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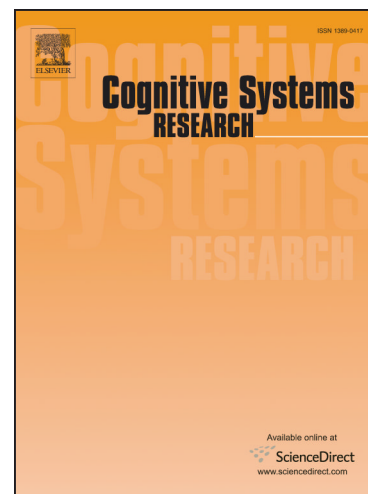
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Research on Externality Economic Evaluation of China's Education and Training Industry Based on Cognitive Perspective

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Abstract: As a key industry promoting the transformation of the labour force and proving labour cognitive level, education and training has strong economic externality with positive external effects on socio-economic development according to many economists. However, the research on the economic evaluation of education and training industry is very limited. From the Western economics perspective of externality, this paper analyses education and training industry on the basis of the important role of human capital in China's economic transformation. The difference between education training's spillover effect and the relative marginal production factor's productivity is calculated by using the fidelity model. In this way, labour cognitive level can be quantified. The more people who receive education training, the more they can promote the economic efficiency of enterprises, and the more they can promote the harmonious development of the entire society and economy. Education and training industry has a positive externality effect that can improve labour cognitive level.

Key words: externality; economic evaluation; cognitive perspective

1.INTRODUCTION

Rapid socio-economic development places higher requirements on people's labour skills and knowledge literacy. Education training has become a way for people to meet individual and social needs, and it has gradually become a popular industry attracting more attention in the 21st century. From the perspective of economic development, the education training industry has a strong external spillover effect that has a positive external impact on economic development. Economists regard labour quality as human capital that consists of labourers' education and training (Cooper & Helpman, 2004), which is quite different from physical capital mainly because of its externalities. Education training has strong externalities that both trainees and nearby people are improved its output. Therefore, research on the externalities of education training industry is vital for getting an in-depth understanding of the importance of harmonious development and an objective and accurate evaluation of the status quo of the education training industry.

2.LITERATURE REVIEW

2.1 Outline of externality theory

Externality theory, one of the important theories of Western economics, originated from the concept of the "external economy" proposed by Marshall (1890) and systematized by "internal diseconomy" and "external diseconomy" developed by Piggo (1920) from the perspective of welfare economics. Despite economists' different research perspectives on externalities, two definitions are generally applied. The first is based on the production subject of externalities (Samuelson and Nordhaus): "The externality is that an economic subject has an external influence on another economic subject, and this external influence cannot be bought and sold through the market price." The other is based on the subject receiving the externalities (Randall): "Externality is used to indicate some inefficiencies arising from certain benefits or costs of an action beyond the decision maker's consideration (that is, certain benefits are given or some costs are imposed on those who do not participate in decision-making)." Coase put forward a clear idea of property rights in 1960 to enrich the theory of externality in developing countries which are not market-oriented countries.

In mathematical language, an external effect is an independent variable of the welfare function of an economic subject that does not pay others or request compensation for the others' behaviour, that is:

$$F_j = F_j(X_{1j}, X_{2j}, \dots, X_{nj}, X_{mk}) \quad j \neq k$$

where j and k are different individuals (or firms), F_j represents the welfare function of j , and X_i ($i = 1, 2, \dots, n, m$) refers to economic activity. This function shows that there is an external effect as long as the welfare of an economic subject is influenced by both the economic activity X_i under the subject's own control and the economic activity X_m under k 's control.

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