

The Classification of Human Capital according to the Strategic Goals of Firms: An Analysis

Ku-Jun Lin

Tamkang University, Taiwan

Mei-Lan Wang

Tamkang University, Taiwan

Many companies nowadays derive their competitive advantages mainly from human capital. And it becomes critical for companies to select human capital that matches their strategic goals. Human capital must be identified, invested and maintained. This paper first defines and classifies company's human capital in line with a theoretical framework we provide; sort out company's human capital investments according to cost development stages in human resources. Finally, we argue that some human capital should be treated as investments instead of expenses in accounting records, and suggest ways for business to select human capital that meets their strategic target.

Introduction

Elements contributing to the value of companies are numerous, including organizational capital, customer (relations) capital and human capital (Dzinkowski, 2000). All these factors centered on humans as a foundation for all sorts of capital. However, current accounting research on the definition, forms and categories of human capital has been limited. It is hard to obtain statistical data of human capital from the current accounting system, let alone apply the data to managing human capital, which has become increasingly important to companies' value creation. Against this backdrop, this paper aims to present an in-depth discussion on human capital.

Currently, financial statements compiled according to the GAAP do not properly disclose companies' investments in human capital and the knowledge assets created by it. Financial statements without a proper disclose of human capital are misleading for companies' management, who are used to making decisions based on the information provided by financial statements. Inappropriate decisions, such as layoffs, may thus be reached, thereby hampering companies' performance, far from its intended purpose of raising efficiency. The root of this mismanagement is the treatment of human capital as expenses instead of resources in traditional accounting (Hermanson et al., 1992). It is, therefore, necessary to further discuss the definition of human capital, the investment of human capital, and the disclose issue of human capital in financial statements under the current practice.

The definition and characteristic of human capital

Not all expenditure made by companies in human is counted as input of human capital. Expenditure about human, such as staff training programs, not in order to exchange it for the labor or services provided employees in the past or during the short-term period

but in order to induce value-added in the future. The so-called costs or investments do not refer to an absolutely fixed set of accounting items but vary according to the business objectives, core skills and human attributes concerned.

Existing literature approaches the definition of human capital mainly in three ways: the transaction cost economy theory, the human capital theory and resource-based view of the firm theory.

The transaction cost economy theory presumes that companies choose to employ personnel in the most efficient way (Argyres and Liebeskind, 1999). When employ personnel, companies can either recruit new staff outside or train/promote existing staff. These two approaches to employment will incur various costs. For example, the former approach incurs hiring costs (transaction costs) and the latter one trigger training costs and management costs (bureaucratic costs). Between these two alternatives, companies choose the most efficient way or combination by comparing all relevant costs (Riordan Williamson, 1985). Human capital within the context of this theory must possess the dual properties of asset specificity and asset uncertainty.

The human capital theory emphasizes that companies decide on the amount of human capital investment they will make by comparing it with the potential future benefits, for instance, improvements in production controls. Human capital in this context refers to technical training and knowledge buildup for employees. Flamholtz (1972) suggests that investments are especially focused on training employees' specialized skills and avoiding these skills to be used by other companies. Human capital referred to in this theory must possess the dual properties of asset specialized skills and non-transferability.

The resource-based view of the firm theory advocates that core skills central to a company's competitive advantages must be acquired from internal development within the company itself and that general technology can be acquired from outsourcing. The core skills are characterized by properties such as value, rareness, not being imitable and immobility (Barney, 1991). Talents capable of core skills are the human capital deserving attention and investments from companies.

By summing up the above theories, this paper defines human capital investments as input made by company in talents and technology that benefit competitive advantages, are valuable and unique, and should be kept out of reach of other companies. In other words, only employees possessing these qualities are qualified as human capital. The skills of employees are a company's assets just like tangible assets (Barney, 1991). In particular, employees with core skills are the fountain source for company to raise competence and profits (Porter, 1985). Therefore, it is also suggested investments in this kind of employees, i.e. human capital investments, should be the focal point of our attention (Porter, 2001).

