Recognizing Intellectual Capital in the Intangible Asset Structure of Enterprises in the Integration Period

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Abstract: Value theory is one of the fundamental problems of economics which is applied in many different disciplines. However, the application of this economic theory in recognizing the valuation of intellectual capital of enterprises is a complex issue, especially knowledge is considered as an important form of resource and exchanged on the market. According to modern accounting theories, the accounting of intellectual capital is associated with the use of a measure of value to recognize, measure, and report on intangible assets of enterprises. However, current accounting practices do not meet the information demand of enterprise knowledge resources. This article focuses on clarifying the theoretical issues of knowledge resources in enterprises and the current state of accounting of intellectual resources in particular and intangible assets accounting in general in Vietnam in the integration period. Based on the research on content, requirements for managing knowledge resources and accounting methods, this article provides the guiding principles for the development of the accounting of intangible assets to exploit enterprises' knowledge resources.

Keywords: Intellectual capital, value theory, intangible assets, enterprises.

1. Introduction

Many studies have shown the benefits of reporting recognizing and enterprises' knowledge resources. The items of knowledge resources have a strong impact on the use of financial information for economic decisionmaking, and businesses will benefit from a more comprehensive presentation of their intellectual capital [1]. Holmen (2005) cited by Moolman (2010) points to the benefits of enhancing recognition and presentation of knowledge resources in financial reporting, including narrowing the gap between book value and market value, providing information on the true value of the business, reducing asymmetric information, increasing the ability to raise capital by providing the value of intangible assets, and enhancing the credibility of the business [2]. A survey of leading companies in Egypt found that 83% of the respondents said knowledge information was useful for making investment decisions related to the company; 71.9% said information about knowledge resources was useful for evaluating the company's performance [3].

According to the international accounting standards board (IASB), recognizing intellectual capital (if capitalized) is in accordance with the accounting method for intangible assets. However, knowledge resources are accounted for as expenses of the enterprise, such as: training costs, pre-operation

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costs, goodwill internally, etc. In other words, in this case, expenditures for investing in knowledge resources are considered past costs rather than future benefits. Thus, the greatest difficulty in accounting and reporting of knowledge resources as well as other intangible assets is the lack of principles and methods related to measurement. At present, knowledge resources have been recognized and presented in annual financial statements of large companies in Sweden, Australia, USA, Egypt, Malaysia, etc. Accordingly, large companies such as Skandia in Sweden have applied the form of a report of intellectual capital as additional reporting to the annual financial statements. Therefore, the recording and reporting of knowledge resources on financial statements is becoming an indispensable trend in many countries around the world. However, regulations on recording, measurement and information on the value of knowledge resources in the structure of intangible assets of enterprises in the Vietnamese accounting system are still not consistent with international standards. In order to meet the requirements of the international integration of accounting, Vietnam must research and gradually apply the regulations on recording, measurement and reporting of intellectual capital in financial reports following international trends and practices, with an appropriate roadmap.

Based on that, the following article will examine the importance of recognizing the value of knowledge resources in the intangible asset structure of an enterprise. The survey will cover the current situation of recording, evaluating and presenting information related to knowledge resources in enterprises to answer the following questions: Does the current accounting system have regulations for recognizing the value of an enterprise's intellectual resources? Is it necessary to record the value of knowledge resources in the structure of intangible assets? Is it necessary to identify the knowledge resources including

organizational resources, human resources and related resources?

The author also examines accounting experts' knowledge of the legal framework, the accounting regime and regulations for the disclosure of knowledge resources in financial reports, as follows: Are the legal framework and accounting regime for knowledge resources adequate? Do you need specific regulations for recording, measuring and presenting information on knowledge resources? Should the accounting of intangible assets be placed in the relationship between benefits and costs?

After the data has been collected, the author make recommendations on the will development of a system for valuing the knowledge assets enterprise. of the recommending some contents for recording, evaluating and presenting knowledge resources based on the spirit of harmony with international accounting standards.

