational behaviour and human decision process, Vol. 50, p. 248, online publication: <http://www.uky.edu/~eushe2/BanduraPubs/Bandura1991OBHDP.pdf>

⁹² Krølner, Rikke; Jørgensen, Thea Suldrup; Aarestrup; Anne Kristine, Hjøl Anneund Christiansen; Christensen,

Anne Maj and Due, Pernille (2012): "The Boost study: design of a school- and community-based randomised trial to promote fruit and vegetable consumption among teenagers", BMC public Health, online publication: <http://www.biomedcentral.com/1471-2458/12/191>

⁹³ Sallis JF, Owen N, Fisher EB: Ecological models of health behavior. In "Health behavior and health education. Theory, research, and practice", 4th edition, edited by: Glanz K.; Rimer BK, Viswanath K.; p. 479, online publication: <http://www.ihepsa.ir/files/h1.pdf>

⁹⁴ Coates, Thomas J.; Jeffery, Robert W. and Slinkard, Lee Ann (1981): Abkürzungen von Namen am besten vereinheitlichen: erster Buchstabe mit Punkt? Ohne Punkt? Ausgeschrieben? "Heart Healthy Eating and Exercise:

Introducing and Maintaining Changes in Health Behaviors", In American Journal of Public Health, Vol. 71; p. 15-23



interventions into the school environment,⁹⁵ sometimes even into the environment for leisure activities and families.⁹⁶ Holistic strategies are regarded as a powerful way to positively influence the eating habits. Typical aspects covered in the implementation are school curricula, school food policy and general school ethos and the commitment of the whole school community.⁹⁷

Analysing the educational character of the School Milk Scheme indicates the belief of the EU that the scheme acts as an educational tool. **The preamble Commission Regulation (EC) No 657/2008 links the educational characteristic to the distribution of products**, elaborating that they shall not serve as an ingredient in regular school meals. **This underlying understanding of the educational character corresponds only poorly with educational elements defined in recent intervention models as described in the literature review. Other than that, no educational measures or characteristics are mentioned in the regulations, neither implicit nor explicit.** Consequently, the court of auditors has criticised the neglect of further educational tools: *“Regarding the anticipated long-term impact (education), the Court finds that at present the scheme takes insufficient account of the stated educational goals. In particular, distribution is not always made in a visible manner, and no other specific educational measures have been introduced.”*⁹⁸

The EU strategy on nutrition, overweight and obesity-related health issues regards educational measures as an important tool to gain life skills and to develop a healthy lifestyle. The white paper recommends concentrating on nutritional education and physical activity, suggesting cooperation with teachers in schools, sports clubs or businesses.⁹⁹ It clearly addresses the responsibilities of educational establishments: *“in ensuring that children not only understand the importance of good nutrition and exercise but can actually benefit from both.”*¹⁰⁰ The strategy therefore **asks for educational measures that accompany the distribution of healthy products and does not agree with the perspective that food provision by itself is a sufficient educational activity.**

The ambition of several Member States and stakeholders involved, to successfully implement the SMS has led to an **integration of educational measures in at least 12 Member States**¹⁰¹ even without a formal obligation. Stakeholders involved agree on the importance of the educational component, especially if it comes to gaining competencies for life, such as

⁹⁵ O'Dea, Jennifer (2005): “School-based health education strategies for the improvement of body image and prevention of eating problems. An overview of safe and successful interventions”, Health Education, Vol. 105. No. 1, p. 27

⁹⁶ Krølner, Rikke; Jørgensen, Thea Suldrup; Aarestrup; Anne Kristine, Hjøll Anneund Christiansen; Christensen, Anne Maj and Due, Pernille (2012): “The Boost study: design of a school- and community-based randomised trial to promote fruit and vegetable consumption among teenagers”, BMC public Health, p. 9, online publication: <http://www.biomedcentral.com/1471-2458/12/191>

⁹⁷ O'Dea, Jennifer (2005): “School-based health education strategies for the improvement of body image and prevention of eating problems. An overview of safe and successful interventions”, Health Education, Vol. 105. No. 1, p. 27

⁹⁸ European Court of Auditors (2011): “Are the School Milk and the School Fruit Scheme effective?”, Special report No 10, p. 6

⁹⁹ Commission of the European Communities (2007): “White Paper On A Strategy for Europe on Nutrition, Overweight and Obesity related health issues”, p. 8; 11

¹⁰⁰ Ibid, p. 11

¹⁰¹ Austria, Flanders, Cyprus, Germany, Hungary, Ireland, Latvia, Lithuania, Poland, Slovenia, Sweden and United Kingdom reported about educational activities.



healthy eating habits. Therefore, they have created a partnership to promote educational measures and activities related to the scheme; however due to financial restriction some measures are offered only periodically. **The majority of websites dealing with school milk in the MS present e.g. information for the relevant stakeholders, games, cartoons and stories for the children related to milk and various teaching materials and ideas on how to integrate the programme into school activities and school lessons.** The engagement of the Commission and the relevant stakeholders also becomes visible for example at the school milk day, a project day focusing on milk and milk consumption which is organised in numerous countries.

In the interview survey carried out for the evaluation of the SMS, dairy organisations and milk suppliers have been identified as main drivers for the provision of teaching material and organisation of hands-on activities (examples of sources for educational material and activities are listed in Annex 8.9). In some cases their activities have been or are financially supported by public funds, e.g. in UK and certain Federal states of Germany. Activities and material offered cover a wide range of approaches (Figure 26) and are dedicated to different target groups (pupils, teachers, parents and other stakeholders):

- teaching recommendations, materials and games
- school action days in school or organised as field-trips; sports activities
- organisation of breakfast times in schools
- taste shows
- drawing, art, music and literature contests for pupils
- role models (e.g. Calcimus the dinosaur, Karlotta the cow, IRMA the tooth fairy)
- provision of incentives
- advanced training for teachers, doctors, nutritionists, caterers, canteen personnel
- lectures by professional dieticians
- parent conferences
- information material for children, parents and teachers in various forms (poster, booklets, leaflets, online-information, CDs)
- newsletters
- exhibitions

In addition, the majority of Member States points out that lessons on healthy eating, nutritional value of certain foods and information on balanced diets are part of their regular syllabus and are taught e.g. in biological or home economic classes.

Beside educational measures, **Austria, the German federal state Bavaria, France, Poland and the United Kingdom run promotion campaigns for milk and milk products targeting young people.** In Slovenia, the SMS was mentioned in several radio and TV shows. Austria presented the programme at the Interpädagogica and France at the agricultural fair.

Schools which carry out educational measures **state that children are very interested and attentive in these activities**, especially in those related to food. In Poland and the United Kingdom, headmasters recognise that children are more aware of healthy eating and the benefits of milk after lessons on healthy lifestyle. Whether the increased awareness is transferred into behaviour could not be determined.



Figure 26: Examples of promotion and education material offered by a SMS supplier¹⁰²



Source: <https://www.coolmilk.com/promote> ; <http://arlaminior.se/>

Being asked whether educational measures should be integrated into the SMS, the vast majority of interviewees refers to the importance of those measures for influencing eating habits. Especially in the case study countries that do not provide any educational measures, Italy and the Netherlands, headmasters advocate their introduction into the scheme. In other Member States, the interviewees appreciate specific measures, only two Member States think that the theme is sufficiently covered in the regular lessons.

Other than for the SMS, educational measures, so-called accompanying measures, are obligatory under the School Fruit Scheme and are required by the Council Regulation 288/2009. Until today these measures are not co-financed by the EU community. The financial ratio of accompanying measures¹⁰³ to the total budget does not exceed 5%.¹⁰⁴ Accompanying measures undertaken contain knowledge transfer and action oriented designs (Table 20) and are described in the strategy papers and monitoring reports of the SFS. These measures are mostly carried out by teachers who are supported by parents, farmers and other stakeholders during action days. In most cases the intervention logistic is delegated to the schools so that the implementation varies greatly and has hardly been evaluated so far.¹⁰⁵ Strategic planning, monitoring and evaluation data are known only for the Irish Food Dudes programme.¹⁰⁶

¹⁰² For further examples see Annex 8.10

¹⁰³ Financial ratio is calculated without Ireland which implemented a completely different approach spending more than 60% of its annual budget on accompanying measures.

¹⁰⁴ European Commission (ed. 2012): „Evaluation of the European School Fruit Scheme“, p. 25; online publication: http://ec.europa.eu/agriculture/evaluation/market-and-income-reports/2012/school-fruit-scheme/fulltext_en.pdf

¹⁰⁵ Ibid, p. XIV

¹⁰⁶ Ibid, p. 137f.; p. 139



Table 20: Accompanying Measures: toolkits observed

Accompanying Measures	Number of entries (multiple answers)		
	Strategies		AMR
	2010/11	2011/12	2010/11
Poster	28	24	30
Knowledge transfer	29	24	28
Action oriented measures	21	18	20
Internet presentation	12	13	20
Strategies/AMRs* suitable	29	25	31
Strategies/AMRs available	31	31	31

* AMR: Annual Monitoring report

Source: « Evaluation of the European School Fruit Scheme », Final report p. 26

The survey on educational measures under the SMS shows that multiple activities are carried out voluntarily which add to regular lessons in schools. They address different stakeholder groups of the SMS and offer mostly a combination of knowledge transfer and action orientated approach. Measures are similar to accompanying measures undertaken under the SFS. **Key actors in the SMS are usually dairy organisations and milk suppliers which offer measures, finance and organise them; sometimes in close collaboration with nutritionists and educationalists.** Their role appears to be stronger than the one comparable organisations involved in the SFS; taking also into consideration that control authorities and ministries are not obligated to become involved in educational activities as part of the scheme's implementation and controlling process. Other than in the SFS **educational measures for school milk are not implemented in all Member States, they are mostly carried out periodically and vary from school to school. The analyses do not show any indications that the measures are based on a behaviour theory or were strategically planned. Holistic approaches are unlikely to be implemented. Furthermore, the impact of the interventions under the SMS is neither monitored nor evaluated so that the success of the measures applied cannot be determined.**

Box 7: Educational purpose of the School Milk Scheme

- ▲ No educational measures are required in the SMS. Therefore the educational purpose of the scheme has to be considered as limited when comparing to recent research on how to influence behaviour.
- ▲ There is a need to base school interventions on behavioural theories, of which the social cognitive theory together with a multi-component approach modelling environmental, social and personal determinants is the most suitable to change children's eating habits.
- ▲ Stakeholders in at least 12 Member States have included voluntary educational measures in the scheme. However, they are neither based on a behaviour theory nor were strategically planned.
- ▲ Main drivers of educational measures which target pupils, teachers, parents and other stakeholders are dairy organisations and milk suppliers.
- ▲ No monitoring or evaluation of voluntary educational measures has been carried out so far.
- ▲ When educational measures are carried out, children are very interested and attentive and become more aware of healthy eating and the benefits of milk.
- ▲ Most countries advocate including obligatory educational measures to the School Milk Scheme, similarly to the School Fruit Scheme.



5.1.4 Evaluation question 4

▲ Understanding of the question

The question **“To what extent has the EU contribution in the total cost of the School Milk Scheme and the total budget available for the School Milk Scheme influenced its effectiveness?”** aims answering how important the EU aid was or still is within the funding concept of the SMS with respect to the achievement of its targets. The hypothesis is that a broad participation and uptake of EU aid is essential for the effectiveness of the SMS.

▲ Method of measurement

For answering this evaluation question a stepwise approach is envisaged, in order to gain knowledge on different information levels (quantitative and qualitative).

The **first step** is a statistical With/Without-Comparison of implemented schemes which are characterised by (1) different shares of EU expenditure in the total costs of the scheme and (2) different levels of total budget used. The different combinations of observed input and selected output variables (effectiveness indicators) build the sum of observations which can be investigated in a statistical regression analysis. This analysis should provide statistical evidence for an existent impact of (a) the level of total SMS budget and (b) the share of EU funds in the total budget, on the effectiveness of the scheme.

The **second step** is more qualitative and will cover additional information of the interview survey carried out in the eight selected Member States. Asking Member States provide in particular useful findings on external effects of this measure which are quite difficult to measure in a quantitative way.

Table 21: Indicators and Methods for Evaluation Question No. 4

Objectives of the question	Indicators	Methods of measurement
Working Package 3: Answers to the evaluation questions		
Question 4 “To what extent has the EU contribution in the total cost of the School Milk Scheme and the total budget available for the School Milk Scheme influenced its effectiveness?”	<ul style="list-style-type: none"> Indicators referring to the overall scale of the SMS: <ul style="list-style-type: none"> - Number of participating schools and pupils - Number of subsidised milk and milk products Indicators referring to the realisation of schemes in Member States: <ul style="list-style-type: none"> - Number of new schemes in Member States under the overall EU scheme - Number of implemented schemes prior and post the implementation of the SMS and the initialisation of EU aid Further indicators referring to effectiveness as described in Question 1 and 2 Existence of external effects caused by the EU support 	<p>Quantitative approach: Statistical analysis of the information gathered by the Commission in accordance with Regulation (EC) 657/2008, Article 17 and results of the standardised questionnaire survey with national Control Authorities in the 26 participating Member States</p> <p>Qualitative approach: Standardised expert interviews with national Control Authorities and Single Contact Points in the 8 case study regions</p>



▲ Answer to the evaluation question

Taking into account the available information, the quantitative part of the answer needs to be carried out in two steps due to two hypotheses which should be analysed: **(1) The volume of the total budget spent on the scheme (incl. EU funds and national top-ups) has a positive impact on the scheme's effectiveness.** If the first hypothesis can be corroborated, hypothesis (2) - **Especially the share of EU budget in the total cost of the scheme has a significant impact on its effectiveness** - can be analysed. Both hypotheses are investigated by a statistical regression analysis which is described in detail in Annex 8.11.

Figure 83 (in Annex 8.11) shows the existence of a statistically significant positive correlation between the *total budget available per child in the target group* and the *share of participating children in the target group*. Therefore, hypothesis (1) can be corroborated, meaning that the total budget spent on the SMS has a positive impact on the number of pupils participating in the SMS and thus, on the SMS's effectiveness. In other words: **The higher the total budget spent for the SMS in a country, the higher the share of participating children in this country.** As hypothesis (1) can be corroborated, the question should be answered if the share of EU budget in the costs of the SMS has a significant impact on its effectiveness. The results of the respective regression analysis are displayed in Figure 84 (in Annex 8.11). As one can observe, the coefficient of determination (R^2) has a very low value (0.0121). This signals that both variables are only little correlated. Consequently, hypothesis (2) cannot be corroborated, meaning that it cannot be statistically verified that the EU share in the total costs of the scheme has a significant impact on its effectiveness.

However, the results should be interpreted carefully. Considering the results of both tests together one can summarise the finding as following: **The volume of the total budget spent on the scheme in a country has a significant impact on the scheme's effectiveness. A lower budget might lead ceteris paribus to a lower participation and vice versa. However, for the effectiveness it does not matter whether the required funds are provided by the EU or by national financing. Thus, the lower the national top-ups are, the higher is the relevance of the EU funds.** Some of the Member States provide national top-ups. In 2008/2009 this was true for 13 Member States. Three of them (Germany, France and Belgium) contribute a relatively small amount to the total expenditures. Other countries like Lithuania and the Czech Republic add more than four times of the EU aid as top-up from national budgets. Six Member States provide national top-ups which amount more than twice of the EU aid. The absolute level of payments in Poland is the highest within the scheme (EUR 23.12 Mio. in 2010/2011). **Across the participating Member States the implementation of additional top-ups is often reasoned by a "too low EU subsidy".** Control Authorities from Poland for example state that a considerable number of schools were not able to participate in the EU scheme until national co-financing was introduced in 2007. Today unflavoured milk is distributed for free within the Polish scheme due to the higher funding. Consequently, milk consumption in the scheme has increased drastically by about 243% and the number of Polish elementary schools participating in the programme increased by about 176% in comparison to the school year 2004/2005.

It is a fact, that in most Member States - due to slightly but continuously increasing milk prices - the share of the EU subsidy in the selling price for children has been decreased over the last decades.



Table 22: Subsidy levels in Netherlands 1997 and 2004 till 2012

	Whole milk	Semi-skimmed milk
1997	27.27%	32.72%

	Whole milk	Semi-skimmed milk	Whole chocolate milk	Semi-skimmed choc milk	Whole milk 0,25 litre	Semi-skimmed milk	Whole chocolate milk	Semi-skimmed choc milk
	Elementary school				Secondary school			
2004	20.69%	15.70%	15.41%	11.70%	17.45%	13.25%	17.45%	13.25%
2005	18.54%	14.15%	13.84%	10.57%	15.73%	12.01%	15.73%	12.01%
2006	17.12%	13.11%	12.78%	9.79%	14.52%	11.12%	14.52%	11.12%
2007	15.58%	12.05%	12.06%	9.33%	13.35%	10.33%	13.74%	10.64%

	Semi-skimmed and whole milk	Semi-skimmed and whole milk	Semi-skimmed and whole choc	Yoghurt drink with raspberry flavour
2008	13.74%	10.99%	10.99%	9.90%
2009		10.99%	10.38%	9.35%
2010		10.99%	10.38%	9.35%
2011		10.38%	9.84%	8.86%
2012		10.38%	9.84%	8.86%

Source: Own compilation based on the case study analysis in The Netherlands



Data provided by CAs from different Member States verify that the ration of subsidies and product price is declining. Real prices for milk increased in the EU on the whole (compare Figure 47). The maximum price for milk products in the scheme set by the CAs has been augmented in most Member States as well. However EU subsidies did not rise as much as the real prices. Consequently, the share of the subsidy in the total price of the products decreased.

Table 22 for example illustrates this development in the Netherlands showing that the subsidy rate decreased significantly over the years. In 1997, the EU subsidy made up to about 27% of the price of whole milk whereas it only constituted to about 10% of the price in 2012.

The tendency of declining subsidy rates has also been underlined by CAs of various other Member States. In Italy the percentage share of the subsidy in the product price decreased from 44% in 1977 (when the programme was initialised) to 14% in 2006. There are no updated data available but it is plausible that the share has decreased further.

Comparing 2004 with 2012 the subsidy rate dropped from 42% to 24% for unflavoured milk in Poland and for flavoured milk from 29% to 18% in the same time frame. The sharp decrease of the subsidy share in a relatively short period of time impacts significantly the effectiveness of the scheme in Poland. It initialises the introduction of the allocation of additional national funds. **The diminishing share of subsidies in real prices is one of the reasons why many Member States consider the impact of the EU contribution to the SMS's effectiveness as suboptimal and insufficient.**

This finding, however, leads to the subsequent question if the EU subsidy, as mentioned by most of the Member States, is only to "low" for a sufficient price reduction which stimulates significantly the buying and thereby consuming behaviour of children or, beyond that, is much too low to permit a milk distribution completely free of charge which might be the "only promising measure" to drastically increase participation in the schemes.

This question should be further explored as it is of high importance for the conclusions on this evaluation questions. The answer to the question should help to decide whether - for example - it should be recommended to enlarge the EU funds to a level which permits a sufficient price reduction of milk products at schools or to a level which has to permit a free distribution of milk products.

Theoretically, this question can be answered by investigating the consumer behaviour in detail, in particular the purchasing behaviour of milk products in relation to different milk product price levels. Exactly this linkage can be described *by the price elasticity of demand*. This approach provides an indicator (the elasticity) for the ratio to which the demand changes if the price changes by one unit. For different products or different consumer groups this effect is higher or lower.

With regard to the SMS it can be assumed for good reasons that the price elasticity of demand for milk and milk products depends to some extent on social economic factors and thus, might differ between Member States. One can expect that Member States with an average low income possess a higher price elasticity of demand; namely if the prices for milk and milk products increase the demand will decrease (dis-) proportional. The other way around, citizen of Member States with an income above the EU average might show a low price elasticity of demand for milk and milk products, meaning that a price change will lead to very limited or no changes in demand. Even though this relationship is only an assumption



(which cannot further be investigated in this evaluation) its consequences for the future strategy of the scheme might be high as it indicates if a higher price subvention can be a sufficient instrument to increase the participation in the scheme (true for a high elasticity) or if exclusively a full price subvention (which permits a free distribution) can help to increase participation (true for low elasticity).

Some scientific analysis has already been done in the last years, e.g. by the German Johann Heinrich von Thuenen-Institute (vTI)¹⁰⁷. The vTI conducted an experiment in which prices for school milk were reduced stepwise in primary schools in North Rhine-Westphalia (Germany): The GDP per capita in North Rhine-Westphalia (EUR 32,631) is slightly above the German average (EUR 32,299) and significantly above the EU average (EUR 25,600). Thus, one might expect a comparatively low price elasticity of demand for milk and milk products.

The sample that the analysis was based on consisted of 314 schools with 2,204 classes and covered 50,103 pupils. With four different price steps throughout the school year 2008/2009 the price experiment shows that school milk prices matter. Prices decreased from 35 cts to 25 cts and then from 15 cts to 0 cts per package. This led to an increase in school milk consumption. Before the price reduction 31% of all pupils were consuming school milk. After reducing the price to 25 cts 39% participated. The following price reduction to 15 cts did not lead to a significant change in demand. This might either be caused by low price elasticity of demand in this price range or external factors.

However, the demand increased highly when prices were reduced to zero. Free of charge milk distribution led to school milk demand at a participation rate of 73% of all primary school pupils. This is a 129% decrease in comparison to the initial situation.

Another conclusion drawn from the experiment was that besides economic factors, cultural eating and drinking habits, taste, lactose intolerance and allergies influence the probability of school milk demand.

In order to gather additional information about the impact of prices on the participation in the scheme an accompanying study by the Max-Rubner-Institute¹⁰⁸ conducted extensive interviews of pupils, parents, teachers, and headmasters in schools in North Rhine-Westphalia. 84% of the parents stated that they would still order school milk if the price rose by 5 cts. More than half of the parents affirmed that this is also true for a 10 cts price increase. However, there are differences concerning the socioeconomic status. Parents with a relatively high income are more probable willing to buy milk not considering the price. At the same time headmasters and teachers are mostly against a free distribution of school milk because this might devalue the product in the eyes of the children.

The results of the analysis verify the assumption that **the product price has a certain impact on the participation rate. However, prices are more important for parents with a relatively low income and have only a limited impact on participation if the parents have relatively high income. Overall, only a free of charge distribution of milk in**

¹⁰⁷ JOHANN HEINRICH VONTHÜENEN-INSTITUT (VTI) (2011): „Endbericht. Ökonomische Begleitforschung zum Bundesmodellvorhaben „Schulmilch im Fokus“ Projekt des BMELV“.

¹⁰⁸ MAX RUBNER INSTITUT (MRI) (2011): „Ergebnisbericht. Einflussfaktoren auf die Nachfrage nach Schulmilch in Grundschulen in Nordrhein-Westfalen“ Begleitforschung zum Modellvorhaben „Schulmilch im Fokus“ des Bundesministeriums für Ernährung, Landwirtschaft und Verbraucherschutz (BMELV).



schools results into a sharp increase in consumption, this was shown in Poland (+200% as described in the case study report of Poland in Annex 8) as well as in North Rhine-Westphalia (compare Figure 37).

In addition to this more quantitative analysis, the following section should summaries the results of the interview survey regarding this topic.

In some of the Member States national milk schemes have already been installed before the EU SMS has started. This was the case for instance in the UK, in France and Hungary. In the UK a school milk scheme was firstly introduced in 1906. But it took some decades till the programme expanded to a fully operating scheme. After World War Two the scheme provided free milk to school children. During the post-war period national milk schemes were mainly aimed at fighting malnutrition. Nevertheless, they were limited in scope and efficiency.

In 1977 the EU SMS replaced national schemes in those Member States where they already existed. Only in the UK the “nursery programme” remained outside of the scheme. With the exception of the UK the CAs stated that there exist currently no additional public milk programmes which are not administered under the EU scheme.

The SCP in Bavaria (Germany) stated that 50% of all schools offering milk in this federal state are not operating under the scheme but offer milk without any subsidies. These schools are not part of any additional scheme but they still represent an alternative to the EU SMS. This is also the case in some other federal states in Germany.

Even though there are no additional national subsidy programmes; some of the Member States mention that they were or are still running national promotional campaigns in order to increase milk consumption and emphasise the advantages for health. The French government started a special promotion for organic milk. In other Member States producer associations created promotional projects in collaboration with governmental institutions (e.g. Italy, Netherlands, Poland).

There have been a couple of preparative pilot projects, e.g. in Poland before the EU scheme has been implemented. They have meant to train schools and potential suppliers and show them ways how to benefit from the EU scheme.

The fact that most Member States do not run additional milk programmes which are not administered under the EU SMS indicates that the EU contribution seems to have an essential positive impact on the launch and implementation of milk schemes.

This fact can be additionally verified by the replies of the national CAs to the question whether a SMS would have been implemented also without any EU aid (Figure 27). All of the interviewed CAs and SCPs reported about a positive impact of the EU funding on the SMS. **89% of all interviewees stated that the implementation of a school milk scheme would have been impossible without the EU subsidies.**

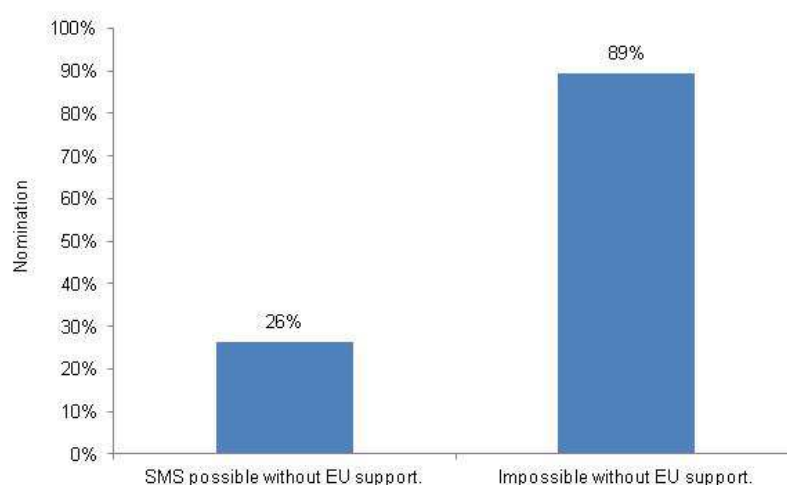
According to most replies tight national budgets are the reason why a scheme without EU subsidies would not be feasible. Only 26% believe that a school milk scheme would also be implemented without EU support. However, also most of them agreed upon the fact that the scale of these schemes would be much smaller. CAs from Italy and the UK replied that a national scheme would be possible, but only with a much smaller budget and thus, this would result in a significant decrease of milk consumption in schools.



Many of the interviewees stated that the **EU was the main driver for the launch and implementation of a school milk scheme in the different Member States**. Even in countries which have additional private schemes (UK) CAs stated that the implementation of new schemes is more likable with EU support.

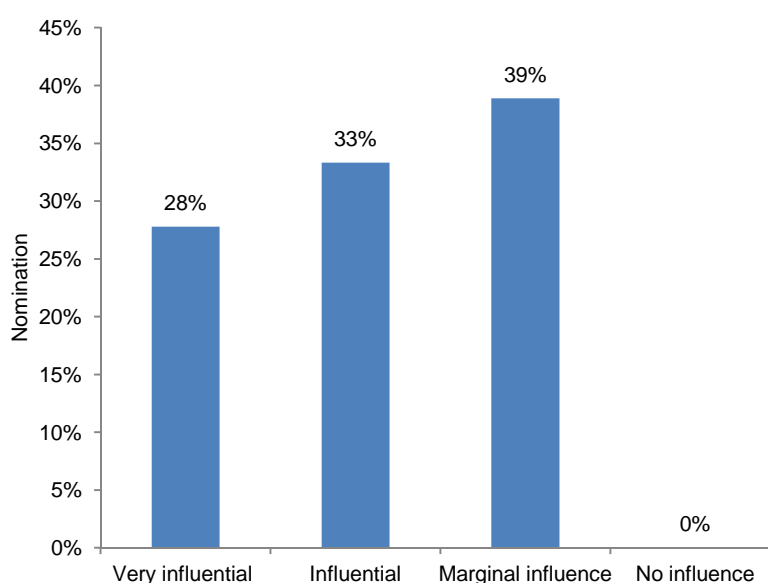
An exception is school milk provided without subsidies, e.g. in some German federal states. However, these are not organised schemes and the distribution differs greatly in quality and continuity compared to the EU SMS.

Figure 27: Possibility of SMS without EU support



Source: Own illustration based on the evaluation's interview survey

Figure 28: Impact of EU financial contribution on the scheme's effectiveness



Source: Own illustration based on the evaluation's interview survey



All of the interviewees agree upon the fact that subsidies have an influence on the effectiveness of the scheme. Nevertheless, there are controversial opinions about the extent of the influence of the current EU subsidies.