The framework of human capital classification

To explain ways of identifying companies' human capital investments, researchers used value as the horizontal axis and uniqueness as the vertical axis to divide companies'

utilization of human capital into four quadrants (Lepak and Snell, 1999). Among the four quadrants, the one representing both high value and high uniqueness denotes human capital investments. This type of human capital is capable of core skills, key to a company's competitiveness, barred from being used by other companies and very difficult to be obtained by means of sourcing. Therefore, it is best to be developed internally within the company itself by means of human capital investments. In terms of cost accounting attributes, how the company forms, obtains, maintains and segregates this type of employees should translate into quantified disclosure of human capital investments. Of course, the salary offered to these employees in exchange for services and labor in itself is not defined as human capital investments. Salary expenditure is considered as the reward of employees' previous effort.

The traditional human capital accounting theories identify the following items of human capital investments (Flamholtz, 1973): 1. Formation and acquisition costs at the early stages of development. 2. Learning costs in the middle stage of development. 3. Replacement costs at the final stages of development. By using the three-stage classification of the human capital investment that mentioned above, Chen and Lin then developed the framework as Figure 1 (Chen and Lin, 2002):

Based on the definitions of human capital by both traditional theories and the above-explained theories, this paper asserts that companies' investments in human capital should follow the dual principles of uniqueness and value. Companies should identify personnel with high value and high uniqueness and then recognize the involving formulation and acquisition costs, learning costs and replacement costs to determine companies' investments in human capital.

Discussing of human capital expenditure classification framework

The horizontal axis of figure 1 represents value of employees and implies the investments in highly valuable human with potential to create business competitive advantages. The value increases along the right direction. The vertical axis is the degree of employees' uniqueness, representing the degree of the unique capacity of human to provide business competitive advantages that cannot be easily mirrored, formulated and acquired. The uniqueness increases in the upward direction.

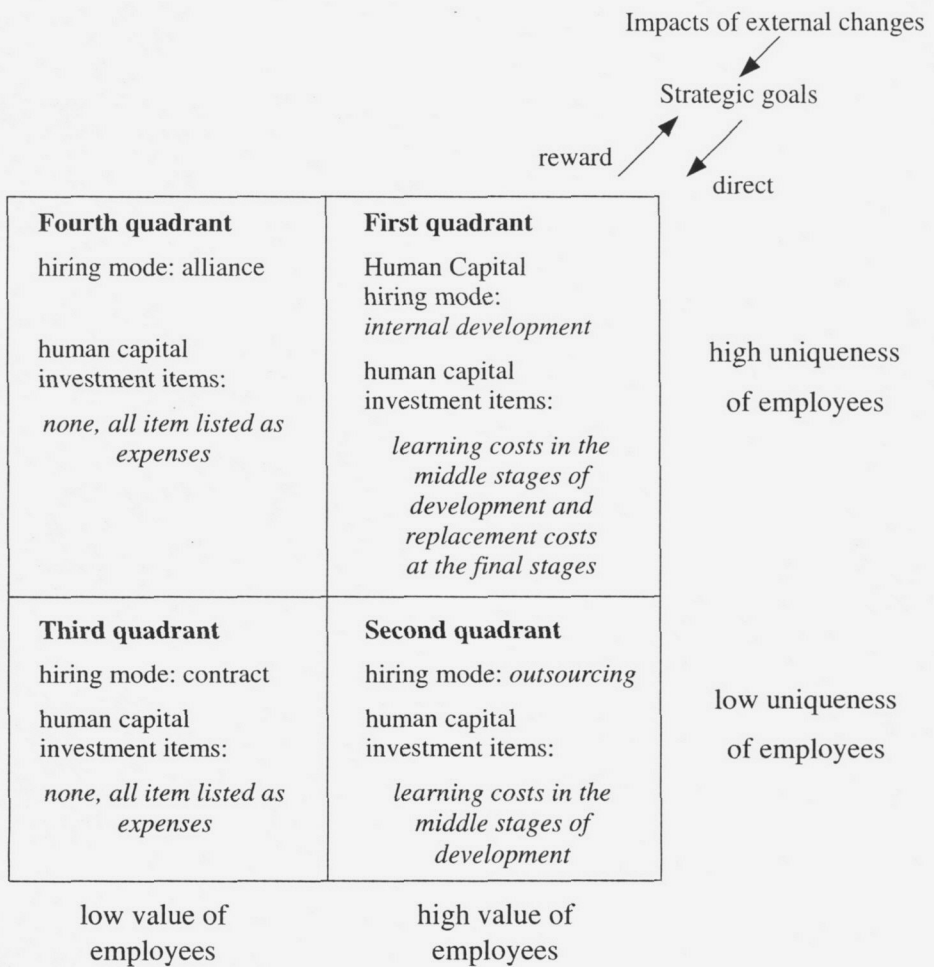
The human capital expenditure in the fourth quadrant of figure 1 represents employees with high uniqueness and low value, such as lawyers or accountants. These employees are highly specialized with national certificates, hence are highly unique. Nevertheless, companies employ these people to deal with contingent or routine affairs. These people are not directly helpful to companies' core skills and value and therefore are not considered highly valuable. Since it is time-consuming hardly economically efficient to train these professionals, companies rarely train lawyers or accountants within themselves. The best way to acquire this type of employees is by establishing alliances.

