EU dairy farms report 2013

based on FADN data

Agriculture and Rural Development

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Brussels, February 2014

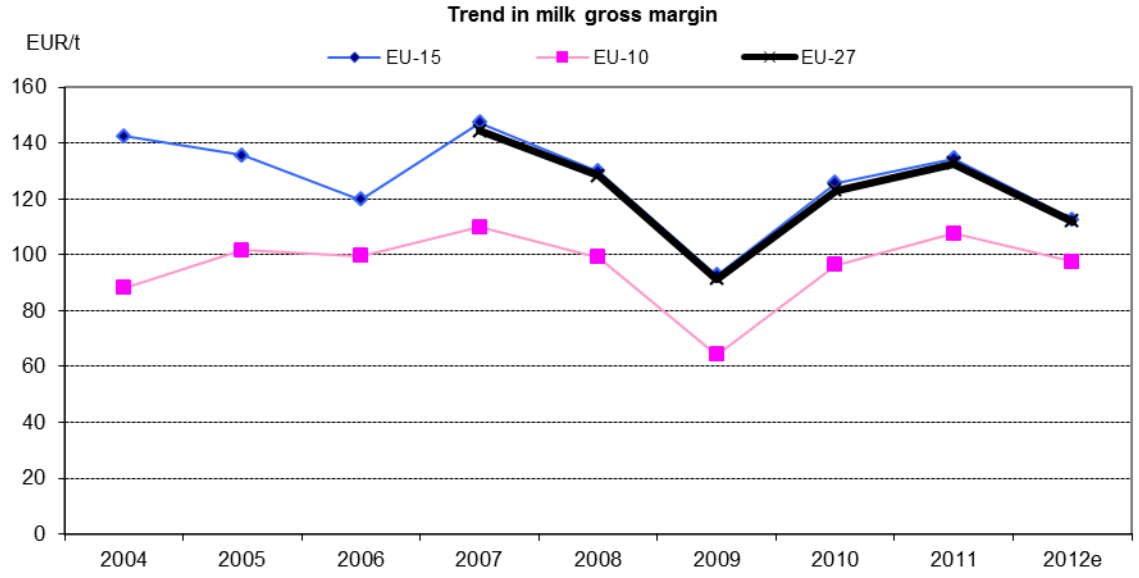
EU DAIRY FARMS REPORT 2013

Executive summary

This annual report provides an **overview of EU dairy farms** based on the latest available data from the Farm Accountancy Data Network (FADN) for **2011.** It provides trends in milk margin per tonne and in income per work unit from 2004[1] to 2011, as well as estimates of milk gross margins for 2012.

Since significant changes in methodology have been implemented, this report is not directly comparable with previous editions. The sample of milk specialised farms for 2011 represented 86% of dairy cows and 90% of milk production in the 27 EU Member States (EU-27).

Following the milk crisis of 2009, 2010 and 2011 were recovery years in most EU Member States. At EU-27 level, 2011 even saw **milk prices reach a peak** (349 EUR/t (euros per tonne) on average) for the 2007-2011 period. However, **operating costs per tonne increased in parallel,** and while the 2011 **gross margin**[2] improved significantly, it did not attain its 2007 level**.** In 2012, it is expected to decrease by 20 EUR/t due to the continuous increase in operating costs and decrease in milk price, although these remain high. Overall, 96% of specialised farms in the EU-27, representing 98% of the milk production of specialised farms achieved a positive gross margin in 2011 (against 93% in 2009).



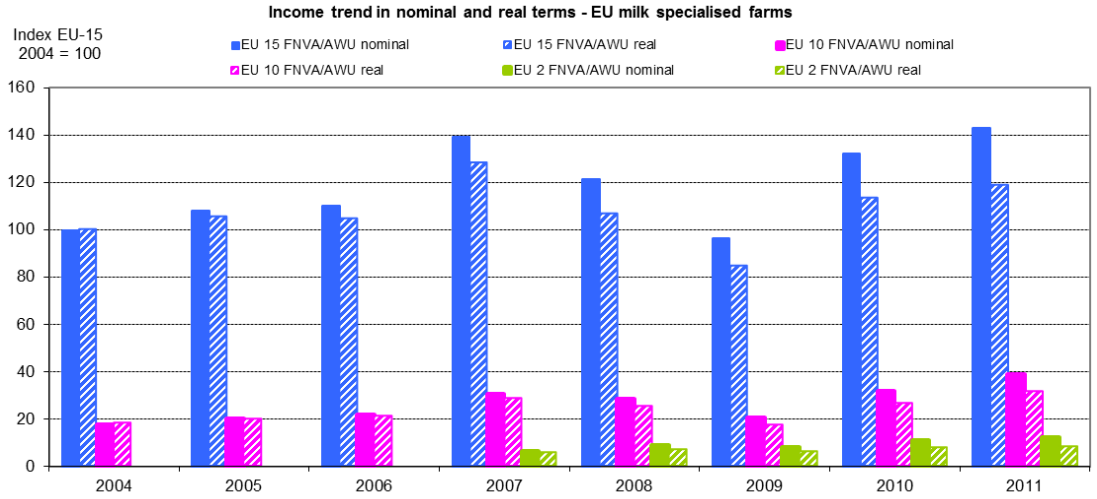
Source: EU FADN — DG AGRI, Model of the allocation of milk costs.

1 2007 for EU-27 and EU-2 Member States.

2 Gross margin = (milk price + coupled payments) - (feed, veterinary, energy costs and other operating costs). Decoupled payments, progressively introduced from 2005, are not included in margins, but they are part of income.

The global picture is the same in the respective EU groups (see the graph above[3]). Even if gross margin levels remain significantly different, the gap seems to be gradually narrowing between the 15 Member States that belonged to the EU before 2004 (EU-15) and the 10 countries that joined the EU in 2004 (EU-10), as both the milk price and operating costs appear to be converging over time.

2010 and 2011 have been positive years in terms of **income**, with **EU-27** milk specialised farms obtaining a higher average Farm Net Value Added per Annual Work Unit (**FNVA/AWU)** than in 2007, in both nominal and real terms**.** This result was the combined effect of an improvement in gross margin and of a **significant increase in milk production** (+33% since 2007). However, whereas dairy specialised farms used to provide higher incomes per AWU than other types of farming, this has no longer been the case after 2009: although their average income remains above the total average, they do not rank in the top three types of farming.



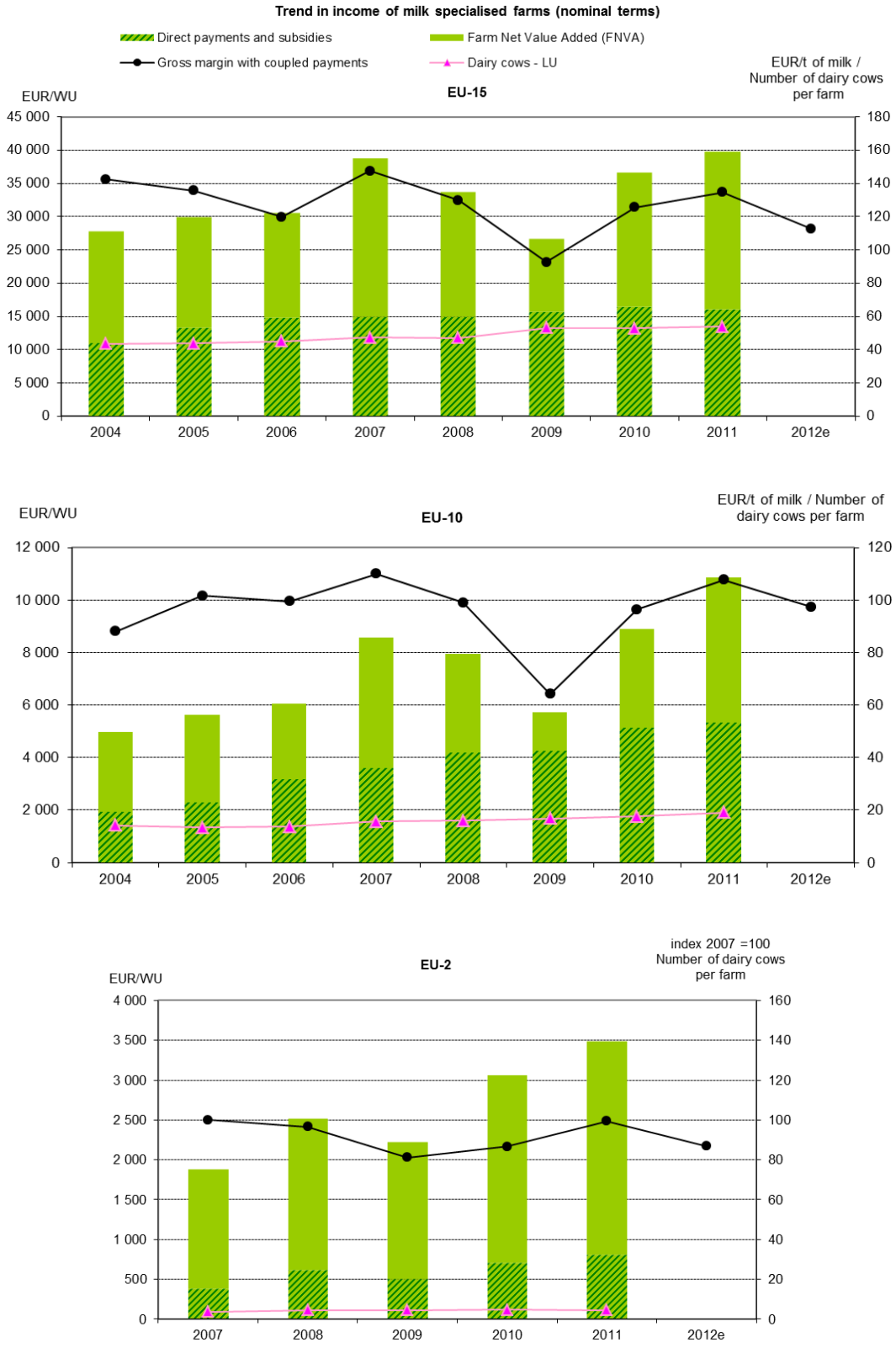
Source: EU FADN — DG AGRI, ESTAT (HICP index EUR 2004).

In all EU groups, 2010 and 2011 have been characterised by a recovery in income following the drop observed in 2009. As with gross margins, income levels varied among the EU groups (see the chart above). FNVA/AWU in the EU-15 is almost four times higher than in the EU-10 and twelve times higher than in the EU-2. In addition to the huge gap in macro variables (income levels, wage rates, other costs and prices), huge differences in farm size (see charts below) explain this result. Again, the gap between the EU-15 and EU-10 seems to be narrowing somewhat. In addition to convergence in margin, production increased proportionally more in the EU-10 (+41%) than in the EU-15 (+28%) over the period 2004-2011.[4] The phasing-in of direct payments in the EU-10, which is still ongoing, also contributed to this trend. In this EU group, direct payments and subsidies represented 49% of the FNVA/AWU of specialised dairy farms in 2011, but they also played a significant role in supporting income in the EU-15 (40%) and to a lesser extent in the EU-2 (23%). In the latter group, the very low apparent labour productivity is the main factor limiting income.

In 2012, the expected deterioration in the margins could lead to a decrease in income, as the quantity of milk produced is expected to remain stable at EU-27 level.

[3] As the margin results obtained for Romania are difficult to interpret, it has been decided not to present them until satisfactory explanations are provided. This means that, except for the overall trend, no margin indicators are shown for the EU-2 aggregate.

[4] Three-year average trend '2005' and '2010'.



Source: EU FADN — DG AGRI, Model of the allocation of milk costs.

EU average results conceal a wide range of situations at national and regional levels, as illustrated in the report.

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Box 1: The Farm Accountancy Data Network (FADN)

The **FADN**[5] is a European system of sample surveys that take place each year and collect structural and accountancy data relating to farms; the aim is to monitor the income and business activities of agricultural holdings and to evaluate the impacts of the Common Agricultural Policy (CAP).

The FADN survey covers only those farms exceeding a minimum economic size (threshold) so as to cover the most relevant part of the agricultural activity of each EU Member State, i.e. at least 90 % of the Standard Output and 90 % of Utilised Agricultural Area covered in the Farm Structure Survey (FSS, Eurostat). For 2011, the sample consists of approximately 82 500 holdings in the EU-27, which represent 5.4 million farms (39 %) out of a total of some 14 million farms included in the FSS.

The survey is intended to provide representative data in three dimensions: by region, economic size and type of farming. The FADN is the only harmonised source of micro-economic data, which means that the accounting principles are the same in all EU Member States.

The most recent FADN data available for this report are for the 2011 accounting year; this is because of the time needed to collect, check and correct the data of all the EU Member States.

A significant change in the FADN methodology entered into force in 2010: the revised EU-typology of farms (replacing standard gross margin by the standard output[6]) was integrated into the FADN database. This report is the first edition based on the 'Standard Output' database, which is also the reason why time series only go back to 2004.[7]

5 For more information on FADN: http://ec.europa.eu/agriculture/rica/index.cfm .

6 See the FADN website for more information.

7 The plan is to integrate the new EU typology of farms into the FADN database back to 2000 in a second step.

1. INTRODUCTION

This report provides an **overview of EU dairy farms** based on the latest available FADN data, i.e. for **2011**. **Cost of production and gross margins for 2012 are also estimated**. The main feature of the five-year period 2007-2011 was the high level of volatility in agriculture in general, and in the milk sector in particular, with both milk prices and input prices being affected. Milk prices fell dramatically in mid-2008 following their sharp increase alongside a general boom in agricultural prices in 2007. Producer prices recovered in 2010 and 2011 but input prices, which had followed the trend in milk prices albeit with a time lag and to a different extent, increased too.

This report provides an analysis of the economic situation of EU dairy farms. Chapter 2 describes the **sample of milk specialised farms** on which the results presented in this report are based. The third section provides an **analysis of milk margin** by EU group and Member State. The fourth section is dedicated to **income analysis** at EU and national level. Detailed data by EU group, Member State and region are provided in the Annex, together with explanations on the methodology.

2. MILK SPECIALISED FARMS IN THE EU

This study is based on farms mainly oriented towards milk production.[8] Following changes in the methodology, this sample of milk specialised farms increased substantially, in particular in the EU-10 Member States. It now includes to some extent[9] farms which were not previously well covered, in particular large farms in Slovakia and the Czech Republic that diversify their activities a great deal. The coverage of the sector thus improved. In the FADN 2011, the sample is made up of 15 030 farms, representing 665 954 farms in the EU-27 of which 44 % are in the EU-15, 21 % in the EU-10 and 35 % in the EU-2.

The share of the milk production covered by specialised farms in the FADN is 94 % in the EU-15 and 70 % in the EU-10 and the EU-2. There are big differences in coverage among Member States: specialised farms in the FADN cover 54 % of the dairy cows reported to Eurostat in the Czech Republic but more than 100 % in Ireland, Sweden and Finland.[10] **Globally, the FADN sample covers 86 % of the dairy cows, and the margin and production costs are valid for 90 % of EU-27 milk production.[11]**

There is significant diversity of milk farms across the EU (Table 1). **Farms in the EU-15 are much larger on average and have higher yields than in the EU-10 and EU-2. On average,** milk specialised farms in the EU-15 have 54 dairy cows, with a milk yield of 7 337 kg/cow, producing 396 t of milk per year, whereas in the EU-10 they have 19 dairy cows, with a yield of 5 695 kg/cow, and produce 109 t of milk per year. Farm size is even lower in the EU-2 where farms have 5 dairy cows on average, with a yield of 3 445 kg/cow,

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8 See Annex I.

9 Provided that milk production is significant enough in the individual structure and actual output of the holdings.

10 This reflects a slight overrepresentation of the EU-FADN weighting system in these countries.

11 See also Table 2 and 3 in Annex I. The results for Cyprus and Greece are not displayed because the sample is too small (less than 15 holdings).

and produce 16 t of milk per year. These data reflect the **diversity of milk farm structures** in the EU-27, which are linked to the differences in natural potential and also in the social, economic and regulatory context. In particular, the different national policies on milk quota management are very likely to have had an impact on the level of restructuring within each Member State.

Table 1: Structural information on milk specialised farms by Member State (2011)

	Specialised milk farms							
FADN 2011	Dairy cows — LU	Forage area — ha	Total labour — AWU	Share of family labour — %	Milk yield — kg/cow	Milk production /farm — tons	Milk price — €/ton	Share of national milk production — %
Belgium	56	47	1.82	98%	7090	398	338	84%
Denmark	142	102	2.38	49%	8421	1193	371	99%
Germany	55	52	2.07	69%	7632	420	343	92%
Greece	.	.	.	.	.	.	.	.
Spain	41	20	1.74	89%	7384	299	313	100%
France	53	71	1.90	91%	7099	373	345	95%
Ireland	62	57	1.62	86%	5461	337	329	99%
Italy	45	23	2.03	80%	6924	314	460	95%
Luxembourg	53	78	1.85	91%	7610	406	326	94%
The Netherlands	82	48	1.73	89%	8019	654	394	99%
Austria	16	26	1.54	97%	6604	105	349	86%
Portugal	30	17	1.74	86%	7246	214	293	98%
Finland	31	40	2.05	85%	8711	270	411	99%
Sweden	62	87	2.25	73%	8546	534	386	99%
The United Kingdom	119	101	2.58	63%	7432	885	315	99%
EU 15	**54**	**51**	**1.93**	**81%**	**7337**	**396**	**357**	**95%**
Cyprus	.	.	.	.	.	.	.	.
The Czech Republic	138	252	15.99	9%	6814	942	335	58%
Estonia	81	178	5.79	19%	7445	606	313	99%
Hungary	76	92	7.11	15%	7199	544	309	78%
Lithuania	11	22	1.81	81%	5482	63	276	85%
Latvia	16	43	2.18	68%	5595	90	279	96%
Malta	56	4	2.36	86%	6664	371	463	99%
Poland	16	13	1.91	94%	5319	86	286	83%
Slovakia	217	788	29.57	2%	5732	1242	334	55%
Slovenia	19	16	2.14	99%	5519	107	310	91%
EU 10	**19**	**24**	**2.28**	**75%**	**5695**	**109**	**297**	**80%**
Bulgaria	13	8	2.18	67%	3140	40	311	89%
Romania	4	2	1.34	96%	3524	14	323	72%
EU 2	**4**	**3**	**1.40**	**93%**	**3445**	**16**	**321**	**75%**
EU 27	**29**	**29**	**1.82**	**82%**	**6905**	**203**	**349**	**93%**

Source: EU FADN, Eurostat production statistics, treatment DG AGRI. ".": data are not displayed, fewer than 15 farms in the sample.

3. ANALYSIS OF MILK MARGINS

This chapter highlights the main results for revenues, costs and margins of dairy activity. They relate exclusively to the production of milk, without taking into account the by-products (calf and dairy cow). They are expressed in terms of current euros per tonne (EUR/t) of milk produced. The tables in Annex II show the detailed results by EU group, Member State and region.[12]

Three different margin indicators are studied.[13] The gross margin (over operating costs) is generally used when making comparisons with alternative types of production (labour, land and capital costs still have to be paid, whichever type of production is chosen). The net margin (before own factors) is calculated as the gross margin minus depreciation and external factors (wages, rent, interest paid). The net economic margin allows for assessment of the residual revenue (profit or loss) obtained from production, after remuneration of all production factors including imputed family factors (opportunity costs for family factors).

The method is summarised in Box 2 and detailed in Annex I.

Box 2: Summary of the method

The FADN database contains information about output and subsidies per product, but as far as costs are concerned it only provides information relating to the farm as a whole. Hence, the direct contribution of each enterprise to the farm income is not available, which means that the cost of production by product have to be estimated. The EU FADN unit has built several models to estimate costs and margins for the different products: arable crops, milk and beef, and permanent crops. These models allocate farm costs to a particular product using different ratios. Annex I gives details of the model for estimating milk cost of production and margins which is used in this analysis (see Methodology 1).

Since 2008, imputed costs for unpaid family factors have been estimated (family labour costs and own capital costs). The aim is to enable a comparison to be made between Member States with different structures in terms of labour (share of family and paid labour), land (rented/owned) and capital. The methodology for estimating the opportunity costs of family labour, land and capital is explained in Annex I (see Methodology 2).

The output, operating costs and gross margin (over operating costs) for 2012 are estimated on the basis of milk prices, milk yield indices and input price indices. It is assumed that structures remain unchanged (e.g. the number of cows remains the same), but a change in milk production resulting from a change in average yield per cow is taken into consideration. The sources of the indices used are the following:

- for the milk price: the Commission's Directorate-General for Agriculture (DG AGRI)

- for milk yield and input prices: Eurostat databases (agricultural production, agricultural prices and price indices).

[12] With the exception of Romanian and thus EU-2 data, which are not fully disclosed due to difficulty in interpreting the results obtained.

[13] For a detailed definition of the margins and costs presented, please refer to the description of the milk model in Annex I.

3.1. Breakdown by EU group

3.1.1. EU-27

With the highest milk price in five years, 2011 has been quite a good year in terms of gross margin despite the simultaneous sharp rise in production costs. As this trend in costs continues through 2012, a decrease in gross margin is expected in spite of the still high milk prices.

At EU-27 level, the operating costs for milk production consist mainly of feed costs (around 50 % of operating costs, 70 % of which are for purchased feed and 30 % for home-grown feed), together with energy, machinery and building upkeep and contract work, each representing about 10 % of operating costs. Since the decoupling of direct support, revenues from milk[14] have depended mostly on the price and the quantity produced.[15] In the short term, gross margin is therefore mainly influenced by the milk price and feed costs.

Between 2007 and 2009, the average price for milk fell by 17 % while operating costs per tonne remained stable. As a consequence, the average milk **gross margin** fell to 91 EUR/t with coupled payments (Figure 1). Milk prices subsequently recovered, reaching their highest level in five years in 2011. This more than compensated for the continuous increase in operating costs (mostly feed and energy), which also hit their highest point in five years in 2011. As a consequence, 2010 and 2011 saw a recovery in gross margin, which reached 133 EUR/t with coupled payments in 2011. However, in 2012 slightly lower but still high milk prices could not make up for continuously rising operating costs, and gross margin is expected to fall by 20 EUR/t that year to 112 EUR/t with coupled payments. While 96 % of milk specialised farms had a positive gross margin in 2011, this percentage is expected to drop to 94 % in 2012.

The average **net margin** (gross margin minus depreciation and external factors, both of which remained mostly unchanged) shows the same trend. After a sharp decrease between 2007 and 2009, it recovered in 2010 and 2011 to reach 43 EUR/t with coupled payments. After deducting the estimated opportunity costs for family labour and capital, we obtain the **net economic margin**, which also recovered to -36 EUR/t in 2011 with coupled payments. Not only did it benefit from the positive trend in the other margins, but the opportunity costs for own capital were halved as compared with 2009 following a decrease in the real interest rate,[16] the imputed family labour costs remaining stable. A negative net economic margin means that on average farmers do not obtain what could be considered an adequate remuneration for their own labour and capital.[17] In 2011, it is estimated that 18 % of the EU-27 specialised dairy farms achieved a positive net economic margin, representing 36 % of the

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[14] The decoupling also means that the link between milk margins and income of dairy producers is somewhat less obvious than in the past.

