

Impact of Agency Costs on Business Performance of Vietnam Listed Food and Beverage Companies

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Abstract

Research purpose:

The article studies the impact of agency costs on business performance of companies in the food and beverage industry listed on the Vietnamese stock market to identify the role of agency problem and then make some recommendations to control the problems and improve the enterprises' efficiency.

Research motivation:

The food and beverage industry has an essential role in the economy and when managers put their own interests first, it can cause very serious damage to shareholders, consumers and the economy as a whole. Therefore, it is necessary to study the impact of agency costs on business performance of enterprises in this industry to identify the role of agency problem and then make some recommendations to control the problems and improve the enterprises' efficiency.

Research design, approach and method:

Data of 34 listed companies continuously for 11 years from 2010 to 2020 were collected and put into panel data regression model.

Main findings:

The results demonstrate that the agency cost indicators are reliable and have a statistically significant impact on the business performance of firms in the food and beverage industry.

Practical/managerial implications:

Some recommendations are suggested such as stronger supervision of outsourced managers' activities, more reasonable compensation procedure and better management of liabilities structure and improvement of asset productivity.

Keywords: agency theory, agency cost of equity, agency cost of debt, business performance, food and beverage industry, listed companies.

1. INTRODUCTION

The agency issue has been attracting great attention from researchers and businesses around the world, especially after the collapse of the world's leading corporations such as Enron, Worldcom, etc. In Vietnam, the legal system and macroeconomic policies are still incomplete and asynchronous, and the financial market is still young and vulnerable. Those problems lead to the more serious mistakes and weaknesses in corporate governance therefore the damage to shareholders and the whole economy can be enormous. Agency costs arise when conflicts arise between shareholders, creditors and managers are a major part of a company's total costs to ensure integrity in its corporate governance. The food and beverage industry has essential role in the economy and when managers put their own interests first, it can cause very serious damage to shareholders, consumers and the economy as a whole. Therefore, it is necessary to study the impact of agency costs on business performance of enterprises in this industry to identify the role of agency problem and then make some recommendations to control the problems and improve business efficiency of enterprises.

2. LITERATURE REVIEW

2.1. Agency costs

Agency theory implies that there are issues in the relationship between a corporate principals and their agents. In common, this relationship is the one between shareholders and company outsourced managers. However, in many cases this theory also explains and resolves the conflict between company's creditors and its manager.

Conflict between shareholders and managers

In Enron's case, a total of \$63 billion in stock value evaporated over the course of 12 months, and up to that point was considered the largest loss (Keown et al., 2005). One of the lessons from Enron's failure involved executives deliberately breaking the law and deceiving shareholders. Although the goal of the enterprise is to maximize shareholder equity, the agency problem hinders the achievement of that goal when the enterprise has a separation between the manager and the owner and the management decisions made are not necessarily in the best interests of the owners. Jensen

and Meckling (1976), Crutchley (1987), Kokoreva and Ulugova (2013), Zakaria et al (2016) demonstrated that managers choose their ownership of shares in firms, the structure capital and dividend distribution policy to minimize the costs that businesses have to incur when the problem of representatives arises.

The costs associated with the agency problem are called agency costs. Jensen & Meckling (1976) define agency costs as the sum of the costs of arranging, administering, and enforcing both formal and informal contracts, plus the opportunity costs incurred when the contracts are feasible but not perfectly executed. Thus, agency costs include contract costs, transaction costs, moral hazard costs, and information costs.

Measuring this cost is not easy, but researchers still try to quantify it depending on economic conditions. Ang et al. (2000), Florackis & Ozkan (2009), Zakaria et al (2016) use Total asset turnover as a criterion to measure agency costs. Low asset productivity represents poor investment decisions, insufficient efforts and wasted resources, therefore agency costs are increasing due to conflicts between managers and shareholders. Singh & Davidson (2004), Florackis & Ozkan (2009) develop one more criterion which is the ratio between total administrative expenses and selling expenses to total revenue. Business administration expenses and selling expenses are implemented by the board of directors or managers in order to promote selling activities, production organization and management, and business activities of enterprises. The increase in these costs may due to the management discretion and are positively related to agency costs (Firth et al., 2008).