2. Theoretical basis and research methodology

2.1. Theory of recognizing intellectual capital in the intangible asset structure of enterprises

2.1.1. Overview of intellectual capital

According to Leif Edvinsson (2000), intellectual capital is intellectual property, applied experience, organizational technology, customer relationship, and professional skill that create a competitive advantage in the market. Abeysekera (2003)identifies knowledge resources consisting of three components: human capital, structural capital, and relational capital, of which organizational resources include intellectual property and infrastructure assets [4]. The Chartered Institute of Management Accountants (CIMA, 2005) divides knowledge resources into the following components and attributes (Table

Human capital Relational capital - Job skills - Trademark - Educational level - Customers - Professional qualification - Customer lovalty - Knowledge of work - Company names - Ability to work - The order - Mentality - Distribution channel - Being proactive, creative in working - Business cooperation - Ability to adapt to work - Copyright contract - Priority contracts - Business license Structural capital Intellectual property Infrastructure assets - License of invention - Management philosophy - Copyright - Corporate culture - Management process - Design rights - Trade secrets - Information system - Financial relations - Brand - Service marks

Table 1. Components and attributes of intellectual capital

Source: CIMA (2005), cited by Moolman (2010) [2].

Intellectual capital is defined as the economic value of intangible assets of enterprises, which is an important factor in determining the value of enterprise assets and assessing the speed of national economic development [5]. Knowledge resources play an important role in defining business strategies and developing business performance measurement tools [6]. This is especially important for non-financial items or qualitative indicators in the presentation of business results. Some studies by Johanson (1999) [7], and Brennan and Connell (2000) [1], have shown that information about knowledge resources, especially human resources, plays a important role in the success of enterprises.

2.1.2. Recognizing the value of intellectual capital in intangible assets

According to international accounting standards (IAS), the method of recording, measuring and reporting on knowledge resources (if capitalized) are carried out in accordance with intangible assets accounting. While intellectual resources are intrinsic to the nature of intangible assets, most of them are

accounted for as expenses and expenditures of enterprises, thereby distorting values and their use. This means that expenditures for investment in knowledge resources are interpreted as past costs rather than those that may be beneficial in the future. To clarify this issue, there is a need for comparison and assessment of the recognition, measurement, and disclosure of the value of knowledge resources in the structure of intangible assets of enterprises (Table 2).

The table shows that the scope of reflection of intangible assets is limited to a narrow scale, focusing on organizational resources rather than external resources and human resources. In the Vietnam accounting system, intangible assets are often regarded as fixed assets, which in part do not conform to international accounting standards and practices because the intangible assets of enterprises are not merely fixed assets. To measure knowledge resources, there are some methods which the world can recognize, such as market to net book value, the method of calculating intangible value (CIV), direct intellectual pital method, and the method of knowledge valuation proposed by Baruch Lev or Paul Strassmann, etc.

Table 2. Comparison of recognizing the value of intellectual capital in intangible assets of enterprises

Items	International accounting standards (IAS 12 and IAS 38)	Vietnam accounting standard (VAS 04 - Intangible fixed assets)		
Intangible assets	- Computer software - Product design - License - Movie - List of customers - House collateral - License of invention - Import limits - Business license - Relationship with customers and suppliers - Advertising privilege	 Land use rights for a definite term Rights issue Copyright, patents Brand Computer software License and franchise license Formulation and mixing methods, design patterns and samples Fixed assets are being deployed 		
Record Invisible treasure	Two conditions for asset recognition - Businesses gain future economic benefits associated with their assets - The cost of asset formation is recognized reliably	Three cases - Assets purchased separately (purchase price - discount, discount, commission) - Assets arising from the business merger (fair value) - Internal construction assets (costs included in business expenses)		
Expenses not accounted for in intangible assets	Cost content - Goodwill arising internally - Expenses before going into operation - Training costs - Advertising costs - Cost of relocation Method of accounting: Allocated to business expenses in the period	Cost content - Goodwill arising internally - Expenses before going into operation - Training costs - Advertising costs in the pre-activity phase - Expenditure incurred during the study period Method of accounting: Allocated to business expenses for a period of 3 years		
Expenses incurred after recognition of assets	Cost method and re-evaluation method (active market) Assets with a finite lifetime distribute depreciation of value over the useful life of the asset. Assets with infinite and indefinite life exist without erosion.	Two standards: - Increase the economic benefits of future assets - Can be reasonably measured and attached to a specific asset		

