A Data-based Study on the Value of Social Contribution of Enterprise Trainer in International Economics and Trade

1st Jun Ni [1,a], 2nd Peng Zhang [2,b], 3rd Yuanzhi Liang[3,c]

* Corresponding author: [a]429369898@qq.com, [b]e-mail: 282765761@qq.com, [c]e-mail:1077870655@qq.com

[1]GuangDong Mechanical & Electrical Polytechnic Economics and Trade School, 510515, Guangzhou, Guangdong, China
[2]Macao Polytechnic University Faculty of Humanities and Social Sciences Macao, China
[3]GuangDong Mechanical & Electrical Polytechnic Economics and Trade School 510515, Guangzhou, Guangdong, China

Abstract: Through analysis of Kirkpatrick four-level training evaluation model and balanced score card theory, in combination with practical training in the field of international economic and trade, this paper put forward the concept of enterprise trainer social contribution value using the Delphi method and questionnaire, and the factors influencing the enterprise trainer social contribution value are summarized. Using available data, based on six dimensions: the size of the trained enterprise, the number of trainees, the position of trainees, the training subject, the remuneration for trainers, response level (acquisition level) evaluation, and reasonable coefficient set in each dimension, the model for enterprise trainer social contribution value is constructed. After the practical use of the model by foreign trade enterprises, training brokers, and institutions, the rationality of the model is verified, and some suggestions are given against the shortcomings of the model in the application process.

Keywords: Enterprise Trainer; Social Contribution Value; International Economic and Trade; data

1 Introduction

With the rapid development of the training industry, society, government, and enterprises are full of expectations for training and corporate trainers.MOTOROLA founded the first corporate university in the world. Through training evaluation, it is found that the return on investment of enterprise training can reach 1:10. "Don't be a CEO, be a trainer." On the one hand, this reflects society's high recognition of corporate trainers, and on the other hand, it also shows the gold content of corporate trainers as golden-collar professionals.

A complete enterprise training program includes training needs analysis, training course design, training course implementation, and training course evaluation. As for the training course evaluation, at present, most of the enterprises in China use the first and second levels of Kirkpatrick training performance evaluation model, response evaluation and acquisition

evaluation. The training course content, teaching method, training style, and training effect of the trainer are mainly scored and evaluated. Due to the complicated evaluation procedures, time, business data, and other factors, few enterprises use the third and fourth levels, behavior evaluation and performance evaluation.

The evaluation of the response level or the acquisition level can directly reflect the teaching quality of the enterprise trainer, but it cannot fully reflect the enterprise trainer's contribution to the enterprise industry and social existence value. This requires us to introduce the concept of social contribution value and explore the components of social contribution value of trainers in international trade enterprises dynamically, comprehensively and as a whole from the perspectives of society, enterprises and trainers.

2 Review of Chinese and Foreign Literature

2.1 The foreign literature

Kirkpatrick four-level training performance evaluation model and Jack Philip five-level evaluation model are the most influential theories in the field of training evaluation. Kirkpatrick's four-level training performance evaluation model mainly includes the following four levels: response level, acquisition level, behavior level, and performance level. But Jack Philip's five-level evaluation model includes the following five aspects: response level, learning level, application level, business effect, and return on investment, in which the second level is named from the acquisition level to the learning level, the third level from the behavior level to the application level, the fourth level from the performance level to the business effect level, and the fifth level of investment return is increased, focusing on the ratio of training input to output. The "Kirkpatrick Model" has become the most widely used approach to training evaluation in the corporate, government, and academic worlds[1]. Kirkpatrick offers new ideas and procedures for continued quality evaluation of the four levels in today s modern workplace[2]. The overview of publications on the Kirkpatrick model shows that research using the model is an active and growing area[3].