In addition, the survey shows that **the EU contribution provides a couple of benefits beyond the financial support**. First of all - as already mentioned - the EU legislation was the starting point for the initialisation of schemes in many Member States. The EU is regarded as the main reason why school milk schemes exist in almost every Member State. The EU input benefits also suppliers. They are perceived as acting on behalf of public orders. This makes it easier for them to bargain with schools than if they are perceived as pure profit making enterprises. In general, the visibility of the EU in the scheme makes this programme more serious and relevant to headmasters and teachers. It puts the topic of a healthy diet in schools on the agenda of educational and governmental institutions. Moreover, the implementation of the EU milk scheme improves the image and awareness of the EU. More details about the positive external effects of the EU support will be given in the answer to evaluation question 13 (EU value added).

Box 8: Conclusions on the scheme's effectiveness

- The total budget spent on the SMS in a country has a significant impact on its effectiveness in terms of the number of participating children. A lower budget leads ceteris paribus to a lower participation and vice versa.
- It has been observed that in most Member States - due to slightly but continuously increasing milk prices over the last decades - the share of the EU subsidy in the selling price for children has been decreasing. Across Member States the implementation of national top-ups is therefore often justified by a "too low EU subsidy". The diminishing share of EU subsidies in real milk prices is one of the reasons why most Member States consider the impact of the EU contribution to the SMS's effectiveness as suboptimal and insufficient.
- The milk prices that have to be paid influence the participation rate in the SMS. Prices are more important for parents with a relatively low income and have only a limited impact on participation if the parents have a relatively high income. Overall, the evaluation has found that only a free distribution of milk in schools would result in a sharp increase in consumption.
- The fact that most Member States do not run additional milk programmes which are not administered under the SMS indicates that the EU contribution seems to have an essential positive impact on the launch and implementation of milk schemes. Most Member States indicate that the EU was the main driver for the launch and implementation of a SMS in their country.
- In addition, the EU contribution provides a couple of benefits beyond the financial support, like the support of health and nutrition policies for children in the Member States.



5.1.5 Evaluation question 5

▲ Understanding of the question

Answering Evaluation Question No. 5 ***“To what extent has the effectiveness of the implementation of the scheme been influenced by...”***

- **Economic, social, cultural, psychological and other drivers (supporting or hampering the implementation of the Scheme)**
- **Administrative burden at the various levels concerned?”**

aims on the one hand, at the identification and assessment of critical socio-economic drivers of the SMS’s effectiveness and on the other hand, on the assessment of administrative burden at the different implementation levels. As both aspects are very special, the answer is split in two parts: **5a) Socio-economic drivers** and **5b) Administrative burden**.

▲ Method of measurement 5a)

To answer Evaluation question 5a) a quantitative as well as qualitative approach is used.

On the one hand a review of scientific literature and public statistics stands as a starting point for a **statistical analysis on the interdependencies between socio-economic variables and the effectiveness of the scheme** (represented by the schemes uptake). Therefore, possible drivers which may have an impact on the schemes effectiveness have to be identified and hypotheses which determine their possible impact have to be defined and verified in a statistical way.

On the other hand, information about the impact of socio-economic factors are summarised **from secondary information sources** and complemented by **specific questions in the evaluation’s interview survey**.

Table 23: Indicators and Methods for Evaluation Question No. 5a

Objectives of the question	Indicators	Methods of measurement
Working Package 3: Answers to the evaluation questions		
Question 5a <i>“To what extent has the effectiveness of the implementation of the scheme been influenced by economic, social, cultural, psychological and other drivers?”</i>	<p>Contrasting socio-economic indicators with effectiveness (output) indicators. Socio-economic indicators are among others:</p> <ul style="list-style-type: none"> ● Scale of milk and milk processing sector in the economy of a country ● GDP and per capita income ● Share of people working in the agricultural and milk processing industry ● Share of urban and rural population ● Importance of milk and further animal products in eating habits 	<p>Statistical regression analysis by using official statistics like EUROSTAT)</p> <p>Review of secondary information (scientific literature)</p> <p>Standardised expert interviews with national Control Authorities, Single Contact Points and School Headmasters in the 8 case study regions</p>



▲ Answer to the evaluation question

The preconditions for an effective implementation of the SMS are diverse. Factors such as the culture, traditions, and economic conditions touch upon various aspects of the SMS. **Although Member States are characterised by different cultural eating and drinking habits, milk is an important product in all of them.** Milk consumption in Europe is above the global average. Overall, milk is regarded as a basic product in the daily diet.

However, there are differences among Member States regarding the traditional value of milk in citizen's diet. This concerns first of all the amount of milk consumed. The highest consumption of milk per capita can be observed in northern European countries: Finland, Ireland, Sweden, Lithuania and the UK. Interviewees from Sweden pointed out that three quarters of the adults drink milk every day and that drinking milk with meals is a common habit which is widely spread in comparison to other Member States. Also interviewees from the UK mentioned that 99% of people consume milk and milk products every day. By contrast, e.g. in Poland and Hungary the consumption of drinking milk is below the EU average although the consumption of milk is deep-rooted in the national food tradition.

Another important difference is the type of dairy which is consumed and preferred. **Today skimmed milk is preferred in most Member States. There is an on-going tendency towards a higher consumption of yoghurt and milk drinks.** In the UK yoghurt is the tenth biggest food and drink line and pro-biotic drinks are very popular since they are considered to be healthy. There is more milk consumed in coffees.

The fact that milk consumption patterns differ can easily be observed by the different product portfolios offered in the single Member States. This observation leads to the following hypothesis: **Social and economic factors influence the implementation and effectiveness of the milk scheme.**

As the impact of social and economic factors is very complex and interactions between different socio-economic determinants are existent, it is very difficult to investigate this issue. For this reason the quantitative analysis done in this evaluation is subject to some simplification and restricted to selected socio economic factors. The hypothesis mentioned above is investigated by a statistical regression analysis as described in detail in Annex 8.12. Overall, the results of the statistical analysis (Figure 85 in Annex 8.12) show no **significant correlation between the selected socio-economic factors and the effectiveness of the scheme.** All of the coefficients of determination (R^2) have a very low value.

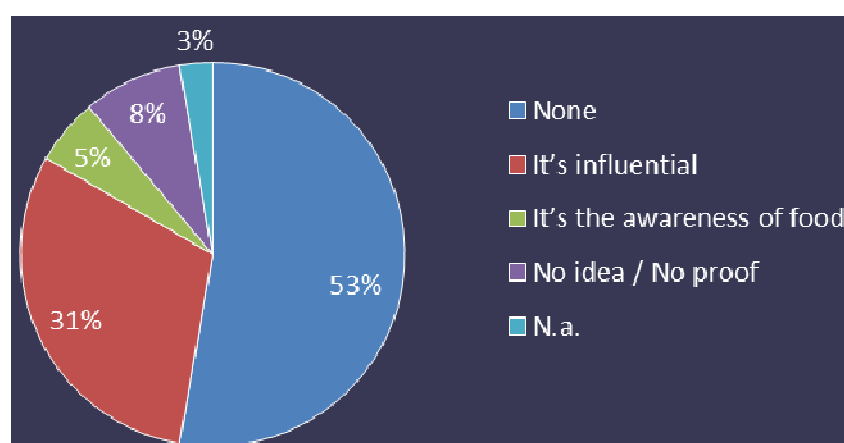
Taking these results into consideration, the conclusion might be drawn that there is no significant impact of socio-economic factors on the scheme's implementation and success and thus, the above mentioned hypothesis cannot be corroborated. However, the regression analysis has only examined socio-economic indicators which vary across Member States, not the social and economic disparities within one country. The question whether children from different socio-economic backgrounds benefit differently from the scheme is not answered. Exactly this important question is difficult to analyse statistically as sufficient national data are not available within this evaluation study. However, the interview survey in the eight case study regions and the results of other existing studies provide further insights on this topic, which should be described in the following.

Nearly half of the interviewees do not think that socio-economic factors influence the effectiveness of the SMS (Figure 29). French CAs stated that the programme is actually



beneficial for children in families with reduced income. But at the same time socio-economic factors have no influence on the effectiveness of the programme itself, because everyone receives the same products.

Figure 29: Results of the interview survey regarding the impact of socio-economic factors on the scheme's effectiveness



Source: Own compilation based on results of the evaluation's interview survey

It should be noted that some interviewees have no opinion on this topic as they do not have data available in order to underline their statements. Some of the interviewed schools stated that they have a fairly homogeneous and well-off economic population in the municipalities and thus, socio-economic disparities do not exist. Still not all of the children from high socio-economic background drink milk every day and the programme is thus also very important for these schools.

Other interviewees contradict the estimation of no influence. **31% of interviewees pointed out that socio-economic factors are influential.** In Poland, the low average income of parents limits the effectiveness of the programme. There should be a wider range of milk products consumed by children, but parents cannot afford it. Since unflavoured milk is distributed for free, parents are not willing to pay more for flavoured milk. German CAs and headmasters agree upon the fact that socio-economic factors are influential. Children from socially less privileged families buy more often milk than others. It was also mentioned, that the awareness of food has an impact on consumption.

Based on a research study carried out by the German MRI¹⁰⁹ parents with an increasing socio-economic status as well as with a higher income valued the purchase of school milk more. **Similar to our regression analysis the MRI study confirmed no statistic interdependence of monthly net household income and the school milk demanded.** The MRI found out that nearly 50% of interviewees think that the price has to be reduced to promote the consumption of school milk. Nearly 20% demand school milk to become a free product in schools.

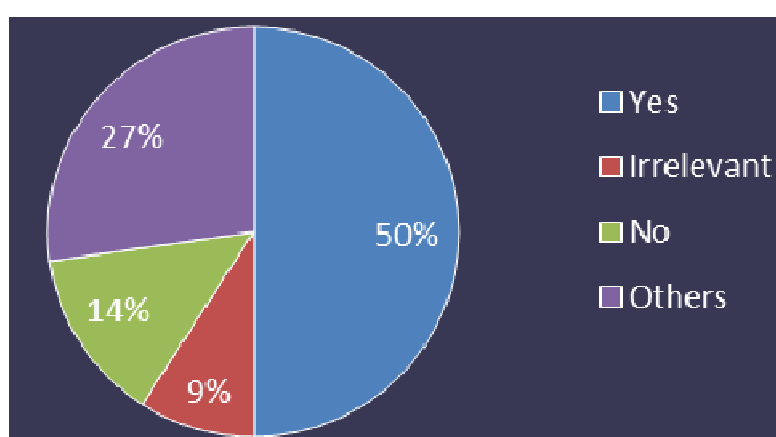
¹⁰⁹ MAX RUBNER INSTITUT (MRI) (2011): „Ergebnisbericht. Einflussfaktoren auf die Nachfrage nach Schulmilch in Grundschulen in Nordrhein-Westfalen“ Begleitforschung zum Modellvorhaben „Schulmilch im Fokus“ des Bundesministeriums für Ernährung, Landwirtschaft und Verbraucherschutz (BMELV).



According to 50% of the interviewees in the evaluation's interview survey the parental contribution has a clear impact on the incorporation of children with a less privileged social background (Figure 30). The higher the parental contribution the higher are the problems for children from less privileged social background to participate in the SMS.

The other 50% of the interviewees doubt any effect, evaluate it as irrelevant or had no answer or no idea.

Figure 30: Results of the interview survey regarding the opinion on existence of an impact of a parental contribution on the incorporation of children from a less privileged social background



Source: Own compilation based on results of the evaluation's interview survey

In Germany a joint project of FrieslandCampina and some municipalities in an area with a relatively low average income offered "social milk" without any charge in the schools. This means milk was distributed for free or cheaper than normal to children with a less privileged social background. The programme led to a very high participation of pupils. **The German CA and FrieslandCampina mentioned that schools with pupils of a less privileged social background tend to have a higher acceptance of school food.**

The most meaningful responses regarding this issue came from Poland and Hungary. Before 2007 they had problems because many schools did not take part in the programme due to difficult financial situations of the pupil's parents. After 2007 children received unflavoured milk for free in elementary schools. In Hungary the national additional support measures were categorized in a 100%, 50%, and 20% support depending on the income of parents. This national support increased the milk consumption of children and parents. Interviewees pointed out that socio - economic and other factors (e.g. parent's average income, social background) have an extensive influence on the efficiency of the scheme. They mentioned that the ratio of participation was higher in the low income regions (approx. 80%). The biggest direct impact can be observed on children from poor families, even though the long-term effect of the scheme is not guaranteed.

Nevertheless, Figure 30 reflects also contradicting opinions who doubt the direct effect. In the Netherlands interviewees assume that some parents consider the products offered as too expensive, but this is not always related to lower income. In the UK they perceive that schools in poorer areas have fewer participants. This shows that participation does not ex-



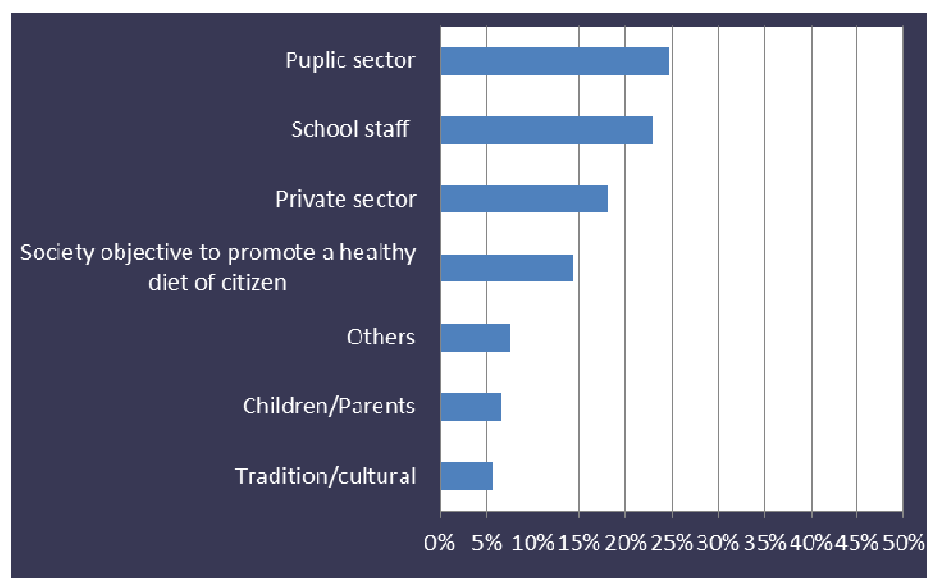
clusively depend on financial reasons (compare Evaluation Question 4) but rather on the failure to acknowledge the benefit of milk as a valuable product in a healthy diet or the fact that schools in a social hot spot have to deal with many problems so that they cannot concentrate on a participation in the SMS.

These aspects are also emphasised in the study of the MRI in 2011 which evaluated the SMS in North-Rhine Westphalia (Germany). It suggests that 22% of the parents do not support school milk because it is too expensive and 12% because it is not for free. 22% of the parents would order the school milk for their children, if each package was 15 cent cheaper, 13% in case the package was 10 cents cheaper and 19% if their own income was higher. Most parents, headmasters, teachers and coordinators stated that children of families with lower income should be supported to get the school milk. They reasoned that **important factors which affect the participation in the scheme are the income of parents; the priority of the income's application, the educational background, as well as the knowledge about milk and health nutrition**. The study also described a decreasing demand of school milk in regard to lower income.

The interview survey explicitly asked for drivers to participate in the EU scheme. The identified drivers can be categorised as displayed in Figure 31.

As one can observe **the public sector can be identified as one of the main drivers for implementing the scheme (about 25%)**. Institutions covered by the category “public sector” are e.g. the EU, the ministries of education and / or agriculture, the state association for milk (especially in Germany), municipalities, public health centres, regional dairy cooperatives, school nutritionists and nutritional guidelines. **School staff, like teachers, administrators or secretaries are also pointed out as main drivers, with a share of 23%.** Thirdly, with **18%**, the private sector, e.g. suppliers and producers, external vendors and institutions are considered as the main drivers of distribution.

Figure 31: Results of the interview survey regarding important drivers for the SMS implementation in Member States



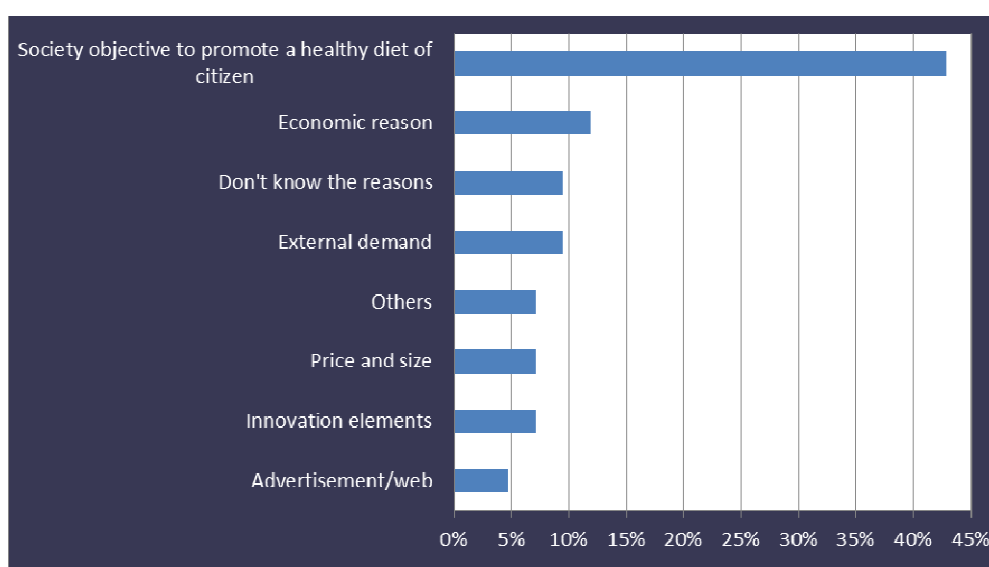
Source: Own compilation based on results of the evaluation's interview survey



Asking the schools for main reasons to participate in the scheme the society objective to promote a healthy diet of citizens was pointed out as a main driving factor to participate in the scheme (about 43%).

Additionally, economic reasons like receiving subsidies, external demand e.g. from parents or the municipal office and the objective of new elements in school life were also reasons to participate in the scheme. The MRI named nearly the same driving factors in its study of 2011. The promotion of a healthy diet remains the most frequently mentioned factor for the participation in the scheme.

Figure 32: Results of the interview survey regarding reasons for schools to participate in the School Milk Scheme



Source: Own compilation based on results of the evaluation's interview survey

These results are very similar to the results in Evaluation question No. 4. The price of the product has a significant impact on the scheme's uptake, especially for children from socially less privileged families. A free distribution is the best instrument to harmonise differences between different socio-economic backgrounds. However, there are much more factors which influence the participation in the scheme such as tradition and cultural background.

In contrast to the quantitative analysis the assessment of the qualitative interview survey shows that social and economic factors seem to have an significant impact on the implementation and effectiveness of the SMS.

Another source which underlines this finding is the evaluation analysis of the European School Fruit Scheme. Here, it is stated that the parental contribution to financing is regarded to be of crucial importance in most Member States. Children from less privileged social backgrounds could be excluded from the scheme if their parents were not able to pay for it. However, especially these children show a very high interest in the scheme.



Box 9: Conclusions on the impact of socio-economic factors on the scheme's implementation and effectiveness

- Although Member States have diverse cultural eating and drinking habits, milk is an important part of the populations' diet in all Member States.
- Regarding explicit socio-economic factors, the statistical research done in this analysis provided no evidence for a significant correlation between selected socio-economic factors and the scheme's effectiveness.
- In contrast, the qualitative interview survey shows that socio-economic variables have indeed an impact on the implementation and effectiveness of the SMS. According to 50% of the interviewees, the parental contribution has a clear impact on the incorporation of children from a less privileged social background. The higher the parental contribution the higher are the problems for children from less privileged social background to participate in the SMS. In addition, schools with pupils from a less privileged social background tend to have a higher acceptance of school meals.
- Field research revealed that the motivation of the public sector, the school staff and the private sector is crucial for the distribution of school milk in each country. In this regard, promoting a healthy diet for citizens is the main reason for schools to participate in the SMS.

▲ Method of measurement 5b)

It is of high importance if administrative burdens (AB) caused by the legislation of the SMS (e.g. documentation and reporting obligations or product controls) are critical factors for Member States' or schools' decisions on participation in the scheme.

Following Renda and Luchetta (2011)¹¹⁰ AB are the part of the administrative costs¹¹¹ resulting from collecting and processing information which would not be collected or processed by an undertaking in the absence of the measure. However, this definition limits **administrative burden** explicitly to those burdens which result from any legislative obligations for documentation or product controls. The evaluators experience emphasised an additional and probably more critical aspect of burdens within the implementation and execution of the scheme. This aspect appears rather at school level than at the superordinate administrative level and is caused rather by **organisational challenges** than by administrative obligations. For this reason the evaluation focuses on both sorts of burden, administrative and organisational ones.

With respect to the AB of the SMS the CEPS Report of 2011¹¹² provides a first analysis. The results of this report are taken into account when analysing the answer to this evaluation question. Within the calculation of AB it was attempted to gain information on time requirements for AB and staff costs within the interview survey, directly from the different stages where burdens occur: Control Authorities (ministries), Single Contact Points (e.g. supplier

¹¹⁰ RENDA AND LUCHETTA (2011): Measurement of Administrative Burdens generated by the European Legislation – AB Quantifications of School Fruit Scheme and School Milk Scheme, Brussels

¹¹¹ Administrative costs are defined as the costs incurred by a normally efficient enterprise in meeting legal obligations to provide information on its action or production, either to public authorities or to private parties. RENDA AND LUCHETTA (2011)

¹¹² CEPS Special Report (by RENDA AND LUCHETTA): "Measurement of Administrative Burdens generated by the European Legislation – AB Quantifications of the School Fruit Scheme and the School Milk Scheme". Brussels, 7th December 2011



organisations) and school headmasters. This information is used to calculate administrative costs for selected countries in accordance with the methodology as proposed in the Commission's action programme for reducing administrative costs.¹¹³

In addition to the estimation of AB reasons for their occurrence are analysed for which the interview survey also provides adequate results from the people who are involved in the scheme's execution.

Table 24: Indicators and Methods for Evaluation Question No. 5b

Objectives of the question	Indicators	Methods of measurement
Working Package 3: Answers to the evaluation questions		
Question 5b <i>"To what extent has the effectiveness of the implementation of the scheme been influenced by administrative burden at the various levels concerned?"</i>	<p>Indicators for AB:</p> <ul style="list-style-type: none"> • Hourly rate (w/d) and costs (in EUR) for documentation and reporting requirements in the SMS • Hourly rate (w/d) and costs (in EUR) for product checks in the SMS • Expenditure / time for AB per participating school / child. • etc. <p>Indicators for organisational burdens:</p> <ul style="list-style-type: none"> • Hourly rate (w/d) and costs (in EUR) for management of reliable logistics • Hourly rate (w/d) and costs (in EUR) for milk and milk product distribution at schools • etc. 	<p>Review of secondary information (scientific literature and other European-wide publications like the CEPS report or Renda and Luchetta (2011) as well as national publications focusing on this topic like vTi (2012).</p> <p>Standardised expert interviews with national Control Authorities, Single Contact Points and School Headmasters in the 8 case study regions</p>

▲ Answer to the evaluation question

Measurement of administrative burden

To evaluate AB in general and to compare burdens across Member States they have to be measured first. This is done based on the information gained in the implementation survey where administrative costs have been asked explicitly. Ideally, individual burdens can be identified and measured at each single process step where they occur. By the identification and specification of explicit process costs burdens per process and subsequently total burden (administrative and organisational ones) can be defined. Even though the interview survey carried out in the eight case study countries provides information on the single processes which cause administrative and organisational burden at the different level of the programme's implementation (Table 26), **the information provided regarding the monetary**

¹¹³ See http://ec.europa.eu/enterprise/policies/smart-regulation/administrative-burdens/action-programme/index_en.htm#h2-5



measurement of single processes or the whole monetary effort for administration was in most cases very limited if not useless. This is based on the fact that detailed information on administrative costs is in most cases not recorded and documented at national level.

For this reason we additionally asked in the interviews for single estimates, like the amount of full- or half-time workers needed to administer the scheme or to execute the controls, the amount of controls executed in the years of implementation or a combination of these indicators. From these variables, which have been reported in most cases, the total administrative costs can be derived as an estimate over the sum of all processes which cause AB. The respective calculation of total burden based on this information has already been presented in the preparatory assessment of the descriptive chapter (Section 4.2.3.6): To achieve a comparable measurement of burdens an educated guess for the costs of a full time worker in administration and a full time worker to execute controls has been done. In cases where numbers of controls per year have been indicated, the control of one school was estimated with half a working day for one person. The required staff times the staff's costs provides an estimate for total administrative costs. A table with exact numbers derived from these calculations can be found in Annex 7. For Member States which neither provide information on the workload for the administration caused by the SMS nor on the effort for the product controls, an estimation of AB was not realisable.

However, to provide a comparable indicator for burden across individual participating Member States the estimated absolute costs have to be related to the size of the respective scheme which is done by dividing the absolute burden with (1) the total costs of the scheme and (2) the number of participating children in the scheme. From this two indicators can be derived which are sufficient for a cross-country comparison (1) the share of administrative costs in total product costs and (2) the average administrative costs per participating child. The estimated absolute AB as well as the described indicators are displayed for all Member States which have delivered sufficient information within the interview survey in Table 25.

As one can observe **burden indicators derived through this are high in some Member States and the variation of costs among Member States is also very high.**

In Slovenia, where administrative costs have been estimated by the financial department¹¹⁴ and thus, can be considered as reliable, absolute administrative costs are actually not very high and do not exceed 13,500 € per year. However, participation of schools is very low in Slovenia. Nevertheless, the Slovenian government wants to provide a basic amount of manpower to give schools the possibility of applying for the School Milk Scheme.

Table 25 shows that there **lies a disproportionately high burden on many Member States in relation to the scheme's scale on the one hand. Burdens are higher in Member States where the uptake of funds is rather low in relation to the eligible population.** The cases of France and Poland show that a higher amount of children participating or a larger range of products distributed do not necessarily cause relatively high administrative costs.

¹¹⁴ Additional information to Slovenia is derived from a telephone conversation with the Slovenian Ministry of Agriculture and Environment on 2013-03-14



Table 25: Estimated average annual administrative costs caused by the SMS

in 1,000 € per year	Average annual administrative costs	Average total product costs (2008/09 - 2010/11)	Share of average annual administrative costs in average annual product costs (2008/09 - 2010/11)	Average number of participating children in 1,000 (2008/09 - 2010/11)	Average administrative costs per participating child (2008/09 - 2010/11)
SLOVENIA	12	2	743%	1	23.32
AUSTRIA	210	707	30%	91	2.30
NETHERLANDS	120	596	20%	72	1.67
SPAIN	1,080	1,151	94%	661	1.63
DENMARK	179	1,775	10%	278	0.64
BELGIUM	280	743	38%	477	0.59
MALTA	8	46	18%	15	0.55
CYPRUS	57	248	23%	116	0.49
ITALY	664	1,793	37%	1,385	0.48
LATVIA	12	133	9%	27	0.44
SLOVAKIA	165	785	21%	470	0.35
CZECH REPUBLIC	180	399	45%	527	0.34
FINLAND	247	3,989	6%	825	0.30
UNITED KINGDOM	319	6,345	5%	1,129	0.28
FRANCE	1,299	11,105	12%	5,279	0.25
POLAND	480	11,635	4%	2,544	0.19
SWEDEN	292	8,832	3%	1,618	0.18
LUXEMBOURG	3	21	13%	17	0.16

Source: Own calculation based on implementation survey's data, total product costs from SMS data provided by European Commission, DG-AGRI (05.02.2013)

The results of this estimation partially underline the findings of the CEPS report on the "Measurement of AB generated by the European Legislation"¹¹⁵. The CEPS report focuses explicitly on the estimation and evaluation of AB in the SMS, compared to those caused by the School Fruit Scheme, so that the main results should be mentioned in this context which are summarised in the following Box 10.

¹¹⁵ RNEDA and LUCHETTA (2011): Measurement of Administrative Burdens generated by the European Legislation – AB Quantifications of the School Fruit Scheme and the School Milk Scheme". Brussels, 7th December 2011



Box 10: Main results of the CEPS report on administrative burden in the SMS and SFS

The reference year for the CEPS analysis is the school year 2009/2010. The report derives the following results:

- ▲ Given that in 2009/10 the total amount of subsidies disbursed (including national top-ups) was slightly more than EUR 128 million, AB represent about 4%. This is a significant share of burden over total funds; still it is lower than other expenditure programmes in the Agriculture priority area. For instance, the Single Payment Scheme and the Single Area Payment Scheme, which are by far more complex schemes, generate about EUR 2.5 billion of recurring burden out of a total expenditure of about EUR 34 billion (that is 7.4% of burden over expenditure).
- ▲ The ratio of burden over total funds is higher than for the School Fruit Scheme because the number of educational establishments is proportionately higher. The burden per school is quite similar to that of SFS. Burden per school amount to EUR 34. Given that the weighted averages of a salary amount to about EUR 15, this is equivalent to about two hours and twenty minutes of work.
- ▲ In terms of burden per pupil, this is equivalent to EUR 0.28 per school year.

