Analytical Overview on the Romanian Dairy Market in the Context of Economic Changes

Iulian Bogdan Dobra¹, Florina Laura Şandru²

1.2Faculty of Economic Sciences, "1 Decembrie 1918" University, Alba Iulia, Romania, 1E-mail: dobra.iulian@uab.ro, 2E-mail: florina.laura.33@gmail.com

Abstract

The aim of this article consists in making a market analysis in the area of milk industry in Romania during 2003-2015 based on the information provided by the National Institute of Statistics and specific market research. The market is analyzed in terms of segmentation, production and price. Conclusions are drawn regarding the evolution and changes that occurred during the important 2003-2015 period of time while having in view the Common Agricultural Policy (2014-2020) but emphasizing evolution during economic crisis.

Keywords

Dairy market, analysis, changes, crisis, evolution, production

JEL Codes: M40, M21

1. Introduction

The Romanian Dairy sector development has been hampered for several years by several factors, such as high degree of fragmentation (small farm size), aging farm community, poor farm management practices, limited access to high-quality inputs, and lack of farmers' organization. These factors lead to lower productivity and farm efficiency. Milk and its derived products are a staple food in human nutrition. A suitable food system does not accept food rations which provide milk and milk products in their structure. These considerations have led to increased consumption of milk and its derivatives. For the future, it is predicts that both milk and milk products will occupy an important place in daily human consumption compared with other animal products. Occupying second place, in importance, the Romanian agriculture, after meat production, milk and milk products sector is one of the most important sectors of Romanian agriculture. The restructuring of Romanian agriculture has as a result reducing or even destroying the material base both in agriculture and processors industries. Also, reduction of livestock has like result the reduction of agricultural production animals - an important part of raw material in food industry. Milk production, a major component of animal production, it has faced such problems.

The specific characteristic of the milk production and processing sector in Romania is the high fragmentation at producers level (Romania has the largest number of dairy farms in Europe), as well as the very large share of family holdings (about 87% of the

Vol. 2 (4), pp. 172-186, © 2016 AJES

total number of holdings have 1-2 cows on the average). Out of this reason, 39% of the milk production at national level goes to self-consumption, 27% to direct sales and only 23% of production is delivered to processing. At the same time, due to the very high share of family holdings, no efficient farm management can exist, and the raw milk production collected for processing has a strong seasonal character, with high values in summer time and by about 30% lower in the cold season. It is obvious that production fragmentation lowers the farmers' bargaining power, these being practically obliged to accept the price offered by the processors.

The disturbances caused by the European economic and political crisis led to radical changes in the way the main companies in the fundamental branches of the European industry approached the market. The politics and practices used and accepted before the crisis need adjustment and adaptations to new, problematic market conditions. These new market coordinates also facilitate a high degree of dynamism of the dairy market, characterized by entrances in and exits off the market, sometimes with surprising velocities. This fact does nothing but to confirm the fact that the restructuration and reorientation of the strategies doubled by a fast adaptation capacity are vital. Other two essential elements for a sustainable development are proactivity and reactivity. Now, more than ever the joint between the two market approaches is needed in a way which can provide the companies in the dairy industry with prompt and efficient answers to the market dynamics.

This article has a descriptive approach on issues related with the Romanian Dairy Market in the context of Economic changes using secondary data analysis method.

Next we will analyze the most important aspects of the evolution of the dairy industry in Romania in the relevant period between 2003-2015, while having in view the Common Agricultural Policy (2014 - 2020). The main producers of dairy products that act on the market are: Albalact (Lactalis), LaDorna, Delaco, Brailact, Covalact, Lactate Natura Târgovişte, Napolact (Friesland), Muller, Carmolact Prod, Lactaq, Lacta Giurgiu.

2. Methodology of research

The purpose of the present paper is to research the milk industry from a theoretical perspective in order to notice if future researches can improve the management accounting system used by the entities in this field by implementing new methods of cost calculation. The research methodology is presented succinctly so that the reader will have the opportunity of understanding the softest of the content of the work and the manner in which it was conceived.

Scientific research can be viewed as an integrated process of interdependent subsystems of knowledge that can be built through a careful and objective observation, investigation and experimentation aimed at the identification and interpretation of new information. The present search paper makes possible the consonance of the

knowledge subsystems of research that we used such as: documenting, analysis and synthesis of information, comparative analysis, and analogy.