The human capital expenditure in the third quadrant of figure 1 represents employees with low uniqueness and low value, such as cleaning and security personnel. Since this

type of employees is easily acquired from the manpower market and also easily replaceable, it is not unique. Moreover, it provides low-end manual labor that is not considered valuable by companies. Therefore, these employees can be hired by means of contracts. The expenditure involved here is exchanging company's assets for personnel's labor service, and therefore are listed as expenses in accounting.

From the perspective of accounting, exchanging company assets simply for services are categorized as expenses. Companies pay salaries to personnel in the third and fourth quadrants in exchange for their services, such as auditing fees paid to accountants and wages and welfare paid to security services. Therefore, this expenditure should be listed as expenses, not human capital investments.

Figure 1. Framework of human capital expenditure classification



Employees in the third quadrant of figure 1 represent those of low uniqueness and high value. For example, electronics companies employ those with a master's degree. The degree in itself is not unique and can be easily acquired from the employment market. However, this type of personnel is equipped with the specialty capable of creating a significant extent of value to the company despite their low uniqueness. Therefore, this type of employees can be hired from outsourcing. Furthermore, if these employees are continually trained, they may be elevated to the first quadrant with both high uniqueness and high value. In terms of accounting costs, all related expenditure with the exception of training expenditure should be listed as expenses. Although this type of employees has a valuable contribution to companies' strategic goals, yet being less unique, easily attainable and easily transferable, its contribution to the uniqueness of company's human capital is not high both in terms of the formulation and acquisition costs at the early stages of development and in terms of the replacement costs at the final stages of development. According to accounting analysis, these costs should be listed as current period expenses, i.e. the price companies paid for using these human resources, and deducted from current period revenues. For this type of employees, only the learning costs at the middle stages of development under the consideration of contract conditions and personnel mobility can be considered as human capital investments. Giving continuous training under certain conditions, these personnel are the future source of company's human capital with high uniqueness and high value.

Employees in the first quadrant of figure 1 are human capital acquired from internal development in companies themselves. Because it has a valuable contribution to companies' strategic goals and is highly unique, it is necessary to continuously invest in those personnel as the core competitiveness and the sustainable human capital of company. Investment items in this regard include learning costs at the middle stages of development and replacement costs at the final stages of development. For instance, continuous investments in this type of human capital can either sustain or increase company's competitive advantages, while investments in the related replacement costs can make up for the potential losses of competitive advantages.

Employees in the first quadrant are managers, technical experts, and personnel related to the development of a company's strategic goals, these are the "inner core" of the company (Boxall, 1998). Firms which focus on augmenting their specific human resource advantages by attracting and retaining highly skilled human capital have higher potential to be more competitive in international markets than less human resource oriented ones (Chadee and Kumar, 2001). If expenditure in this type of personnel is considered expenses instead of human capital investments, then first of all the human capital conducive to the creation of a company's future economic value is not presented. Second, when making decisions to trim expenses, the company is likely to be misled into cutting human capital investments, thereby reducing its ability to survive and compete in the future.

