



## New Exploration on Chinese Enterprises Human Capital

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### Abstract

We can study how human resource turns into human capital and realizes its values as capital by analyzing the logical and economic relationship between human resource and human capital. Manpower means three meanings for enterprises: namely resource, manager, and management level. To transform human resource into human capital needs important conditions. The core is the investment in human capital and its effective management. To explore this issue profoundly is meaningful for enterprises' business management in practice.

**Keywords:** Human resource, Human capital, Return on investment, Property right and distribution system

### 1. Meanings of human capital based on human resource

Discussions on enterprises' human capital are wide and extensive. For example, these discussions concern its connotation and composition, property right, operations and management, assessments and performances, status and meanings, etc. As people are studying these issues, they put enterprises' human capital and funds at the same level, regarding the former as the carrier of science & technology, and the core of management system, and the latter as the blood of enterprises' operations, and the base of development.

As for the theoretical evolvement, Karl Marx is the first man who has discussed the relationship between labor power and capital. He has mentioned the labor power and the ownership of labor power in his work *Capital* (Karl Marx, 1957, p. 58, 190-191, 194-195). The human capital theory is founded by T. W. Schultz, an American economist, in early 60s of last century. In 1960, he expatiated on the "human capital theory" in a speech in American Economic Association, which has been regarded as the symbol of the birth of human capital theory (T. W. Schultz, 1984, p. 25). Afterwards, Gary S. Becker, Jacob Mincer, and Daniel Denison have modified this theory further. The foundation of human capital theory creates a new thought on human production ability. According to this theory, material capital refers to physical materials available, including workshops, equipments, machines, supplement matters, land resources, cashes and funds, and other securities, while human capital refers to manpower, namely the summation of opportunity costs in educating and training employees, and also the sum of humans' production knowledge, labor and management techniques, health and quality. Human capital means "human competence", namely the sum of human competence developed by investment in human capital (Zhang Fenglin, 2006, p. 61-63).

At the enterprise management level, human capital management is not a brand-new system. It integrates two analysis dimensions, namely the "human capital" management and the "return on investment", together, regarding manpower as capital in investment and management, based on human capital management. According to human capital market and return on investment, human capital management can help to adjust management measures timely and gain long-term returns. The most difference between traditional human resource management and human capital management is that the former emphasizes on factor and management operations, and the later on investment and economic analysis. Therefore, "human capital" refers to the capital transformed from the human resource that brings about expected economic interests for enterprises based on investors.

However, the problem is how to explain why human capital is also enterprises' capital? Or, how does manpower turn into capital? How does it carry out its capital function? As capital, how does manpower realize its capital value? To study these issues, the first is to understand the logical and economic relationship between manpower and capital.

For enterprises, manpower has three meanings. The manpower means labor power at the first level, namely the human resource, the primary factor in production business. If all labor powers refer to humans, humans are the most active element in productivity. Classical economics offers other explanations, namely "three key factors of production" -profits from capitals, rentals from lands, and wages for laborers ----- that is the well-known Say Theory. Karl Marx has

already intensively analyzed the labor power in political economy and advanced the labor value theory that labors create values: labor power is the most primary factor in enterprises' production, which is the most important content in enterprises' productivity system.

The manpower means manager at the second level. Modern enterprise theory and practice distinguish managers (operators) from common labor powers (labors) more and more. Management experts think that entrepreneurs can determine enterprises' development direction, speed, and result. Entrepreneurs are representatives of managers and the core of enterprise management system. But entrepreneurs are not the real owners of enterprises to a great degree, especially in enterprises with relatively perfect modern enterprise system.

At the third level, the manpower means the business management team with high qualities and competences in enterprises. If team members who are in charge of enterprises' operations and management merely get wages and rewards, two problems need to be solved further. Firstly, as enterprises are in front of market risks, business risks, and operation risks, business managers may shift off or get rid of responsibilities (or not fulfill their responsibilities as much as possible), which will surely harm enterprises' development. Secondly, if business managers have not motives and practical pursuits for greater interests, they may fail to drive enterprises' development or avoid any risk. Therefore, owners of enterprises can select some managers as partners and cooperators with common interests, namely taking these managers as owners of enterprises by means of equity allocations, option incentives, and bonuses, etc. To be simple, employ these manpower as capital -which deepens modern enterprise theory and forms human capital theory. Scientific and technological knowledge, management techniques, and other human capital factors are main signals that differentiate knowledge economy from industrial economy and even post-industrial economy times. The operation of traditional industrial economy chiefly relies on currencies, lands, equipments, and other material resources and capital investments. A new survey shows that if take the contribution to social output, not only individual income, the return on human capital investment in China reaches 30% or 40%, higher than the return on material capital investment, 20%. It means the economic condition that benefits the confirmation of human capital shows in China (Liu Yan, 2006, A3).

