

## The determinant of capital structure in cane production companies (case study: Holding Company of Cane Development and Sidelong Industrial)

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**Abstract:** The capital structure and its determinants is an important issue in the field of corporate finance. By presenting ideas in a variety of research , looking for a way to determine the optimal capital structure The company's cost of capital and increase firm value are minimize. The results show that the ratio of instantaneous and there is a significant negative relationship between profitability and capital structure. The capital structure has positive relationship with government aid. After collecting and processing information from the financial statements of the subsidiaries of the holding, using Eviews and Stata software and data combined hypothesis test is performed. The results show that the ratio of profitability and capital structure immediate and significant negative relationship. With the help of panel regression, we have found that size, LIQ and profitability have the negative relationship and aid of government (B) has the positive relationship with the leverage.

**Key words:** *Capital structure; Cane production; Holding company*

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### 1. Introduction

The main goal of management firms is maximizing shareholder wealth. One way to determine the capital structure policy is to increase shareholder wealth. The combination of debt and equity balance sheet, left, shows the capital structure. Using the company's debt risk increases, so does the optimal capital structure is the appropriate balance between risk and return.

Capital structure is one of the most significant financial decisions in company. Capital structure determines the proportion of debt and equity used to fund firm's activity. Determining firm's debt ratio is an important financial decision since the right mix of debt and equity enables firms to maximize firm value which will also increase shareholder wealth, and enable firms to finance their activity more efficiently.

Inadequate capital structure of firms, especially small firms can cause problems such as lack of access to affordable financing, the length of the finally, lack of liquidity and access problems caused by the shortage of manpower in the production and storage.

Researches show the assets of the company and consequently as collateral in the amount of funds received is positive and significant impact. Small companies may have the resources to manage financing obligations and establish upper limits for them.

There are many researches and theories about capital structure, but it is hard to implement the general findings into different sector, since every

sector has their own industrial specific characteristics that might influence their financing preference. This paper contributes to capital structure research by focusing in Indonesian plantation firms.

### 2. The literature

By combining sources of needed capital and financing affect corporate capital structure. Debt and equity capital structure are composed of two main components. Jensen and Meckling (1976) suggest that the optimal capital structure is that point where the tax advantage on interest payments must balance out with the cost of bankruptcy and agency cost of capital structure. Pecking order theory proposed by Myers (1984) and states that the firm has to make the hierarchy of the desired funds. He proposed that first of all the firm finance its projects by their own internally generated funds (retained earnings). If the firm needs more funds to match its growth then it should generate funds by issuing debts. Firms utilize new equity for the generation of funds at the last option because it is the most expensive form of financing.

Factors and variables influencing the choice of the optimal capital structure can affect the profitability and economic efficiency of enterprises. We investigate the effect of various factors including the availability of financing companies and also features important companies in the area of performance, profitability, growth opportunities, size and type of activity, that's will be needs which determines their diverse financial.

Bevan and Danbolt (2002) further work on this idea and proof that the firm which earns huge profits

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they have less debt due to the use of internally generated funds. This approach, originally developed by Ross (1977), explains that debt is considered as a way to highlight investors' trust in the company, that is if a company issues the debt it provides a signal to the markets that the firm is expecting positive cash flows in the future, as the principal and interest payments on debt are a fixed contractual obligation which a firm has to pay out of its cash flows. Thus the higher level of debt shows the manager's confidence in future cash flows. Another impact of the signaling factor as we have already discussed it in the pecking order theory is the problem of the underpricing of equity.

Previous studies have shown that the main reasons for failure of businesses, lack or inadequacy of investment and financing are inappropriate. Most small business owners do not have a strong business skills and so, understanding and perception of integrity of financial markets and provider of funds and how they work. Some business owners the wrong combination of sources (debt versus equity) or choose to study specifically the obligations and restrictions will be looking for their high liquidity. They may even refer to funding sources that work with their suppliers to be problematic. The decision in this regard that the capital structure of the combined company will be the main tasks of administrators.

With continues inclusion of debt financing the bankruptcy cost is also increases for the firm. As discussed in the agency cost of capital structure that the owners have to pay incentives to their agents (managers) in the corporation form of business. If the corporation also financed by debts then these agents (managers) have to work as the agents of the debt providers so it increases the agency cost of capital structure.

### 3. Research methodology

The hybrid data approach is used to analyze the data and evaluate the research model. Panel data refer primarily to move units out over time. The purpose of this study was to examine the capital structure of Khuzestan Sugar Industry Development Company (KSIDC). Improve the performance and profitability of firm's holding company in the development of sugar cane as the ultimate goal of improving the capital structure of each of the subsidiaries outcome is achieved.

Leverage refers to the percentage of assets financed by debt. Previous research studies have used different measures of leverage. Frank and Goyal (2003b) state that the difference between a debt ratio based on market value and one based on book values is that the former tends to regard the firm's future situation whereas the latter reflects the past situation. Fama and French (2002) point out some inconsistencies arising from the use of two different debt ratios. According to them, both theories (pecking order and static tradeoff) apply to the debt

book Value, and there are doubts if the predictions may be extended to the debt market value.

Based on the theoretical research hypotheses that were discussed in chapter two is as follows;

1. There is a significant negative relationship between capital structure and LIQ Ratio.
2. There is a significant negative relationship between capital structure and Profit Ratio.

One of the methods of time-series and cross-sectional analysis of combined data be effectively applied to the analysis of social science and applied economics. In this method, a school or a group of people are studied. Note that this method does not require a large time series data and information and yet a lot of questions about the behavior of the variables, the correct answer, and most studies have been of interest to researchers.

