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Tico Manufacturing: A Case Study of Entrepreneurial Growth

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Introduction

Upon arriving at work, Lee Tipton sat down at his desk, leaned back and realized that a lot had happened in the fifteen years when he first started his pallet manufacturing business. He had been driving a truck and making a regular income, when the Teamsters Union went on strike and shut the entire trucking business down. Unemployed, with a wife and two children to support and with no job prospects in sight, he had felt like the world was coming to an end. He had been making refurbished pallets on the side, while driving his truck. Immediately his part time pallet business became his sole source of income for his family.

Little did he know that by taking advantage of this small business opportunity, a one man operation grew into an organization of 75 employees in a very small town and in a very competitive industry. From acquiring broken pallets and rebuilding them, his business grew not only into a pallet manufacturing operation, but into several other business lines: new heat treated pallets, paper packaging for safe guarding pallet loads, mulch for landscaping, and freight hauling.

Lee had always had a knack for making money, but he had made most of his decisions based on intuition and a lot of courage. Sitting back in his chair and staring at the tile ceiling, he knew he had to change that approach. His business had grown too large and complex to manage just on a hunch. He needed a refined financial accounting system to reflect the different products and services separately in order to determine whether they were profitable or not. He had also come across a new opportunity to start a new service line of repair and maintenance on diesel trucks, but this time he wanted real financial data to make his decision.

Background

Lee Tipton never dreamed of becoming a successful entrepreneur. His real dream was to be a member of the Missouri Highway Patrol. So upon finishing high school, he applied and was accepted in the Highway Patrol. For the first few years he enjoyed his work, but the long hours and stress of his job begin to wear on the new family he was forming. His wife and children begged him to do something less dangerous.

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Lee's father was a successful truck driver at the time, so Lee decided to follow in his father's footsteps and go into trucking. He joined a firm called Churchill Trucking in 1980 and worked as a truck driver. Since Churchill Trucking was a regional trucking company that served the Midwest, Lee's hours were compatible with his family. He was very content with the steady income, regular hours and the people he worked with. He continued driving for Churchill for 15 years.

During those 15 years most of the freight he hauled was loaded onto wooden pallets. These pallets were flat wooden board platforms that allowed one to stack a considerable amount of weight on them. Then the pallets could be moved by a forklift. Since the pallets were wood, they were easily broken and wore out quickly. Pallet owners had to throw them out and buy new ones. For the various companies it was costly to have someone come in, load them up and take them to the landfill. Lee asked the companies if he could have the broken pallets and they were eager to have him take them off their hands.

He was surprised at how much extra income he made and surprisingly, he enjoyed rebuilding the pallets. He worked out of his garage, and pallet refurbishing became a significant source of supplemental income for him and his family. Whenever Lee was delivering goods for Churchill, he would ask the companies if they had any old broken pallets they needed to get rid of. He took them home, refurbished them and resold them on his return trips, sometimes to the same clients. The clients were more than happy with the deal, since Lee turned out a good product and at half the price of a new pallet. Word of mouth soon spread and other companies began to hear about Lee's pallets and called and ordered whatever he could provide. Slowly the hobby began to take on steam and a real lucrative side business began to form.

TICO Inc., Takes Shape

Fate or opportunity stepped in when the teamster's truck union began a lengthy strike in 1994. Churchill could not deliver any goods by truck until the strike ended. Lee had a wife in college and two small children to provide for, so he could not wait until the strike was settled. In 1995, Lee rented a small building, hired a friend to help him and got down to making pallets full time. Since he already had a full client list of businesses who wanted his pallets, he just needed to be able to supply more. He called his new firm TICO and organized it as a sole proprietorship (a single owner business). He soon had more business than he and his friend could handle.

The second year after forming TICO, Lee heard of a new opportunity. The state of Missouri's Department of Natural Resources had available grant money to keep products from the landfills and to reuse natural resources. TICO was doing both. Lee applied and received funding for $150,000 to construct a new building. The new building provided more space, which permitted him to continue to expand the business, and hire more employees to make the refurbished pallets.

