Profitability analysis of leather tanning industry with capital structure without interest using canvas financial management approach

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Abstract. There were around 330 leather tanning industries in Garut in 2011. Currently, there are only 220 tanning industries left. Contrarily, in 2011 credit facility users from the tanneries were only 15% then increased to 95% in 2019. Loans with an interest system will incur new costs that can cause price increases or reduce incomes, this is what is thought to be the cause of the reduced number of the leather tanning industry. This study aims to calculate the impact of credit on the price and profitability of the leather tanning industry in Sukaregang, Garut. Capital structure is the ratio between external capital and internal capital. This study uses the Financial Management Canvas approach to overcome the analysis complexity because in general SMEs do not have adequate financial reports. The results showed that changes in the capital structure causes unbalanced in the income statement. An increase in product price is performed to obtain a balanced income statement. Another way is by reducing the profits to pay the loan interest. The existence of external funds in the form of loans with an interest system causes an increase in selling prices and or reduces profitability.

1. Introduction

The national leather industry developed rapidly during the 1970s, marked by the emergence of several industrial centers such as the Tanggulangin Sidoardjo sales center, the Magetan tanning center for East Java, and the Yogyakarta sales center. West Java Province has a leather production center known as the Sukaregang leather industry, Garut. It is an industrial cluster that has complete upstream and downstream linkages. This center processes raw leather into tanned leather (upstream industry) which has high added value and then used as an input to the leather garment and leather-craft industry. Some of the products are leather jackets, bags, leather shoes, and wallets. Various leather products are known as trading commodities at the local, national, and international (export) level.

Based on data from the Ministry of Industry of the Republic of Indonesia (2018), the contribution to Indonesia’s Gross Domestic Product (GDP), the leather industry, leather goods and footwear sector occupies the fourth largest position, with an export value of US$ 241.3 million after food of US$ 1.25 billion, followed by apparel of US$ 519.99 million, paper and paper goods of US$ 376.4 million.
Leather products belong to the ten potential commodities, with export destinations including Hong Kong, India, China, Vietnam, Germany, Singapore, Italy, Korea, Malaysia, Thailand, Spain, Taiwan, Cambodia, Japan, South Africa, Sri Lanka, France, the Philippines, the United States of America, and Austria. Consequently, the leather industry sector is a promising industry for Indonesia’s economic growth. The leather industry sector has the potential to be developed into one of the leading industries in Indonesia.

This tannery activity has become a livelihood for the people in the Sukaregang Garut leather tanning center, but the number of industries is decreasing every year. In 2008, 350 tanneries were employing 1,750 workers in Garut Regency [1]. At present, 220 business units are left. On the other hand, the number of tanneries using loan facilities is increasing. According to [2], in 2011, 85% of tanneries only relied on internal capital, and 15% used loans from cooperatives or rural banks (BPR). Recently, the number has become 95%, and only 5% use internal capital.

Capital structure is a balance or comparison between external capital or capital originating from loans in the form of debt, both long-term and short-term debt, and the amount of internal capital. Internal capital or capital originating from within the company is obtained from company capital, reserves provided by the company, and profits derived by the company. The composition of loan capital with internal capital in a company will determine its financial structure. The company's financial structure reflects the balance between internal capital and loan capital. Therefore, the capital structure of a company is part of the financial structure, which is an equilibrium between external capital or debt with internal capital.

A company's profitability is influenced by various factors, such as the company's capital structure. The capital structure is how much assets are obtained from loans and how much is obtained from the internal. Changes in capital structure occur due to reduced internal capital and increased external capital or loan capital. The addition of external capital hereabouts is the addition of capital from bank loans. This external capital must be returned every period along with specified interest [3].

Loans with an interest system will incur new costs that can cause price increase or reduce income. Loan interest costs affect profitability because loan interest costs are one element of non-operating costs that are fixed. Consequently, large or small, the cost of loan interest will affect the profitability for a particular period [4]. The high loan and interest burden owned by the tanneries in Sukaregang Garut is allegedly causing a decrease in the profitability of the tanning industry in the area. This condition is considered to be the cause of the decline in the number of the leather tanning industry in Sukaregang Garut. Based on these, this study aims to analyze the profitability of the leather tanning industry in Sukaregang Garut and the effect of loans with the interest system on the increase of price and the decrease of profitability.

2. Methods

2.1. Research location

The location studied is the leather tanning industries, located in the center of the leather tanning industry in Sukaregang, Garut Regency. This leather industry center is located in the Sukaregang Village, Garut Kota District, Garut Regency.