Sources: IAS 38; VAS 04; synthesis of the author.

These methods are not widely accepted because they have certain limitations. For example, in the CIV method, the cost of capital imposes the net present value of intangible assets, or in the direct method, the computational technique is still incomplete and it is difficult to fully determine the composition of the knowledge resources of a business. In the trend of convergence with international accounting, Vietnam also needs to develop

methods to record and measure the value of knowledge resources in the structure of intangible assets. To deal with the above issues, the author will conduct surveys at enterprises to reflect the status of recording, valuing and presenting information related to knowledge resources. To find whether the current accounting system has clear provisions for recognizing the value of knowledge resources the following matters will be addressed:

whether the value of knowledge resources is recognized in intangible assets and is it necessary to identify the knowledge resources including organizational resources, human resources and related resources? The author also examines accounting experts, audits of the legal framework, the accounting regime, regulations for the presentation of knowledge resource information in financial reports to get opinions about: should there be specific provisions on recording, measurement and presentation of information for knowledge resources and should the accounting of intangible assets be placed in the relationship between benefits and costs?

2.2. Research methodology

2.2.1. Method of data collection

Samples in the official study were made by a convenient sampling method, collecting data from 528 companies listed on Hanoi Stock Exchange (HNX) and Ho Chi Minh City Stock Exchange (HOSE). Research has also been conducted on primary data collection based on the questionnaire survey method. Accountants of listed companies were surveyed which taking into account the size of the business. Sample selection ensured that the opinions of the respondents represented the accountants in Vietnam to reflect honestly the current state of knowledge reporting in the enterprise. The author collected data by submitting online surveys through Google Drive; the results were the collection of 466 samples of the survey, accounting for 88.26%.

To collect primary data, the author designed questionnaires consisting of information on production characteristics and accounting work of enterprises to investigate the actual situation of recording, evaluating and presenting information related to intellectual resources in the surveyed enterprises. Questionnaires were sent directly to the respondents or indirectly by mail. In addition, the author conducted in-depth interviews with the chief financial officers and chief accountants of the firms using direct interviews and interviews by phone.

Moreover, in order to have access to the depth of the issue, providing a useful reference base for recommendations, the conducted discussions with 45 accounting experts who were directly involved in researching, teaching and consulting (in which: 8 were experts from the Ministry of Finance, 5 were experts from Vietnam Accounting and Auditing Association, and 32 were university lecturers). The main contents of the interviews were the legal framework, the current accounting regime and regulations for the presentation of information on knowledge resources in financial reports, thus, gathering opinions about whether the value of knowledge resources should be recognized or not in the current intangible asset structure.

2.3. Data analysis methods

After the data collection, the author used SPSS and Excel software to analyze the status of recording, evaluating and presenting information related to intellectual capital in enterprises. The main contents of analysis and remarks were on the legal framework, the accounting regime and regulations for the presentation of information on knowledge resources in the financial statements. Research has also shown that it is necessary to develop a system for valuing the knowledge assets of enterprises, which requires the combination of qualitative indicators and quantitative indicators to allow enterprises to be more flexible in supplying information on the enterprise's intellectual resources. The accounting of intangible assets must be placed in the relationship between benefits and costs. Recognition, measurement and presentation of knowledge resources is based on the spirit of harmony which is in line with international practice and must build a system for assessing enterprise intellectual capital.