The CEPS report comes to the conclusion that these figures are too low to say that burden account for the main barrier for schools to participate in the scheme. Other costs are probably more substantial, such as the costs of organising the physical distribution. However, the report suggests several proposals for a reduction of AB which can be summarised as following:

- ▲ Flexibility comes at a cost in terms of AB, and the right equilibrium between centralisation/subsidiarity and rigidity/flexibility should be achieved;
- ▲ Direct participation of educational establishments may be burdensome for them, but overall costs may be lower;
- ▲ Fixed-cost effects of burden on participants should be minimised;
- ▲ Fixed-cost effects of burden on Member States should be minimised;
- ▲ Use of e-government should be increased;
- ▲ The SFS and SMS could be managed via the same administrative procedures.

As summarised, the CEPS report comes to the conclusion that the administrative costs per child are equivalent to about EUR 0.28. **The results for this indicator (Table 25) show partially much higher values and is on EU average - although not all participating Member States are covered – probably on a higher level (beyond EUR 0.35).**

This difference might have two main reasons:

- (1) Our approach is mainly based on the number of employed and necessary staff for the administration of the scheme which in most cases is not exclusively working for the SMS. The assignment of working hours to the respective activities belonging to the SMS is not unambiguously and might lead to some over- but also underestimation of real burden caused by the scheme.
- (2) As burdens behave partially **like fix-costs a decreasing participation of schools and children might not simultaneously lead to an equivalent reduction of administrative costs as a couple of basic processes have to be maintained independent of the schemes scale (as drastically demonstrated by Slovenia). In a situation of a**



continuously decreasing participation in the scheme on European level a simultaneous increase of the administrative costs in relative terms is comprehensible.

From this it follows that the **relationship of burden vs. benefit of the SMS might drastically worsen which might indeed become a main obstacle for Member States or schools to participate in the scheme.** However, many figures of the administrative costs are based on a theoretical calculation. They should be nevertheless taken seriously, since they may even still underestimate the real costs participating Member States have to pay to organize the scheme. Most of the schools in the European Union are fully or at least to a substantial part publically financed. Organisational and administrative costs deriving from the programme at school level are consequently paid by the Member States as well. These costs, however, are not included in the qualitative statements regarding the AB of reporting Member States in the implementation survey.

Beside the absolute monetary value of AB it is of relevance to identify explicitly the main processes which cause administrative or organisational burden for the stakeholders involved in the scheme. **The cost-benefit-ratio of the scheme is also minimised by the organisational burdens in school, namely record keeping, waste management and logistics, limiting also the support for the scheme by the teachers.** Even though some of these processes might be evaluated as simple, unproblematic and thus, un-burdensome from a purely objective and technical perspective, it is necessary to listen carefully to the impression of the persons concerned. As the motivation and the engagement of these persons have a very high impact on the scheme's uptake, their subjective impression of burden should be considered in detail. The following Table 26 summarises the stated causes of administrative and organisational burden differentiated for each implementation level and based on the results of the interview survey.

Table 26: Main causes for administrative and organizational burden in the SMS

	Administrative Burden	Organisational Burden
Administrative level	<p>Approve the applicants and informing the beneficiaries (espec. about the high diversity of product categories)</p> <p>Execution of on-the-spot checks (min. 5% of applicants and total subsidy paid)</p> <p>Record keeping and documentation (espec. since 2008) of:</p> <ul style="list-style-type: none"> - product quantities subsidised under the SMS - N° of participating applicants - N° of participating educ. establishments - N° of participating children - N° and results of on-the-spot checks - amount of national top-up, if existent 	Implementation effort to install the scheme
Supplier level	<p>Managing of:</p> <ul style="list-style-type: none"> - security guarantees - supply licence - product controls - delivery documentation <p>if this is not automated and standardised e.g. in software tools (like SAP)</p>	Managing the distribution of products and collecting the payments at schools if this is not managed by the schools themselves
School level	<p>Record keeping of delivery documents</p> <p>Taking part in on-the-spot controls</p>	<p>Collecting the payment from children / parents if this is not</p> <ul style="list-style-type: none"> - integrated in school fees - externally handled e.g. by suppliers or service providers - done in a alternative distribution system like cafeterias / vendor machines - necessary as the milk products are distributed free of charge <p>Organising the ordering / distribution of the products, if this is not</p> <ul style="list-style-type: none"> - organised by the supplier (e.g. vending machines) - supported by caretakers of the school - necessary as the delivery system is already installed (e.g. cafeterias)

Source: Own compilation based on the interview survey results



As one can observe, **the processes which cause AB within the scheme are charging for administrations (e.g. ministries) as well as for dairy suppliers. Organisational burdens charge in particular the participating schools.**

Statements from reporting Member States in the interview survey of our case study analysis suggest that the AB was and still is an obstacle for schools and suppliers to participate in the scheme and for Member States to expand it.

The control authorities who are responsible for the administration of the scheme mentioned that burdens occur mainly through the following processes:

- ▲ Approve the applicants and continuously informing the beneficiaries which is especially extensive because of the high diversity of product categories covered by the EU directive.
- ▲ Execution of on-the-spot checks (min. 5% of applicants and total subsidy paid)
- ▲ Record keeping and documentation, especially since the 2008 amendment of the EU regulation, which covers the recording, documentation and delivery of data for: product quantities subsidised under the SMS, number of participating applicants, number of participating educational establishments, number of participating children, number and results of on-the-spot checks, amount of national top-up (if existent)
- ▲ Implementation effort to install the scheme

Costs for CAs and SCPs are mainly based on the required personnel. As already described, the personnel costs which are to some extent fix-costs are in most cases very high compared to the number of participating schools and children in the schemes due to the trend of a continuously decreasing participation in the scheme.

Main processes that cause administrative costs are obviously the record keeping and documentation obligations as well as the required on-the-spot controls. Especially, the “Commission Regulation (EC) NO 657/2008” is pointed out as the main factor which has led to an increase of AB.

In some Member States (e.g. in France) the declaration of product groups when schools are applying for the subsidies is a very burdensome process. From their point of view, it would be much more time-efficient to separate product groups only on an aggregated level within the legislation, e.g. cheese and milk, instead of different kind of milks or different fat contents. The system chosen by France is considered as very complicated and difficult for suppliers and schools to apply and the benefit of such a detailed documentation is not seen, especially as no information feedback from the EU statistics currently exists.

Even though the absolute costs for administration might be moderate, the burden in most Member States is considered as much too high in relation to the small amount of subsidies schools can receive through the scheme.

The milk suppliers mentioned that burdens occur mainly through the following processes:

- ▲ Managing the security guarantees, supply licences, product controls and the delivery documentation.
- ▲ Managing the distribution of products and collecting the payments at schools if this is not managed by the schools themselves or by an alternative service provider.



Most suppliers evaluate the burden of the scheme that they have to handle, like providing the security guarantee and applying the supplier licence, as disproportional high. Product controls are also burdensome. However, in particular bigger supplier like FrieslandCampina mentioned that costs and time-burden resulting from the mentioned processes can be significantly reduced through process-automation and -standardisation such as sufficient software tools (e.g. SAP programmes). It is comprehensible that the development of such tools is cost-intensive and not every medium- to small-scale supplier (especially direct sellers) is able to independently develop and run such tools. Therefore, one should consider if it might be realizable to e.g. develop and provide such software in a standardised way which can be offered to suppliers. This might also be a possibility to provide a standardised documentation tool for useful information which might be able to significantly simplify the information storage and information transfer to the national CAs and subsequently to the Commission.

An often stated organisational problem for schools applying to the scheme is the collection of the milk payment which often constitutes a main obstacle for schools to participate in the scheme (this aspect will be further discussed later in this chapter). Different strategies exist to counteract this problem which all base on the approach that the process of payment is kept away from schools. In some Member States this is solved by the suppliers who adopt this process. If this is the case, additional organisational burdens are caused for the suppliers. An example, which runs very efficiently, is e.g. the approach of FrieslandCampina in the Netherlands. This school milk supplier arranges contracts directly with the parents through an online system, and parents can register online. All payments are done automatically, so no organisational burdens arise for the schools. There are a few schools that organize their own supply of products (outside the Friesland Campina approach). They have much larger burdens as they have to organize the parental contributions themselves. Asking participating school headmasters in the Netherlands, most of them stated that almost no organisational burden occurs for them as all administrative and organisational processes concern exclusively FrieslandCampina.

An alternative approach is carried out in the UK where instead of the supplier an external service provider is managing the payment procedure, also directly with the parents.

Headmasters mentioned that burden occur mainly through organisational processes, as:

- ▲ Collecting the payment from children or parents, if this is not integrated in school fees, externally handled e.g. by suppliers or external service providers, done in an alternative distribution system (e.g. cafeterias or vendor machines) or not necessary as the milk is provided free of charge (e.g. in Hungary or Poland).
- ▲ Organising the ordering and distribution of products, if this is not organised by the supplier (e.g. by vendor machines), supported by caretakers of the school or not necessary as the delivery system is already installed (e.g. cafeterias).

Regarding the “money collection problem” in schools (mainly the collection of the parental contributions to the costs of the school milk), this seems to be a main obstacle for schools to participate in the SMS. If alternative approaches which manage the payment procedure outside the school do not exist or are not feasible, there needs to be someone who feels responsible (a motivated teacher, parent, and caretaker) to still enable the participation. Financial support for those persons might be important in order to motivate people. For example in Germany this problem worsened in the past few years



(teachers have less time, caretaker are responsible for two or more schools etc.). In some cases parents do that job but then there is only limited continuity.

AB, on the other hand, is in most cases evaluated as low if not marginal at school level and covers processes like record keeping of delivery documents and the time-effort which is required for taking part in the on-the-spot-checks. Some of the schools mention further, that a burden is also seen in the fact that the scheme's regulations insist on only subsidising milk actually eaten by the children in the schools. Sometimes, especially if the products are offered by a canteen or cafeteria, it seems to be difficult to exclude other people eating these products at the same time (e.g. teacher, staff, etc.). This leads sometimes to a non-participation of schools, because the controls are too complicated for them. Especially the interviewed non-participating schools mentioned that burdens at school level are considered as far too high compared to the benefits derived from the programme. Furthermore, some schools fear a higher organisational burden, if they would have to implement additional educational measures like in the School Fruit Scheme.

Box 11: Conclusions on administrative and organisational burdens

- Information on administrative costs provided by Member States is in most cases limited. The reason for this is that detailed information on those costs is not recorded and documented.
- Burden indicators are higher in Member States where the uptake of funds is rather low in relation to the eligible population.
- The cases of France and Poland show that a higher amount of children participating or a larger range of products distributed do not necessarily cause relatively high administrative costs.
- The estimated administrative costs per child are on EU level beyond EUR 0.35 per school year.
- As burdens behave partially like fix-costs a decreasing participation of schools and children might not simultaneously lead to an equivalent reduction of administrative costs as a couple of basic processes have to be maintained independent of the schemes scale.
- In a situation of decreasing participation in the scheme a simultaneous increase of administrative costs in relative terms is likely.
- Processes which cause AB within the scheme are charging for administrations (e.g. ministries) and dairy suppliers. Organisational burdens charge in particular the participating schools.
- Most suppliers evaluate the burden they have to handle, like providing the security guarantee and applying the supplier licence as disproportional high. Product controls are also burdensome. However, in particular bigger suppliers are able to reduced significantly costs by process-automation and -standardisation through adequate software tools.
- Regarding the "money collection problem" in schools (mainly the problem of collecting the contribution of the parents to the costs of the school milk), this seems to be a main obstacle for schools to participate in the programme. If alternative approaches managing the payment procedure outside the school do not exist or are not feasible, there needs to be someone who feels responsible (a motivated teacher, parent, and caretaker) in order to enable the participation.
- Even though some of the operative processes might be evaluated from outside as simple, unproblematic and not burdensome, it turned out to be of high importance to listen carefully to the judgement of the persons concerned. The motivation and the engagement of these persons to deal with problems and burdens have a very high impact on the SMS's uptake.



5.1.6 Evaluation question 6

Understanding of the question

Evaluation Question No. 6 **“To what extent would a strategic programming and targeting approach lead to an improved effectiveness of the School Milk Scheme?”** refers to the hypothesis that through a strategic planning and targeting the scheme’s effectiveness can be increased.

Strategic planning is a planning process which is usually described as a “Draw-See-Think-Plan”-method. Furthermore, since the evaluation of the strategies in the School Fruit Scheme showed that Member States tend to use their strategies as implementation plan, ways have to be detected that support a strategic approach including a control process.

Method of measurement

The evaluation will deal with the strategic planning process and the stakeholders involved. The design of the School Milk Scheme has to be taken into account in order to identify starting points for strategic measures. Other strategic instruments have to be considered additionally and reviewed with respect to their contribution to the scheme’s effectiveness.

Table 27: Indicators and Methods for Evaluation Question No. 6

Objectives of the question	Indicators	Methods of measurement
Working Package 3: Answers to the evaluation questions		
Question 6 “To what extent would a strategic programming and targeting approach lead to an improved effectiveness of the School Milk Scheme?”	<p>Evaluation of the current situation and possible strategic elements:</p> <ul style="list-style-type: none"> • main concerns for the recent SMS • recommendations for changes • strategic approaches in the School Fruit Scheme • other strategic instruments to be appropriate <p>Impact assessment:</p> <ul style="list-style-type: none"> • expected increase in up-take of the scheme • expected increase in number of participants • expected increase in milk distribution • improvement of the scheme’s support and of the image • realisation of advisable recommendations 	<p>Qualitative approach:</p> <p>Review of prior evaluations and reports on the School Milk Scheme</p> <p>Analysis of the legislative documents for the School Milk and Fruit Scheme with respect to strategic elements</p> <p>Impact assessment</p>



▲ Answer to the evaluation question

The scheme's effectiveness has been criticised since the early 1970ies.¹¹⁶ The first evaluation report (1999) stated a rather poor effectiveness with regard to the scheme's impact on the market, its help to increase consumption and improving knowledge of the nutritional qualities of milk products.¹¹⁷ Specific points of critique are listed in Table 28. **The report suggests a consideration of terminating the scheme and of reallocating its funds.**¹¹⁸ Hence, it does not recommend detailed measures to improve its effectiveness and efficiency.¹¹⁹ Political decisions in the EU led to a continuation of the SMS. Changes in its regulation helped to overcome certain areas of concern (Table 28), which therefore will not be subject of this evaluation.

Table 28: Critical comments based on the first evaluation (1999)

Points of critique in the final report: "Evaluation of the school milk measure" (1999)	
Subject	Status quo
<ul style="list-style-type: none"> Strong national impact of the general health and educational policy limits its effectiveness. The SMS has a small impact on the availability of products. SMS's uptake reaches only 12% of the entitlement volume. AB prevent schools from participating. It is challenging for schools to pre-finance the products distributed under the scheme until the reimbursement. Compared to the market volume the scale of the SMS is small (0.3% of total milk delivered to EU dairies in 1996/97). Since school milk is hardly supported by any promotion campaigns it does not improve knowledge about nutrition. Prices are no major factor influencing the consumption of milk. Therefore the price subsidies are not effective.* The SMS's impact on prices for school milk could not be determined since milk in educational establishments is often provided free of charge or as an ingredient for meals.* Certain products with rising consume trends are not eligible under the SMS (e.g. semi-skimmed yoghurts).* The SMS tries to encourage liquid milk consumption against the change in eating habits, namely that with increasing age adolescents consume more milk products than liquid milk.* The SMS offers a poor value for money ratio since alternative ways of disposal from the milk market are cheaper.* 	<ul style="list-style-type: none"> Situation affects the scheme's effectiveness until today. Situation affects the scheme's effectiveness until today. The average up-take in the EU reaches only 8% This statement has still been found in the recent survey. Situation affects the scheme's effectiveness until today. In 2010 the scale of the scheme totals 0.3% of the market volume of raw milk supplied to EU dairies. Situation affects the scheme's effectiveness until today. A study of price influences on school milk consumption presents the impact of this factor. Amendments in the legislation do no longer allow using school milk for the preparation of meals. The amendment in 2008 widened the product range distributed under the scheme. Member States are free to offer cheese and milk products under the scheme. It is doubtful which alternative disposal is available at lower costs yet able to stimulate the milk consumption

* Points of critique which have been overcome and are therefore not covered in the answer of the evaluation question

Source: CEAS Consultants and Technische Universität München (1999): "Evaluation of the School Milk Measure"

¹¹⁶ Critics that parents are capable to provide their children with milk led e.g. in the UK to the decision to first cut back on school milk for secondary school children and second on reductions for primary schools in the 1970ies and 1980ies.

¹¹⁷ CEAS Consultants and Technische Universität München (1999): "Evaluation of the School Milk Measure"

¹¹⁸ Ibid, p. IX

¹¹⁹ Ibid, p. X



In more recent days the CEPS¹²⁰ report (2011) analysed the AB related to the SMS and the SFS. The authors identified several characteristics which burden the scheme additionally (Table 29). They suggest several measures to minimise the AB with reference to potentially negative impacts on the scheme's general approach. Based on their statement: *"we always warn that simplification should be achieved taking into account possible consequent reduction of benefits, e.g. in terms of subsidiarity, effectiveness or soundness of management"*,¹²¹ the need for a strategic consideration becomes apparent.

Table 29: Critical comments based on the CEPS-report (2011)

Points of critique in the report: "Measurement of AB generated by the EU Legislation" (2011)	
Subject	Status quo
<ul style="list-style-type: none">• The number of participating schools is not available.• The flexibility of Member States to draw decisions on how to implement the SMS may cause more documentation and controls so that it increases burdens.• The scheme does not define any minimum requirements as regards to participating pupils in an educational establishment, the duration of the distribution period and a minimum quantity to be distributed in each participating school. This neglect might cause additional burden for certain schools since some administrative costs and burdens behave like fix costs.• If the allocation of funds is based on the population of pupils only, small Member States face higher burdens than larger Member States due to the impact of fix costs.• Possibilities to reduce burdens by electronic submission of obligatory documents are not exhausted in the administration of the scheme.• Separate administration of the School Fruit and the School Milk Scheme may cause avoidable burdens for participants.	<p>Situation affects the scheme's effectiveness until today.</p>

Source: CEPS, Renda, A. and Luchetta, G. (2011): "Measurement of AB generated by the European Legislation"

In the same year, the report of the **European Court of Auditors (2011)**¹²² indicates an **unsatisfying "performance" of the SMS**, its **unattractiveness**, its **"significant dead-weight"**, the **neglecting of educational goals** and finally the **missed chance for changes recommended by the first evaluation (Table 30)**. Therefore, the wish to improve the scheme's effectiveness is obvious.

¹²⁰ CEPS, Renda, A. and Luchetta, G. (2011): "Measurement of Administrative burdens generated by the European Legislation"

¹²¹ Ibid, p 76

¹²² European Court of Auditors (2011): "Are the School Milk and the School Fruit Scheme effective?", Special report No 10



Table 30: Critical comments based on the “European Court of Auditors” -report (2011)

Points of critique in the special report: “Are the SMS and the SFS effective?” (2011)	
Subject	Status quo
<ul style="list-style-type: none"> • The SMS was not considerably adjusted, facing a fundamental criticism and recommendation to end it. • The SMS have at best a “very limited impact”.¹²³ • The low subsidy rate influences the SMS’s attractiveness negatively. • The scheme leads merely to deadweight since milk products would either be provided to or bought by the pupils anyway. • The SMS pays too little attention to its educational objective • The target group of the SMS appears not to be specific and its definition is not based on nutritional needs. • The visibility of the scheme is marginal. • The political decision makers do not make use of synergies between the SMS and the SFS. 	<ul style="list-style-type: none"> • Situation affects the scheme’s effectiveness until today. • The scheme’s impact on the market is almost negligible; an increase on children’s milk consumption cannot be evaluated with the information available. • This statement has still been found in the recent interview survey. • Indications for deadweight effects still occur, such as the low price elasticity of certain milk products provided and a low awareness of the SMS. • Situation affects the scheme’s effectiveness until today. • As regards to the SMS’s objective, a more restricted definition of the target group will limit the impact. • Situation affects the scheme’s effectiveness until today. • Situation affects the scheme’s effectiveness until today.

Source: European Court of Auditors (2011): “Are the School Milk and the School Fruit Scheme effective?”, Special report No. 10

The review of the three evaluations of the SMS shows certain areas of concern, which are illustrated in Table 31.

Table 31: Main areas of concern as regards to the SMS

<ul style="list-style-type: none"> • Neglect to integrate all tools important to reach the scheme’s objectives • Neglect to integrate all groups of stakeholders important to reach the scheme’s objectives • Neglect to link and adjust the measures introduced • Neglect of synergies with School fruit Scheme (SFS) 		
Contribution to objectives	Visibility	Poor instrument-impact relationship
<ul style="list-style-type: none"> • poor up-take • Implementation decisions by the Member States may reduce effectiveness • no specific target group • no educational measures 	<ul style="list-style-type: none"> • scheme hardly known • linkage between products distributed and scheme is hardly visible • poor communication 	<ul style="list-style-type: none"> • low subsidy rate • AB (esp. in schools) • high deadweight

Besides specific programme characteristics that influence its effectiveness, **four superordinate points of critique have been taken into consideration, namely:**

- **the neglecting to apply all instruments relevant for the success of the scheme**
- **the neglecting to involve all stakeholder groups relevant for its success**
- **the neglecting of synergies with the School Fruit Scheme**
- **the neglecting to link and adjust the measures introduced.**

A strategic programme would certainly help to get over the latter named point of critique. The process of strategic planning requires to match single measures of several instruments as well as to adjust these instruments to the strategy, which can be understood as the way to-

¹²³ European Court of Auditors (2011): “Are the School Milk and the School Fruit Scheme effective?”, Special report No 10; p. 6



wards the objective. All measures must lead into the same direction and are ranked by their contribution towards reaching the objective. Therefore, a strategic programme would certainly help to overcome the latter named point of critique. The contribution to overcome the first two points appears to be most likely since the approach to be undertaken leads to a thoroughly occupation with potentially useful instruments/measures, with shared responsibilities and drivers for desired developments. The achievement of synergies with the School Fruit Scheme is possible but firstly needs a general decision since the schemes fall so far under specific regulations. In addition, the process will define sub-targets or milestones which indicate the approach to the overall objectives, namely market stabilisation and stimulation of children's dairy consumption. Both will help to **develop a monitoring and evaluation concept which allows controlling the scheme's performance, readjustments and advancement of the scheme**. Introducing sub-targets and controlling processes will help to improve the recent poor contribution of the scheme towards its objectives (see first column in Table 31). **The idea of strategic programming and the targeting approach however needs to be communicated and transferred to all participating Member States in order to ensure its impact.** Findings in the evaluation report of the School Fruit Scheme point out that the relevant regulations ask for a strategic approach, e.g. the Member States have to submit strategy papers, monitoring and evaluation reports. The European Court of Auditors, having examined the School Fruit Scheme, considers the programme as a more promising approach. Since the strategies are published¹²⁴ and the Member States have to notify any changes to the Commission,¹²⁵ this tool further adds to the transparency of the EU SFS. The performance in the Member States showed that the compiled documents could hardly be used as a strategic instrument. They miss for example to set specific objectives the Member State aims to reach, such as a certain increase in fruit consumption of participating children or a defined number of participants. The documents rather appear as guidelines for the national or regional implementation of the School Fruit Scheme.¹²⁶ **Strategic programming requires analysing and determining the main factors of influence for the success of the scheme.** The general aim is to increase the milk consumption of young people, which will lead on the one hand to a market stabilisation and on the other hand to a more balanced diet of children. If milk consumption is kept as a habit for a lifetime the desired effects continue even after young people do not participate in the scheme anymore and leverage effects are most likely. Analyses of successful interventions on eating habits strengthen the need for an intervention logic deducted from behavioural theories.¹²⁷ **Underlying the social cognitive theory as the leading behavioural theory to change behavioural pattern (compare Evaluation Question 3), three areas of influence have to be taken into consideration, as illustrated in Figure 33: environmental, personal and social determining factors of milk consumption.**¹²⁸

¹²⁴ E.g. strategies can be downloaded from the schemes website of the European Commission:
http://ec.europa.eu/agriculture/sfs/european-commission/index_en.htm

¹²⁵ See Article 15 (4) of Commission Regulation (EC) No. 288/2009 of April 7th 2009

¹²⁶ European Commission (ed. 2012): „Evaluation of the European School Fruit Scheme“, p. 100; online publication:
http://ec.europa.eu/agriculture/evaluation/market-and-income-reports/2012/school-fruit-scheme/fulltext_en.pdf

¹²⁷ Sharma, M. (2006): “School-based interventions for childhood and adolescent obesity”, obesity reviews (2006), 7, p. 267

¹²⁸ Similar factors on the milk consumption have been identified in a study by Salamon, Petra; Weible, Daniela; Bürgelt, Doreen; Christoph, Inken B.; Peter, Günter; Gonzalez, Aida; Rothe Andrea and Weber Sascha A (2010): “Ökonomische Be-



Environmental factors cover the scheme's implementation in the Member State, organisational and logistical aspects of the scheme as well as financial ones, the product range available, the product image and the participation of schools. Each factor itself is influenced by several other factors, e.g. the school's participation is influenced by the scheme's image among the school staff, by the administration required, by product prices etc. Interdependencies of determinants show the complexity of the various influences on consumption. Personal determinants among others are the eating habits, taste preferences and the age of children as well as their self-perception. The desired self-perception and life style affect the image of dairy products and alongside the decision whether their consumption is desirable. It is a link to the answer whether milk is "some whitish liquid for babies" or a refreshment supporting "health, energy and beauty". The area of social determinants includes opinion makers in peer groups, teachers and parents as role models and opinion leaders, the public opinion as regards to milk and milk consumption, to the SMS and the EU, plus the social background of a child. Taking all these factors and their interdependencies into consideration, **various starting points for a strategic programming and targeted approach become apparent**. In order to align strategic measures in a way that they all contribute to reaching the objective, **key strategies help as orientation guide**.

Figure 33: Main factors of the consumption of school milk

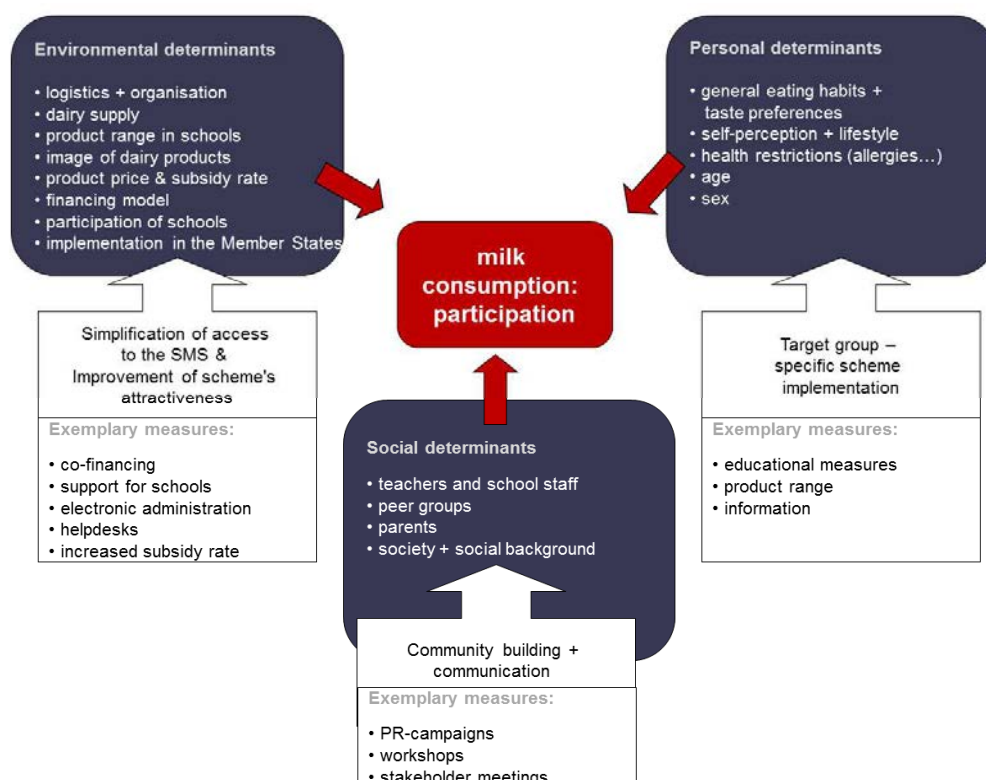


Figure 33 presents for each area of influence a specific key strategy:



- **Simplification of access to the SMS and improvements of the scheme's attractiveness will have a positive impact on environmental determinants.**
- **Community building and communication ensures the scheme's support of relevant stakeholders, motivates them in their participation and commitment and therefore influences the social determinants.**
- **Target-group specific scheme implementations contribute to increase the scheme's attractiveness e.g. to different age groups and therefore, to avoid possible restrictions before they affect the scheme's effectiveness.**

Each of the three key-strategies summarises a bundle of different measures. Community building for example is based on improved, target group specific communication, on knowledge exchange and on physical meetings. As single measures and their potential impact are presented in the corresponding evaluation questions¹²⁹, they are not repeatedly depicted in this chapter.