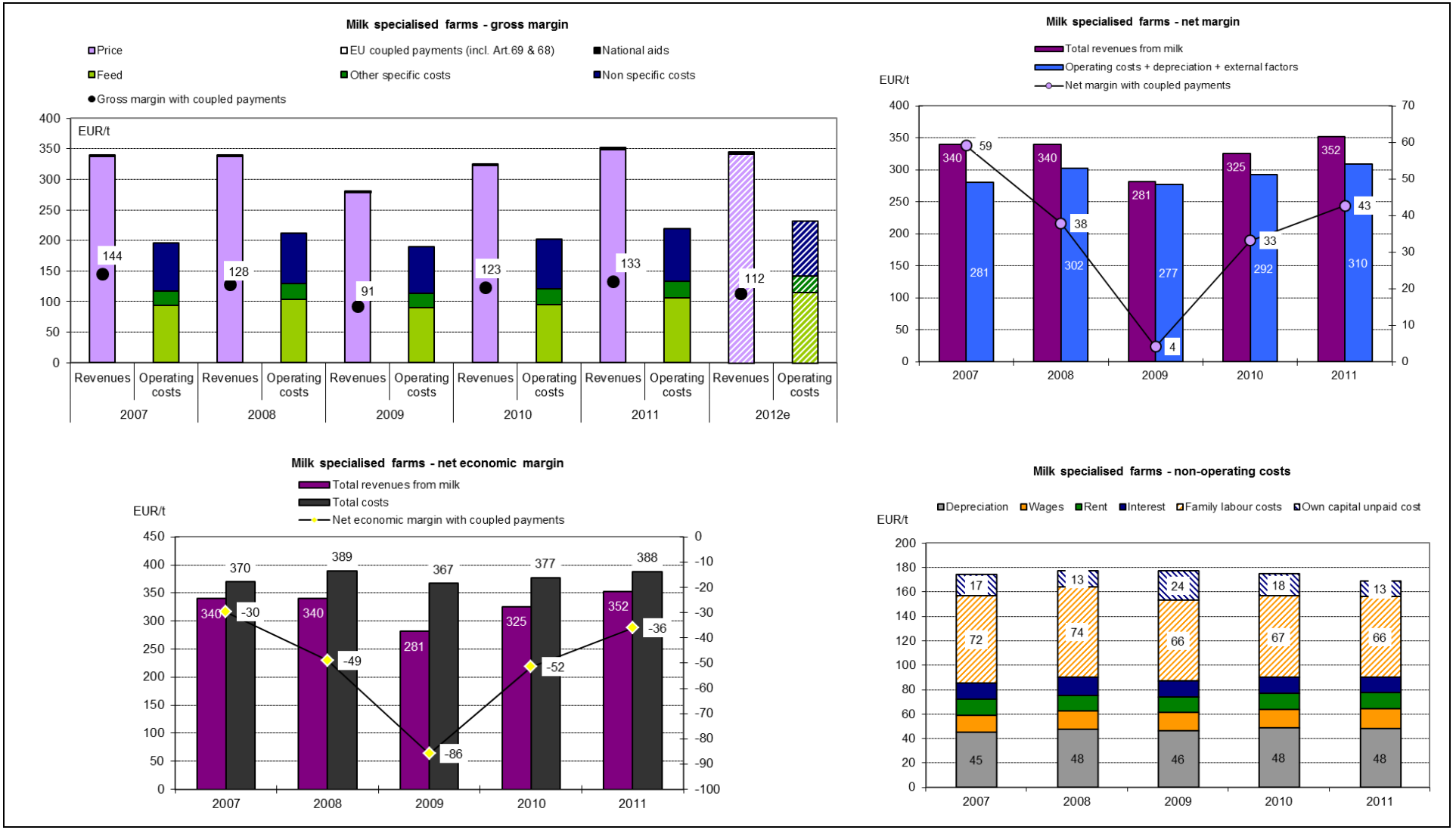
[15] Since the margins are presented per tonne of milk, the impact of the quantity produced is mostly visible in the income indicators.

[16] See Methodology 2 for further explanation. The 'real interest rate' used to calculate own capital unpaid costs corresponds roughly to the difference between the long-term interest rate and inflation. It should be noted that opportunity costs for family labour and own capital are only estimates, however, and should be interpreted with caution.

[17] It is worth noting that the margins presented in this section relate exclusively to the production of milk. The 'by-products' (calf and dairy cow) are not taken into consideration although they are accounted for in the income part. According to a very rough estimate, they would add around 35 EUR/t on the revenue side at EU-27 level in 2011.

milk production of specialised farms. Given the trend in gross margin, net economic margin is expected to deteriorate in 2012.

Figure 1: Trend in cost of milk production and margins, EU-27



Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

3.1.2. EU-15

Trends in the EU-15 were similar to those in the EU-27.

In the EU-15, 2011 saw the **highest price** for milk since 2004, at 357 EUR/t. When taking into consideration the coupled payments (including aid under Article 68 since 2008), the revenues from milk amount to 360 EUR/t on average. Yet the specific **costs of production increased** too (+19 % in three-year average trend, '2010' vs '2005') and so did the non-specific operating costs (+12 %). At 135 EUR/t with coupled payments, the resulting **gross margin** is among the highest in the eight-year period (see Figure 5). 96 % of specialised farms had a positive gross margin in 2011 but this percentage is expected to decrease again in 2012, back to its 2009 level at 93 % of specialised farms (still representing 97 % of the EU-15 milk production from specialised farms): even if milk prices remain high in 2012, (+1 % as compared with 2007), the expected increase in operating costs (+19 %) would lead to a decrease in gross margin (-24 % as compared with 2007).

Given that depreciation and external factor costs per tonne have remained stable since 2009, **net margin** also recovered, reaching 42 EUR/t with coupled payments. However, the average of the last three years (2009 to 2011) is significantly lower (-49 %) than the average of the first three years studied (2004 to 2006), even though average milk prices are slightly higher (+8 %).

In 2011, the imputed costs for family factors (family labour and own capital), reached their lowest level over the studied period. The decrease in the real interest rate — the lowest since 2004 — meant that opportunity costs for own capital were low (Figure 4). Opportunity costs for family labour per tonne also followed a downward trend, together with the share of family in the labour force, while apparent labour productivity (milk production per AWU) has increased continually since 2004 (Figure 2), which offsets the gain in imputed wage for family labour (Figure 3).[18] As a result, **net economic margin** with coupled payments, although negative, is much less so than in the previous three years, and 22 % of the EU-15 specialised dairy farms achieved a positive net economic margin in 2011.

Figure 2: Apparent labour productivity

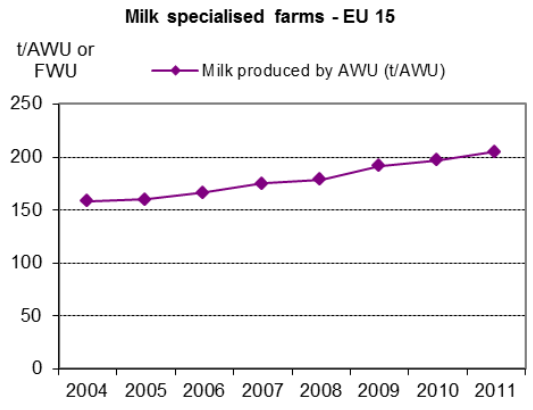
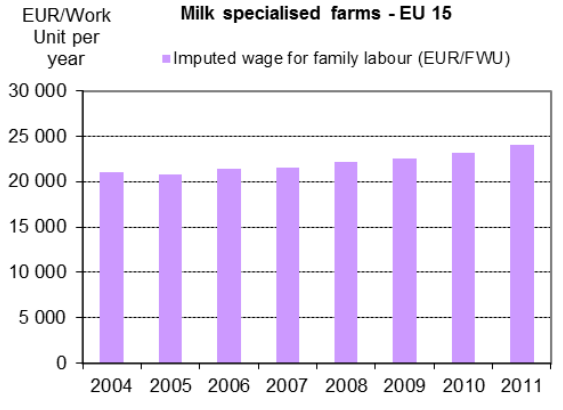


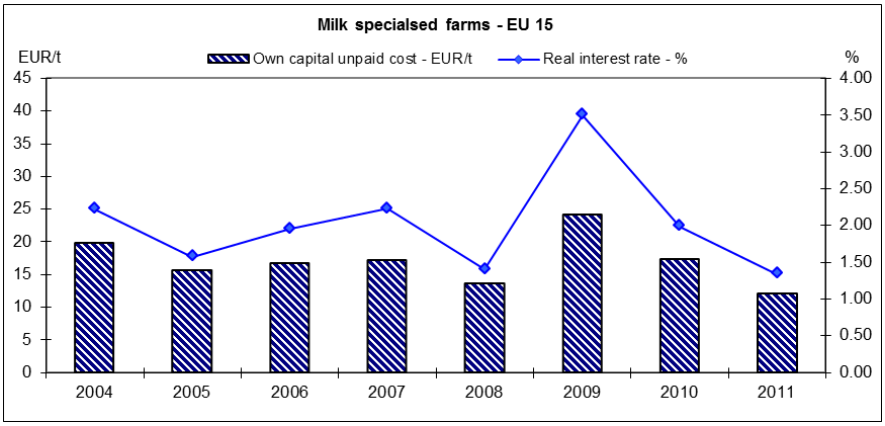
Figure 3: Imputed wage for family labour



Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

[18] The increase in labour productivity decreases the cost of labour per tonne of milk, but increases the income of family workers.

Figure 4: Opportunity costs for own capital and real interest rate



Source: EU FADN — DG AGRI.

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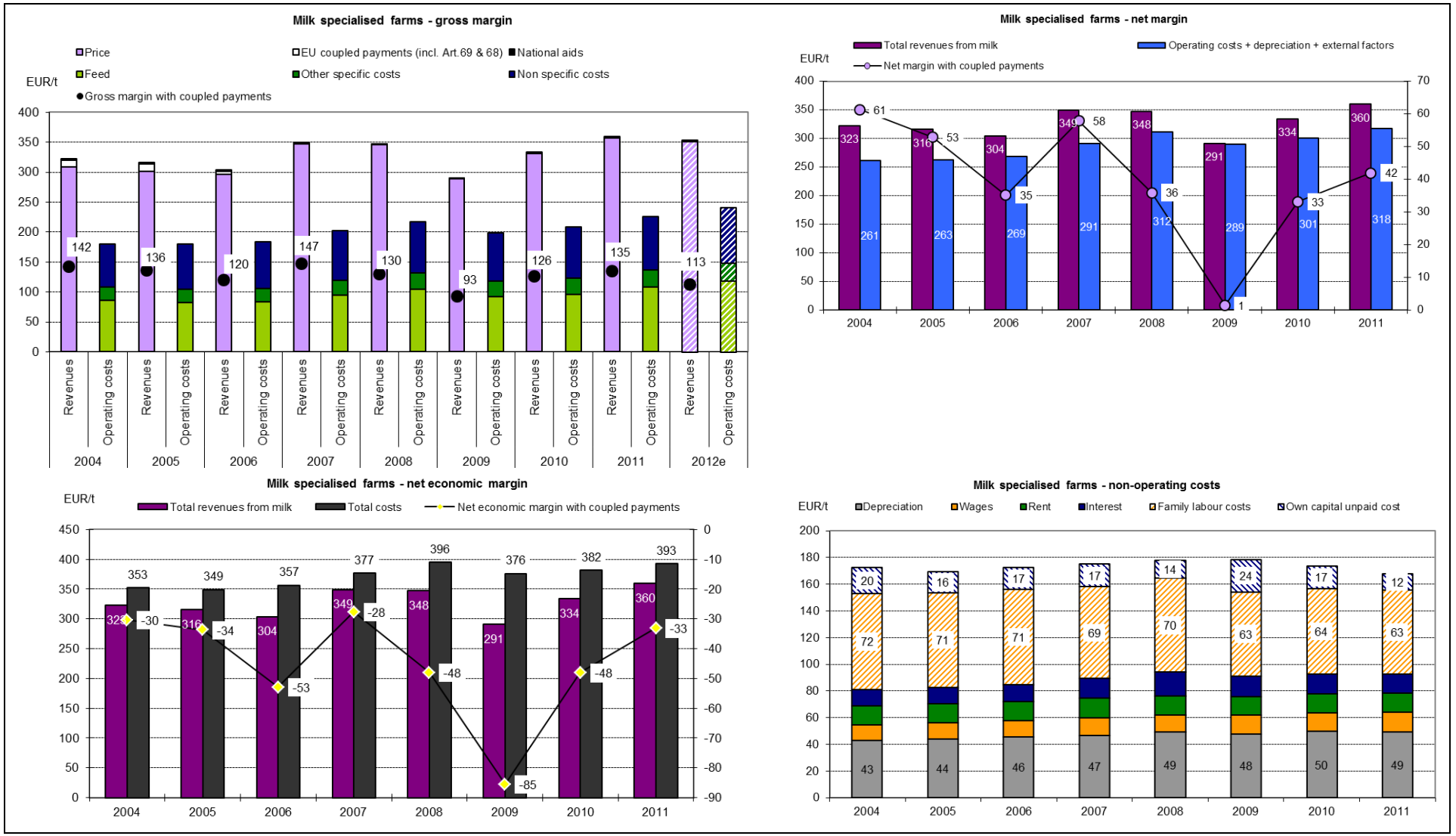
Figure 5: Trend in cost of milk production and margins, EU-15



Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

3.1.3. EU-10

In 2011, the gross margin with coupled payments in the EU-10 recovered to its 2007 level, in spite of a significant increase in the operating costs of production.

In the EU-10, 2011 was similar to 2008 in many respects. Firstly, in these two years the average milk prices were the highest of the 2004-2011 period. In 2011, they were complemented by a greater national aid so that total revenues from milk reached 302 EUR/t on average. At the same time, operating costs almost returned to their 2008 peak, almost reaching 200 EUR/t. The resulting average **gross margin** per tonne (108 EUR/t with coupled payments) returned to its 2007 level (Figure 9). However, in 2011 less farms benefited from these good performances than in 2007, with 94% of EU-10 specialised dairy farms having a positive gross margin, representing 95% of the milk production, against 96% in 2007. In 2012, the decrease in milk prices combined with sustained high production costs will probably result in a decrease in gross margin, but to a lesser extent than in the EU-15 (-11 EUR/t).

In line with the trend in gross margin, **net margin** also recovered between 2009 and 2011, although to a lesser extent than the former, with external factor costs and depreciation per tonne back to their 2008 level.

Overall, apparent labour productivity has been growing steadily since 2004 (+6% per year, Figure 6), but so did as well the imputed wage, which almost doubled over the period (Figure 7). The resulting opportunity cost for family labour hovers around 60 EUR/t. The opportunity cost for own capital decreased significantly following the trend in the real interest rate (Figure 9). The **net economic margin** thus shows a recovery to an average of -43 EUR/t with coupled payments in 2011. As in the EU-15, 35% of milk from specialised dairy farms is produced with a positive net economic margin.

Figure 6: Apparent labour productivity

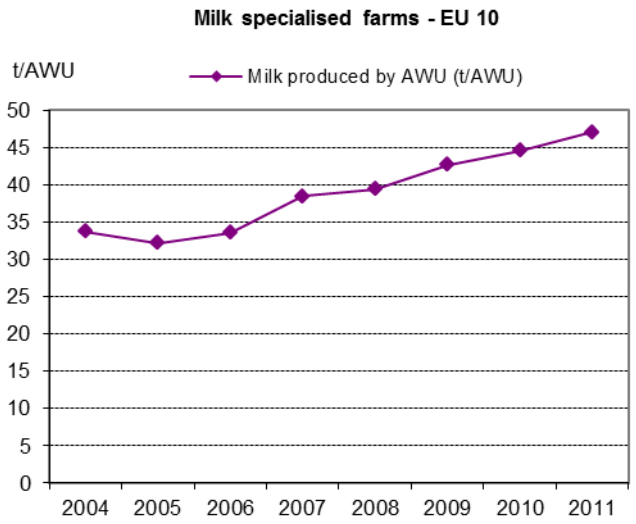
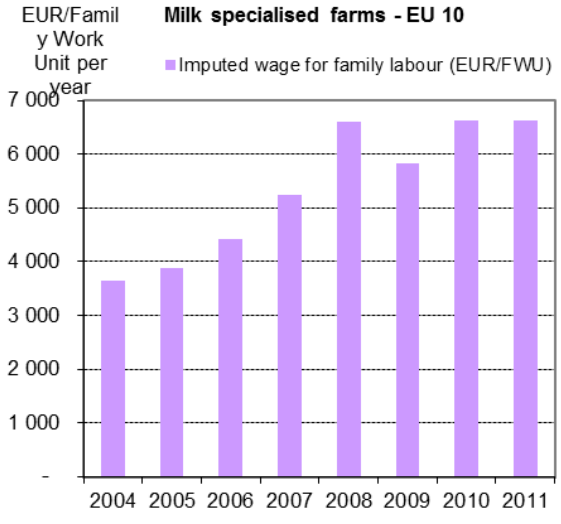
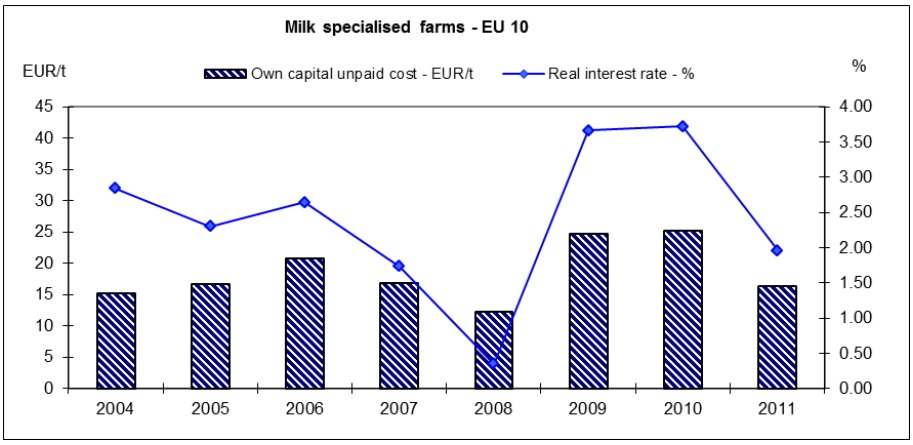


Figure 7: Imputed wage for family labour



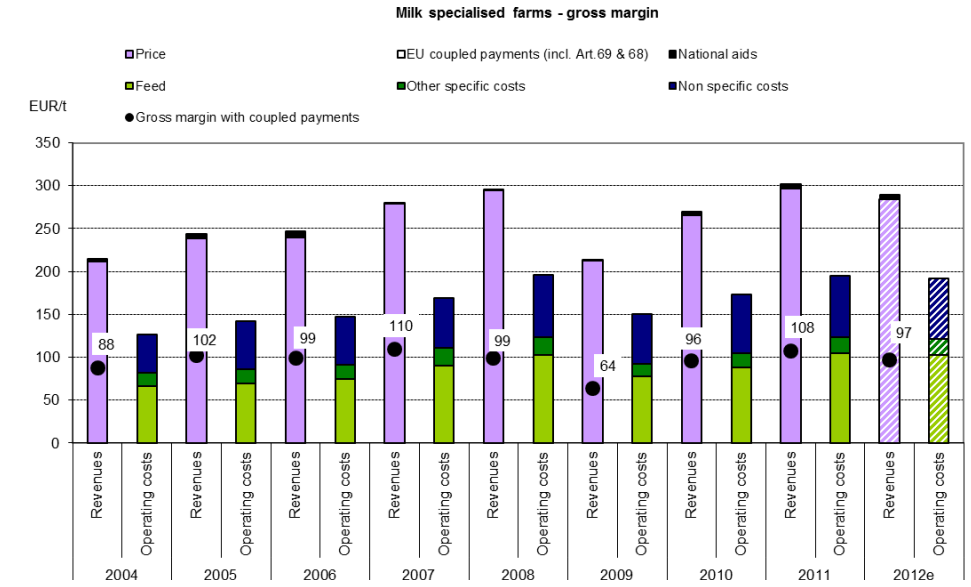
Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

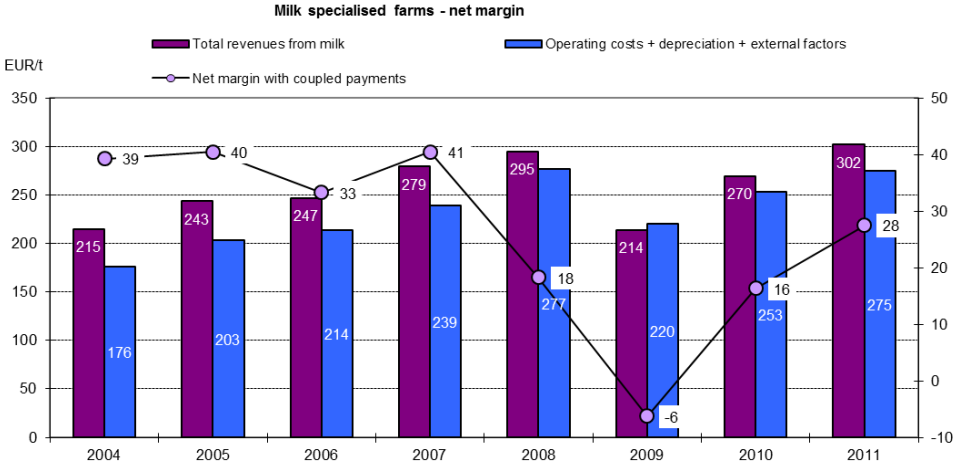
Figure 8: Opportunity cost for own capital and real interest rate

