The Ambiguous Relationship of Leadership and Intellectual Capital: Understanding how Intellectual Capital is Developed

Claudia Müller and Margit Raich
University of Innsbruck, Austria
claudia.mueller@uibk.ac.at
margit.raich@uibk.ac.at

Abstract: Intellectual Management deals with these interactions between all resources, tangible and intangible to create maximum value. Leadership plays an important role when turning knowledge within an organization into Intellectual Capital. Therefore it is of major interest to consider and evaluate the relationship as well as possible synergies between Intellectual Capital and Leadership to improve organizational processes and performance.

Keywords: Knowledge, Intellectual Management, Leadership, Organizational Processes, Measurement

1. Introduction

Within the last decade two major key words have influenced the scientific and practical discussion in management – *Leadership* and *Knowledge Management*. Reflecting upon these two topics considering aspects of their relationship, synergy and interference it is definitely not possible to start a holistic discussion but one will have to concentrate on specific aspects of interest.

This article therefore aims at showing the relevance of Leadership for the creation and retaining of Intellectual Capital. It will put a spotlight both on Leadership and Knowledge Management, especially Intellectual Capital. The last decade saw the introduction of these major keywords - Leadership and Knowledge Management - and consequently was dominated by a more or less thoroughly carried out discussion and evaluation. Both management areas have gained broad acknowledgement caused by the fact that enterprises permanently face changing business conditions.

Conducting a survey within appropriate literature and magazines only a vanishing small number of articles which have Leadership and Knowledge Management or Intellectual Capital explicitly as a topic can be found. One of the reasons for this development might be that even "a priori" one is convinced that everybody is aware of the relation and the synergies. Furthermore the concentration on one of these "new" topics may cause a lack of

time of getting familiar with both management approaches on an equal level. Therefore this important synthesis of new areas in management is hardly carried out.

The paper starts with a short definition of Knowledge Management, Intellectual Capital and Leadership to be able to start a meaningful discussion on these topics. In a second step one case study deals with the importance of Leadership as well as its effects to the organization (e.g. processes, structures, cultures). The description of Leadership based on interviews of leaders and followers in each organization. It allows gaining an insight into their running processes and helps to identify activities that create or destruct value. However to show this influence can not be the end of the story. The second part of the paper tries to give a short insight on current approaches of Intellectual Capital measurement and evaluates their suitability to connect Intellectual Capital and its measurement to Leadership. It has to be of major interests for every leader to know how he can contribute with his capability of Leadership to retain and even create Intellectual Capital within the enterprise.

2. Background

2.1 Knowledge and Intellectual Capital

Knowledge and its management have become major issues of discussion in management as well as in research in the course of the late eighties and nineties. As

a consequence also Intellectual Capital and Intellectual Capital Management attracted managers' and researchers' attention. However one may not get these terms mixed up, they are obviously different - but yet similar in meaning - and therefore often used in synonymous ways. *Knowledge (KN)* can be characterized as information in context, together with an understanding of how to use it. Examples would include knowledge about drainage in a street, derived from looking at a schematic and understanding how the placement of houses may or may not affect drainage (Mayo 2001, Stewart 1997).

Intellectual Capital (IC) which represents the main output of all efforts and steps taken within KN as a central figure can be defined as intellectual material – knowledge, information, intellectual property and experience – merely everything that can be used to create wealth and value. It can be called the collective brainpower you find in our enterprises. It is hard to identify and harder still to deploy effectively. But once you have found and exploited it, you win (Stewart 1997). *IC* is to be defined as the non-financial and non physical resources used by and within an enterprise, it is knowledge which can be converted into profits (Sullivan 1999).

It has become obvious that the real value of knowledge-oriented companies cannot be determined by only traditional accounting methods. The worth of an Intel or Microsoft lies *not* in bricks or mortar or even in inventories, but in another, intangible kind of assets namely Intellectual Capital (Edvinsson/Malone 1997).

According to research conducted by the Swedish insurance and financial services enterprise Skandia Intellectual Capital can be divided into two major components - Human Capital and Structural Capital (Edvinsson/Malone 1997). A more detailed classification is shown in Figure 1.