3. Results and discussions

3.1. Results of analysis and evaluation

Scale Ouestions Scale	Totally agree	Agree	No idea	Disagree	Totally disagree
1. In your opinion, does the current accounting system have regulations for recognizing the value of an enterprise's intellectual resources?	0%	3.5%	5%	38.3%	53.2%
2. In your opinion, should the value of knowledge resources be recognized in the structure of intangible assets?	28.4%	49.7%	14.4%	5.2%	2.3%
3. Did you mention that recognition and measurement of knowledge resources are occurring on a very small scale, mainly focused on recognizing organizational resources?	32.8%	53.5%	8.5%	5.2%	0%
4. Do you need to identify knowledge resources including organizational resources, human	30.6%	43.4%	15.8%	6.5%	3.7%

Table 3. Results of the survey on the status of recording, evaluating and presenting information on intellectual capital in enterprises

Source: Self-synthesizer.

Based on the synthesis of survey data, the research has reflected the status of recording, evaluating and presenting information related to knowledge resources in enterprises, specifically as follows: the current accounting system has no regulations for recognizing the value of intellectual capital (the opinion of 53.2% of the respondents). It is necessary to record the value of knowledge resources in the structure of intangible assets (49.7% of the respondents). Recognition and measurement of knowledge resources are occurring on a small scale, focusing on organizational resources (53.5% of the respondents) and identifying knowledge resources including organizational resources, human resources and related resources (43.4% of the respondents). Results of the survey for accounting and auditing experts about the legal framework, accounting regime, regulations for the presentation of knowledge resources information in financial reports, are as follows: The legal framework and accounting regime for intellectual capital, the majority of experts surveyed said that the guiding legal framework is still incomplete (66.67%). In Vietnam, expenditures for the formation of knowledge

resources, and resources?

resources are accounted for in costs rather than the formation of the value of the assets. The accounting of intellectual resources in business costs partially conceals the potential for exploitation of these resources, thus having little effect in providing honest and objective information to meet the management requirements. Therefore, accounting experts agree that there should be specific provisions for the recognition and measurement of intellectual capital (51.52%) by combining qualitative indicators and quantitative indicators (57.58%). Accounting for intangible assets must be set in the relationship between benefits and costs (63.64%). This is quite practical and suitable with the status of recognition of intellectual capital in Vietnam, and in line with international trend ofaccounting convergence.

3.2. Discussion

Nowadays, the formation and development of the knowledge economy is an indispensable natural tendency of human society.

Scale **Totally Totally** Disagree Agree No idea Questions agree disagree 1. Did you know that the current legal framework and accounting regime for 2.7% 2.3% 6.06% 22.27% 66.67% intellectual capital are adequate? 2. Do you have specific regulations for recording, measuring, and presenting 51.52% 36.36% 9.09% 3.03% 0% information to knowledge resources? 3. In your opinion, should you choose to combine qualitative indicators 0% 0% quantitative 57.58% 42.42% 0% indicators to provide information about the enterprise's knowledge resources? 4. Should you book your intangible assets in the relationship between benefits 63.64% 21.21% 12.12% 3.03% 0%

Table 4. Results of the survey on the legal framework, accounting regime, regulations for presentation of information on intellectual capital in financial statements for professionals

Source: Self-synthesizer.

In the context of deepening and accelerating international integration at present, countries which move quickly into the knowledge economy will have advantages in all aspects. However, in Vietnam, the legal system and accounting system do not have any regulations on recording the value of knowledge resources in financial statements. The lack of information on these resources has a profound effect on the trend of knowledge development in enterprises, especially when Vietnam has cheap human resources, which is an important advantage in international competition.

and costs?

