

Objective

The objective of this study was to calculate the economic and technical efficiency of the milk production in cattle farms (n=15) in Slovakia for the period 2006 – 2010

Materials & Methods

- The costs were calculated for dairy cattle farms (n=15) registered in database of APRC Nitra (Table 1)
- Economic efficiency of the milk production was expressed as the profitability of total costs and by the profitability of individual costs items
- Technical efficiency was determined by a nonparametric methodological approach - Data Envelopment Analysis (DEA)
- Market prices with and without set-off direct subsidies was taken into account

Table 1 Economic parameters of the milk production in cattle farms (n =15) for the years 2006 - 2010 (€)

Parameters	AVERAGE	MIN	MAX	ST DEV
Milk yield in kg per feeding day	16,0	14,6	17,3	1,066
Total primary costs per feeding day	5,100	4,317	5,688	0,497
Total overhead costs per feeding day	0,475	0,410	0,531	0,051
Total costs	5,576	4,726	6,196	0,538
By-product	0,272	0,268	0,274	0,002
Own costs per feeding day	5,304	4,454	5,923	0,538
Own costs per kg of milk	0,331	0,306	0,359	0,021
Milk prices without subsidies (WOS)	0,310	0,252	0,348	0,042
Milk prices with subsidies (WS)	0,326	0,282	0,356	0,031
Profit/loss per kg of milk WOS	-0,020	-0,075	0,017	0,045
Profit/loss per kg of milk WS	-0,004	-0,042	0,026	0,031

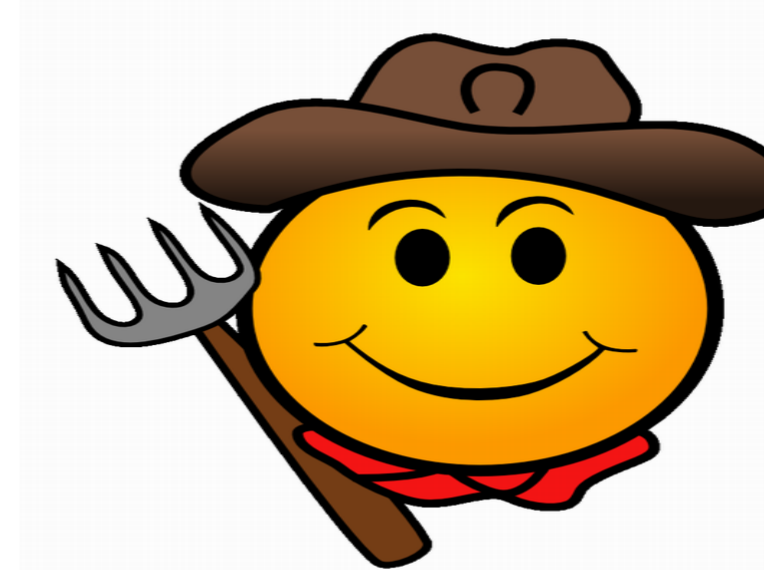
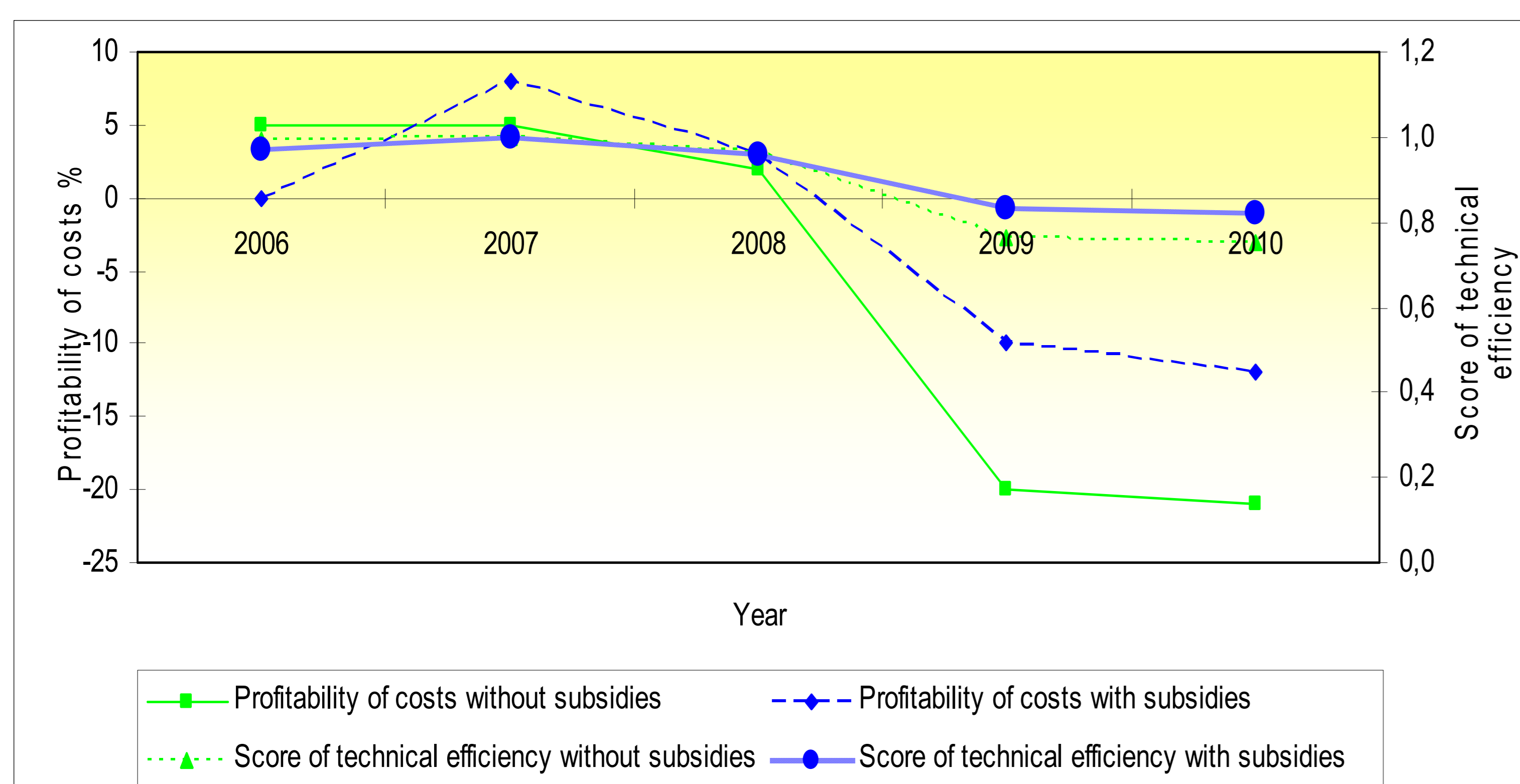


Results & conclusions

For the milk production in evaluated cattle farms:

- The average profitability rate of milk production was -6%
- Average score of technical efficiency was 0.9 (Figure 1)
- The higher efficiency was in 2007 (positive impact of market prices)
- The lower efficiency was in 2010 (due to lower milk price and increased value of costs) (Figure 1)
- The most important costs items were costs for feeds, depreciation and secondary costs
- The direct subsidies improved efficiency of milk production by 6 %

Figure 1 Economic and technical efficiency of milk production



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