3. Analysis of the dairy market evolution and changes between 2003 – 2015

3.1. Segmentation

The success in the dairy industry consists in efficient production of milk and dairy products under good hygienic conditions. The main constraints for the small producers stand in the inadequate feeding of animals, low genetic potential and the high degree of contamination with bacteria of the milk regarded as raw material.

The greatest part of milk production in the developing countries is obtained in farms with less than five animals. The milk production is widely spread in the countryside, while the main outlet of the dairy products is the urban environment. So, the main challenges of the processors are represented by the collection logistics (in the rural environment) and the distribution logistics (in the urban environment).

Category	Products
Consuming milk	Pasteurized milk (according to the fat content), UHT (ultra
	pasteurized), consuming milk with flavors (cocoa, honey etc.)
Fresh dairy products	Yoghourt (simple or with added flavors or fruits), buttermilk,
(sour)	creams, sour cream, sana, kefir etc.
Cheeses	Cheese, "telemea", "cas", cheese cream, processed cheese, feta,
	specialties etc.
Milk powder	Dry milk powder (fat or skimmed), buttermilk, dry buttermilk,
	additives for coffee etc.
Animal fats	Butter, butter cream
Ice cream	Simple ice cream or with flavors (natural or identical natural; with
	natural milk or/and milk powder)

Table 1. The segmentation of dairy products

The primary objective of milk processing is the extension of the life span of the products by eliminating the pathogens. The boiling treatment is the most common technical process of milk pasteurization.

Another technical process is that of fermentation by means of which cheeses are obtained, concentration and de-hydration, which often involve a boiling treatment. The choice of the technical process of milk processing depends on the local tradition and the on the scale of the activity. In the case of the exporting countries the process of de-hydration and fermentation of milk is widely used (cheese production). In the developing countries the greatest part of the milk volume is processed in small production units. The increase of dairy products with high added value is another

Vol. 2 (4), pp. 172-186, © 2016 AJES

priority of milk processors. By means of the Common Agricultural Policy (CAP), the European Commission intends, as a main advantage, to increase the incomes of the farmers and as a consequence the raising of the living standards in the rural environment.

4. The internal market of dairy products

4.1. Production

Out of the annual milk production of 4.15 hectoliters of cow and buffalo milk, $\sim 20\%$ is delivered to the processing units, the rest being sold directly on the free market and family self-consuming.

4.2. The production of dairy products in the industrial units, on products and sub-products, in volume between 2003-2015. Milk collection and dairy products obtained in Romania

The dairy industry represents about 1.3% of the Romanian processing industry and 7.7% of the whole food industry.

Year	Total Milk collection in Romania (1000 T)	Year	Total Milk collection in Romania (1000 T)
2003	859.48	2010	1013.16
2004	1051.10	2011	1006.94
2005	1134.15	2012	970.85
2006	1150.00	2013	1005.88
2007	1157.95	2014	: C
2008	1072.68	2015	1070.42
2009	1011.46		

Table 2. Total Milk collection in Romania (1000 T)

Data Source: EUROSTAT NewCronos (apro_mk_pobta and apro_mk_farm)

Evolution of collecting total milk in Romania, as it can be analyzed as shown in the table above is somewhat fluctuating having periods of increasing and decreasing depending on factors relating both to the general economic context, the economic crisis in particular, and political factors, regulatory specifically, after Romania joined the European common area.

The analyzed period is between 2003 and 2015 inclusive, which mean that we have a 12-year reporting period (reporting data for 2014 is missing). Subject methodology of data collection can still see the tendency of increasing quantities of milk collected from 859.48 (1000T) in 2003 to 1157.95 (1000T) in 2007 at the time Romania join the

European Union. 2008 brings a fall collection that level over the previous year but up from 2003 and 2004. In 2012, year of economic crisis, came after a period of another three years of crisis, 2009, 2010.2011, amounts collected fall to the level of 970.85 (1000T) this figure is the second lowest value recorded in the period considered.

The lowest value was recorded in 2003. These values as well as all the values contained in our analyzes are necessarily contextualized and are the mathematical representation of a wide-ranging general economic transformation, modernization of agriculture and dairy industry in Romania. There is a tendency to stabilize the quantities collected of course not necessarily describe any production capacities or those collection.