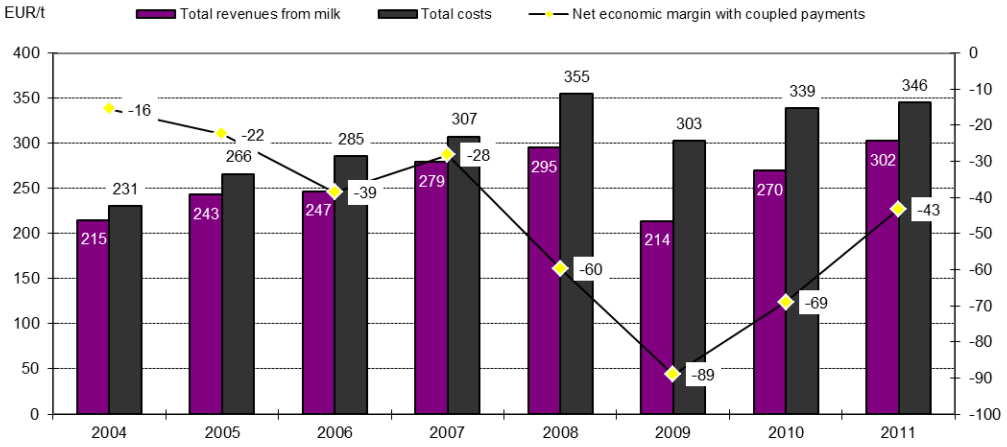


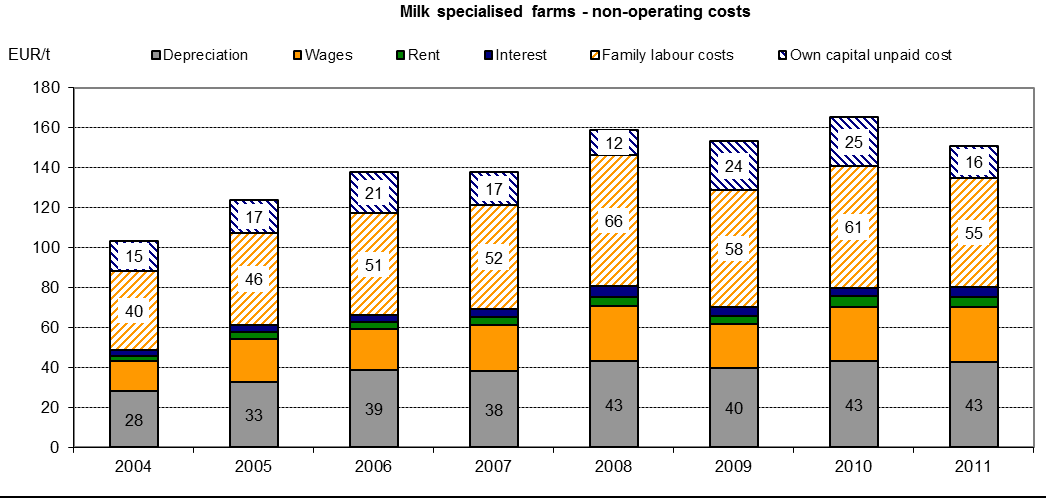
Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

Figure 9: Trend in cost of milk production and margins, EU-10









Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

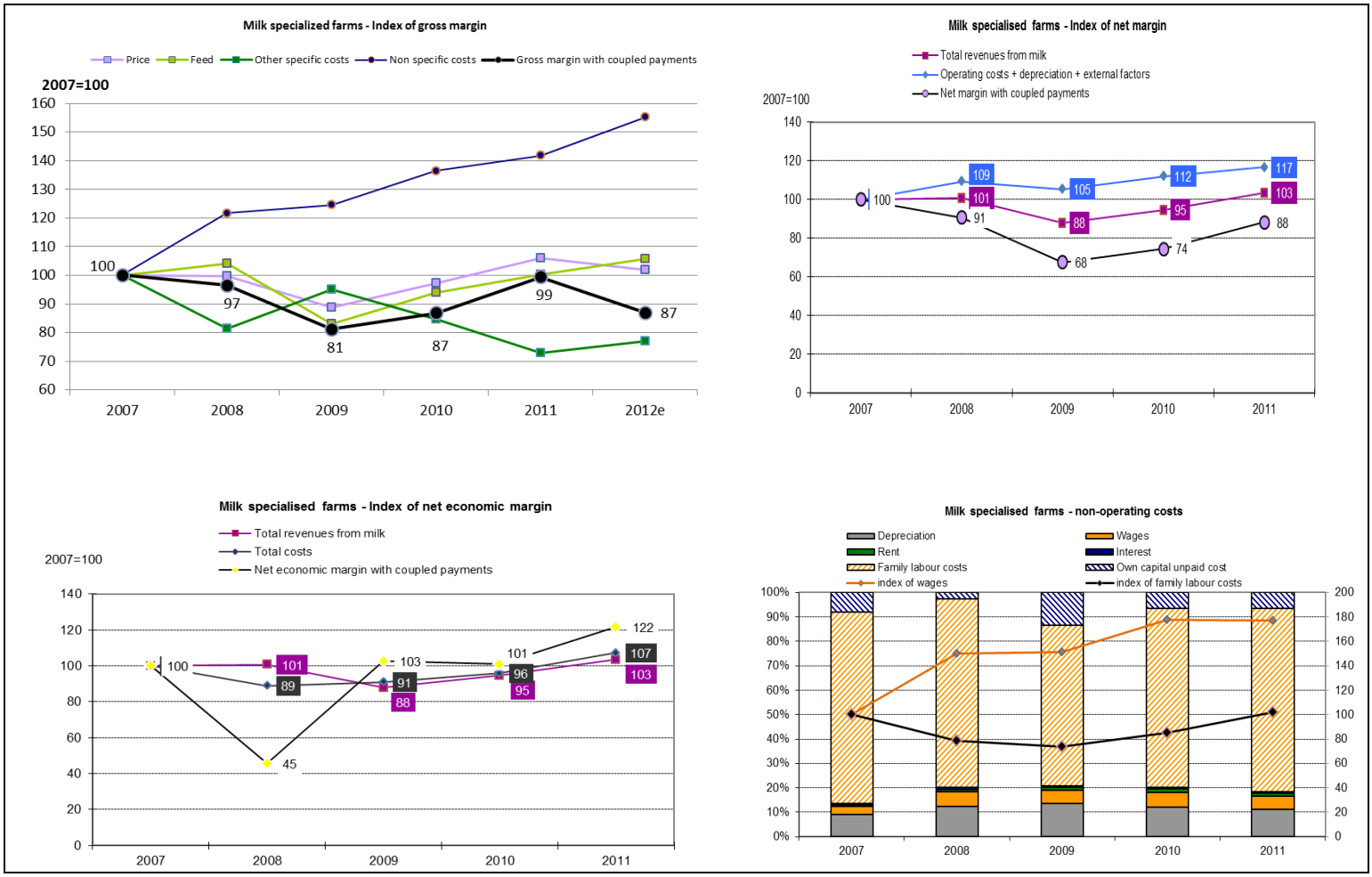
3.1.4. EU-2[19]

The EU-2 still lags behind significantly in terms of labour productivity.

In the EU-2, as in the other EU groups, milk prices reached their five-year peak in 2011 (Figure 10). Operating costs per tonne have also increased since 2009, especially feed costs and non-specific costs although they remain quite low as compared with the other EU groups. The average **gross margin** for 2011 therefore regained its 2007 level. It is however expected to decrease significantly in 2012, following the decrease in milk price and above all the rise in operating costs.

Depreciation has increased by 31% since 2007, but has remained quite low compared with the other EU groups. External factor costs per tonne also increased over the period, especially wages, but were limited. Milk revenues increased proportionally more, producing a higher **net margin** in 2011. The **net economic margin** also improved**.** It was however restricted by the importance of family labour costs: due to the very small average size of the herd, family labour costs remain extremely high (75% of the non-operating costs). They rose quite considerably in 2011: the increase in imputed wage is not being offset by the increase in apparent labour productivity.

Figure 10: Trend in cost of milk production and margins, EU-2 (indices 2007=100)



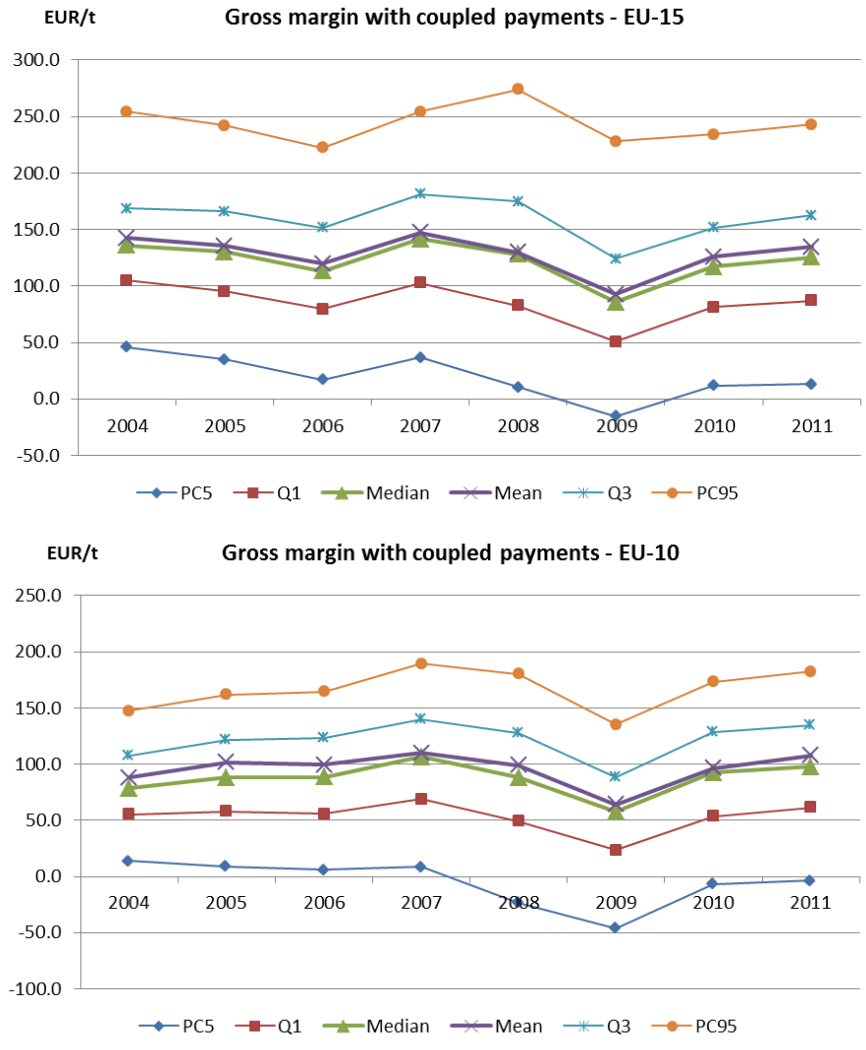
Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

19 Due to difficulties in understanding the prices reported to the EU, only trends are displayed and commented in this section.

3.2. Distribution of gross margin

The above results are averages. To provide a better insight, the figure below shows the trend in the distribution of gross margin with coupled payments in the EU-15 and EU-10. In both EU groups, the average (mean) and the median are quite close, the average being about 10 EUR/t above the median in 2011. The inter-quartile range (Q3 – Q1) for 2011 is also comparable (around 75 EUR/t) in the EU-15 and EU-10. However, the gap between the 5 % top-performing farms (PC95) and the 5 % least-performing ones (PC5) is wider in the EU-15.

Figure 11: Trend in the weighted distribution of gross margin with coupled payments



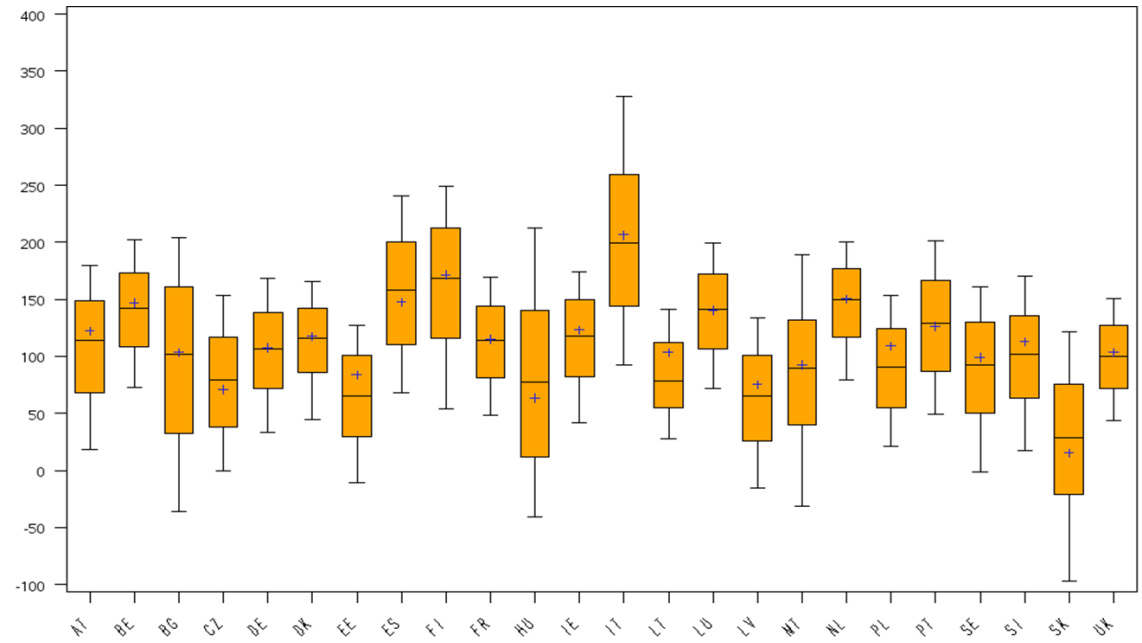
Source: EU FADN — DG AGRI

3.3. National level

This section focuses on the performances of the individual Member States between 2004 and 2011, based on trends in costs and margins in the Member States provided in Annex II. Indeed, as seen in the previous section, the EU averages conceal big differences between farms. Some of them are country-specific, while others occur within the individual Member States (see figure below). With the exception of Italy, differences within Member States are

more marked in the EU-10 and EU-2 countries. It is worth noting that in Italy and Lithuania, which both exhibit the highest average gross margins of their respective EU group (250 EUR/t and 130 EUR/t respectively), the median gross margin is much lower (200 EUR/t, and 78 EUR/t respectively), meaning that well over half the farms do not reach the average gross margin.

Figure 12: Weighted boxplot of gross margin with coupled payments per Member State — 2011



Source: EU FADN — DG AGRI. Extreme values are not displayed. The whiskers represent the percentiles 10 and 90. The mean is a global ratio.

3.3.1. EU-15 Member States

In 2009 **Ireland** was the EU-15 Member State most affected by the crisis. By 2011, it had also experienced the most spectacular recovery: expressed in index 2004=100, its average gross margin with operating costs was 41 in 2009 and 103 in 2011. As in 2009, the milk price was the main driver of this increase in gross margin, as Ireland had the lowest average operating costs in the EU-15 and these increased only very moderately over this period. Denmark, the Netherlands and Sweden also performed quite well — going from 50, 57 and 47 respectively in 2009 to 102, 108 and 90 in 2011 in index 2004 = 100, mostly thanks to the increase in milk prices and also to relatively stable operating costs in Denmark. By contrast, in **Spain, Portugal and Finland** gross margins have decreased since 2009. The milk price has not risen significantly in any of these three countries since 2009, while the increase in feed costs has been significant in the first two — where they represent around 65% of the operating costs — as has been the case for non-specific costs in Finland. However, thanks to considerable coupled national aid (around 80 EUR/t), Finland remains in the top-three of the EU-15 with regards to gross margins with coupled payments. The margins for Italy, with its high value added products generating high prices and its limited costs, and for the Netherlands — the other two countries in the top-three — were 250 EUR/t and 167 EUR/t respectively. **Germany**, the major EU producer, had the lowest average gross margin with coupled payments (107 EUR/t on average). It is worth noting, however, that the German data correspond to the campaign year 2011/2012 whereas the data for the other Member States is for the 2011 calendar year (January to December). Therefore, the effects of the slowdown in

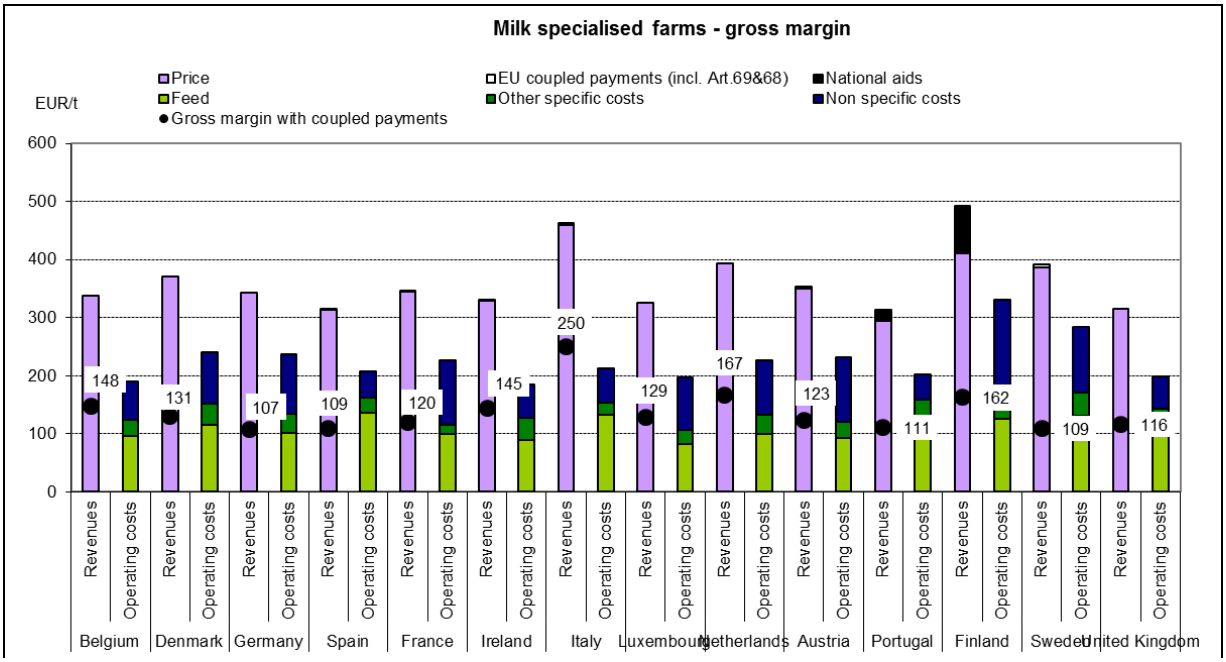
milk prices and increase in some cost items in the first half of 2012 may already have been incorporated in the German results for the 2011 accounting year.

The average **net margin** has also recovered in most EU-15 Member States since 2009. However, it remained negative in Denmark (-30 EUR/t) due to very high costs for external factors (financial charges and wages — family labour force represents only 50 % of the total labour force in Denmark). Luxembourg, which exhibits high depreciation, also had a negative average net margin with coupled payments, as did Sweden, where the costs of external factors, especially wages, are relatively high. At the other end of the spectrum, Italy, Ireland and Spain achieved the highest net margins (see Figure 13). Depreciation and interest costs are extremely low in Spain.

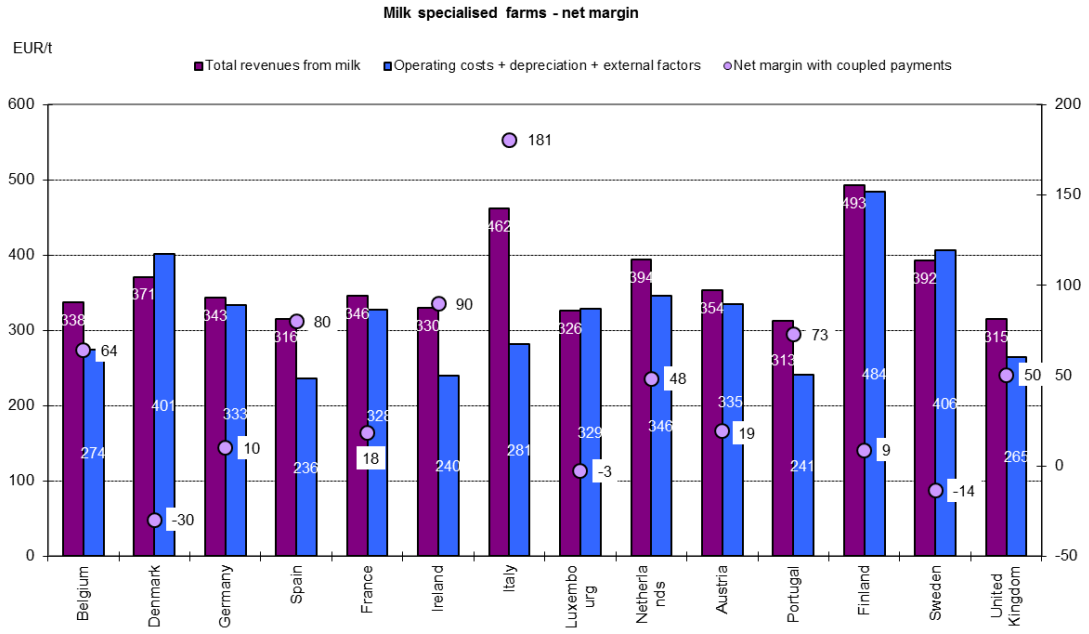
The improvement in the gross margin as well as a decrease in the real interest rate (i.e. a decrease in the imputed costs for own capital[20]) resulted in an improvement in the average **net economic margin.** When considered with coupled payments, it was positive in four Member States in 2011: Italy, Spain and Portugal but also the United Kingdom. By contrast, high family labour costs resulted in high negative average net economic margins in Austria (low quantity of milk per FWU), Finland and Sweden (high wages).

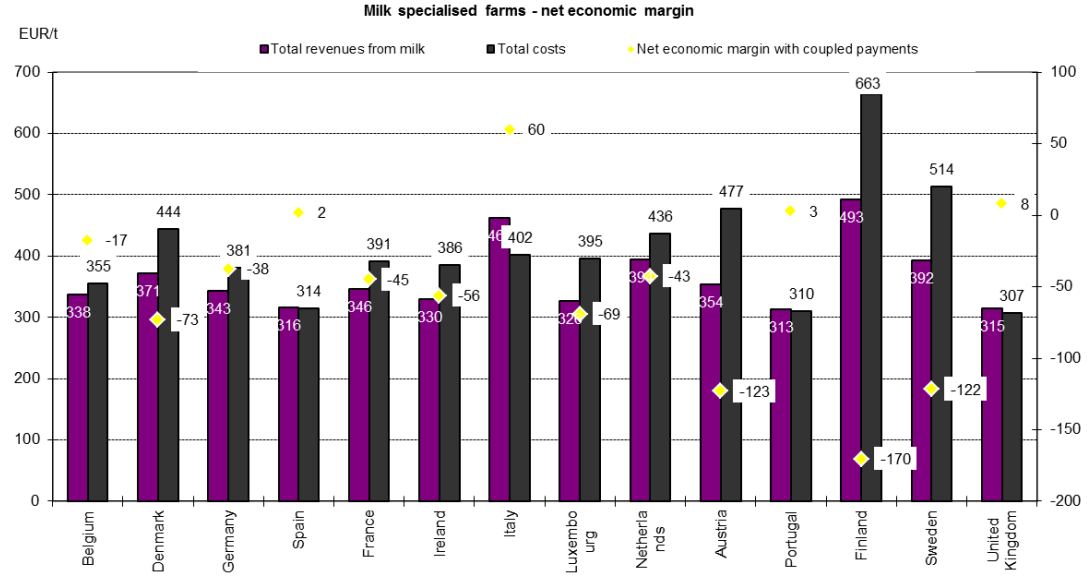
The expected increase in costs (mainly feed) together with lower — but still high — milk prices in 2012 are likely to result in a deterioration in the average gross margin in most EU-15 Member States, with the exception of Finland and the United Kingdom (where there was a significant increase in milk prices).

