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Threads for the future: value chain analysis at PCCA☆

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Abstract

Plains Cotton Cooperative Association (PCCA) is a highly successful cotton cooperative that has consistently earned strong returns through value-added approaches. The case focuses on the strengths and linkages in PCCAs main businesses that have made it such a success. This provides an opportunity for students to apply value chain concepts and explore associated issues of vertical scope.
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1. Introduction

Fortune favors the prepared mind – LOUIS PASTEUR[1]

It was a quiet day as Jon Hodges gazed reflectively at the large cotton denim mill that had catapulted Plains Cotton Cooperative Association (PCCA) strongly into value-added processing of its members' cotton. This cotton mill was a key feature of an overall business that had consistently generated over 20% return on equity through well considered risks. More recently, in 1998 a yarn and fabric processing facility had been purchased in South Texas that further expanded PCCAs value-added product offerings and capabilities.

Currently as PCCAs president, Jon has overseen a dramatic shift in the large denim mill's business. Traditionally, all production at the facility had been marketed directly to Levi Strauss and Co. where the company had been regarded as their top quality supplier. However, recently Levi Strauss has fallen on difficult times as its jean lines, which seemed

☆ This case was developed as a basis for classroom discussion rather than to illustrate either effective or ineffective handling of an administrative situation. The opinions expressed are the author's and do not necessarily represent the opinion of PCCA or Texas Tech. University.

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like such a staple product in the 1980s, were faced with declining demand. This led to decreased demand for the mill's denim. Looking to the future, PCCA repositioned itself by developing a sales force (they had not needed one with only one customer) and successfully marketing denim to several new customers. The denim mill continues to be highly profitable.

A key reason for the high profitability is the ongoing focus at PCCA on technical efficiency. Cotton processing into denim or other clothing products is a multi-stage, highly complex process. PCCA focuses on strong performance in technical process of cotton and operating continuously at capacity. This is facilitated by good worker morale at production facilities.

While the CEO does make important decisions, a key aspect of decision-making at PCCA is the need to justify actions to the board and larger group of cooperative members. Major changes would need to be carefully developed, especially given the current profitability of denim operations. However, the weakening of the denim market and their core strengths leads management to consider opportunities to add more value to members' cotton.

Now, Jon considers the future prospects and situation for PCCA. What is the next step for the cooperative? Which value-added opportunities should PCCA investigate and invest in? Are there ways to increase the scope of the business into new cotton-related value-added ventures? Currently, PCCA is very profitable, but agricultural markets, processing technology and demand are highly dynamic, and well considered risk taking should be the future to PCCAs long term competitive success.

2. A history of growth and success

PCCA is a farmer owned cooperative which was founded in 1953 by farmers who wanted the highest price possible when they marketed their crops. Over time, they have grown in their main Texas and Oklahoma membership regions to handle approximately 18% of the U.S. cotton crop. While they sell much of the cotton as a commodity, a key goal has been to produce and market value-added products. Their mission statement succinctly states this aim: ''To add significant value to the cotton marketed for our members by being the supplier of choice to our business partners in terms of quality, service and value''. This value-added effort has been very successful with the PCCA earning over a 20% return on equity in recent years (Table 1).

Table 1
Selected financial ratios for PCCA (all divisions)

	1995	1996	1997	1998
Profit margin (%)	2.4	3.5	3.3	3.7
Total asset turnover (×1)	5.8	4.1	5.2	4.1
Equity multiplier (%)	1.40	1.48	1.23	1.64
Return on assets (%)	14.5	14.4	17.2	15.2
Return on equity (%)	20.3	21.2	21.1	24.9

Source: *PCCA Annual Reports*.

