

# Factors affecting the ability to apply ABC accounting method: Case study of Vietnamese consumer goods enterprises

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***Abstract: The article analyzes the impact of factors affecting the ability to apply the ABC accounting method of Vietnam consumer goods enterprises, providing more empirical evidence on factors affecting the ability to apply ABC accounting method. The research method uses the survey of consumer goods enterprises. Quantitative research is done with SPSS 25 software. Research results show that 6 factors positively affect the ability to apply ABC accounting method, in which the level of human resources is the influencing factor. has the strongest influence on the ability to apply ABC accounting method of enterprises in the consumer goods industry. Based on the research results, the author has proposed recommendations to improve the ability to handle ABC accounting methods of enterprises in the consumer goods industry, thereby contributing to improving the performance of enterprises in the industry consumer goods.***

***Keywords: ABC accounting method, applicability, consumer goods enterprises  
JEL code: M41***

## **1. INTRODUCTION**

Accurate cost information is essential for effective decision-making in today's advanced production environments. The activity-based cost method (ABC) system of cost control and the amortization basis is applied to measure the costs of end products and services (Cooper & Kaplan, 1992). Activity-based costing (ABC) is a management accounting method used to track, control and evaluate the distribution of all components of the business production process for the purpose of provide accurate information for administrators on the basis of the allocation of operating costs for products and services. ABC is considered as a powerful innovation in the management accounting system, chosen by many businesses around the world.

International economic integration and trade liberalization have been and are the trends of the world economy. The deeper and deeper international economic integration process brings Vietnam many opportunities, but challenges are not small. Consumer goods are everyday household goods. It is popular but requires extremely high quality. In the current Vietnamese market, consumer goods manufacturing companies always ensure brand reputation, high product quality and standard production lines to create beautiful, durable and good products. consumer hand. Vietnamese consumer goods manufacturing companies not

only serve domestic customers but also conquer overseas markets, with prestige and quality. In that context, cost management accounting information is an important tool to help corporate administrators control operations and have a basis to make decisions for the business. This study aims to analyze the impact of these factors on the ability of manufacturing enterprises to apply ABC accounting of consumer goods manufacturing enterprises, thereby giving some recommendations for businesses to applying ABC accounting method.

## 2. THEORETICAL BASIS AND LITERATURE REVIEWS

### 2.1. Theoretical basis

**Uncertainty theory:** According to Spekle (2003), the uncertainty factors affect the design of the business at the same time affect the technical tools of management accounting. This shows that it is not possible to build a template model of applying accounting methods for all enterprises. This theory is selected by many authors when studying uncertainties affecting the application and implementation of ABC accounting methods in businesses, typically: Anderson (1999), Khalid (2005), Majid and Ali (2013). Most researches have said that the level of success when applying ABC accounting method to different businesses is different, and the level of success when applying to an enterprise but in different stages. Different developers are also different.

**Representative theory:** that the relationship between shareholders and business managers is the relationship of representation - or fiduciary relationship (Spekle, 2003). Both parties want to maximize their interests, so there is a basis to believe that the business manager will not always act in the best interest of the owner, that is, the shareholders. Therefore, the degree of successful application of ABC accounting method will depend on the relationship between business owners, administrators and outside investors, specifically: remuneration, monitoring mechanism, decentralization.

**Sociological theory:** This theory studies how organizations are formed through the interactions between people, organizations and society. Covaleski et al. (1996), argue that the existence of an organization requires socially appropriate behavior to achieve high production efficiency. Accordingly, the business performance is not only an internal issue of the enterprise, but also affected in a general social context, related to current regimes and policies and Relationship with employees in businesses. According to sociological theory, the ability to successfully apply ABC accounting method is influenced by factors: macro policies of the State, social policies and methods of dealing with employees' interests.

**Psychological theory:** This theory has emphasized the role of people in the organization, contributing to increase the efficiency of governance. The authors studying this theory believe that human activities depend a lot on psychosocial factors, when individual behavior is consistent with organizational goals, organizations will thrive. Bimberg et al (2007) suggested that psychological theory is applied in research on management accounting in budgeting, decision-making and control processes.

