INTELLECTUAL CAPITAL REPORTING: CHALLENGE OF THE KNOWLEDGE ECONOMY

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ABSTRACT

In the current dynamically changing discontinuous economy, there is an increasing need for new measures to guide future actions of business models developed to anticipate the surprise. Accordingly, researches on Intellectual Capital measurement and reporting continue gathering interest of corporate sectors. Although conglomerates have started applications of new methods, the challenge to integrate results with the generally accepted accounting systems continues. The key argument of this article is that most current methods of Intellectual Capital measurement are pertinent to the industrial world of the current era. The discussion surfaces the key strengths and weaknesses of the applied methods and how they need to be afresh given the changing assumptions about business strategy and competitive business environment. Based on this discussion a new perspective is proposed for the ever growing distribution companies. For the purpose of this article, the focus of discussion is on measurement rather than reporting. However, most of the arguments, observations and results obtained from a pilot study are relevant to both academics and practitioners in the accounting field.

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1. INTRODUCTION

Considerable effort is given in defining non-financial assets. Initial definitions for intellectual capital were vague expressions like “an individual’s accumulated knowledge and know how which becomes the source of innovation and regeneration” or “ability, skill and expertise embedded in human brain”. Some managers claimed intellectual capital to be “knowledge that exists in an organization that can be used as a differential advantage” after having studied works of Leif Edvinsson (1997), the first Intellectual Capital Manager, Nick Bontis (1998a), the first PhD on Intellectual Capital and Huber Saint-Onge (1998), this study is based on the following definition:

   Intellectual Capital is the knowledge converted to value, which is attributable to all factors that can not be reported in balance sheets and that establish the basis of trust for the company’s future consisting of structural capital, human capital and relational capital.

Goodwill, a concept of industrial age also included intangible assets but there is a big difference with the fact that goodwill is treated as an asset with a limited life and so can be amortized. The knowledge considered in intellectual capital however, can go into service products like software which can be used innumerable times without any loss of value (Chatzkel, 2002).

The objective of this study is to emphasise the importance of Intellectual Capital measurement and discuss a new perspective on the subject. Evolution of studies on Intellectual Capital Measurement based on a time line will be presented in section 2, before its definition is given mathematically. Section 3 will consist of presentation of various models of Intellectual Capital Measurement. Section 4 will be reserved to introduce a new perspective through a case study performed in a Turkish electricity distribution company. Finally, the paper will be concluded by summarising the results achieved and recommendations for further studies.
2. EVOLUTION OF INTELLECTUAL CAPITAL MEASUREMENT

Intellectual capital has existed since the beginning of human history. Cave men put carving on stones either to transmit skill and knowledge of hunting or to inform others about the geographical positions. It was the ability to grow and leverage knowledge that differentiated Cro-Magnon hunters from Neanderthals who did not have these skills. Yet, the first evidence of codification of tacit knowledge was in Frederick Taylor’s Scientific Management in 1911, where tacit skills were converted into objective rules and formulas (Ataman, 2002). Barnard extended scientific management by also considering “behavioural knowledge” in management processes in 1938. As the two perspectives merged, a new synthesis of knowledge management was born that laid the foundation of organization theory. In 1945 Simon was influenced by the development of the computer and cognitive science and recognized the nature of decision making while performing administrative functions (Bontis, 2002).

John Kenneth Galbraith introduced the expression “intellectual capital” in 1956, when he complimented Michael Kalecki in his letter by the following sentence (Larson, 1998):

“I wonder if you realize how much those of us in the world around have owed to the intellectual capital you have provided over these past decades”

Hiroyoku Itami was the first management strategist to study the value of intangible assets in Japanese companies but his work was not translated into English until 1987 (Amidon, 1999). Brian Hall, specialist of human resources, has wrote about human value in 1981 presenting several instruments for measuring and describing the value sets of individuals and corporations (Sullivan, 2000). Karl Erik Sveiby has pioneered the Swedish move by his first book, the Know-How Company in 1986 (Sveiby, 2001) where he mentioned the human capital. David Teece, in a paper about the value of technology, introduced “innovation reporting” (Sullivan, 2000). Sveiby was continuing his works supporting accounting by “invisible balance sheet” in the mean time. His book on invisible assets, “Kunskapsledning” (Knowledge Management) was published in 1990. The definition offered was in translation “A way of seeing the world and the organisation, thus an understanding of Knowledge Management as a perspective on organisation theory inspired by epistemology” (Sveiby, 2001).
It is Tom Stewart who made the concept popular and brought it on the table of managers with his article in Fortune “Brain Power- How Intellectual Capital is Becoming America’s Most Valuable Asset” (Stewart, 1991). This is why intellectual capital terminology is owned by the human resources immediately, as if it uses a single resource. In 1992 Skandia, a Swedish giant in bank-assurance, announced the first Intellectual Capital Management position where Leif Edvinsson is assigned and the first business report on Intellectual Capital was published by a Swedish company in 1994 (Skandia, 1994).