2.2. Research design

The study was conducted using a quantitative approach with a model of financial management canvas for data presentation so that it is more easily understood. Numerical real conditions that occur in the management of the leather tanning industry that is associated with profitability and capital structure will be easier to understand by using this approach. Data collection techniques were as follows:

2.2.1. In-depth interview. Interviews were conducted with informants who were considered to be most knowledgeable about the capital structure and profitability of the leather tanning industry. Data were
collected from the entrepreneur's side, leather workers, owners of the equipment, and shop owners of auxiliary materials in Sukaregang, Garut District, Garut Regency.

2.2.2. Field observations. The observation was carried out by examining the data and information regarding implementation directly to the field, located in Sukaregang, Garut Regency.

2.2.3. Literature study. A literature study was conducted by examining various financial aspects of the leather tanning industry.

2.2.4. Data collection. Secondary data was collected from the relevant agencies in Garut Regency and entrepreneurs who practice in Sukaregang Garut.

3. Results and discussion

3.1. Capital structure and profitability of the Sukaregang Leather Tanning Industry, Garut

The tanning activity has become a livelihood for the people in the Sukaregang Garut leather tanning center, but the number is decreasing every year. In 2008, 350 tanneries were employing 1,750 workers in Garut Regency [1]. In 2011, the number reached 340 tanneries with a total workforce of 1,595 workers [2]. In 2015 there were 300 business units [5], and currently, there are only 220 business units left.

![Figure 1. Number of tanneries in Sukaregang, Garut.](image)

To support the continuity and business development, in 2011, 85% of tanneries solely relied on their limited internal capital [2]. Internal capital comes from the business profits that are separated from consumption needs. Less than 15% of tanneries in this center have/are still using loans from cooperatives or rural banks (BPR) with an interest system. Along with the development of financial institutions in the area, there is currently an increase in the quantity of the tanneries using the loan capital with an interest system to 95% and only 5% using internal capital.

There are changes in capital structure in the leather tanning industry in Sukaregang Garut. The number of industries that use loan capital with a system of interest is higher. According to [6], capital structure is a balance or comparison between the amount of long-term debt with internal capital. Therefore, capital structure is measured by the debt to equity ratio (DER). DER is a ratio employed to measure the level of leverage (use of debt) to the total shareholder’s equity owned by the company. Total debt is total liabilities (both short-term and long-term debt), while total shareholder’s equity is total own capital (total paid-in capital and retained earnings) owned by the company. This ratio shows the composition of the capital structure of total loans (debt) to the total capital owned by the company. The higher DER shows the composition of total debt (short-term and long-term) which is greater than the total internal capital, thus making the company's debt on external parties (creditors) higher.

For every company, the decision in choosing the source of funds is crucial because it will affect the company's financial structure, which will ultimately affect profitability. Profitability is a portrayal of
management performance in managing a company. Company profitability can be measured from: operating profit, net income, return on investment/assets, and return on owner's equity [6]. The profits of the leather tanning industry in Sukaregang Garut currently only range from 1 million IDR to 3.5 million IDR for every ton of raw leather processed into tanned leather. The amount of profit depends on the capital structure.

The profit from the leather tanning industry is notably lower compared to 2011, which could reach 6.5 million IDR per ton of raw leather. This decline is considered to be caused by changes in the capital structure of the leather tanning industry in Sukaregang Garut. Today, they use more capital loans with an interest system to run the businesses. [7] states that the source of company funds is reflected by external capital and internal capital as measured by DER. When DER is higher, the company's ability to get profitability will be lower, so DER has a negative relationship with profitability.

3.2. Analysis of financial statements with the financial management canvas approach

One weakness of small and medium-sized enterprises (SMEs) is the absence of financial administration records. It will hinder the progress of SMEs due to inaccuracies related to the company's financial value. Recording generally only takes the form of proof of purchase and sales. Simple financial records for SMEs consist of at least 6 documents, namely: cash payment journal, cash receipt journal, cash flow journal, expense records, office inventory journal, goods inventory journal, and income statements. Nearly 95% of the tanneries in Sukaregang Garut do not record financial administration, making it difficult to create a balance sheet and income statement to analyze its profitability. Then the financial management canvas approach is used.

Financial management canvas is an approach that uses a graphical visual model to provide an understanding of the company's financial statements so that it becomes simpler and easier to understand conceptually without messing with financial numbers [8].