### 2.2. Literature Reviews

Besides theoretical studies, studies on factors affecting the ability to successfully apply ABC accounting method are also interested in many authors around the world such as:

Anderson (1999), pointed out two groups of factors that affect the implementation and application of ABC accounting method, they are: group of organizational factors (such as: the support of senior managers, compensation training to apply an activity-based costing system);

group of contextual factors (such as the level of competition, the appropriateness of the decisions of the administrator, the adaptation of the current system).

Khalid (2005), pointed out two groups of factors that affect the success of ABC accounting method, that is: group of organizational factors (such as: support from senior managers, owners are not must be the accountant, the staff training); group of context factors (such as: the usefulness of cost information, the presence of information technology and the size of the business).

Majid and Sulaiman (2008), research has shown the necessary factors to ensure successful application of ABC accounting method, that is: business organizational structure should be designed in a horizontal model in which The manufacturing process is divided into activities; Those holding responsibility in ABC project must have sufficient capacity and deep understanding of information technology; cost information on activities; the support of managers and shareholders.

Zhang and Isa (2010), pointed out factors: behavior, organization and technology are the main factors determining the success of the ABC accounting method. In addition, factors: the role of culture and organizational structure also significantly affect the ability of enterprises to apply ABC successfully.

Majid and Ali (2013), have demonstrated, even in small manufacturing enterprises, the possibility of product cost distortion is real if using traditional cost calculation method, so we propose to apply ABC accounting method in steel manufacturing enterprises; The study also pointed out the factors affecting the ability to apply ABC accounting method, such as: cost proportion, production process, product category, input materials, finished products, sell inventory products.

In Vietnam, the researches related to ABC accounting method are mainly theoretical studies and applied experiments in some enterprises. Some case studies on this issue such as: Dao Thi Thu Giang and Tran Tu Uyen (2016) study the factors affecting the application of ABC accounting method in cost management in listed enterprises. listed on the Vietnamese stock market. The study also pointed out the factors affecting the ability to apply ABC accounting method, such as: total revenue, product variety and cost structure. Nguyen Viet Hung and Tran The Ba (2016) analyzed and applied the ABC accounting method with 3 outstanding limitations: limited knowledge of ABC accounting, lack of managerial support and lack of resources. Dam Phuong Lan (2017) studied the effects of organizational factors on the application of ABC accounting method in domestic feed processing enterprises, the analysis results showed the application of ABC accounting and the success of the method are influenced by factors such as support from senior managers, effective assessment association, ownership of accounting fees and ABC training.

Facing the trend of trade liberalization, in order to improve competitiveness, Vietnamese enterprises need to consider applying modern cost management methods to create special advantages, especially businesses in the industry of pepper. use. Therefore, research on factors affecting the ABC accounting method application in Vietnamese consumer goods enterprises is really necessary.

### **3. RESEARCH METHODOLOGY AND RESEARCH MODEL**

#### *3.1. Research method*

The research method used includes surveying through questionnaires of consumer goods businesses to evaluate factors affecting ABC accounting method application. Applying ABC accounting method and 6 factors including: characteristics of production and business,

characteristics of organization and management, level of human resources, financial resources, business strategy and corporate culture measured by five-level Likert scale Very good, good, average, not good, weak. The 5-level Likert scale is used familiarly in many studies, so the author quantifies each factor according to five levels. Quantitative research was carried out with SPSS 25 software.

Research scope is all consumer goods businesses. Research data is collected in the form of direct interviews and email interviews for managers and employees working in many different positions in the consumer goods industry. Survey results collected 325 questionnaires from 360 distributed questionnaires. After eliminating invalid questionnaires due to many blank boxes, the author chose to use 310 questionnaires.