The theory of a balanced scorecard is one of the main tools used in business evaluation at home and abroad. Since 1992, Robert S.Kaplan, and David P. Norton have promoted the Balanced Score Card (BSC) to the strategic management system of enterprises. The BSC has been widely accepted and recognized by the global business community and non-profit organizations. The Balanced Scorecard includes four aspects: financial perspective, customer perspective, internal business processes, learning and growth. The characteristics of balanced scorecard theory: 1. To pay more attention to quantitative assessment; 2. Multi-index assessment; 3. To focus on achieving long-term goals; 4. To pay more attention to the learning growth and core competence cultivation of the assessment objects; 5. To improve the overall management level of the organization through the implementation of BSC[4]. The balanced scorecard approach is an effective technique for performance evaluation[5]. The efficacy and profitability of the BSC can be scaled up with the aid of data analytics, which provides all the inputs needed for a decision support system[6].

2.2 The Chinese literature

In November 2018, the central committee of the communist party of China issued the *2018-2022 national cadre education training plan*,put forward the establishment and improvement of a cadre education and training quality evaluation system, focusing on improving the effect of learning and training,promote the construction of teaching staff and the sharing of excellent trainers. A "Five-level" evaluation model of the teacher training effect, on the basis of Kirkpatrick's four levels, adds a demand level [7]. Different teachers can bring different curriculum harvests and curriculum satisfaction to students[8]. It is essential to promptly establish a system for tracking the results of training evaluations [9]. There is no scientific and reasonable evaluation index system for training evaluation[10].

The level of the response for teacher assessment should include the teaching performance, responsibility, and professionalism of the trainer[11]. We select core projects for the fourth-level assessment. Due to the difficulty in obtaining data and the high cost of evaluation, not all training courses require performance evaluation[12]. Using the concept of a balanced scorecard can help us evaluate the teaching effect more comprehensively[13]. When the balanced scorecard is used to evaluate teachers' performance, finance is transformed into the social contribution dimension and customers into the audience dimension[14]. The value of social contribution reflects the degree of social responsibility, which flows out for the economic interests of the society and the public[15]. The performance evaluation of social responsibility enhances the overall value of the company[16].

2.3 Conclusion

Whether at the national level or at the industry, enterprise, and trainee level, higher requirements are put forward for enterprise trainers. At present, the training community evaluates the learning situation of the trainees and the teaching quality of the trainers by implementing the evaluation of the trainees' response level and the acquisition level. This operation is obviously unscientific, with subjective one-sided color. This requires us to base on Kirkwall evaluation theory and balanced scorecard theory,to create the concept of social contribution value,and the social contribution value model is used to make a comprehensive and objective evaluation for international trade enterprise trainers. However, until now there is no literature on the value of corporate trainers' social contribution. This further shows that most researchers at home and abroad only stay at the training course evaluation stage in their research on the value of corporate trainers. This further shows that most researchers at home and abroad only stay at the training course evaluation stage in their research on the value of corporate trainers. Research on the value of the social contribution of corporate trainers is scarce.

3 Theoretical model and demonstration

3.1 Design and basis of evaluation model of social contribution value evaluation of enterprise trainers for international economic and trade

The value of social contribution refers to the contribution and responsibility that individuals make to meet social needs at material and spiritual levels through their own self-practicing activities. The social contribution value of enterprise trainers refers to the various training courses and activities adopted by enterprise trainers, the effort to implement various

improvements and enhancements in the organization, organization, employees, or members, and the value added of material and spiritual wealth brought to enterprises and society. On the one hand, the social contribution value of enterprise trainers reflects the vision, level, and strength of trainers; on the other hand, it also reflects the degree of social responsibility undertaken by enterprise trainers and their contribution to society.

1) Delphi process

This study uses the Delphi method to invite 12 senior foreign trade trainers, training brokers and institutions, human resource managers of enterprises, and foreign trade managers to participate in the subject. It sends the research question on the social contribution value evaluation of enterprise trainers for international economic and trade to them, each of which was asked to identify 12 factors that determine the social contribution value evaluation of enterprise trainers for international economic and trade, and then recycle it. Among these, six factors with the highest frequency were summarized, and the other six factors were then sent to the 12 experts again, through group discussion; each factor was assigned a weight.