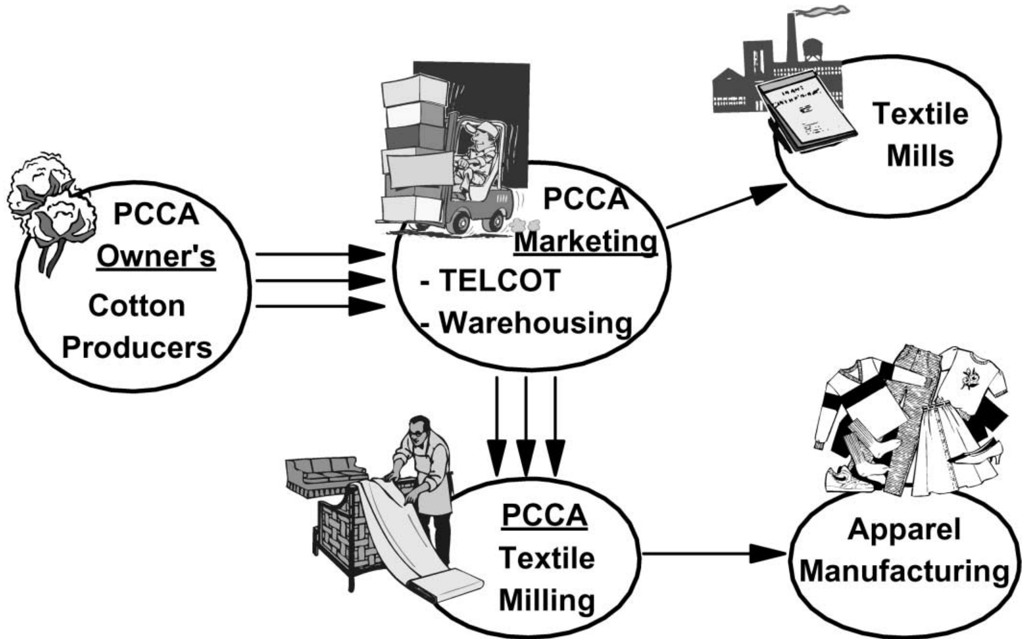

Fig. 1. PCCAs main businesses and marketing channels.

PCCA adds value in several ways as illustrated by Fig. 1. They provide convenient warehousing locations and marketing services (such as TELCOT) that help enable members to increase prices received for their cotton. In addition, PCCA has excellent knowledge of cotton quality availability (due to its large market share) and is able to select raw cotton of desirable quality levels from members' cotton prior to other cotton customers. This not only increases demand for members' cotton (and price paid for members' cotton), but is highly efficient in providing large quantities of cotton with particular quality for milling. Each of PCCAs value-adding areas are facing important changes.

3. The TELCOT system

The first major success of PCCA was in 1975 when the TELCOT system was implemented with the goal of increasing prices for members' cotton through efficient market information and pricing. Essentially, TELCOT is an online, realtime trading system which operates conceptually like the New York Stock Exchange. PCCA servers provide a means for members to market their product and provide information to buyers. This system give producers access to over 50 major international buyers of cotton. TELCOT has been so successful that over 22 million bales of cotton have been traded on this system since 1975 (PCCA webpage). In 1987 to 1988, TELCOT marketing was increased when TELCOT became a marketing option for members of marketing pools in Texas and Oklahoma.

PCCA markets its members' pool cotton throughout the year to get a good average price spread during the year. A pool is thought to have an edge over a producer marketing their own cotton because the pool lets professionals market the cotton (PCCA in this case). This allows producers to focus on cotton production and leave marketing issues to the coop. Furthermore, PCCA can use the futures market to hedge their cotton, which often lowers the risk to producers and the organization. PCCA uses this pool to sell their cotton to U.S. and foreign textile mills, and merchant trade.

Currently, TELCOT receives $4/bale commission for cotton marketed using the service. However, the advent of the internet and improved telecommunications technology raises the possibility of radically reconfiguring this service and lowering costs. Without this, members may consider marketing their cotton through some other method. The extent and cost of this overhaul are currently under review.