### 3.2. Research model and research hypothesis

From the research overview, the proposed research model is as follows:

$$ABC = \beta_1 + \beta_2 \times PC + \beta_3 \times MO + \beta_4 \times HR + \beta_5 \times FR + \beta_6 \times BS + \beta_7 \times CC + E$$

To assess the impact of factors on ABC accounting in Vietnamese consumer goods enterprises, the study uses 6 detailed hypotheses as follows:

H<sub>1</sub>: Business characteristics of Consumer goods businesses have a positive relationship with the ability to successfully apply ABC accounting method

H<sub>2</sub>: Management organizational characteristics of consumer goods enterprises have a positive relationship with their ability to operate ABC accounting method is applied successfully

H<sub>3</sub>: The human resource level of consumer goods enterprises has a positive relationship with the ability to successfully apply ABC accounting method

H<sub>4</sub>: Financial resources of the Consumer goods companies have a positive relationship with the ability to successfully apply ABC accounting method

H<sub>5</sub>: Business strategies of consumer goods enterprises have a positive relationship with their ability to apply successfully ABC accounting method

H<sub>6</sub>: Corporate culture of enterprises in the relevant consumer goods industry has Positive effect with the ability to successfully apply ABC accounting method

## 4. RESEARCH RESULTS

### 4.1. Scale test

The results of evaluating the reliability of the scale with Cronbach's Alpha showed that all scales had reliability greater than 0.6 and total variable correlation coefficient greater than 0.3. All scales satisfy the conditions to analyze discovery factors EFA. The reliability of the scales is summed up in the table below.

Table 1: Scale test results

No.	Variable name	Symbol	Number of observed variables	Cronbach's Alpha coefficient	Smallest Total variable correlation coefficient
1	ABC	ABC application	5	0.804	0.469

2	Characteristics of production and business	PC	5	0.694	0.317
3	Characteristics of organization and management	MO	6	0.742	0.420
4	Qualifications of human resources	HR	4	0.814	0.616
5	Financial resources	FR	4	0.721	0.392
6	Business strategy	BS	3	0.672	0.399
7	Corporate culture	CC	5	0.803	0.497

#### 4.2. Explore factor analysis EFA

Factor analysis was performed with Principle Component extraction, Varimax rotation for the dependent observed variable. The results showed that the coefficient KMO = 0.851 (meet the condition > 0.5); Significance level and Barlett test = 0.000 (<0.05) shows that the EFA analysis is appropriate. The total extracted variance is 57.723% > 50%; and factor load factors are greater than 0.5 should meet the requirements. The official scale after the EFA treatment consists of 6 independent variables with 27 observed variables as proposed.

Table 2. Results of EFA analysis

	Factor					
	1	2	3	4	5	6
CC4	0.634					
CC1	0.676					
CC2	0.658					
CC3	0.648					
CC5	0.583					
FR2		0.680				
FR1		0.633				
FR4		0.556				
FR3		0.565				
HR1			0.548			
HR3			0.768			
HR4			0.737			
HR2			0.681			
MO1				0.759		
MO3				0.738		
MO6				0.615		
MO5				0.582		
MO2				0.574		
MO4				0.601		
BS1					0.711	

BS3					0.688	
BS2					0.619	
PC3						0.824
PC1						0.668
PC2						0.533
PC5						0.563
PC4						0.534

#### 4.3. Regression analysis

Table 3. Results of the statistical value of the factors

Summary Model					
Model	R	R squared	R-squaredcorrected	errorestimate standard deviation,	of coefficient Durbin - Watso
1	0.814 <sup>a</sup>	0.736	0.732	0.30581	1915
a. Predictors: (Constant), CC, MO, BS, PC, HR, FR					
b. Dependent Variable: ABC					

The adjusted R-squared reflects the influence of the independent variables on the variation of the dependent variable, in this case 6 factors (Business characteristics, management organization characteristics, resource level human resources, financial resources, business strategy, corporate culture) affected 73.2% of the ability to apply ABC accounting methods of businesses in the consumer goods industry. The Durbin-Watson coefficient is 1.915, in the range from 1.5 to 2.5, so there is no first order sequence autocorrelation.

In order to check whether this regression model is suitable for the collected data set and has application significance, the author continues to test the model's suitability through ANOVA test as follows:

Table 4: Suitability test (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	44.042	6	24.007	26.701	0.000 <sup>b</sup>
	Residual	28.337	303	0.094		
	Total	172.379	309			
a. Dependent Variable: ABC						
b. Predictors: (Constant), CC, MO, BS, PC, HR, FR						

Sig tests  $F = 0.000 < 0.05$ , so the regression model evaluates the impact level of 6 factors (Business characteristics, organizational and managerial characteristics, human resource level, financial resources, combat business strategy, corporate culture) to the ability to apply ABC accounting methods of businesses in the consumer goods industry.