Human Capital can be defined as the combined knowledge, skill innovativeness and ability of the enterprise's individual employees to meet the task at hand. It also includes the enterprise's values, culture and philosophy. Due to this tight connection to the individual human capital cannot be owned by the enterprise.
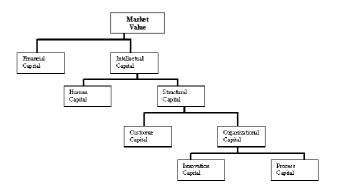

Figure 1: Skandia market value

Contrary to this *Structural Capital* can be owned and even traded by the enterprise. The hardware, software, organizational structures, patents, trademark – in one word everything which is left at the office when the employees go home is accounted for structural capital. It furthermore includes customer capital – the relationship developed with key customers (Stewart 1997).

The development of Intellectual Capital has to be seen as one of the main consequences of successful knowledge management. For companies which decide to use the tool KM the question of Intellectual Capital and its management must arise. Looking at companies nowadays one will recognize that knowledge management itself is widely spread - however it is often reduced to providing them with new information technologies. But each and every employee's access to the enterprise's knowledge does not guarantee that he or she applies it in a suitable and successful manner to finally turn it into Intellectual Capital.

2.2 Leadership

People bring in their input and services to create value. In this context Leadership becomes important because it should nurture and develop this personal human capital (Mayo 2001).Leadership is seen as an element influencing all process levels, in fact the way of carrying out processes in an organization. It is the cornerstone for the achievement of objectives and affects the working atmosphere, the way of

cooperation, the exchange of knowledge and the delegation of responsibility and competences. According to Newman and Chaharbaghi (2000) Leadership has to fulfill a matter of fact which lies in a certain logic: Leadership presupposes inferiors. Leadership applies to the participants in the context of leader-follower relationships. In this case Leadership should be based on a two-way mutual interaction. These relations between the subjects are fostered both historically and culturally. "The focus of leadership is not the individual, but in the patterned sequential behaviour of leaders and constituents who form an interactional system" (Fairhurst 2001:383).

Apart from the great number of studies and definitions of Leadership "several elements can be identified as central to the phenomena of Leadership" (Northouse 1997: 3-4):

- *Leadership is a process and involves influence*
  Leadership is a social influence process in things getting done with people.

- *Leadership occurs within a group*
  Leaders are able to realize their vision with the help of their teams. Leaders have to motivate and inspire them in producing first-rate performance.

- *Leadership involves goal attainment*
  Teams try to achieve the desired results. Leadership is required because someone has to set the direction and point the way.

Most definitions of Leadership refer to the process whereby people influence other people in order to reach certain organizational and/or individual goals. In this context it is not only required to develop visions, to create values and to observe a direction as a leader but it is also important that the leader keeps a role model for their followers.

In this connection a particular role is also attributed to the senior managers, because their decisions and actions form the organization as whole. The senior managers are e.g. responsible for the implementation of management systems regarding the definition and establishment of visions, strategies, business policies, organizational structures, teams, measurement and communication systems etc. to guarantee the long-term

success of the enterprise. Especially the senior managers are a key component for the employee satisfaction and their commitments. Finally good Leadership creates a higher rate of trust and integrity which will end in a better financial performance (Pfau/Kay 2002).

3. Leadership and Intellectual Capital

So far the basics of both Leadership and Knowledge Management and in addition to this Intellectual Capital have been described. Even at first sight one will recognize one evident similarity. Each concept is targeted at the value of the business. Knowledge Management aims at establishing and distributing knowledge within the enterprise and how it can attribute to the business's value. Leadership attributes to creating value by focusing on the customer, by introducing innovation and taking risks and finally by delivering results for the customers and shareholders (Kaplan/Norton 2004).

Based on this similarity one is interested in the question in how far these two concepts interfere, how they can profit from each other and which questions are still due to a satisfying answer.

One should have recognized by now that there is a good potential in this relationship as far a synergies are concerned. Those who are interested in the rise and fall of firms will have no doubt that high quality Leadership is an organization's major asset. Poor Leadership not only affects things like low morale, absenteeism, and attrition, but might also give rise to complacency, failure to respond to markets and customers, poor strategic choices and major other undesired effects. Share values usually respond noticeably when key leaders leave or join organizations, so this is measurable in real shareholder value (Mayo 2001).

Leadership itself represents a powerful intangible asset; however what is especially important about it, is the fact that it has also a strong influence and impact on other intangible assets. Leadership at first sight is part of the human capital an enterprise holds, but when Leadership is understood as a process to develop Leadership it becomes also part of other Intellectual Capital (e.g.

structural or process capital). Therefore it is useful to analyze Leadership in the context of a firm, because it turns one's attention to the interaction of human being, interactions of people and the organization itself. It is this aspect and the interest in it which definitely led to the following case study which is now going to be described.