The size of a firm can affect the leverage of the firm negatively. Large firms do not consider the direct bankruptcy costs as an active variable in deciding the level of leverage as these costs are fixed by the Constitution and constitute a smaller proportion of the total firm's value and also because larger firms, being more diversified, have less chances of bankruptcy (Titman and Wessels 1988). Shah A (2005), and Rajan and Zingales (1995), also expecting the negative relationship between size and leverage of the firm.

There are some conflicting viewpoints about the profitability and the leverage of the firm. Modigliani and Miller (1963) state that if companies generate funds by debts then they will get the advantage of tax deduction on the interest payments. So according to Modigliani and Miller (1963) there is a positive relationship between leverage and profitability. On the other hand, pecking order theory by Myers and Majluf (1984) states that when the firms need funds, they will prefer internally generated funds instead of external sources of capital. So there must be a negative relationship between profits and leverage of the firm. Rajan and Zingales (1995) also found the negative relationship between leverage and profitability in previous studies, the measure of profitability used was operating earnings before interest payments and income tax (EBIT). But following Shah and Hijazi (2005) we measure profitability (PF) as the ratio of net income before taxes divided by total assets because the data taken from the State Bank of Pakistan publication does not permit us to calculate EBIT.

The panel data model assumed velocity observations on N individuals over T periods of time. Here we have the single equation linear regression where Y is the K independent variables  $x_1, \dots, x_n$  regression, in which we include a random disturbance there. Given that the data is in the form of panels, for individual i at time t, we have:

$$y_{it} = \beta_{1it}x_{1it} + \dots + \beta_{kit}x_{kit} + u_{it} = x'_{it}\beta_{it} + u_{it}$$

$\beta_{it}$  Parameters that must be estimated and  $x'_{it}$  is the row vector  $(1 \times k)$   $\beta_{kit}$  column vector of explanatory variables and the regression coefficients. The models include intercept survey to understand everything or not. It is clear that both models can be considered. If we consider an intercept of the regression, we have for all  $i$  and  $t$   $x_{1it}$ .

**4. Estimate the model**

In order to better understand the research community and learn more about their data prior to statistical analysis, the data should be described. Data describing a step in the direction of the

prevailing pattern recognition and basis for explaining the relationship between the variables used in the study. Therefore, the pre-test research hypotheses, descriptive statistics for the variables used in the study are investigating the company. In the first step of the analysis of data from the present study, the first to provide an overview of the main features of the measured variables, descriptive statistics research, including mean, median, maximum, minimum and standard deviation Research data are presented in Table 1.

**Table 1:** Descriptive statistics of outcome variables over the period 2001- 2011

Variable	Minimum	Maximum	S.D	Median	mean
LEVERAGE	4.64E-05	1.797854	0.304518	0.99622	0.960253
PROFIT	-280698	924093.2	268679.3	-32403.8	13011.64
LIQ	0.155924	5.809017	0.937167	0.828384	1.114681
SIZE	172393	4494607	949124.3	1789793	1944888
DEBT	0	4517130	1027701	1598597	1877907

Source: Research Results

To test the hypothesis for the relationship between a dependent variable and the independent

variables of the regression model and the model is the following:

$$\text{LEVERAGE}_{it} = \beta_0 + \beta_1 \text{PROFIT}_{it} + \beta_2 \text{LIQ}_{it} + \beta_3 \text{SIZE}_{it} + \beta_4 \text{B}_{it} + e_{it}$$

In these model, LEVERAGE, was used as the dependent variable and all other variables are used as independent variables:

	the company)
PROFIT	Profitability ratios
LIQ	Quick ratio (the ratio of current assets to current liabilities)
B	Debt relief funds by government

**Table 2:** Operating variables

Operating name of the variables	Operational definition of variables
LEVERAGE	Financial Leverage (the successor to the capital structure)
ASSET	Company size (the total assets of

Multiple regression study (first model) is as follows:

**Table 3:** The first model, the binding effect of financial leverage

Dependent Variable: Financial Leverage			
Variable	Coefficient	t	Significance
LIQ	-0.00855	-5.31	0.00
PROFIT	-1.08	-6.85	0.00
SIZE	-1.16	-0.41	0.682
B	5.71	3.08	0.00
C	0.9919	15.89	0.00
Coefficient of determination	0.6985		
F	25.48		

Source: Research Result

**5. Results and discussion**

The study showed that Liquid ratio, profitability and financial aids, as some features are effective on the capital structure. Some scholars have given different results obtained in various studies that the results may indicate that the financial characteristics of the company; according to the environmental conditions in different countries can have positive or negative effects on the company's capital structure. Some researchers have been obtained to the firm's

financial characteristics to respond to uncertain and varying evidence. This means that features the company's financial performance the company knows the outcome. In addition, the companies must be flexible and change with the economy at large, quickly adapt themselves to new conditions.

In the analysis, we have found the effect of size, profitability, and growth (all are independent variables) on the leverage (dependent variables) position of the company. With the help of panel regression, we have found that size, LIQ and profitability have the negative relationship and aid of

government (B) has the positive relationship with the leverage. However, the results for size are not statistically significant. Based on this we are not in a position to conclude that size has the negative or positive relationship with Leverage due to their insignificant results so we reject our hypothesis related with the size.

The Companies need to understand the concept of fiscal policy, to create an appropriate capital structure that will lead to improved performance. It is suggested to directors to use financials model for obtained to optimize the capital structure of the company.

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