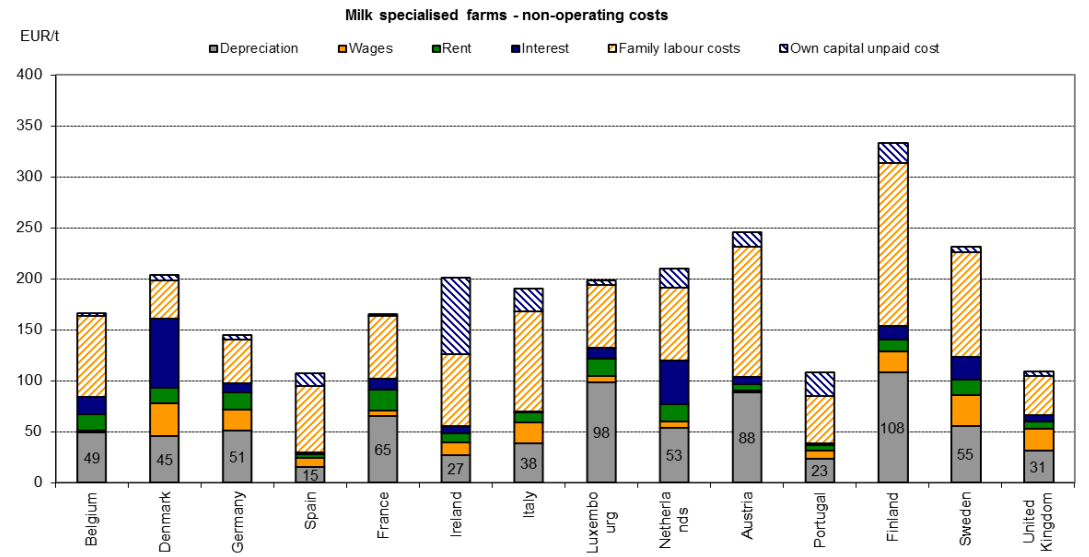
Figure 13: Cost of milk production and margins in the EU-15 Member States, 2011



[20] The opportunity cost for own capital corresponds to the interest a farmer would get from putting the money in the bank instead of investing in agriculture.







Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

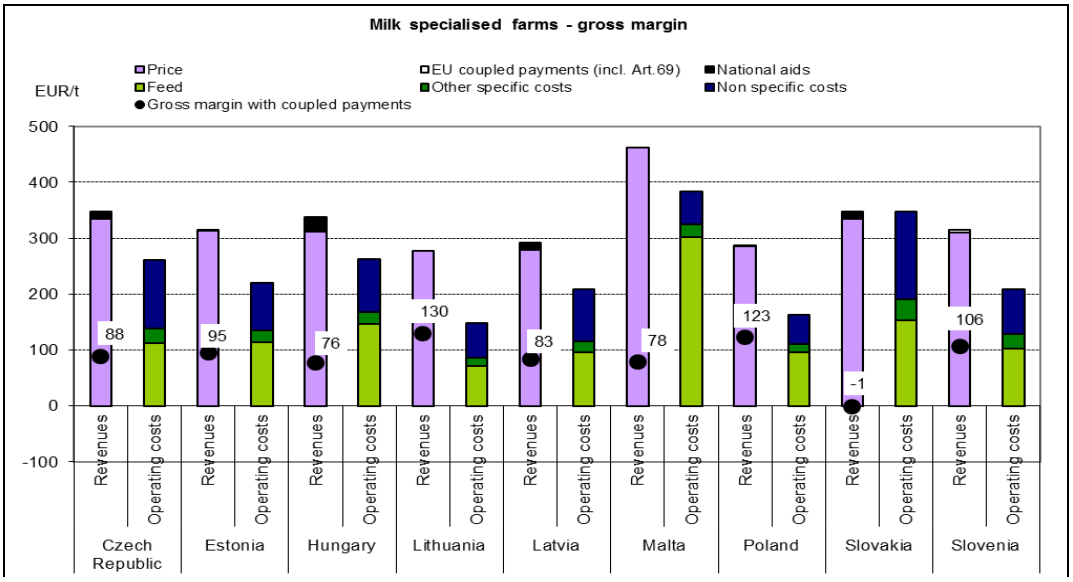
3.3.2. EU-10 Member States

The 2011 situation in the EU-10 Member States is varied. In Malta, where there was virtually no crisis in 2009, the average **gross margin** with coupled payments fell by 32 EUR/t in 2010 due to a decrease in the milk price on the one hand and in national coupled payments on the other hand. It only partially recovered in 2011 (reaching 77 EUR/t) because of the increase in feed price. In all the other EU-10 Member States, the situation improved. In Lithuania and Latvia, a steep increase in the milk price led to a tremendous recovery; expressed in index 2004=100, the average gross margins with coupled payments were 159 and 114 respectively in 2011 against 92 and 69 in 2009, the highest gross margin per tonne since 2004 in Lithuania. Lithuania also exhibited the highest average gross margin of the EU-10 (130 EUR/t) followed by Poland; both countries had very low operating costs (147 EUR/t and 164 EUR/t respectively). By contrast, Slovakia was the only EU Member State with a negative gross margin in 2011 (-1 EUR/t with coupled payments). [21]

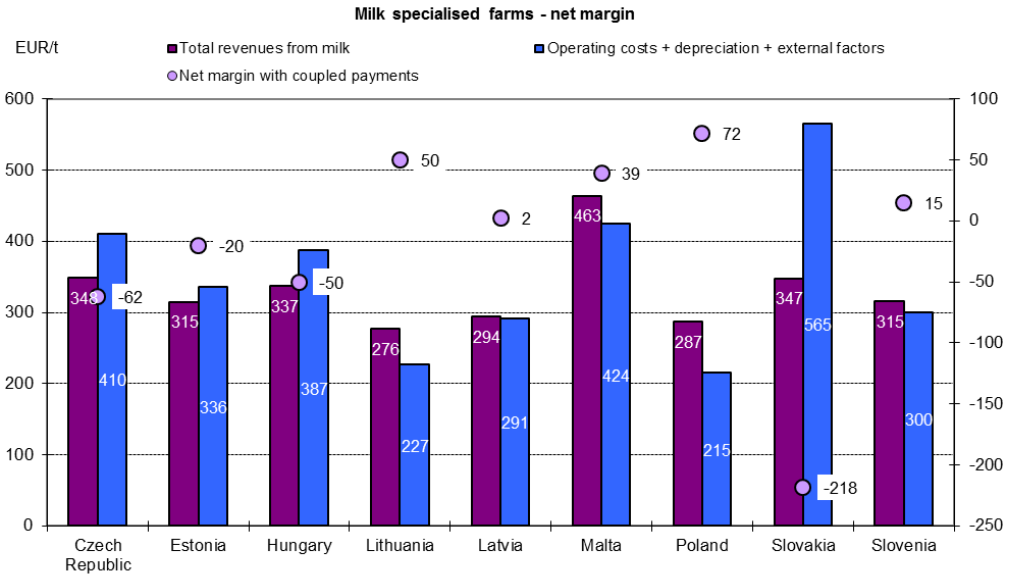
In line with the trend in gross margin, **net margins** improved in all EU-10 countries in 2011. In 2011 net margins with coupled payments were positive in half of the EU-10 countries: Lithuania, Latvia, Malta, Poland and Slovenia. In line with the structures, wages constitute a very high cost in the Czech Republic, Estonia, Hungary and Slovakia. Depreciation is also quite high in the very large farms of Slovakia (77 EUR/t) and the very small farms of Slovenia (82 EUR/t). This high level in Slovenia may be surprising, but it is much the same as that of neighbouring mountainous Austria.

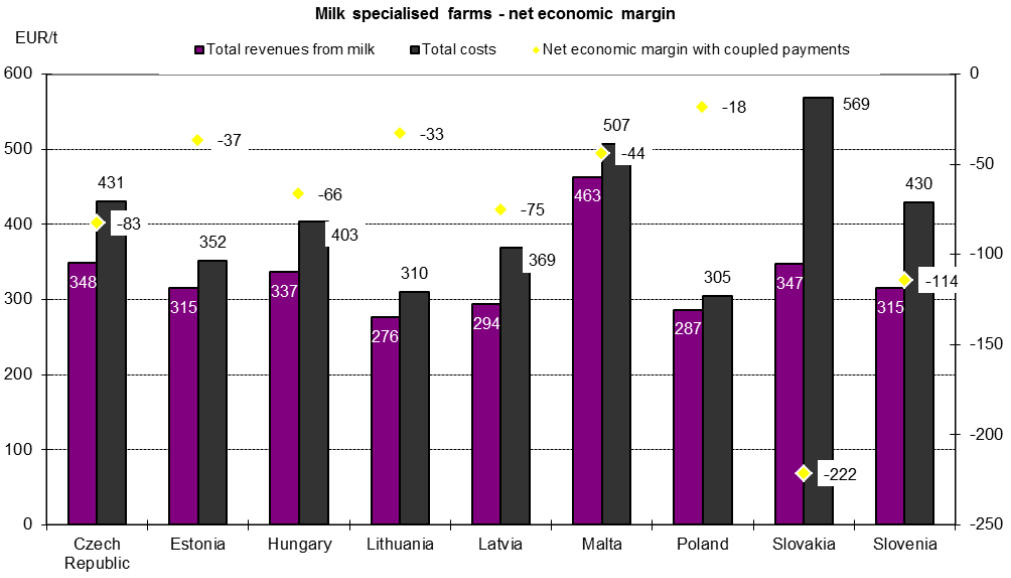
Opportunity costs for family factors are high in Lithuania, Latvia, Malta, Poland and Slovenia, where family farms predominate. In 2011, the average **net economic margin** was negative in all EU-10 Member States, especially in Slovakia and Slovenia.

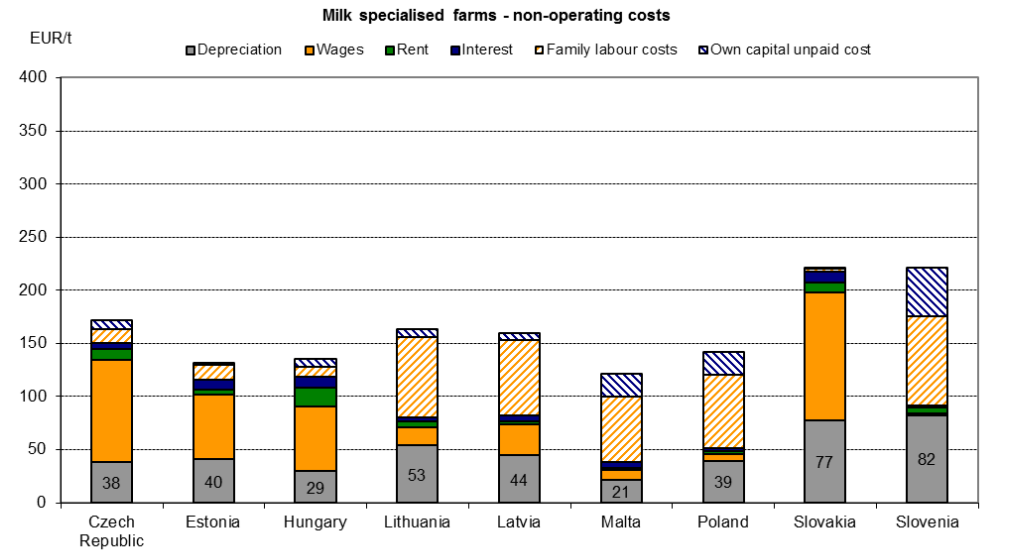
Figure 14: Cost of milk production and margins in the EU-10 Member States, 2011



[21] Slovakian (and, to a lesser extent, Czech) milk specialised farms are few and very big (on average 217 dairy cows and 788 ha of fodder area); they rely heavily on paid labour and very little on unpaid labour (they are cooperatives or companies), and may produce a significant amount of other products (they are not very specialised). Therefore it is difficult to allocate non-specific costs properly and the Slovakian estimates should be interpreted with caution.







Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

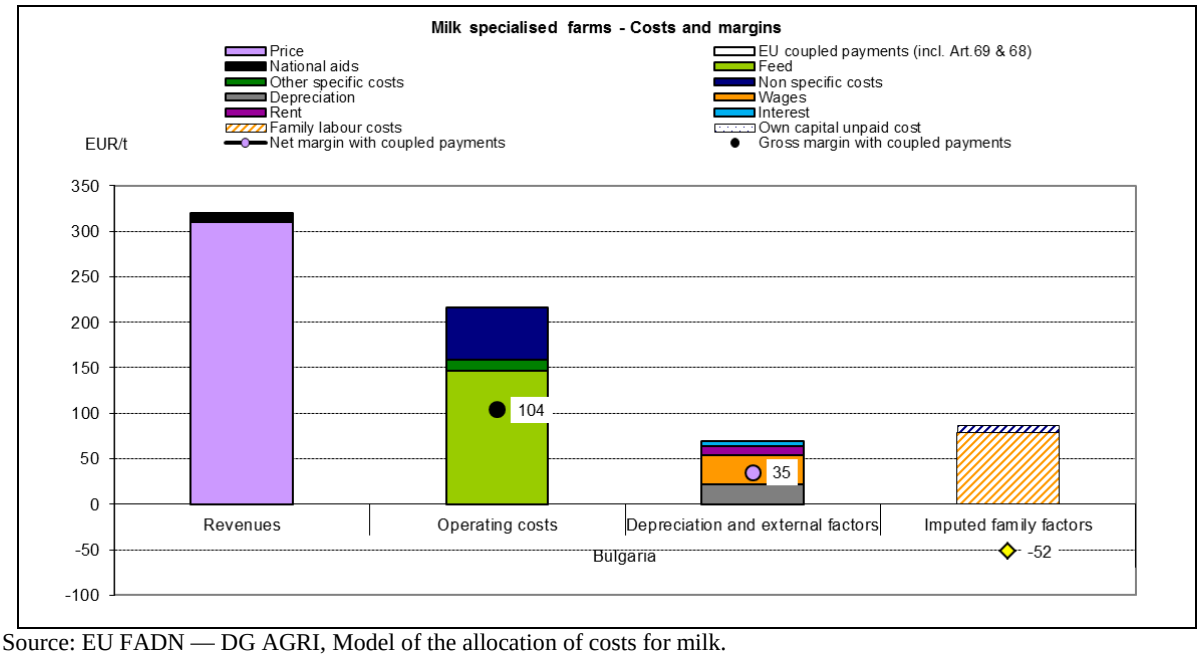
3.3.3. EU-2 Member States

As in almost every other EU Member State, 2010 and 2011 have been synonymous of a recovery in gross margin both in Bulgaria and Romania. In Bulgaria, milk specialised farms receive a fairly high price for milk (311 EUR/t), supplemented by coupled national aid (10 EUR/t), which brings their milk revenues well above the EU-10 average. However, average operating costs are 217 EUR/t. Operating costs in Romania are much lower, possibly even the lowest in the EU-27, with feed, in particular, being cheaper in Romania. This is why Romanian milk specialised farms achieve a very good **gross margin** and are less sensitive to increases in production costs. This is not the case on Bulgarian specialised farms. Their gross margin is 102 EUR/t and the percentage of specialised farms with a positive gross margin is quite low (84%).

The gap between Bulgarian and Romanian specialised farms widens when it comes to **net margins**. In Bulgaria, family labour force represents only 67% of the total labour force against 96% in Romania, and 82% of the total utilised agricultural area (UAA) is rented, resulting in higher external factors costs. Net margins are positive in both countries.

The opportunity costs for family labour and own capital are much higher in Romania than in Bulgaria (79 EUR/t). This difference is exacerbated by the difference in labour productivity: an annual work unit (AWU) produces 10t of milk annually in Romania, against 18 t in Bulgaria. This is by far the lowest labour productivity in the EU-27, and may be explained by the presence of many very small farms in the sample. This low labour productivity is only partly offset by the comparatively low imputed wages in these two countries. **Net economic margin** is very low in Romania and not much better in Bulgaria (-52 EUR/t).

Figure 15: Cost of milk production and margins in Bulgaria, 2011

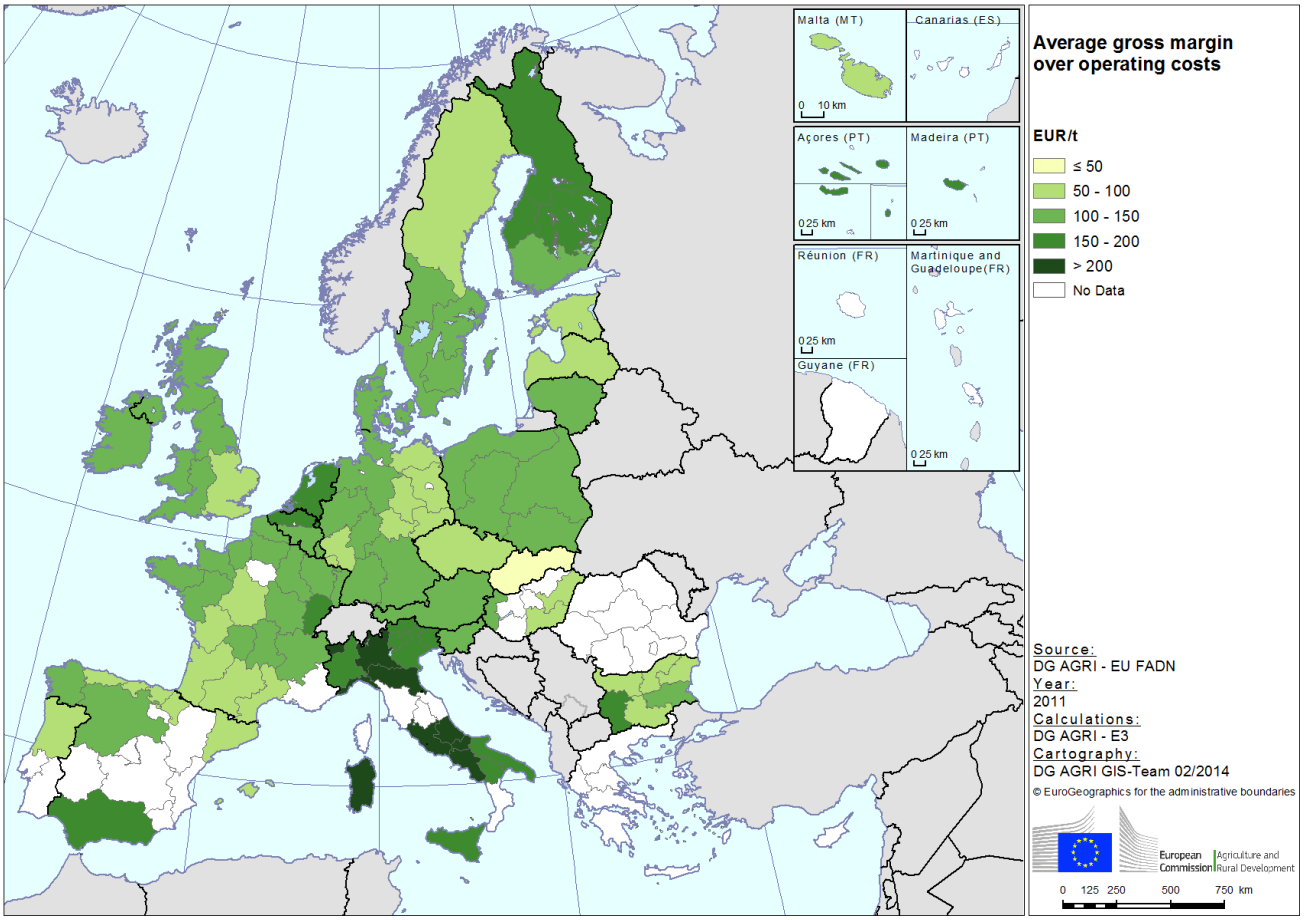


Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

3.4. Regional level

As previously highlighted, there are also differences within Member States. The map below shows the average gross margin per tonne with coupled payments by region. The best performing regions are those with high average milk prices (e.g. in Italy), coupled support (e.g. in Finland) or low costs (e.g. in Spain). More detailed results are available in annex II.

Map 1: Average gross margin per tonne with coupled payments by region, 2011



4. INCOME ANALYSIS

As shown above, on average, the margins of the dairy activity on dairy specialised farms have recovered since 2009. This chapter focuses on trends in the income of dairy specialised farms at the level of the whole farm, thus also incorporating the results of other activities that may be carried out on the farm. The following **income indicators** are studied:

– Farm Net Value Added (FNVA) equals total output (total production value), plus direct payments minus intermediate consumption and depreciation. It represents the amount available to remunerate all fixed production factors (land, labour and capital), either owned by the farm or external.

– Farm Net Income (FNI) equals FNVA minus external factors, plus balance on subsidies and taxes on investments. It is the amount available to remunerate family factors (labour, land and capital).

– Remuneration of Family Labour (RFL) is calculated only for family farms.[22] It equals FNI minus the opportunity cost for own capital. It represents the amount available to remunerate family labour.

These indicators are expressed **per Annual Work Unit** (AWU), for FNVA and FNI, or per Family Work Unit (FWU) for RFL, to take account of the differences in the labour force remunerated on the holding. All income indicators are calculated before deduction of income taxes and expressed in current euros unless otherwise stated. Detailed tables are presented in Annex II.

Box 3: What are the components of income on specialised milk farms?

Holdings have two sources of agricultural[23] income: market and subsidies.

Income from the market:

- dairy enterprise: the margins associated with the production of milk are presented in the first part of this report. However, since public support is no longer incorporated in the milk price, it is not always easy to predict the income of specialised milk farms by looking solely at the margins.

- coproducts of the dairy activity: in order to ensure comparability, the results presented in the first part of this report relate to the production of milk *stricto sensu*. Because they could blur the picture and make it difficult to interpret the results,[24] the costs and revenues of products directly linked to milk production (calves and cull dairy cows) are not taken into consideration when calculating the margins. They are however part of the income calculation. As an indication, cattle sales (be they dairy cattle or other cattle, including fattened animals) account for 13.2% of the total output[25] of specialised milk farms at EU-27 level, with differences between the Member States (from 7.6% in Slovakia to 22.8% in Ireland).

22 For the purpose of this report, 'family farms' are defined as farms employing an unpaid labour force, which usually corresponds to a family labour force.

23 Farmers may have other sources of external income.

24 Besides, they are not always well reported in the farm return.

25 SE131, i.e. total output without compensating for differences in forage valuation.

- other enterprises: the sample of specialised milk farms has been selected in such a way that the dairy pole represents at least 40 % of the potential of production of the holding. Although farms are quite specialised, especially in the EU-15, they may run other enterprises which contribute to the total output of the farm and generate costs. These not only include crop production, but also forestry and tourism (e.g. in Austria).

