A Training Framework for Improving Firm Financial and Non-Financial Performance

Ye Shaoyong[1], Nur Naha Abu Mansor[2+], Azzman Mohamed[3,] Norhalimah Idris[4] and Roya Anvari[5]

[1, 2, 3, 4,5]Faculty of Management and Human Resource Development, Universiti Teknologi Malaysia, Johor Bahru Campus, 81310 Skudai, Johor Darul Takzim, Malaysia

Abstract. Using multivariate analysis, we hypothesized that training factors such as top management support, training needs analysis, training expenditure and intensity, and training methods would be positively related to firm's financial and non-financial performance. Multiple linear regression model conducted on data collected using survey questionnaire from 192 manufacturing enterprises in Yueqing City, China confirmed our predictions. Descriptive analysis was used to identify the level of training factors and firm performance and Pearson Correlation Coefficient (r) was performed to identify the relationship between independent and dependent variables. A significant positive relationship between training factors and firm performance indicated top management support most strongly contributes to non-financial performance while training expenditure and intensity most strongly contribute to financial performance.

Keywords: training factors, financial performance, non-financial performance, top management, and training expenditure.

1. Introduction

In recent years, China has become the fastest developing economy of the world. It has suffered from fundamental changes since 1979, when a more effective market oriented system replaced the old one. After China joined in the World Trade Organization (WTO) in 2001, China's GDP growth rate increased to 8.05% in 2002 and still kept in increasing speed in the following years. Specifically, the growth rate of economy still respectively kept at 10.08% in 2005, 10.98% in 2006, and 12.08% in 2007 (refer to Table 1). This high-speed development was paid attention by the worldwide. And China's economy development will continually significantly impact on the world economy. Table 1. shows the level of China's overall economy from 1999 to 2009 (Statistical Yearbook of China, 2009). It tells us China's GDP grew year by year. During these eleven years, the average annual GDP kept at 8.91%. Although in 2008 the world suffered from financial crisis, China's economy still kept robust. As shown in table 1, the growth rate of China's GDP still increased at 9.13% in 2008 then decreased to 7.63% in 2009. These good performances were attracted by many academic researchers. As reported by the World Bank, the sector which most strongly contributes to China's economic growth is manufacturing. Manufacturing enterprises have been responsible for 34% to the China's GDP. The informatization and globalization trend request the enterprise staffs must constantly update their knowledge and improve their skills. Especially under the background of economic globalization in China, the essence of enterprise competition is talent competition. If enterprises want to win in the exciting market competition, undoubtedly the importance of human resources is the first. Training as an important way of human resources development is becoming crucial. Training is an important way to educate talent. Training could improve staff's knowledge, skills, and their potential creativity. It could improve efficiency so as to enhance the competitiveness

of enterprises.

[+] Corresponding author. Tel.: + 607 – 5530266; fax: +607 – 556 6911.
E-mail address: (nurnaha@utm.my).

Table 1. China GDP Growth Rate during 1999-2009 (%)

Year	Mar	Jun	Sep	Dec	Average
2009	6.10	7.90	8.90		7.63
2008	10.60	10.10	9.00	6.80	9.13
2007	13.00	12.60	11.50	11.20	12.08
2006	11.40	11.50	10.60	10.40	10.98
2005	10.50	10.10	9.80	9.90	10.08
2004	9.80	9.60	9.10	9.50	9.50
2003	10.30	7.90	9.60	9.90	9.43
2002	8.00	8.00	8.10	8.10	8.05
2001	8.40	7.80	7.00	6.60	7.45
2000	8.10	8.30	7.00	7.30	7.68
1999				6.00	6.00

The primary aim of this study is to propose and test a multilevel model of relationship between training factors and firm performance. In doing so, we recognize that training factors consists of top management support, training needs analysis, training expenditure and intensity, and training methods would be positively related to firm's financial and non-financial performance. We firstly identified what are the training factors in relation to this study and secondly, seek to identify if these factors have relationship with firms performance.

2. Training Factors

Many internal and external factors have been considered in leading to increase firm financial and non-financial performance. We looked into top management support as one of the factors necessary to succeed in training. We believe senior managers believe that training costs are too high. They feel it could not bring positive results of training in short term. If there is a lack of top management support and commitment, organizations may give up training and focus on other firm activities, especially when they are now eager of short term benefits. Because employees' training was not emphasized by enterprises, many companies viewed employees' training as "soft task". This brings an understanding that training is easily influenced by organizational development factors. For example, when streamlining organizations, employees who had to accept training were to be dismissed first. When reducing costs of companies, training costs were to be cut first. When enterprises were in poor performance, training even would be cancelled (Zhao, 2002). Top managers focused on the immediate benefits. They didn't link training with long-term-development objectives. They didn't fully develop the employees' capability from the strategic perspectives (Zheng, 2003). The above discussion leads to the following hypothesis:

Hypothesis 1: Increased top management support in training implementation is positively related to increase firm financial and non-financial performance.