When considering single measures it is important to be aware of their influence on other determinants and thus to keep the overall perspective in mind. For each measure responsibilities have to be determined, which again have a major impact on the scheme's effectiveness. Renda and Luchetta (2011) for example point out that the freedom of Member States to decide on the majority of implementation parameters on the one hand may lead to an increased burden in the state. Restriction of their freedom on the other hand might prevent them from participating.¹³⁰ The question whether the schools have to collect the parental contribution or the parents pay the supplier directly or a co-financing model similar to the SFS will be established in the future will have an impact on the scheme's up-take. Nevertheless, even in this theoretical consideration of the strategic approach for the SMS it is evident that **the EU needs to implement certain key strategies and to provide guidance to the stakeholders and participants at national, regional and local level.** The questions as to whether the SMS is supported by a promotion campaign, whether additional communication measures should be applied, in which way parents should be more intensively involved or if educational measures will become obligatory can only be decided at Community level.

Since the strategic concept allows numerous decisions for single measures, responsibilities, strategies, sub-targets etc. and independencies are found for the determinants of school milk consumption, the intensity of the improvement cannot be forecasted.

The discussion of Evaluation Question No. 6 therefore leads to the general conclusion that a strategic programming and targeting approach will have a positive impact on the scheme's effectiveness since the process will help to overcome serious areas of concerns. The achievable impact however depends on the specific strategy designed for the SMS and its conversion in the Member States.

¹²⁹ Educational measures are covered e.g. in Evaluation Question No. 3, No. 2 deals with the product range and taste preferences, No. 5b with AB, No. 12 with age-appropriate approaches

¹³⁰ CEPS, Renda, A. and Luchetta, G. (2011): "Measurement of Administrative burdens generated by the European Legislation", p. 76



Box 12: Conclusions on the contribution of strategic planning and targeting approach to the scheme's effectiveness

- Regarding the scheme's effectiveness main areas of concern are lack of visibility of the scheme, the limited contribution of the EU aid to the total price of dairy products distributed and an insufficient integration of educational measures.
- Addition critical points have been identified: all important tools are not integrated and all groups of stakeholders are not integrated which are important to reach the scheme's objectives and insufficient synergies with the School fruit Scheme (SFS). With regard to the latter, the Commission is working on a new initiative whose aim is precisely to reach more synergies between the two existing school schemes.
- The process of strategic planning can help to overcome concerns. Added value would be brought by following the required methodology and through an adequate dialogue with the Member States and stakeholders.
- In order to provide a basis for a targeting approach the main factors of the consumption of school milk, categorised as environmental, personal and social influences, have been analysed and interdependencies have been asserted.
- As a starting point for the strategic planning for each category a key strategy has been developed:
 - (1) *Simplification of access to the SMS and improvements of the scheme's attractiveness will have a positive impact on environmental determinants.*
 - (2) *Better cooperation and communication ensures the scheme's support of relevant stakeholders motivates them in their participation and commitment and therefore influences the social determinants.*
 - (3) *Target-group specific scheme implementations contribute to increase the scheme's attractiveness e.g. to different age groups and therefore, to avoid possible restrictions before they affect the scheme's effectiveness.*
- The impact of a strategic planning and targeting approach depends on the specific strategy designed for the SMS by the various Member States.



5.2 Theme 2: Efficiency and deadweight

5.2.1 Evaluation question 7

▲ Understanding of the question

Evaluation Question No. 7 “**To what extent has the SMS been implemented efficiently?**” investigates the relation between the effectiveness-level (output) and the money and effort spent (input-level) of the SMS. Efficiency in general describes the extent to which time, money or effort is well used for the intended task. Moreover, the topic of efficiency is closely related to the topic of administrative burden (Evaluation Question 5b) and deadweight (Evaluation Question 8). Thus, all aspects cannot be investigated separately, but have to be linked together.

It is obvious that a **reduction of avoidable administrative costs increases the efficiency of a programme** as for the same output less input (money and effort) is required. For this reason a detailed analysis of the administrative burden issue has already been given in the answer to Evaluation Question 5b (Section 5.1.5).

Furthermore, it is also evident that **any existence of a deadweight effect leads to a reduction of the scheme’s efficiency** as for any input level no additional output is produced, so that an increased input (money and effort) would not lead to an improved output. Thus, a strong deadweight effect leads in extreme cases to an absolute in-efficient input-output relation and thus, to an absolute in-efficient policy intervention. For this reason, a detailed analysis on the deadweight issue is given in the answer to Evaluation Question 8 (Section 5.2.2).

▲ Method of measurement

In order to calculate a basis of comparable **input indicators**, the funds used by the Member States have to be put into relation to the size of the target group first. Therefore, the input into the scheme is defined as **spending per child** to make the different schemes comparable.

The **output indicators** used to compare the different schemes result from the effectiveness-indicators as already discussed in Evaluation Question No 1 and 2. Since the SMS aims to stimulate milk consumption among children and young people, the *increase in milk consumption* would ideally be the most appropriate output indicator. However, **the available information on Member State level does not provide sufficient data related to the actual consumption or consumption changes caused by a participation in the scheme**. Therefore, auxiliary indicators have to be defined. In this regard, the **share of participating children in all children in a country** (participation share) can be used as an alternative output indicator. This share can be put into relation to the comparable input factors, such as *spending per child*. The resulting efficiency indicator can be defined as follows:

$$\frac{\text{Share of participating children in all children in a country}}{\text{Spending in EUR per child and year}} \\ = \text{Efficiency of SMS subsidy.}$$



This indicator is (1) comparable over all Member States and (2) usable to evaluate efficiency as it describes theoretically the share of participation which might be realised per each EUR spent per child and school year in a country.

However, it has to be pointed out that any ranking of Member States with respect to such an efficiency indicator is in no case a hard indication for a well or bad operating scheme. Rather, the efficiency approach tends only to evaluate the monetary aspect of the SMS, subject to the data available, and cannot be used to derive answers to the effectiveness questions (quality of output) which is done in Chapter 5.1. Table 32 summarises the methodological approach to answer evaluation question 7.

Table 32: Indicators and Methods for Evaluation Question No. 7

Objectives of the question	Indicators	Methods of measurement
Working Package 3: Answers to the evaluation questions		
Question 7 “To what extent has the School Milk Scheme been implemented efficiently?”	<p>Indicators are highly related to the available data and data quality. Therefore the following indicators have to be viewed as possibilities given for a broad information basis:</p> <ul style="list-style-type: none"> • <i>Increase in milk consumption related to quantity of distributed school milk (products)</i> • <i>Increase in milk consumption related to overall and EU expenditure</i> • Spending per pupil related to the reach of the SMS <p>Experiences with the efficiency of the SMS's implementation:</p> <ul style="list-style-type: none"> • Suggestions for improving the efficiency • Identification of saving opportunities • Obstacles that cause avoidable expenditures 	<p>Quantitative approach: Statistical analysis of the information gathered by the Commission in accordance with Regulation (EC) 657/2008, Article 17</p> <p>Qualitative approach: Results of the standardised questionnaire survey with national Control Authorities in the 26 participating Member States and the interview survey of the case study analysis</p>

▲ Answer to the evaluation question

Based on the mentioned considerations to find an appropriate indicator to measure the SMS's efficiency with respect to the existent limitations in data availability, the described approach can be used to provide deeper insights especially for two questions:

(1) To what level of output (measured in share of participation children in all children of a country) **does the same input** (measured in expenditure per child) **lead in each participating country?**

(2) Which level of input seems to be appropriate to reach a maximum level of output?

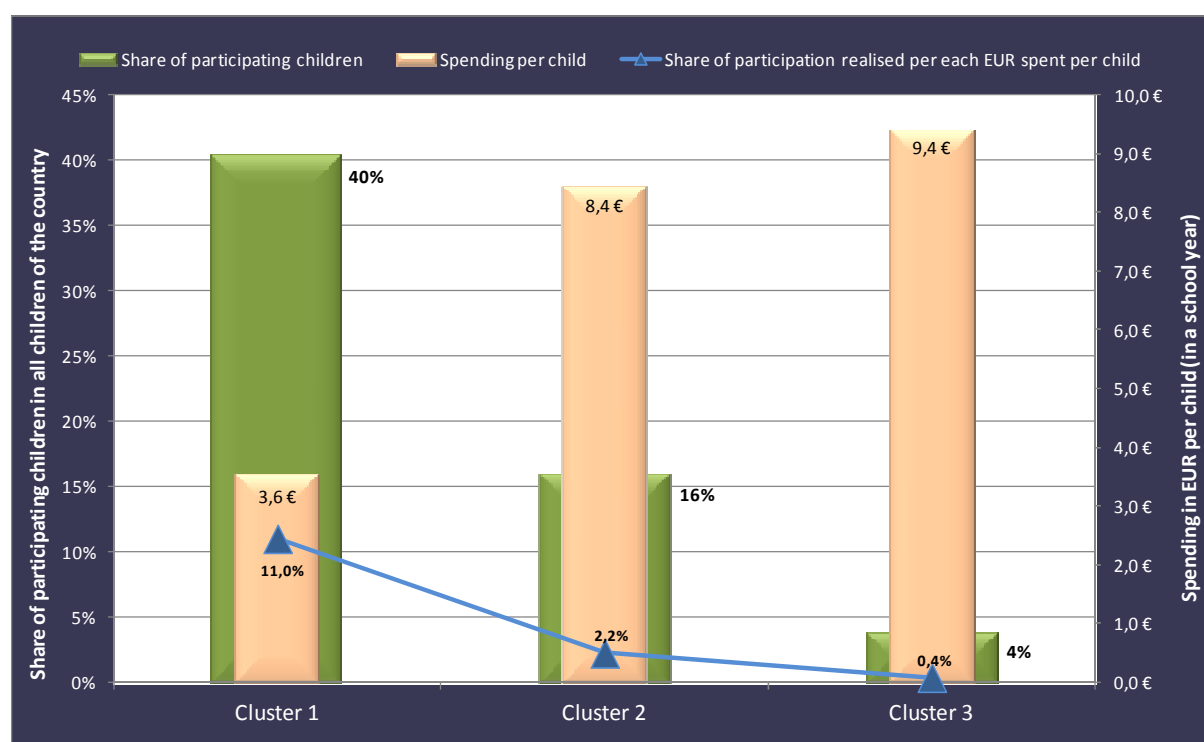
Regarding the first question Figure 34 displays the results of the calculated indicator “Efficiency of SMS subsidy” for all participating Member State which are clustered in three



groups. The average values for each group are highlighted in Figure 34. The main result (the blue triangles in Figure 34) represents the efficiency of the SMS subsidy which can be interpreted as “share of participation realised per each EUR spend per child in a country”. This means that e.g. in the first Cluster, where on average EUR 3.6 were spent in the SMS per child in the school year 2010-2011 and a participation share of about 40% was reached, every EUR spent per child led consequently to a participation of 11%. By contrast, e.g. in Cluster 3, on average about EUR 9.4 were spent per child in the school year 2010-2011 which led to a total participation of only about 4%. This means that every EUR spent per child led only to a participation of 0.4%.

Among all participating Member States the range of this indicator reaches from 0.1% in Slovenia and Bulgaria to over 15% in Finland and Cyprus which is an indication for the fact that **the subsidies spend under the SMS lead to quite different outputs among Member States.**

Figure 34: Share of participation realised per each EUR spent per child in a country



Source: Own calculation based on SMS data provided by European Commission, DG-AGRI (05.02.2013)

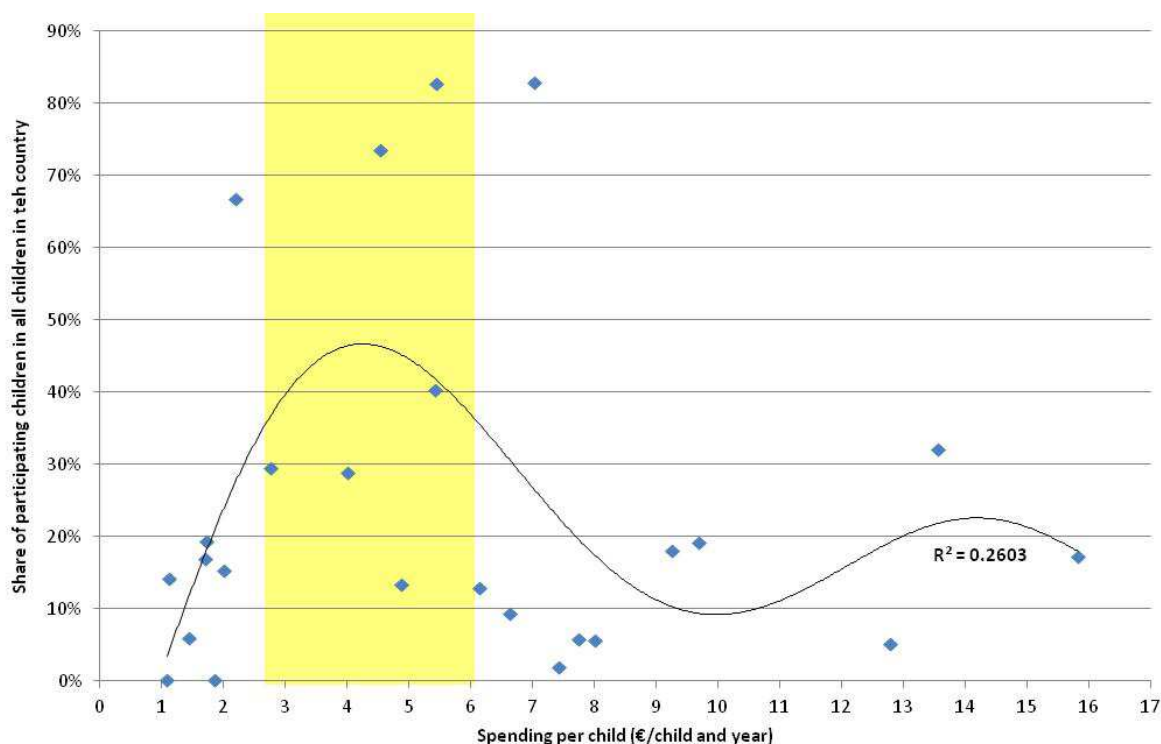
Note: Countries covered by Cluster 1 are: Finland, Sweden, Italy, Estonia, Belgium, France, Malta, Luxembourg, Romania, Czech Republic. Cluster 2 covers: Spain, Portugal, Poland, Latvia, Slovakia, Denmark, United Kingdom, Lithuania. Cluster 3 covers: Austria, Germany, Ireland, Hungary, Netherlands, Bulgaria, Slovenia.

Regarding the second question, Figure 35 displays the correlation between the spending per child observed in the Member States and the participation share. It can be observed that the regression function shows a R^2 of 0.26, meaning that 26% of the observations can be explained by the estimated function. Even if the quality of this regression function is limited, it can be proved that a correlation between both variables exists. **However, a high spending per child does not automatically lead to a higher participation share** (Figure 35). This observation is comprehensible as on the one hand, a relatively high spending per child



maximises the interest of the target group for participation but, on the other hand, leads in most cases to a reduces scale of the SMS as a result of budgetary limitations.

Figure 35: Correlation between spending per child and participation share



Source: Own illustration based on SMS data provided by European Commission, DG-AGRI (05.02.2013)

Box 13: Conclusions on the scheme's efficiency

- Every reduction of administrative costs increases the efficiency of the SMS. By definition, any existence of policy inefficiency or deadweight effects leads to a reduction of the scheme's efficiency. Considering both aspects will provide the first and easiest way to increase the efficiency of the SMS.
- To measure effectiveness a common efficiency indicator applicable for all MS has been constructed for the evaluation. The results show, that the range of the calculated indicator large among MS which indicates that the subsidies spent in the SMS lead to quite different outputs.
- The correlation between the spending per child and year and the share of participating children is statistically significant. However, high spending per child does not automatically lead to a higher participation share. This observation is understandable as on the one hand, a relatively high spending per child increases the interest of the target group to participate but, on the other hand, leads in most cases to a reduces scale of the SMS as a result of budgetary restrictions. In view of the empirically observed trade-off in the scheme between spending per child and participation in the scheme it should be considered to establish minimum thresholds for spending per child and participation.



5.2.2 Evaluation question 8

▲ Understanding of the question

Deadweight is a special case of programme inefficiency¹³¹. Deadweight refers to effects which would have arisen even if the intervention had not taken place. Deadweight usually arises as a result of inadequate delivery mechanisms, which fail to target the intervention's intended beneficiaries sufficiently well. As a result, other individuals and group who are not included in the target population end up as recipients of benefits produced by the intervention. This evaluation must analyse whether the scheme is efficient and does indeed provide additional "milk portions" to young people. In other words, the question must be answered whether the milk consumption of children would be the same even if EU and national funds would not have been used to subsidise milk products? Special attention concerning possible programme inefficiency has to be given to the category of children that has already a rather high consumption of milk products and another category, mostly from a less privileged social background that are far less used to drinking milk products.

▲ Method of measurement

The question can be answered by economic theory and refers i.a. to the **price elasticity of demand for milk and milk products**. The price elasticity of demand defines the change of demand quantity if the price is changed by one unit. If demand changes considerably, the elasticity is high and can be described as *elastic*. The opposite observation - an only marginally changing consumption due to changing prices - indicates an *in-elastic* elasticity.

With respect to the SMS one can suggest that a probable existent low (*in-elastic*) price elasticity of demand - which is typical for staple food - might hinder the effectiveness and efficiency of the scheme. In this case the impact of a subsidised retail price would not lead to considerable changes in consumption. By contrast, probable high (*elastic*) price elasticity might strengthen its impact as only a marginal change in the retail price would lead to a strong change in consumption. Both options are visualised in Figure 36. As one can observe, the market impact in case of an elastic demand function is significantly stronger than in the case of an in-elastic demand function, although the intervention mechanism and the price subsidy (input) is on the same level. The general interpretation of different elasticity values is described in Table 33. **In general, one can say that the lower the value of the elasticity, the more elastic is the demand function and the higher is the absolute quantity effect of a price intervention.**

¹³¹ European Commission, Directorate-General for the Budget, *Evaluating EU Activities. A practical guide for the Commission services*, Brussels, July 2004, p. 103.



Table 33: Interpretation of the price elasticity of demand

Value of elasticity (η)	Interpretation	Changing the product price by one unit leads to a ...
$\eta < -1$	elastic demand	...over-proportional demand change
$\eta = -1$	unit elastic demand	...proportional demand change by one unit
$-1 < \eta < 0$	inelastic demand	...under-proportional demand change
$\eta = 0$	perfectly inelastic demand	...no demand change

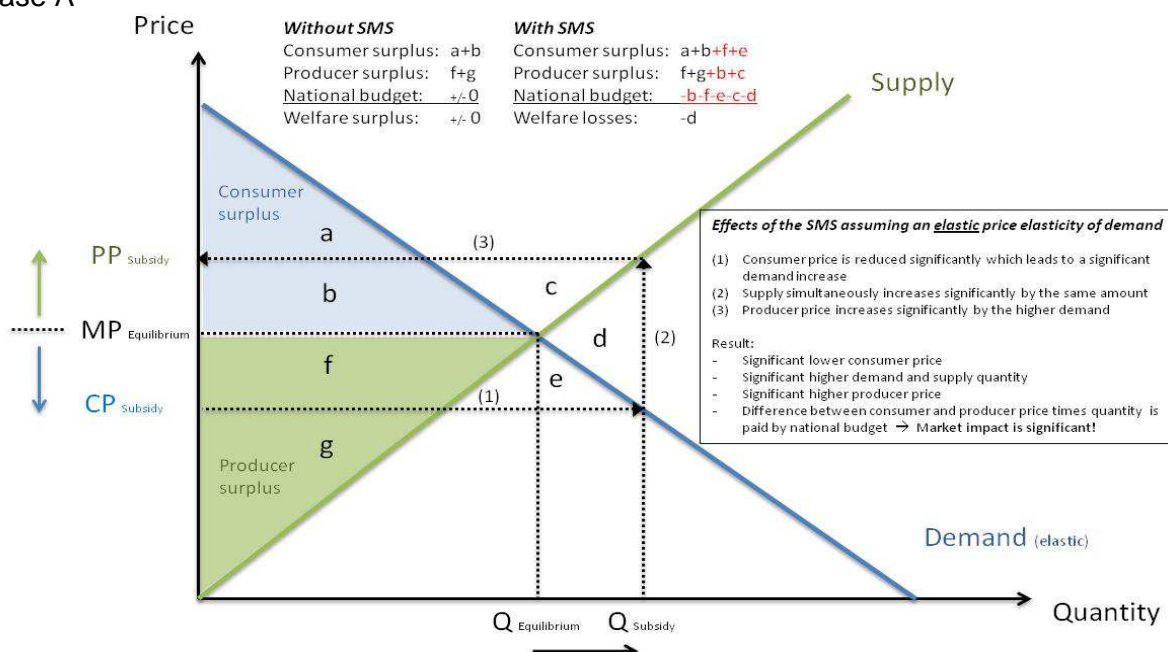
Source: Own compilation

Following the described theory, a possible approach to answer this question is to investigate the consumption behaviour by analysing and defining the price elasticity of demand for milk and milk products of pupils. Various (statistical) approaches are conceivable to measure consumption behaviour. However, most approaches are difficult to execute within an European-wide policy evaluation. Thus, in a first step, in order to gain more knowledge on this aspect a **detailed literature review** is carried out.

In a second step, the information gained from the literature review is validated by **qualitative interviews** with school headmasters. The interviews are carried out within the interview survey focusing on the selected eight Member States. Questioning school headmasters provided useful insights into the price perception of children and parents and the willingness and ability to pay for milk products offered to the children in schools.

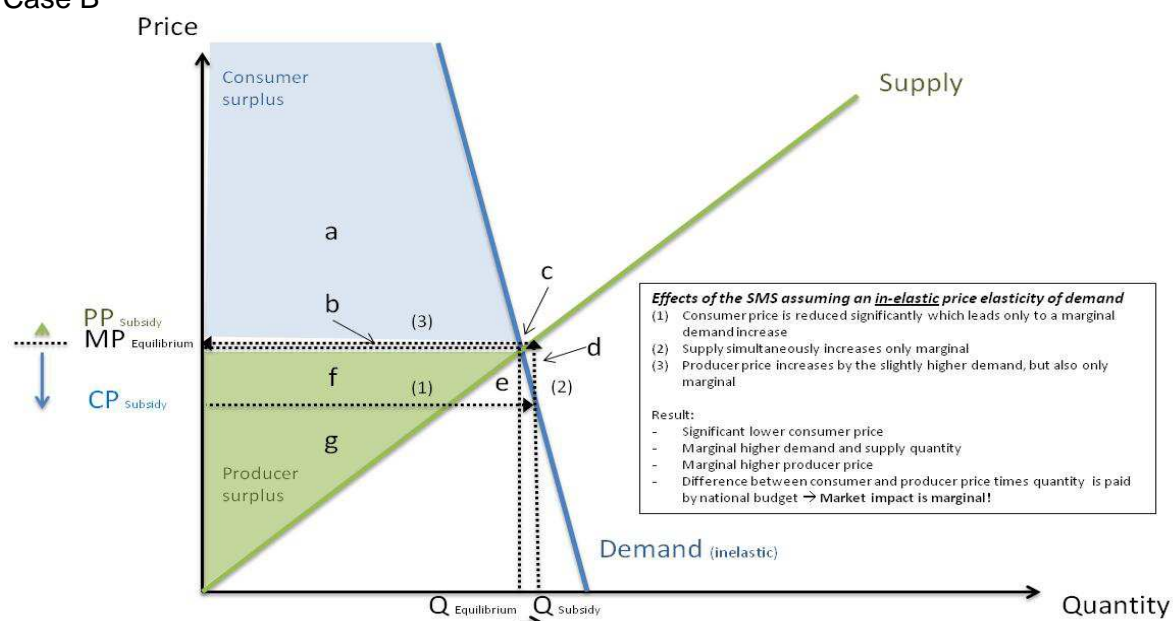
Figure 36: Functioning of the SMS subject to different price elasticities of demand

Case A





Case B



Source: Own illustration

Table 34: Indicators and Methods for Evaluation Question No. 8

Objectives of the question	Indicators	Methods of measurement
Working Package 3: Answers to the evaluation questions		
Question 8 “To what extent has the implementation of the School Milk Scheme led to deadweight?”	<p>Indicators for deadweight:</p> <ul style="list-style-type: none"> Price elasticity of demand for milk and milk products (elastic or inelastic) Increase in consumption reached through the SMS compared to a control group (non-participating schools) <p>Experiences in schools:</p> <ul style="list-style-type: none"> Willingness and ability of parents and children to pay for milk and milk products. 	<p>Qualitative approach:</p> <p>Literature review on price elasticity of demand of milk and milk products and explicitly deadweight in SMS</p> <p>Standardised expert interviews with school headmasters / teachers in the 8 case study regions</p>

Answer to the evaluation question

(1) Results from existing literature

The German *von Thünen Institut* and *Max Rubner Institut* (2011) have carried out a research for the German SMS in North-Rhine Westphalia which concentrates on economic aspects related to the scheme such as the price influence on distributed products. Within a price experiment at schools, prices for milk have been decreased by 4 levels (EUR 0.35 per 250 ml portion drinking milk to fully out of charge) during the school years 2008/09 and 2009/2010. More than about 7,300 pupils (population ≈ 740,000 pupils) participated in the analysis. Fig-



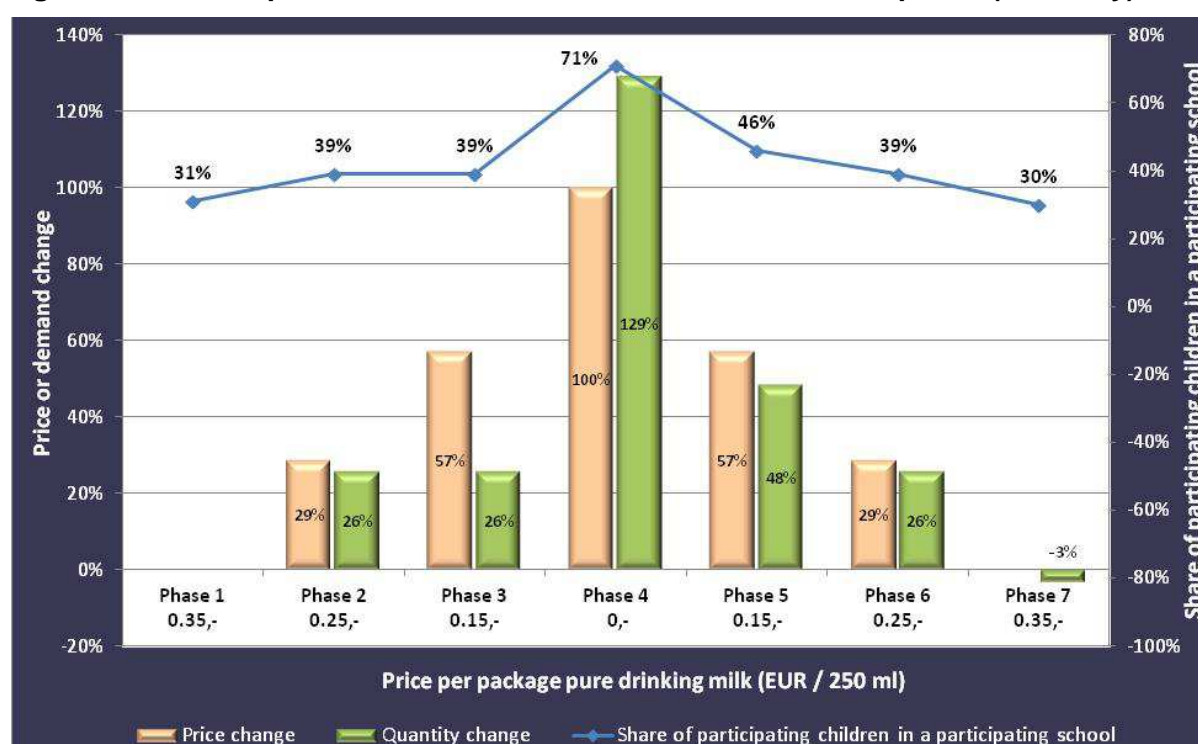
ure 37 illustrates the results of the price experiment, namely the impact on children's milk consumption.