Conflict between managers and creditors

Some governance decisions increase the interests of shareholders while reducing the interests of creditors. When the market is not perfect, shareholders prefer risky projects and creditors do not. *Ceteris paribus*, shareholder equity return will increase inversely with risk, and creditor's return will decrease inversely with risk. As risk increases, the creditor may face a decrease in expected returns as interest and principal payments may not be received as expected. This contradiction is even greater when managers redistribute benefits from creditors to shareholders by increasing the risk of the enterprise after taking on debt. Thus, to protect themselves from the agency problem, banks and bondholders demand higher yields and shorter maturities, leading to increased agency costs on firms (Reed et al., 1999). Debt provisions can be used to limit managers' risk-transfer behavior (Crutchley, 1987).

An increase in agency costs will be related to an increase in debt demand, as reflected by the firm's debt-to-equity ratio (Reed et al., 1999; Kokoreva & Ulugova, 2013). In addition, Lee (2010) used the "high use of short-term debt" sign to show an increase in the agency cost of debt in general.

2.2. Business performance

Empirical studies on corporate governance use ROE and ROA as two measures of business performance.

We can measure the performance of a company through ROA which shows the amount of income generated from invested assets. Managers are directly responsible for the operations of the business and the use of business assets. Therefore, ROA allows users to evaluate how effective the corporate governance mechanism is in ensuring and promoting the effective management of the company. In this study, ROA is defined as the profit after tax for the financial period divided by the total assets of the same period.

One of the main purpose of business is to generate income for the benefit of common stockholders. ROE is a measure that tells an investor how much profit a company generates from the money invested by its shareholders. In this study, ROE is defined as the after-tax profit for the financial period divided by the total shareholders' equity for the same period.

2.3. The impact of agency costs on business performance

Jabbary. H et al. (2013) studied on 73 enterprises listed on the Tehran Exchange for 5 years (2006-2010) showed the existence of a statistically significant relationship between agency costs and business performance of the enterprise.

Tran Minh Tuan (2020) uses a 6-year dataset (2010-2016) of Vietnamese listed companies to demonstrate that agency costs have a negative impact on firm performance with a 1% statistical significance. This conclusion is consistent with previous studies in developed countries. The model of this study is subdivided by industry but omitted food and beverage industry. In addition, the data set is relatively outdated, leading to a decrease in the update and reliability of the study.

It can be said that similar studies in Vietnam are also relatively limited, especially in the food and beverage industry. In-depth research by industry is necessary because each industry has very different characteristics of finance and management in general, from which we can explain in detail the direction of impact, cause and give detailed recommendations. This is exactly the research gap that the paper aims and tries to fill.

3. METHODOLOGY

3.1. Research Model

The research model is shown in the diagram below:

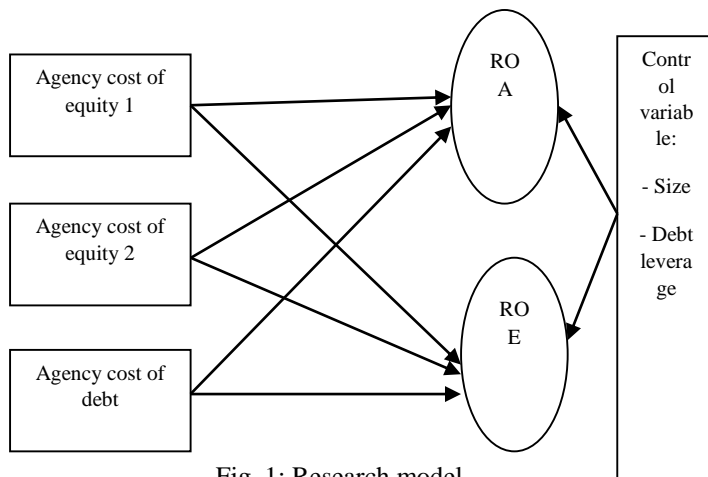


Fig. 1: Research model
(Source: Author's own design)

The dependent variables of the model are two indicators of business performance, namely return on total assets (ROA) and return on equity (ROE) (Jabbary. H et al. (2013) ; Tran Minh Tuan (2020))

The independent variables are agency cost indicators. Specifically:

Table 1: Indicators and measures of agency cost variables

No	Indicators	Acronym	Measure
1	Agency cost of equity 1	AC1	Ratio between total administrative expenses and selling expenses on total revenue (Singh & Davidson, 2004; Florackis & Ozkan, 2009; Jabbary. H et al. (2013); Tran Minh Tuan (2020)).
2	Agency cost of equity 2	AC2	Total asset turnover = Net sales/Average total asset (Ang et al., 2000; Florackis & Ozkan, 2009; Zakaria et al., 2016; Jabbary. H et al. (2013); Tran Minh Tuan (2020)).
3	Agency cost of debt	AC3	Short-term debt to capital ratio (Lee, 2010).