Another important mile-stone in the evolution of Intellectual Capital Management is Mill Valley Group meeting, which is recorded as the first meeting on the subject. In 1994 there were about twelve companies practicing Intellectual Capital measurements. Leif Edvinsson, Gordon Petrash and Patrick Sullivan gathered “Intellectual Capital Managers” of first eight practitioner companies, which included Skandia, Dow Chemicals and Canadian International Bank of Commerce. This was the first meeting of Mill Valley Group, where they discussed and agreed on a common definition of Intellectual Capital as “knowledge that can be converted into profit” (Harrison, Sullivan, 2000). They defined the resources of measurement as human and coded knowledge.

The first performance measurement tool is created by Kaplan and Norton in 1992 named as “Balance Scorecard” trying to measure the innovation power and learning capability of a company (Kaplan, Norton, 1992). Nobel Prize winning economist James Tobin contributed to Intellectual Capital measurement in 1994 by defining “Tobin’s Q”, a ratio representing the relation of market value and replacement value of a company (Bontis, 2002).

It was Hubert Saint-Onge who was the father of “Customer Capital” by exercises he implemented in Canadian International Bank of Commerce in 1995 (Saint-Onge, 1996) and he created the “customer scorecard”.

Baruch Lev with the “Intangibles Research Project” started academic research at New York University in 1996 and Nick Bontis was the first to hold Ph.D. degree in Intellectual Capital Management in 1996 (Amidon, 2003). He is the one who initiated measuring Intellectual Capital with Likert questionnaires.
There is an explosion of academic studies and surveys of financial measurement from 1996 onwards. The books of Tom Stewart (Stewart, 1997) and Leif Edvinsson (Edvinsson, Malone, 1997) are followed by academic researches of Stivers group (Stivers, Covin, Green, Smalt, 1998), Roos (Roos, Roos, 1998), Dragonetti and Bontis. Dedicated conferences, corporate initiatives and internet sites are expanded. Bontis, Dragonetti, Jacobsen and Roos evaluate and contrast intellectual capital work with “Economic Value Added-EVA” concept (Bontis, Dragonetti, Jacobsen, Roos, 1999). In 1998 “Tango”, the first simulation tool is generated by Sveiby for valuing and managing intellectual capital resources which has become a widely used managerial tool (Bontis, Girardi, 1998b). In country wide intellectual capital Sweden and Denmark were the leaders (Danish Trade, 1997).

From 1999 onwards, International organisations like OECD, European Community and World Bank have included intellectual capital reporting and measurement in their research agenda. These reports encouraged the governmental research and investments in intellectual capital management. OECD Report summarises influence of intellectual capital in development (OECD, 1999). European Community emphasises the importance of Intellectual Capital for the future of Europe and suggests that the gap to respond the needs should be covered by brain transfers from other parts of the world (Szentirmai, Monnet, 2001). Country reports on intellectual richness are submitted to present national knowledge assets, as in the examples of Canada (Miller et al., 1999) and Australia (Guthrie, Petty, 2000). Croatia has already measured national index as well (Pulic, 2003).

In 2000, Karl Erik Sveiby broadened the definition of the concept as evaluation of knowledge dealing inside and outside of a firm (Sveiby, 2000). Different definitions and factors are summarised by Intellectual Capital Sweden as a concept that includes all factors critical to an organisation’s future success, that are not shown in the traditional balance sheet (Intellectual Capital Sweden, 2002). This definition includes factorising intellectual capital as organisational, human and relational capital. Finally, World Bank is running a project to measure intellectual capital in Turkey (Aubert, 2003).
Recognition of value created by intellectual capital is almost succeeded. Current challenge is to establish a legitimate undertaking and gathering evidence in support of its further development. Most recent studies are focused on either reporting of intangible assets (Zambon, 2003) or reporting on the measurement and management differences of intangibles in vertical industries (Pike, Roos, 2002) as seen in Intellectual Capital Timeline given in Figure 1.

Intellectual capital is not only a definition but also an operating framework for organising resources which evolved to satisfy the demand of practitioners. Today it is a common agreement of theoreticians that intellectual capital consists of three resources: human capital, structural capital and relational capital as seen in Figure 2.
Human Capital (hc) is sum of all individual capabilities composed of managers (M) and employees (E). It is the cumulative knowledge, skills and experience of an organisation’s employees and managers. As Esther Dyson claims, success of an organisation in twenty-first century relies on not only learning the net, but also being a fanatic about hiring and training good people (Dyson, 1997). Some examples for employees can be motivation, loyalty, incentives and for managers, management methods and leadership.

