

# THE RELATIONSHIP BETWEEN EMPLOYEE TRAINING AND FIRM PERFORMANCE IN THE LIGHT INDUSTRY IN CHINA

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## ABSTRACT

The relevant factors of employee training have the relationships with firm performances. This study focuses on testing the relationship between two main variables (training frequency and training expenses) of independent variables and the control variables (gender, age and education) of employee characteristics and firm performance of return on assets of year T+1. There are three main hypotheses linked to the conceptual framework of this study: firstly, there is a positive relationship between training frequency and return on assets; secondly, there is a positive relationship between training expenses and return on assets; and thirdly, there is a significant positive relationship between employee characteristics and return on assets.

In order to reach to the research objectives of this study, I collected the necessary data and information from firms (N=110 firms) within the administrative area of Jiangsu Province in China. The data and information covered the year 2006 to 2008. The data and information processing of this study is to use the collected data and information of two main independent variables and the control variables of employee characteristics happened in year 2006 and 2007 to match the data of return on assets happened in year 2007 and 2008. This study is to using the Multiple Regression Analysis to examine the hypotheses.

The results of this study show that the only independent variable of training frequency is significant and positive relationship with return on assets; and the only one control variable of employee characteristics mentioned in this study is significant and negative relationship with return on assets. Finally, the findings of this study suggest that the firms should pay some more attention to frequency of employee training and age structures of employee, when they create relevant strategic plans or decisions for firms' development.

Keywords : employee training, firm performance, return on assets, training frequency, employee characteristics, relationship

## INTRODUCTION

Training is an important part of human resources within an organization. The aspects of training, such as employee training frequency, expenses on employee training activities, employee characteristics and others, could affect the firm performances. Most of researches had shown that the employee training could affect the firm performances. Such as, Huang (2001) said that if the important roles and functions would be enough showed out, the employee should have been educated and trained well, which could help the firm or firm to operating well. And some Chinese researches had discovered that most of firms lacked of right cognition on above point, and during these few years the international environment is not stable. Most of the firms tried to reduce the relevant expenses on firm, reduce the employee training frequency or downsize the employee. The unstable international environment here does not point at the wars in the world, just point at another thing that's the influences of American Sub-loan Crisis, which affects the whole global.

The issues of surviving, keeping the stable sales, and improving the firm performance in this serious market environment, the firms in light industry and the China Government have to think about. As mentioned early, the firms in the light industry, most of which are small and medium-sized firms, are the most important group in the whole national economic system, which creates the values and wealth to the society, create the employment opportunities to the public etc. By reviewing some articles from Chinese researchers in this field, we could find that most of the Chinese firms did not pay more attention

to the importance of training activities to firm performance, and also have the opinions about the expenses on employee training activities was the costs to firms; so most of them do want to invest in other aspects of firm's operating such as the advertising, purchasing equipments etc. Actually, the employee of each organization is the most important factor, which plays an important role and affects the firm's development; like the words from Andrew Carnegie: 'If I plant equipment, materials, all burned, but as long as the class to keep my troops a few years later, I will continue to be a steel magnate. As a firm during the particular historical period in order to overcome some issues of surviving and development, it has to try to know: what factors on firm management do the works from firms have recognized and problems they have met? What relations among relative factors that firms have recognized and met will affect the firm performances?

This study focuses on the collected data and information from firms to find the relevant issues on Human Resources practice to find some relationships between few variables mentioned in this study and firm performance (Return on Assets – Year  $T+1$ ). By analyzing and completing relevant issues of this study, it reaches to study how relevant issues of human resources practice affect the firm performance by literature reviews, to find the relationship between relevant issues of human resources practice and firm performance based on the hypotheses of this study. The details of hypothesis of this study are as follows:

Hypothesis 1 (H1): There is the positive

relationship between expenses on employee training activities per year and firm performance – Return on Assets (ROA).

Hypothesis 2 (H2): There is the positive relationship between frequency of employee training activities per year and firm performance – Return on Assets (ROA).

Hypothesis 3 (H3): There is the significant relationship between employee characteristics and firm performance– Return on Assets (ROA).