By analyzing the meanings of manpower to enterprises, we can conclude a simple process for turning manpower into capital.

Human (with labor power) →→ Human resource (with special or specialized labor power, techniques, and experiences, participate in enterprises' activities) →→ Manpower knowledge capital (science and technology, management responsibility, professional talents or elites, specialized trainings and experiences, work periods in enterprises) →→ Human leader (operators, managers, leaders, and the leader who masters specialized technologies in certain field) →→ Human capital (intellectual property right, management buyout (MBO), stockholders, owners' intentions and arrangements).

## 2. Conditions for human capital

In general, to transform human resource into human capital needs these conditions as follow:

(1) Turn human resource into managers ("manpower knowledge capital"): In order to turn human resource, namely common labor power, into managers, enterprises must pay attentions to and invest in specific manpower. Enterprises' investments are in proportion to individual experiences accumulation and technique maturity. To turn human resource into managers needs enterprises investments (costs), which can transform manpower into capital assets (intellectual property right) and implicit capital (core competence, such as product brand, and core technology).

(2) Turn managers ("manpower knowledge capital") into human capital: After forming "manpower knowledge capital", enterprises must invest more (such as the owners' emotional investments, trusts, and nutrition from social environment). By this way, "manpower knowledge capital" can become a component of human capital based on repetitive eliminations and trainings. In general, the formation of human capital is based on enterprises' investments. One is wages and distributions, and the other is trainings and education (Zhang Yongcheng, 2006, p. 5-9). Under this condition, managers, together with capital, become factors of enterprises' production turnover, possessing common responsibilities and obligations with capital.

(3) To turn "manpower knowledge capital" into human capital needs a long-term or special appraisal process ----- namely the value changes due to appreciation or depreciation. The greatest character of human capital is the uncertainty and its coherence with enterprise environment needs. In coherence, its capital value is equivalence or appreciation, if not, then depreciation. Appreciation means profits, and depreciation losses. Therefore, human capital is also a component of enterprise assessment. The appraisal and assessment of human capital value is a special process, which is different from normal cost accounting system. The expenditure on human resource is consumptive (regular), while the expenditure on human capital is capital expense ----- it is important to understand this point, which can help to differentiate the operation and management of human resource and human capital, and their contributions to business and accounting modes.

(4) The common operation of capital includes: investment, circulation, and bonus. If there are only investment and

circulation, it is capital movement. If manpower assessment merely lies in investment and circulation, it will not become capital but human resource or common manager. Therefore, any enterprise should not employ the human capital concept exaggeratedly or freely. Sometimes, it is hard to distinguish between capital and funds. After all, they share same measurements, namely price and value. The human capital with investment can generate capital accumulative effect and could be managed in form of capital gain. Otherwise, it is common production factor.

To sum up, the manpower (human resource) that can not directly benefit from enterprises' capital gain does not belong to human capital. Therefore, any manpower that benefits from capital gain possesses the basic nature of human capital. However, the annual rewards from the boss for the sake of incentives should not be regarded as reasons for being taken as human capital.

### **3. Labor property right: the basic connotation of human capital**

The human capital is embodied by owners of labor power (namely laborers), and their knowledge, techniques, and relevant capabilities, which serve as the main factors for production increment. Therefore, the human resource with techniques is the most important one among all resources. The return on investment in human capital is larger than that in material capital.

The human resource that has intellectual property right and labor property right is human capital. In a sense, to study the property right of labor power is to probe into the core value of human capital (Ye Zhengmao & Hong Yuanpeng, 2001, p. 3-5). In order to study the property right of labor power, we should know two points: the first is the content of property right (namely the labor property right and the intellectual property right), and the second is the responsibility and the obligation of property right.

The property right of labor power reflects the labor property right. The definition of labor property right is meaningless unless people possess basic work ability and obtain relevant knowledge and techniques. The basic work ability ensures the survival of laborers, being the foundation of labor value. The knowledge and techniques guarantees the development, being the precondition for realizing the labor value.