3.1 Case study

The main emphasis of the study is to point out the Leadership reality in one enterprise based on the answers of the involved persons. The objective is to gain new insights and a better understanding of the examined situations and processes. 16 people with and without Leadership responsibility were interviewed about the Leadership behavior in the organization in summer 2003. The interviewees from different structural levels were asked open questions about the tasks of their departments, their individual activities, the ways of collaboration and Leadership. In this context people talked about their experiences, meanings as well as their opinions. The average interviewing time covered about 30 to 50 minutes. The interviews were recorded. In the next step the texts were analyzed with the qualitative method GABEK® (© Josef Zelger).

3.1.1 The GABEK method

GABEK (Ganzheitliche Bewältigung von Komplexität) is a tool to analyze textual qualitative data. It is based on the theory of "Wahrnehmungs"gestalten"" (perceptive appearances) by Stumpf (1939), which has been transferred to a theory of linguistic „gestalten", designed by Zelger (1999). According to Zelger it is necessary to structure the experiences, knowledge and expressed perceptions of participants which allow a comprehensive view of individual aspects of the particular situation investigated. The process of analyzing data is carried out by developing of a rule-based network of data which takes both syntax and semantics into account (Zelger 1999). The analysis of the unstructured qualitative data is supported by the computer implementation *WinRelan* (Windows Relations Analysis). GABEK allows a transparent organization of knowledge based on the natural language processing of individual statements. The knowledge of the members of the organization is collected and systematized

by different procedures. The following remarks refer to the explanation of one central analysis step, the design building process of „gestalten" that allows a hierarchical order to be built up, which represents the relevant themes in an organization (e.g. Leadership).

A linguistic "gestalt" is a relationship between statements. A linguistic "gestalt" is a text group of 3 up to 9 sentences, which are closely linked by key words. It is a complex linguistic entity built by a certain number of sentences which clearly differ from other sentences building another entity. At the same time those are tightly connected. Each text group can be felt as a meaningful unit.
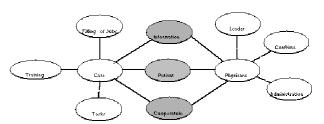

Figure 2: Example for connections of two sentences to a formal structure

In a formal structure sentences are presented as quantity of lexical expressions. The connections between the sentences derive at least from one expression which they all have in common. By the support of the Software *WinRelan* most closely related statements could be emphasized. Figure 2 shows two sentences that are connected by the key concept "Patient", "Information" and "Cooperation". In the group each sentence has to contain at least three concepts, which also occur in other sentences of the same group. The process is carried out as long as the syntactic, semantic and pragmatic rules are complied with. As a result of the gestalt-building process, the *„gestalten" tree* is developed, which is presented in Figure 4. The gestalt-building process is done again on the next levels. As a result we get summaries of summaries, first hyper-"gestalten"and in the next step hyper-hyper-"gestalten".

In a next step cause/effect relations are presented to identify the connections of Leadership and Intellectual Capital. Cause/effect relations are the results of experiences over time or of discussions of people. On the basis of the coding of

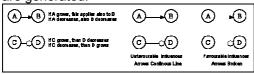causal relations causal network graphics are generated.

Figure 3: Captures

The causal coding is made on the basis of a square matrix, in which the key terms contained in a record sheet serve as line and column designations. If in the text a causal opinion is assumed, then the assumed influence is entered in the line of the influence variable and the column of the influenced variables as "+" or as "–", according to whether the influence of the variable in the line leads to an increase or decreased of the influenced variable in the column." (Zelger and Oberpranacher, 2002:48:49) The captions in Figure 3 should help to elucidate the causal net graphics. The variables influenced are represented as arrows: favourable influences are represented as arrows with broken lines; unfavourable influences as arrows with continuous lines.

3.1.2 The case: A medium-sized enterprise

The enterprise is an internationally-acting, medium-sized enterprise in Austria. For more than 30 years the organization has noted a continuous growth in the enterprise size as well as in the sales and market shares. The founder of the enterprise still plays a decisive role; he is CEO of the whole organization, the holding. The enterprise produces its own products and distributes other goods of the same industry. It was situated and still rests in a dynamic market which is characterized by changes and competition. The increasing stress of competition and the changing consumer behaviour was the reason for the sale of one business unit and involved the lay-off of a quarter of the crew. At the same time a new international holding structure was built up. Because of new competences and technologies new business units were created. Since 2002 the enterprise has experienced rapid growth in the market share because of these new business units.

