



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

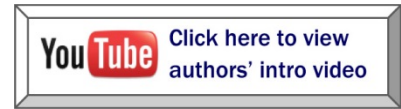
Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



International Food and Agribusiness Management Review
Volume 18 Issue 1, 2015

The Case of Strategic Management and Marketing Consulting for ATO: Doing Business in Tajikistan

Brian K. Coffey

*Lecturer of Economics, Keiin Institute of Business and Sciences,
2A Nekrosova Street, Ivanovka, Kyrgyzstan*

Abstract

This case offers students the simulation of providing consulting to a small, newly-formed and struggling dairy processor in the developing country of Tajikistan. The task is to conduct a profitability analysis using data provided by the firm. This can be accomplished by calculating the contribution margin of each product and estimating monthly break-even production levels for various scenarios. The information, combined with the background provided in the case, can be used to develop marketing and production strategies. Completing this analysis requires working with imperfect data and making appropriate assumptions. The case highlights the reality of challenges faced by small-scale agribusinesses in emerging economies.

Keywords: profitability analysis, emerging economies, strategic management

^①Corresponding author: Tel: + 996.556.08.26.00
Email: B. K. Coffey: brian.coffey@keiin.kg

IFAMA Agribusiness Case 18.1B

This case was prepared for class discussion rather than to illustrate either effective or ineffective handling of an agribusiness management situation. The author(s) may have disguised names and other identifying information presented in the case in order to protect confidentiality. IFAMA prohibits any form of reproduction, storage or transmittal without its written permission. To order copies or to request permission to reproduce, contact the IFAMA Business Office. Interested instructors at educational institutions may request the teaching note by contacting the Business Office of IFAMA.

Introduction

Azam is the founder of a small, newly-formed dairy processing firm located in the Sughd region of northern Tajikistan. He has hired you as a business consultant to evaluate the firm and help him map out a plan for the future. Scheduling a meeting with Azam was not easy. He answered his cell phone in the delivery truck and had to yell to be louder than the traffic noise. He had been at the plant to oversee the morning production run and left shortly after that to deliver products around the city and to outlying villages. He repeats this harried schedule several times each week. He finally makes it back to the plant to meet with you in the afternoon. The two of you sit on metal chairs in a small office with no air-conditioning. By the time the tea comes, you are ready to move outside and continue the conversation.



Source. Reprinted with permission from Nations Online Project: Nationsonline.org

Note. The city referred to in the case study is Khujand.

Background Information

Azam worked for several years for the largest dairy processor in the Sughd Region of Tajikistan. He learned about the technical side of making many dairy products. After some time, he decided he wanted a business of his own and set out to create his own brand of dairy products. His aunt was willing and able to finance a large portion of the business through personal investment and

taking out two loans in her name. She has little or no knowledge of dairy processing but trusts Azam and wants to be part of the business. They jointly agreed to call the company “ATO”¹ and they began operations about one year ago. They both see the business as an opportunity to provide healthy food to their local community. Azam traveled to China and brought back processing equipment. Capital outlays for setting up the plant were estimated to be \$120,000 USD. This is a major investment in Tajikistan where half the population lives in absolute poverty and per capita Gross National Income (GNI) is about \$800 USD (at the time of this investment). It is estimated that a million citizens of Tajikistan (most of whom are young, energetic men like Azam) have migrated from Tajikistan to Russia in order to find jobs. In Russia, these migrant workers take on menial labor and endure harsh working conditions. The specific case of ATO is small in scale but the concept of developing successful small to medium enterprises that add value to commodities has significant implications for providing domestic jobs in Tajikistan and increasing standard of living.

The plant has sufficient equipment to process about five metric tons of raw milk per day. Presently, their production levels are far below capacity. They only accept and process milk every other day. There are many obstacles keeping ATO at this low level of production. Competition is a major challenge. Many dairy processing firms have appeared due to the increased domestic demand for dairy products. Tajik people see dairy products as natural and healthy. Raw milk has recently become the fifth most valuable agricultural commodity produced in Tajikistan. Azam estimates that in the Sughd Region there are at least ten dairy processors. Almost all of these are larger than ATO. The largest processor, for which Azam worked, is also the most well-known among consumers and among dairy farmers. They are able to buy much of the milk from the surrounding towns and villages. ATO, on the other hand, has struggled with both the quantity and quality of their milk supply. Production and sale of raw milk is very fragmented. Independent agents collect milk from households and sell it to dairy processors. Many households are milking less than ten cows. ATO buys milk collected by these independent agents. There are also internal challenges. Utilities, especially electricity, can be sporadic. Power cuts, scheduled and unscheduled, often delay production or result in spoiled products. ATO rents a production facility that was established decades ago when the area was part of the Soviet Union. Refrigeration systems work but require frequent maintenance. As Azam tells you more, you gain a fuller understanding of how challenging the business environment is.