In the current trend, intangible assets are growing much faster than tangible assets. In intangible assets, there are usually about 55% of assets from information technology and property intellectual (patents, know-how, copyright, industrial design, etc.); the remaining brand. reputation, are strategy, organizational model and customer relationships. In terms of intellectual property or intellectual property in GDP, many countries from the OECD are already knowledge-based (intellectual property represents more than two-thirds of GDP). According to the World Bank's Knowledge Economy Index (KEI), 29 countries and territories reached a KEI from 8.0

to 9.43 in 2012 (Sweden ranked first, Taiwan ranked 13th, Hong Kong ranked 18th, Singapore ranked 23rd, Korea ranked 29th). At present 32 countries and territories are considered to have become knowledge-based or creative economies. However, in Vietnam, the scope of intangible assets is limited at a narrow scale, focusing on organizational resources rather than external resources and human resources. This feature reflects the difficulty in identifying resources or otherwise lacking standards that are consistent with defining the firm's ability to control the resources and economic benefits of the asset that can bring business.

In addition, in the Vietnamese accounting system, intangible assets are often regarded as fixed assets. This part does not conform to international practice. The facts shows that the intangible assets of an enterprise are not merely fixed assets and fixed characteristics because intangible assets and fixed assets are two different properties of an asset.

4. Recommendations

Information on intellectual capital plays a very important role in enhancing the

competitiveness of enterprises. In order to help businesses meet the requirements of a knowledge and information economy, a new approach to have knowledge acquisition and accounting of enterprise knowledge resources is needed. Based on the above assessment and comparison, five issues need to be set in order to better meet the demand for managing enterprise knowledge resources:

Firstly, build a system to determine the value of the knowledge assets of the business. The valuation methodology may be based on three qualitative criteria set out in International Accounting Standard 38 (IAS 38):

- The ability to identify assets (disconnected from physical assets and formed from contracts or legal agreements). This is a prerequisite for identifying a knowledge resource that is the property of the business. For example, to identify an employee initiative that is the property of an enterprise, the business must prove ownership of the initiative through the certification of intellectual property rights.
- Control issues (with the right to benefit from property). This factor is derived from the first factor. Along with asset ownership, an enterprise must acquire the right to operate and exploit assets. For example, the use of an initiative in production and business can bring economic efficiency.
- Future economic benefits (generate revenue or reduce the cost of the business). This factor should be clarified when determining the assets. For example, what is the projected increase in labor productivity in an enterprise? One thing to note, however, is that knowledge resources often do not have a particular physical form, so it is often difficult to determine the value and useful life of an asset. This is a complicated issue. According to the author's opinion, solutions to this problem can be developed as follows:

For asset valuation, the cost method should be used instead of allowing the use of the fair value method. The cost of an asset comprises the costs of establishing and putting the asset into use. The reason for this choice is that the method of fair value is not appropriate for Vietnam's transitional economic conditions, as market factors (e.g. inflation, supply-demand, etc.) are not fully developed or not effectively managed. The CIV method will also be unreasonable when much of the initial recognition of an asset is made when the assets are first operated and the norms relating to the use of assets are not met.

The useful life of intangible fixed assets may be limited or infinite. Intangible fixed assets with indefinite useful lives will not be depreciated but the enterprise must assess the possibility of impairment. These assets can therefore be regarded as fixed or liquid assets depending on the nature of service of the property.

Secondly, develop a method for measuring qualitative methods appropriately and defining the relationship between traditional quantitative methods and qualitative methods. combination of qualitative targets with quantitative indicators allows enterprises to be flexible in communicating their knowledge resources. One thing to keep in mind is that in order to avoid having difficulty determining the value and lifetime of the asset, it is possible to present assets as off-balance sheet items. This ensures that information is provided to users and minimized the risks associated with asset accounting. Another solution is to enhance the scope of analysis and presentation explanatory notes of financial statements. This helps the users of accounting information get a better awareness of the resources that are the knowledge assets of the business.