Figure 4 shows the „gestalten" tree based on the interviews of the 16 people. Based on the „gestalten" 12 hyper-"gestalten"

were formed: "*Familiar Enterprise*", "*Motivation*", "*Coherence*", "*Career*", "*Spin-Off Business Unit*", "*Employee Satisfaction*", "*Market Attractiveness*", "*Leadership Barriers*", "*Transparency*", "*Entrepreneurship*", "*Give Direction*" and "*Changes*". From these hyper-"gestalten" 5 hyper-hyper-"gestalten", the "*Corporate Culture*", "*Issues*", "*Corporate Attractiveness*", "*Leadership*" and "*Future Oriented Management*" were constructed. Also in this case the hyper-"gestalten" are collected into higher order to hyper-hyper-"gestalten" applying the same rules again.

As an example for the description of this case the hyper-hyper-gestalt "*Corporate Culture*" is used. The summary reads as follows:

> *The corporate philosophy is that only satisfied organization members of staff are able to perform services and to contribute to the success of the enterprise. This philosophy is stamped by the founder and is seen in the existing culture.*

In the next step, the hyper-gestalt "*Familiar Enterprise*" is summarized as follows:

> *Because of the familiar situation the staff gets the feeling of not standing alone. At any time support is provided, which is not always the case in larger enterprises. The people feel comfortable with that situation.*

The hyper-gestalt "*Familiar Enterprise*" is the result of different „gestalten" (one example is presented):

> *"Non-Hierarchic-Thinking": There is no classical hierarchical thinking in the meaning of traditional organizational structures. There is a flat hierarchy. This fact is seen as a positive factor for the communication and motivation of the employees. Thus a climate of straightforwardness is created.*

In the case of the hyper-hypergestalt "*Corporate Culture*" we still find other topics that are relevant from the acting participants' point of view. This can be presented by the hypergestalt "*Motivation*. Since the employees strongly identify

themselves with the products, products themselves represent a substantial motivation factor. The innovative and new *"Products"* meet the spirit of young people. Another topic is *"Training".* Every member has the possibility to enhance personally in the enterprise. They are able to attend courses and get access to other incentives. But the initiative must derive from the employees. If someone decides for training he will get the necessary support in the organization. Finally the *"Freedom"* plays an important role in the enterprise. The *"Freedom"* of leaders and employees carrying out their activities is appreciated because they have the chance to form the organization.

In this enterprise also *"Leadership Barriers"* could be identified*.* The *"Stress"* of the leaders derives from the huge workload they face, that means that leaders have less time for their followers. Furthermore the "gestalt" *"Strained Situation"* - characterized by the spin-off of the business unit- makes leadership more complicated. Large changes or new situations stress the relations between leaders and followers. Another leadership problem is the *"Lack of Time"* since it causes necessary delegation of work to followers, which as a consequence might complicate the relationship "leader – follower"*.*

In Figure 4 we also find „gestalten" that are listed below without any link to other levels in the „gestalten" tree (e.g. *Bellwether, Activitites* etc.). In these cases the rules couldn't be fulfilled on the higher level. Those „gestalten" are seen as gentle signals; they are not that important from the interviewees' point of view but shouldn't be ignored in the analysis of processes because they can eventually provide an informative basis for a certain business process.

At the beginning it was mentioned that human capital refers to the combined knowledge, skill innovativeness and ability of the enterprise's individual employees to meet the task at hand. It also includes the values, culture and philosophy of an organization. In the "gestalten" tree the influence of Leadership on different intellectual capital variables is identified. The chosen causal net graphics try to give an overview about the causes and the effects between different variables. The

topics of the graphics were used from the "gestalten" tree to clarify the interconnections. The graphics identify the impact Leadership has on other factors of Intellectual Capital in the sense of positive and negative impacts. In this case the starting point of the analysis is the senior manager, because of its mentioned relevance for the enterprise in general.
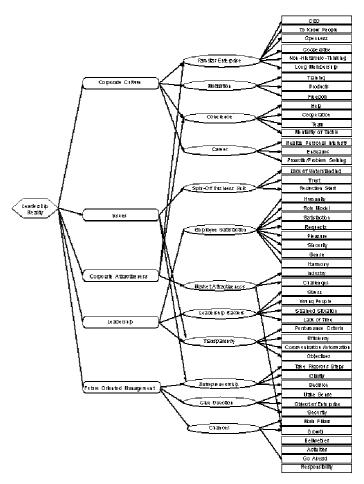