Source: Author's own compilation

The control variables included in the model are size and debt leverage. The size variable is measured by natural logarithm of total assets. The leverage variable is ratio of liabilities to equity.

In general, the estimated models can be written as below:

$$ROA_{it} = \alpha_0 + \alpha_1 AC1_{it} + \alpha_2 AC2_{it} + \alpha_3 AC3_{it} + \alpha_4 Lev_{it} + \alpha_5 Size_{it} \quad (1)$$

$$ROE_{it} = \beta_0 + \beta_1 AC1_{it} + \beta_2 AC2_{it} + \beta_3 AC3_{it} + \beta_4 Lev_{it} + \beta_5 Size_{it} \quad (2)$$

Where,

ROA_{it} : Return on Asset of company i in year t

ROE_{it} : Return on Equity of company i in year t

AC1_{it} : Ratio between total administrative expenses and selling expenses on total revenue of company i in year t

AC2_{it} : Total asset turnover of company i in year t

AC3_{it} : Ratio of short-term debt to total capital of company i in year t

Lev_{it} : Debt to equity ratio company i in year t

Size_{it} : natural logarithm of total assets company i in year t

3.2. Research questions and hypotheses

3.2.1. Research questions

RQ1: How total administrative expenses and selling expenses on total revenue ratio affects ROA of listed food and beverage companies in the period 2010 to 2020?

RQ2: How total asset turnover affects ROA of listed food and beverage companies in the period 2010 to 2020?

RQ3: How short-term debt ratio affects ROA of listed food and beverage companies in the period 2010 to 2020?

RQ4: How total administrative expenses and selling expenses on total revenue ratio affects ROE of listed food and beverage companies in the period 2010 to 2020?

RQ5: How total asset turnover affects ROE of listed food and beverage companies in the period 2010 to 2020?

RQ6: How short-term debt ratio affects ROE of listed food and beverage companies in the period 2010 to 2020?

3.2.2. Research hypotheses

RH1: The higher total administrative expenses and selling expenses total revenue ratio, the lower ROA of listed food and beverage companies in the period 2010 to 2020.

RH2: The higher total asset turnover, the higher ROA of listed food and beverage companies in the period 2010 to 2020.

RH3: The higher short-term debt ratio, the lower ROA of listed food and beverage companies in the period 2010 to 2020.

RH4: The higher total administrative expenses and selling expenses on total revenue ratio, the lower ROE of listed food and beverage companies in the period 2010 to 2020.

RH5: The higher total asset turnover, the higher ROE of listed food and beverage companies in the period 2010 to 2020

RH6: The higher short-term debt ratio, the lower ROE of listed food and beverage companies in the period 2010 to 2020.

3.3. Data and analysis method

The data used for analysis is a set of financial data of 34 food and beverage manufacturing companies listed continuously on the Vietnamese stock market for 11 years from 2010 to 2020. Data source is from the websites providing professional financial data such as www.vietstock.vn and website of the listed companies.

The article uses the regression of panel data with fixed effects model (FEM) or random effects model (REM), depending on the relevance of the models. The advantage of REM and FEM models is that it helps to control for fixed effects at the enterprise level that are not observable, such as the level of business owners, technology, etc. However, the FEM model has a correlation between model residuals and independent variables, while the REM model does not.

4. RESEARCH RESULT

4.1. Descriptive statistics

The following table shows descriptive statistics of the variables in the model:

Table 2: Descriptive Statistics

Variable	Obs	Mean	SD	Min	Max
ROE	374	-0.47	205.87	3928.37	91.24
ROA	374	6.61	9.48	-34.32	72.19
AC1	374	0.12	0.07	0.01	0.53
AC2	374	1.47	0.96	0.13	5.76
AC3	374	0.43	0.20	0.001	1.17
Debt leverage	374	5.75	87.21	-978.24	789.9

Source: Author's own compilation

From the above table, we can see that business performance of the food and beverage production companies is not very impressive. Even the mean ROE of 374 observations is at -0.46%. However, the large standard deviation indicates a high level of differentiation among firms. The leading enterprises are Masan, Vinamilk, Dabaco with very good business performance. Meanwhile, some of seafood processing companies have shown a serious decline in business efficiency in the last 2 years when the covid epidemic broke out.