The financial statements consist of income statements, balance sheet reports, and cash flow statements. The income statement is the most frequently viewed and used report. This report is useful to see the business net in terms of sales and profits. The balance sheet and cash flow statement is a report that is often viewed but underutilized because it only shows the health position of the company and knows where the funds are and where they are used [8].

An income statement is used to analyze the profitability of the leather tanning industry in Sukaregang Garut. After a sale transaction takes place between the customer and the company (represented by the SALES block), profit is obtained (represented by the PROFIT block) as a result of sales minus the cost of raw materials (illustrated by the PRODUCT block), minus the costs incurred (represented by the COST block). If it applies to a business period or cycle consisting of many sales transactions, the description is referred to as an INCOME statement for that period. Profit is the result of operations that can be of positive value, which means the sale is profitable. Conversely, it can be negative, referred to as a loss. The income statement is represented graphically with a model in Figure 2.

Figure 2. Visual graphical model of the income statement.

When a tannery decides to use loans with an interest system, a new block will appear in the income statement, namely interest costs, this makes the income statement unbalanced, as illustrated in Figure 4.
The income statement becomes unbalanced due to the emergence of a new block (Figure 3A), namely interest caused by loans with the interest system. Two things can be done so that the income statement becomes a balance again. The first thing is raising prices (Figure 3B). By raising prices, the sales block will increase so that the income statement will return to balance. It can be done by companies with products that are needed, so that price increases do not affect consumers purchases. The strategy is done by the auxiliary store and the tanner equipment owner. If raising prices cannot be done, the enterprise must reduce the profit so that the income statement remains in balance (Figure 3C). It is done by tannery because an increase in selling prices will reduce sales.

3.3. Loan interest causes increase in price of auxiliary materials and equipment rental in the leather tanning industry in Sukaregang Garut

In general, the income statement of the leather tanning industry in Sukaregang Garut can be described visually, as shown in Figure 6. For every ton of raw leather processed into tanned leather, the tannery will receive a total sales of approximately 41 million. The total amount consists of purchasing raw materials of 25 million IDR (61%), cost of auxiliary materials (cost 1) of 7.1 million IDR (17%), equipment rental costs (cost 2) of 2.7 million IDR (8%), labor costs (cost 3) of 2 million IDR (5%), and the rest is a profit of 3.6 million IDR (9%) with a note that the capital structure of tannery is from internal capital or interest-free loans.

The price of auxiliary materials (cost 1) and equipment rental costs (cost 2) is considered to be quite high due to price increases. The increase in the price of auxiliary materials and the high equipment rental costs is allegedly due to changes in the capital structure that uses a lot of capital loans with the interest system.
Based on the analysis, the price of auxiliary materials was currently at 7.1 million IDR. It is suspected that the price has increased due to changes in the capital structure of the auxiliary material shop. Some of the capital used comes from loans with an interest system with a ratio of 30% of internal capital and 70% of loans with an interest system. The price of supporting materials should only be 6.3 million IDR (Figure 5A) but became 7.1 million IDR (Figure 5B) due to the fixed costs of interest that must be paid by the owner of the auxiliary materials shop due to the utilization of loan capital with the interest system. This can be illustrated as in Figure 5.

![Figure 5](image)

**Figure 5.** Prices of auxiliary materials with internal capital structure and loans structure.

Although the price of auxiliary materials has increased, this does not increase or decrease the profit of the shop owner, because the price increase is only used to pay interest. The increasing price of auxiliary materials due to the interest will be borne by the tanneries as consumers. The same thing is believed to have occurred at the prices applicable for equipment rental costs. It can be graphically illustrated as in figure 6.

![Figure 6](image)

**Figure 6.** Price of equipment rental cost with internal capital structure and loans.

The current equipment rental cost is 2.9 million IDR. The current price is expected to increase due to capital structure, which mostly comes from loans with an interest system with a ratio of internal capital of 30% and the remaining 70% comes from loans with an interest system. The equipment rental cost should only be around 1.6 million IDR (Figure 6A) increased to 2.9 million IDR (Figure 6B) due to fixed costs, which is the interest that must be paid by the owners. In order not to reduce profits, the interest costs will be charged to the rental price. It will ultimately be borne by the tanneries or consumers. This increase does not increase or decrease the profits of the owners because it is only used to pay the interest due to loan capital with the interest system.