Year	Cows' milk collection in Romania (1000 T)	Year	Cows' milk collection in Romania (1000 T)
2003	844.61	2010	903.75
2004	1019.00	2011	897.35
2005	1109.00	2012	887.85
2006	1133.00	2013	882.38
2007	1136.40	2014	996.65
2008	1051.48	2015	919.30
2009	991.59		

Table 3. Cows' milk collection in Romania (1000 T)

Data Source: EUROSTAT NewCronos (apro_mk_pobta and apro_mk_farm)

Cow milk collection in Romania in the period 2003-2015 follows a trend that can be explained to a large extent through two specific causes, namely, the major impact of the economic crisis linked to structural failure of the industry to establish a faster pace of recovery in the post-crisis period and legislative dynamics on subsidizing agriculture in general.

The highest value is retrieved in 2007, specifically 1136.40 (1000T), the year Romania's accession to the European Union and default rules common agricultural market, a market where technological differences and reporting mentality agricultural production could easily take notice in the performance indicators. There is in this context necessary to mention namely that with the accession of Romania to the European common quality standards of milk collected change their upside. Years of crisis bring decreases considered important. For example if we compare 2007 with 2012, the drop is more than obvious, from 1136.40 to 887.85 (1000T). After a significant increase in the range 2013-2014, 2015 brings a new decrease in value aspect which once again demonstrates the dynamics registered in this regard.

Vol. 2 (4), pp. 172-186, © 2016 AJES

Table 4. Ewes' collection milk in Romania (1000 T)

Year	Ewes' collection milk in Romania (1000 T)	Year	Ewes' collection milk in Romania (1000 T)
2003	6.05	2010	16.41
2004	17.60	2011	14.35
2005	13.41	2012	15.76
2006	9.00	2013	18.12
2007	12.61	2014	27.28
2008	13.63	2015	29.68
2009	13.73		

Data Source: EUROSTAT NewCronos (apro_mk_pobta and apro_mk_farm)

Sheep milk collection in Romania is considered a trend upward; a positive development is explained by the relatively small quantities compared to cow's milk. Thus, if we consider heads interval of time between 2003 and 2015 we see an increase of about 5 times the amount of milk collected from 6.05 in 2003 to 29.68 (1000T). Interesting to watch is 2010, year of economic crisis, one year for collecting sheep milk was a year of growth in terms of quantities reported. Including the interval 2012-2015 shows a significant increase in this segment from 15.76 to 29.68 (1000T) nearly doubles within a relatively short time.

In the pre values fluctuate from 6.05 to 9.00 (1000T) with a maximum of 17.60 in 2004.

Table 5. Goats' collection milk in Romania (1000 T)

Year	Goats' collection milk in Romania (1000 T)	Year	Goats' collection milk in Romania (1000 T)
2003	5.50	2010	3.86
2004	6.70	2011	3.37
2005	4.90	2012	4.68
2006	3.00	2013	7.12
2007	4.25	2014	15.00
2008	4.03	2015	16.83
2009	4.01		

Data Source: EUROSTAT NewCronos (apro_mk_pobta and apro_mk_farm)

Evolution regarding collection of goat milk in Romania, relatively small quantities denotes a certain socio-cultural aspect related to this niche of modern agriculture. A more expensive product produced in smaller quantities than cow's milk or sheep's, goat's milk, in terms of development of its collection in Romania shows the same trend of growth especially in the last 5 years interval where a continuous growth from 3.37 in

2011 to 16.83 (1000T) in the year 2015. The years of crisis impacting negatively on the overall quantity of collected milk.

Table 6. Buffalos' collection milk in Romania (1000 T)

Year	Buffalos' collection milk in Romania (1000 T)	Year	Buffalos' collection milk in Romania (1000 T)
2003	3.33	2010	1.39
2004	7.80	2011	0.96
2005	6.84	2012	1.11
2006	5.00	2013	1.28
2007	4.69	2014	1.40
2008	3.54	2015	1.42
2009	2.14		

Data Source: EUROSTAT NewCronos (apro_mk_pobta and apro_mk_farm)

Regarding developments buffalo milk collection, the general trend of the time analyzed, namely 2003-2015 is totally different from everything I've presented so far, in the sense that although 2004 present values twice higher than year previous general picture described showed a strong trend of decreasing value at year-end 2011 0.96 (1000T) after a period of continuous decline from 2007 to 2011. 2012, provides figures in return but much smaller than those recorded in the years 2004-2005.