Regarding the situation of using debt of enterprises in this industry is also quite high. On average, firms maintain liabilities 5.75 times equity with a standard deviation of 87.2. Maintaining high debt but negative average ROE shows that the company's ability to generate profit is low. Notably, in total liabilities, short-term debt dominates. The ratio of short-term debt to total capital on average accounted for 0.43. Thus, there is a large potential risk, while the efficiency is low.

Average Selling and administrative expenses on revenue were at 0.11. The highest level up to 0.53 fell in the case of Hanoi - Hai Duong Beer Joint Stock

Company. This business also regularly maintains a high ratio of selling and administrative expenses. Another enterprise, Bibica Joint Stock Company, also regularly maintains this cost at 0.26-0.28.

Listed food and beverage companies have an average total asset turnover of 1.47. Thus, in general, the ability to generate revenue from assets of these enterprises is quite low. Assets are invested inefficiently, while the debt ratio is very high.

4.2. The impact of agency costs on business performance

4.2.1. The impact of agency costs on ROA

The hausman test gives p-value = 0.7427, thereby confirming that the suitable model is REM. The results of the random effects regression model are as follows:

Table 3: REM model results on the impact of agency costs on ROA

ROA	Slope	P value
AC1	-4.138247	0.553
AC2	3.994045	0.000
AC3	-19.90799	0.000
Size	0.9428102	0.041
Leverage	0.0084439	0.034
R-square: 38%		

Source: Author's own compilation

- Auto correlation test

The result of xttest command gives p-value of 0.0003. Thus the conclusion is the model has autocorrelation phenomena.

- Heteroskedasticity test

Using command xttest0 is suitable with REM, then the result confirm that the model has heteroskedasticity problem.

The ROA model has both the autocorrelation and heteroskedasticity phenomenas, therefore the author uses xtglm command to fix these mistakes. The result is shown in the table 4.

Table 4: Fixed model

ROA	Slope	P value
AC1	-10.6191	0.009
AC2	3.579163	0.000
AC3	-14.4273	0.000
Size	1.053043	0.001
Leverage	0.003128	0.329

Source: Author's own compilation

It can be seen that the higher AC1 - the ratio of selling and administrative expenses to revenue, the lower ROA. P-value of fixed model is 0.009, thus this correlation is statistically significant. Managers can benefit from pushing these costs up, reducing business

performance, which is detrimental to the observed companies.

Besides, AC2 (Total asset turnover) also shows a very high statistically significant impact at 1% on ROA. As Total asset turnover increases, ROA increases. This is true of the classical theories. When the conflict between shareholders and managers is lower, managers will try to make the most of the company's resources to boost profitability. And vice versa. The efficiency of using total assets of seafood enterprises is very low, averaging only 1.4, showing that the problem of representatives exists quite clearly, leading to poor business performance of enterprises in this industry with the average ROA is just over 6%.

The higher the short-term debt ratio (AC3), the lower the ROA with statistical significance of 1%. Besides the high slope indicates that this agency cost has a great influence on ROA. Food and beverage companies have a short business cycle because of the short product life, so the short-term debt ratio will account for the majority. However, this has a big impact on ROA.

4.2.2. The impact of agency costs on ROE

The hausman test gives p-value = 0.0004, thereby confirming that the appropriate model is a fixed-effects regression model (FEM). The results of the fix effects regression model are as follows:

Table 5: FEM modeling results on the impact of agency costs on ROE

ROE	Slope	P-value
AC1	604.2354	0.006
AC2	116.8931	0
AC3	-338.715	0
Size	26.8257	0.179
Leverage	1.164353	0
R-square: 22%		

Source: Author's own compilation

- Auto correlation test

The result of xttest command gives p-value of 0.17. Thus the model doesn't have autocorrealation phenomena.

- Heteroskedasticity test

Using command xttest3 is suitable with FEM, then the result confirm that the model has heteroskedasticity problem.

The ROA model has only heteroskedasticity phenomenas, therefore the author uses xtgls command to fix thí mistake. The result is shown in the table 6.

Table 6: Fixed model

ROE	Slope	P value
AC1	-14.919	0.491
AC2	6.863006	0.002

AC3	-29.1428	0.006
Size	2.843769	0.027
Leverage	0.225357	0.106

Source: Author's own compilation

In contrast to the ROA model, selling and administrative expenses on revenue (AC1) does not have significant impact on ROE.

The efficiency of using total assets also has a statistically significant positive impact on ROE. The slope is also very significant. The conflict between shareholders and major managers, represented by the low efficiency of using total assets for many years, leads to reduced returns for shareholders.