As the business expanded the nature of Lee's job changed. Lee spent most of his time managing the employees and making calls to solicit new clients. Even though Lee had hired a web designer to develop a web site to attract new business, it netted him very little extra business. He found that he had a natural talent for sales and now spent the majority of his time making business calls and getting new clients. He also kept a bid sheet of all his types of products and sent these out with every driver to drop off with every new order for pallets. By 1998 he had expanded his business to include making new pallets and heat treated pallets

The heat treated pallets opened the door for more business associated with the Food Processing Industry. The heat treatments were used to cleanse the wooden pallets of any bacteria or insects by heating the pallets to a temperature that killed the insects and bacteria. These heat-treated pallets had to be used for food transport, since chemically treated pallets could not, because of the potential for leaching chemicals into the food. Because TICO, Inc. was the first heat-treating facility in Missouri it had a clear competitive advantage over other heat-treated facilities that later had sprung up in Missouri. Lee thought that the heat-treated pallets were one of his more profitable lines, but with an accounting system that combined revenue and expenses from all product and service lines, he was not sure.

Even though TICO was using material from old broken down pallets and also making new pallets there was wood waste that had to be taken care of. TICO wanted to avoid the cost of hauling the old wood to the landfill, it purchased a wood chipper to make mulch out of the unused wood, which also reduced the large piles of waste lumber. By purchasing the chipper the waste was reduced to smaller piles of mulch that was sold to landscapers. In 1999, TICO also added another product line, selling packing paper to customers who used its' pallets. Since most pallets had to be loaded and then wrapped with the paper to avoid the product from sliding off the pallets, TICO felt companies would surely want to buy the paper at the same time as the pallets. TICO hoped that this new product line would be profitable, but again it was lacking proper accounting information to determine profitability. As the profitability of the pallet business appeared to increase TICO had to consider purchasing trucks to reduce the cost of delivery, rather than leasing trucks, which was more expensive.

Trucking Industry

The transport industry consisted of trucking, rail, water, pipeline, and air. Truck transportation represented 69.5% of the transport industry with rail being the principle freight hauling competitor. However, the rail industry had only 3% of the freight hauling, and water, pipeline and air made up the balance of the transport sector. The trucking industry had 1.8 million trucks on the road for the long haul and 1.2 million trucking companies, but the long haul sector had some issues. The long haul truck driver usually drove an average of 11-14 hours a day. Because of the long hours, and the fatigue many truck drivers would not work long hauls. This had led to a shortage of long haul truck drivers. The turnover for long haul drivers had been 130%. For the short haul drivers the average turnover had reached 15%. As a result of the turnover there had been a substantial shortage of truck drivers. The estimated shortage was 20,000. With this shortage and high turnover rate, the training and hiring of new truck drivers had become costly. Fortunately, for TICO this had not been a problem. The owner had a very positive relationship with his drivers and worked hard to meet their needs.

Other costs that were difficult to control were the changes in government regulations that frequently occurred. In June of 2006 the government (Environmental Protection Agency: EPA) required refineries to reduce the sulfur content in diesel fuel which raised fuel prices. This artificial rise in prices, coupled with the increase in global demand for fossil fuels, generated fuel cost control difficulties (carbon monoxide and dioxide) for all transportation firms, and had a negative effect on most firms' profitability.

The internet provided instant communication through satellites and microwave technology permitted instant access via cell phones. For the trucking industry the web portals that had developed, permitted truckers to immediately contract for services and goods. The portals provided trucking firms with increased productivity and the opportunity to have fewer empty trucks. A firm may have had one contract for hauling goods one way for a customer and then contract with another firm to haul goods back to the trucking firm's origination point. This was an opportunity that TICO took full advantage of.

TICO's Growth

Despite the difficulties of controlling costs by 2002, TICO had grown close to $2,000,000 in gross revenues and housed some $3,000,000 in total assets. With TICO's revenue growth, it considered purchasing new trucks and trailers, but the new trucks cost at least $100,000. This was an amount of debt that TICO could not afford. As an alternative, TICO started to purchase used semi-trucks for $40,000 and used trailers for $10,000 to replace the leased ones. These purchases reduced leasing costs, but on the other hand, truck maintenance and repair costs became an issue.

Initially, the trucks hauled pallets away from Unionville, Missouri to whatever firm needed pallets. However, the trucks came back to Unionville basically empty, except for additional recyclable pallets. TICO wanted to avoid this one way hauling, in 2006 TICO applied and secured its brokerage license, which permitted TICO to contract for return trips. Negotiations were done over the phone and contracts were faxed back and forth between TICO and its customers. By 2010, TICO had 20 semi-trucks, 60 trailers and 20 drivers. TICO's 20 drivers never ran with an empty load. For example, the 60 trailers allowed for drop-and-hook, where one trailer is left at the client's place of business, and when full of broken pallets, it was picked up and an empty trailer was dropped off. These changes provided TICO with more management control and greater flexibility, and had led to other types of freight hauling.

