

# **EXPLOITATION OF IP VALUE GROWTH POTENTIAL IN TERMS OF SME'S INTERNAL ENVIRONMENT**

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## **Abstract**

This paper deals with broad field of knowledge management from valuation theory and practice point of view. The aim of this article is to provide deeper understandings of intellectual property value creation. On the basis of fundamental scientific methods the extensive literature searching, analysis of assumption and deduction of consequential results are carried out. In fine, method for future empirical research aimed on intellectual property value creation is derided.

## **Key words**

SME'S, Tacit Knowledge, Economic Niveau, Net Income Capitalization, Internal Environment

## **Introduction**

An effective management of knowledge is necessary for the right investment decisions at the age of knowledge economy nowadays. A considerable distinction of shares of objectified intellectual property in a property portfolio of enterprises has happened during the last few decades. Primarily, the aim of this paper is to analyze knowledge management within an internal environment of small and medium sized enterprise. Further we consider assumption suitable for qualifying and quantifying value of intellectual property which is capable for yield potential capitalization. Intellectual property is distinctive mover of competitive advantage on the present. This stage is suitable for analysis of historical and present data. Accordingly it can be applied for predict future time period and this coefficient is feasible for volatility analysis of intellectual property value changes. Finally, we derived brand new

author's method suitable for intellectual property value expression in terms of market value of a small and medium sized enterprise.

## **Methodology**

Firstly we carried out an extensive literature searching focused on subject of knowledge management definition. Above all, analysis and comparison scientific methods were applied in this stage. Secondly we prepared schemes described intellectual property in tangible evidence. Mainly the description method was applied in this stage. The last part is devoted to methodological question of economics and management theory and practice in order to draw the intellectual property value equation. Consequently, further applied methods were deduction and induction.

## **Knowledge Management Niveaues**

There are exists many ways for recognition and in other words materialising knowledge. Knowledge should be apprehended as a part of transformation knowledge chain from general data to knowledge (see f.i. Truneček, Vágner). Knowledge management is dynamic modern branch of management with several discrepancies in technology and heterogeneous conception. Fundamental dichotomy is based on divergent interpretation of knowledge concept. Results of our observations are progress concept grounded on rudimental application approaches. These approaches are differentiated above all particular methods and according to the detailed event and also techniques.

We extract author's concept of knowledge management in accordance with particular niveau. The top niveau called philosophic niveau shows us the first purpose, intention. This is the ideological cornerstone of knowledge management. On account of the first mover there is pushed the choice of rudimental possible approaches toward application procedure determining. This is the part of theories and gnoseological thoughts. The second niveau, methodical or systematic niveau, already we are able to select sortable methodical device. Hereinafter all along we finished this part of progress we are able to approach into the last part, technique niveau. In this level, partial techniques, computations and management activities are applied on the specific entities and subjects of management.

## **IP Recognition in the SME's Internal Environment**

Knowledge according to a part of general management are changed rapidly recently. The changes and the shift of conception are evident in particular move from management of humans being to a management of their knowledge as a fundamental subject of knowledge management. The management targeting is yield potential exploitation covered in knowledge. Knowledge are especially explicit which are expressed a sort of tangibles. The next classification is implicit knowledge expressed indirectly. Namely it can be subject logic, process sequence, technology or answer. The tacit knowledge is the source data for the competitive advantage of SME's. Tacit knowledge we apprehend as an incommunicable, secret fact in issue.

## **Broad Conception of IP**

Knowledge management is known on several names. Some author called it "conceptual Babylon". According to particular paradigm of various schools of economics and management are used unstructured titles for this subject. We can meet with subject of knowledge management named in accordance with accounting regulations and guidelines, tax laws, industrial property laws and valuation rules and guidelines. Other view providing economics and valuation theory. The broad concept of intellectual property is accepted ourselves. Indications are not semantic equal, but are based on exploitation and expression of some sort of knowledge. Kisslingerova, Novy (2005) pointed out commonly used terms for intellectual property such as for instance intangible assets, intangibles, intellectual property, intellectual capital, intellectual ownership, and industrial property, copyright et sequentia.

Objective elaborated scheme come out from economics analysis of the Czech laws and industrial property practice. Fundamental terms are circumscribed quite broadly and vague herein. Particular species are incorporated in several laws and legal enactments. Applied diction of these resources conforms to instead license agreement negotiation than corporate finance occasions. According to the Commercial code entered separate terms company name called firm and enterprise. Company name is used for business operations. Internal and external stakeholders get into business relations exactly under the company name.

An extensive literature searching of intellectual property namely according to the Czech law and accounting system (see Figure 1) shows dichotomy of economics and especially law conceptions. Internal environment of enterprise is figured out central circle. While external environment of law and economics system was not object of out observation.