Subsidies, including decoupled payments, also contribute significantly to the income of specialised dairy farms (see text).

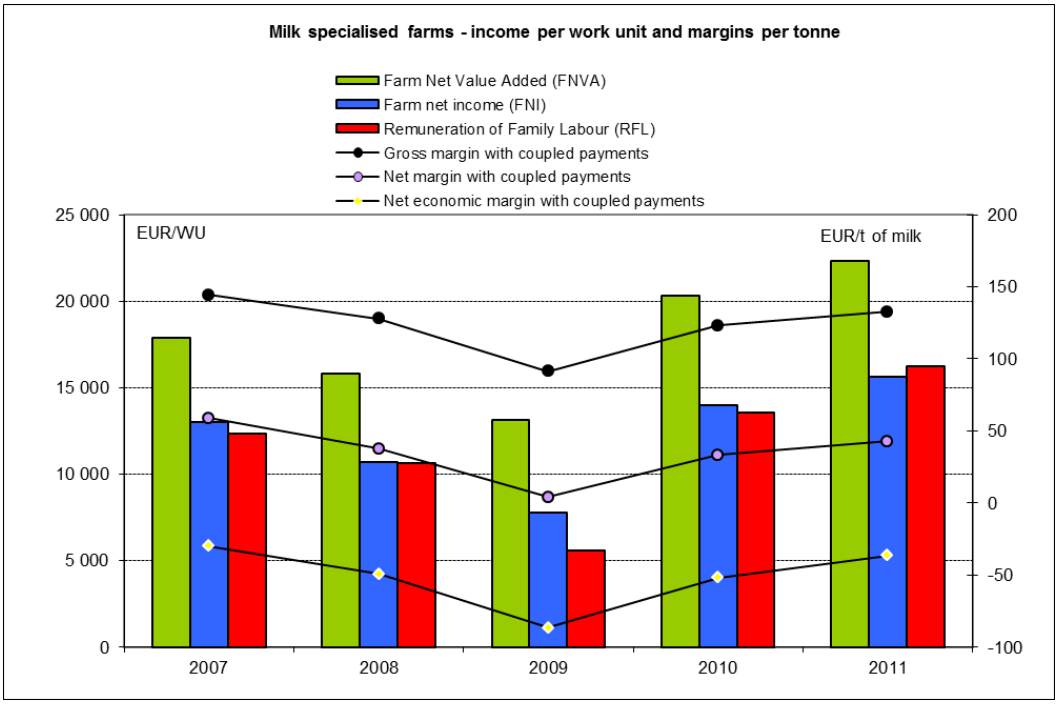
4.1. Breakdown by EU groups

4.1.1. EU-27

At EU-27 level, 2010 and 2011 were two consecutive very good years in terms of income.

In line with the positive trend in the margin indicators (Figure 16), not only have the income indicators for milk specialised farms in the EU-27 recovered since 2009, they have also reached their peak, even exceeding 2007 performances both in 2010 and 2011. The increase in the milk price as well as in average milk production (+33 % since 2007) has resulted in a rise in the milk output and subsequently in total output. This increase (+44 %), together with the increase in subsidies (mostly the phasing-in of direct payments), has been significant enough to outweigh the rise in intermediate consumption (+54 %). As a result, farm net value added and farm net income have increased by 26 % and 21 % respectively since 2007 to 22 415 EUR/AWU and 15 629 EUR/AWU respectively, while the remuneration of family labour has exceeded 1 000 EUR per month since 2010 (16 269 EUR/FWU on average in 2011).

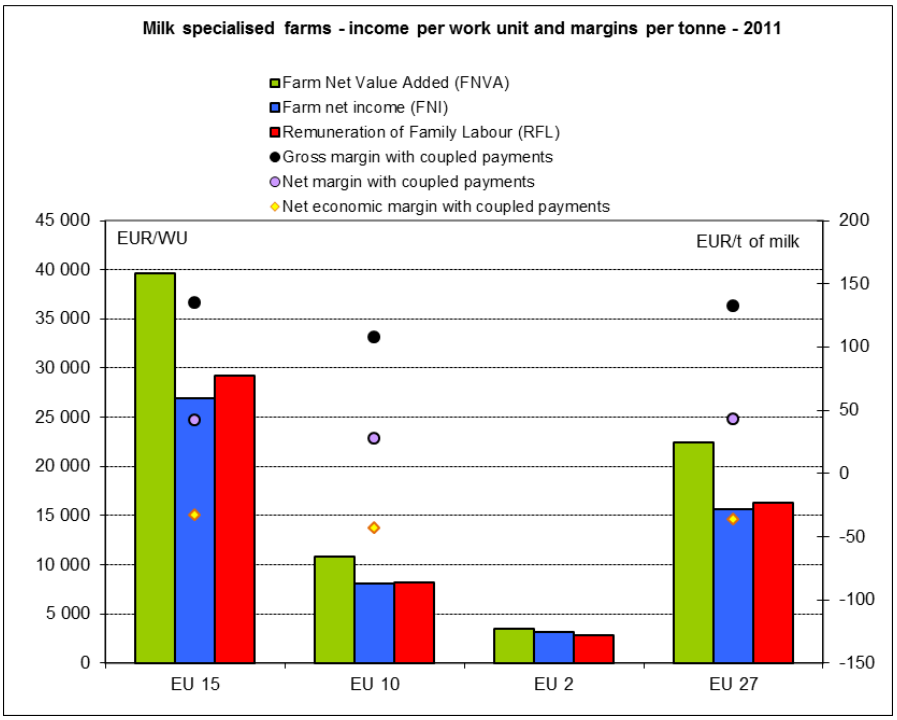
Figure 16: Trends in the income of milk specialised farms, EU-27



Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

However these EU-27 results conceal substantial differences in income between the EU groups (Figure 17). The FNVA/AWU is still almost four times higher in the EU-15 than in the EU-10, and about twelve times higher than in the EU-2.

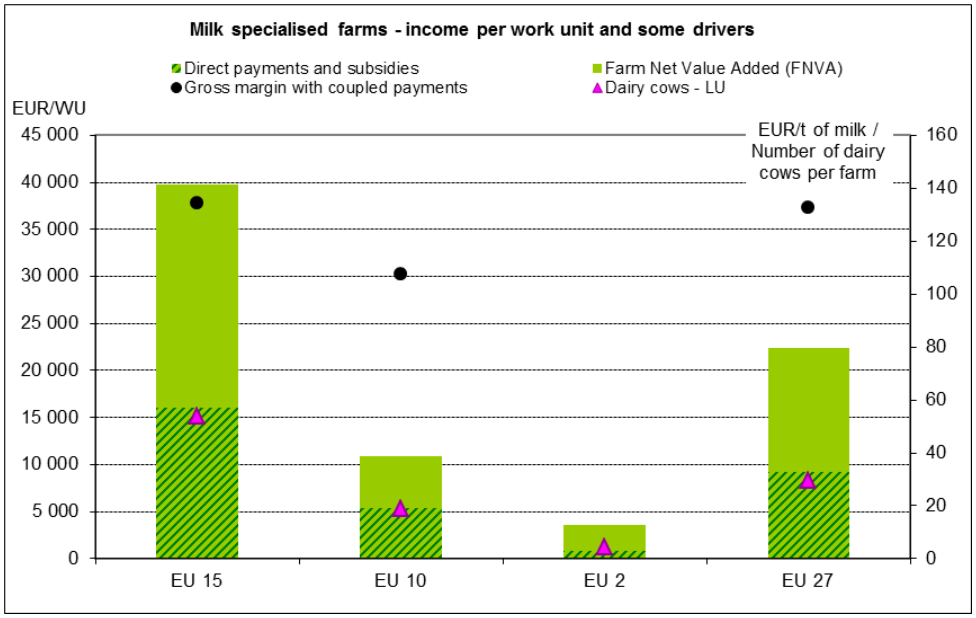
Figure 17: Income of milk specialised farms by EU group, 2011



Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

As illustrated in Figure 18, once taken into account the huge gaps in the macro variables (income level, wage rate, other costs and prices), the differences in income between the EU groups have more to do with differences in farm size than in margin per tonne. Since the decoupling of direct payments, these are no longer included in the gross margin but are part of income. The increase in milk revenues (both milk price and milk production) means that the share of direct payments and subsidies (first and second pillars, EU and national) in the FNVA/AWU has decreased. In 2011 it was, on average, 40 % in the EU-15, 49 % in the EU-10 and 23 % in the EU-2, where direct support is still being phased in.

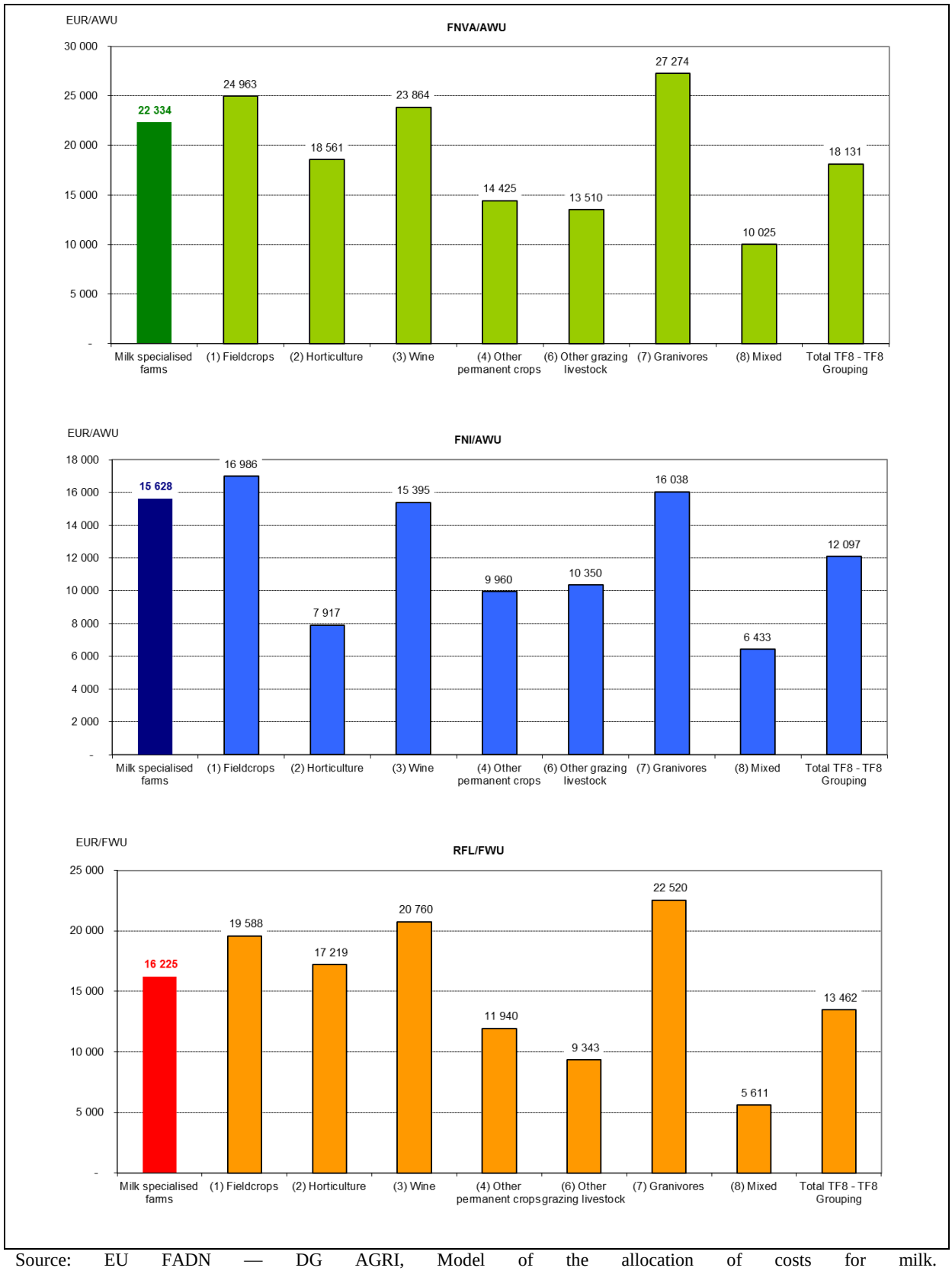
Figure 18: FNVA/AWU and some variables by EU group, 2011



Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

In 2011 as in the previous years, milk specialised farms showed results above the EU-27 total average across all types of farming. Since 2009 however, they have no longer been in the top three of types of farming for income (Figure 17). In 2011, they ranked fourth after *Granivores*, *Fieldcrops* and *Wine* farms for FNVA/AWU. They regained third place for FNI/AWU after *Fieldcrops* and *Granivore.* They ranked fifth after *Granivores*, *Wine*, *Fieldcrops* and *Horticulture* farms for RFL/FWU, although remaining well above the EU-27 average. Therefore, whilst milk specialised farms may not have appeared the most attractive in terms of income in 2011 at EU-27 level, they were in a better situation than some other types of farming.

Figure 19: Comparison of the income of milk farms with other farms, EU-27, 2011



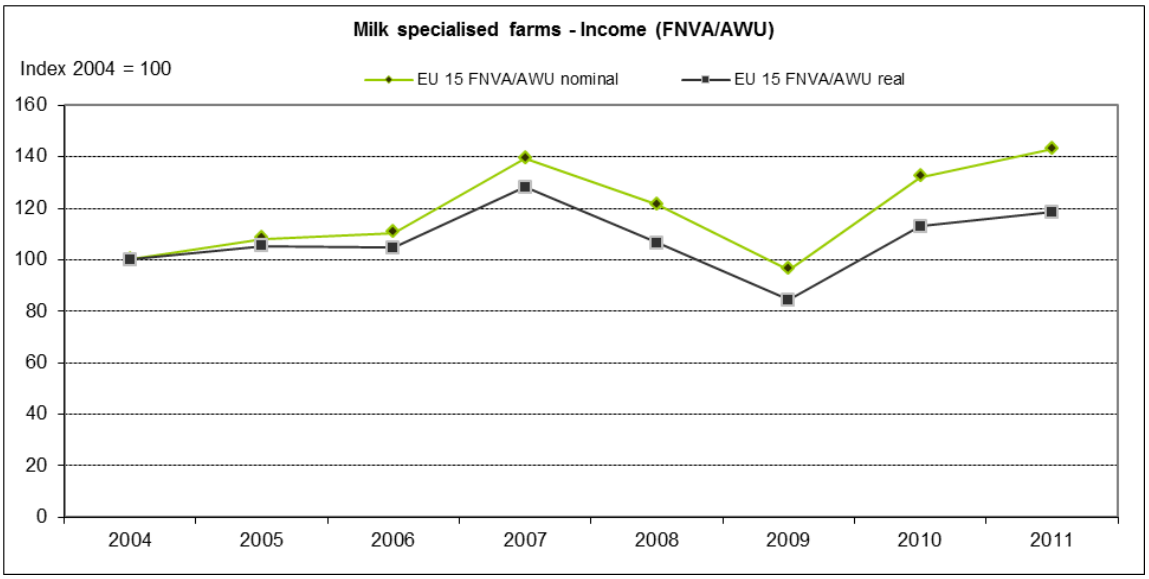
Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

4.1.2. EU-15

The income of the EU-15 milk specialised farms recovered in 2010 and 2011, although it did not reach its 2007 level in real terms.

In the EU-15, the income of milk specialised farms increased significantly between 2004 and 2007 in both nominal and real terms (Figure 20). It then fell steeply in 2008 and 2009 (both in nominal and real terms) in connection with the milk crisis. 2010 and 2011 mark a significant recovery in FNVA/AWU: income in nominal terms was even higher in 2011 than in 2007, although this was not the case in real terms, where it was 10 points below the 2007 peak. As was the case at EU-27 level, the improvement in gross margin was not the only factor driving this recovery: the average milk production per farm also increased (+28 % between '2005' and '2010').

Figure 20: Income trends in nominal and real terms, EU-15



Source: EU FADN — DG AGRI, ESTAT (HICP index EUR 2004).

The recovery has been even more spectacular for the two other income indicators. Farm net income has increased by 79 % since 2009, while the remuneration of family labour almost tripled (Figure 21). It is worth noting that the improvement in the FNVA is not the only reason for these good performances. The remuneration of family labour is also influenced by the real interest rate[26] which decreased significantly between 2009 and 2011, leading to a decrease in the imputed remuneration of own capital (-50 %). The percentage of farms with a positive figure for remuneration of family labour reached 91 %. Following the decoupling of direct payments and subsidies, the trend in income has mirrored the trend in margin.

[26] See footnote 13.

Figure 21: Trend in income of milk specialised farms, EU-15

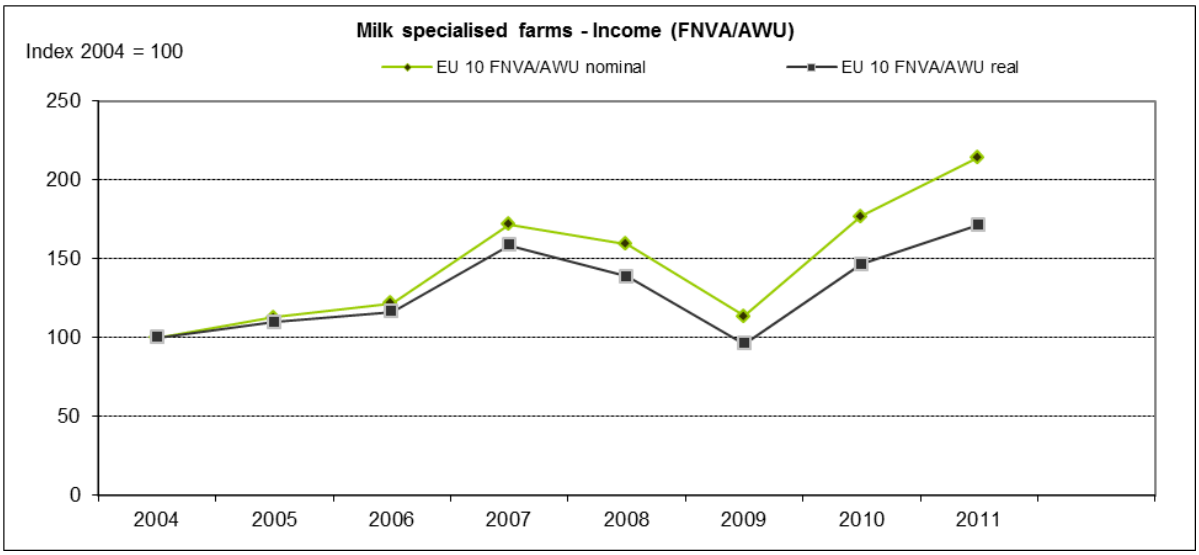
Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

4.1.3. EU-10

Thanks to improvements in labour productivity in the EU-10, the income of milk specialised farms has improved significantly since 2004.

The income of milk specialised farms in the EU-10 also dropped steeply between 2007 and 2009 (Figure 22), falling back to its 2004 level in real terms. However, it has since recovered, more than doubling its 2004 level in nominal terms by 2011.

Figure 22: Income trends in nominal and real terms, EU-10

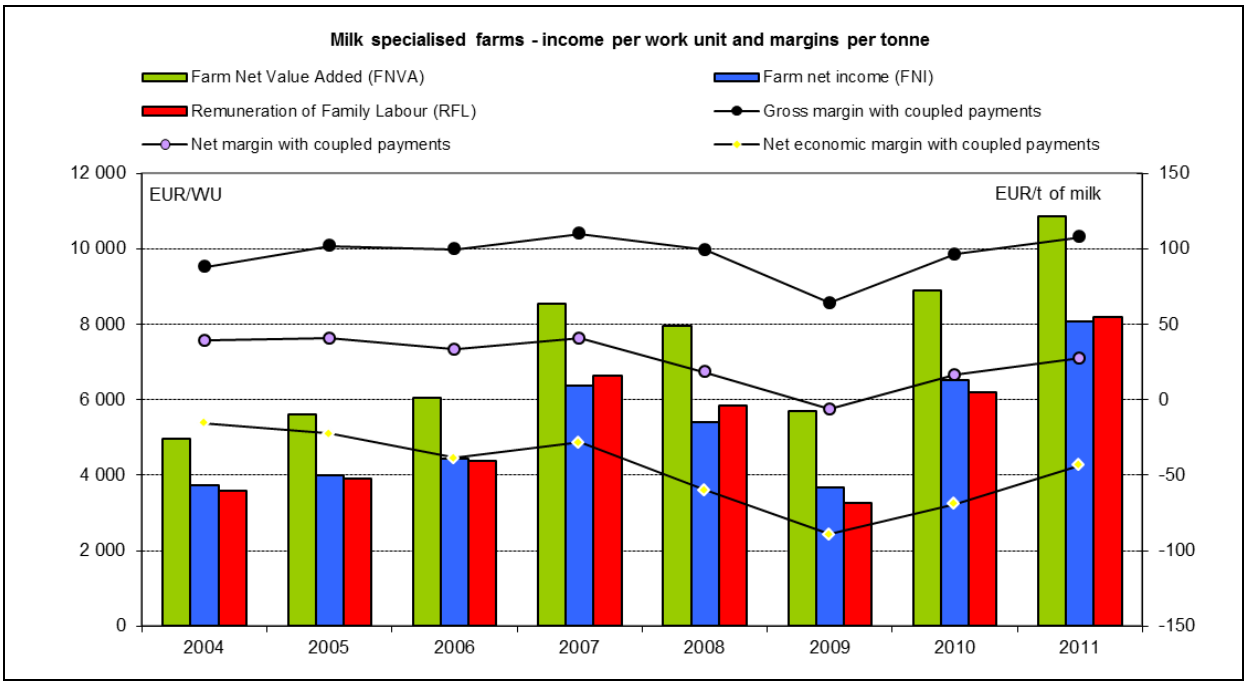


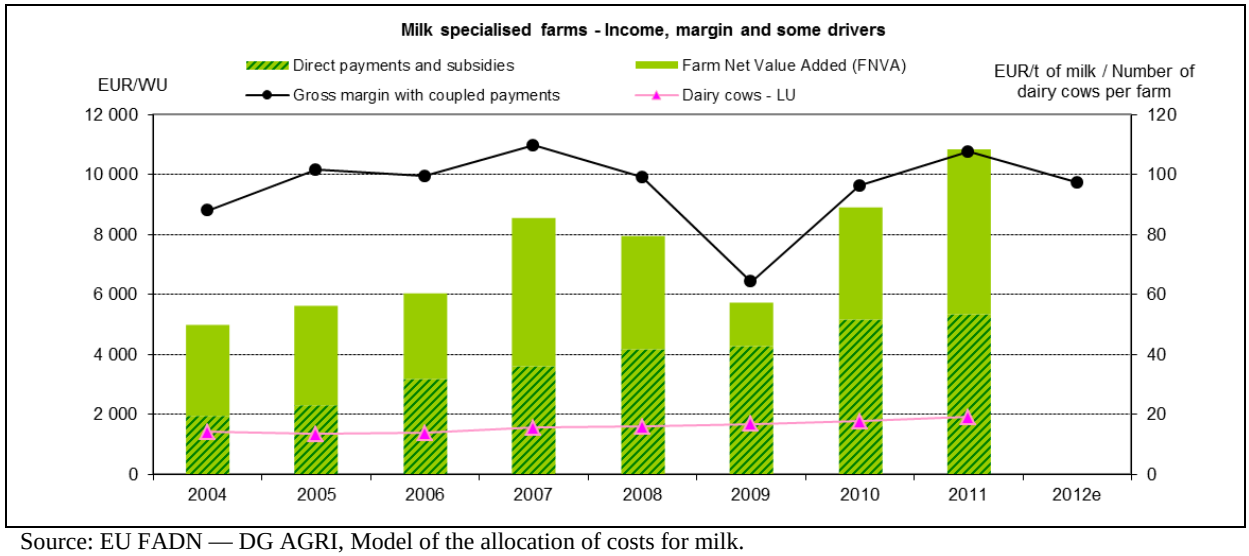
Source: EU FADN — DG AGRI, ESTAT (HICP index EUR 2004).