Table 7. Drinking milk in Romania (1000 T)

Year	Drinking milk in Romania (1000 T)	Year	Drinking milk in Romania (1000 T)
2003	124.56	2010	223.18
2004	150.90	2011	220.46
2005	159.46	2012	208.11
2006	173.87	2013	219.03
2007	182.66	2014	250.46
2008	196.69	2015	259.51
2009	221.92		

Data Source: EUROSTAT NewCronos (apro mk pobta and apro mk farm)

According to data provided by Eurostat, for the production of drinking milk in the range between 2003 and 2015 shows an evolution that we analyze this: between 2003 and 2010 is an increase in proceeds from 124.56 (1000T) from 223.18 at the end of 2010. the year 2012 recorded a decrease over the previous year, production reverting to an important trend in the last three years. Positive trends show the amounts reported

Vol. 2 (4), pp. 172-186, © 2016 AJES

statistically a sector with high potential, with a growing market, with values increasing individual consumption.

Skimmed milk in Romania Skimmed milk in Romania Year Year (1000 T)(1000 T)2003 1.23 2010 : c 2004 2.10 2011 : c 2005 2.39 2012 5.72 2006 3.54 2013 2.69 2007 2.54 2014 3.48 2008 4.12 2015 2.64 2009 8.72

Table 8. Skimmed milk in Romania (1000 T)

Data Source: EUROSTAT NewCronos (apro_mk_pobta and apro_mk_farm)

Evolution of production of skimmed milk in Romania deployment has at least interesting statistic in that 2003, show an increase in quantities 2004, 2005, 2006, 2007, 2008, 2009 while after 2012 the trend is downward with a high probability to keep it for the next period. From the point of view of consumption it is noteworthy that, traditionally, in Romania skim milk consumption is lower than that of whole milk, for example. Sure, these quantities must be viewed contextually, they depend on certain factors and especially how to structure the categories of milk origin.

Year	Acidified milk (yoghurts and other) in Romania (1000 T)	Year	Acidified milk (yoghurts and other) in Romania (1000 T)
2003	62.89	2010	148.32
2004	85.50	2011	146.89
2005	85.50	2012	153.11
2006	108.46	2013	166.45
2007	130.87	2014	166.00
2008	143.58	2015	190.52
2009	146.37		

Data Source: EUROSTAT NewCronos (apro_mk_pobta and apro_mk_farm)

Evolution of production of yoghurts describes a general upward trend in the analyzed interval. Between the values for 2003 and those for 2015 are significant differences. The economic crisis has not impacted significantly in terms of production of yoghurts 2011 being the only year with a slight decline in terms of production volume.

Table 10. Butter – Total in Romania (1000 T)

Year	Butter – Total in Romania (1000 T)	Year	Butter – Total in Romania (1000 T)
2003	5.34	2010	9.75
2004	11.30	2011	9.45
2005	11.78	2012	9.29
2006	7.97	2013	9.80
2007	8.23	2014	10.59
2008	9.20	2015	11.20
2009	10.49		

Data Source: EUROSTAT NewCronos (apro_mk_pobta and apro_mk_farm)

Butter production follows the general trend of other milk derivatives, those overall growth over the years analyzed from 5.34 in 2003 to 11.20 (1000T) in 2015. The years 2010-2012 marked a decline followed by a revival we approach the production situation in 2005, when it recorded the highest value of the range presented.

4.3. The production of milk and prices, on milk types between 2009–2012, the recession period

Between 2009 – 2012 the whole production of milk in Romania had an annual growth rhythm of (-3%), from 5.3 mil tons in 2009 to 4.8 mil tons in 2012. The important production increase is recorded for goat milk, but the reporting basis is low, because the goat milk represents only 6.5 % of the whole milk production in Romania.

The value of the milk production was of 1.2 mld \in in 2012, meaning an average price of 1.12 RON (0.25 \in) / liter of milk.

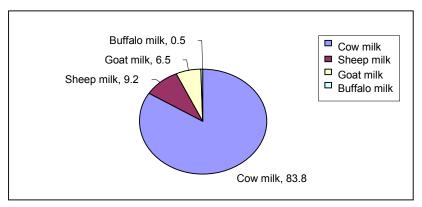
Table 11. The milk production on milk types '000 tons

	2009	2010	2011	2012	CAGR
Cow milk	4.654	4.500	4.075	4.006	-5%
Sheep milk	432	430	404	443	+1%
Goat milk	169	222	229	312	+23%
Buffalo milk	28	21	19	22	-8%
TOTAL milk production	5.283	5.173	4.727	4.783	-3%

Production value, at producer price (mil €)

TOTAL MILK	1.285	1.113	1.250	1.208	-2%
+ given subventions	58	13	0	0	

Data Source: The National Institute of Statistics

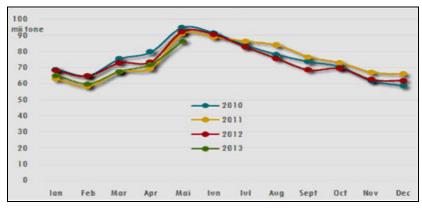


Data Source: The National Institute of Statistics

Figure 1. The structure of milk production on milk types 2012

4.4. The seasonality of milk production and collection during the critical 2010-2013

The quantity of milk collected by processors during summer is with 50% greater than during winter, exactly opposite to the demand of dairy products (higher demand during winter than during summer).