The social contribution value evaluation of enterprise trainers for international economic and trade includes six dimensions:① training enterprise scale: The company's annual sales revenue is a key measure (The larger the annual sales income of the enterprises indicates that the proportion of the enterprises in China's economic activities is larger, and the greater the contribution to the country's economic development); ② number of trainees: The number of trainers will affect the scope of social influence, and the ability of the trainer to control the classroom is proportional to the number of trainees; ③ trainee position: Corporate executives, middle-level and front-line salesmen play different roles in the operation and management of enterprises. Business executives will more effectively implement the views and suggestions of trainers in business management; ④ training topic: International trade training topics can be divided into three levels: macro, meso and micro, so these three levels will reflect the vision, theoretical foundation, and practical skills of the enterprise trainer. The macro theme of foreign trade training has a wide influence. As it often stands in the perspective of the world and the country, the highest qualifications are required for trainers. The meso theme comes second. Micro topics often involve only a certain aspect of foreign trade or a certain enterprise, such as international business etiquette, foreign trade documents, etc, so the qualifications required for trainers are relatively low; ⑤ trainers' remuneration: The level of class pay is one of the main indicators that most directly reflect the training value of trainers. It reflects that the training enterprise is willing to pay directly for the trainer's labor, which is the external monetized expression of the trainer's value; ⑥ Response level and acquisition level evaluation: The evaluation of the trainees in these two aspects is a direct score for the quality of the training and teaching of the enterprise trainer, which reflects the harvest and understanding of the trainees in the training class.

2)Questionnaire survey method

On the basis of the above research, using the questionnaire star to design the questionnaire, 300 questionnaires were sent to senior foreign trade trainers, training brokers, human resource managers, foreign trade managers, and salesmen in China, a total of 220 copies were effectively recovered. 97.17% of the respondents believe that enterprises must rely on enterprise training to achieve business success, and 58.18% of respondents believe that the

purpose of corporate training is to improve job skills. At the same time, 90% of the respondents believed that the questionnaire survey on the teaching quality of enterprise trainers for international economic and trade (response level or acquisition level evaluation) could not fully reflect the social contribution value of trainers. 94.55% of the respondents believe that it is necessary to conduct corresponding research on the social contribution value of trainers and establish relevant models.88.18% of the respondents believe that the "Belt and Road" is a macro-level theme of foreign trade training, and 80.91% of the respondents believe that "foreign trade risk prevention and control" is the middle-level theme of foreign trade training, while 71.82% of the respondents believe that "negotiation skills" is the micro-level theme of foreign trade training.62% of the respondents believe that the more trainees are trained in international economic and trade, the greater the influence of enterprise trainers on social contribution value evaluation will be. 70% of the respondents believe that the larger the scale of the training enterprise, the greater the influence of the trainer. 62% of the respondents believe that the more the trainer is paid for the training course, the greater the social reputation of the trainer.

The results of the questionnaire are in perfect agreement with the conclusions reached by the Delphi method, which provides a basis for establishing the model of social contribution value evaluation of enterprise trainers for international economics and trade.

3)The model of social contribution value evaluation of enterprise trainers for international economic and trade

$\sum 1$ is a specific of the social contribution value evaluation of foreign trade training by enterprise trainers.

$$\sum 1 = Y_1 + Y_2 + Y_3 + Y_4 + Y_5 + Y_6 \qquad (1)$$

Figure 1. shows the six influencing factors for the social contribution value evaluation of foreign trade training by enterprise trainers.

Y1 represents the scale of training enterprises, where a coefficient is assigned based on the annual income. Training enterprises with an annual income of 10 million yuan or less are assigned a coefficient of 1. For every additional 10 million yuan in income, the coefficient increases by 0.1.

Y2 represents the number of trainees, where the coefficient of training number of 30 or less is 1. For every additional 10 people, the coefficient increases by 0.1.

Y3 stands for trainee position, where the coefficient of export salesman and export manager is 1. For every additional person of vice president or above, the coefficient increases by 0.1.

Y4 stands for training topic, where the coefficient of foreign trade macroscopic course is 1.1. The coefficient of the foreign trade meso topic is 1, and the coefficient of the foreign trade microscopic course is 0.9.

Y5 stands for trainer remuneration, where the coefficient of 800 yuan per hour and below is 1, and the coefficient increases by 0.1 for every 100 yuan per hour.