Azam’s aunt has grown impatient to see profits. She wants to ensure that ATO is profitable and has assumed the role of plant manager. She will focus on quality control and operations. Profitability is, so far, a nebulous concept due to the disarray of financial records. Azam spends so much time and energy selling and delivering products that he has no time left for record keeping or even basic financial analysis. Azam knows that ATO is not making money but he has no idea how much it is losing or what it will take to see a profit.

Data for Prices, Costs, and Input Requirements

With a good understanding ATO’s history, you delve into the technical and financial side of the business. Information from financial records and employee interviews yield average levels of monthly fixed costs (Table 1).

¹ Ato is a Persian word that is loosely translated as “a gift from God”.

Table 1. Monthly Fixed Costs for ATO

Expense	Tajik Somoni*	US Dollars
Rent	950	200.00
Electricity	1,100	231.58
Diesel Fuel	1,650	347.37
Coal	520	109.47
Daily Lunch**	500	105.26
Water	60	12.63
Cleaning Equipment	250	52.63
Automotive Costs	500	105.26
Plant Maintenance	500	105.26
Lab Equipment	100	21.05
Taxes	1600	336.84
Regulatory Expenses	650	136.84
Employee Salaries**	4,750	1000.00

Note. *At the time of this case 1 US Dollar = 4.75 TJS

**In a continuation of Soviet tradition, lunch is provided for all employees each day. Employees work on the basis a monthly salary.

A review of the firm's data reveals the per-unit costs of raw milk, other inputs, and packaging materials (Table 2).

Raw milk is processed differently to arrive at different end products. Two issues that affect all products are level of milk fat and waste. On average, the level of fat in raw milk purchased by ATO is about 3.6%. However, the level of fat in the milk is not consistent across seasons and is often undesirably low. This inconsistency affects the consistency and quality of ATO products. Regardless of how the milk is processed, about 2% is wasted through spillage or other mistakes. Specialized processing requirements result in different variable costs for each ATO product.

Table 2. Cost of Milk, Additives, and Packaging Materials

Material	Price in TJS*	Price in US Dollars	Units
Milk	1.5	0.32	L
Powdered Milk	30	6.32	kg
Stabilizer	35	7.37	kg
Bacteria Culture			
for kefir	78	16.42	package**
for sour cream	60	12.63	package**
Fat Additive	14.25	3.00	kg
Seasoning for Dughob	0.05	0.01	enough for 0.9L of dughob
Plastic Container			
200 g	0.24	0.05	one container
400 g	0.29	0.06	one container
Foil Lid	0.07	0.01	one lid
0.5L Soft Pack	0.09	0.02	one pack
1L bottle	0.52	0.11	one bottle
0.9L bottle	0.53	0.11	one bottle
ATO Label	0.06	0.01	one label

Sour Cream

Even the richest milk received by ATO has inadequate fat to result in thick, appealing sour cream. They must add fat. Given the earlier assumption about level of milk fat, they add 114 kg of fat per metric ton² of raw milk if it is to be made into sour cream. To make the texture of the product more desirable powdered milk and stabilizer are both added at the rate of 1% of the raw milk to which it is added (e.g., 10 g per 1000 L). This means that 1000 L of raw milk results in more than 1000 L of sour cream. Bacteria are needed to culture the sour cream and are added during the processing at the rate of one package per metric ton of milk. Sour cream is sold in 200-gram and 400-gram containers. Each container has the ATO brand printed on it and requires a foil lid.

Kefir

Kefir is a product similar to yogurt but is thinner and is served as a drink in Tajikistan. Kefir also requires bacteria to ferment but it is not necessary to add additional fat. Powdered milk and stabilizer are added in the same proportions as they are for sour cream. Kefir is sold in 0.5 L soft packs and 1.0 L bottles. Soft packs have the ATO brand name and logo printed on them. ATO purchases clear plastic bottles and affixes an ATO label on them.

Dughob

Dughob³ is a slightly spicy dairy drink. It is processed by simply adding water and seasoning to kefir. One liter of prepared kefir will yield 1.8 L of dughob. Dughob is sold in special 0.9 L bottles. The bottles are plain and an ATO label is pasted on during processing. ATO dughob is fairly popular among local men. However, it is a seasonal product. People only drink it during the hot summer months of July and August.