Structural Capital (sc) is the embodiment, empowerment and supportive infrastructure of human capital. It is also the organisational capacity including technology (IT) used to transmit and store intellectual material. It is the product of a company’s organisational capital, innovation and process capital (P). Leif Edvinsson defines it as a resource to support efficiency, to reduce risk and improve renewal power separating business strategies under “Business Recepies” (Edvinsson, 2002). Licences, in-house developed software, process documentation are generally accepted as part of this resource (IP).

**Figure 2** Definition of Intellectual Capital
Relational Capital (rc) consists of all of the market channels (B), customer and supplier (C) relations as well as an understanding of governmental and industry association impacts (N). It is obvious that organisations can not any more operate as an island but they create a holonom with the integration of all internal and external relations. “Understanding what customers want in a product or service better than anyone else is what makes someone a business leader” says Nick Bontis (Bontis, Nikitopoulos, 2001). Business network with partners, brand names, customer loyalty are some examples to be considered in relational capital.

Hubert Saint-Onge considers the business value to be in the intersection of all three resources (Saint-Onge, 1996). Nick Bontis indicates “trust” and “culture” as drivers of both human and relational capital (Bontis, 2002).

3. MODELS OF INTELLECTUAL CAPITAL MEASUREMENT

Measurement of intellectual capital is not taken serious in performance evaluations for a while because of the lack of indicators that could be referenced. Surveys on the subject are approved and supported as a result of increasing cost of research and development and tendency of financial companies to accept intellectual capital reporting. Studies evolve in two directions: (1) macro economic level for calculating national indicators as a percentage of GNP and (2) organisational performance to support business strategies. This study is concerned with organisational intellectual capital and therefore macro level measurements will be left for the economists to survey. Companies measuring intellectual capital as part of their performance evaluation are expected to consider both internal and external reporting. In this section available measuring methods will be presented by differentiating the external evaluation and internal evaluation. Both are needed and dependent on the data collection culture of the company. Since this study is focused on strategic evaluation and leverage of Intellectual Capital, external evaluations will be summarised but six internal evaluation methods will be detailed in bibliographical order Figure 3.
3.1. External Evaluation Methods

Non-monetary methods are used to determine the existence of intellectual capital and mainly applied on publicly traded companies. Auditing firms or consultants benefit these methods during mergers and acquisitions. Whereas, executive managers benefit these metrics in process of deciding investments and can use results to increase the market value of the company.
*Market to Book Values* by Paul Strassman: This is undoubtedly one of the most widely used methods for measuring and evaluating Intellectual Capital because of its mathematical simplicity. The calculation derives from the ratio between market value (calculated based on stock market share price) and the company’s net accounting value (taken from the annual financial statements) (Strassman, 1998). The basic assumption is that the intangible asset value is equal to the difference between the company’s market value and its accounting value. It is criticised for not taking macroeconomic conditions into account but it is used in benchmarks. Critics suggest that it may influence investors' perceptions about the company’s potential to generate profits in the future although numerator and denominator are calculated from two different sources. It is currently applied in Turkish production companies (Çelikkol, Yıldız, 2003).

*Tobin’s Q* by James Tobin (1981): “Q” is the ratio between the company’s market value and the replacement cost of its intangible assets. When Q is positive it means that replacement cost is less than the company’s market value where the company benefits monopoly profits or a higher-than-average return on investment. The higher the Q ratio, the higher the value of the company’s Intellectual Capital since, as mentioned, the latter is determined by the difference between the company’s market value and fixed assets, including long-term financial assets. A high Q ratio is observed more frequently in organisations with a high degree of knowledge and technology as well as in companies where human capital is the source of most of the knowledge (Dzinkowski, 2000). Both numerators are calculated using company specific figures which may be influenced by unpredicted fluctuations in addition to difficulty of finding replacement value.

*Calculated Intangible Value* (CIV) by Thomas Stewart: Works on Returns on Assets (ROA) by comparing industrial average with the company specific ROA. If company ROA is more than the industry average then income tax is applied on excess return. Net Present Value is calculated to see the future opportunities of the company (Stewart, 1997). This method is easy to apply with stock market values. The only critic it receives is that it trusts the company to apply a reliable accounting system. A sample application is realised in Turkey (İşeri, Kayakutlu, 2003).