Based on these hypotheses above to analyze relevant data and information, the findings that linked to objectives and hypothesizes of this study could make the entrepreneurs or managers to know the relationship of training activity and firm performances on expenses within a firm in light industry; The findings could be the useful information for the firms in light industry in administrative region – Jiangsu province in China – to make planning and decisions on firm strategy for creating and increasing the firm performances based on training activity which is one key issue of firm management; And also hope that the findings of this study could help the firms to survive and develop in the changing and competitive environment, and to create the values to the local society and whole nation.

## LITERATURE REVIEWS

As we known, the people are one most important factor in an organization. If not have this most important factor, how would the organization be like? For this assumption, it is difficult to imagine what the organization would be like. In the real world, a firm or firm's success and surviving depends on some kinds of resources such as quality human resources, capitals, innovation ability, advanced

technology, the good organization structure and so on. Few factors mentioned before, we know, the factor of human resources that focuses on people who affect the relative policies of firm, financial situation, and development of other relative aspects within the surviving and competing environment of market and society, based on these, the firm would create and choose the relative policies or strategy to the firm or firm development and competing in the surviving and heavy environment (Chen Rili Hussin, 2006). Although the factor of human resources has the greater importance and function to firm's or firm's development and competence; if the important roles and functions would be enough showed out, the employee should have been educated and trained well, which could help the firm or firm to operating well (Huang, 2001). Employee training is a learning experience in that it seeks a relatively permanent change in employees such that their ability to perform on the job improves (Stephen P. Robbins and David A. Decenzo, 2004). Training involves changing skills, knowledge, attitudes, or behavior (C.S. Duncan, J.D. Selby-Lucas and W. Swart 2002). It (employee training) has been estimated, for instance, that U.S. business firms alone spend billions each a year on formal courses and training programs to develop workers' skills (T. Galvin 2002).

Tan (1996) recorded that skills upgrading activities among the top management of the companies are vital and it could lead towards better productivity level and customers satisfactions. The forms of employee training is more diverse, and the employee training could be performed through some various channels such as the training in a college, the training in the firm or other firms, the training in the professional training organization, and the online learning that uses

the e-materials from the internet. If having the necessary equipments, the online learning now has become one more popular and easy channel or way for employee to use and gain new knowledge, skills and so on and also gives the human resources practices on training activities. According to Collins et al. (2003), online learning system can help to deliver ICT (Information Communications Technologies) training to small and medium-sized firms, and gives them the chance to gain the core skills and competencies are vital for small and medium-sized firms' performance, such as productivity and profit.

Although above mentioned contents show that relevant employee training issues have the effects on firm performance, some researches revealed that Westhead and Storey (1997) found out that the association between the employee training activities and firm performance are not very strong and significant. Marshall et al. (1995) and Kitching (1998), both agreed that the direct relationship of employee training and firm performance when they gathered that there is a very weak relationship between both variables.

This study is designed to try to test the relationship between both two key variables (expenses on employee training activities and firm performances) and other variables linked to firm performance by Multiple Regression Analysis Model; and try to perfect this study in order to get the expecting results.

## RESEARCH METHODOLOGY

As mentioned earlier, all of the firms as the study objectives in this study are located in the administrative region of Jiangsu province of China, which belong to the general category of light industry. And the firms investigated relate to produce or

manufacture many kinds of products or goods such as the domestic appliances, foods, and clothes etc. And each firm's economic contribution make Jiangsu become one most important province and have the particular position in the whole nation of China. End of March in year 2010, there are 957,361 companies that have registered in Administrative Bureau for Industry and Commerce of Jiangsu province (Chinese Business Directory, 2010). In order to completing the relevant information and data collecting for this study, the chief persons in charge of each firm is the major respondents to the survey of this study who are Human Resources Manager and Financial Manager, or the Chief Executive Officer. All of the firms and respondents in the limited geographic and administrative area mentioned in this study are the population to this research.

The selected objectives of firms, which have registered in Administrative Bureau for Industry and Commerce of Jiangsu province, as the samples of this study belong to the category of small and medium sized firms in light industry; and the samples of 110 firms will form the basis of relative information sources. The selected surveyed firms have the training programs to their employee (general employee); the firms should have been found before year 2004.