At the needs analysis level, Roberson *et al*. (2003) informed training needs analysis (TNA) was a process that training department used various methods and technology to analyze the target, knowledge and skills of organization members in order to identify training necessity and training content, before organizations conduct training. Dessler (2001) thought there were two kinds of methods for training needs analysis: (i) task analysis: It means to analyze the job needs; (ii) performance analysis: It means to evaluate on-the-job employee performance. He thought training was used to solve problems of poor performance. Other authors like Mondy and Noe (2005) divided training needs analysis into three levels: (i) organizational analysis: to determine which departments need to implement training. This analysis focused on the entire organization, including organizational strategic mission, organizational goals, organizational business plans and human resource planning analysis; (ii) job analysis: to systematically collect special job or job group of data,

including the standard of job, knowledge, skills and attitude; (iii) personnel analysis: to focus on evaluating the employees' knowledge, skills, and abilities in their working. Thus, we pose the following hypothesis:

Hypothesis 2: Increased conduct of training needs analysis (TNA) in training implementation is positively related to increase firm financial and non-financial performance.

In relation to training cost and expenditure, when organizations conduct training, it will cost a lot of financial and non-financial resources. Trainers need some time to design and deliver training content. Zhao (2002) revealed that although China human capital investment made progress, the level was still very low. In his report, he didn't point out on training funds. However, through his survey, he concluded that training investment of many enterprises was still low in China. It was far away from the national policies and requirement. Some researchers compared the training investment between China and developed countries. They pointed out there was a big gap between them.

Hypothesis 3: Increased stress on training expenditure and intensity in training implementation is positively related to increase firm financial and non-financial performance.

Training is a kind of management activity which is constrained by the materials conditions. It needs a training location, training equipment, training materials and other resources. Only a few China enterprises have good training facilities. On the contrary, many China companies were lacking of training facilities. In addition, some enterprises had the problem of training facilities obsolescence. Xu (2005) and his partners conducted a survey about training in some enterprises. It showed that a total of 56% of enterprises were willing to try to adopt multimedia to improve training. However, they thought they could not afford it. This meant there were obstacles that enterprises used training facilities. In addition, he found approximate 35% of training facilities had ageing and needed to be improved. Nearly 45% of training facilities needed to be upgraded. Relevant researches found when many enterprises implement training, it lacked of overall operational mechanism (Dong and Ye, 2003). The lack of salary incentive mechanism was the most serious among all factories. This was the main reason for poor effect on training. Lan (2001) pointed that China enterprises lacked of high-quality workers. However, many staffs suffered from passive training and sustained in their current positions. They did the current job and received the same salary. This vicious circle has seriously hindered the development of enterprises. In summary, the following hypothesis is developed:

Hypothesis 4: Appropriate training method in training implementation is positively related to increase firm financial and non-financial performance.

3. Method

3.1. Sample and Procedure

The current study surveyed 374 manufacturing enterprises of Yueqing City registered in Industry and Business Administration Bureau of Yueqing City, China. The target population of this study was the manufacturing companies in Yueqing City, China. Based on Kjejcie and Morgan' study, if the population size is 374, the theoretical minimal sample size is about 189. In other words, only if more than 189 effective questionnaires are collected; it will sufficiently support this research. According to the phone calls feedback, there were 15 manufacturing enterprises which specifically refused to cooperate with this study. Finally a total of 359 questionnaires were distributed out and 201 questionnaires were returned.

3.2. Measures

Top management support; we measured top management support using a 5-item scale developed by Huang and Yang (2002), which include items from question 9 to 13. Training need analysis; to measure training need analysis, we adopted questions used in Zheng (2003). Training expenditure and costs; we measured this variable from question 18 to question 23. These questions were adopted from Xu and Xie (2005). Training methods; this variable uses questions adopted from Yang (2005). The statements in the questionnaire are from question 24 to question 27. Financial performance; the section on firm performance comprises of 8 items. This dimension on financial performance involves (a) market share, (b) profitability, (c) overall competitiveness, and (d) the rate of completing task. Non-financial performance. A scale capturing

non-financial performance was specifically developed for this study, based on Yang (2001) definitions for non-financial performance.