From 2008 to 2010, TICO's profitability continued to improve.TICO's Net Income had increased from $1,015,735 in 2008 to $1,469,380 in 2010. The total net income to total sales for 2008 was 14.7% and for 2010 was 17%. Despite this profitability, TICO's income statement remained as one total statement with all product lines combined. TICO needed a separate profitability analysis for each product line. TICO's 2008 and 2010 Income Statements appear as follows:

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TICO, Inc.
Income Statements
For the Years 2008 through 2010

	2008	2009	2010
Sales Revenues:			
Pallets	3,991,622	$4,264,935	$4,633,875
Freight Hauling	2,427,603	2,868,125	3,237,628
Certified Heat Treated Pallets	320,100	419,720	543,014
Mulch	27,790	29,200	31,300
Packing Paper	96,500	90,800	88,534
Total Sales Revenue	6,863,615	7,672,780	8,534,351
Expenses:			
Lumber to Make Pallets	871,225	910,500	998,500
Recovered Pallets Purchased*	650,125	728,825	860,775
Saw Blades for Cutting Pallets	18,821	20,045	26,135
Nails Used In Pallet Construction	95,309	98,500	109,517
Shop Supplies/Tools Used in Making Pallets	44,375	45,938	61,897
Pallet Equipment Repairs and Maintenance	33,478	38,565	47,917
Fuel for Freight Hauls	961,525	1,148,700	1,307,550
Truck Repairs and Maintenance	263,450	363,375	401,025
Trailer Repairs and Maintenance	26,022	36,625	39,005
Lease Payments for Freight Hauling Trucks	59,290	89,810	138,126
Insurance on Trucks and Trailers	84,137	86,751	99,475
License and Permits for Trucks	38,412	48,015	49,843
Freight Hauling Truck Expenses	17,157	25,820	30,468
Propane for Heat Treatment	12,678	13,563	18,200
Packing Paper Purchases	55,000	45,500	40,139
Payroll	1,989,898	2,190,975	2,352,963
Utilities	46,936	52,338	68,863
Total Segment Expenses	5,267,838	5,943,845	6,650,148
Profit Margin	1,595,777	1,728,935	1,887,339
Selling and Advertising Expenses	8,400	3,518	4,532
General & Administrative Expenses:			
Payroll for Administration and Office	146,624	170,282	165,861
Utilities for Office	5,215	6,037	7,306
Office Supplies	13,423	17,763	15,838
Janitorial	11,113	10,500	9,660
Professional Fees and Dues	8,872	8,750	9,275
Donations and Contributions	2,625	6,860	8,665

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Depreciations on Buildings and Equipment	128,280	125,920	185,662
Total General & Administrative Expenses	316,152	346,112	402,267
Income before Interest and Taxes	1,271,225	1,379,305	1,480,540
Interest Expense	64,915	99,363	108,060
Taxes	190,575	201,250	203,100
Net Gain on Insurance Reimburse for Fire			300,000
Net Income	**$1,015,735**	**$1,078,692**	**$1,469,380**

*Recovered pallets were refurbished and resold as regular pallets.
**Payroll was allocated as follows: Pallet Production 58%, Freight Hauling 37%, Heat Treatment 2%, Mulch 1% and Packing paper 2%. *Only production payroll should have been allocated to the product lines.*
***Utilities were allocated as follows: Pallet Production 68%, Heat Treatment 30% and Packing Paper 2%. *(freight hauling and mulching utility costs were considered insignificant*).

TICO recognized with the different products and services, the total income statements were not sufficient to make strategic decisions about its' future, even though the total net income to total sales for 2008 was 14.7% and for 2010 was 17%.

Risk Considerations

Another risk TICO had to watch for on a daily basis was the risk of fire associated with the dry lumber used to make pallets and the resulting sawdust from cutting wood. TICO made sure that it maintained sufficient insurance to cover such a catastrophe. In 2010, there was a fire that completely destroyed the warehouse/special order and manufacturing building. The warehouse and inventory were heavily insured and as a result TICO realized a significant gain of $300,000 from its insurance company. Fortunately, the trucking side of the business had already been spun off into a separate company called TRICOR LOGISTICS and was housed in a separate building. As a result the trucking business was not adversely affected by the fire.