The measures of this study on firm performance will used the multiple variables (Chenhall and Langfield-Smith, 2007) which were measured under the philosophy of a perceived rating of the organization's performance; and the variables like as showed in the conceptual framework of this study, they are the Return on Assets (ROA) and Productivity, which are the dependent variables in this study. Mahoney (1984) argues that because of interactions and dependencies in the work process, and organization

performance is not a simple sum of individual or unit performance or productivity. Dyer and Reeves (1995) introduces three organizational effectiveness categories designed to evaluate strategic human resources management: human resources outcomes, organizational outcomes, and financial / accounting outcomes.

The variables of this study are divided into two categories: the first category is the main variables that are training frequency per year and training expenses per year; the second category is the control variables that are characteristics and s. And the collected data and information for each variable mentioned in this study will covered in the Multiple Regression Analysis Model  $Y_{t+1} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$  to test the hypothesis; the  $X_1$  and  $X_2$  are the main variables – Training frequency and Training expenses, and the  $\beta$  stands for the control variables that are the characteristics of employee.

A questionnaire is used for collecting the relative data. The structure of this questionnaire consists of four sections, which included both openended and closed-ended questions. Section one concerns relative basic information of the surveyed firm and responders. Section two concerns on information about employee training; Section three focuses on some relative training information not covered in this study. Section four will focus on collecting relative information on firm performance which this study will focus on. The questionnaire will be delivered directly to and collect the relative information from the person in charge in the target surveyed firms in the limited region. And in this study, the major data analysis tool will use the SPSS to handle with relative collected data for this study.

## RESULTS

The sample of this study is collected from the administrative area of Jiangsu province, and all of them are engaged in different business sectors in the light industry. Finally, there are 110 firms formed the sources of data and information to this study. The general sample description showed in Table 1:

Business sector	Sum of firms	Percentage
Manufacturing	91	82.73%
Services	16	14.55%
Others	3	2.77%
Total	110	100%

In order to handling the collected data and information, this study use the 220 firms– years' data and information, which of the main variables and the control variables happened in year 2006 and 2007, and the independent variable of Return on Assets happened in year 2007 and 2008. The descriptive statistics showed in Table 2:

Table 2 the Descriptive Statistics

Items	Minimum	Maximum	Mean	Std. Deviation
Total Employee	4.00	6100.00	1436.00	1509.93496
Average Age	22.00	37.60	27.8132	3.02118
Percent of Male	.15	.98	.6744	.20142
Training Frequency	1.00	13.00	3.8182	2.20287
Training Expenses	2.00	150.00	36.5018	24.34856
Return on Assets	-37.21	50.54	7.83	10.74
Dummy education	Lower than Bachelor's Degree 54.09%		higher than Bachelor's Degree 45.91%	

Note: the valid number of firms is 220

Table 3 the Model Summary and ANOVA<sup>c</sup>

Model	R	R Square	Adjusted	ANOVA <sup>c</sup>	
				F	Sig.
1	.192 <sup>a</sup>	.037	.028	4.143	.017 <sup>a</sup>
2	.306 <sup>b</sup>	.094	.072	4.419	.001 <sup>b</sup>

a. Predictors: (Constant), Training Expenses, Training Frequency

b. Predictors: (Constant), Training Expenses, Training Frequency, Dummy

Education, Average Age, Percent of Male

c. Dependent Variable: Return on Return (T+1)

are significant, and the main independent variables (Training frequency and Training expenses) could be accounted for the dependent variable of Return on Assets by 3.7% in model 1; and in Model 2, all the variables could be accounted for the dependent variable of Return on Assets by 9.4%. Table 4 reveals that the main independent variable of Training frequency is significantly related to the dependent variable of Return on Assets and has the positive relationship with Return on Assets in Model 1 (p-value is 0.006, B is positive); In Model 2, the main independent variable of Training frequency and the control variable of Average age are significantly related to the dependent variable of Return on Assets (p-value is 0.001 and 0.000). In Model 2, the main independent variable of training.