The red pillars in Figure 37 display the level of the price reduction per phase in % of the initial product price of EUR 0.35 per 250 ml drinking milk. For a better visualisation and comparison to the quantity changes, the percentage change is displayed as the modulus ($|x|$). The green pillars display the resulting demand changes measures in % of the initial quantity consumed in phase 1.

In the experiment each child could only order one package per day so that the number of consumed packages in a school and the number of pupils participating in the SMS per day in this school is equal. Thus, the number of participants in relation to the total number of pupils in the observed schools corresponds to the general participation share.

Following this assumption Figure 37 can be interpreted as following: E.g. in Phase 2, as a result of a price decrease of -29%, the participation increases subsequently by +26% to a level of 39% of the school children in the observed schools. Thus, in phase 2, **the price decrease is higher than the increase of participation.**

Figure 37: Price experiment within the SMS in North-Rhine Westphalia (Germany)



Source: Own illustration based on BMELV/ VTI (2011): "Ökonomische Begleitforschung zum Bundesmodellvorhaben 'Schulmilch im Fokus'" (Accompanying economical analyse of the School Milk Scheme)

In general this characteristic of the price elasticity is equal in all phases, except of phase 4, where the distribution is fully out of charge. This observation leads to the assumption, **that contrary to the normal consumption behaviour, the free distribution constitutes more than a pure price effect. Rather, the free distribution might lead to further psychologi-**



cal effects or simply to less organisational effort in the operation of the scheme which apparently stimulates the demand behaviour and thus, the participation in the scheme very strongly.

The study also investigated the price impact on milk consumption by defining different clusters of the sample group which are characterised by various socio-economic features, like household income, education, gender, etc.

The main results of this research are summarised in the following.

- **Decreasing the milk price can increase milk consumption at schools. However, in general the demand increase behaves under-proportional to the price reduction. Only the free of charge provision might lead to an over-proportional (drastic) demand increase.**
- Thus, the influence of prices and price reductions on total participation in the scheme is limited.
- However, **younger children have in general a higher milk consumption per capita than older children. By contrast, they react less on price changes than the older ones.**
- Older children in general have a lower milk consumption per head. However, they react more sensible on price changes than younger children.
- The absolute milk consumption of children from privileged social backgrounds in phase 1 to 3 is higher than those of children from less privileged social backgrounds. In phase 4 the situation reverses! **In general children with a less privileged social background react more price sensible than children from a privileged social background. From this it follows that in particular children from less privileged social backgrounds profit from a free distribution.**
- **The price elasticity of demand depends strongly on the milk product. In Germany, for example, the increase of consumption through declining prices is significantly stronger in the case of milk-mix-drinks than for plain milk. Thus, the financial effort to reach a higher participation in Germany is much higher if only plain drinking milk is offered compared to offering milk-mix products.**
- **The psychological impact of a free distribution is very strong and cannot be compared to a price reduction!**
- The participation is influenced by further very important drivers, such as the teachers' attitude towards milk, the parents' income and the child's image of milk.¹³²

To validate these findings one part of the research investigated in more detail the price elasticity of demand for milk and milk products for the total society, differentiated into households with and without children. Overall, two main results were derived from this research:

- (1) Households with children react more price sensitive with respect to milk and milk products than households without children.

¹³² BMELV/ VTI (2011): "Ökonomische Begleitforschung zum Bundesmodellvorhaben 'Schulmilch im Fokus'" (Accompanying economical analyse of the School Milk Scheme)



- (2) Substitution effects can be observed especially between milk and milk products, on the one hand, among each other and, on the other hand, between meat products.

In detail, the following price elasticities were calculated:

Table 35: Price elasticities of milk demand observed in Germany

Value of elasticity (η)	Product	Changing the product price by one unit leads to a
-1	Drinking milk	...proportional demand change by one unit
-0,9	Yogurt	...slight under-proportional demand change
-0,73	Hard cheese	...under-proportional demand change
-0,99	Soft cheese	...slight under-proportional demand change
-0,58	curd	...under-proportional demand change
-1,79	butter	...strong over-proportional demand change

Source: BMELV/ VTI (2011): "Ökonomische Begleitforschung zum Bundesmodellvorhaben 'Schulmilch im Fokus'" (Accompanying economical analyse of the School Milk Scheme) – Part 6: Preiselastizität der Milchnachfrage

The **Court of Auditors Report on the SMS and SFS**¹³³, came also to the result, that the European School Milk Scheme is compromised by the fact that in most cases milk products would have been consumed even without EU financial aid (deadweight effect).

The report emphasises as a main problem of the scheme that products are subsidised which would have been consumed anyway. Thus, deadweight effects might be significant.

However, it explains this fact in another way than the price elasticity explanation of the vTI and RMI study. **The main reason is seen in the distribution model applied. The Report of the Court of Auditors emphasises that especially if the subsidy is used for products which are included in canteen meals deadweight is generated.** The report argues that the subsidy does not lead to an increased share of milk products in meals. Canteens are receiving aid for milk products that they would be serving anyway and the aid does not encourage them to increase their use of milk products. *"Given the current low level of aid, it appears to have very little positive impact. As the aid is insufficient to influence purchase decisions in any real way, most of the pupils benefiting from the aid would also have been most likely to buy the milk even if unsubsidised. Such small reductions on the scale price will mainly benefit children who are already likely to be consuming the greatest quantities of milk products. Parents who are unwilling to buy such foods in supermarkets are unwilling to pay for them in schools either. The same problem applies to milk that schools make available for parents to buy under the Top-up."*

The report recommends **transferring the concepts of the School Fruit Scheme.**

- Organising the distribution of milk exclusively outside canteens. This is a risk to added value. *"[...] Member States should explain how they will guarantee the added value of their scheme, especially where regular school meals are consumed at the same time as products financed under their School fruit Scheme"* EC No 288/2009.
- A higher level of aid and a distribution free of charge so that there is almost universal participation by those who are offered free fruit. One effect of this is to minimise the rela-

¹³³ European Court of Auditors (2011): *Are the school milk and school fruit scheme effective?* Special Report No 10



tive deadweight, because the beneficiaries include children who would not have been prepared to purchase the product without subsidy. Another effect is that the role of schools is enormously simplified as they no longer have to collect money from families.

- Free of charge distribution is of high importance (studies of Poland, UK and Germany).
- In those countries where free of charge distribution is applied, the participation is increased drastically. However, a lot of national budget is required which might not be disposable in all Member States.

Following the “price elasticity concept” and the results of the studies discussed above one can summarise that a certain **potential for the existence of a deadweight effect is existent in the intervention mechanism of the SMS.**

This effect is especially high, if (1) products are offered which are characterised by an in-elastic price elasticity of demand and (2) subsidised products are not offered explicitly but e.g. as part of canteen meals.

However, **there are promising approaches to avoid and overcome such deadweight effects, like the prioritisation of certain “elastic” products or target groups, an exclusively “explicit” product distribution or a distribution fully out of charge, if this is financially feasible.**

A further indication for the existence of deadweight effects is the level to which participants in the scheme are aware of their participation and the underlying programme. For this reason school headmasters (n= about 30) and parents (n= about 50) have been asked within the interview survey to evaluate their and the children’s awareness of the existence and - if applicable - their participation in the scheme. The results of the survey are displayed in Figure 38.

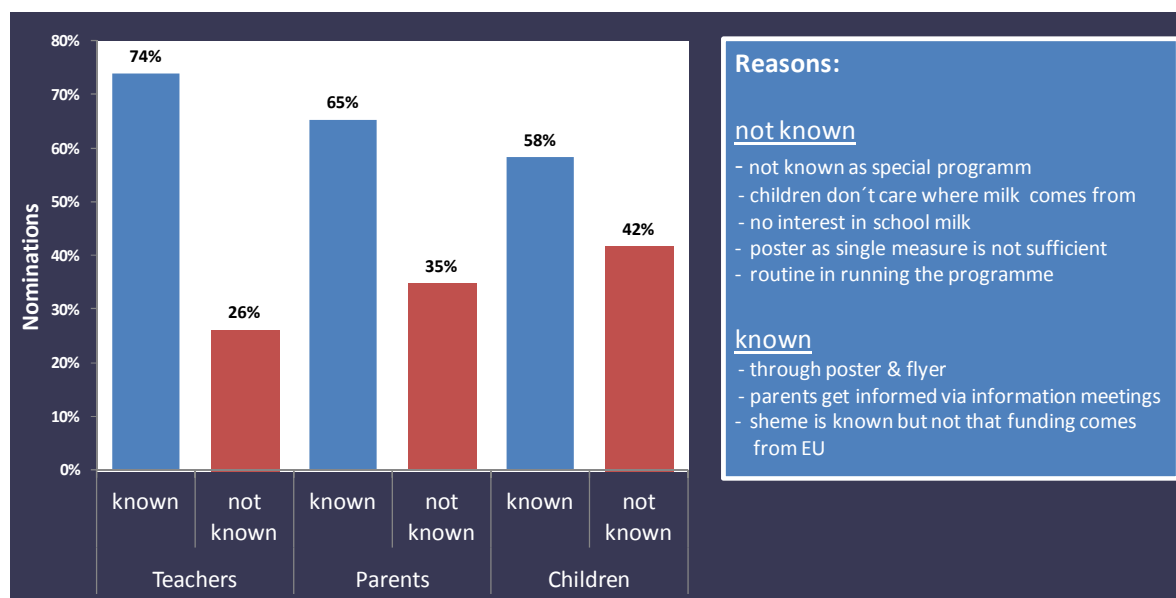
It can be observed that **a significant share of teachers, parents and children participating in the scheme are not aware of the programme, although the majority of the interviewees know about the programme. In general it can also be observed that the awareness declines from teachers to parents and from parents to children.**

Reasons for the missing awareness are also stated by the interviewees, like the fact that school milk in general is known, but not that it is based on a EU programme. This might be caused by the fact that the poster as a single measure is evaluated as to be not sufficient to inform the people. **Furthermore, as the programme has a long tradition and has often been applied by schools for decades, a routine of running the scheme is existent which partially leads to the fact that nobody questions the measure, its functioning and background.**

Even though the majority of interviewees participating in the scheme stated that they are aware of the programme, the existence of a not marginal number of participants which are not aware of it is remarkable. This points also to the existence of deadweight effects.



Figure 38: Awareness of the scheme



Source: Own illustration based on the interview survey results

Box 14: Conclusions on the existence of deadweight effects

- Consumer demand behaviour differs for different products. Thus, changes of product prices lead to different reactions of consumer demand. It can be assumed that the lower the demand effect of a price intervention is the more probable is the existence of deadweight effects.
- Scientific findings indicate that decreasing the milk price leads indeed to increasing milk consumption at schools. However, in general the demand increase behaves under-proportional to the price reduction. Only the free of charge provision leads to an over-proportional demand increase.
- The demand behaviour varies across different milk products. In Germany for example, the increase of consumption through declining prices is significantly stronger in the case of milk-mix-drinks than for plain milk. Thus, the financial effort to reach a higher participation in Germany is much higher if only plain milk is offered compared to offering milk-mix products.
- Contrary to the effects of a price reduction, the free distribution constitutes more than a pure price driven stimulus. The free distribution leads to further psychological effects or simply to less organisational effort in the operation of the scheme which apparently stimulates the demand behaviour significantly and therefore, the participation in the scheme very strongly and positively.
- Another aspect which leads to increased deadweight effects is missing awareness of the SMS, especially of the participants themselves. This may occur when the subsidised milk products are not offered explicitly but e.g. as part of regular school meals. Even though the majority of teachers and parents participating in the scheme stated that they are aware of the SMS, a number of participants is not aware that it is funded by the EU.
- Promising approaches to avoid and overcome deadweight effects exist, like the prioritisation of milk products that theoretically imply a strong demand effect, an exclusively "explicit" product distribution and a distribution fully out of charge.



5.3 Theme 3: Coherence

5.3.1 Evaluation question 9-11

The answers to the Evaluation Questions No. 9 to 11 aim at identifying **whether the objectives and implementation of the SMS are coherent with e.g. other policies of the Common Agricultural Policy (CAP), like the EU School Fruit Scheme (Question 9), general EU policy strategies, such as the Strategy for Europe on Nutrition, Overweight and obesity related Health Issues (Question 10) and overall CAP objectives (Question 11).**

The scheme's coherence with the mentioned policies, strategies and policy principles is discussed in detail within this evaluation theme. For answering the question the core objectives of the SMS have to be highlighted and contrasted with the objectives of the mentioned policies. Another aspect to be addressed is the subsidiarity principle. The principle is explicitly included in European law in Article 2 of the Treaty of Maastricht. According to this principle, the EU should only act where actions of individual Member States are not sufficient.

Table 36: Indicators and Methods for Evaluation Question No. 9-11

Objectives of the question	Indicators	Methods of measurement
Working Package 3: Answers to the evaluation questions		
<p>Question 9-11 <i>"Has the implementation of the SMS been coherent with..."</i></p> <ul style="list-style-type: none"> ○ (9) other CAP instruments, in particular the SFS and information provision and promotion measures ○ (10) the Strategy for Europe on nutrition, overweight and obesity related health issues ▪ (11) general CAP objectives?" 	<ul style="list-style-type: none"> ● Coherent with the overall EU 2020 policy objective as well as § 168 of the TFEU to ensure a high level of human health protection ● Coherent with reducing ill health of European citizen due to poor nutrition, overweight and obesity ● Coherent with increasing agricultural productivity ● Coherent with ensuring a fair standard of living ● Coherent with increasing consumption of agricultural products and stabilising agricultural markets ● Coherent with providing certainty of food supply ● Coherent with reasonable consumer prices ● Coherent with the specific objectives of the School Fruit policy (increasing fruit and vegetable consumption of children and stabilising the European fruit and vegetable market) ● Coherent with the objective of multi-stakeholder and multi-sector action at EU, Member State and local level ● Etc. 	<p>Review of European legislative documents:</p> <ul style="list-style-type: none"> ● European Treaty ● COM (2007) 279 ● Council Regulation (EC) No 1234/2007 ● Council Regulation (EC) No 13/2009 ● Council Regulation (EC) 657 /2008 ● COM (2010)2020: EU 2020 Strategy ● Council Regulation (EC) No 1255/1999 ● Etc.



▲ **Question 9: Has the implementation of the School Milk Scheme been coherent with other CAP instruments, in particular the School Fruit Scheme and the information provision and promotion measures?**

As presented in the intervention logic the EU SMS aims at two major objectives:

- a) The SMS shall contribute to the stabilisation of the dairy market.
- b) The SMS shall stimulate the consumption of milk and milk products among young people.

The EU School Fruit Scheme pursues the same two objectives¹³⁴ with respect to the fruit and vegetable market and consumption so that a conflict of goals can be negated between the two interventions in educational establishments.

The EU promotion and information policy defines its objectives in an improvement of consumers' image and knowledge of agricultural products and production methods in order to reverse declining consumption, to expand demand or to open new markets. Hence it points into the same direction as the SFS and SMS, namely aim for market stabilisation through increased consumption.

Long-term impacts show a considerable degree of compliance as they are expected to lead to:

- An increased consumption of the particular products distributed or promoted
- An increased share of the specific agricultural product in the diet of EU citizens
- A reconnection of urban citizens with fresh foods and its producers as well as a better understanding of production methods

The long-term impacts as presented above are completed by the expectation of improved physical conditions of EU citizens in the case of SMS and SFS, a contribution to social cohesion by the SFS and a complementation to Community activities through the information policy. Therefore, coherence is also found for the expected long-term impacts.

A complementation of the school schemes and the information policy applies in addition to the communication measures required for the SMS and the SFS. Participating educational establishments have to put up a poster informing about the participation in the respective EU supported programme. As the schemes are part of the Common Agricultural Policy, the posters can be regarded as means to point out a specific initiative of this policy. The same is true for the internet sites informing about the SMS and the SFS. In order to improve the perception of the EU initiatives, considerations of the Commission led to the decision not to allow financial aid for milk and milk products used in the preparation of regular school meals.¹³⁵ In addition, accompanying measures required under the SFS add to a better understanding of production processes, fruit quality and the agricultural contribution to food supply and living conditions in the EU.¹³⁶

¹³⁴ European Commission (ed. 2012): „Evaluation of the European School Fruit Scheme“, p. 33-35; online publication: http://ec.europa.eu/agriculture/evaluation/market-and-income-reports/2012/school-fruit-scheme/fulltext_en.pdf

¹³⁵ Commission Regulation (EC) No 657/2008, preamble, paragraph 4

¹³⁶ Commission Regulation (EC) No 288/2009, Article 3,4



The evaluation did not find any incoherencies in the legislative framework of the SMS, the SFS and the agricultural information policy. In fact, complementation of these intervention logics becomes obvious. Since coherence is not a matter of general rules and design of the scheme only, the relation between the SMS and the SFS as part of their implementation was also subject of the interview survey. With the exception of Poland, results among the case study regions show that the SMS appears in most cases as an independent programme in the participating educational establishments, meaning that schools or educational authorities decide on the distribution of milk and milk products and try to install and administer the scheme in a proper way. Hardly any interviewee involved in the administration or any headmaster report about integrating or linking the SMS to other programmes and activities at school, such as “healthy eating and living” programmes, “nutrition and sport” units or initiatives aiming at community building and social aspects. Although the SMS offers a variety of options for linkages to regular (pre)schooldays, it usually misses the chance to support the scheme through other activities. In rare cases, e.g. in a federal state of Germany, the SMS plays an important role as part of the “healthy breakfast” initiative. In the United Kingdom, the scheme is part of the “healthy school” campaign, which means that the participation in the SMS is credited in the checklist of the campaign.

In contrast to these findings, Poland has implemented several ways to incorporate the SMS into other programmes targeting educational establishments. Within the framework of the European Network of Health Promoting Schools, Poland developed the “school promoting health”-programme in 1992. Activities related to the idea of schools promoting health were carried out in cooperation with and support of the Ministry of Education and the Ministry of Health. Currently more than 2000 schools are involved in the health promoting programme. In addition, the Chief Sanitary Inspectorate and the Polish Federation of Food Industry have been organising the “Keep Fit!” Programme within the framework of the implementation of the WHO strategy on diet, physical activity and health in Poland. “Keep Fit!” aims at promoting principles of a balanced diet and physical activity in the population of secondary school adolescents. Today more than 96 schools, including approximately 10,000 children, participate in this programme. An even closer linkage is stated between the SMS and the “I am crazy about milk”- programme, which was launched by the Polish Chamber of Milk, the Polish Federation of Cattle Breeders and Dairy Farmers in December 2012. The initiative addresses children in primary and secondary schools as well as their parents and teachers. “I am crazy about milk” aims at informing the target groups about nutritional qualities of dairy products, increasing the knowledge about proper eating habits and creating a positive image of milk and milk products.

With the exception of Sweden and the United Kingdom, which do not participate in the EU SFS, interviewees have been asked directly for links between the SFS and the SMS. Italy and Hungary did not indicate any connection. In France, 349 educational establishments participate in both schemes (5,000 in the SMS and 1,700 in the SFS). In the Netherlands several cases are known where schools run both schemes, whereas in Poland, the number accounts for 9,000 out of 14,400 educational establishments. In Germany, most of the federal states do not participate in both programmes simultaneously. Rather than for the implementation, links are in fact indicated for the administration level, e.g. schemes are implemented by the same federal Ministry in Bavaria or educational measures for both programmes are developed by the same association. Headmasters whose educational establishments participate in both programmes point out that this decision requires additional attention because the administration of the schemes is very different. Furthermore, the



schemes have to be treated separately, as the SMS relies on parental contribution. In the Netherlands, headmasters report that they were only able to run both schemes as long as the fruit and vegetables were distributed free of charge.

The evaluation report of the European SFS discloses that organisational burdens at school level have to be regarded as a serious challenge to the participation. These burdens are caused by organising the accurate fruit supply and managing the fruit and vegetable preparation and distribution among children. In many cases teachers take the necessary duties on, although they are already working at full capacity in teaching and educating.¹³⁷ Similar situations have been witnessed for the SMS, requiring even more time for the record keeping. Therefore, the SMS and the SFS compete against each other at school level as regards to crucial resources and man power. Besides, mentioning internal barriers in administration, interviewees in France point out that the programmes are in competition about the break times when both distributions take place. In the United Kingdom, a competition between the nursery milk scheme and the EU SMS can be observed. Due to the different management structures of the schemes, the supplying agencies are able to make more money out of the nursery scheme. Furthermore, slight indications of irritations are noticed: the implementation of the SMS in a federal state in Germany did not comply with the “sugar free morning” concept as the SMS included flavoured milk and cocoa; vice versa, several schools in the United Kingdom mentioned that children are not allowed to drink fruit juice because of its sugar content. On administrative level, both schemes compete for national funds which help to increase the scheme’s uptake, but have been analysed to be a limiting factor in the SFS.¹³⁸

To summarise the results on coherence, Table 37 presents an overview of characteristics in the school intervention and information policy as well as the areas of competition in the implementation of the SMS and the SFS.

¹³⁷ European Commission (ed. 2012): „Evaluation of the European School Fruit Scheme“, p. 81; online publication: http://ec.europa.eu/agriculture/evaluation/market-and-income-reports/2012/school-fruit-scheme/fulltext_en.pdf

¹³⁸ European Commission (ed. 2012): „Evaluation of the European School Fruit Scheme“, p. 106; online publication: http://ec.europa.eu/agriculture/evaluation/market-and-income-reports/2012/school-fruit-scheme/fulltext_en.pdf,



Table 37: Characteristics in the school intervention and information policy

Points of comparison	School Milk Scheme	School Fruit Scheme	Information and promotion policy
Objectives of the initiatives	<ul style="list-style-type: none"> a) Stabilisation of the milk market b) Improvement of health conditions among EU citizens 	<ul style="list-style-type: none"> a) Stabilisation of the fruit and vegetable market b) Improvement of health conditions among EU citizens 	Improvement of consumers' image and knowledge about the CAP, about agriculture in the EU, agricultural products and production methods in order to reverse declining consumption, to expand demand or to open new markets.
Long-term impacts	<ul style="list-style-type: none"> a) Increased EU consumption of dairy products b) Increased share of dairy in the diet c) Decreased diseases and better physical conditions d) Reconnection of urban citizens with farmers, food and its producers 	<ul style="list-style-type: none"> a) Increased EU consumption of fruit and vegetables b) Increased share of fruit and vegetable in the diet c) Decreased diseases and better physical conditions d) Reconnection of urban citizens with food and its producers e) Contribution to social cohesion 	<ul style="list-style-type: none"> a) Increased EU consumption of agricultural products b) Increased share of agricultural products in the diet c) Improved understanding of EU agriculture and the CAP among EU citizens d) Growing internal and external markets e) Complementation to Community activities
Subject and eligibility	Milk and milk products as specified in Commission regulation (EC) No 966/2009, Annex I	Fruit, vegetables and processed fruit and vegetable products as specified in Commission Regulation (EC) No 288/2009, Article 5, 1a and Annex I	Among other products measures are eligible for milk and milk products as specified in Commission Regulation (EC) No 501/2008, Annex I.



Points of comparison	School Milk Scheme	School Fruit Scheme	Information and promotion policy
Information and communication measures	<ul style="list-style-type: none"> a) School milk poster in participating establishments b) EU website about the SMS 	<ul style="list-style-type: none"> a) School fruit poster in participating establishments b) EU website about the SFS c) Accompanying measures 	Information and communication measures as defined in Council Regulation (EC) No 3/2008, Article 2
Health support	<ul style="list-style-type: none"> a) Fight against obesity and overweight b) Contribution to a well-balanced diet 	<ul style="list-style-type: none"> a) Fight against obesity and overweight b) Contribution to a well-balanced diet 	References to health effects of consumption must be based on scientific facts.
Central message/ image	EU scheme highlights the nutritional value of dairy products.	EU scheme highlights the nutritional value of fruit and vegetables.	Measures may focus on intrinsic quality parameters and therefore in the nutritional value.
Areas of competition	<ul style="list-style-type: none"> a) National top-up b) Resources in schools (e.g. manpower, logistics, break time, activities) c) Focus of interest (rather seldom: restricted compliance with other school food initiatives) 	<ul style="list-style-type: none"> a) National co-financing b) Resources in schools (e.g. manpower, logistics, break time, activities) c) Focus of interest (rather seldom: restricted compliance with other school food initiatives) 	No competition to SMS and SFS due to the complementary character and the separate funding.

Source: Own illustration based on Commission Regulation 657/2008; Commission Regulation (EC) No 288/2009, Council Regulation (EC) No 814/2000, Council Regulation (EC) No 3/2008 and Commission Regulation (EC) No 501/2008



Box 15: Conclusions on the scheme's coherence with the SFS and EU information and communication policy

- ▲ No incoherencies in the legislative framework of the SMS, the SFS and the agricultural information policy have been found. In fact, the complementary character of these intervention logics is obvious.
- ▲ The SMS and the SFS do not compete as regards to their objectives, but as regards to national funds and crucial resources, e.g. man power at school level.
- ▲ Linkages between the SMS and the SFS are rare. A small number of educational establishments participate in both programmes. As regards to implementing bodies the agencies in at least 16 out of 23 MS that applied both schemes are responsible for the SMS as well as for the School Fruit Scheme.
- ▲ Communication and information policy aims at a reverse in the declining consumption of agricultural products just as the two schemes.
- ▲ The envisaged long-term impacts are very similar: increased consumption of certain products, increased share in EU citizens' diet and reconnection of urban citizens with agriculture.
- ▲ Educational measures under the SFS and communication measures in both schemes add to the objective of the information policy to improve consumers' knowledge about the CAP, EU policy and agriculture.



▲ **Question 10: Has the implementation of the School Milk Scheme been coherent with the Strategy for Europe on Nutrition, Overweight and Obesity-related health issues?**

The *Strategy for Europe on Nutrition, Overweight and Obesity-related health issues*¹³⁹ (Health Strategy) targets at reducing any kind of risks “associated with poor nutrition and limited physical exercise”.¹⁴⁰ The Strategy paper calls for a multi-stakeholder and multi-sector approach at EU, Member State and local level, as well as internationally alongside the World Health Organization. It aims at integrating policies and coordinated activities “...across the board; from food and consumer, to sport, education and transport.” Consequently the approach comprises various Commission policies in different political areas, of which the SMS is listed as an example for the agricultural policy¹⁴¹, leading towards the intended risk reduction.

The objective of the SMS to stimulate milk consumption adds to the reduction of health risks resulting from poor nutrition, e.g. obesity and overweight. Since the relation between the Health Strategy and the SMS is as evident as the need for a coherent policy the following chapter will analyse coherency between both EU initiatives.

In order to prevent and to fight overweight, obesity and chronic diseases¹⁴², the Health Strategy builds on four principles. Therefore the first step of the analysis will concentrate on the question as to which extent the SMS is coherent with the four basic principles.

a) Reduction of all risks associated with excess weight

Considering that risks associated with excess weight are numerous, the strategy highlights two main areas of concerns: poor diets and a lack of physical activity.¹⁴³ Ensuring a share of dairy products among children adds to a well-balanced diet, so that the second objective of the SMS is in line with the target set in the strategy. The SMS regulation expresses this consideration in the preamble as well.¹⁴⁴

The second objective of both EU initiatives goes beyond the common subject; the Health Strategy does not aim at market balances, whereas the SMS does not stimulate physical activity.

b) Action across all groups, policy areas and a wide range of instruments

The implementation of the SMS shows that different stakeholder groups are involved in the process. All these partnerships have been created without a formal request as it is e.g. in-

¹³⁹ COM (2007) 279 final: White Paper on A Strategy for Europe on Nutrition, Overweight and Obesity related health issues. Brussels, 30.05.2007

¹⁴⁰ Directorate General for Health and Consumers: “Strategy on nutrition, overweight and obesity-related health issues”, internet publication: http://ec.europa.eu/health/nutrition_physical_activity/policy/strategy_en.htm

¹⁴¹ Ibid.

¹⁴² COM (2007) 279 final: White Paper on A Strategy for Europe on Nutrition, Overweight and Obesity related health issues. Brussels, 30.05.2007, p. 2

¹⁴³ Ibid.

¹⁴⁴ Commission Regulation (EC) No 657/2008, preamble, paragraph 2



tended in the SFS.¹⁴⁵ This situation leads to the conclusion that the SMS is coherent with the second principle of the Health Strategy.

A more detailed analysis however presents also weaknesses considering the involvement of different stakeholder groups. Interviewed parents very often explained that they hardly know anything about the EU SMS and that they are not actively involved in the scheme. Headmasters mentioned that children and young people are unaware of the scheme behind the provision. Including the idea of active partnerships in the framework of the SMS would add to a further support of the Health Strategy.