Thirdly, the accounting of intangible assets must be located in the relationship between benefits and costs. One of the requirements when setting up and operating the accounting apparatus is that the benefits must be greater than the costs incurred. While costs are often measured fairly accurately by monetary measures, the benefits are not clearly defined and are usually limited to completion as required by law [8]. This has a serious impact on meeting the information requirements for

economic decision-making. It is important to note that managers' accountability is very important in providing information about assets, especially the knowledge resources of the business.

Fourthly, there needs to be orientation of some content on the recognition, measurement and presentation of intellectual capital based on the spirit of harmony with international practice.

Identification of items of knowledge resources presented is an important issue in the reporting of intellectual capital. Research by Sujan et al. (2007) on 20 leading Australian companies indicates that external resources are the most reported (48%), followed by organizational resources (inside) with 31% and human resources 21% [9]. Meanwhile, the research results of the top 40 listed companies on the South African stock market in 2009 show that the average attribute attributed by a reporting company to human resources is 8, organizational resources is 4.9 and the relative resource is 7. In the reported attributes, 40% are in human resources, 25% are in organizational resources and 35% are related resources [10]. A number of studies on the knowledge domain of Abeysekera (2003) [4] and Guthrie et al. (2010) [10] show that the majority of reported attributes relate to relative resources, followed by human resources (Table 5).

Table 5. Key components and attributes of knowledge resources presented in the financial statements

Numerical or P	Main content
I	Human resources
1	Business spirit
2	Educations
3	Knowledge of the work
4	Ability to work
5	Job skills

II	Organizational resources
1	Management philosophy
2	Administrative processes
3	Corporate culture
4	Information system
III	Relational resources
1	Business partnerships
2	Company names
3	Customers
4	Customer loyalty
5	Distribution channels
6	Trademarks

Source: Synthesis and author's proposal.

Fifthly, the building of a system for assessing enterprise's intellectual capital. In order to achieve the improvement of knowledge-based measurement models, the development of a knowledge-based indicator system can be seen as a useful way to report business performance. The frameworks for building the enterprise resource assessment scores are outlined below, based on a proposal by Abeysekera (2003) [4] and the composite author (Table 6).

5. Conclusion

Intellectual capital plays a decisive role in the transition to a market-oriented economy. However, the synthesis of the theoretical system of knowledge resources and the accounting of the intellectual resources between Vietnamese accounting system and international practice show that the application of theoretical issues relating to the value and use value of knowledge assets do not meet the management requirements and information on enterprises' intellectual resources. This study's survey of the current accounting system shows that the recording and reporting of information on knowledge resources is limited, mainly in organizational resources rather than external resources and human resources.

Table 6. Framework model for constructing coefficients for evaluating intellectual capitals

For profit report

Factors affecting revenue

- Investment in training/changes in market value;
- Replacement turnover/change in market value;
- The number of favorable media releases/changes in market value;
- Average repeat revenue per customer in the period/change in market value.

Factors that affect costs

- The cost of settling complaints/changes in market value;
- Cost of absences/change in market value;
- The cost of stopping work due to disagreements with unions / changes in market value;
- Sick leave/change in market value;
- Accident costs/changes in market value.

For financial statement

Factors affecting asset creation

- Money invested in labor education/market value;
- Effective intellectual property/market value;
- Averaged repeat sales per customer for 5 years/market value;
- Average working time of experts in companies/market value;
- Revenue per customer enhancement/market value;
- New investments in technological process/market value.

Factors affecting the creation of liability

- Revenue from 5 major customers/market value;
- Increase taxes on products/market value.

Sources: Abeysekera (2003) [4] and synthesis, author's proposal.

The limitation of intangible assets by the determination of useful lifetime values has a certain impact on the reflection of knowledge resources on firms' financial statements. Thus, affecting the determination of competitiveness conceals some of the actual production capacity of enterprises. From the above-mentioned issues, the author considers that more detailed research is needed on the ability to generate and provide information on knowledge resources in enterprises, thereby introducing specific accounting methods in line with the business and information needs of the users.

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