In the framework of human capital expenditure classification constructed in this paper, in order to provide more information, it is not appropriate to slump direct investments

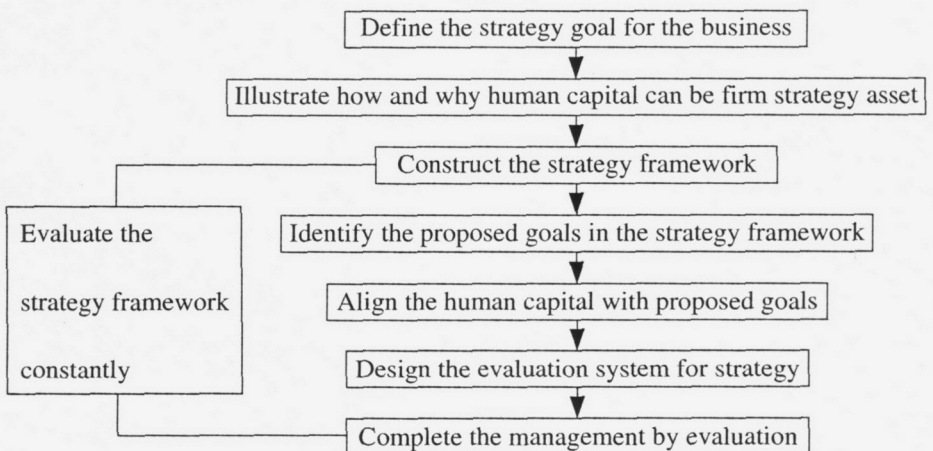
in human capital belonging of the first or second quadrant together with other human capital expenditure as expenses under the same accounting category and then deduct them from revenues. The direct investments in human capital of belonging the first quadrant such as learning costs in the middle stages of development and replacement costs in the final stages of development, and those direct investments belonging of the second quadrant, such as learning costs in the middle stages of development.

In addition, indirect investments in human capital, defined in this paper as accommodating measures of human capital, should also be considered investments rather than expenses. These include a company's active provision of benefit, sharing profits, granting stock options, keeping promotion channels open and maintaining good employer-labor relationships. These measures bring about a sense of satisfaction with both employment contracts and psychological commitments. In a more passive sense, measures such as contracts specifying employment duration and property right establish barriers to transfer of human capital to competing companies. Although this type of expenditure is not invested in human capital that is directly related to a company's competitive advantages and development strategies, it should be regarded as peripherally linked to the maintenance of human capital.

The effect of firm strategy goal toward human capital

Of course, any company's strategic goals are subject to be changed along with external factors, such as technological innovation, and the passage of time. Likewise, the value and uniqueness of employees defined by each company are affected. Therefore, human capital in the first quadrant should be adjusted with the external environment when necessary. We can understand the relationship between firm strategy and human capital through figure 2(Becker et al., 2001):

Figure 2. Steps in transforming human capital framework into firm strategy asset



1. Define the strategy goal for business

The management should decide current strategy goal through broad discussion. The goal must be clear and direct employees understand their roles, the way to complete and how the performance be evaluated.

2. Illustrate how and why human capital can be firm strategy asset

From the perspective of strategic human resources, human capital can be effectively utilized through a "high-performance work system", to maximize the quality of human capital investments in an organization. Through empirical researches, evidences have shown that this system has positive relation with firm financial performance (Becker and Houselid, 1998). The high-performance work system can connect business decision with competitive strategy, provide the skill needed to perform the strategy, develop timely and effective support, and perform rules for evaluation.

3. Construct the strategy framework

The framework must connect with firm value chain then create value. The following thinking can be evaluated before construction:

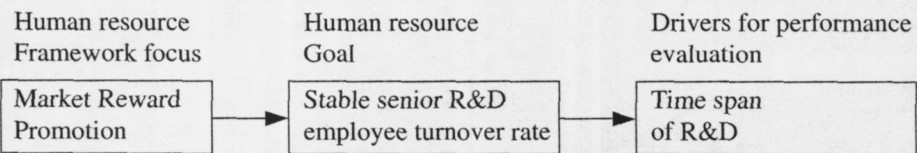
- (1) What strategic goal is most critical and important?
- (2) What is the driver of target performance?
- (3) How can we measure the degree of completion?
- (4) What is the barrier to complete the goal?
- (5) What should the employees do to complete the goal?
- (6) Does human resource function in the business allow employees acquiring enough capability to complete the goal?
- (7) If not, what change should the business made?

4. Identify the proposed goals in the strategy framework

We must understand which target will promote the firm performance in the strategy framework. For example, if low employee turnover will shorten the time span of research and development(R&D). We can retain our human capital by giving them higher bonus or offering stock option plan to them.