Furthermore, the Health Strategy asks for a wide range of instruments to reach its objectives, whereas the SMS concentrates mostly on the distribution of dairy products in educational establishments. These different perspectives have already been discussed in Evaluation Question No 3 of this report.

- c) Requirement of actions from all organisations, industries, political and private stakeholders involved

The implementation regulation of the SMS outlines different actors and determines their role and tasks in establishing and executing the programme.¹⁴⁶ The scheme is therefore found in compliance with the third principle of the Health Strategy. Potentials for further alignment are seen in the suggestion to ask Member States for action plans on the implementation of the SMS leading towards a stronger involvement of relevant stakeholders as described above and in Evaluation Question No 6.

- d) Monitoring and assessment of the prevalence of obesity, overweight, eating patterns and measures undertaken to implement the strategy

Monitoring, documentation and reporting obligations are obligatory instruments within the SMS.¹⁴⁷ Since Member States neither need to evaluate the impact of the SMS, nor to report about the increase in consumption, nor about its actual contribution to improved eating habits, conclusions about the negative impact on obesity and overweight through the SMS are not possible. Consequently, although the regulation of the SMS does not show incoherencies with the fourth principle of the Health Strategy its monitoring system is not able to contribute to the assessment of the prevalence of obesity, overweight and eating patterns.

It should be noticed as well that the SMS is not directly integrated into the monitoring system based on the strategy on nutrition and overweight.

The second step of the analysis deals with coherence between the SMS and the six political strategies suggested in the Health Strategy. Since the coherence of the strategies “Encouraging physical activity” and “Developing monitoring systems” haven been discussed in the principles “a” and “d” respectively, the further analysis is structured according to the remaining four strategies.

¹⁴⁵ Commission Regulation (EC) No 288/2009, preamble, paragraph 3

¹⁴⁶ Commission Regulation (EC) No 288/2009

¹⁴⁷ Commission Regulation (EC) No 288/2009



a) “Better informed consumers”

The strategy takes clear information about labelling of products, advertising and other information measures into account in order to form *“an individual's knowledge, preferences and behaviours, for example related to lifestyle and eating habits.”*¹⁴⁸ Well-informed consumers are supposed to decide for healthier products and a healthier lifestyle.

The SMS supports the idea of creating a general awareness for healthy eating decisions. Therefore, regulations do not allow using subsidised products as ingredients in regular school meals¹⁴⁹ and they commit participating educational establishments to present the school milk poster¹⁵⁰. Other than that, the SMS does not require any further communication measures. Hence, the SMS is in line with the strategy, yet measures in this direction undertaken within the SMS remain marginal.

b) “Making the healthy option available”

The SMS actively provides children and young people with milk and milk products in educational establishments. Hence, it ensures that these products are available in the children's environment. The coherence between this strategy and the SMS becomes evident.

c) d) Targeting priority groups

The Health Strategy defines “children” in general and especially those in *“low socio-economic groups”* as priority group of all measures undertaken.¹⁵¹ The SMS addresses in general “pupils” in all kinds of officially registered educational establishments, excluding residential schools, as beneficiaries of the scheme.¹⁵² Still several Member States define the target group more strictly (c.p. Table 10).

In addition to product subsidy by Community aid, in some cases national funds are available. The price reduction is granted to any participant regardless of his socio-economic background. If Member States do not provide additional financial aid for children of a low economic background, an exclusion of a high priority group from the SMS is possible. Coherence between the strategy and the SMS is observed for the general priority group, namely children, but not for children with special needs.

e) Developing the evidence base to support policy making

As consequence of insufficient background information available, the Commission announces initiatives on research regarding consumer behaviour, health impacts of nutrition and prevention of obesity.¹⁵³ Results shall contribute to the process of adequate policy decision making. The SMS neither takes any encouragement of research into consideration nor

¹⁴⁸ COM (2007) 279 final: White Paper on A Strategy for Europe on Nutrition, Overweight and Obesity related health issues. Brussels, 30.05.2007, p. 5

¹⁴⁹ Commission Regulation (EC) No 288/2009, article 5,4

¹⁵⁰ Commission Regulation (EC) No 288/2009, article 16

¹⁵¹ COM (2007) 279 final: White Paper on A Strategy for Europe on Nutrition, Overweight and Obesity related health issues. Brussels, 30.05.2007, p. 8

¹⁵² Commission Regulation (EC) No 288/2009, article 2

¹⁵³ COM (2007) 279 final: White Paper on A Strategy for Europe on Nutrition, Overweight and Obesity related health issues. Brussels, 30.05.2007, p. 8



tries to explore the scheme's contribution to fight against obesity and overweight. Thus it does not reflect this target dimension yet.

No incoherencies between the Health Strategy and the SMS have been identified in the analysis. Nevertheless, the results also show a remarkable potential for a better alignment of both initiatives. In order to meet the political strategies described in the white paper, the SMS in particular needs further considerations as regards to its contribution to prevent overweight and obesity, its targeting of children with special needs and social inclusion, its monitoring and evaluation requirements and its accompanying communication and information measures.

Box 16: Conclusions on the scheme's coherence with the Strategy for Europe on Nutrition, Overweight and Obesity-related health issues

- No incoherencies between the Strategy on Nutrition, Overweight and Obesity-related Health issues and the SMS have been identified in the analysis.
- As the SMS contributes to the development of healthy eating habits basic compliance is found with the objective to stimulate children's milk consumption. However, the scheme's objective to add to the market stabilisation goes beyond the focus of the health strategy.
- The SMS is basically in line with the four principles and with five out of the six political strategies defined in the health strategy. The dimension of the sixth political strategy is not reflected in the SMS.
- The evaluation results also show that the SMS contributes in some aspects only marginal to the implementation of the health strategy. Thus potential for an improved alignment is obvious.
- Aspects that remarkably add to the mutual support of both policies include a better consideration about the SMS's contribution to the fight against obesity and overweight, the social inclusion realised under the scheme, information and communication to involve important stakeholders for the SMS as well as monitoring and evaluation measures.



▲ **Question 11: Has the implementation of the School Milk Scheme been coherent with general CAP objectives?**

The legal justification of the EU SMS relies on Article 39, 41(b), 43 and 168 of the TFEU¹⁵⁴ corresponding to the Common Agricultural Policy (CAP).

Among others, it is mentioned that measures have to contribute to the stabilisation of the market for agricultural products. Article 41(b) of the TFEU is specifically provided for joint measures within the framework of the CAP in order to promote consumption of agricultural products. Especially Article 168 of the TFEU states that a high level of human health protection is ensured in the definition and implementation of all Union policies and activities.

Both specific objectives of the SMS as defined in the Single CMO address to a high extent the overall and specific objectives of the CAP: (1) **stimulate the consumption of milk by young people** as the per-capita consumption of milk and milk products is declining in most Member States. (2) **Balancing the milk market and stabilise the market prices for milk and milk products** and thereby increase the income of EU farmers as a higher consumption of milk would subsequently lead to a higher domestic production of milk in the long-run.¹⁵⁵ As the overall and specific objectives of the CAP are diverse, they are summarised in Annex 8.13.

The SMS as well as the SFS are policies of the Single CMO, implemented to realize, on the one hand, the specific objectives of the CAP Pillar I (Figure 39), and on the other hand to foster the objectives of the *Strategy for Europe on nutrition, overweight and obesity related health issue*. **Regarding the specific SMS objectives and SMS measures, one can attest that a clear coherence with the CAP Pillar I objectives as described in detail in Annex 8.13 is given, especially when regarding the specific objectives contribute to farm income, maintain market stability and maintain a diverse agriculture in Europe.**

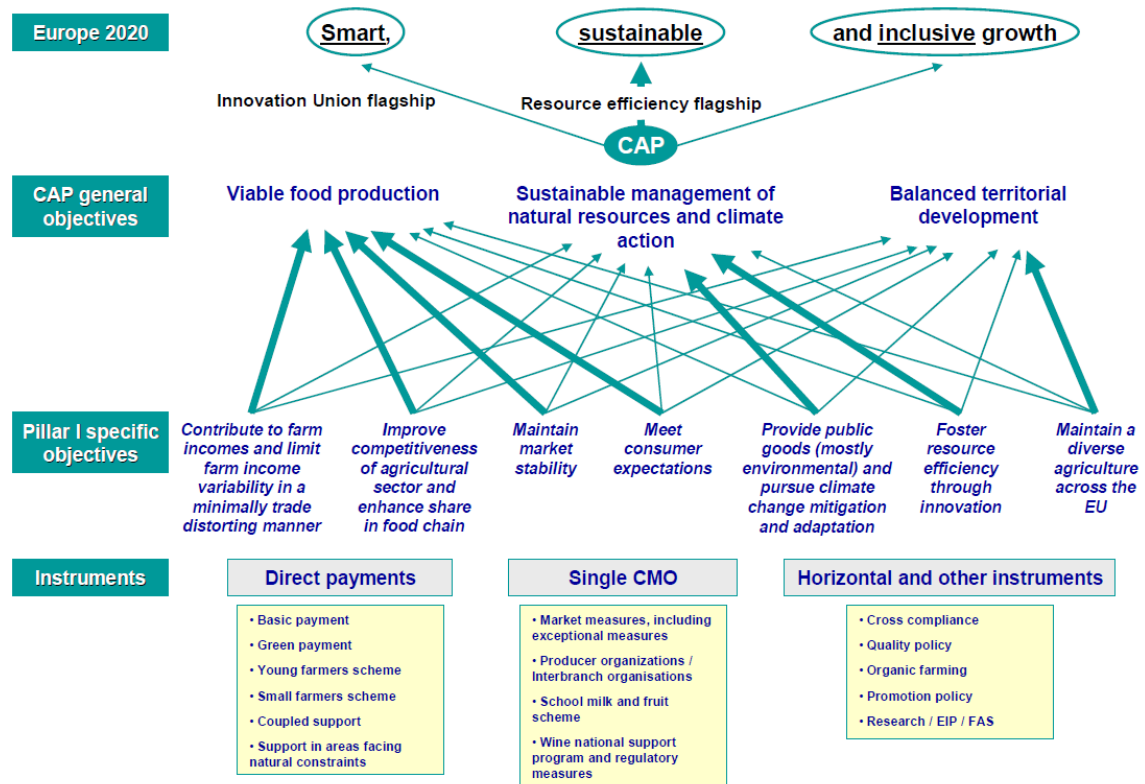
The conformity with some CAP objectives, like *to improve agricultural competitiveness* and *to meet consumer expectations* might be discussed more critically. For example the SMS cannot be seen as an instrument that complies with the consumer trend of decreasing milk consumption. By contrast, it is a measure to actively counteract this trend, motivated by the assumption that dairy products are an important and necessary component of a healthy nutrition (health target of the SMS) and the fact that a further declining EU dairy consumption would lead to a reduced EU dairy production and subsequently to a reduced agricultural income in the long-run (market target of the SMS). Thus, the SMS has an educational character which rather tends to stimulate consumer preferences and expectations in line with the Commission's assumptions on a healthy nutrition (described in the *Strategy for Europe on nutrition, overweight and obesity related health issue*), than tending to meet current consumer preferences and expectations.

¹⁵⁴ OFFICIAL JOURNAL OF THE EUROPEAN UNION (2010): "Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union". Vol. 53, C 83

¹⁵⁵ COUNCIL REGULATION (EC) No 1234/2007 of 22 October 2007 establishing a common organisation of agricultural markets and on specific provisions for certain agricultural products (Single CMO Regulation), Preamble (43) and Article 102



Figure 39: Intervention logic of the CAP Pillar I¹⁵⁶



▲ Subsidiarity

Subsidiarity is a general principle of the EU Treaty as it considers the EU as a Community. The principle is explicitly introduced in European law by inclusion of Article 2 of the Treaty of Maastricht. According to this principle, the EU should only act where actions of individual Member States are not sufficient. The present formulation is contained in Article 5(3) of the Treaty on European Union (consolidated version following the Treaty of Lisbon): “Under the principle of subsidiarity, in areas which do not fall within its exclusive competence, the Union shall act only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States, either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level.” With respect to the EU SMS it can be concluded that this scheme is in line with the subsidiarity principle as almost all participating Member States mention that the programme was necessary to permit a large-scale and nation-wide SMS which is in most cases not practicable without the framework of the EU SMS and its aid.

¹⁵⁶ Intervention Logic for the CAP:
<http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=8772&no=8> (16.07.13)



Box 17: Conclusions on the scheme's coherence with general CAP objectives

- The SMS is a policy of the CAP (Single CMO) implemented to realize the specific promotion objectives of the CAP Pillar I. The SMS is found to be clearly coherent with CAP objectives, especially with the specific objectives of contributing to farm income, maintaining market stability and maintaining a diverse agriculture in Europe as the SMS tends to increase milk consumption in Europe and thereby subsequently stimulates also dairy production in Europe.
- However, the conformity with some CAP objectives, like improving agricultural competitiveness and meeting consumer expectations might be addressed more critically.



5.4 Theme 4: Relevance

5.4.1 Evaluation question 12

▲ Understanding of the question

Key word of Question No. 12 **“To what extent is the design of the SMS relevant for the need of balancing the milk market and stabilizing the milk prices and the need of increasing milk consumption by young people?”** is the “design” of the SMS. The design is built on intervention measures, the target group, the eligibility of certain product categories, the subsidiary rate, the European school milk poster etc. as well as control measures. The design elements will be evaluated with respect to both objectives of the programme.

▲ Method of measurement

The answer to evaluation question No 12 will be based on a three step procedure:

- (1) All elements of the specific programme design will be identified and described.
- (2) All elements will be evaluated focusing on their contribution to the scheme's relevance.
- (3) The matching and coordination of the design elements will be reflected

Table 38: Indicators and Methods for Evaluation Question No. 12

Objectives of the question	Indicators	Methods of measurement
Working Package 3: Answers to the evaluation questions		
Question 12 “To what extent is the design of the School Milk Scheme relevant for: - the need of balancing the milk market and stabilising the milk prices - the need of increasing milk consumption by young people?”	<p>Indicators for evaluating the SMS's design:</p> <ul style="list-style-type: none"> • type of design elements included • success factors for school schemes • measures initiated for balancing the milk market • devising design elements on basis of recent scientific findings • provision for previous recommendations to make the scheme more effective <p>Indicators for evaluating the SMS approach:</p> <ul style="list-style-type: none"> • coordination of measures • avoidance of conflicts of objectives • reasonable consideration of superordinate aspects, such as the school setting, the age of the target group, the integration of key communicators etc. 	<p>Identification of design elements based on EEC No 1080/77 and No 657/2008.</p> <p>Comparison of design elements with scientific findings & previous evaluations.</p> <p>Evaluation of success factors in expert talks with stakeholders.</p> <p>Literature review for superordinate aspects.</p> <p><u>Information sources, i.a.:</u></p> <p><i>Report No 10 of the EU Court of Auditors</i></p> <p><i>Garde, A.: “EU law and obesity prevention”</i></p> <p><i>Impact assessment on nursery milk in the UK</i></p> <p><i>London economics.: “Evaluation of the national top-up of the SMS subsidy in England”</i></p> <p><i>Inken, B., Aida, A. et al.: „Driving factors for the school milk demand in Germany”</i></p>



▲ Answer to the evaluation question

Elements of the SMS Design and measures introduced through the implementation regulation are described in chapter 3.3 “measures of the intervention”. They can be summarised in three core elements:

- the distribution of subsidised milk and milk products to children in educational establishments (250ml milk equivalent per child and school day)
- the SMS poster as information measure
- the administration and controls of the scheme to ensure compliance with the regulation.

In order to evaluate the contribution of these elements to the relevance of the SMS, in particular with respect to the aim of increasing the children's consumption of milk and milk products, the key characteristics are compared to scientific recommendations. Table 39 provides an overview of this comparison:

Table 39: Comparison of SMS - design elements and scientific recommendations

Design element	SMS	Recommended good practice
Target group	Children regularly attending educational establishments (0-18years), MS specify the target group 15 MS: 0-3 years 18 MS : 4-6 years 21 MS : 7-15 years 16 MS : 16-20 years	Schools provide an ideal setting and efficient environment for creating healthy eating habits. ¹⁵⁷ Interventions in primary schools are promising since dietary and physical behaviour start to develop in this age. ¹⁵⁸ Evidence for improving eating habits among children aged 4-10 and 11-16 has been stated. ¹⁵⁹ Adaption for different age groups is regarded as important. ¹⁶⁰
Products	Dairy products as listed in the regulation including various fat contents	Milk products offered in school should have a low fat and salt content. ¹⁶¹ Recommended milk products are low-fat milk, kefir, sour milk, yoghurt and cheese. ¹⁶²

¹⁵⁷ WHO Regional Office for Europe (2006): „Food and nutrition policy for schools - A tool for the development of school nutrition programmes in the European Region”, p. 48; online publication: http://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf

¹⁵⁸ Sharma, M. (2006): “School-based interventions for childhood and adolescent obesity”, obesity reviews (2006), 7, p. 266

¹⁵⁹ Jepson, Ruth; Harris, Fiona; MacGillivray, Steve; Kearney, Nora; Rowa-Dewar, Neneh (2006): “A review of the effectiveness of interventions, approaches and models at individual, community and population level that are aimed at changing health outcomes through changing knowledge attitudes and behaviour”, p. 19, online publication: <http://www.biomedcentral.com/1471-2458/10/538>

¹⁶⁰ Pro Greens Consortium (2011): „Recommendations and guidelines for promotion of vegetables, fruit and berries in schools developed during the pro greens project 2008-2011”, p. 3, online publication: http://www.progreens.org/pdf/project_results/Deliverable_15-19_PRO_GREENS_Summary_of_Recommendations.pdf
Krølner, Rikke; Jørgensen, Thea Suldrup; Aarestrup; Anne Kristine, Hjøll Anneund Christiansen; Christensen, Anne Maj and Due, Pernille (2012): “The Boost study: design of a school- and community-based randomised trial to promote fruit and vegetable consumption among teenagers”, BMC public Health, p. 2, online publication: <http://www.biomedcentral.com/1471-2458/12/191>

¹⁶¹ WHO Regional Office for Europe (2006): „Food and nutrition policy for schools - A tool for the development of school nutrition programmes in the European Region”, p. 20; online publication: http://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf

¹⁶² WHO Regional Office for Europe (2006): „Food and nutrition policy for schools - A tool for the development of school nutrition programmes in the European Region”, p. 26f.; online publication: http://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf



Design element	SMS	Recommended good practice
Amount	Subsidised max. 250ml milk equivalent per pupil and school day – amounts to approx. 10% of recommended intake	Serving per day: Children 3-6: 100ml of milk of yoghurt, 2-4 times a day; Children 7-18: 200ml of milk or 175ml of yoghurt, 2-4 times a day. 2 servings should be offered in schools ¹⁶³ .
Duration	Distribution takes place during in whole school year.	Duration last longer than a year for gaining a sustainable impact. ¹⁶⁴ A long duration is favourable. ¹⁶⁵
Distribution	Most often daily supply	2 servings of milk/ milk products should be offered per school day. ¹⁶⁶
Subsidy	Products are offered at reduced price. Subsidy in general from 10% to 25% of product price	Free provision has been found to be more effective than programs with parental contribution. ¹⁶⁷
Inclusion of all children	Not obligatory, as participants need to contribute financially.	Group experience is a success factor of interventions in schools. ¹⁶⁸ Peer influences should be addressed in school interventions. ¹⁶⁹
Supply	18 MS: in classrooms 15 MS: in canteens 8 MS: self-service	Repeated exposure is successful to introduce prior novel food to children only if tasting is included. ¹⁷⁰ Vending machines providing healthy products are accepted and frequented by children. ¹⁷¹
Information	Obligatory: SMS poster at the entrance hall of the educational establishment Informal: website of the SMS	Families should receive information about food and nutrition initiatives in schools and should be kept up-to-date. Recommended content: <ul style="list-style-type: none"> • meal composition, portion size and timing • potentially damaging influence of coercive feeding practices • children's way of learning eating habits • model of parents as crucial factor¹⁷²

¹⁶³ WHO Regional Office for Europe (2006): „Food and nutrition policy for schools - A tool for the development of school nutrition programmes in the European Region”, p. 37f.; online publication: http://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf

¹⁶⁴ DE SA AND LOCK (2008): „Will European agricultural policy for school fruit and vegetable improve public health? A review of school fruit and vegetable programmes”, Journal of Public Health, Vol. 18, p. 565

¹⁶⁵ Krølner, Rikke; Jørgensen, Thea Suldrup; Aarestrup; Anne Kristine, Hjøll Anneund Christiansen; Christensen, Anne Maj and Due, Pernille (2012): “The Boost study: design of a school- and community-based randomised trial to promote fruit and vegetable consumption among teenagers”, BMC public Health, p. 2, online publication: <http://www.biomedcentral.com/1471-2458/12/191>

¹⁶⁶ WHO Regional Office for Europe (2006): „Food and nutrition policy for schools - A tool for the development of school nutrition programmes in the European Region”, p. 37f.; online publication: http://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf

¹⁶⁷ Elling, Bere; Veierød, Marit B; Klepp, Knut-Inge (2005): „The Norwegian School Fruit Programme: evaluating paid vs. no-cost subscriptions”, abstract, in Prev Med Vol. 41, pp. 463-70; online publication: http://www.ajpmonline.org/medline/record/ivp_00917435_41_463

¹⁶⁸ Bundesministerium für Landwirtschaft, Ernährung und Verbraucherschutz (2010): „Handbuch Schulobstprogramme“, p. 18

¹⁶⁹ Contento, Isobel R. (2007): “Nutrition Education. Linking Research, Theory, and Practice.” Jones and Bartlett Publishers, p. 152

¹⁷⁰ Jepson, Ruth; Harris, Fiona; MacGillivray, Steve; Kearney, Nora; Rowa-Dewar, Neneh (2006): “A review of the effectiveness of interventions, approaches and models at individual, community and population level that are aimed at changing health outcomes through changing knowledge attitudes and behaviour”, p. 84, online publication: <http://www.biomedcentral.com/1471-2458/10/538>

¹⁷¹ Harvey, Joe (2004): “A feasibility study into healthier drinks vending in schools.” p. 19, online publication: http://www.stayactiveeathealthy.ca/files/A%20Feasibility%20Study%20Into%20Healthier%20Drinks%20Vending%20in%20Schools_UK.pdf

¹⁷² WHO Regional Office for Europe (2006): „Food and nutrition policy for schools - A tool for the development of school nutrition programmes in the European Region”, p. 12; online publication: http://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf



Design element	SMS	Recommended good practice
Educational measures	Not obligatorily included.	Multi-component strategies are more effective than strategies ¹⁷³ based on single components. A finding that can be explained by synergistic effects between educational & environmental strategies. ¹⁷⁴
Behavioural theory	No.	Social cognitive theory is helpful in school settings. ¹⁷⁵
Environment, social and personal determinates	No.	The WHO recommends modifying the school environment towards supporting healthy decisions. ¹⁷⁶ The social cognitive theory as most common behavioural theory applied in school interventions considers physical environment, personal & social determinants. ¹⁷⁷
Physical activity	Not suggested .	A combination of diet and sport measures leads to better results in preventing overweight than diet modelling only. ¹⁷⁸
Holistic approach	No.	Inclusion of out-of-school-activities and parents as promising approach ¹⁷⁹ The commitment of the school community is a key factor for food and nutrition policies in schools. ¹⁸⁰
Strategic planning	No.	Interventions should be included in the school curricula. ¹⁸¹ The WHO suggests an action plan in each school that includes "precise objectives with feasible timelines and milestones". ¹⁸²
Evaluation	Regular reporting about distributed products, participants and administrative issues. No regular impact evaluation.	Evaluations are necessary to modify input and output indicators. ¹⁸³ Since interventions are process driven the WHO recommends continuous monitoring and evaluation. ¹⁸⁴

¹⁷³ Carvalo, Graça S. et al. (2012): "A healthy lifestyle and school intervention: conceptual and attitudinal change but no behavioural change", XV IOSTE Symposium (International Organisation for Science and Technology Education) – The use of Science and Technology Education for Peace and Sustainable Development. Hammamet, Tunisia, p. 1-10; online publication: www.repositorium.sdum.uminho.pt/bitstream/1822/20883/3/IOSTE_HealthyHabits.pdf

¹⁷⁴ Sallis JF, Owen N, Fisher EB: Ecological models of health behavior. In "Health behavior and health education. Theory, research, and practice", 4th edition, edited by: Glanz K. et al.; p. 479, online publication: www.ihepsa.ir/files/h1.pdf

¹⁷⁵ Sharma, M. (2006): "School-based interventions for childhood and adolescent obesity", obesity reviews (2006), 7, p. 267

¹⁷⁶ WHO (2006): „Food and nutrition policy for schools - A tool for the development of school nutrition programmes in the European Region", p. 10; online publication: http://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf

¹⁷⁷ Bandura, Albert (1998): "Health Promotion from the perspective of social cognitive theory", Psychology and Health, 13

¹⁷⁸ T. Brown, T. and Summerbell, C. (2008): "Systematic review of school-based interventions that focus on changing dietary intake and physical activity levels to prevent childhood obesity: an update to the obesity guidance produced by the National Institute for Health and Clinical Excellence", obesity reviews (2009) 10, p. 138f.

¹⁷⁹ Sharma, M. (2006): "School-based interventions for childhood and adolescent obesity", obesity reviews (2006), 7, p. 267

¹⁸⁰ WHO (2006): „Food and nutrition policy for schools - A tool for the development of school nutrition programmes in the European Region", p. 2; online publication: http://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf

¹⁸¹ Pro Greens Consortium (2011): „Recommendations and guidelines for promotion of vegetables, fruit and berries in schools developed during the pro greens project 2008-2011", p. 2, online publication: http://www.progreens.org/pdf/project_results/Deliverable_15-19_PRO_GREENS_Summary_of_Recommendations.pdf;
WHO (2006): „Food and nutrition policy for schools - A tool for the development of school nutrition programmes in the European Region", p. 10; online publication: http://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf

¹⁸² WHO (2006): „Food and nutrition policy for schools - A tool for the development of school nutrition programmes in the European Region", p. 11; online publication: http://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf

¹⁸³ Sharma, M. (2006): "School-based interventions for childhood and adolescent obesity", obesity reviews (2006), 7, p. 267

¹⁸⁴ WHO (2006): „Food and nutrition policy for schools - A tool for the development of school nutrition programmes in the European Region", p. 2; p 11f., online publication: http://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf



Providing school milk in educational establishments takes advantage of an efficient environment to reach the specified target group. The definition of age groups benefiting from the SMS are regarded as suitable to stimulate the milk consumption especially if milk distribution starts in early ages and is continued for a long time. A daily supply pattern and access to school milk throughout the whole school year, as it is implemented in most Member States, meet expert recommendations. A WHO report on eating policies in schools summarises: *“School milk programmes represent an important vehicle for the promotion of milk in the children’s diet. Evidence from Denmark, for example, shows that milk consumption in school increased by 40% when a school milk scheme was introduced (FAO, 2004)”*.¹⁸⁵

Regarding the fact that children of a broad age range participate in the scheme it is necessary to adapt the programme to the different age groups. The maximum subsidised quantity e.g. requires several serving times for younger children¹⁸⁶. Since taste preferences and milk consumption change with increasing age¹⁸⁷ the product assortment for adolescents should be adapted in an appropriate way; for example by including more cheese¹⁸⁸.

Scientific research as regards to consumption habits underline that older children prefer free food choices and enjoy a relative freedom in food purchasing choices¹⁸⁹. Supply models that take these findings into account will improve the scheme’s acceptance among youngsters. Headmasters in Germany, Sweden and the United Kingdom recommend introducing aged-based supply strategies as well. The United Kingdom e.g. points out good experiences with offering milk in “circle times” for younger children. Interviewees mentioned in addition that young children like colourful, illustrated milk packages, whereas older children regard the carton packages illustrated with cows etc. as childish. Children’s age has to be kept in mind also for developing and implementing educational measures. Member States might modify their framework of the SMS in a way that it pays attention to various age-groups; still the regulation does not motivate to age differentiated approaches.

The list of eligible products offers possibilities for choices in line with the nutritional recommendations, but allows also milk products that have been criticised, especially for their fat content. Since the share of heat-treated milk dominates the product provision by more than 70%, actual product choices by Member States is found mostly in line with recommendations.

The maximum amount of subsidised product allows to provide children aged 3-6 with the recommended two servings during the school day. For children 7-18 years the maximum subsidised quantity equals approx. one portion; hence remains below the recommendation.