Table 3. Wholesale Prices of ATO Products

Product	TJS	US Dollars
200g Sour Cream	1.55	0.33
400g Sour Cream	2.55	0.54
0.5L Kefir	1.65	0.35
1.0L Kefir	3.00	0.63
Dughob (0.9L)	3.00	0.63

Debt

The two loans Azam's aunt has taken on total \$40,000 US. The economic climate in Tajikistan is such that cost of capital is quite high. She was able to borrow \$25,000 US at 25% annual interest with a 24-month payback period. She then borrowed \$15,000 US from a different lender at 27.48% annual interest to be paid back over the next 18 months. Borrowing capital seemed necessary to buy equipment and get started. However, the monthly payments (Tables 4 and 5) are now a strain on cash-strapped ATO.

² A metric ton of milk weighs 1000 kg. Though not exact, it is common to assume the volume of a metric ton to be 1000 L of milk.

³ Dughob is the Tajik name for a dairy beverage very similar to *ayran*, which is extremely popular in Turkey and among Turkic peoples around the world.

Table 4. Repayment Schedule for Two-Year \$25,000 Loan

Month	Principle Payment	Interest Payment	Total Payment
1	0	521	521
2	1,086	521	1,607
3	1,086	498	1,584
4	1,086	476	1,562
5	1,086	453	1,539
6	1,086	430	1,516
7	1,086	408	1,494
8	1,086	385	1,471
9	1,086	362	1,448
10	1,086	340	1,426
11	1,086	317	1,403
12	1,086	295	1,381
13	1,086	272	1,358
14	1,086	249	1,335
15	1,086	227	1,313
16	1,086	204	1,290
17	1,086	181	1,267
18	1,086	159	1,245
19	1,086	136	1,222
20	1,086	114	1,200
21	1,086	91	1,177
22	1,086	68	1,154
23	1,086	46	1,132
24	1,086	23	1,131

Table 5. Repayment Schedule for Eighteen-month \$15,000 Loan

Month	Principal Payment	Interest Payment	Total Payment
1	0	344	344
2	0	344	344
3	787	344	1,130
4	805	325	1,130
5	823	307	1,130
6	842	288	1,130
7	861	269	1,130
8	881	249	1,130
9	901	229	1,130
10	922	208	1,130
11	943	187	1,130
12	964	166	1,130
13	986	144	1,130
14	1,009	121	1,130
15	1,032	98	1,130
16	1,056	74	1,130
17	1,080	50	1,130
18	1,110	25	1,361

Sales and Marketing

After getting a feel for the operations of the business, you talk with Azam about how he markets and sells ATO products. Presently, ATO products are sold through a local supermarket chain (four or five stores throughout the city of Khujand) and a handful of small, independent shops. These connections have been made mainly through Azam's network of friends. Some of the store owners have become irritated by the inconsistent supply and the varying quality of products. Azam is working to convince them that ATO will improve in these areas. However, most clients are reticent to make big orders.

Due to the competitiveness of the market for dairy products and very low brand awareness of ATO among consumers. Consumers of dairy products in Tajikistan largely view these products as commodities and will readily substitute among brands based on price. Azam has simply priced his products at the levels of his competitors. Local shops apply a standard mark-up to all the products and they are sold alongside other local brands. Earlier, you explored local stores and noticed ATO products stacked erratically in coolers, mixed with other brands, and sometimes even hidden by other products. When you ask Azam about this he says he has seen it too but has little bargaining power with the stores to change the situation.

Planning for the Future

A review of the firm's data shows that, on average, ATO processes 20,500 L of raw milk per month (Table 6). Azam indicates that he knows production must increase but does not have a clear understanding of exactly how much milk he needs to process to be profitable. It is obvious that he feels a lack of control of the business. He is working daily. Money is going out and coming in but Azam does not have an idea of the net profit or loss that is coming from the effort. He wants you to provide some objectivity in determining whether ATO can be profitable. Another factor is the relationship with his aunt. It seems she has lost patience with the idea of investing. Azam needs to be able to show here where the business is going and how ATO can be profitable. He needs some concrete data to help him plan his next steps.

Table 6. ATRO Production Levels for a Typical Month

Product	Raw Milk Used (L)
200g Sour Cream	3,000
400g Sour Cream	2,500
0.5L Kefir	7,000
1.0L Kefir	8,000
Dughob (0.9L)	0*
Total Raw Milk	20,500

Advising ATO

As Azam's management consultant, it is your task to give him the information he needs to accurately assess the health of ATO and make decisions about how to go forward. As a starting point identify:

1. The returns over variable cost for each product
2. Returns over all costs for a typical month of production
3. The quantity of milk the ATO must process in a month to break even

Once you have the break-even analysis completed, use it to give Azam a plan for the future. Help him to think more broadly in terms of how he can expect to compete in the market he has entered. Offer tactical advice regarding targeting the right products on which to focus. In terms of marketing, what are some simple, inexpensive steps ATO could take? What other advice do you have for ATO?