Y6 stands for response level (acquisition level) evaluation, where the coefficients are assigned based on satisfaction levels. The basic satisfaction level is assigned a coefficient of 1, the satisfaction level a coefficient of 1.1, and the very satisfaction level a coefficient of 1.2. In

cases of basic dissatisfaction or dissatisfaction, the item does not receive a score.

$$\sum n = \sum 1 + \sum 2 + \ldots + \sum n\text{-}1 + \sum n \tag{2}$$

$\sum n$ is the sum of social contribution value evaluation of foreign trade training by enterprise trainers N times.
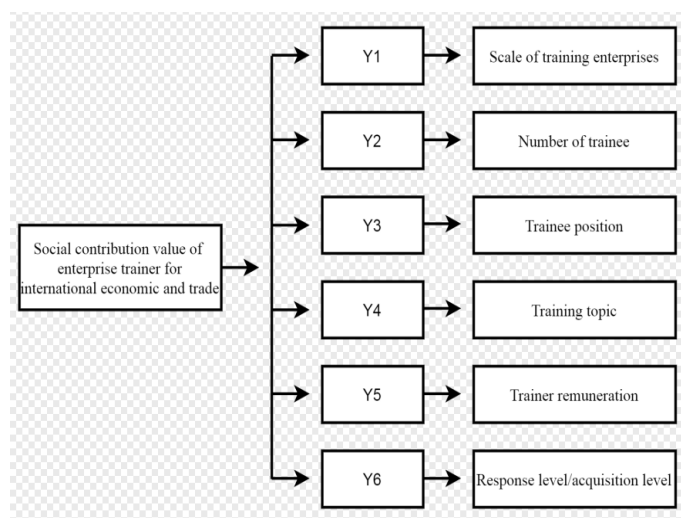

Figure 1. The model of the social contribution value of enterprise trainer for international economic and trade

3.2 Demonstration and application

At present, there are a large number of small and medium-sized foreign trade enterprises, training brokers and institutions in China, whose scale is generally small and the company's financial resources are limited. This model is simple and easy to operate using EXCEL software, which can be implemented in quick operations. Through a year of practice, it has been used by about 130 foreign trade enterprises, brokers and institutions, and the social contribution value of enterprise trainers for international economics and trade can be calculated correctly. The model helps foreign trade enterprises, brokers and institutions accurately match foreign trade enterprise trainers and successfully complete foreign trade enterprise training projects.

4 Conclusion and suggestion

4.1 The innovation points of this study

The establishment of this model is an innovation in social contribution value evaluation of enterprise trainers for international economics and trade, who can be evaluated reasonably, fairly, comprehensively and dynamically. At the macro level, it plays a leading role in accurately understanding the enterprise training industry and guiding the construction of the trainer team. At the medium level, it plays a key role in the orderly development of the foreign

trade training industry and promoting the sustained high-quality transformation of China's foreign trade industry. At the micro level, it plays a guiding role in training brokers, training institutions, and enterprises to find matching trainers. This study can be relied on to effectively evaluate trainers of international trade enterprises, smoothly implement training projects, and effectively improve the training effect of enterprises. Finally, this study also has reference value for the evaluation of the social contribution value of corporate trainers in other fields.

1)Viewpoint innovation

The launch of this model fills the vacancy of social contribution value evaluation for enterprise trainers in international economics and trade. Based on the data, it is possible to measure the value of the social contribution of enterprise trainers for international economics and trade through the model more effectually and scientifically. Quantitative evaluation based on data provides a basis for qualitative evaluation.

2)Method innovation

This study is based on both Kirkpatrick four-level training performance evaluation model and balanced scorecard theory. For each training session, evaluation indicators are introduced, including the scale of the training enterprises, the number of participants, the positions of the trainees, the topics covered in the training, the compensation of the trainers, and the response level (acquisition level). The social contribution value of the enterprise trainer is calculated using Formula ①. Then, considering the entire career of the enterprise trainers, the cumulative dynamic social contribution value derived from N instances of enterprise training throughout their career is calculated using Formula ②.

4.2 The deficiencies of this study

The construction of this research model is based on various data, "Let the data speak" focuses on quantitative evaluation. Any evaluation model will have shortcomings and defects, so the following four aspects need to be continuously studied and improved:

1) Emotional factors

Because the subjective emotional factors, such as the learning attitude of trainees and the working attitude of enterprise trainers, cannot be expressed by data,emotional factors were not considered and integrated into the design process of the model. However, the above emotional factors certainly bring subtle changes to the social contribution value evaluation of enterprise trainers for international economics and trade.