The price reduction offered under the SMS stimulates the consumption of milk only marginal since the share in the product price is low. Parents stated that without additional private or

¹⁸⁵ WHO Regional Office for Europe (2006): „Food and nutrition policy for schools - A tool for the development of school nutrition programmes in the European Region”, p. 20; online publication: http://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf

¹⁸⁶ Deutsche Gesellschaft für Ernährung (2008): “Ernährungsbericht 2008”, Bonn, p. 55

¹⁸⁷ Øvrebo, Else Marie (2010): „Food habits of school pupils in Tromsø, Norway, in the transition from 13 to 15 years of age”, online publication, <http://munin.uit.no/bitstream/handle/10037/3806/article.pdf?sequence=3>

¹⁸⁸ Deutsche Gesellschaft für Ernährung (2008): “Ernährungsbericht 2008”, Bonn, p. 60-93

¹⁸⁹ Fitzgerald Amanda, Heary Caroline, Nixon Elizabeth and Colette, Kelly (2010): “Factors influencing the food choices of Irish children and adolescents: a qualitative investigation”, Health Promotion International, Vol. 25 No. 3, p. 296



public funding the prices for school milk are on a high level compared to milk prices in supermarkets. In general, price can be a motivator to drink school milk but only to a small extent. Consumption can be stimulated much stronger if free distribution is granted.¹⁹⁰ Free distribution of products provided in a nutritional intervention allows the participation of all children and since it has been found more effective experts recommend this model.

By the exception of Sweden and primary schools in Poland, parents have to pay in addition to the SMS. As a result, not all children participate in the programme and some interviewees stated that this is a question of being able to afford the participation for low income groups. The sporadic participation in the scheme constrains peer group effects which are helpful for stimulation consumption and for contributing to children with special needs.

No expert recommendations are found as regards to supply strategies in schools. It becomes clear that provision is linked closely to the infrastructures and personnel available in schools. Since the regulation of the SMS permits the implementation of different supply strategies adequate in the specific setting its design does not constrain milk distribution.

The SMS poster has been criticised numerous times by the interviewees. The awareness of the program among parents and children, based on the impression of headmasters and parents, is poor. Being the only information measure demanded in the regulation the provided information is evaluated as insufficient for informing and especially for integrating parents and other stakeholders. The information measure does not comply with expert recommendations neither for its frequency nor for its content.

Other typical design elements of interventions about eating behaviour such as educational measures, physical activities, underlying behavioural theories, holistic approaches, strategic planning and inclusion of environmental, social and personal determinants have not been found in line with good practice recommendations.

Requirements for the documentation of product distribution are covered in the legislation. They are suitable for gaining key figures of the scheme's implementation; yet they do not allow evaluating the impact of the SMS such as the actual increase in children's consumption of milk and milk products. Furthermore, the legislation does not ask the Member States to carry out evaluations as means of success control and starting point for further improvements regarding parameters for the implementation. Hence the requirements remain incomplete for complying with expert recommendations.

The discussion of SMS design elements up to this point largely refers to their relevance to increase milk consumption of children. Their relevance, regarding the stabilisation of the EU milk market, which can be interpreted as a more global target, can be discussed more generally.

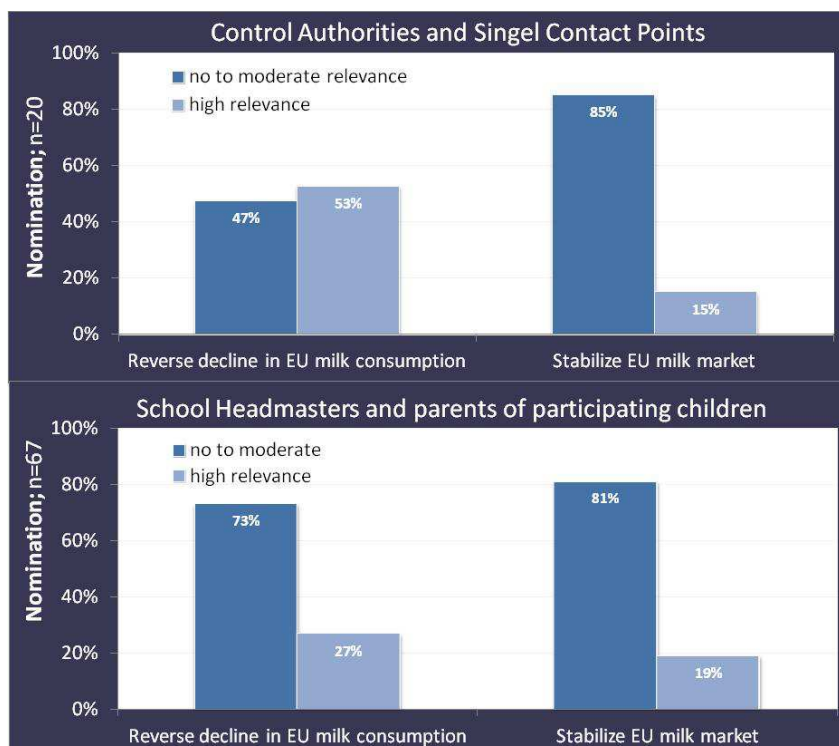
All design elements mentioned are also relevant for the scheme's "market target" as theoretically it will only be realisable if the long-term and sustainable increase is achieved in children's consumption. A SMS design based on scientific knowledge will subsequently provide the highest probability to sustainably increase children's milk consumption in the long-run and thus, will also provide the highest probability to stimulate and stabilise the milk market.

¹⁹⁰ Compare to chapter 5.1.2 Evaluation Question 2 results from Salamon, Petra; Weible, Daniela; Bürgelt, Doreen; Christoph, Inken B.; Peter, Günter; Gonzalez, Aida; Rothe Andrea and Weber Sascha A. (2010): "Ökonomische Begleitforschung zum Bundesmodellvorhaben „Schulmilch im Fokus“, Endbericht, online publication: <http://www.ti.bund.de/?id=6639>



As already shown in Evaluation Question 1 the share of supplied milk under the scheme in total milk supplied to dairies is in most Member States less than 0.5%. Thus, the direct market impact of the scheme is negligible and indirect impacts based on leverage effects are difficult to verify. In any case design elements which are specified in a way that they distribute as much milk products as possible, for as long as possible, to as many children as possible will contribute to an increasing market relevance of this measure. As displayed in Figure 40, 81 to 85% of the national market experts, school headmasters and parents in the eight case study regions evaluate the SMS's relevance as moderate if not negligible for its long-term aim of stabilising the milk market. At least by the national market experts the scheme's relevance is seen more optimistic with respect to its short-term market impact, the reverse of the declining EU milk consumption. Here, about 53% of the interviewed CAs and SCPs mentioned that the scheme is of high relevance. Less optimistic is the evaluation of school headmasters and parents: 73% voted for a marginal if not negligible relevance of the scheme.¹⁹¹

Figure 40: Evaluation of the scheme's relevance by interviewees



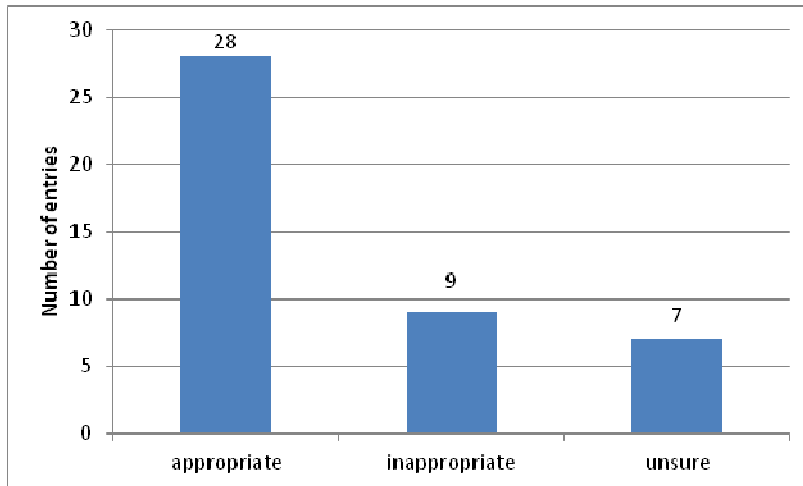
Source: Own illustration based on interview survey in the eight case study regions

With respect to the SMS's aim of increasing children's milk consumption, headmasters of participating and non-participating schools have been asked whether they think that the scheme is an appropriate instrument or not. Figure 41 shows that both the majority of participating and non-participating headmasters assess the scheme as an appropriate tool.

¹⁹¹ The different evaluation of the two interviewee groups might be explainable by the different perceptions. While most CAs and SCPs are members of national (agricultural) ministries or professional agricultural service providers which obviously have deeper interest and knowledge on agricultural markets, school headmasters and parents are in most cases more interested in the direct impact on their children.



Figure 41: Answers to the Question: “Do you think that the EU SMS is an appropriate instrument to increase children’s milk consumption in schools?”



Source: Own illustration based on interview survey in the eight case study regions

Arguments why headmasters believe that the scheme is able to stimulate consumption are:

- SMS helps to ensure that milk is accessible and schools to provide dairy more regularly
- since milk is offered regularly consumption becomes a routine
- SMS helps counteracting the habit of drinking sodas
- SMS helps to introduce new dairy products in children’s diet
- serving size is fitted
- SMS leads to an increased feeling of togetherness in the class (collective consumption)
- SMS sensibilises children for milk as products are discussed in school festivals & activities
- milk increases the school's awareness for a healthy diet
- costs are not too high (in one school, milk is the cheapest product on sale at the kiosk)

Those headmasters doubting the impact of the scheme name the following reasons:

- diets/menus of the canteens are prepared according to nutritional aspects only and they include already the sufficient quantity of milk and milk products
- Milk and dairy products would have been supplied anyway as part of the balanced diet that is offered to children in schools
- lack educational measures and information provision
- too few children participate in the programme
- parents are not informed about the programme and effects of milk consumption
- price reduction is not high enough to make products desirable for pupils
- some children are allergic to milk or simply do not like the taste

Common **reasons why** participating educational establishments would **abandon** the SMS are related to a poor value-price ratio, hence if either demand, subsidies or participation drops or administrative and organisational burdens increase, headmasters may quit the SMS. Several headmasters mentioned, even in this case they would continue to provide dairy products. In order to understand how the design of the SMS helps to stimulate milk consumption interviewees from participating educational establishments as well as those dealing with the administration and organisation of the scheme have been requested to

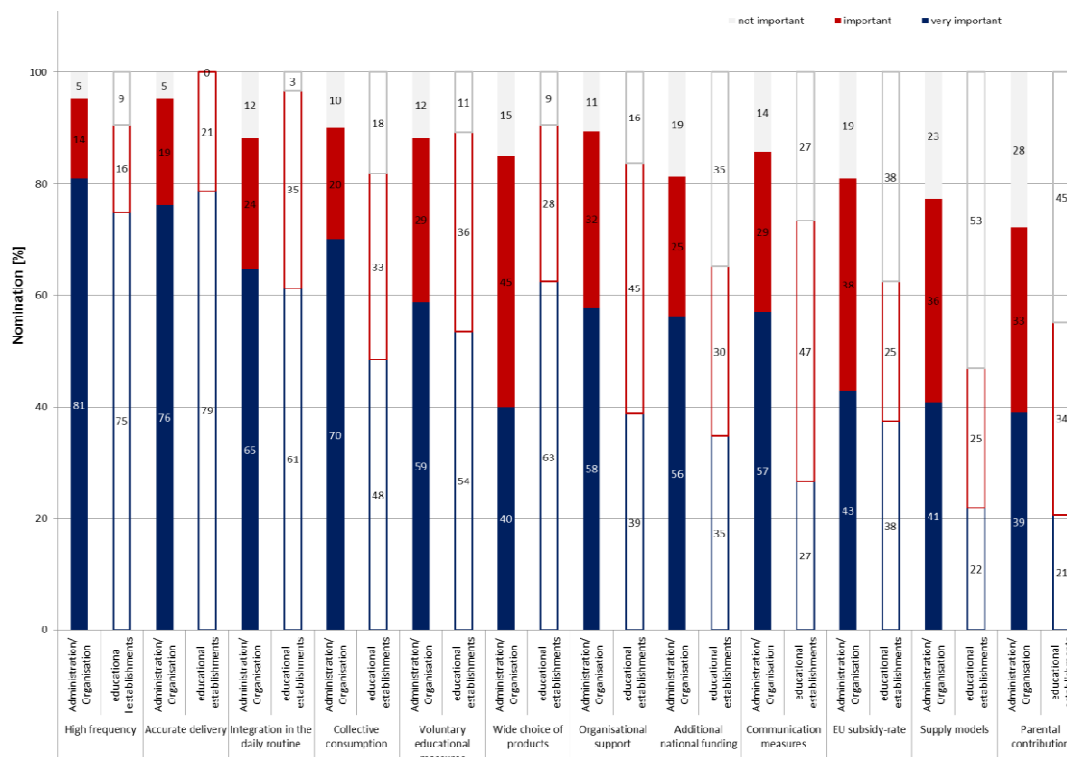


evaluate the scheme's main determinants for success. Their rating is shown in Figure 42 and lead to the following ranking of success factors:

- a) **High frequency in offering milk and milk products**
- b) **Accurate delivery and reliable logistics**
- c) **Integration into the daily routine**
- d) **Collective consumption**
- e) Voluntary educational measures
- f) Wide choice of products
- g) Organisational support
- h) Additional national funding
- i) Communication measures
- j) EU subsidy-rate
- k) Supply models
- l) Parental contribution

Consequently the first two most important success factors are almost completely covered by the scheme; whereas all other factors down to parental contribution offer potential for improvements as the discussion among the participants presents. In addition Figure 42 illustrates that stakeholders involved in the administration/organisation of the scheme and those managing the scheme in educational establishments do not share the same perspective when rating the success factors. Similar points of view as regard to the importance are only identified for the three factors “high frequency”, “accurate delivery and reliable logistics” and “voluntary educational measures”.

Figure 42: Rating for the main determinants for success of the EU SMS



Source: Own illustration based on interview survey in the eight case study regions



The success factors, their current status and recommendations for the future implementation have been discussed in the following way:

High frequency of distribution: Most common is a daily distribution of milk, followed by a provision 2-3 times per week. Daily supply is recommendable; if not possible it should take place at least 3 times a week.

An **accurate delivery and reliable logistics** are regarded as essential. Since suppliers pay a lot of attention to ensure a proper procedure, no changes are needed.

The **integration of the SMS into the daily routine** of the school is assessed diversely. Some implementing bodies and headmasters notice a satisfying integration into the daily routine, others claim that it is hardly possible to adapt the SMS to the routine, e.g. because the number of participants in the educational establishment is too small.

Collective consumption takes place in some educational establishments already either in the classroom or in canteens during breaks. Headmasters recognise that children love to eat and drink together; hence collective consumption should be continued and promoted. In addition, it has been proposed that teachers should drink the school milk together with the pupils.

Voluntary educational measures are not implemented on a regular basis, but would be welcomed by all Member States of the case study sample.

With regard to offering a **wide choice of products**, France, Hungary, Italy and Poland mention that this is already accomplished in their respective implementation. Germany and the Netherlands state that this fact seems rather unimportant. The United Kingdom recognised that children like plain milk and therefore a wide choice would not be necessary. However, the majority of interviewees suggests to not only offer plain milk, but to widen product choices. Dutch interviewees agree, that a concentration on 3-4 products is adequate due to organisational aspects.

There are sporadic claims that teachers do not feel responsible for the SMS, while the implementation requires their support. Germany, Hungary and the United Kingdom ask for more support from the teachers, whereas in most cases the distribution in schools offering regular school meals works fine and no further **organisational support** is required.

Out of eight countries Sweden, Hungary, Poland and schools in certain areas of the UK state having access to **national or regional funding**. There is a consensus that additional national/regional funding would add to the attractiveness of the SMS:

As **communication measures**, the SMS poster being the only obligatory information is often the only communication instrument used. France, Germany, the Netherlands, Sweden and the United Kingdom make clear that the information related to the SMS is not sufficient. It should be intensified in the future especially towards parents, but also to children e.g. by changing the design and information of the poster. Some interviewees recommend adapting communication strategies from the SFS.

EU subsidy-rate: The majority of interviewees believe in the idea, the lower the price the higher the consumption. Since recent subsidies are considered too low, interview partners suggest increasing the rate.

Direct distribution of milk and milk products to the children is popular and seems adequate also for the future. However, interviewees strengthen the need for age appropriate supply models.



Parental contribution: Sweden does not ask for a parental contribution, as well as plain drinking milk in Polish primary schools is free of charge. In the United Kingdom, parents consider the products under the SMS expensive. In general, teachers would like to avoid collecting money. Interviewees recommend offering plain milk without any parental payments. Interviewees from the United Kingdom believe that a parental contribution is acceptable for other milk products, French statements point out that parental contribution to school meals is necessary but not for the SMS in particular.

The main findings of the answer to evaluation question No 12 can be summarised by stating that the SMS is regarded by experts as well as by participating stakeholders as an appropriate instrument to stimulate the consumption of milk and milk products among young people. The setting “educational establishments” is appropriate to reach this objective in the defined target groups. Products distributed as well as the frequency and duration of the programme are found in line with recommendations and stakeholders’ point of view. The remaining elements of the SMS’s design are implemented in a rather inefficient way as they correspond only poorly with expert recommendations and stakeholders mentioned numerous suggestions for improvements.

Box 18: Conclusions on the relevance of the scheme’s design for increasing milk consumption by young people

- The majority of interviewees think that the SMS is an adequate instrument to increase children’s consumption of milk and milk products.
- The more or less daily provision of products in educational establishments and the specification of the target group correspond well with expert’s findings for a successful intervention on eating habits.
- The quantity of milk provided under the scheme and the implemented price reduction add only marginally to the additional milk consumption. The SMS poster, being the only obligate communication measure, cannot sufficiently inform important stakeholders about the programme.
- Other important design elements of the intervention logic, such as educational measures, physical activities, underlying behavioural theories, holistic approaches, strategic planning and inclusion of environmental, social and personal determinants are not taken into account under the SMS.
- Interviewees identify as the five most important success factors (or design elements) for school milk programmes: high frequency in offering milk and milk products, accurate delivery and reliable logistics, integration into the daily routine, collective consumption and voluntary educational measures.
- The relevance of the scheme for its market balancing target is not evident as the direct market impact of the scheme is small. However, possible long-term leverage and multiplier effects of the intervention are likely.



5.5 Theme 5: EU value added

5.5.1 Evaluation question 13

Subject of Evaluation Question No. 13 **“To what extent has the implementation of the School Milk Scheme created EU value added?”** is the added value (“improvement” or “advantage”) that has been accomplished by the fact that the scheme is actualised under the European Community and European legislation. The question includes the following aspects:

- Would the Member States, public and private actors, be willing and able to implement a comparable milk programme even without EU aid?
- Has the SMS created added value with respect to (pre-)existing national milk schemes?
- What outcomes make the SMS an advantageous/profitable investment?
- Are there more promising opportunities to reach the objectives of the Council Regulation, namely balancing the milk market and stimulating milk consumption?

▲ Method of measurement

The analysis starts with a review of the situation in the Member States. It will describe the existence of national/regional schemes, the distribution of milk schemes prior to the States’ participation in the EU SMS as well as the public and private contributions to the scheme. In order to answer the question whether the EU investment has been profitable or whether political decision makers should consider more promising alternatives, previous results of the evaluation on effectiveness and efficiency will be taken into account. In order to estimate the potential impact of these alternatives, the evaluation compares the given situation to experiences made in programmes/measures which are similar in their choices of action, e.g. to the School Fruit Scheme, to the results of milk promotion campaigns that focus on young people and to impacts on the milk market through positive incentives to organic milk production.

Table 40: Indicators and Methods for Evaluation Question No. 13

Objectives of the question	Indicators	Methods of measurement
Working Package 3: Answers to the evaluation questions		
Question 13 “To what extent has the implementation of the School Milk Scheme created EU value added?”	<p><u>Indicators for a scenario without EU support:</u></p> <ul style="list-style-type: none"> -Distribution of school milk prior to the participation -Occurrence of pre-existing national schemes -Public and private contribution to the SMS -Accompanying measures in the SMS <p><u>Indicators for evaluating promising alternatives:</u></p> <ul style="list-style-type: none"> - Increase in milk consumption - Effectiveness of the measures - Efficiency of alternatives <p><u>Indicators for additional benefit of the EU initiative</u></p> <ul style="list-style-type: none"> - Increased visibility of the scheme - Better awareness of the SMS and its objectives - Contribution to the image of milk products - Image improvement of the EU - Learning effects among the Member States 	<p>Quantitative approach:</p> <ul style="list-style-type: none"> - Information and statistical data of Member States - Literature review of evaluation reports <p>Qualitative approach:</p> <p>Review of certain political measures and their impact</p> <p><u>Information sources (examples):</u></p> <ul style="list-style-type: none"> - Evaluation of CAP measures (dairy sector) - Evaluation of promotion and information actions - Evaluation of income effects of direct support - Evaluation of the EU School Fruit Scheme - Standardised expert interviews - Standardised questionnaire



▲ Answer to the evaluation question

As shown in Figure 27, 89% of all interviewees believe that without the EU initiative their home country would not have implemented a school milk programme. The result is remarkable in such a way that at least five of the eight participating case study countries introduced school milk in the post war period or before.¹⁹² Their statements nevertheless show that the EU support is appreciated and recognised positively among these states.

The positive EU impact on the introduction of milk schemes in the Member States also becomes evident from the basic survey as only five Member States run additional national or regional milk scheme without participation in the EU SMS. Some basic information on these programmes is gathered in Table 41. In addition, 11 Member States and the German Federal State Hessen grant top-ups, of which those for the Czech Republic, Estonia, France, Hungary, Latvia, Lithuania, Poland, Slovakia and the United Kingdom are remarkable.

Table 41: Information on milk programmes in the Member States

Member State	participants	funds
Belgium (Flanders)		in 2004: 10,000 € in 2010/11: 125,000 € in 2011/12: 13,000 €
Belgium (Wallonia)	in 2010/11: 41,000 children in 2011/12: 49,000 children	in 2010/11: 493,000 € in 2011/12: 290,000 €
France	in 2004: 4,000 schools, 921,000 children in 2010/11: 5,000 schools, 2.34 million children in 2011/12: 6,000 schools, 2.3 million children	in 2004: 1.48 million € in 2010/11: 2.34 million € in 2011/12: 867,000 €
Germany	50% of all Bavarian schools provide free milk – 2,268 schools with approx. 660,000 pupils ¹⁹³	
Sweden	Free school meals including milk and milk products are provided to all children.	
United Kingdom	Under the nursery milk scheme, 189 ml milk are served every day to 1.5 million children under 5 years being in day care for more than 2 hours.	61.6 million €

¹⁹² France set up the first national milk programme in 1954. In Germany, school milk was part of the free school lunches being provided between 1946 and 1949, and later on pupils were able to buy school milk in educational establishments. Hungary introduced a scheme in 1927, which expired due to World War II. Sweden offers free school lunch including milk and milk products since 1946 (Osowski 2012, p. 10). In the United Kingdom, the school milk act of 1946 granted children's access to milk in educational establishments. (No information was available for the Netherlands and Poland).

¹⁹³ Compare official school statistic for Bavaria, online publication:
https://www.statistik.bayern.de/medien/statistik/bildungsoziales/schu_eckdaten_der_amtl._schulstatistik_2011.pdf



Hence the first EU value added results from the fact that the SMS motivates Member States to establish milk programmes and that it has been raising awareness in these states for more than 40 years now. It seems likely that the EU support facilitated the perpetuation of milk programmes in some Member States from post war time until today. Nevertheless, dead-weight effects have to be taken into consideration as some Member States that offer regular school meals indicate that milk and milk products are distributed as part of the meals anyway and five out of eight interviewed headmasters from non-participating schools report on offering milk and milk products to their students (for further results in deadweight see evaluation question No. 8). In addition to stimulating the implementation of milk programmes, the interviewees also specified the following aspects of EU value added:

- The SMS ensures financial aid, which in some cases allows providing products of a better quality, in other cases to expand the scheme or to reduce national budgetary restrictions.
- The EU initiative implies political support to run national/regional programmes. The EU-wide implementation helps to promote the scheme, it emphasises its objectives and makes the national schemes more reliable, robust and long-standing.
- The EU framework eases convincing schools and leads to a higher acceptance.
- EU support allows a better implementation in educational establishments since the poster is obligatory and „... and otherwise promotion of the milk products offered would not have been allowed in some schools, e.g. in the Netherlands. Furthermore suppliers under the scheme receive an informal EU-public “mandate” and do not act on their own (financial) interest in the public eye.
- A positive image transfer has been noticed in both ways. On the one hand the strong EU image is transferred to milk and milk products, on the other hand, providing children with milk and milk products adds positively to the EU image.

A key issue of these aspects is the promotion of the scheme and its objectives. Besides the EU school milk poster, no other obligatory communication measures are required by the regulation. In order to gain further insights on the level of awareness, headmasters of non-participating schools and parents have been asked whether they have ever heard about the EU SMS. All other interviewees have been asked for their opinion whether they think that the EU SMS is well-known.

The interviewed non-participating educational establishments do not recognise the scheme at all, except those who stopped participation. Parents' recognition of the scheme varies from well-informed parents to those who know about the provision but are unsure about a link to the EU scheme and an observable group that have not heard about the EU SMS.

People being involved in the administration and organisation of the scheme believe mostly that the scheme is hardly known among parents and children. The EU SMS is well-known in Member States where the milk distribution takes place separately from other school activities e. g. in Poland, where milk is provided not only in canteens but also in classrooms, and in Germany where educational establishments do not offer meals on a regular basis. Except for headmasters in Germany, this group of interviewees sees a difference between themselves and school personnel on the one hand and parents and children on the other hand, regarding the level of awareness. Several headmasters stated that they do not communicate the scheme to the last-mentioned. Thus, in general suppliers turn out to be the group that is actively pushing the communication. Other headmasters believe that parents are aware of the



scheme through indirect ways e.g. through the tradition of the scheme, the bills¹⁹⁴ or the poster. Doubts have been brought up whether the parents know about the EU contribution to financing. In many cases the children recognise that they receive milk without asking where it comes from and without understanding the EU's part in the programme; however in some cases like in Poland the children receive drinking milk in specially designed packages for the SMS with the EU logo. To conclude, the potential of strengthening the EU value added by promoting and communicating the scheme more actively and by involving important stakeholder groups is recognised by the stakeholders.

An example of a possibility to create more EU value added is identified in the knowledge transfer among the Member States. Conferences among Member States take place for example under the SFS. Headmasters and people dealing with the administration and organisation of the scheme have been asked whether the EU scheme stimulates a knowledge transfer between the participating Member States. All answers fall upon the category "not at the moment". Some interviewees from ministries or implementation agencies mentioned that communication on the scheme happens occasionally among colleagues from other Member States, but on a bilateral agreement. Still, except for three participants, all interviewees welcome the sharing of knowledge and experiences and base their interest on the following benefits:

- A common exchange of experiences and problems will help the SMS's implementation.
- Conferences and examples of best practice will improve the SMS's efficiency.
- An improved knowledge transfer will ensure an overview about the implementation in the various Member States, especially on internal regulations in these countries that might be helpful for the own national/regional implementation.

Perspectives differ as regards to the way the knowledge transfer should be organised. Some prefer "partnerships" with Member States that run a programme similar to their own implementation, others vote for conferences among the administration, a third group wishes meetings for suppliers and controllers of the scheme or for the administrative and organisational level. Knowledge transfer therefore provides additional potential for EU value added.

The question whether the Commission could have chosen more adventurous opportunities for balancing the milk market and stimulating milk consumption shall be answered by comparing potential alternatives to the SMS in order to evaluate its EU value added.

It is evident that comparisons are limited to those measures contributing to both objectives of the scheme. **Market interventions, export subsidies on milk and milk products or direct payments to dairy producers** may help to stabilise the milk markets, yet they do not increase milk consumption among young people. Therefore, they might serve as one component in a multi component approach, which means that the amount of EU subsidy needs to be divided in at least two parts, namely payments for market stabilisation and measures to stimulate milk consumption among young people.

Reviewing the answer to evaluation question No 1, the annual budgets of the SMS are too small to notice a direct impact on the market. The quantity of products distributed under the SMS allocates for just 0.3% of the total milk volume supplied to dairies both in 2004 and

¹⁹⁴ In some cases the parental contribution to the scheme is included in the general school fee; hence the SMS is not visible on the bill.



2010. Comparing the EU subsidies granted for alternative measures to stabilise the milk market, which add up to 943 million € in 2009/2010, to the expenditures for the SMS of 65.18 million € in that year, the result leads to a similar picture: less than 6.91% of additional spending. As the total budget needs to be split to support measures for stimulating the milk consumption as well, it will have an almost negligible impact on the market. Compared to the EU spending on promotion and information measures for the dairy sector in 2009 allocating 18 million €¹⁹⁵, the share of the SMS budget appears remarkable. However, one has to keep in mind that the budget was spend for programmes in 11 Member States only, as well as the difficulties to measure a direct impact of communication measures.