This positive trend was not only driven by the good margins but also by an improvement in labour productivity. Thanks to an increase in dairy cow yield and in the average number of cows per AWU, the average quantity of milk produced per AWU increased by 41% between 2004 and 2011 (from 34 to 48 t per AWU), which was sufficient to more than compensate for the 83% increase in imputed wage. The gradual phasing-in of direct payments and subsidies since 2004 also contributed to this trend (see Figure 23).

Farm net income and remuneration of family labour also fared much between 2004 and 2011. Although external factor costs and in particular wages rose, so too did the balance of investment subsidies and taxes, suggesting that massive investment, sponsored partly by rural development programmes, took place. After peaking in 2010 due to the high real interest rate, the remuneration of own capital decreased in 2011, contributing to the increase in the remuneration of family labour. In 2011, this latter indicator was positive in 93% of farms.

Figure 23: Trends in the income of milk specialised farms, EU-10





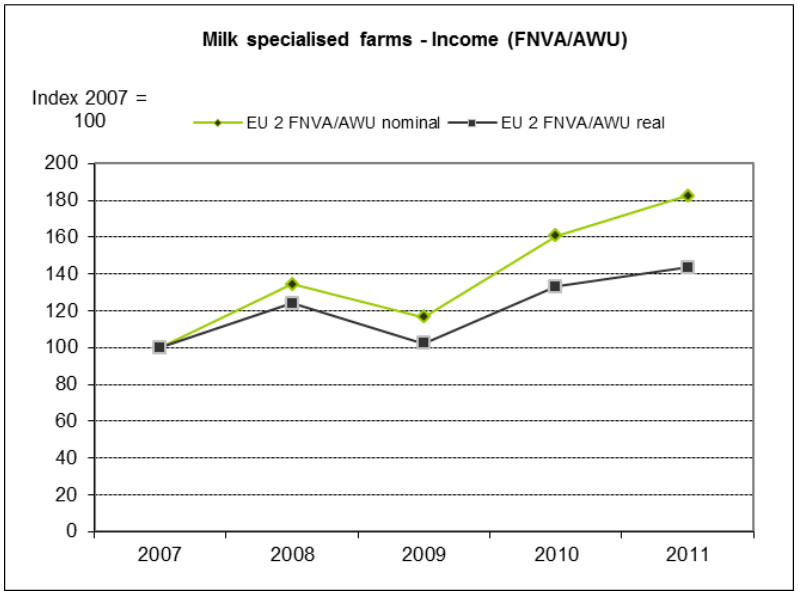
Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

4.1.4. EU-2

Income in the EU-2 is showing an even more positive trend than in the EU-10.

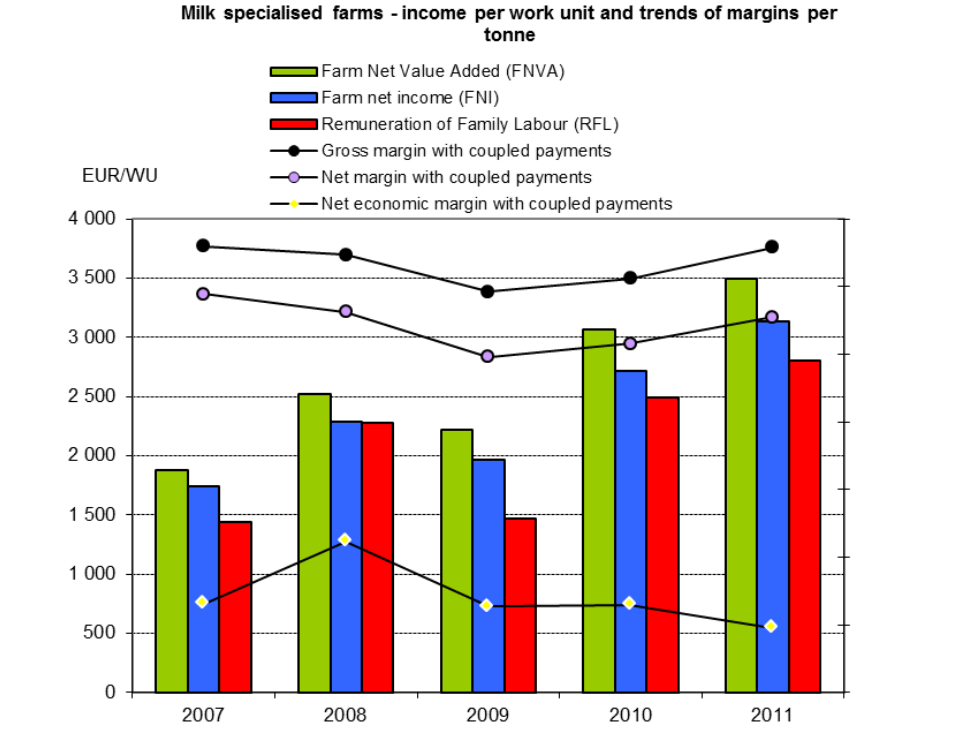
Although the 2009 milk crisis was less acute in the EU-2 than in the other EU groups, it had an impact on the income of specialised dairy farmers. The recovery has since been significant, and in 2011 the average FNVA/AWU showed an 86% increase as compared with its 2007 level in nominal terms and 46% in real terms (see Figure 24). Again, this can be explained by the good performances in terms of margins, by the phasing-in of direct payments and by the increase in labour productivity (see Figure 25). Nevertheless, FNVA per AWU (3491 EUR/AWU on average) remains much lower in the EU-2 than in the other EU groups. Due to the large number of small to very small farms in the Romanian sample, and in view of the weight of this Member State in the EU-2 aggregate, these results should be interpreted with caution.

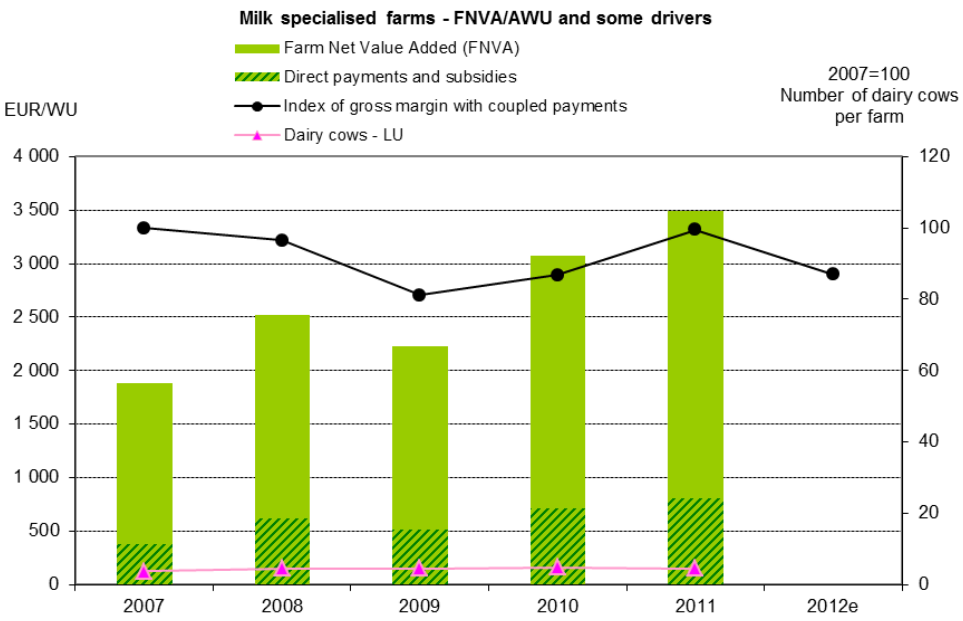
Figure 24: Income trends in nominal and real terms, EU-2



Source: EU FADN — DG AGRI, ESTAT (HICP index EUR 2004).

Figure 25: Trend in the income of milk specialised farms, EU-2





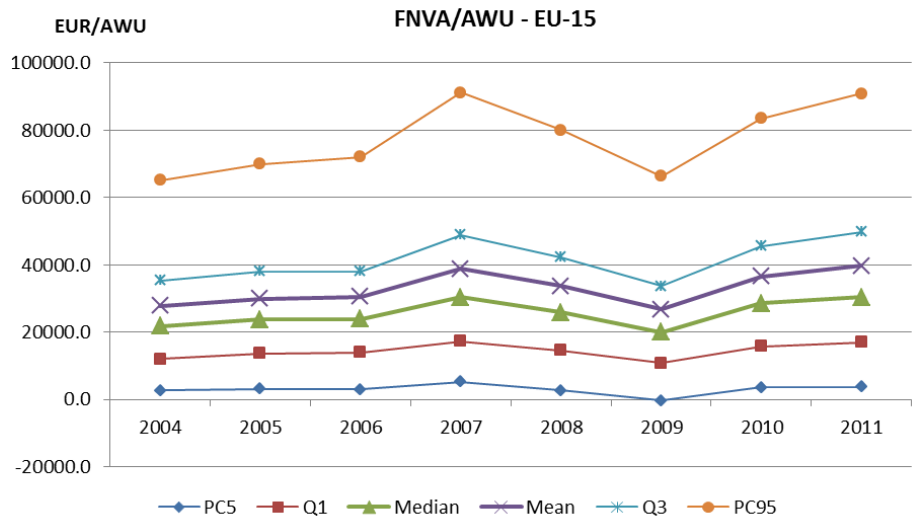
Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

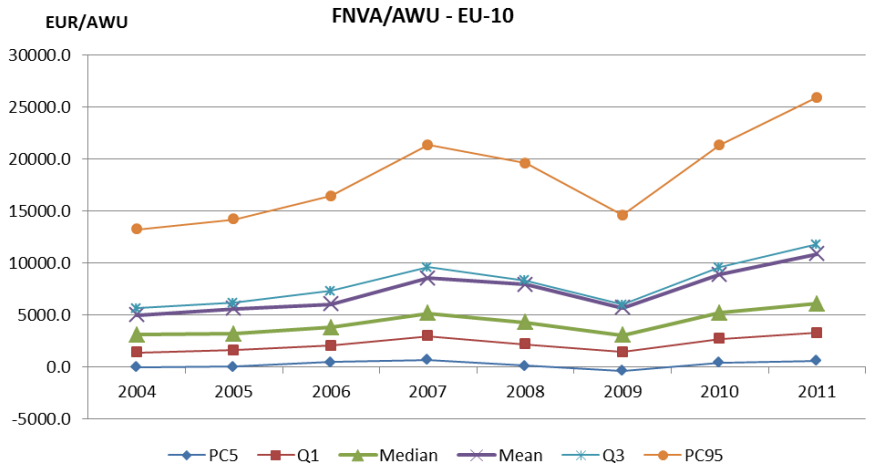
4.2. Distribution of FNVA/AWU

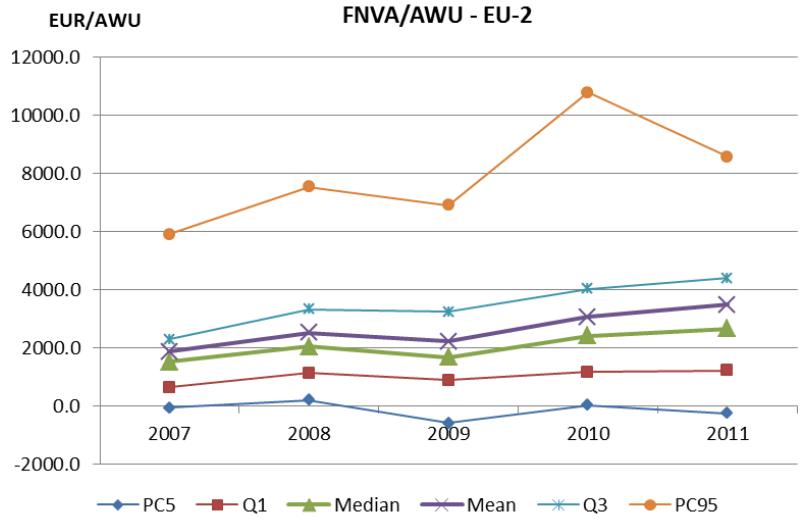
As was the case for margins, the average EU income results conceal big differences. The figure below shows the trend in the distribution of weighted FNVA/AWU in the different EU groups. The results show that the good performers have a marked effect on the average. This is especially the case for the EU-10, where the average FNVA/AWU (10 849 EUR/AWU) is closer to the third quartile than to the median (6 101 EUR/AWU), which is significantly

lower. This means that nearly 75% of specialised milk farms in this EU group have an income lower than the average.

Figure 26: Trend in the weighted distribution of FNVA/AWU





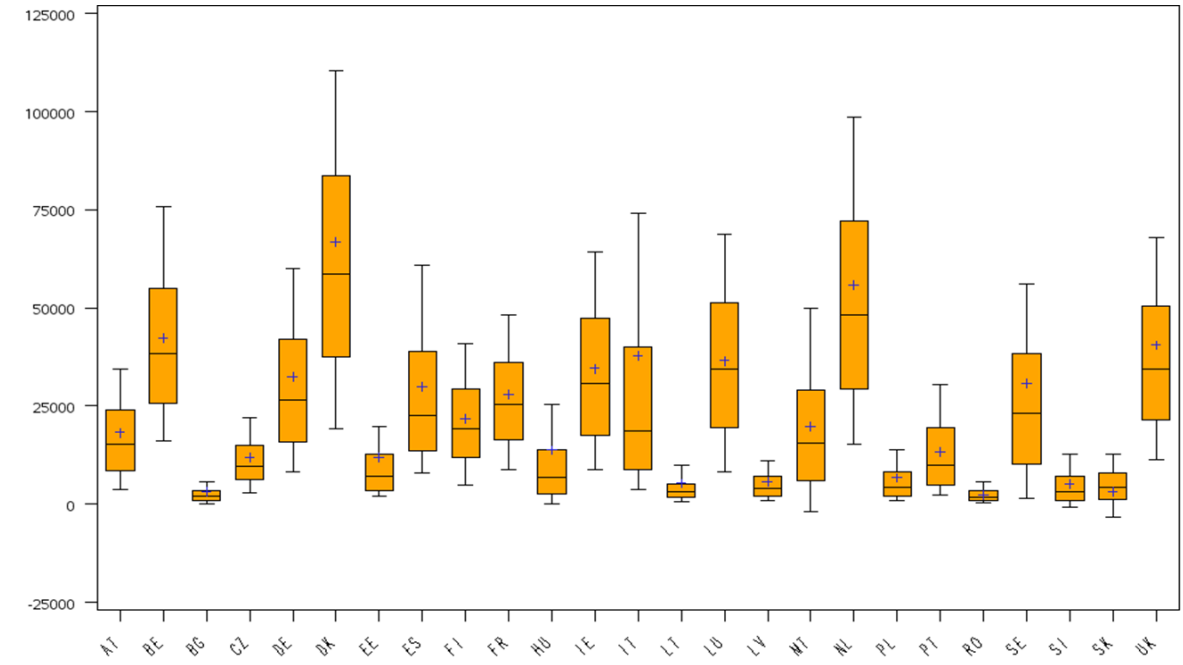


Source: EU FADN — DG AGRI

4.3. National level

Results are not only affected by differences between Member States but also by differences within Member States, as illustrated in Figure 27. In contrast to what can be observed for the distribution of gross margin with coupled payments, the biggest spreads in terms of inter-quartile range for FNVA/AWU are in the EU-15 Member States, in particular in Denmark, the Netherlands (around 45 000 EUR/AWU). The median FNVA/AWU (18 778 EUR) in Italy is significantly lower than the average (49 090 EUR), as was the case for the margin.

Figure 27: Distribution of FNVA/AWU (weighted boxplot) within Member States — 2011



Source: EU FADN — DG AGRI. Extreme values are not displayed. The whiskers represent the percentiles 10 and 90. The mean is a global ratio.

4.3.1. EU-15 Member States

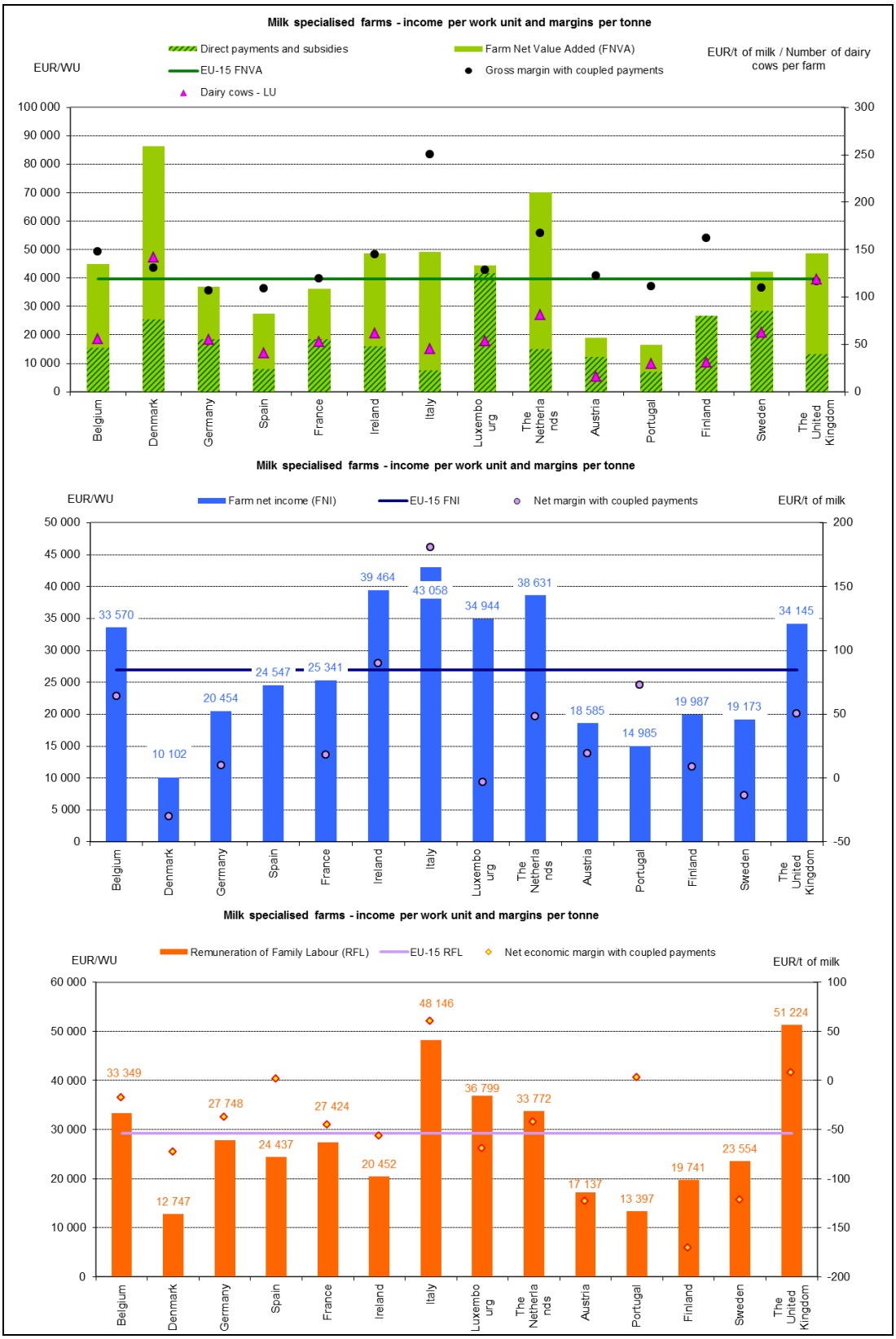
Figure 24 shows the average income indicators of milk specialised farms by Member State in the EU-15 in 2011. **Farm net value added per AWU** ranged from 16 278 EUR in Portugal to 86 183 EUR in Denmark. The good gross margin in Denmark is inflated by the high average size of the herd and the very high average yield per cow, both of which contribute to an average production of 1 193 t per farm. Portugal, at the other end of the spectrum, is not the EU-15 Member State with the lowest average milk production (105 t per farm) — this is Austria where farmers tend to complement their milk income with forestry and tourism — but intermediate consumption in Portugal is high when compared with total output, and the balance of subsidies and taxes is quite low (around 7 000 EUR/AWU) in comparison with the EU-15 average (around 16 000 EUR/AWU), which may be linked to the small size of Portuguese holdings. The nature of the subsidies also differs: whereas decoupled payments account for 70 % of the balance of subsidies and taxes at EU-15 level, they represent only 44 % in Portugal, where subsidies for livestock are equally important. This is also the case in 2011 in Sweden (47 % - livestock subsidies and rural development), Luxembourg (36 % - subsidies for the production of renewable energy), Austria (33 % - rural development payments) and Finland (20 % - livestock subsidies and rural development). In 2011, Finland

was the only EU-15 country where subsidies were necessary to prevent a negative FNVA/AWU.

Luxembourg's dairy farmers also received a significant amount of investment subsidies, on top of substantial subsidies for renewable energies, as compared with their colleagues from other EU-15 Member States, although this was lower in 2011 than in the two previous years. As a result of these payments, Luxembourg ranks fourth as regards **farm net income** with an average of 34 944 EUR/AWU. Whereas Belgium, Italy, Ireland and the United Kingdom had similar performances in terms of FNVA/AWU (between 44 800 and 48 700 EUR/AWU), Italy and Ireland did better in terms of FNI/AWU. Both have low external factors costs, but Ireland has higher rent and interest costs than Italy. Belgium has both high rent and interest costs, while in the United Kingdom, the average amount for wages is among the highest in the EU-15 (37 % of the labour force is paid labour force), after Sweden and above all, Denmark. Financial costs in Denmark remained extremely high (44 231 EUR/AWU), which explains why it had by far the highest FNVA/AWU (86 183 EUR/AWU) and the lowest FNI/AWU (10 102 EUR/AWU on average), after deduction of external factors.