In marketing their members' cotton, PCCA evaluates the cotton on a wide variety of important quality traits including strength, color and micronaire differences. The milling operation generally gets "first shot" at the quality received from members with no procurement costs. This reduces direct purchasing costs by around $3 to 5/bale[2] and purchased cotton is conveniently stored at cooperative warehouses.

The existence of the milling operation provides important information about emerging trends in cotton milling. PCCA cotton marketers have used this information to change product offerings to meet new technical needs and changing demand.

4. Value-added cotton processing

The 1987 purchase of the denim mill from American Cotton Growers remains a key turning point in PCCAs history. At this point, PCCA began adding substantial value to members' cotton and added another marketing alternative. This increased demand for member's cotton (thus increasing local cotton prices) and the denim mill had the first opportunity to purchase quality cotton from members. A cooperative member can participate in the "mill option" through investing a $5/bale retain (or equity) in the milling operation that has historically been held for 5 years. This has proven to be very profitable as earnings have been approximately $15/bale return per year.

Through most of its history, this mill had sold almost 100% of its output to Levi Strauss and Co. where they earned the designation as a top quality supplier.[3] In addition, it seemed that Levi Strauss valued the connection to growers and paid PCCA a slight premium for the excellent quality denim supplied. This close relationship changed during 1997 to 1998 when Levi Strauss and Co. fell on hard times with the decline of their brands. Currently, Levi Strauss and Co. remains an important customer and PCCA supplies a strong proportion of their needs. However, PCCA needed to expand demand to keep the mill running at high capacity.

To accomplish this, PCCA needed to develop sales force or purchase a sales force. They investigated several potential opportunities and purchased Mission Valley Fabrics in May 1998. The critical benefit of this was the sales force with excellent contacts to which the denim mill's production could be marketed. The new PCCA marketing effort began

Table 2
Divisional profit margins for PCCA

	1996	1997	1998
Marketing division	0.6	0.9	0.9
Pool division	1.2	1.4	1.3
Warehouse division	17.2	19.1	34.7
Textile division	18.9	16.9	18.4

Source: *PCCA Annual Reports*.

Table 3
Median industry ratios for cotton fabric mills

	1997	1998
Profit margin (%)	2.4	2.3
Total asset turnover (×1)	5.0	3.0
Equity multiplier (%)	2.56	1.80
Return on assets (%)	3.4	4.1
Return on equity (%)	8.7	7.3

Source: *Industry Norms and Key Business Ratios*.

marketing its denim, leveraging its excellent reputation as a top quality supplier to Levi Strauss and Co. This met with strong success because the mill is currently running at 98% of capacity and profit margins have remained high (as shown by Table 2). Evidence of this success is shown by a comparison of the profit margins of the milling division with similar operations which shows PCCAs operation being much more profitable (as shown in Table 3). To meet demand for various customers, PCCA purchased additional equipment and instituted a flexible production schedule. These changes were accomplished economically which is consistent with PCCAs conservative, low cost approach to business.

The Mission Valley operation further enabled the cooperative to process cotton and cotton blends into fabrics, yarn, and then dye, and weave the material. A wide variety of apparel finished goods are produced at this mill including clothing, upholstery fabrics, and creative textiles. With this purchase PCCA is able to provide a wider range of customer needs beyond denim. However, the product markets for the Mission Valley have had very low returns because many customers have switched to much lower priced imports particularly from Asia. The recent devaluations and a strong desire to move product by these competitors has resulted in low prices for Mission Valley production, and it has not generated strong returns.