Data Source: The National Institute of Statistics

Figure 2. The seasonality of cow milk collection

5. The use raw milk 2009 - 2012

5.1. Milk destination

Deliveries to the free market situation, namely the processing sector are generated by the difficulties encountered by small-scale producers particularly caused by:

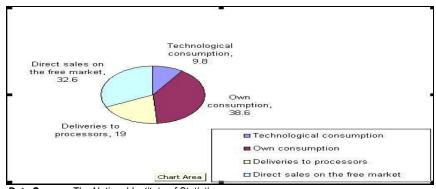
- Seasonality of the tender offer and the low individual offer;
- Lack of storage, refrigeration;
- The prices that often do not cover production costs;
- A lack of criteria for payment of raw milk by its quality (different situation after 2007);
- Persistent late payment method producers to processors, often reinvesting profits in the business, in some cases "forgetting" dairy farming.

All this has led to maintaining a high level of self-consumption between 35-40% which strengthens the idea of producing for their own needs and not for the market - causing the subsistence nature of most diary cows' holdings. The main problem of the milk field continues to be the collection of milk, and the charges on both milk producers and economic operators specialized in its processing. According to this, the investments directed to this segment supported by milk processors would produce benefits for all operators in the system and even individual end users, but especially for the collection. Today consumers continue to buy milk and dairy products in small amounts at relatively high price because of this vicious circle less milk, high price, and low consumption -

high price because of this vicious circle less milk, high price, and low consumption - less money for proper processing of milk, raw materials in large quantities, affecting all agents and specialized companies involved. Dairy production in this situation cannot know a spectacular evolution in the short term.

In terms of limited competitiveness in the system, domestic operators must also face the external offer of dairy products, which generally do not fall under the same parameters. Dairy products with a high degree of processing such as all types of cheese will begin to cover increasingly more solvent domestic demand due to an increase in competitiveness and an ensured diet of European standards. Although it is estimated that raw milk production will drop a little slow, the evolution of the processing sector will be based mainly on self-consumption decrease and even technological consumption by replacing natural milk in feeding calves with nutritional substitutes, and as a consequence, on increasing the milk quantities delivered for processing. Estimates of potential mutations that can occur during immediate period and internal reserves analysis from the supply of raw milk available, we found that it can provide an increase in the total amount of delivered raw milk processing sector up to 40% of quantity of milk processed in the year 2012.

Vol. 2 (4), pp. 172-186, © 2016 AJES



Data Source: The National Institute of Statistics

Figure 3. Milk destination – raw milk produced in Romania

The largest quantity of milk collected in the Central Region (32%), North West (22%) and North East (21%). Moreover, these regions are also the largest dairy companies:

- Center: Albalact, Hochland, IL Mures (Friesland), Covalact, Prodlacta, Olympus, Indlacto, Gordon Prod. Therezia.
- Sanlacta, Unilact, Miradatod;
- North-West: Friesland Romania (inclusiv Napolact), CarmoLact Prod, Romfulda, Lech Lacto, Bonas.
- Norh-East: Dorna Lactate, Raraul, Lacto Solomonescu, Bucovina, Five Continents, Ilvas, Spicul 2, Coza Rux;

6.Price

In the last year of recession in Romania the price of milk delivered to processors increased from 0.9 RON/kg in 2009 to about 1,1 RON/kg (an increase over 20%), but the price in euro increased by 17% from 0.21 €/kg to 0.25 €/kg during that critical period of time.

Table 12. Evolution of the average price of milk delivered to processors 2009-2012

	2009	2010	2011	2012	CAGR
Cow milk	0,90	0,94	1,08	1,11	+7%
Sheep milk	1,41	1,48	1,81	1,87	+10%

Data Source: The National Institute of Statistics

7. Conclusions about the evolution of dairy market in Romania during the National Recession

The 2009-2012 period provides a picture of a market "agitated" dynamism intense battle to win market share due to increasing competition and domestic producers and import products. This environment is sometimes sprinkled with stable point where some companies try consolidation of position. Context produce new investments increase in volume and in value. Besides drinking milk, the Romanian dairy market is diverse, but few players are able to impose more than one category. For most independent dairy processors remain only two choices: bankruptcy or association with a stronger partner in financial terms. Great challenges of this period consist of increasing raw milk prices and lower sales, plus efforts to maintain market share in new and challenging business conditions.