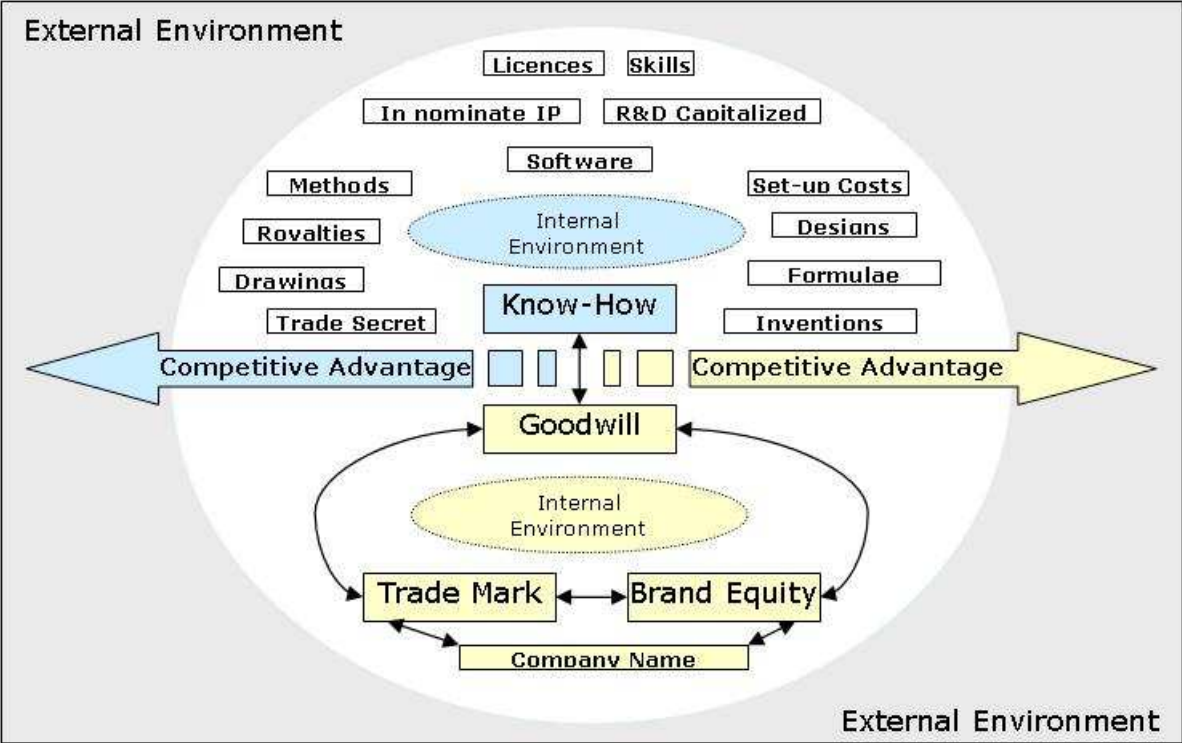


Figure 1: Economics Consequence of the Industrial Property

Intellectual property according to the Czech Accounting Standards balance sheet recorded industrial property called Intangible Fixed Assets. Inter these are filed following items: set-up costs, research and developoment capitalized, software, royalties, goodwill and other intangible fixed assets. Hereinafter contains for our purposes insignificant heads: intangible assets in the course of construction and advance paid for intangible assets.

In the terms of the intangibles exploitation phenomena does not unmistakable nexus between brand equity (financial expression of brand), trade mark and goodwill. Indeed there we can recognize several others, but very similar terms such as trade name, trade brand and brand name. According to Czech commercial code any one particularity can be traced up. According to commercial code entrepreneurs or businessmen make entrepreneurial activity under the company name (also called business, association or organization). Every enterprise must “have” only one company name, but it is on its own about ownerships of the brand. Goodwill is especially accounting term which is able to reflect difference becomes from accounting and

market value of the firms in acquisitions processes. According to Czech accounting standards goodwill has been recorded as accounting entry only since 2003. Until that time the value of goodwill had been addressed as impairment of acquired fixed assets. Jurecka (2005) pointed out that the intangibles value is estimation of trademark value and group of incidental brand names, trade brand and goodwill. Particular parts overlap together each other. It is too complicate task to separate yields per parts. That is economics point of view. Different point of view brings accounting and other rule of law. Jurecka (2005) further pointed out in several mutually interconnected studies the important role of intangibles in balance sheets as failure of the Czech economics.