Intellectual property right is resulted from the full development of labor property right. It is the primary precondition of labor property and also the basic connotation of human capital. The laborer-based intellectual property right reflects laborers' capabilities and also their knowledge and techniques. In a sense, the knowledge ----- people's education level, the technique ----- experiences, and the wisdom ----- people's capability, cause people's differences, what can also be used to explain the differences between common owners of labor power and owners of human capital.

Another fundamental difference between owners of labor power with intellectual property right and the owners of labor power with labor property right is that the former has the surplus right of claiming for surplus labor fruit as possessing and employing the labor power. The surplus claim right can be studied from the social aspect or the aspect of economic organization in which laborer works. The laborer, as a component of society, possesses the right of sharing social development fruits, which means the share of public goods and semi-public goods. The laborer's surplus claim right, in a scope of an economic organization, means the laborer, merely as the owner of labor power, has the surplus claim right. Accordingly, the former becomes the root of social status (includes political status), and economic status (includes the status in daily life), and the later the root and the result of enterprise capital (chiefly enterprise' human capital).

### **4. Deductions and significance**

Based on these studies and conclusions, we can get these deductions as follow:

- (1) Enterprises' assessments and evaluations (the way to evaluate performance) on production and managers, and even the backbone and core employees, are only a kind of management system or method, what belongs to the management of wages, performances, and human resource, instead of the content or the scope of capital management.
- (2) The management buyout (MBO) and the introduction of intellectual property right as equities happened in enterprises, namely the equity incentive and the option incentive (the former focuses on physical capital, and the later the virtual capital) in a common sense, are in the scope of enterprise capital.

The two deductions are important in six aspects. Firstly, the human resource management is the normal management method and process for common enterprises. In contrast to capital management, human resource management is more a production factor management. It has more definite management objectives, values, and responsibilities. However, human capital management is a special management method and process for stock enterprises, which belongs to the fields of capital composing and profits management, associating closely with enterprises' future, mode, competence, culture, and development.

Secondly, the two concepts should not be mixed or abused in enterprise business management. Human resource management is right for all enterprises, especially for small and medium-sized enterprises or mini enterprises. It has common and general contents of enterprise management. Human capital management is especially for stock enterprises or the enterprises (no matter whether it is large or small) in which intellectual property right exerts vital effects. In a

sense, it dominates enterprise management. By identifying their differences, managers (bosses, business operators, and business owners) can understand the contents and methods of enterprise management clearly, in case of mixing the primary meanings of management and capital. Meanwhile, it simplifies researchers' thoughts on management.

Thirdly, the two deductions can help managers and researchers select right management tools properly. People often mention "equity trap" or even a saying "option: a notorious incentive mechanism" (Zhu Weiyi, 2007, C. 19), or agree the "cost lock" (Bao, Huichun, 2006, p. 25). That is because they mix the human resource concept and the human capital concept in practice. In performance evaluations and incentives, people may misuse the equity incentive and option incentive that will cause "equity trap" ----- in fact, it extends the human resource issue further to the human capital aspect. People also mention "performance puzzle" frequently. Here, people narrow the human capital management to the human resource aspect in practice. Turning capital structures, capital functions, and capital gains into performance evaluations makes operators escape from pressures and owners lose management directions. Therefore, to understand the two concepts and their uses is meaningful for practice.

Fourthly, to identify the difference between human resource and human capital can help to distinguish the productivity composing and the capital composing. The productivity composing includes human resource in general. The application of human resource in enterprise operations can determine whether it is labor-intensive or technology-intensive. The greatest difference between productivity composing and capital composing is that the former is a production factor but the later a production condition.

Fifthly, human resource accounting is based on regular expenditure, forming a logical and conditional relationship with current return, while human capital accounting is based on capital expenditure, forming an economic and distribution relationship with current return. In addition, the later can affect the long-term return accounting. What more important is its effects on the accounting and transaction of capital values and enterprise values. And it also serves as a base for an enterprise selecting suitable management system.