To conclude: The spending on alternative measures in the milk market does not provide a suitable option since it cannot support either of the two objectives of the SMS.

A second potential alternative which needs to be analyse is an **investment in promotion and information campaigns for milk targeting young people**. In theory these campaigns should lead to an increased milk consumption which will then contribute to the balance of the milk market. Evaluation results of a milk promotion campaign targeting children from 8-17 years in Germany show that although children liked the campaign; it was not possible to identify an impact on children's milk consumption.¹⁹⁶

Although the increase in milk consumption realised through the SMS has not been evaluated in most Member States, the scheme provides some information on the quantities distributed and consumed by the young people. For sole promotion measures it will be even harder to detect the share of children's milk consumption resulting from the campaigns. Furthermore, campaigns might exclude important stakeholder groups such as personnel in educational establishments and dairy suppliers who support the SMS and add to its implementation and reliability. It is also questionable whether schools, regarded as ideal setting to address young people, would agree on promotion campaigns in their environment.

Since interviewees however reported about a lack of information about the scheme and children's identification with role models may support healthy eating patterns¹⁹⁷, an investment on accompanying communication measures suggests contributing to the scheme's success.

As third option **free distribution of** school milk based on national public co-financing shall be discussed. In previous chapters the advantage of including all children in a class has been presented. Free distribution will also add to social equality, reduce organisational burdens related to parental financial contribution and increase the participation in the SMS.¹⁹⁸ Free distribution has been identified as success factor for the SFS.¹⁹⁹

¹⁹⁵ EU Press Release (2010): „€ 18 million EU support for the promotion of dairy products“, IP 10/34, online publication: http://europa.eu/rapid/press-release_IP-10-34_en.htm#PR_metaPressRelease_bottom

¹⁹⁶ CO CONCEPT (2012): „'Karlotta unterwegs'- Evaluation der EU geförderten Informations- und Absatzkampagne für Milch und Milcherzeugnisse in der Bundesrepublik Deutschland.“

¹⁹⁷ Horne, PJ, Hardman, CA, Lowe, CF et al. (2009): “Increasing parental provision and children's consumption of lunchbox fruit and vegetables in Ireland: the Food Dudes intervention”, European Journal of Clinical Nutrition, 63, p. 613-618

¹⁹⁸ Salamon, Petra; Weible, Daniela; Bürgelt, Doreen; Christoph, Inken B.; Peter, Günter; Gonzalez, Aida; Rothe Andrea and Weber Sascha A. (2010): “Ökonomische Begleitforschung zum Bundesmodellvorhaben ‚Schulmilch im Fokus‘“, Endbericht, online publication: <http://www.ti.bund.de/?id=6639>

¹⁹⁹ European Commission (ed. 2012): „Evaluation of the European School Fruit Scheme“, p. 70; online publication: http://ec.europa.eu/agriculture/evaluation/market-and-income-reports/2012/school-fruit-scheme/fulltext_en.pdf;



A scenario based on the EU expenditure of 65.18 million € and a budget of 23.10 million € resulting from Member State's co-financing suggests that 5.91 million children could be provided with 250ml milk per day for a whole school year.²⁰⁰ The new approach would allow to reach almost one third of the participating children in the school year 2009/2010 and to provide them with a serving that is very likely to influence eating patterns. However, even with the additional national budget the total quantity of distributed milk would decrease by approximately 80,000 tons and restrict the potential market impact even further. The scenario therefore might improve the qualitative output of the scheme in terms of stimulating milk consumption and consolidating healthy eating habits among children, to the disadvantage of the quantitative output.

None of the three potential alternatives provides more profitable investments a priori. In particular, neither one will have a perceptible impact on the balance of the milk market. Indications as to further improve the EU value added by strengthening communication measures under the scheme, by creating a supporting community of stakeholders and by changing distribution models have already been discussed in previous chapters.

In summary, the EU framework for the SMS creates EU value added in particular through financial and political support and through a positive image transfer. Further potentials for increasing the EU value added are especially seen in redesigning the scheme (compare evaluation questions No 6 and No 12), communication measures and knowledge transfer.

Box 19: Conclusions on the EU value added

- The EU value added of the SMS and its support to establish and maintain the SMS is clearly recognised and appreciated among the MS.
- Only in five Member States additional school milk programmes which are not administered under the EU scheme are carried out.
- The interviews indicate that deadweight effects have nevertheless to be watched carefully since school meals usually include milk and milk products.
- EU value added results from the political support to operate milk programmes; promoting the scheme among political decision makers, educational establishments and other stakeholders.
- The EU-wide implementation emphasises the SMS objectives and makes the national schemes more reliable, robust and long-standing.
- The EU image adds positively to milk and milk products while the distribution of milk and milk products to young people strengthens the positive EU image.
- A more active promotion of the scheme and the introduction of a knowledge transfer between the Member States have been identified as possibilities for creating further EU value added.
- Neither direct market interventions, nor promotion campaigns targeting young people nor free distribution of milk products only have been found to be a better investment than the SMS in order to stimulate the milk consumption among young people and contributing to the market balance at the same time.

Bere, Veierød, Skare and Klepp (2007): "Free school fruit – sustained effect three years later", International Journal of Behavioral Nutrition and Physical Activity

²⁰⁰ The number of portions distributed is based on the EU27 average milk price paid to producers of 30ct/litre in 2010 (online publication: <http://www.agriculture.gov.ie/publications/2011/annualreviewandoutlookforagriculturefisheriesandfood20102011/agriculturalcommoditiesinputs/milk/>). National co-financing rates are based on those applied in the SFS.



6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

6.1.1 Impact of the SMS on the European milk market

Compared to the total market volume of milk and milk products (represented for example by the total amount of raw milk delivered to EU dairies), **the volume of the milk distributed in the SMS is by its nature very limited (about 0.3% on EU level). However, this cannot serve as the only indicator of the SMS's market impact.**

The SMS is based on the assumption that it affects the consumption behaviour of children which later become parents, passing on their milk drinking habits on to the next generations. **Such a long-term effect might result in a remarkable impact of the SMS on the market balance, in comparison with a counterfactual situation without a SMS.**

Quantitative indicators for these long-term effects however are difficult to define and statistical evidence on the magnitude of these effects is therefore hard to provide. The statistical analysis carried out in this evaluation provided no significant results to verify the existence of a market impact beyond the quantities purchased for distribution in the SMS. The survey carried out for this evaluation shows that most of the involved stakeholders (67% to 81%) evaluate the immediate market impact of the SMS as moderately relevant or small.

6.1.2 Impact of SMS on children's milk consumption

In many Member States young children in kindergartens and Primary Schools meet - on average - the recommended intake of milk and milk products. However, milk consumption declines with increasing age and older children and adolescents often remain below intake recommendations. The SMS therefore addresses also Secondary Schools, yet the Member States focus in the SMS is mostly on younger children in kindergartens and Primary Schools.

Children who are already used to drinking milk show a higher tendency to participate in the SMS than children with low milk consumption. This is caused by taste preferences developed in the home environment and by the parental contributions (the part of the school milk price to be paid by the parents) required in most national or regional SMS programmes. Overall, the distribution of milk and milk products increases the milk consumption of the target group.

Long-term effects of the SMS on milk consumption could not be identified due to a lack of data in the Member States. The evaluation found that distribution in educational establishments is a step leading to a long-term impact on consumption of milk products under the condition that the provision of products is accompanied by measures fostering good eating habits. Taking recent theories about successful intervention logics into consideration a long-term impact is more likely if the SMS's approach is not based on distribution of milk and milk products only, as it is the case at present, but takes also personal, social and environmental determinants of milk consumption into consideration.



6.1.3 Educational character of the SMS

At present the EU Regulation concerning the SMS does not require educational measures and targeting parents and participants is in many cases limited to the SMS poster. Messages on the role of milk consumption to substitute soft drinks and thus fighting obesity and overweight are not systematically communicated. The SMS's national or regional implementation is not based on behavioural theories as it is generally recommended for school interventions in the academic literature.

A wide range of different educational materials and activities are offered voluntarily in the Member States, in particular by milk suppliers and dairy organisations. However, these measures are not designed to influence eating habits. The voluntary educational measures are often temporary and have a small scale. Neither their impact nor their success is documented, monitored or evaluated.

Where educational measures were carried out, it turned out that children liked to participate and to learn about healthy nutrition and the production and processing of milk. SMS stakeholders and the majority of the **interviewees in the surveys carried out for this evaluation are strongly in favour of obligatory educational measures in the SMS.**

6.1.4 Impact of the EU aid on the SMS's effectiveness

Evidently, the total budget spent on the SMS in a country has a significant impact on its effectiveness in terms of the number of participating children. A lower budget leads ceteris paribus to a lower participation and vice versa.

It has been observed that in most MS - due to slightly but continuously increasing milk prices in the last decades - the share of the EU subsidy in the price of school milk has been decreasing. Member States therefore justify their national top-ups by a "too low EU subsidy". The diminishing share of EU subsidies in real milk prices is one of the reasons why most Member States consider the impact of the EU contribution to the SMS's effectiveness as suboptimal and insufficient.

The milk prices that have to be paid influence the participation rate in the SMS. Prices are more important for parents with a relatively low income and have only a limited impact on participation if the parents have a relatively high income. Overall, the evaluation has found out that only a free distribution of milk in schools would result in a sharp increase in consumption.

Beside the price subsidy, most MS indicate that the EU framework of the SMS was the main driver for launching and implementing a school milk scheme in their countries.

6.1.5 Impact of socio-economic factors on the SMS's effectiveness

Although the single Member States have quite different eating and drinking habits, milk is in general an important part of the populations' diet in the EU.

Regarding socio-economic factors the statistical analysis provided no evidence for a significant correlation between selected socio-economic factors and the SMS's effectiveness. This result is comprehensible, since measures or actions which refer to the socio-



economic target dimensions are neither considered nor transferred in the SMS's design so far. **However, the qualitative interview survey carried out for this evaluation shows that social and economic variables have indeed an impact on the implementation and effectiveness of the SMS.** According to 50% of the interviewees of the qualitative survey for this evaluation a higher parental contribution – the part of the milk price that parents have to pay in the SMS after the EU aid and national top-ups have been deducted - has a clear negative impact on the participation of children from less privileged social backgrounds. This is an important finding with respect to the social dimension of the SMS. Therefore the consideration of the socio-economic dimension within the general design of the programme is urgently needed.

Further important factors mentioned by the Member States are the parents' income, the application of income (which is very different across Member States), the educational background, as well as the knowledge about milk, health and nutrition.

Field research revealed that the **motivation of the public sector, the school staff and the private sector is crucial for the distribution of school milk** in each country. In this regard, to promote a healthy diet for citizens is the main reason for schools to participate in the SMS.

6.1.6 Administrative and organisational burden caused by the SMS

Burdens in the SMS can be divided into those related to meeting legal obligations to provide information on the one hand – the administrative burdens – and those for actually distributing the school milk – the organisational burdens. Information on administrative costs caused by the SMS is in most cases not recorded and documented at Member States level.

For this reason the indicator for the administrative burden used in this analysis is only a rough estimate. It is primarily based on the assessment of staff costs required for all administrative tasks of the SMS. The resulting administrative costs are relatively high in some Member States and the variation of relative administrative costs among Member States is also quite high. **Administrative burdens are higher in Member States where the uptake of funds – the use of the EU budget available - is rather low.** Figures for France and Poland show that a higher amount of participating children or a larger range of distributed products in the SMS do not necessarily lead to relatively high administrative costs. As administrative burdens behave to a large extent like fix-costs, a decreasing participation of schools and children does not lead to an equivalent reduction of administrative costs.

While administrative burdens of the SMS are born by administrations (e.g. ministries) and dairy suppliers, organisational burdens are born by the participating schools, teachers, school staff and parents. Most school milk suppliers evaluate the burden they have to handle, like providing the security guarantee and applying the supplier licence as disproportionally high. Product controls are also considered as burdensome. However, larger suppliers are able to reduce significantly administrative costs by process-automation and -standardisation through adequate software tools.

The organisational burden of collecting the parental contributions seems to be an obstacle for participation, if it has to be carried out by the schools (teachers).

The evaluation revealed the importance of monitoring closely the organisational burden of the persons involved in the operation of the SMS. Even small variations of the



organisational burden influence the willingness of schools to participate in the scheme.

6.1.7 Advantages of a strategic programming approach

The evaluation has found that a strategic programming approach is lacking at present. Such an approach could improve the effectiveness of the SMS. It would adequately address weaknesses of the present scheme: lack of integration of all stakeholder groups and application of all the tools necessary to reach the SMS's objectives and use the synergies with the EU School Fruit Scheme.

It has been found that strategic planning is needed in three key areas in order to strengthen the SMS intervention:

- (1) Simplification of the access to the SMS.
- (2) Target-group specific SMS implementation and other approaches to increase the attractiveness of the SMS.
- (3) Better cooperation and communication between relevant stakeholders.

The new strategy should be based on behavioural theory as the objectives of the SMS are met best by behavioural change leading to a robust and sustainable increase in milk consumption. Environmental, personal and social determinants must be considered in the intervention model.

These recommendations may start a discussion on improving the SMS and serve as a starting point for developing an adequate intervention logic. The new strategy needs to be communicated to the Member States and they should be invited to specify their own strategy based on the general EU SMS strategy. If the Commission organises conferences for a knowledge transfer on the SMS among Member States, ideas for strategic planning can be discussed among the participants.

6.1.8 Efficiency of the SMS

In general, every reduction of avoidable administrative costs increases the efficiency of the SMS. By contrast, any existence of deadweight effects of the SMS leads to a strong reduction of its efficiency. Considering both aspects will provide a straightforward way to increase the efficiency of the SMS.

In order to measure the SMS efficiency a common indicator for all MS has been developed in the evaluation. This indicator reveals that **comparable subsidies lead to quite different results in the Member States.**

The evaluation found a statistically significant correlation between the *spending per child and year* and the *share of participating children*. However, a high spending per child does not automatically lead to a higher participation share. The evaluation produced also the observation that a **relatively high spending per child maximised the interest of the target group to participate but often lead to a smaller scale of the SMS due to budgetary limitations.** In view of the empirical trade-off in the scheme between spending per child and participation



in the scheme it should be considered to establish minimum thresholds for spending per child and participation.

A problem in the measuring the efficiency of the scheme results from the fact that one of the most important output indicators, the number of participating children, is not harmonised across Member States. The EU Regulation asks for reporting on the “number of participating children in the scheme” since the school year 2008/2009, but does not define this variable explicitly. As it is an ambitious task to specify the accurate number of participating children for several reasons, Member States refrain in most cases from a measurement in “accurate participation”. Instead they indicate a calculated “theoretical participation”. **The way in which Member States calculate the “theoretical participation” varies strongly which diminishes the comparability of this variable for any evaluation analysis. To address this issues the Commission has already amended Regulation 657/2008 in August 2013 asking in addition to existing requirements “the approximate number of children in regular attendance in all educational establishments participating in the school milk scheme” and “the approximate number of children eligible under the school milk scheme”.**

6.1.9 Analysing deadweight effects

Deadweight is a special case of programme inefficiency. Deadweight refers to effects which would have arisen even if the intervention had not taken place. Deadweight usually arises as a result of inadequate delivery mechanisms, which fail to target the intervention's intended beneficiaries sufficiently well. As a result, other individuals and group who are not included in the target population end up as recipients of benefits produced by the intervention. It has to be investigated whether or not the programme is efficient and provides an additional “milk portion” to young people or not.

With respect to the SMS one has to consider that demand behaviour differs for different products, thus changes of product prices lead to different reactions of consumer demand. **It can be assumed that the lower the demand effect of the SMS subsidy, the more probable is the existence of deadweight effects.** Scientific findings indicate that decreasing the milk price leads indeed to increased milk consumption at schools. However, in general the demand increase behaves under-proportional to the price reduction. **Only the free of charge provision leads to an over-proportional (drastic) demand increase.**

Contrary to the effects of a price reduction, the free distribution constitutes more than a pure price driven stimulus. The free distribution leads to further psychological effects and to less organisational effort in the operation of the SMS which apparently stimulates the demand behaviour significantly and therefore, the participation in the SMS very strongly and positively. Furthermore, due to the omitted parental contribution the problem of excluding children of low-income families can be avoided and as all children in a class may participate, children's interest in the SMS might benefit from group dynamics.

Furthermore, the demand behaviour varies across different milk products. In Germany for example, the increase of consumption through declining prices is significantly stronger in the case of milk-mix-drinks (like flavoured milk) than for plain milk. Thus, the financial effort to reach a higher participation in Germany is much higher if only plain milk is offered compared to offering milk-mix products.



Another aspect which has led to deadweight effects is the missing awareness of the SMS's existence by its participants e.g. due to the fact that the milk is in some cases part of regular school meals. Even though the majority of teachers and parents in participating educational establishments stated that they are aware of the SMS, some participants are not aware that it is funded by the EU.

Promising approaches to avoid and overcome deadweight effects exist, like the prioritisation of milk products that theoretically imply a strong demand effect, an exclusively "explicit" product distribution and a distribution fully out of charge.

6.1.10 Coherence of the SMS

The SMS is a policy of the CAP (Single CMO) implemented to realize the specific promotion objectives of the CAP Pillar I and to foster the objectives of the 2007 Strategy for Europe on Nutrition, Overweight and obesity-related Health issue **The evaluation has found that the SMS is coherent with the overall CAP objectives**, especially with the specific objectives of contributing to farm income, maintaining market stability and maintaining a diverse agriculture in Europe.

The SMS and the Strategy for Europe on Nutrition, Overweight and Obesity-related Health issues are coherent. **There is room for further alignment of the SMS with the four principles specified in the Strategy:**

- (1) Reduction of all risks associated with excess weight
- (2) Action across all groups, policy areas and a wide range of instruments
- (3) Requirement of actions from all organisations, industries, political and private stakeholders involved
- (4) Monitoring and assessment of the prevalence of obesity, overweight, eating patterns and measures undertaken to implement the strategy

The evaluation has identified the complementary character of the SMS, the EU School Fruit Scheme and the EU information policy. Objectives of all three policies are coherent. The envisaged long-term impacts of all three policies are very similar as they focus among other aspects on an increased consumption of certain products, increased share in EU citizens' diet and a reconnection of urban citizens with agriculture. Although the SMS and the School Fruit Scheme are quite similar with regard to their objectives and their intervention logic, both programmes are hardly linked, neither at EU level nor in the Member States.

6.1.11 Relevance of the SMS

The SMS is an adequate tool for increasing milk consumption of children and thus improving their eating habits. Some of the policy design elements, e.g. the school setting, the (almost) daily distribution, a long distribution period and the target group are well chosen to stimulate the consumption. The relevance of the scheme for that purpose can be increased by adding to its policy design: educational measures, free distribution of the milk products to the children and better information on the scheme for parents. These additions are needed to realise a behavioural change with regard to better eating habits.



Comparing the SMS's implementation with expert recommendations shows that the quantity of distributed milk or milk product remains below the recommended intake of educational establishments. The SMS poster has to be regarded as insufficient for the communication of the SMS. Other important design elements, being usually core elements of food policies and interventions in Kindergartens and schools are not established under the SMS.

Interviewees identify the five most important success factors for school milk programmes to be: high frequency in offering milk and milk products, accurate delivery and reliable logistics, integration into the daily routine, collective consumption and voluntary educational measures.

While long-term effects of the scheme may contribute to the market balance, short-term market effects are found to be small. Policy design elements which are specified in a way that they distribute as much milk products as possible, for as long as possible, to as many children as possible, so that the SMS's scale is as high as possible, will contribute to an increasing market relevance of this measure.

6.1.12 EU value added gained by the SMS

EU value added of the SMS is recognised by the Member States. Most Member States indicated that the EU SMS was the main driver for launching and implementing a school milk scheme in their countries. Especially people dealing with the administration of the SMS are aware of the EU support. EU value added is created, based e.g. on support to establish and maintain the milk programme, on political support to convince decision makers and educational establishments, improved reliability, on stability of the SMS and on a positive image transfer on milk products. The potential for higher EU value added has been identified in this evaluation e.g. through a stronger knowledge transfer between MS and with experts, a periodical review of the scheme and through better promotion and more active communication of the achievements of the SMS.

6.2 Recommendations

6.2.1 Recommendations to improve the effectiveness & relevance of the SMS

The SMS should be redesigned to permit for a sustainable stimulus of children's milk consumption. The intervention logic should be based on a behavioural theory. Key strategies for a more efficient design are developed within this report.

A set of monitoring and evaluation indicators should be defined that allows an assessment of the implementation and impact of the SMS on the milk market as well as on children's nutrition habits. Clear monitoring and evaluation obligations based on an adequate set of indicators should be introduced at the level of Member States and at the EU level. In this regard, it is also suggested to introduce children's consumption of milk and milk products into the regular collection through the European Statistical System as it is envisaged in the Health and Nutrition Strategy e.g. for the consumption of fruits.

It is shown that the EU framework of the SMS adds positively to children's milk consumption as it supports the access to milk and milk products. However, the conclusions on the SMS's relevance, its educational character, the sustainable stimulation of children's milk consumption and the strategic planning ask for a redesigning of the SMS. The development of a modi-



fied approach can build on the expert's recommendations displayed in this evaluation report. The key question on how to contribute best to children's milk consumption may provide orientation in this process.

To significantly increase the participation of children in the scheme free distribution (fully out of charge) of milk products to children should be explored for several reasons:

- a) an empirical study on school milk shows that participation increases drastically if the products are provided for free
- b) indications have been found that the participation is more challenging for children from a less privileged background due to the parental contribution
- c) free distribution allows all children to participate so that the SMS may benefit from group dynamics
- d) free distribution reduces the SMS's administrative and organisational burden

To realize a free distribution, it is advisable to discuss alternative financing models, for example a co-financing approach.

To permit for a long-term and sustainable impact on children's nutrition habits the intervention logic should be based on a behavioural theory. It is recommended to introduce educational and communication measures eligible for the EU aid as part of the SMS. In order to create long-lasting healthy eating habits the SMS should build on all kinds of possible support, in particular of the parents since they are a very important direct role-model for children and take care of the food preparation at home. A bridging to the home environment is promising to improve the SMS's effectiveness.

When targeting the SMS, adequate attention should be paid to children's age since milk consumption declines with increasing age and adolescents show higher needs to meet the recommended intake. Furthermore, age appropriate approaches are necessary to keep children's interest in the SMS.

Up to this point social inclusion does not belong to the target dimension of the SMS. Complementing the intervention logic by this aspect will help to address children with special needs as regards to eating habits and milk consumption. In addition, a correspondent amendment would add to the coherence between the SMS and the targets of EU2020 and the Health and Nutrition Strategy. The evaluators recommend including socio-economic factors in the general design of the SMS. Since any stigmatisation of children with special needs should be avoided it is suggested to provide all children in participating educational establishments with milk and milk products.

Given the fact that educational measures carried out voluntarily under the SMS are mainly financed by the milk suppliers and funds are therefore limited, the eligibility of these measures should be discussed. This applies also for communication measures, targeting at a strong partnership between all relevant stakeholders and at promoting the SMS.

6.2.2 Recommendations to improve the scheme's efficiency

Minimising the scale of avoidable administrative costs and deadweight effects is the first and easiest way to increase the efficiency of the SMS.



Administrative burdens of the SMS can be reduced by: (1) Simplification of product checks and administrative controls through a risk-based, spot-check approach as well as a simplification of the registration procedure of suppliers. (2) Realisation of synergy-effects between the SMS and School Fruit Scheme, e.g. by a combined administrative framework.

In order to overcome deadweight effects the prioritisation of certain milk products should be considered, namely those for which the price subsidy would theoretically lead to an over-proportional or at least proportional demand effect (price elasticity concept). Those products have to be defined by Member State, since the consumer behaviour is influenced by individual and cultural habits. Furthermore, milk products should exclusively be distributed “explicitly” to increase the awareness of the SMS.

Reduction of the organisational burdens should be sought. This could e.g. be realised by better access of small suppliers to software tools to manage their SMS operations and by organising the collection of parental contributions outside participating schools.

Given the crucial role of the organisational burden for the participation of schools in the scheme the opinion of stakeholders on this burden should be considered.

In view of the empirically observed trade-off in the scheme between spending per child and participation in the scheme it should be considered to establish minimum thresholds for spending per child and participation.

Within this and every upcoming evaluation, the “number of participating children” is a very crucial variable and one of the most important output indicators to measure the scheme’s effectiveness and efficiency. Therefore it is recommended to present a clear definition. In this regard, the Commission has already amended Regulation 657/2008 within the running evaluation procedure (August 2013). The amendment adds to the existing monitoring obligation “*the approximate number of participating children in the scheme*” also “*the approximate number of children in regular attendance in all educational establishments participating in the school milk scheme*” and “*the approximate number of children eligible under the school milk scheme*”. Consequently, improvements are expected for the next evaluation period.

6.2.3 Recommendations to further improve the scheme’s coherence within the EU policy framework

Coherence has been found between the SMS, the general objectives of the CAP, the School Fruit Scheme and the Strategy for Europe on Nutrition, Overweight and obesity-related Health issues.

At the same time, the need for an improved alignment especially between the SMS and the School Fruit Scheme has become apparent. Merging the administrative frameworks or even the whole schemes may provide advantages such as reducing the administrative and organisational burdens as well as the costs of distribution.

This finding results among others from the competition between both schemes for human resources e.g. for personnel in schools. School personnel have to cope with the organisational burden of the scheme which has been found to be a challenge for the SFS; the SMS adds its share of organisational tasks drawn on more or less the same persons in educational establishments. Since the administration of the scheme as regards to record keeping, product controls and monitoring of both programmes have not been aligned so far, avoidable



burdens occur. Competition between both programmes is likely as well as regards to educational time, attention and stakeholders' support. Therefore, it is advisable to harmonise at least the administrative frameworks of both programmes as much as possible to also consider further synergies. They are seen e.g. in combined educational and communicational measures, combined product distribution and in establishing strong partnerships with all relevant stakeholders focussing on a balanced and healthy diet.

Since coherence is given between the SMS and the objectives of the EU information and promotion policy, synergies may also occur in the intersection set of these two policies. The SMS helps to reverse a declining consumption of milk and milk products and to add knowledge about agricultural products and agriculture in the EU in general. Since the SMS contributes also to the objectives of the EU information and promotion policy, it should be explored how to improve information campaigns.

Further synergies should be sought between the SMS and the Strategy for Europe on Nutrition, Overweight and Obesity-related Health issues. The review should include the product range provided under the SMS, the measures undertaken with consideration of possible means in the field of education and physical activity and the establishment of a strong alliance of stakeholders. In this regard, addressing other important groups, e.g. sport clubs and parental organisations should be discussed as well. The integration of socio-economic factors will also enhance the mutual support of both policies.

6.2.4 Recommendations to increase the EU value added gained by the scheme

Although Member States recognise the EU's role in the SMS positively, the evaluation indicates additional possibilities to strengthen the EU value added.

As the interview survey shows, interviewees of all 8 case study countries dealing with the administration and organisation of the scheme would welcome the introduction of a knowledge transfer. They would like to learn from best practice and to discuss challenges encountered. Furthermore, knowledge transfer is regarded as an option to point out areas that need further clarification, e.g. the documentation of the number of participating children²⁰¹ or the role of private child minders as aid applicants. Ideas about the character of a future knowledge transfer include Community conferences of implementing agencies, meetings of representatives of Member States with similar scheme design and meetings of administrative personnel and milk suppliers at Community or national level. With regard to the experiences gained under the SFS the development of the milk scheme might be supported by setting up a group of experts. Scientists as well as stakeholders who are actively involved in the implementation and organisation of the scheme should be invited to join the group. A constitution involving both scientific knowledge and applied skills will add to the recognition and acceptance of the group of experts and their recommendations.

In addition, a more active promotion of the SMS on Community level is regarded as a possibility for further EU value added. A promotion campaign would add to the visibility and understanding of the scheme. It supports rising awareness among the stakeholders and offers opportunities for identification and community building. Finally, a campaign may help to illustrate the EU's role in the SMS. Promotion of the scheme might be realised either directly e.g.

²⁰¹ Improvements in this regard are expected due to the amendment in August 2013 (voted in July).



through an EU-wide campaign, the EU-website of the SMS, by means of public relation and accompanying communicational measures or indirectly by motivating the Member States to a more intensive promotion.

It is also suggested to start a process of continuous improvements of the SMS, to further develop the scheme and create it more open in order to act on recent trends and development e.g. of children's behaviour, of the scheme's implementation or of changes in the milk market. In order to do so, instruments for further development and improvement in the future should be introduced which support the scheme's flexibility. They may include a periodical review of the scheme, the consideration of results from an improved monitoring and evaluation procedure under the scheme and the adjustment to recent scientific findings which are relevant for the programme, e.g. on behavioural changes, market developments and the prevalence of overweight and obesity.



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