### **Measure of IP Value**

The information about value of enterprises is necessary for the right investment decision nowadays. The deficiencies of previous years do not bring favourable tools for its measuring and managing. In the Czech Republic we can recognize three periods' necessity attainments of value of companies. The first wave of the intellectual property valuation was connected with the privatization in the beginning of 90<sup>th</sup> in the Czech Republic. Already at the time the several cases were inefficiently appraised and huge spectrum of intangibles were nonrefundable lost. The second wave was connected with the economics crisis in the second half of 90<sup>th</sup>. The GDP decreased and whole economy came into crisis. In this time, abroad economics subject have made mergers and acquisitions with underestimated enterprises in the Czech Republic. The third wave started round about 2004 and still continuous. Multinational corporations make mergers and acquisitions with the moneymaking, successful, profitable enterprises. Huge challenge remains underestimated value of enterprises. Management does not achieved enough information about the value of intangibles and a lot of pieces of intellectual property had been purposely acquired by abroad companies and after that stopped derived benefit from theirs. By all means, the value of intellectual property is basically derived from realized cash flows, accordingly the previous affirmation means liquidation of exploitation potential of subject intellectual property.

On a basis of empirical survey in the western countries and USA the ratio of intellectual property in the value portfolio of enterprises still rapidly growth. If management want to responsibly managing the chain of enterprise value creation is necessary to measure, quantify and qualify the value within responsible appraisal of intellectual property.

## General IP Valuation Framework

Basic valuation concepts can be dealt out in to branches. The first is qualitative approach and second is quantitative approach. Qualitative approach is based on subjective ranking of appraiser. This approach is usually employed within the frame of marketing assessment. For instance we can mention dotted estimation according to Balance Scorecard, Rules of Thumb, Information method based on the crucial deficiency is the result of this method etc. Marketing experts are usually satisfied with a soft evaluative verdict without resulting amount associated with the concrete intellectual property and/or assets. For value creation management of IP is hence for this reason ineligible.

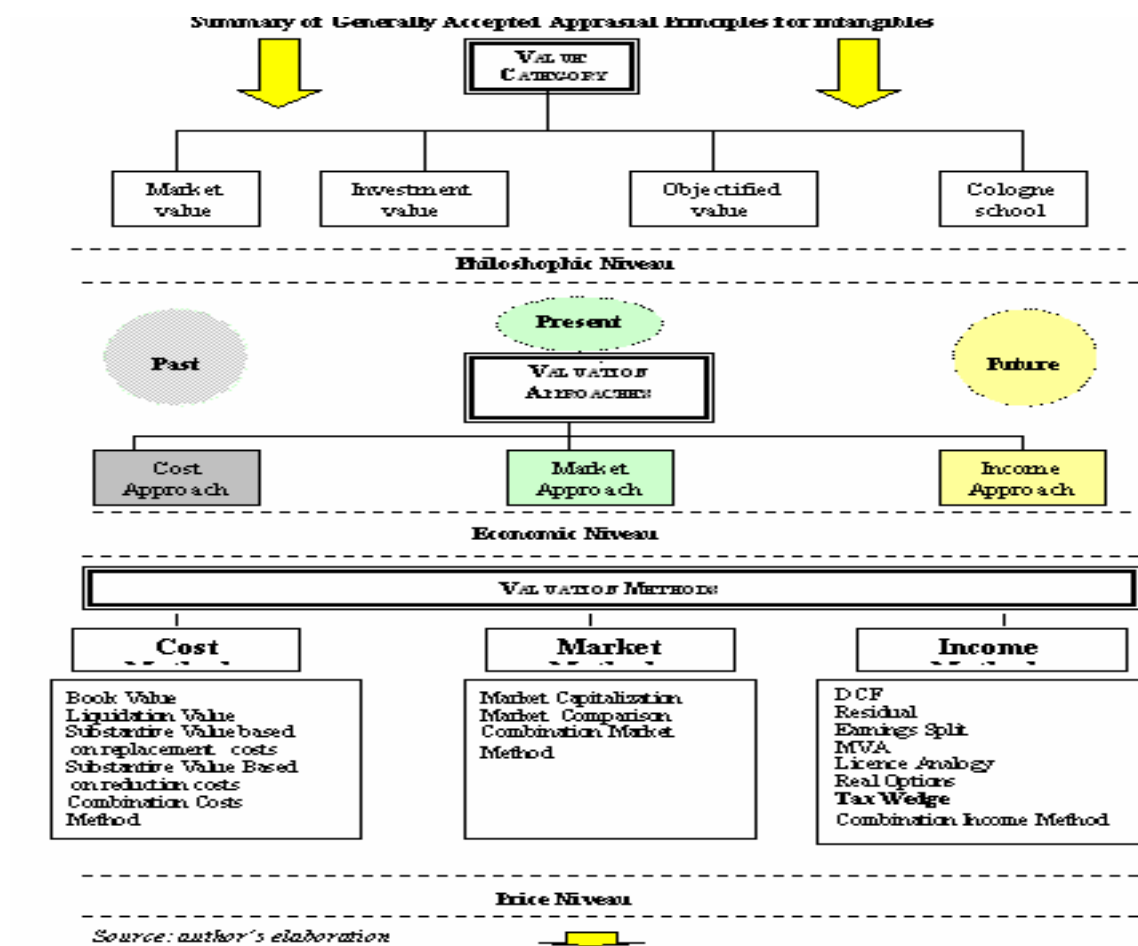


Figure 2: Economics Consequence of the Industrial Property

The figure 2 vide supra shows a general appraisal principle. The scheme describes basic steps in appraisalment and IP price negotiation in three rudimental niveaues. In the case of this