8. Research discussions

The "Milk Package" from the new Regulation of the European Commission is designed so as to ensure favourable long-term perspectives for the dairy farm sector, after the milk quota system removal beginning with the year 2015. The Regulation was published on March 30, 2012, with certain issues that were enforced in April 2012 and in October 2012. The package provides for written contracts between the milk producers and processors, as well as the possibility to collectively negotiate the contractual clauses through the producers' organizations. At the same time, it establishes the new EU norms specific for the inter-professional organizations. The package presupposes a series of measures enhancing the milk market transparency; these measures will be applied until the first half of the year 2020. The Commission is mandated to report on the market situation and the implementation of measures in 2014 (already in the past) and 2018. The report, which will be made by the Council and the European Parliament, will assess in particular the effect of these measures on the dairy farmers and milk production from the less-favoured regions and will cover the potential incentives to encourage farmers to conclude production agreements in common. For a rational development of production and for a decent life standard for the dairy producers, their bargaining power with the processors should be enhanced, which would lead to a more equitable distribution of the value added along the supply chain.

9. Final conclusions

Compared to the farmers from other sectors, those from the milk sector have a less flexible behaviour as regards production adjustment to the changes on the market: the production remains constant; it cannot be reduced or re-oriented on short term, while the high costs of investments in equipment and animals make it difficult to change the nature of production.

Vol. 2 (4), pp. 172-186, © 2016 AJES

The growth of drinking milk products, of cheese in the last 3 years especially in 2015 was the result of economic growth and a recovery of incomes, with changes in purchasing and consumption habits. The dynamics had strong support from the perception of drinking milk products as healthy and the expansion of modern grocery retailers, which encouraged the change in purchasing habits from unpackaged to packaged products and from cheap products available in independent small grocers to more sophisticated and expensive ones. Yoghurt and sour milk products continued to enjoy strong popularity, being a traditional product across the country and all income segments of the population. The impressive current value growth recorded by other dairy was the result of economic growth and recovery of incomes, especially in larger cities, which almost account for the highest proportion of sales of other dairy. Meanwhile, rural consumers continued to rely on own farm resources for cream and fromage frais and quark. Therefore, consumption of unpackaged cream and plain fromage frais and quark was high and embraced by consumers of all incomes due to the perception of being natural and healthy.

According to Prospects Dairy will continue to be seen as healthy and the fact that consumption has a strong tradition is expected to support the forecast period growth of its packaging which is expected to be at a CAGR of 5%, to reach total retail volume sales of 2.0 billion units in 2020. The main source of this growth will be the consumer switch from artisanal dairy to packaged dairy.

References

Briciu S., Căpușneanu S., Rof L.M., Topor D. (2010). *Contabilitaea și controlul de gestiune. Instrumente pentru evaluarea performanței entității*, Editura Aeternitas, Alba Iulia

Briciu, S. (2006). Contabilitate Managerială, Editura Economica, București.

Grosanu, A. (2010). Calculația costurilor pe centre de profit, Editura Irecson, București, 2010

Lipparini, L. (2000). Imprenditori e Imprese, Editura II Mulino, Bologna

Lipparini, A. (2002). La Gestione Strategica del Capitale Intelletuale e Del Capitale Sociale, Il Mulino, Bologna

Otiman, P.I., Toderoiu, F., Sima E., (coord.), Grodea M. (2012). *Modificări cantitative și calitative ale ofertei de lapte în România -o analiză regională/Economia agroalimentară și dezvoltarea rurală în România implicații ale politicii agricole Comune asupra securității alimentare*. Editura Academiei Române. Bucuresti.

Tabără N., Briciu S. (coordonatori) (2012). Actualități și perspective în contabilitate și control de gestiune, Editura TipoMoldova, Iași.

Topor D., Căpușneanu S., Puţan A. (2012). *Evolution and Performance analysis for wine Entities in Romania*, Annales Universitatis Apulensis Series Oeconomica, Volum 2.

Michael S., (2013), Inteligenta Pietelor, Editura Curtea Veche, Bucuresti.

Other references

www.albalact.ro

www.covalact.ro

www.dorna.ro

www.danone.ro

www.napolact.ro

www.capital.ro