



The Role of Milk Marketing Cooperatives in the Recovery of the Armenian Dairy Sector



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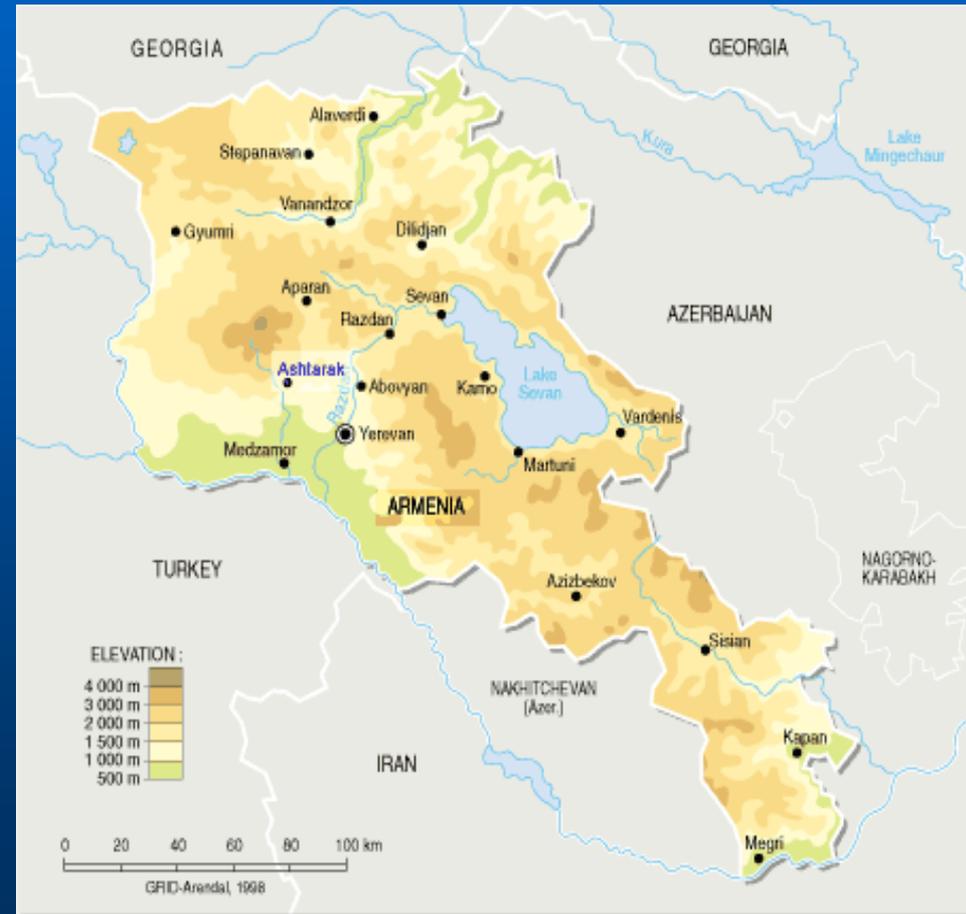
Objectives of the study

- This paper aims at studying and revealing the role of the milk marketing cooperatives in the recovery and growth of the overall dairy chain in Armenia.
- The study reviews and analyzes the outcomes of the Cooperative Development Program implemented by the USDA Marketing Assistance Program and continued by the Center for Agribusiness and Rural Development.
- The paper also aims at studying the relationships between member farmers and milk marketing cooperatives, and reveals the determinants of farmer satisfaction with their current relationships.

Background: Armenia in Transition

- During the Soviet period Armenia was an industrialized country with a large rural population. Armenia was exporting its outputs chiefly to the other “brother” republics, and in turn relying on them for key inputs.

- The market-oriented reforms introduced in 1991-92 comprised the privatization of many productive resources and organizations.



Problems During Transition

- Breakdown of the relationships of farms with input suppliers and output markets.
- The result is that many farms and rural households face serious limitations in accessing essential inputs (feed, fertilizer, seeds, chemicals, etc.) and selling their output.
- Widespread forms of contracting problems like long payment delays or non-payments for delivered products (Swinnen, 2005) were apparent in Armenia during the transition.

Dairy Industry in Armenia

Prior to Transition

- Annual capacity of 320000 tons of dairy production.
- 27000 tons of cheese and 13000 tons of ice-cream.
- 42 state-owned dairies.