Table 4 the Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1 (Constant)	5.240	1.775		2.951	.004
Training Frequency	.903	.325	.185	2.779	.006
Training Expenses	-.024	.029	-.053	-.802	.424
2 (Constant)	26.475	6.804		3.891	.000
Training Frequency	1.069	.323	.219	3.311	.001
Training Expenses	-.021	.031	-.048	-.685	.494

frequency also has the positive relationship with the Return on Assets, but the control variable

of Average age has the negative relationship with the Return on Assets.

Average Age	-.868	.240	-.244	-3.611	.000
Dummy Education	.634	1.470	.029	.431	.667
Percent of Male	2.850	3.724	.053	.765	.445

a. Dependent Variable: Return on Return (T+1)

## DISCUSSION

The basic research design is to test the relationship between relevant variables and the dependent variable of Return on Assets (year T+1). The main independent variables (Training frequency and Training expenses) whether are significantly related to return on Assets; whether the main independent variables and the control variables are significantly related to return on Assets.

To test these assumptions or hypotheses of this study, the outcomes of analyzing relevant collected data and information have revealed some results. The main independent variable of Training expenses is not significantly related to return on assets, but just only the main independent variable is significantly related to return on assets. Not all the control variables (Average age, Dummy education, Percent of male) mentioned in this study are significantly related to return on assets, except the control variable of Average age is significantly related to the dependent variable of return on assets and it has the negative relationship with the dependent variable – return on assets. In other words, the first and third hypothesis cannot be tested in this study; the control variables in forth hypothesis, except average age, cannot be tested. (Hypothesis 1 (H1): There is no positive relationship between expenses



on employee training activities per year and firm performance – Return on Assets. Hypothesis 2 (H2): There is the positive relationship between frequency of employee training activities per year and firm performance – Return on Assets. Hypothesis 3 (H3): There is the significant and negative relationship between Average age of employee characteristics and firm performance – Return on Assets)

Based on above analysis, this study shows that the training frequency can affect the return on assets for the next year; the more training frequency could help the employee to well know relevant operating skills or knowledge to make their works with better effectiveness and efficiency; in other words, it is good for increasing the productivity and improving firm performance. This point is also aligned with Huang (2001). And other researchers mentioned in this study agree that training could help the firms to upgrade their performances in many ways – such as the financial performance (Return on Assets).

The average age is the only one of control variables mentioned in this study, which has the significant and negative relationship with return on assets; thinking about it by another aspect, it aligns with the Chinese traditional Confucian thinking towards on age. The Chinese traditional Confucian thinking suggests that the different age groups have the different characteristics: younger people who are will to learn more new things and easily accept new ideas (technologies, knowledge and skills etc.); the older people who have more life experience are more mature and possess better problem-solving skills. Western findings also suggested that the older and younger employees must come together to form coherent and viable corporate culture (Wagner, 2007). These values possessed by different age groups can complement

each other in companies and it tends to achieve better firm performance. So far, the results of this study agrees that the age of control variables could be an important factor to affect firm performance – return on assets.

When making strategic planning for self-development, they should think about the relevant factors of employee training and employee characteristics. The findings of this study has showed the importance for firms to do like this, because some factors of those could affect the firm performances, such as the firm performance of return on assets mentioned in this study.

According to the results and relevant analysis of this study, when they make the developmental or strategic planning for self-development, the effects of training frequency and the age of employee's as the firm, they should think about. The findings of this study have showed the importance for firms to do like this, because some factors could affect the firm performances such as the firm performance of return on assets mentioned in this study. Based on the findings of this study, the firms should increase the frequency of employee training linked to its developmental or strategic planning and its limited resources; another factor is that the age, the firms should pay some more attention to optimize the age structures of employee to well develop the potentials of different age groups, like the western findings suggested in this chapter. Doing like this could affect the firm performances; the findings of this study have revealed this point.

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Other variables covered in this study could be tested out the significant and positive relationship with the dependent variable of firm performance – return on assets, because there are some limitations to this study:

Firstly, the number of samples also may have commanding influence over the result. If the number of samples is increased, it may provide a better implication.

Secondly, another major factor that is important to influence this study is the time. To collect the relevant data and information, it also takes more time to travel some important areas in Jiangsu province within the limited time.

Thirdly, it is difficult to get full cooperation from the entrepreneurs or managers of firms to answer the questionnaire. The common reason given is they are tight with their routine in handling the firms

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