State that profitability is inversely proportional and influenced by the debt funds and an increase in debt tends to decrease net income significantly[9]. [10] adds that the price of commodities traded in America is strongly influenced by interest rates.
3.4. Interest causes of profit reduction in the Leather Tanning Industry Sukaregang, Garut

The interest costs arising from the capital structure originating from loans with the interest system can be covered by raising the product selling price. However, if this not possible, the company has to reduce the profits. It was done by 200 tanneries. The average profit of the tanneries in Sukaregang Garut was around 3.5 million IDR when using internal capital. But if the tanneries use the loan capital with an interest system, the profit will decrease depending on the amount of interest that must be borne. The interest is determined by the financial institution that provides the loan. An illustration of the profit of tanneries with their internal capital structure and loans from several financial institutions is presented in Figure 7.

![Figure 7. The profitability of the leather tanning industry using internal capital and loans from various sources.](image-url)

The profits of the leather tanning industry currently range from 1.5 million IDR to 4 million IDR depending on their capital structure. Whereas in 2011 the profits could reach 6.5 million IDR. According to [3], an increase in funds obtained from outside or loans makes companies have to repay loans together with the interest. It can make the company's profitability decrease due to additional costs, reduced revenue, and increased loan funds.

Target profit is not easy to achieve because various problems must be faced. Internal factors that determine the profitability are the amount of debt and internal capital, also known as capital structure. One of the actions companies can take to achieve the expected profitability is by determining the ideal capital structure by reducing loans and increasing internal capital. The company's capital will increase when the company makes a profit [3].

By using a financial management canvas analysis, the profitability of SMEs tanneries can be analyzed by creating graphical visual images of the income statement as presented in Figure 10. In 2011, low-interest rate loans were estimated to be the cause of high profits. It is because of the selling price of auxiliary materials and the equipment rental costs relatively low (COST) as illustrated in Figure 10A. However, such cases no longer exist because even though the tanneries do not use loans with the interest system, they will still bear interest (B1) from the auxiliary store and the owner of the equipment rental which amounts to 5% (Figure 8B). In this case, there were 9% of SMEs tanners with a profit of 4 million. Meanwhile, if the tanneries use loan capital with an interest system, the profits will be reduced because they have to pay interest which rate is determined by the financial institutions that provide loans, as illustrated in Figure 8C (loans from commercial banks), 8D (loans from BPR) and 8E (loans from cooperatives). The number of tanning SMEs, in this case, was 15%, 42% and 11% of the total SMEs tanneries in Sukaregang, with a profit of 3.2 million, 2.3 million and 1.5 million, respectively. In addition to covering the interest from the auxiliary store and the equipment rental (B1), they have to bear the interest due to their loans (B2). This causes a smaller profit that was only 4% from the previous 15%.
The profit of the tanneries will decrease if the owner of the auxiliary material and the equipment rental use the loan with an interest system in their capital structure. The interest will be borne by the tanneries (B1) through the high selling and rental price, whereas the tanneries also bear the burden of interest due to their loans (B2). As a result, the profit of SMEs tanneries will be lower and can reach 1.5 million IDR or around 4% per ton raw material, depending on the amount of interest determined by the financial institutions. This is considered to be a contributing factor to the decreasing number of the leather tanning industry in Sukaregang Garut today.

According to [11], interest in productive loans is dangerous because it is a cost of production, and therefore affects prices. Consumers must bear a higher price burden. In this case, tanneries as consumers bear the increase in the price of auxiliary materials and equipment rental. [9] adds that increasing debt funds in the capital structure tends to minimize the net profit of the company.

4. Conclusion
In 2011, there were 330 SMEs leather tanning industries in Garut. Now there are only 220 SMEs leather tanning industries left. The number of tanneries that use loan facilities with an interest system increased from 15% in 2011 to 95% in 2019. There was a change in the capital structure of the tanneries in Sukaregang Garut. The amount of capital that originates from loans with an interest system is higher than internal capital. This results in an increase in prices and a decrease in the profits.

Interest costs arise due to the utilization of loan capital with an interest system. Interest costs can be overcome in two ways, first by raising the selling price of the product as performed by the owners of the auxiliary shop and equipment rental. Secondly, by reducing the profits obtained, this is done by tanneries.

The tanneries experienced a decrease in profit from 6.5 million IDR in 2011 to 1-3 million IDR per ton of raw material. Tanneries with 6.5 million profit no longer exist, while those who get 3.9 million profit only 9%, and those who get 3.2 million IDR, 2.3 million IDR and 1.5 million IDR, respectively 15%, 42% and 33% of the total number of tanneries. This decrease in profit is considered to be the cause of the reduced number of tanneries in Sukaregang Garut.

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