The **remuneration of family labour** was also the lowest in Denmark in 2011 — 12 747 EUR/FWU, slightly lower than in Portugal. Overall however, Portuguese 'family' farms appeared in better health, since 91 % of them achieved a positive figure for remuneration of family labour, against only 62 % in Denmark. The figure exceeded 80 % in all other EU-15 Member States, including Ireland where opportunity costs for own capital remain very high due to the real interest rate. The EU-15 average was noticeably influenced by the very good performances of the United Kingdom, Italy and the Benelux countries, the only EU-15 Member States above it. France and Germany, however, are not too far off the average, with around 27 500 EUR/FWU.

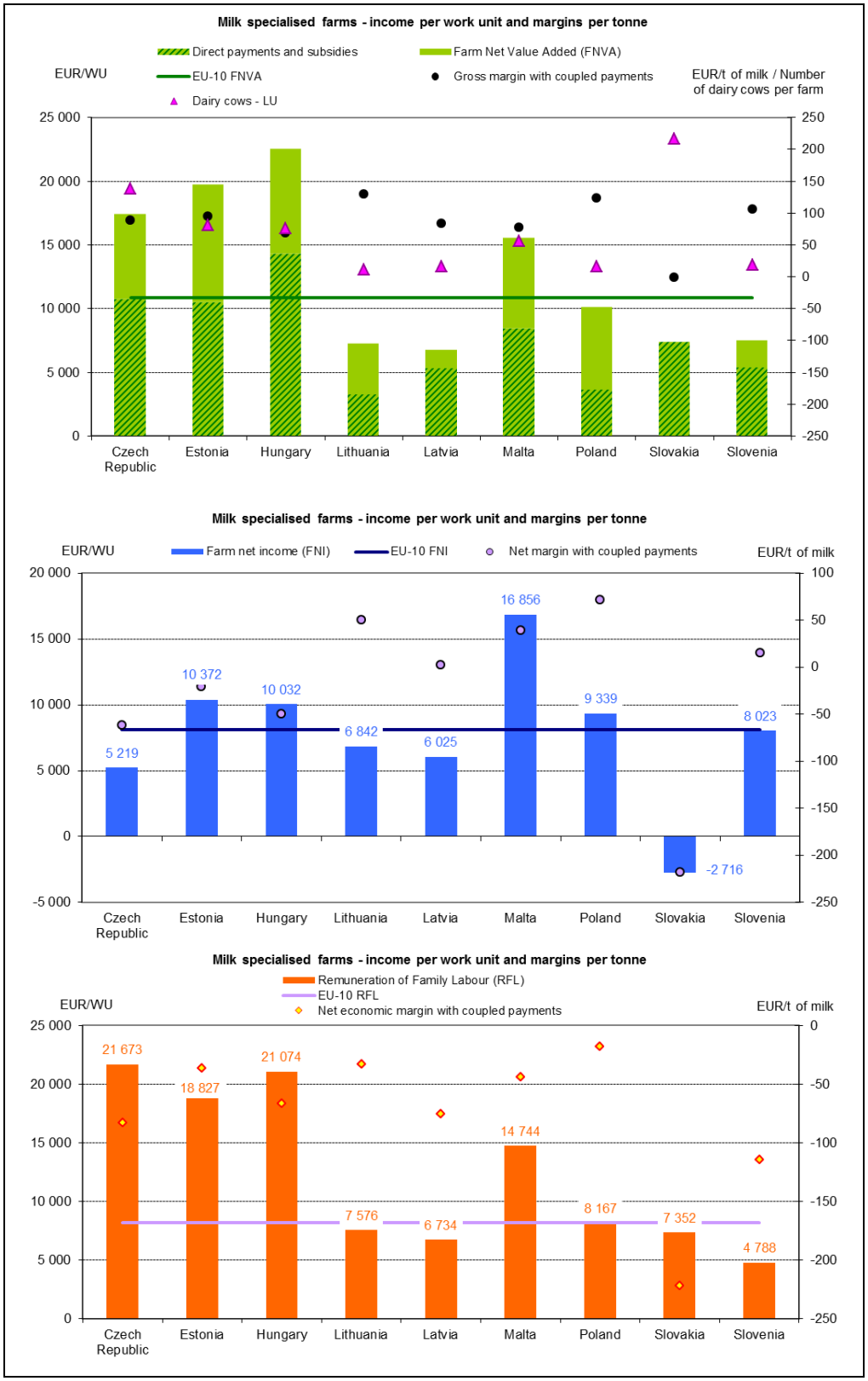
Figure 28: Income indicators for milk farms in the EU-15 Member States, 2011[27]



Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

[27] On the green graph showing gross margin and FNVA/AWU, for Finland, only the total level (FNVA/AWU) is comparable with other countries, as the total amount of direct payments and subsidies per AWU is actually higher than the FNVA/AWU.

Figure 29: Income indicators for milk farms in the EU-10 Member States, 2011[28]



Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

[28] On the green graph showing gross margin and FNVA/AWU, for Slovakia, only the total level (FNVA/AWU) is comparable between countries, as the total amount of direct payments and subsidies per AWU is actually higher than the FNVA/AWU.

4.3.2. EU-10 Member States

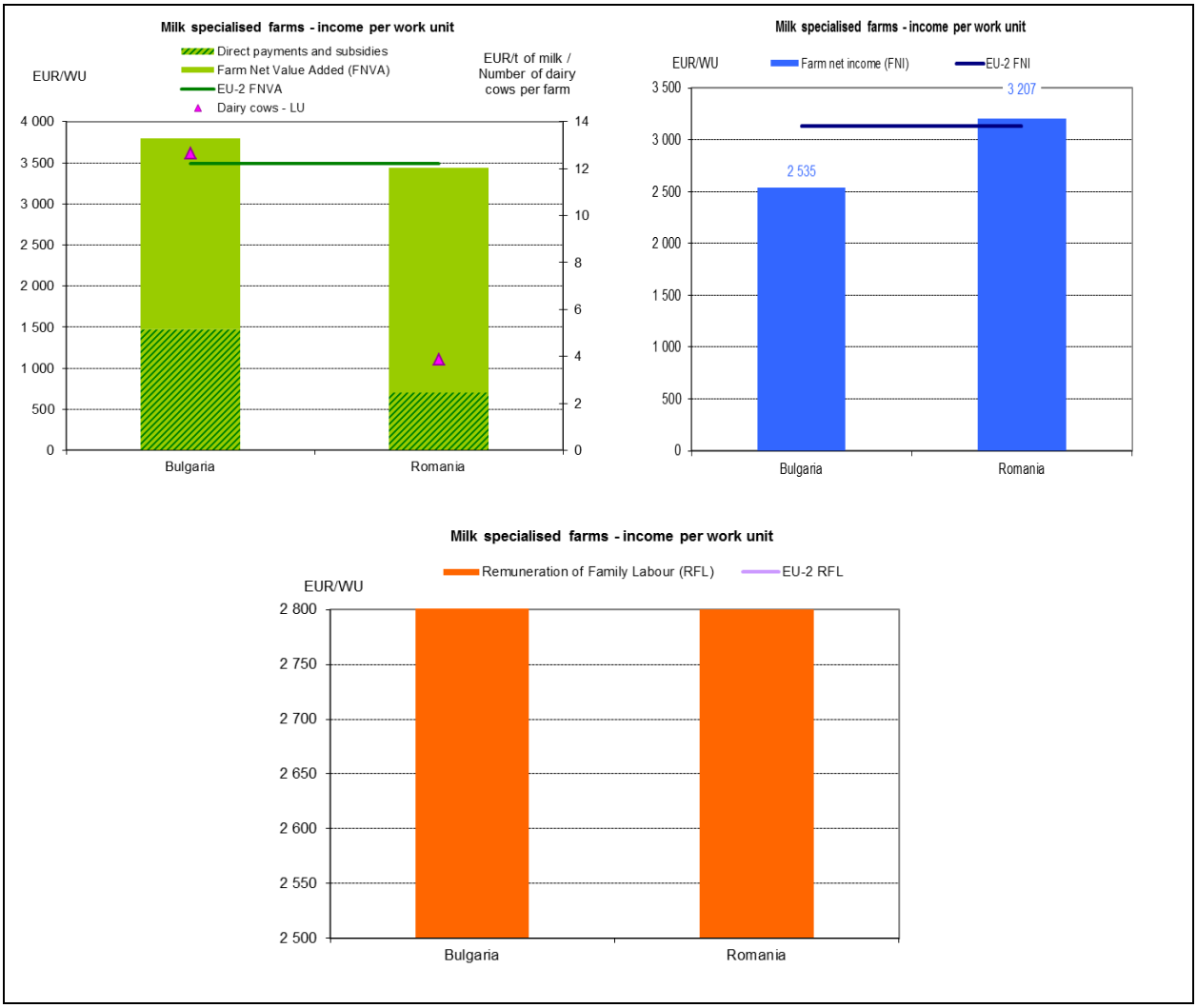
Figure 29 shows the average income indicators for milk specialised farms by Member State in the EU-10 in 2011. Malta, the Czech Republic, Estonia and Hungary achieve quite good results, with an **FNVA/AWU** of between 15 587 EUR and 22 603 EUR. Lithuania and Poland, despite their very good gross margin, are among the EU-10 Member States with the lowest FNVA/AWU (7 310 EUR and 10 199 EUR respectively). Lithuanian farms are small (11 dairy cows on average) and the average labour productivity is low (35 t/AWU). At the other end of the spectrum, on the big cooperatives of Slovakia (217 dairy cows on average), labour productivity is also limited (42 t/AWU) resulting in a low FNVA/AWU. Even in Malta and Estonia, where the quantity of milk per AWU is the highest among the EU-10 Member States, it remains much lower than the EU-15 average.

In contrast, wage costs tend to be higher than in the EU-15. This is particularly true in the Czech Republic, Slovakia, Estonia and Hungary due to their structures, and even produces a negative average **farm net income** in Slovakia. Family farms in Slovakia do not perform too well either, having one of the lowest **remuneration of family labour** (7 352 EUR/FWU), while neighbouring Czech Republic achieves an RFL of 21 673 EUR/FWU. The percentage of specialised farms with a positive RFL varies considerably between the different countries.

4.3.3. EU-2 Member States

In 2011, remuneration of family labour was similar in Bulgaria and Romania (around 2 800 EUR/FWU) (Figure 30). The farm net value added per AWU is also relatively comparable for these two countries, although the result is due to low costs in Romania and to higher output and subsidies in Bulgaria. The costs of external factors are significantly higher in Bulgaria, resulting in lower farm net income. However, both countries remain below the average income indicators for the EU-10 Member States. This can be explained by differences in farm size (averaging 4 dairy cows in the EU-2 compared with 54 in the EU-15 and 19 in the EU-10) and in direct payments and subsidies (the EU part of direct payments has not yet been fully phased in).

Figure 30: Income indicators for milk farms in the EU-2 Member States, 2011

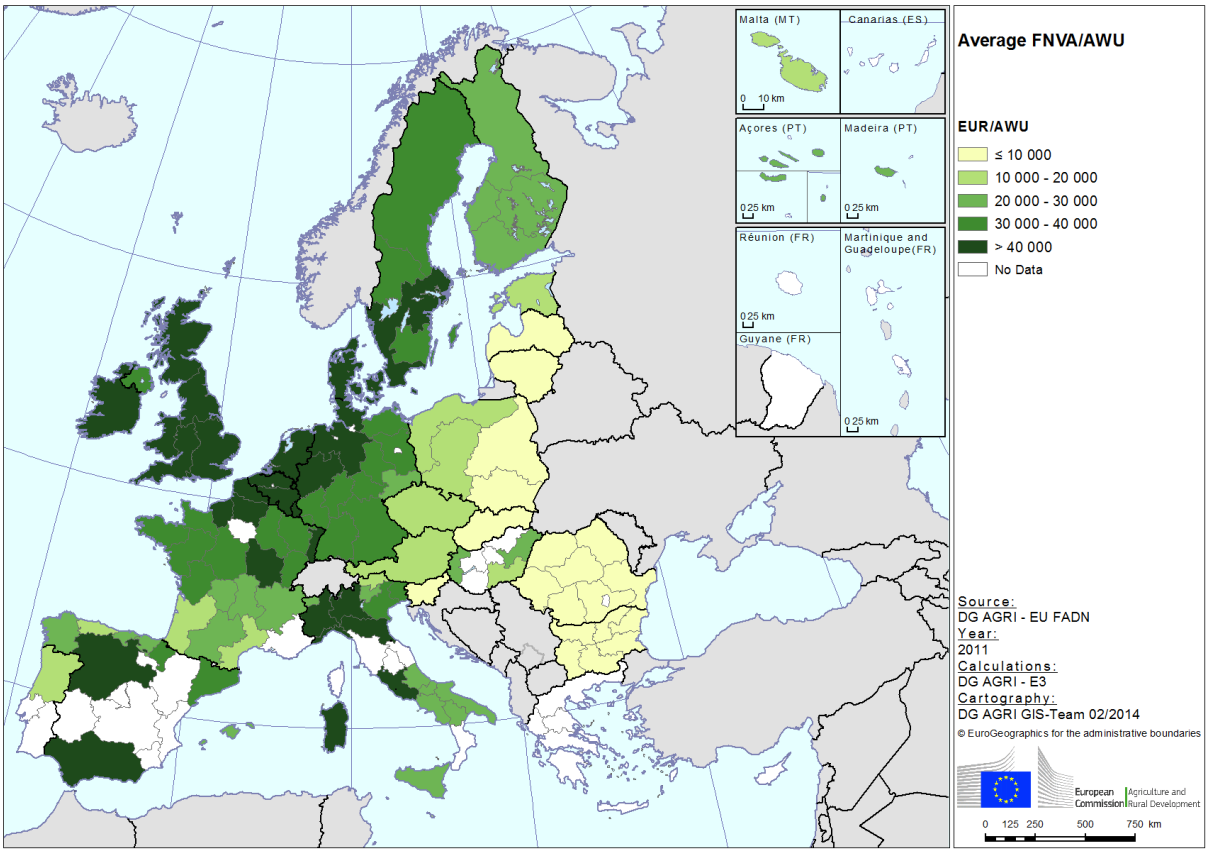


Source: EU FADN — DG AGRI, Model of the allocation of costs for milk.

4.4. Regional level

The map below shows the average FNVA/AWU by region in 2011. The picture is quite different from that for the gross margin. The best performing regions are mostly located in northern Europe: Ireland, Denmark, the United Kingdom, Belgium, the Netherlands and north-west Germany. The northern Italian regions also perform well, as do Andalusia and Castilla y Leon where intermediate consumption is quite low. More detailed results are available in Annex II.

Map 2: FNVA/AWU by region, 2011



ANNEX I

Methodology 1

The model for estimating milk production costs and margins on the basis of FADN data

The FADN (Farm Accountancy Data Network) database contains information on output and subsidies per enterprise; however, as regards costs, it only provides information referring to the farm as a whole.[29] In this context, the contribution of each enterprise to the farm income is not directly available. Therefore production costs by product have to be estimated. The EU FADN unit has constructed several models to estimate costs and margins, for a range of different products: arable crops, milk and beef, and permanent crops. This note describes the methodology used to estimate milk production costs and margins.

The allocation of costs

The following terminology is used with regard to costs:

– **Operating costs**, which include the following:

  – **Specific costs**: for milk production, they cover purchased concentrates, purchased coarse fodder, farm use of non-fodder crops, specific forage costs, milk herd renewal costs, the milk levy and other specific livestock costs (veterinary etc.).

  – **Non-specific costs**: upkeep of machinery and buildings, power (fuel and electricity), contract work, taxes and other dues (excluding the milk levy), taxes on land and buildings, insurance for farm buildings and other direct costs (including water as regards the model for milk).

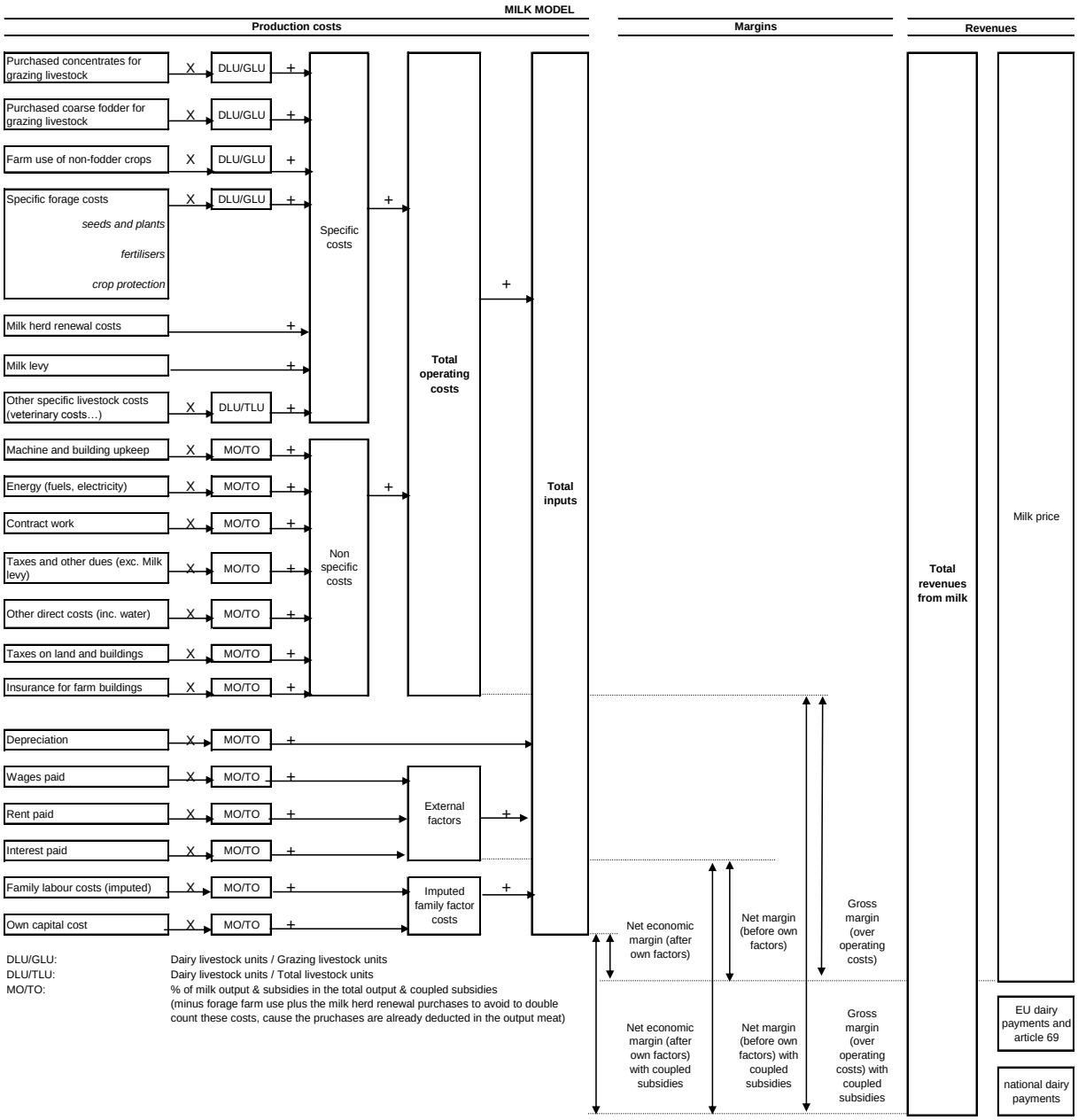
– **Depreciation**

– **External factors**: i.e. wages, rent and interest

– **Imputed family factors**, which cover: family labour cost and own capital cost (own land cost + estimated cost for own capital except land – interest paid).

The costs are illustrated in the breakdown overleaf.

[29] It is difficult for the accountant or the farmer to assess the proportion of water or electricity or fertilisers to allocate to each activity, especially for mixed farms.


MILK MODEL
Production costs
Margins
Revenues
Purchased concentrates for grazing livestock
Purchased coarse fodder for grazing livestock
Farm use of non-fodder crops
Specific forage costs
seeds and plants
fertilisers
crop protection
Milk herd renewal costs
Milk levy
Other specific livestock costs (veterinary costs…)
Machine and building upkeep
Energy (fuels, electricity)
Contract work
Taxes and other dues (exc. Milk levy)
Other direct costs (inc. water)
Taxes on land and buildings
Insurance for farm buildings
Depreciation
Wages paid
Rent paid
Interest paid
Family labour costs (imputed)
Own capital cost
DLU/GLU
DLU/TLU
MO/TO
Specific costs
Non specific costs
Total operating costs
External factors
Imputed family factor costs
Total inputs
Total revenues from milk
Milk price
EU dairy payments and article 69
national dairy payments
Net economic margin (after own factors)
Net margin (before own factors)
Gross margin (over operating costs)
Net economic margin (after own factors) with coupled subsidies
Net margin (before own factors) with coupled subsidies
Gross margin (over operating costs) with coupled subsidies
DLU/GLU: Dairy livestock units / Grazing livestock units
DLU/TLU: Dairy livestock units / Total livestock units
MO/TO: % of milk output & subsidies in the total output & coupled subsidies
(minus forage farm use plus the milk herd renewal purchases to avoid to double count these costs, cause the pruchases are already deducted in the output meat)

The basis of the methodology is to allocate a share of the farm costs to milk production. Different **ratios** are used:

– Dairy livestock units[30] as a proportion of grazing livestock units (DLU/GLU on the flow chart) is used to allocate grazing livestock feed costs;

– Dairy livestock units as a proportion of total livestock units (DLU/TLU) is used to allocate other livestock specific costs;

– Milk output and subsidies as a proportion of total output[31] plus linked subsidies (MO/TO) is used to allocate non-specific inputs and fixed costs. Subsidies are taken into account to enable the results to be compared over time since, from 2004 onwards, part of the milk support that was previously included in the price has been allocated via a direct payment. Moreover, this makes it possible to distinguish and to take better account of the co-existence of beef production on farms where costs of milk production are estimated (increasing the importance of direct aid support compared with market price support in beef production). The total output (TO, denominator) is also adjusted by deducting the value of home-grown fodder recorded in FADN and adding the purchase costs for milk herd renewal (see below).

As the **milk levy**[32] is directly linked to milk production only, it is fully allocated to the costs of milk production.

Some disparities in FADN recording among Member States also have to be taken into account in order to be able to make comparisons. Some Member States (generally from the north of the EU) do not put a value on **fodder** in FADN, mainly because of the difficulty of estimating production and the value of forage. Based on the principle that forage production is simply an input for animal production, and that failure to record it — either on the crop output side, or on the animal costs side — does not affect income, no effort is made to estimate it. In other countries — generally those where fodder production is more expensive — a value is assigned to the production of fodder. Even if this difference is unlikely to affect margins, it can lead to biases when comparing costs between Member States. To take account of the differences in records, fodder production used on the farm is treated as follows for the purpose of the model:

– The value of the **farm use of non-fodder plants** (e.g. barley, rye, etc.) is maintained in the item *'Crops used for feed'*, but the farm use value of all crops used as forage (fodder roots, other fodder plants — e.g. silage of cereals, temporary grass, meadows and pastures and rough grazing) is excluded.