Sixthly, along with the development of modern enterprise system and stock economy, the transfer from human resource to human capital in practice drives the multiple ownership of production material in a sense. In special, the introduction of human capital as equities in enterprises advances the reform of ownership, and also directly triggers the breakthrough in the reform of distribution system, exploring on the construction of property right incentive mechanism. If human capital is a distribution system for socialist market economy, the capital property right in modern property right system offers a wider view, including virtual intellectual property right, such as patents, brands, commercial secrets, technological secrets, and human capital, and will serve as the new content of labor value studies. The harmonious society is human-oriented, what will more facilitate the exploration on harmonious society's distribution system based on social fairness and economic efficiency.

### 5. The measurement mode for enterprise human capital

Enterprise human capital based on labor property right is different from other physical capital in value measurement. If there is a re-evaluation on physical capital (namely the capital replacement in modern accounting theory) in traditional accounting, the measurement of human capital in modern enterprises concerns three factors: the first is the measurement of personal labor cost; the second is the measurement of surplus claim right under the labor property right (namely the measurement of property right and distribution right as human capital); the third is the measurement of future profitability with the changes of prices, yields, and performances. These three factors are the main contents for enterprises measuring the values of human capital.

(1) The price of personal labor, namely personal cost (PC). The wage of laborer can be simplified into the cost of laborer's daily life, namely the necessary expenditure on life materials for maintaining the re-production of laborer ----- the wage of laborer and other income. The wage is firstly used for buying sorts of life necessities, maintaining normal re-production (based on the average consumption price, regardless of the economical or luxury states) or paying off debts.

(2) The price of personal labor capital (namely the price of human capital in HCM). The price of personal labor capital is caused by education cost, experience cost, and intellectual property cost.

1) Labor capital education cost (EC) = School education cost (SEC) + Position education cost (PEC)

Here, EC refers to all expenses on education;

SEC = all education cost – average personal or family education cost (SEG) =  $(\sum EC - SEG)$

2) Labor capital's experience cost (UC) =  $\sum (EC_i \times (1 + UCR_i)^{TM} - EC_i)$

Here, the labor capital's experience cost UC means the cost for acquiring techniques in work. UC generates from the maturity of techniques. The length of work time is decisive for UC. In general, UC should take the degree of maturity, namely the length of service, into consideration;

i stands for the level of education;

UCR means the rate of experience cost increase at different education level;

<sup>TM</sup> refers to different lengths of services at different education level.

3) The intellectual property cost (ZC) means the sum of risks and profits afforded by the laborer as capital. We can discuss this issue from six aspects. Firstly, the use right of labor capital is controlled by the carrier of labor (the owner of labor capital includes many subjects, such as government, enterprise, family, investor, and individual; while the carrier of labor is the laborer. From a capital aspect, the owner of labor capital differs from the carrier of labor capital (Ye Zhengmao & Hong Yuanpeng, 2001, p. 7). Secondly, the property right of labor capital mainly belongs to the carrier. In other words, it is personal monopoly asset. Thirdly, the disposition of labor capital property right is under the influences of the carrier's personal motives to a great degree, namely the so-called "the combination of value realization and personal efforts". Fourthly, the profitability of labor capital property right is the essential reason for driving the carrier of labor capital to realize self-development and the investor to invest in developing labor capital. Fifthly, risks of labor capital property right are inevitable. The labor capital property right is a typical virtual asset, associating closely with and flowing along with the laborer individual. Therefore, it has risks, similar to other capital property right, and strong uncertainty. Generally, the property right and profitability originated from investments in human capital are either positive or negative even in a great loss. Sixthly, the labor capital's intellectual property right is different. Because the labor capital is the sum of all production knowledge and techniques of people, the difference of its carriers leads to different property rights and efficiencies. To sum up, the conclusion is: the labor capital's intellectual property right is not a fixed number or constant but a rate, namely  $ZC'$ .

Considering the conditions of enterprises, this rate can be reflected by the yield, namely: the return on labor intellectual property right =  $\sum$ enterprise return on labor / enterprise' total cost of labor, or:  $Z C' = \sum LP / \sum LC$ . Besides, because there is a significant correlation between enterprise risk and human capital's intellectual property right, we should take enterprise's quantitative performance (A) into consideration. Therefore: the intellectual property right of enterprise's labor capital =  $(EC + UC) \times ZC' + A$ .

(3) Then, we can get these simple and important measurement modes:

1) The value of personal labor capital = the price of personal labor + the price of personal labor capital =  $PC + (EC + UC) \times ZC' + A$ .

2) The enterprise's total human capital value =  $\sum (PC + (EC + UC) \times ZC' + A)$ .

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