Figure 4: The „gestalten" Tree – The Medium-Sized Enterprise

The attractiveness of the enterprise as well as the positive attitude concerning the work in the organization is affected substantially by the senior manager. He is that person who gives orientation and motivates the staff in the case of problems and frustration. If he leaves the door open it will be always possible for the people to contact the senior manager any time. The more employees the less the senior manager is able to be all ears for everyone. Finally an open door works as a symbol and points out the culture of open communication in the organization. The presence of the senior manager allows supporting this communication process

and the way how other leaders should behave. The more the leaders exemplify, support and respect others, try to live in harmony, the more successful they will be in this enterprise. The way how leadership is practiced (in the sense of interaction) influences how the people appreciate its activity, how they engage, how they are motivated etc. and in general influences the existing leadership culture as a whole.
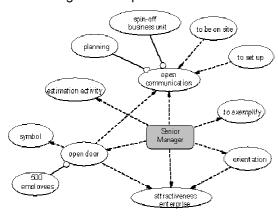

Figure 5: Senior manager

Figure 6 presents the positive influence of the team work in the execution of workings like the observance of delivery dates, but also the positive effects on the working atmosphere. The familiarity supports the collaboration and the culture to support each other if necessary. The so-called feeling of "we" nurtures the advancement of team affiliation. The security leads to an increasing collaboration, communication barriers effect negatively the collaboration. Egoistic behavior will be reduced by using the same language as well as by having personal relationships, which help to get along with each other.

Figure 6: Collaboration

If someone completes his/her work, works overtime and is hard-working, all members of the organization have the opportunity for career developments in the enterprise. Employees will be supported by the senior manager and other leaders if they want to visit courses. In this case they have the chance to improve their
positions.

In Figure 7 a successful leader takes great care of the well being of the employees and tries to solve problem in the team. In this connection the communication in form of talking and asking plays an important role. The leader tries to exemplify the own ideals, but at the same time a successful leader should be able to take rigorous steps in the organization if required. There will be situations when the leader has to be diplomatic, at the same time leaders shouldn't inhibit new ideas and actions by the employees. Finally approaching employees as well as encouraging collaboration are variables attributed to successful leadership.
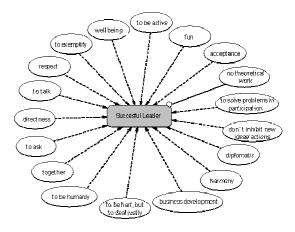

Figure 7: Successful Leader

What can we learn from the „gestalten" trees and the causal net graphics regarding to the relationship of Leadership and Intellectual Capital? For the organization – out of the interviews done with leaders and followers – the Leadership map represents the specific situation concerning Leadership. Out of the specific context of the case study a certain reality construction of the Leadership world emerges. The results serve as the base for the identification of strengths and weaknesses of Leadership processes in an organization. They also show how Leadership influences different kinds of organizational variables and running processes and how it is connected with other variables in the organization.

3.2 Intellectual capital measurement

The following discussion on the current state-of-the-art and on present problems of reporting on Intellectual Assets (Intellectual Capital) will address

researchers as well as practitioners. Most of these approaches concentrate on measuring IC - the information gained however mainly addresses only one or a restricted number of stakeholders. The measurement of IC should rather aim at satisfying all stakeholders' information needs - therefore it should integrate external as well as internal issues.

First of all this effort demands a distinctive knowledge about possible interest groups and their needs for information. The discussion about IC was started due to the fact that traditional financial reports could not cope with presenting intangible assets and as a consequence book value and market value diverge. For handling this discrepancy all efforts concentrated on trying to present a statement of intangible assets for present and future shareholders. However knowledge about intangible assets is especially crucial for an enterprise's development – the internal purpose of reporting about IC has to be put in the centre of interest since current internal accounting systems cannot provide this information. When speaking about an enterprise's development one should furthermore acknowledge the dynamics of intangible assets and therefore take them into account when establishing an integrative management information system for intangibles.

Basically four different categories of Intellectual Capital measurement methodologies can hereby be distinguished which all have their pros and cons (Roos 2002):

- *Direct Intellectual Capital Methods* Focusing on measuring Intellectual Capital directly.

- *Market Capitalization Methods* Deriving the value of Intellectual Capital from market capitalization.

- *Return on Assets Methods* Using the ratio of the ROA to define the value of Intellectual Capital.