4. Results

4.1. Descriptive Statistics, Correlations, and Multiple Regressions

The mean score of training factors and firm performance is between 2.50 and 2.81, which is lower than 3. In other words, the level of these four training factors and firm performance in manufacturing sector of Yueqing City, was being practiced on a moderate level. Of interest, top management support was significantly related with financial performance ($r = .842$, $p < .01$), while it also significantly correlated with non-financial performance ($r = .849$, $p < .01$). At the same time, training needs analysis not only significantly correlated with financial performance ($r = .821$, $p < .01$), but also statistically associated with non-financial performance ($r = .809$, $p < .01$). Likewise, training expenditure and intensity was significantly related with financial performance ($r = .831$, $p < .01$), and it was also significantly statistically associated with non-financial performance ($r = .820$, $p < .01$). Moreover, training methods was not only significantly correlated with financial performance ($r = .780$, $p < .01$), but also was associated statistically with non-financial performance ($r = .756$, $p < .01$). All four training factors were found to have strong relationship with firm financial and non-financial performance. Top management support, training needs analysis, training expenditure, and training methods were significantly correlated with both performance measures. Moreover, the multiple regression analysis would be used further for hypotheses testing.

5. Discussion and Research Implications

In order to achieve the research objectives, 192 manufacturing enterprises were surveyed. It centered on the respondent enterprises, which were: corporation nature of private (67.2%), manufacturing type of food and beverage (35.9%), market competition status of follower (60.9%), small company scale (67.2%), and development stage of maturity (34.4%). In addition, through data analysis, 62.5% respondent enterprises don't have a training department. Most enterprises were established between 2000 and 2009, which are responsible for 56.2% of the respondents. These data reflected the background situation of manufacturing enterprises in Yueqing City at certain level. Moreover, our findings also provide several implications for research. Findings of this study provided a variety of benefits to both enterprises and academic perspective. It not only provided some references to help manufacturing enterprises in Yueqing to find out the problem solution, but also made up the lack of academic studies on training factors and firm performance in China's organizations. There are many different training methods. Different training method has different advantage and limits. Descriptive statistics presents that item 26 (trainers uses the modern teaching tools to conduct training) has the highest mean score. It indicates in quite a number of enterprises, the training tools and facilities are rather old. As stated by Xu and Xie (2005), only a few China enterprises have good training facilities. Quite a number of companies have problems of training facilities obsolescence. With these problems, trainers could not adopt suitable training methods to transmit training content effectively. Some training methods could not be implemented due to the lack of necessary training facilities. In addition, item number 24 (conducting the off-job training or on-the-job training according to differing training needs) has the second highest mean score and item number 25 (conducting the internal training or external training according to differing training needs) presents the third highest mean score. Both of these two items indicate many manufacturing companies don't choose the training methods based on differing training needs. In other words, in these enterprises, trainers just chase to simply implant training content to trainees. Training methods don't service for actual needs. Thus, it is not a surprise that training effect is not obvious in these companies. Item number 27 (trainers adopt the different training method to conduct training according to differing training content and trainees) rates the lowest score. More than half respondents disagree or strongly disagree with this item. This indicates the training methods which are selected are not based on training content or trainees' characteristic. In other words, training methods are not fully utilized. From Pearson correlation analysis, the correlation coefficient between training methods and financial performance is 0.780 and the correlation coefficient between training methods and non-financial performance is 0.756. Therefore, it indicates that hypothesis 4 has been substantiated. Multiple regression analysis has been used to

test the strength of their relationship. It has been found that training methods has a positive impact on financial performance and non-financial performance. However, among these four training factors, training methods has the lowest impact on firm performance based on multiple regression analysis. In a similar study, Yang (2001) found training methods have a positive impact on organizational performance.

6. Limitations and Future Research

This study has limitations. First, the research was carried out in Yueqing City, China mainland only; therefore it would not be generalizable to all areas of business. Second, due to many manufacturing companies in Yueqing City, this study only investigated the sample of enterprises in this city. Therefore, the data collected may not reflect the situation of all manufacturing companies in Yueqing City. Third, there are many theories and models about training, however this study only examined the training factors consisting of top management support, training needs analysis, training expenditure and intensity, and training methods. This study is limited to the manufacturing sector. Future study could be extended to the analysis not only in manufacturing, but also in other industries. Second, in this study, because the sample size is not large enough, the findings of the survey would be restricted. This development will be more meaningful and universal, if performed. Third, this study focused only on training factors consisting of top management support, training needs analysis, training expenditure and intensity, and training methods. Other training factors such as training plan, training design, and training evaluation may have impact on firm performance, and future research can explore these subjects.

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