With a $300,000 capital gain, TICO was left with the question of how to minimize the tax consequences of the gain? If TICO were to invest the money in a similar building or enterprise, TICO had the opportunity to avoid the $45,000 in capital gain taxes. Even though the building had burned down, the concrete foundation and the parking lot where semi-trucks were parked was left intact. With the $300,000 gain from the insurance, one idea was to construct a new building that could have been used for maintenance and repair of TICO's trucks. This would eliminate the inconvenience of traveling 45 miles to the nearest truck and trailer repair shop which took time and was costly. The average labor charged for truck maintenance and repair was $65 per hour and parts were sold at a retail price rather than at a wholesale price. If TICO started a truck-trailer maintenance and repair shop, the going hourly rate for mechanics was $20 per hour, parts and supplies could be reduced by a dealer's 20% discount rate.

With a $300,000 capital gain and escalating truck-trailer maintenance and repair costs, TICO started analyzing projections on starting a truck maintenance and repair business. By contacting a number of TICO's customers, it was found that a very large number of trucks originated in the Unionville area. These estimated revenue projections were favorable. From the projections, sales revenues were estimated to be $1,200,000 a year, based on servicing twenty trucks per week and ten trailers. There were additional opportunities. Two contracts were coming up for bid. One was a contract to do the truck work for the local Missouri Highway Maintenance department. The other was a contract to do the work for the local schools busses.

From the projected estimates, cost and supplies were estimated to be $480,000 a year. As far as wages and salary expenses, TICO had three displaced workers who had worked in the building that had burned and they could be used as general labor in the new venture at a cost of $25,000 each. TICO hired three new mechanics at $40,000 a year each. The owner's son could be relocated to the new building as manager for a salary of $60,000. Payroll taxes for the employees were estimated at $32,500. Worker's compensations insurance was estimated at $26,100. Health insurance coverage was figured at $17,850 for the year. The projected increase in building operating costs, which included utilities, was $75,000 a year. Equipment repairs and maintenance were estimated at $225,000 and insurance on the equipment and buildings were projected to be $40,000. The advertising budget needed to be increased by at least $7,000 annually to attract business.

The projected new building was estimated to be $700,000, and by using the $300,000 in insurance money, TICO would have had to borrow the other $400,000. The principle amounted to $40,000 a year and the interest on the loan was a simple annual interest of 8%, which amounted to $32,000 a year. Real estate and property taxes were estimated to be $43,000 a year.

Strategic Implications

The projections for starting a truck and repair business indicated profitability, but TICO's balance sheet variables also had to be analyzed. TICO's total debt had increased from $3,000,000 to $3,500,000 in order for TICO to purchase more used trucks. TICO's total assets added up to $6,000,000. For working capital, TICO's cash account was $100,000, accounts receivable $360,000 and inventory $160,000. TICO's wages payable were $180,000, current debt and interest was $230,000 and the trade accounts payable $254,800. TICO's accountant indicated cash flow was a problem because many of its clients paid 60 to 90 days late. TICO billed clients on a straight net due in 30 days, but none the less, they still paid late. For example, TICO had one large corporate account that comprised 10% of its revenue and usually paid 90 days late. This created a problem because workers had to have their wages paid on time, and interest and debt payments had to be paid every month to keep TICO's credit rating up. To avoid these cash flow problems TICO established a revolving line of credit of $300,000 at 9% interest with its bank.

Conclusion

As Lee pondered these questions he knew he had to break up the total income statement into product segments and service lines to provide more specific financial information to better evaluate the direction he thought TICO needed to follow. After separating the different product groups' profitability, various financial ratios also had to be developed in order to analyze the

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business risk associated with each product segment. By looking at how each segments' profitability contributed or detracted from the company's profit as a whole, decisions could then be made about keeping product lines or dropping them. TICO also needed an analysis of the risk associated with starting the truck and trailer repair business. A profitability analysis of the proposed truck maintenance and repair business needed to be done to determine how it contributed to long and short term debt, cash-flow (lines of credit) and the cost savings TICO would get by doing its own truck and trailer repairs.

The decision to start another business venture was personally important to Lee, TICO's owner. The fear of failure for Lee not only affected his immediate family, but affected TICO's 75 employees. For the last twenty years these employees had depended on TICO for their livelihood. Lee worried about laying off employees that were also his friends and neighbors.

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