- *Scoreboard Methods* Trying to determine the value of Intellectual Capital by considering the different aspects of an enterprise's strategy.

3.3 Measuring leadership

When taking a narrower look at the mentioned methodologies one unfortunately will find that some proposed

metrics do not meet the requirements of good metrics. Many of them lack creativity in terms of determining the size and the growth of the organization and do not necessarily address the types of knowledge that produce the most value-added benefits for the organization. Various assumptions (some perhaps erroneous) may be made in terms of current used metrics. For instance, assuming the average age of an employee to be young (let us say 30) may not necessarily mean that the organization is a vitally strong, innovative enterprise (Liebowitz/Suen 2000).

Nevertheless all the efforts which were taken to solve the issue of measuring Intellectual Capital did attribute a lot to the discipline's development. Those approaches represent the result of the first phase of the "intangibles movement". But there is still a steep way ahead. The inertness and commoditization of most intangibles have important implications for the future development. They do imply that corporate value creation depends critically on the organizational infrastructure of the enterprise, on the business processes and the systems that transform lifeless things – tangible and intangible – to the bundles of assets which are generating cash-flows and conferring competitive positions. Such organizational infrastructure, when operating effectively, is the major intangible of the firm. Therefore it seems to be clear what has to follow at this point.

After a phase of intangibles work, which was primarily directed at the documentation and awareness-creation within companies, now the focus has to be laid on organizational infrastructure, the intangible that counts most and about which little is known. Organizational infrastructure (that is managerial processes, organizational blueprints, incentive and control (corporate governance) systems) when operating successfully enables management to generate excess product out of invested resources (Lev 2003).

In this context the measurement of Leadership becomes important. Leadership, being one intangible asset itself, takes hereby an ambiguous position. The importance of the intense influence of Leadership in the development of other components of the Intellectual Capital is

beyond dispute as the case study has shown us. In this context it is important to turn one's attention to the analysis in the interplay of Leadership and other variables. The Human Capital includes beside individual competences also the enterprise's values, culture and philosophy. In the medium-sized enterprise the corporate culture is influenced by the value system of the senior manager (e.g. open communication, loose contact between the leaders and followers, no formalism, to be active, equal career opportunities for all employees etc.). For this reason a strong culture in the sense of uniform patterns of orientation has been identified. The whole company is owned by the family of the senior manager. Here also the personal beliefs and values are reflected in the behaviours of the actors. For example all leaders and followers have to sort things out in the storehouses in the case of problems concerning delivery dates.

The "gestalten" tree in Figure 4 presents a good overview of the variety of the so-called ambiguous dependances of Leadership and other variables of the Intangible Capital. At the same time we see in Figure 7 the definition of a successful leader in the medium-sized company. In this connection the question arises concerning possible measurement methods of Intangible Capital, in this case especially of Leadership. How we can measure Leadership?

Leadership differ from other routine activities, because of its complexity. There exist different kind of competence models, which try to examine the required competences and skills of leaders for a successful leadership (Conger and Benjamin 1999). Boyatzis (1998) takes in his model the external conditions, the demand on the function of the leader and finally the individual competences into consideration. A leader will be ineffective if one or two of the components don't accord. Fact is that leadership is the result of a number of behaviours. There will be the danger – especially in the model building process – to miss important variables. If there is the assumption that leadership success is connected with the company success there will be the question of the relation of those two variables. The definition of leadership success differs from enterprise to enterprise because of their individual focus (e.g. on profit, growth, ROI, liquidity, stability, environment protection, motivation, self-actualization of the employees, safeguarding of jobs etc.). The item of successful leadership can be filled with different contents. Different contents also means to compose a different main focus concerning the ideal measurement methods of Intangible Capital.

4. Implications for further research

Current approaches of Intellectual Capital measurement recognize Leadership more or less to certain extent but mostly implicitly. Methods which belong to the market capitalization category or the return on assets category do not really succeed whereas direct Intellectual Capital methods or the scorecard methods definitely acknowledge the importance of Leadership. However those approaches mostly put the focus on Leadership as a competency model and not as a concept of the Leadership process model. The logical implication must be, that the development within the Intellectual Capital measurement should also try to emphasize more specifically on the relationship between the different components of IC. The fact that this relationship represents a crucial success factor for any organizational structure meets the challenge which IC measurement is facing. Leadership as a strategic input is reflected and measured by its operational outputs (e.g. processes, products). Consequently what should be tried is to link the different measures' relationship to give a realistic and holistic picture of the Intellectual Capital involved.

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