2) Response level and acquisition level evaluation

The evaluation of response level or acquisition level has an obvious subjective component. On the one hand, there is no unified standard for the completeness and orientation of the training satisfaction questionnaire designed by enterprises, training brokers, and institutions. On the other hand, influenced by various factors such as educational background, emotions, and personal preferences, trainees have subjective components when completing the trainer satisfaction questionnaire.

3) Behavior level and performance level evaluation

Although the effectiveness of behavior-level and performance-level evaluations is higher than

that of response-level or acquisition-level evaluations, at present, most of the enterprises that implement training in China have not made corresponding evaluations on the behavior level and performance level of the trainees. It is difficult to obtain data. Therefore, the model design process did not integrate the behavior level and performance level evaluation.

4) Trainers' remuneration

According to *Administrative Measures on Training Fees for Central and State Organs in 2017,* training of state-owned enterprises, party and government organs using state financial funds, associate senior technical title, senior technical title, and academician level of enterprise trainers per hour of class salary is not more than 500 yuan, 1000 yuan and 1500 yuan. The trainer's class pay design in this model is based on full marketization, so referring to state regulations, the use of this model will have a certain impact on the evaluation results of social contribution value evaluation of enterprise trainers for international economic and trade.

References

[1]Kirkpatrick D L.Evaluating Training Programs: The Four Levels.J.Journal for Nurses in Pro fessional Development, 1994.DOI:10.1097/NND.0000000000000077.
[2]Kirkpatrick D L.Evaluating training programs: Inside the four levels.J. Mcgraw Hill Professional, 2008.DOI:10.1021/cen-v034n010.
p1083.
[3]Alsalamah A, Callinan C.The Kirkpatrick model for training evaluation: bibliometric analysis after 60 years (1959-2020). J.Industrial and commercial training, 2022(1):54.
[4]Kaplan R S, Norton D P.The Balance Scorecard-Measures That Drive Performance.J.Harvard Business Review, 1991, 70(1)
[5]Fu-Hsiang, Chen et al.A balanced scorecard approach to establish a performance evaluation and relationship model for hot spring hotels based on a hybrid MCDM model combining DEMATEL and ANP - ScienceDirect.J.International Journal of Hospitality Management, 2011, 30(4).DOI:10.1016/j.ijhm.2011.02.001
[6]Victor S, Farooq A. Combining the Use of Data Analytics and Balanced Scorecard to Enhance Healthcare Delivery: A Study.J. Journal of Health Management, 2022.
7]Zhang meilan.Construction of "five-level" evaluation model for teacher training effect.J.Chengdu Normal University Journal,2021,37(02).
[8]Yuan hua, Zhou ling, Li jie.Evaluation and analysis of training effect of enterprise trainers based on SPSS.J.Journal of Wuhan Polytechnic,2013,25(03).
[9]Jiang lei. Evaluation System of Design training.J. Human Resources, 2021, (03).
[10]Cao hui, Zhang yijie. Enterprise Executive Training Evaluation System based on Cauchy Model and its application.J. Shanxi University of Finance and Economics Journal of Science, 2019,41 (S2).
[11]Liang junwei. Research on index system of training effectiveness evaluation -- taking G Company as an example [J]. New Economy, 2021, (07).

[12]Zeng shuangxi. How to solve the "evaluation difficulty" of training effect.J. Human Resources, 2021, (19).

[13]Li pan, Gao junwei. Implications of Balanced Scorecard for Teaching Evaluation.J. Asia Pacific Education, 2016, (35).

[14]Li qing. Research on University Teacher Performance Management under Balanced Score Card.J. Business News, 2020, (06).

[15]Wang ying, You yonghua. Corporate Comprehensive Performance Evaluation: Considering Corporate Social Responsibility.J. Value Engineering, 2007, (11).

[16]Sun lan. Research on Performance evaluation of Central enterprises embedded with Social responsibility -- A case study of State Grid Corporation.J. Fiscal Supervision, 2018, (19).