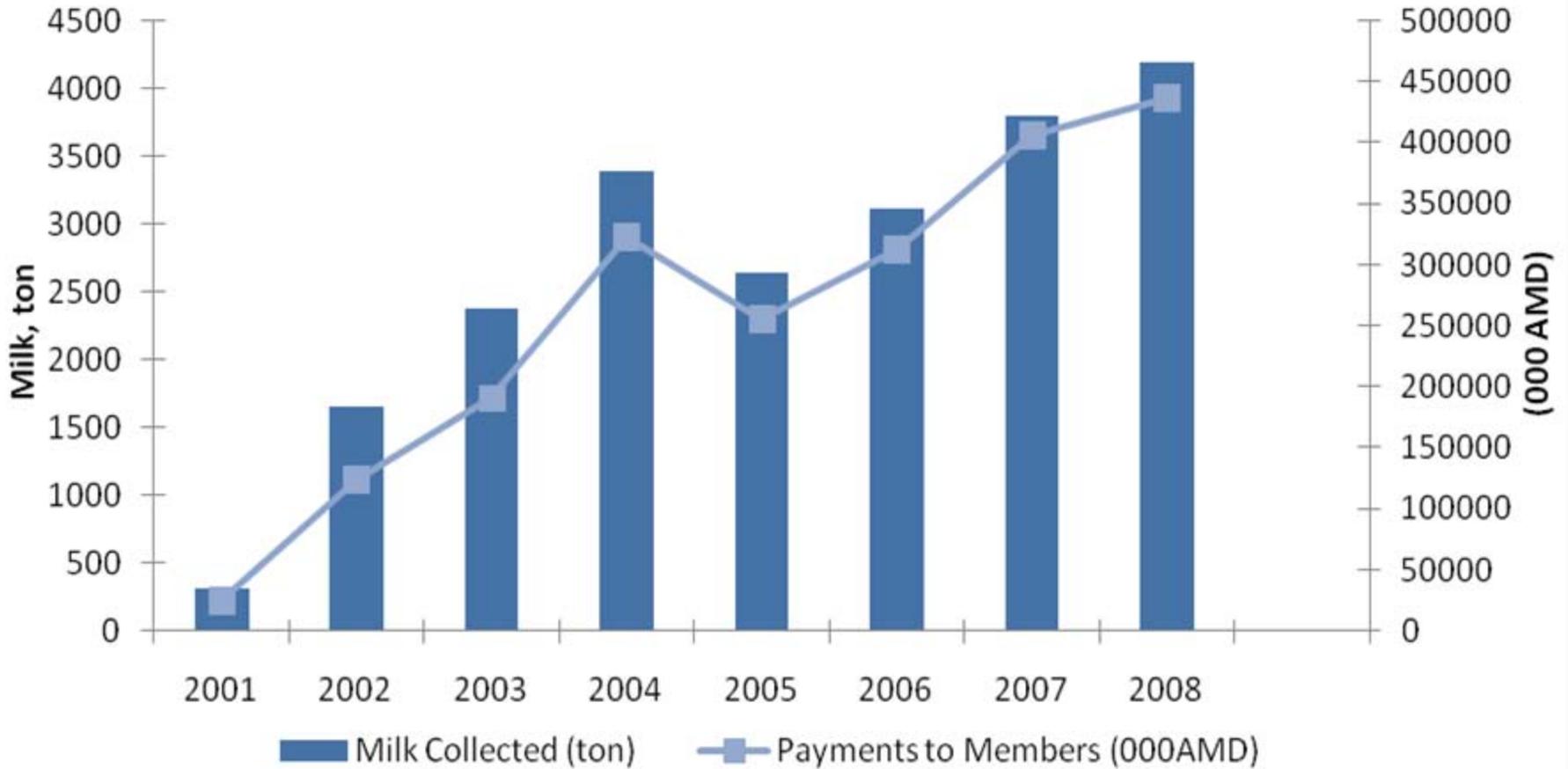
After the Transition

- All former 42 state-owned dairies have been privatized, many of them do not operate at all.
- Many small plants exist, which produce salted cheese under inadequate hygiene conditions.
- Several large dairy processors produce a wide range of dairy products: sour cream, yogurts, milk, ice-cream and cheeses.
- No FDI and JV in the dairy sector.
- Emergence of milk marketing cooperatives.

CARD Cooperative Development Program

- The role of Center for Agribusiness and Rural Development (CARD) Foundation, as a third – party facilitator in the development of the dairy marketing channels in Armenia has been and remains significant.
- CARD contributed to the development of the dairy marketing channels in Armenia by establishing milk marketing cooperatives and milk collection centers in many villages across the country.
- Currently there are almost 30 milk marketing cooperatives throughout Armenia.

Milk Collection and Payments by Selected Cooperatives, 2001-2008



Data and Research Methodology

- The research was based on survey data. The survey was conducted in Armenia in the scope of the “**Supporting the International Development of CIS Agriculture**” (SIDCISA) project, funded by EU INTAS.
- A total of 300 dairy farmers were drawn randomly from all regions of Armenia which have significant commercial milk production, based on proportions given from statistical data on milk production. The sample turned out containing 238 individual farmers (non-members) selling their milk to dairy processors and 62 cooperative member farmers selling their milk to cooperatives.
- Several papers have been released in the scope of the findings of the SIDCISA project (Gorton et al. 2007, Dries et al. 2006). However this study mainly concentrates on data collected from Armenia with main emphasis on the relationships of the *member farmers and cooperatives* as their main buyers as well as provides interesting comparisons with the relationships *individual farmers have with their main buyers (dairy processors)*.