– The value of **fodder plants produced on the farm** is estimated on the basis of the specific costs of the crops (e.g. seeds, fertilisers, crop protection). Specific costs are allocated to fodder production according to a ratio (fodder on total area). However, some forage crops do not benefit from all inputs (e.g. there is no crop protection for

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30 Dairy livestock units are defined as dairy cows and a share of total breeding heifers and young females. This share is equal to dairy cows as a proportion of the total number of cows (dairy cows, cull dairy cows and other cows).

31 Output after deduction of forage crops farm use.

32 In the previous model design, the milk levy was deducted from subsidies on the revenues side.

temporary grass). Therefore, the area taken into account in the ratio varies according to the input. The following table details the calculation. This item is called *'Specific forage costs'*.

Estimation of *'Specific forage costs'*

Cost item	Allocation key[33]
Seed costs	% area of fodder crops (144), other forage crops (145) and temporary grass (147) in the total Utilised Agricultural Area (UAA) - after exclusion of fallow lands (146), areas leased to others (149), meadows (150) and rough grazing (151)
Fertiliser costs	% area of fodder crops (144), other forage crops (145), temporary grass (147) and meadows (150) in the total UAA - after exclusion of fallow lands (146), areas leased to others (149) and rough grazing (151)
Crop protection costs	% area of fodder crops (144) and other forage crops (145) in the total UAA - after exclusion of fallow lands (146), temporary grass (147), areas leased to others (149), meadows (150) and rough grazing (151)

– The **home-grown fodder value is deducted from total output** (the denominator in the allocation ratio MO/TO) because it is included in the farm total output and it has to be deducted to obtain a comparable ratio between the Member States that value fodder and those that do not.

The **milk herd renewal purchases cost** was introduced when the model was revised in 2008. Although the cost of rearing the farm's own milk heifers was already included in the model, the cost of the purchase of new heifers (for example, to renew the genetic potential of the herd) was not included. It was indirectly taken into account in part by the MO/TO ratio, because the total output of the farm includes the meat output, which is calculated by deducting the purchases. Therefore, for farms that rely heavily on purchases rather than on rearing their own animals, total output (the denominator) was lower and therefore the ratio used for the allocation of costs to milk was higher, with the result that all of their costs calculated using this ratio were higher. However, it was done regardless of whether these purchases were linked to the milk enterprise or to the meat enterprise. With the new method, an attempt has been made to take direct account of the share of purchases that can be related to milk.

The aim is therefore to take direct account of the cost of purchases of young female bovines to be used for milk production.[34] This cost is calculated by multiplying the farm purchases of female cattle from 12 to 24 months and of breeding heifers by the ratio of dairy cows over the total dairy cows plus suckler cows. This makes it possible to allocate a share of young female cattle purchases to milk production. Information on details of

[33] Codes refer to product or cost codes in the farm return (Commission Regulations Nos 2237/77 and 868/2008).

[34] The value of sales of cull dairy cows cannot be deducted because of the scarcity of information about this item in the FADN database. Moreover, it can be considered as a meat by-product, which anyway has not been included in the model design until now. The value of calves is not taken into account in revenues, despite the fact that it is an obligatory by-product of milk production.

purchases of animals is available in FADN only from 2000 onwards; therefore this estimate can only be made from 2000 onwards. Moreover, it is not obligatory and, in practice, some Member States did not record it in the initial years after its introduction.[35] This has to be taken into account when interpreting the results.

However, a correction should be made for total output (the denominator in the allocation ratio MO/TO) to avoid double counting of these costs. The total output already deducts all purchases of animals, so the calculated milk herd renewal costs should be added back into the total output used in the allocation ratio MO/TO.

Another disparity in recording by Member States concerns **depreciation of the milk quota**, which is applied in some Member States and not in others (in part because of differences in milk quota management). Moreover, for the most recent accounting years, specific instructions were given to Member States that depreciation of quotas should not be entered in the FADN table related to capital.[36] This means that depreciation is not taken into account in the calculation of income. In order to be consistent with this principle and to allow comparability over time and among Member States, our estimates apply a rule of non-depreciation of milk quota. It should be noted that the cost of buying or renting milk quota is covered (where it is not self-financed) by interest and rent paid.

The following FADN cost items have been included in the 2008 revision of the model:

– **taxes and other dues** (excluding the milk levy) (part of farming overheads, non-specific costs),

– **insurance on farm buildings** (part of farming overheads, non-specific costs),

– **taxes on land and buildings** (part of farming overheads, non-specific costs).

The estimation of imputed unpaid family factors has also been included in the margin and income calculation. The methodology used is explained in another annex.

Revenues from milk

Revenues from milk take into account:

– the value of **sales of milk and milk products**;

– **EU dairy payments** (11.81EUR/t of quota in 2004, 23.65EUR/t in 2005, 35.50EUR/t in 2006 before decoupling; the actual implementation date of the payments depends on the Member State), Article 69 payments for dairy (used in Spain) and Article 68 payments linked to dairy production;

– Any **national dairy payments**.

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[35] Milk herd renewal purchases cannot be estimated for Greece, Italy (2000-2005), Ireland (2000), Finland (2000), Sweden (2000).

[36] Document RI/CC 1256: Deprecation of quota should NOT be entered in Table G (Land and buildings, deadstock, circulating capital), but may be entered in Table L.

This means that the value of calves and of sales of cull dairy cows is not taken into account, because no satisfactory method has been found to estimate this value on the basis of the current data.

The margins

The following terminology is used in relation to margins:

– **Gross margin (over operating costs)**: sales of milk and milk products minus operating costs;

– **Net margin (before own factors)**: sales of milk and milk products minus operating costs, depreciation and external factors;

– **Net economic margin (after own factors)**: sales of milk and milk products minus operating costs, depreciation, external factors, and imputed unpaid family factors.

All the margins are displayed **with and without coupled payments for milk** (EU and national). This makes it possible to simulate the removal of coupled payments.

The sample of farms

Given the estimation methodology, i.e. the need to allocate costs, to obtain reliable estimations of production costs and margins it is necessary to focus on **milk specialised farms**. Depending on the specific objectives of the analysis, different specialisation criteria might be chosen. In general, the following criteria have been used:

– Farms covered by the following types of farming (TF): 41 *Specialist dairying*, 43 *Cattle dairying, rearing and fattening combined*, 71 *Mixed livestock, mainly dairying*, 81 *Field crops — grazing livestock combined.* The decision was made to include farming types 43, 71 and 81 (and not only 41) in the sample so as to cover a larger share of dairy cows, particularly in the new Member States.[37]

– A structural specialisation rate[38] greater than **40 %**. This criterion has been introduced to make the sample of specialised farms more stable over years and therefore ensure better comparability of results over time.[39]

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[37] See Table 5.

[38] Structural specialisation rate: the potential contribution of the 'cattle, dairying pole' (as defined by Commission Regulation (EC) No 1242/2008 establishing a Community typology for agricultural holdings) to the total production of the farm i.e. the share of the milk sector in the total Standard Output.

[39] The comparability of results over time is however also affected by the extrapolating factors: as FADN is a sample survey, the collected data need to be extrapolated against the population of farms reported under the Farm Structure Survey (FSS). A new FSS is carried every three years and takes the form of a census every ten years. Due to this update in the population used for extrapolation, the weight of a given farm remaining in the sample may change quite significantly, thus affecting the average results (in some Member States there appears to be a break in time series for structural information between

– An actual specialisation rate[40] greater than **35 %**. This criterion has been kept[41] to make sure that in reality, milk production remains the main activity of the holding.

– A share of sales of milk and milk products in the milk output higher than 50 %.

– An average milk price at farm level of less than 900 EUR/t of milk, in order to exclude farms producing **buffaloes' milk**. These farms are mainly located in the two Italian regions *Lazio* and *Campania*, essentially for the production of '*Mozzarella di buffala*'. It was decided to exclude them because of their major differences in terms of milk yield, price, costs and margins.

Moreover, given the use of different ratios for the allocation keys,[42] some precautions are necessary in order to prevent problems with estimates:

– Total output and total output plus subsidies should be strictly positive.

– Total output plus subsidies should be greater than milk output plus subsidies.

– Total output should be greater than milk output.[43]

Farms that do not meet these conditions are excluded from the sample used to estimate costs and margins.

The results are presented in **EUR/t of milk**. They are the so-called 'global ratio', i.e. they are obtained by dividing the average revenues, costs or margin in the Member State (or region) by the average quantity of milk produced in that Member State (or region) (and not by the weighted average of the individual ratio by farm).

2008 — extrapolated with FSS 2007 — and 2009 — extrapolated with FSS 2010). However, extrapolating with the newest FSS population is deemed to provide more precise, actual results for the most recent years, which is what matters for the purpose of this report.

40 Actual specialisation rate: the share of milk output and subsidies in total output and coupled subsidies (forage farm use deducted) as reported in the farm accounts.

41 Although its threshold has been lowered (from 50 % to 35 %) as compared with the previous editions of this report.

42 Allocation keys: dairy livestock units as a proportion of grazing livestock units, dairy livestock units as a proportion of total livestock units, milk output and subsidies as a proportion of total output and coupled subsidies, milk output as a proportion of total output.

43 The number of dairy cows and of grazing livestock units must also be greater than 0.

Methodology 2

Estimation of imputed unpaid family factor costs — Method

- **Family labour cost**: this is estimated on the basis of the wages which the owner of the farm would have to pay to hire employees to do the work carried out by family members.

It is estimated as the average regional wage per hour obtained in the FADN database[44] multiplied by the number of hours worked by family workers on the farm.

It is commonly acknowledged that the number of hours of family workers is sometimes overestimated. Thus the method uses a maximum of 3 000 hours per Annual Work Unit (this is the equivalent of 8.2 hours a day, 365 days a year, and corresponds more or less to the time that can be spent on a farm by dairy farmers).[45]

Using hours makes it possible to remunerate a manager more than an employee for working more hours.

It is challenging to calculate a reliable estimate because records of hours worked on the farm might be overestimated and it is not easy to determine what an appropriate remuneration for family labour is. Farmers may indeed agree to be remunerated less than they would be according to the average agricultural wage. They may consider farming a way of life or benefit from other sources of income for their household (other gainful activities directly related to the holding, spouse working outside the farm, etc.).

- **Own capital cost**

  – **Own land cost**: this is estimated on the basis of the rent that the owner of the farm would have to pay if the land were rented instead of owned.

  It is estimated as the owned area multiplied by the rent paid per ha on the same farm or, if there is no rented land on the farm, by the average rent paid per ha in the same region and for the same type of farming.[46]

  – **Cost of own capital (other than land)**: the cost of own capital (permanent crops, buildings, machinery and equipment, forest land, livestock and crop stocks) is estimated at its opportunity cost. That is how much money the farmer could gain from investing the equivalent of its capital value in a bank.

The interest paid on the capital is not known, as this information is optional in the FADN farm return. Nevertheless, to take into account the actual interest rate paid on the farm, a 'weighted' interest rate is calculated as the weighted average of this interest rate for debts

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[44] If there are not enough farms (fewer than 20) with paid labour at regional level, the national average is taken into account.

[45] A constraining factor of the estimation method is that if a farmer receiving a salary would probably work less.

[46] If there are not enough farms (fewer than 20) in a given region for a type of farming, the national rent per hectare for the given type of farming is used (the TF8 classification is used).

and the long term interest rate taken from the Global Insight database for the net worth. It should be noted that if the 'weighted' interest rate is lower than the LT interest rate (which means that the calculated rate of interest paid is lower than the LT interest rate), the LT interest rate is used instead of the 'weighted' interest rate.

In the end, the own capital value (excluding land and land improvement) is estimated as the average value of the assets (closing plus opening valuation divided by 2) multiplied by the real interest rate.[47] The correction is made by subtracting the inflation rate[48] from the nominal interest rate. A condition is applied to avoid negative real interest rates.

The total circulating capital is not valued because of the unreliability of this variable in some Member States. Nevertheless, the crop stock value is taken into account.

To calculate the **unpaid capital costs,** in order to avoid double counting, we have to deduct the **interest paid** from the sum of the own land cost and the cost of own capital except land:

Imputed unpaid capital costs = own land cost + estimated cost for own capital except land — interest paid (when interest paid is lower than the sum of own land and own capital costs).

The total cost of imputed unpaid family factors is then the sum of family labour costs and unpaid capital costs:

Imputed unpaid family factors = family labour cost + unpaid capital costs

Or

Imputed unpaid family factors = family labour cost + (own land cost + estimated cost for own capital other than land – interest paid)

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47 The increase in the value of assets is excluded from income calculations. For example, land appreciates in value over time, which is one of the reasons why investors invest in land. This gain is not included in income; therefore it would not be consistent to include it in the cost of capital. In addition, in the FADN, assets are valued at replacement value. Depreciation is based on this replacement value and therefore already takes into account the increase in prices (inflation). Consequently, it would be double counting to include the inflation part of interest in the cost of capital.

48 The inflation rate is based on the Eurostat annual average rate of change in Harmonised Indices of Consumer Prices (HICPs) — **available from 1997**. Inflation rates based on price indexes of GDP and gross fixed capital consumption have been tested, but they are very high and were leading to very high negative costs for capital, mainly in the EU-10. An inflation rate calculated on the basis of price indexes for gross fixed capital consumption has been tested, as it seemed to be more closely related to assets. However, this rate has fluctuated widely over the years for certain Member States. In addition, land is one of the most important assets which does not depreciate. Therefore the inflation rate of gross fixed capital consumption must not have a closer relationship with the change in the price of agricultural assets than with the consumer price indices.

Table 2: Share of dairy cows covered by the FADN by Member State

	FADN 2011			Eurostat cattle survey 2011	Coverage FADN/FSS		
Number of dairy cows	Non-specialised milk farms	Specialised milk farms	Total		Non-specialised milk farms	Specialised milk farms	Total
Belgium	77 720	394 421	472 141	510 600	15 %	77 %	92 %
Denmark	4 865	570 065	574 930	579 000	1 %	98 %	99 %
Germany	327 778	3 762 895	4 090 674	4 190 100	8 %	90 %	98 %
Greece	.	.	.	130 000	.	.	.
Spain	3 403	798 935	802 338	797 900	0 %	100 %	101 %
France	181 346	3 299 287	3 480 633	3 664 000	5 %	90 %	95 %
Ireland	8 646	1 066 626	1 075 271	1 035 600	1 %	103 %	104 %
Italy	111 276	1 405 152	1 490 470	1 755 000	6 %	80 %	86 %
Luxembourg	2 784	39 780	42 564	44 500	6 %	89 %	96 %
The Netherlands	11 517	1 458 734	1 470 250	1 504 000	1 %	97 %	98 %
Austria	86 090	442 906	528 996	527 400	16 %	84 %	100 %
Portugal	6 124	192 773	198 897	242 000	3 %	80 %	82 %
Finland	3 108	318 115	321 223	281 500	1 %	113 %	114 %
Sweden	4 477	353 991	358 468	347 600	1 %	102 %	103 %
The United Kingdom	17 938	1 728 481	1 746 420	1 800 000	1 %	96 %	97 %
EU 15	**848 732**	**15 895 718**	**16 744 450**	17 409 300	5 %	**91 %**	**96 %**
Cyprus	.	.	.	24 100	.	.	.
The Czech Republic	142 101	202 407	344 508	374 100	38 %	54 %	92 %
Estonia	1 628	95 600	97 229	96 200	2 %	99 %	101 %
Hungary	62 586	175 574	238 160	250 000	25 %	70 %	95 %
Lithuania	40 899	233 583	274 482	349 500	12 %	67 %	79 %
Latvia	5 987	138 464	144 451	164 100	4 %	84 %	88 %
Malta	93	5 986	6 079	6 300	1 %	95 %	96 %
Poland	398 879	1 611 998	2 010 877	2 446 100	16 %	66 %	82 %
Slovakia	75 394	93 198	168 592	154 100	49 %	60 %	109 %
Slovenia	15 666	102 259	117 925	109 100	14 %	94 %	108 %
EU 10	**743 235**	**2 671 892**	**3 415 126**	**3 973 600**	19 %	**67 %**	**86 %**
Bulgaria	24 355	215 465	239 820	313 200	8 %	69 %	77 %
Romania	365 733	831 015	1 196 748	1 170 000	31 %	71 %	102 %
EU 2	**390 088**	**1 046 480**	**1 436 568**	**1 483 200**	26 %	**71 %**	**97 %**
EU 27	**1 982 055**	**19 614 090**	**21 596 144**	**22 866 000**	9 %	**86 %**	**94 %**

Source: EU FADN 2011, Eurostat cattle survey 2011, treatment DG AGRI.

Table 3: Share of milk production covered by the FADN by Member State

	FADN 2011			Eurostat 2011	Coverage FADN/FSS		
Number of dairy cows	Non-specialised milk farms	Specialised milk farms	Total		Non-specialised milk farms	Specialised milk farms	Total
Belgium	543	2797	3340	3151	17%	89%	106%
Denmark	34	4800	4834	4880	1%	98%	99%
Germany	2534	28719	31253	30301	8%	95%	103%
Greece	.	.	.	757	.	.	.
Spain	22	5899	5922	6488	0%	91%	91%
France	1203	23421	24623	25092	5%	93%	98%
Ireland	.	5825	5863	5556	.	105%	106%
Italy	556	9708	10264	11299	5%	86%	91%
Luxembourg	20	303	322	292	7%	104%	110%
The Netherlands	104	11698	11802	11851	1%	99%	99%
Austria	484	2925	3409	3307	15%	88%	103%
Portugal	32	1397	1429	1919	2%	73%	74%
Finland	26	2771	2797	2301	1%	120%	122%
Sweden	29	3025	3054	2850	1%	106%	107%
The United Kingdom	.	12847	12950	14088	.	91%	92%
EU 15	**5730**	**116619**	**122349**	**124156**	**5%**	**94%**	**99%**
Cyprus	.	.	.	156	.	.	.
The Czech Republic	1007	1379	2386	2736	37%	50%	87%
Estonia	7	712	722	692	1%	103%	104%
Hungary	350	1264	1614	1712	20%	74%	94%
Lithuania	221	1281	1501	1782	12%	72%	84%
Latvia	29	775	804	842	3%	92%	96%
Malta	.	40	40	:	.	n.a.	n.a.
Poland	1745	8574	10319	12414	14%	69%	83%
Slovakia	429	534	963	928	46%	58%	104%
Slovenia	58	564	622	602	10%	94%	103%
EU 10	**3849**	**15216**	**19065**	**21865***	**18%**	**70%**	**87%**
Bulgaria	80	677	757	1126	7%	60%	67%
Romania	1146	2929	4075	4075	28%	72%	100%
EU 2	**1226**	**3605**	**4831**	**5201**	**24%**	**69%**	**93%**
EU 27	**10805**	**135441**	**146245**	**151221***	**7%**	**90%**	**97%**

*: excluding Malta.

Source: EU FADN 2011, Eurostat production statistics 2011, treatment DG AGRI.

Table 4: Share of milk production by Member State in the FADN 2011

Member State	Share of milk production 2011
Belgium	2%
Denmark	3%
Germany	21%
Greece	-
Spain	4%
France	17%
Ireland	4%
Italy	7%
Luxembourg	0%
The Netherlands	8%
Austria	2%
Portugal	1%
Finland	2%
Sweden	2%
The United Kingdom	9%
EU 15	**84%**
Cyprus	0%
The Czech Republic	2%
Estonia	0%
Hungary	1%
Lithuania	1%
Latvia	1%
Malta	0%
Poland	7%
Slovakia	1%
Slovenia	0%
EU 10	**13%**
Bulgaria	0%
Romania	3%
EU 2	**3%**
EU 27	**100%**

Source: EU FADN — DG AGRI.

Table 5: Share of milk production by Member State and farm type in the FADN 2011

	Share of milk production by farm type				Share of farms by farm type			
	Specialised milk farms				Specialised milk farms			
FADN 2011	Specialist dairying	Cattle — dairying, rearing and fattening combined	Mixed livestock, mainly grazing	Mixed fieldcrops and grazing livestock combined	Specialist dairying	Cattle — dairying, rearing and fattening combined	Mixed livestock, mainly grazing	Mixed fieldcrops and grazing livestock combined
Belgium	79%	15%	.	4%	75%	19%	.	4%
Denmark	97%	.	.	.	96%	.	.	.
Germany	88%	5%	2%	5%	89%	7%	2%	3%
Greece	.	.	.	.	.	.	.	.
Spain	97%	3%	.	.	93%	7%	.	.
France	74%	9%	4%	12%	75%	11%	3%	10%
Ireland	95%	5%	.	.	90%	10%	.	.
Italy	95%	4%	.	.	90%	9%	.	.
Luxembourg	83%	16%	.	.	78%	20%	.	.
The Netherlands	97%	.	.	.	97%	.	.	.
Austria	86%	13%	.	.	80%	19%	.	.
Portugal	100%	.	.	.	100%	.	.	.
Finland	97%	.	.	.	96%	.	.	.
Sweden	98%	.	.	.	98%	.	.	.
The United Kingdom	96%	2%	.	.	94%	5%	.	.
EU 15	**89%**	**5%**	**2%**	**4%**	**87%**	**9%**	**1%**	**3%**
Cyprus	.	.	.	.	.	.	.	.
The Czech Republic	44%	6%	8%	43%	63%	11%	4%	21%
Estonia	92%	.	.	.	87%	.	.	.
Hungary	66%	.	.	34%	88%	.	.	12%
Lithuania	79%	.	.	17%	82%	.	.	5%
Latvia	80%	.	.	14%	87%	.	.	9%
Malta	95%	.	.	.	91%	.	.	.
Poland	89%	1%	3%	7%	89%	2%	5%	4%
Slovakia	66%	.	.	.	71%	.	.	.
Slovenia	99%	.	.	.	100%	.	.	.
EU 10	**81%**	**2%**	**4%**	**14%**	**88%**	**1%**	**6%**	**5%**
Bulgaria	89%	.	.	7%	87%	.	.	4%
Romania	62%	14%	21%	2%	51%	16%	30%	3%
EU 2	**66%**	**13%**	**17%**	**3%**	**53%**	**15%**	**28%**	**3%**
EU 27	**87%**	**5%**	**2%**	**5%**	**75%**	**9%**	**12%**	**4%**

Source: EU FADN — DG AGRI.

ANNEX II

Results by EU group, Member State and region.

Data as of 27/03/2014.

European Commission

EU dairy farms – Report 2013 based on FADN

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This report provides an overview of costs of production, margins and income of farms specialised in milk production in the EU. The analysis is based on the latest data available from the Farm Accountancy Data Network (2004-2011) as well as on estimates for 2012.

European Commission
Directorate-General for Agriculture and Rural Development

http://ec.europa.eu/agriculture