paper we describe theoretical solution of fundamental approaches for valuation method. If presented appraisal model is used incorrectly without basic knowledge, the method does not help has therefore been underrated by the public. Using three niveaues model valuation is being applied more effectively, but opportunity still remains<sup>1</sup>.

### **Intellectual property valuation method for long run tome series**

A basic appraisal concept for wide field defined intangibles comes out from companies operation called mergers and acquisition. Transfer of a business share/company stock is able to bear appealing gains for new-one business holder/stock holder. There are not exists any available database of these operations in market or other type of company values in the Czech Republic.

Traditional concept for explication of the three-digit group of intangibles (vide supra Figure 1) can be articulated following equation:

$$V_i = V_m - V_b \quad (1)$$

V<sub>i</sub>.....Intellectual property company's value

V<sub>m</sub>..... Company's market value

V<sub>b</sub>..... Company's substantive (book) value

By this simple equation we can obtain total value of intellectual property with naked variance market and book values. This ratio is applicable to transition countries quite tough. Valid assumption comes up from expectation of developed functional market with enterprises and effective stock market. Mentioned assumption can not be applied in the Czech Republic.

Our topical concept for long run horizontal and vertical technical analysis is in preference determined for effective management of underlying properties. Our draft appears from German point of views on particular matters. On the contrary of the approach reoffered above all specialists from US and western countries (vide e.g. Damodaran, A. 2006, Smith, G., Parr, R. 2000) the German approach, methods and techniques are based on earnings. In detail, these

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<sup>1</sup> Compare Figure 2. with knowledge management niveaues

methods are based on Net Income Capitalization rather than Discounted Cash Flow<sup>2</sup> methods and techniques. A DCF method, dividend discount methods and market (also called relative) valuation methods needs data from effective market. On the contrary, initial presumption for Net Income Capitalization outgoing from accountancy. Deficiencies of accounting regulations are sufficiently known in general. As well effort of the board of the International Accounting Standards Committee which issues International Financial Reporting Standards (IFRS) to cleanup expression of accounting entries value.

In the concrete, our equation comes up form Version II, how the methods named Marik (2007). This case is further called variance of practitioners. The methods origins are worked out by the Institut der Wirtschaftsprufer, Germany. Net income is derivates particularly from adjusted operating earnings on the accounting background.

$$V_{NI} = \frac{\sum_{t=1}^K q \cdot NI}{\sum_{t=1}^K q} - IAV \quad (2)$$

V<sub>NI</sub>..... Value of a wide define intellectual property (goodwill=trademark=brand)

NI..... Adjusted Net Income

q..... Weights determines interest of net Income behalf specific last year for prediction future adjusted net income

K..... The number of past years included to the computation

IAV..... Substantive value based on book value

The most influential variable in this equation are the weights. They are estimated by statistical methods for each particular enterprise on the basis of last time series. Data are smoothed suited mathematic function. Variance and uncertainty are compensated certainty equivalent of Adjusted Net Income. Possibilities of improvement are in research on systematic samples of enterprises in particular fields. Furthermore, the aim of further research is analysis of time series industrial property changes in portfolio of enterprises.

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<sup>2</sup> Bellow DCF



## Conclusion

Incomes derived from exploitation of intellectual property poses the highest potential of earnings from types of assets in portfolio of enterprises. Managing and measurement of intellectual property value is unconditional for the right investment decision in the age of knowledge economy nowadays. Intellectual property can be expressed by legal rights and/or implicit by relative prevention according to trade code. These examples mean only a few types of intellectual property in tangible expression.

We selected the Net Income Capitalization method with the frame of income approach and the substantive value methods in the frame of cost approach for creation of author's economic model. In fine we conclude by the draft of an additional research on the basis of present results. On the basis of the model we going to observe time series and changes in intellectual property value during the transition period because this is requirement of future business success.

In fine, knowledge management represents one of the latest branches of paradigm shift of economics thoughts. Intellectual property on the basis of our observe concentrate knowledge as a type of intangible assets by means of material record in accounting system of enterprise. The companies in the Czech Republic still does not cultivate this part of property portfolio and does not exist explicit methodology for the intangible property analysis in the long run time period. One of the fundamental premises of management is – to manage only what you are able to qualify. This is the crucial task for the Czech companies, if they want to exploit, to manage and make use of value creation potential concealed in the intellectual property.

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