The model's F-statistic has the value Sig. = 0.000 < 0.05 indicates that the model is suitable for the data set and can be deduced overall. VIF coefficients are all less than 2, so there is no multicollinearity phenomenon between the components that does not appear in the research model.

The regression results show that the impact of the 6 factors to the ability to apply the accounting method ABC of business sectors Consumer goods are shown in the table below:

Table 5: Regression result of multiple

Coefficient		Unstandardized Coefficients		Standardized Coefficients			Multiplestatistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	0.022	0.180			0.002		
	PC	0.295	0.042	0.266	2.249	0.002	0.630	1.588
	MO	0.210	0.046	0.134	4.531	0.000	0.623	1.606
	HR	0.473	0.033	0.464	5.084	0.000	0.496	1.015
	FR	0.222	0.037	0.202	5.948	0.000	0.472	1.118
	BS	0.216	0.128	0.218	4.102	0.000	0.651	1.535
	CC	0.261	0.137	0.258	1.664	0.000	0.442	1.262

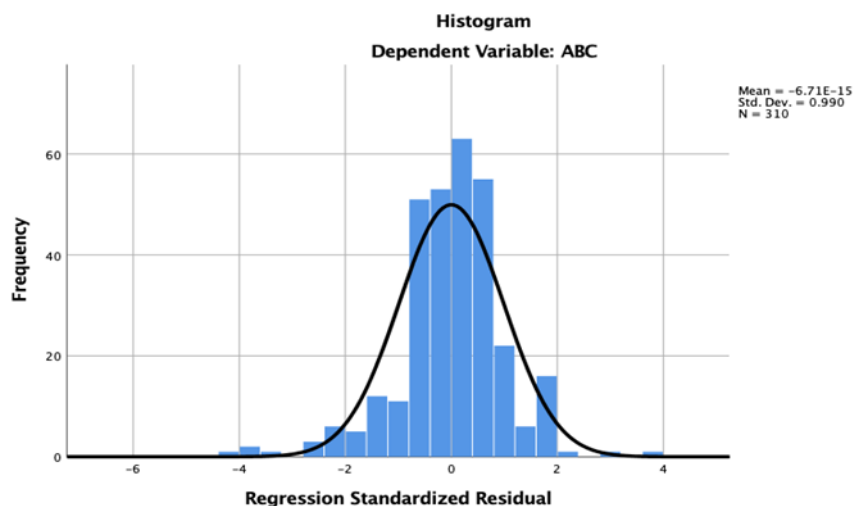
The sig test value for each independent variable < 0.05: the variables are significant in the model.

Beta coefficients are all positive: all variables have a positive impact on the dependent variable

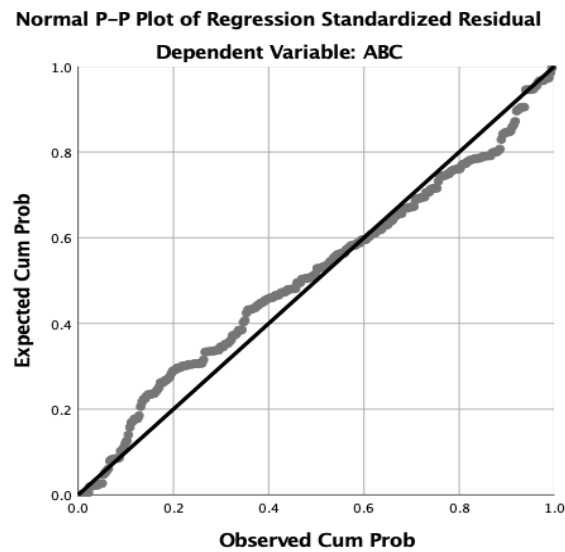
The regression model is written as follows:

$$ABC = 0.022 + 0.266PC + 0.134MO + 0.464HR + 0.202FR + 0.218BS + 0.258CC + E$$

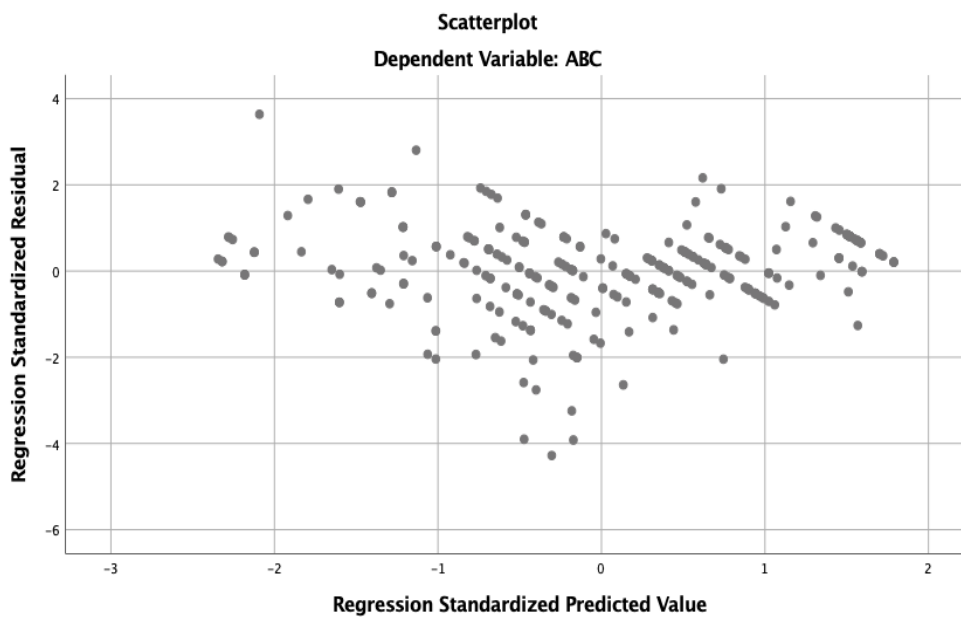
*Normalized Residual frequency*



*Chart Normal P = P Plot*



*Scatter Plot for testing linear contact assumptions*



## 5. DISCUSSIONS AND RECOMMENDATIONS

### 5.1. Discussion

On the basis of the results of quantitative research on factors affecting the ABC accounting application of enterprises in the consumer goods industry, some conclusions can be drawn as follows:

Linear regression equation multiples extracted according to the standardized Beta coefficient shows that the level of human resources factor has a higher standardized Beta coefficient (0.464) than all other factors. The standardized Beta coefficients of the remaining factors are: Business characteristics (0.266), organizational and managerial characteristics (0.134), financial resources (0.202), business strategy (0.218) and corporate culture (0.258).

Thus, the level of human resources, production and business characteristics and corporate culture are the factors that most strongly affect the ABC accounting method of enterprises in the consumer goods industry. This can be explained that, for businesses in the



consumer goods industry, a good level of human resources will positively affect the successful application of the ABC accounting method.

### 5.2. Recommendations

From the research results of factors affecting the ABC accounting method application of enterprises in the consumer goods industry, the author gives some recommendations for successful application of ABC accounting method, thereby contributing to improving the performance of businesses in the consumer goods industry as follows:

In order to be able to apply ABC accounting method in practice, enterprises in the consumer goods industry are very necessary to have a high quality human resource. In order to apply the ABC accounting model well in the consumer goods businesses, it is essential to train human resources with the following knowledge of ABC accounting. Not only the accounting department but also the human resources of other departments with knowledge of ABC accounting will bring higher efficiency.

Besides, production and business characteristics and corporate culture also have a significant impact to apply ABC accounting method. Therefore, administrators need to understand the benefits of applying ABC accounting method, thereby building production and business plans, building corporate culture to improve the ability to apply ABC accounting method. , contributing to improving the operational efficiency of businesses

In addition, the characteristics of organizational management, financial resources and business strategy also positively impact the ABC application. Therefore, administrators need to invest in financial resources, build appropriate management systems and business strategies to contribute to successful ABC accounting.

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