5. Align the human capital with proposed goals

In order to lower the turnover rate for senior R&D employees, the firm can adjust policies in the human capital management framework. For example, the management can raise the salary for those employees and achieve the goal. See the charts below:



By following the procedure in the chart, it will eliminate the conflict between firm policy and its goal.

6. Design the evaluation system for strategy

When design the evaluation system for strategy, firms must understand the cause and effect relationship between evaluation index and the strategy goal. The evaluation index must well define. Firms that use "turnover ratio of senior employee" as an index must define the qualification of 'senior employee'. In the mean time, evaluation index can be both financial and non-financial.

7. Evaluate strategy framework constantly

Use the evaluation designed to manage the human capital that matches firm strategy goal.

8. Evaluate the strategy framework constantly.

Give feedback and adjust strategy framework periodically.

Conclusion

Human capital in the business changes from time to time. It is hard to locate human capital that fits firm strategy goals. This paper explores the definition of human capital and human capital expenditure classification within business, based on two interacting principles, i.e. the value of employees to competitive advantage and the uniqueness of employees. It is suggested that companies' human capital expenditure is analyzed in detail, and that the human capital investments conducive to competitive advantages are extracted from expenditure. Moreover, instead of listing human capital expenditure indiscriminately as expenses, this paper identifies the different stages of development of human capital to reflect the truth of important investments made by businesses in the process of survival, development and profit creation.

Finally, human capital should have different characteristics in different industries during different periods. This paper suggests ways to elect critical human capital that benefits to firm strategy goals. And suggest practical steps to maintain human capital.

References

1. Argyres, Nicholas S. and Liebeskind, Julia Porter(1999), "Contractual commitments, bargaining power, and governance inseparability: incorporating history into transaction cost theory," **Academy of Management Review**, Vol. 24, i1, pp.49-63.
2. Barney, J.(1991), "Firm resource and sustained competitive advantage." **Journal of Management**, Vol. 17, i1, pp.99-120.
3. Becker, Brian E. and Huselid, Mark A.(1998), "High performance work system and firm performance: A synthesis of research and managerial implications." **Research in Personnel and Human Resources Management**, Vol. 16, pp.53-101.

4. Becker, Brian E., Huselid, Mark A., Ulrich, Dave(2001), "The HR scorecard: linking people, strategy, and performance", Harvard Business School Press, P.37.
5. Boxtall, Peter.(1998), "Achieving competitive advantage through human resource strategy: toward a theory of industry dynamics," **Human Resource Management Review**, pp.265-288.
6. Chadee, Doren. and Kumar Rajiv.(2001), "Sustaining the international competitive advantage of Asia firms: A conceptual framework and research propositions", **Asia Pacific Journal of Management**, Vol. 18 i4, pp. 461-480.
7. Chen, Hai Ming and Lin, Ku Jun(2002), "A Discussion of Human Capital Expenditure Classification— Toward the Competitive Advantages of a Taiwan Company," **Indian Journal of Economics**, Vol. LXXXIII, No. 328, Vol.10, Pp.102~121.
8. Dzinkowski, Ramona.(2000), "The measurement and management of intellectual capital: An introduction," **Management Accounting; London**, Vol. 78, i2, pp.32-35.
9. Flamholtz, E.(1972), "Toward a theory of human resource value in formal organizations," **Accounting Review**, pp.666-678.
10. Flamholtz, E. (1973), "Human resource accounting: measuring positional replacement costs", **Human Resource Management**, Vol. 12 i1, pp. 8-11.
11. Hermanson, Dana R., Hermanson, Roger H. and Ivancevich, Daniel M. (1992), "Human resource accounting in a recessionary times", **Management Accounting**, Vol. 74 n1, p69.
12. Lepak, David P., and Snell, Scott A.(1999), "The human resource architecture: toward a theory of human capital allocation and development," **Academy of Management Review**, Vol.24, i1, pp.31-48.
13. Porter, Michael E. (1985), *Competitive advantage: Creating and sustaining superior performance*, Free Press, New York.
14. Porter, Michael E and Stern, Scott. (2001), "Innovation location matters", **Sloan Management Review**, pp. 28-36.
15. Riordan, Michael H. and Williamson, Oliver E.(1985), "Asset specificity and economic organization," **International Journal of Industrial Organization**, Amsterdam., pp.365-378.