An increase in the debt-to-equity ratio increases ROE, but an increase in the short-term debt component decreases ROE. Thus, the use of debt leverage has a positive effect on ROE, but because the nature of the debts of this industry is mostly short-term, the ROE also decreases with a very strong degree (slope is - 29.14).

Firm size also has a statistically significant positive effect on both ROA and ROE. In food and beverage industry, the bigger companies the more efficient performance.

In contrast, debt leverage does not show significant impact on business performance in both case of ROA and ROE.

5. CONCLUSIONS AND RECOMMENDATIONS

Enterprises in the food and beverage industry in the past 11 years have had low business efficiency. The average ROA is just over 6.6%. The average ROE is - 0.46%. Due to the impact of the trade war and the covid epidemic, in the past 3 years, the profits of companies have dropped sharply, except for a few businesses that produce essential foods such as milk, meat products, instant food and so on. Companies processing seafood, beer and wine showed a sharp drop in profits, even suffered big losses. Processed seafood products are increasingly subjected to stricter inspection when exported to major markets. Through the test, the author find that agency costs have a significant impact on the business performance of enterprises in the food and beverage industry. The impact directions are consistent with theoretical and practical studies. Only selling and administrative expenses on revenue ratio does not show statistically significant influent to ROE. But this ratio still correlates with ROA of observed companies.

Thereby, the author proposes the following recommendations to improve the business efficiency of food and beverage enterprises through good management of agency problem as follows:

- Strengthen the inspection and supervision of the activities of outsourced managers, especially the use of administrative and selling expenses.

- Build a reasonable compensation procedure which can link the interests of managers with the interests of shareholders while minimizing the burden on corporate management costs.
- Manage and structure liabilities reasonably in the direction of reducing short-term debts at an optimal level so that it is still consistent with the business cycle.
- Review the resources of the business, improve the quality and productivity of fixed assets, inventory. The companies also need to have a reasonable credit policy to quickly collect receivables as well as maintain an optimal cash balance to avoid waste.

REFERENCES

- [1] Ang, J.S., Cole, R.A. and Lin, J.W., (2000), "Agency costs and ownership structure", *Journal of Finance*, vol. **55**, (1), pp.81-106.
- [2] Crutchley, C.E. (1987), "The agency cost of financial decision-making: An empirical analysis", Doctoral dissertation, Virginia Polytechnic Institute and State University.
- [3] Firth, M., Fung, P.M.Y. and Rui, O.M. (2008), "Ownership, governance mechanisms, and agency costs in China's listed firms", *Journal of Asset Management*, vol. **9**, no. 2, pp. 90-101.
- [4] Florackis, C. and Ozkan, A., (2009). "The impact of managerial entrenchment on agency costs: An empirical investigation using UK panel data". *European Financial Management*, **15**(3), 497-528.
- [5] Jensen, M.C, Meckling, H.W, (1976). "Theory of the firm: Managerial behavior, agency costs and ownership structure". *Journal of Financial Economics*, 305-360
- [6] Jabbari, H., Hajiha, Z. and Labeshka, R.H., (2013). "Investigation of the effect of agency costs on firm performance of listed firms in Tehran stock Exchange". *European Online Journal of Natural and Social Sciences*. **2**(3), 771-776.
- [7] Kokoreva, M. and Ulugova, A. (2013), "Agency costs and capital structure choice in emerging markets", *Varazdin Development and Entrepreneurship Agency (VADEA)*, Varazdin, Apr 05, pp. 384.
- [8] Lee, H.S. (2010). "Conditional conservatism, agency costs, and the contractual features of debt", Doctoral dissertation, The University of Arizona.
- [9] Reed, B.J., Costigan, M.L. and Lovata, L.M. (1999), "The market's valuation of an auditor's ability to reduce agency cost", *Allied Academies International Conference. Academy of Accounting and Financial Studies. Proceedings*, vol. **4**, no. 1, pp. 42-46.
- [10] Singh, M. and Davison, W.N. (2004). "Agency costs, ownership structure and corporate governance mechanisms". *Journal of banking and finance*, **27**, 793-816
- [11] Tran Minh Tuan (2020). "Tác động của chi phí đại diện tới hiệu quả kinh doanh của các DN niêm yết trên thị trường chứng khoán Việt Nam", Doctoral dissertation, Hanoi National Economics University.
- [12] Zakaria, Z., Purhanudin, N, Pin, T.C. and Soon, C.K.W. (2016). "Leverage and agency cost: Malaysian construction listed companies". *International Journal of management research and review*, **6**(12), 1654-1660