Methods

- First a multivariate regression analysis, using the ordinary least square method, has been developed to test whether the members of cooperatives have better bargaining power, are paid higher for their milk by the cooperatives and have higher welfare.
- Milk price is the dependent variable and the independent variables are “time with main buyers in months”, firm’s organizational form (A dairy processor is the reference category), ten regions of Armenia (Tavush region is the reference category), and finally a dummy variables indicating whether the payment for milk was received after or before the delivery.

Methods cont. - Hypothesis

- The members of a cooperative are more likely to be more satisfied from the relationship with main buyer (Cooperative),
- The members of a cooperative are more likely to have the buyer (Cooperative) visit premises to help improve performance,
- The members of a cooperative are more likely to have the buyer (Cooperative) provide training or education,
- The members of a cooperative are more likely to have main buyer contribute to increasing of the output,
- The members of a cooperative are more likely to have the actions of my main buyer help improve the quality of the produce,
- The members of a cooperative are more likely to have trustworthy main buyer (Cooperative),
- Being able to sell to a cooperative, members have improved the living standard of their household,
- Being able to sell to a cooperative, members have improved the profitability of their farm operations.

Results

- The members of cooperative on average have received 9.66 Armenian drams more per liter of milk than a farmers selling to a dairy processors.
- Milk prices were different across regions as well. Farmers from Aragatsotn (ARGT), Ararat (ARRT) and Kotayk (KTYK) regions were paid the highest rate for their milk.
- Summary of the multivariate regression analysis proves that the members of cooperative have better bargaining power, get paid higher for the milk they produce and as a result have higher welfare.

Results

- The odds of overall satisfaction from the relationship with the main buyer is 3.29 times higher for the member of cooperative compared to a dairy processor.
- The actions of main buyer significantly increase the output and improve the milk quality for the member of cooperative; the odds are 2.6 and 2.25 respectively.
- The likelihood of having more trustworthy buyer is 3.1 times higher for the member of cooperative.
- The results of the ordered regression analysis also confirm that the welfare and standards of living is much higher for the member of cooperative. The odds of improved living standards and improved profitability are respectively 4.96 and 4.74 time higher for the member of cooperative.

Support Measures: COOP vs. Processors

Possible Support Measure	COOP		IND	
	YES	NO	YES	NO
Credit, Loans and Forward Payments	54.84	45.16	24.37	75.63
Physical Inputs	51.6	48.39	7.14	92.86
Machinery	6.45	93.55	0.42	99.58
Transportation	6.45	93.55	23.95	76.05
Specialized Storage	9.68	90.32	0.00	100.00
Guaranteed Prices	41.94	58.06	47.90	52.10
Veterinary Support	46.77	53.23	17.65	82.35
Business and FM Support	14.52	85.48	1.26	98.74
Harvest & Handling Support	8.06	91.94	1.26	98.74
Loan Guarantees	16.13	83.87	0.84	99.16
Investment Loans	6.45	93.55	0.42	99.58
Quality Control	85.48	14.52	81.93	18.07
Prompt Payments	90.32	9.68	86.97	13.03
Market Access	64.52	35.48	33.61	66.39

Contractual Relationships

- Contractual relationships were more developed within the cooperatives. The survey revealed that about 60% of the coop members have oral contracts, only 31% have written contracts with their cooperatives. Only 9% of the members had no preliminary arrangement for their relationship.
- About 30% of non-member farmers had no contract with their main buyers; 40% had written contracts and the remaining 30% had oral contracts.
- Although the majority of coop farmers had only oral contracts, it didn't stopped them receiving the support measures. This fact highlights the role and the importance of trust between the member and the cooperative.

Conclusions

- With this paper we once again advocate to continue and further develop cooperative movement and extend it over other aspects of the agricultural sphere enabling farmers to further integrate themselves in the agri-food chains and networks and improve their incomes.
- CARD and other organizations and NGOs active in the development of the cooperative movement in Armenia should regularly conduct trainings and consulting for both member and non-member farmers on “Cooperative Principles and Identity”, “Cooperative Management”, “Members’ Roles and Responsibilities” and similar topics.
- In parallel, a lobbying campaign must be formulated by farmer organizations and cooperatives towards developing a “Law on Agricultural Cooperatives” which does not exist in Armenia.

Conclusions

- The research findings also revealed that being a member of cooperative, farmers became more motivated to invest more in their farms.
- In particular, about 42% of the coop members stated that they have invested in new shed for cattle, about 65% have enlarged their cattle sheds and 39% have purchased new milking cows. More than 20% of the member farmers have bought calves, modernized the cattle stall and purchased agricultural equipments.
- The same indicators for non-member farmers were only the half of what coop members invested.

Thanks for your attention !!