5. Future possibilities in garment manufacturing

The success of Mission Valley Fabrics in expanding PCCAs product line suggests substantial room for expanding value-added efforts further into garment manufacturing. Although many apparel marketers are excellent marketers, they still face the challenge of developing and coordinating garment production among the earlier stages of production,

Table 4
Value generated at different levels in jean production

- Producer
  - Sells cotton to a merchant for \$.50/pound
- Merchant
  - Sells to a cotton mill for \$.60/pound
    - Commission
    - Warehousing
    - Freight and insurance
- Textile Mill
  - Mill produces yards of fabric (denim)
    - 1.6 pounds of cotton to make one yard of cloth
    - 1.6 pounds × \$.60/pound=\$.96/yard
    - Clean, card, spin, warp, dye, beam, weave, finish
  - Mill sells to apparel processor for \$2.50/yd.
- Apparel Processor
  - 1.3 yards/pair of jeans
    - \$2.50/yd × 1.3 yds. = \$3.25/pair
  - Cut, sew, finish, laundry, inventory, ship
  - Apparel processor sells to apparel designer for \$10.00/pair
- Apparel Designer
  - Examples are Levi, Guess, Tommy, Lucky, VF (Wrangler, Lee)
  - Apparel designer sells to retailer for \$20.00/pair
- Retailer
  - Examples are Walmart, J.C. Penny, Dillards, etc.
  - Retailer sells to consumer for \$35.00 to \$70.00

Note: There are 2.08 pounds of cotton in one pair of jeans which at the price paid to the cotton farmer amounts to \$1.04. That 2.08 pounds of cotton at retail price in a \$50.00 pair of jeans is now \$24.04/pound.

milling, and sewing. Potentially, PCCA could vertically extend its firm through to supply a finished garment to these apparel designers rather than milled cotton, such as, denim or yarn as they are currently doing. In this scenario, an apparel designer would supply PCCA with a garment's specifications and PCCA would coordinate and supply the finished garment to the marketing firm. PCCA would be able to extend its core competency in cotton sourcing and processing to another level and more completely service its customers' needs. Table 4 provides information on typical relative prices of products in cotton production, processing, marketing and retail.

This opportunity presents a number of complex risks and choices for the firm. A key aspect of this is that garment manufacturing is highly labor intensive. This means that producing the finished garments in the United States would not be cost effective. Potentially, PCCA could buy or build such a business in a country with lower labor costs. Mexico, given its proximity to Oklahoma and Texas, is a natural potential location especially with the advent of the North American Free Trade Agreement.[4]

This move into Mexican garment manufacturing would be a substantial change for PCCA. PCCA has never operated internationally beyond marketing cotton, and Mexico

would present a production environment that is substantially different from that in the U.S. Furthermore, many coop members might not see the need for such a "radical" move. This means that, while this opportunity might be profitable, there are also substantial risks.

One of the key considerations in getting into garment manufacturing would be the need to identify a good apparel manufacturer to partner with or purchase. In this, the manufacturer should have strong production capabilities along with a good reputation. In addition, important characteristics of a partner would be to have a strong balance sheet and be able to provide investment capital.

6. Choices for the future

The beeping of his computer reminded Jon of an upcoming meeting with a consultant on the potential opportunities in Mexican garment manufacturing. But would the Mexico venture be too risky? Would PCCAs board buy it? In the event of failure, would this impact his career at PCCA?

7. Questions

1. Sketch PCCAs suppliers, main business and customers. At what points, does PCCA add value to its members' cotton. What are its related core strengths or competencies that are critical in value generation? Are there substantial linkages that form a key part of how PCCA adds value?
2. What core strengths and linkages could PCCA be able to supply to the garment manufacturing opportunity from its existing businesses?
3. Considering the garment manufacturing opportunity:
   a. What are the key risks that PCCA would face in such a venture?
   b. What are the relevant possibilities and risks associated with forming a joint venture or strategic alliance as compared to an ownership position with a Mexican firm? Which approach would you recommend that PCCA use?

Notes

1. Value chain analysis was developed by Porter (1985) and is a common management concept described in many management and strategy texts, (e.g., Besanko et al., 2000).
2. This is the amount commonly paid to a cotton merchandiser in purchasing cotton by a buyer.
3. This ability to meet Levi Strauss and Co.'s quality standards were an initial huge challenge for American Cotton Growers (Lichtenstein, 1990) that had largely been achieved by the time of the 1987 purchase.
4. Other countries, such as those in the Caribbean or Central America, could be choices too.

Acknowledgments

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