### 3.2. Internal Evaluation Methods

These require detailed work in the company while performing some gap analysis and reengineering.
Balance Scorecard by Kaplan and Norton

Balance Scorecard system proposed by Kaplan in 1992 continues to be the most influential method with practitioners today. The basic idea behind the Balanced Scorecard is to place alongside traditional financial variables several non-financial operating measures. The traditional variables provide information on the past performance of organisation, while the non-financial variables can measure new issues like customer satisfaction, internal processes, innovative activities, and improvements made by the company. Kaplan and Norton suggest that combination of financial and operating measures allow managers to obtain a balanced view of the company’s performance through information about unrelated areas with a view to optimise decision-making process (Kaplan, Norton, 1996). The Balanced Scorecard is a method for measuring organisational performance based on four perspectives: Customer Perspective (How do the customers see the company?); Internal Perspective (What must be excelled at?); Innovation and Learning Perspective (Does improvement in value creation continue?) and, Financial Perspective (How is view of the shareholders about the company?).

There are two basic advantages to the Balanced Scorecard approach. First, the method shows in one report all the different and seemingly unrelated factors of the company’s competitive program. Second, the Balanced Scorecard helps a company to avoid making sub-optimal use of its resources since the method induces top management to consider all the measures together. The method lets managers know whether an improvement in one area is achieved at the expense of another, and so it helps them understand the interrelationship among the several areas of strategic interest. Balance Scorecard has one disadvantage of avoiding organisational decentralisation and distribution of decision responsibility.
The Skandia Navigator™ by Edvinsson and Malone This is a model defined by Leif Edvinsson after he has been assigned as Intellectual Capital Manager of Skandia, Swedish bank-assurance enterprise. The Skandia Model resembles a house allowing managers and auditors navigate among all Intellectual Capital Resources. Human Capital is the centre of focus protected by the symbolic walls of Customer Focus and Process Focus. The roof is Financial Focus representing past performances but the basis of the house is Innovation and Development Focus through which the company earns its future.

After having measured all the indices Organisational Intellectual Capital is calculated as organisation’s efficiency coefficient in the use of intellectual capital multiplied by the optimal value of Intellectual Capital expressed in monetary terms. Efficiency coefficient is expected to be closer to unity the more efficient the company is in employing its Intellectual Capital. Scandia’s success made Scandia Navigator the most well known model. However, because of its high costs this model is not applied in developing countries yet.

The Intangible Assets Monitor by Sveiby: It is developed by Karl Erik Sveiby in 1997. It is a diagram model showing a high amount of indicators in a simplified format. Sveiby claims that indicators can change according to characteristics of industry, company culture and competitive variables. It is down into three large typical categories: external structure, internal structure, and staff skills. In terms of intangible assets analysis, three general areas of interest correspond to each of the three categories: innovation and growth; efficiency; and stability.

Celemi, a Swedish consulting company has been reporting with this method since 1997 (Sveiby, 2001). Sveiby represents his model essentially as a strategic tool for knowledge-focused strategy change. Best advantage of the model is that it can easily be related to information systems even by using spread sheets. Many companies adopted “Tango” (simulation of the model by Sveiby) for intellectual capital statements (Bontis, 1998b). It is mainly criticised because it ignores financial values.

Inclusive Valuation Methodology by M’Pherson Model is developed in 1999 by Philip K. M’Pherson. IVM creates a hierarchy of values where values are rated by 1 and 0. Combinatorial arithmetic is used to create computer modelling. Sensitivity analysis are performed by the support of software generated (M’Pherson, Pike, 2001). Three
dimension value surfaces are created to combine financial and intangible values. “Leeson Factor” is its unique tool.

M’Pherson claims it creates a modelling environment for strategic decision making and complexity management. It is also useful to manage Cost-Benefit Analysis and Life-Cycle Cost Effectiveness design projects. Monetary equivalent of value contributions accruing from intangible assets are established. This model is preferred by research intensive business. Complexity of calculations and interpretation of results are difficult to use for non-engineers. Companies which benefit this model suggest that it gives impressive results.

**Human Capital ROI by Bontis.** Nick Bontis was the first researcher to use Likert questionnaires to measure Intellectual Capital from 1996 onwards (Amidon, 2003). He considered human capital composed of genetic inheritance, education, experience and attitudes of individuals about life and business, as the primary component of Intellectual Capital in his studies (Bontis, 1998a, 1998b, 1999).

The concept is Human Capital effectiveness can be measured as a result of Human Capital Valuation. Descriptive statistics and quantitative metrics are applied and correlation matrices are driven for all components to result in finding what yields Human Capital ROI (Bontis, 2003).

**Human Capital Effectiveness** is the dependent component where regression equation is solved by hypothesis testing. The construct is composed of four measures: Revenue Factor, Expense Factor, Income Factor and Human Capital ROI. **Human Capital Valuation** shows the value of human capital in organizations. It is comprised of five measures: Compensation Revenue Factor, Compensation Expense Factor, Compensation Factor, Executive Compensation Factor, and Supervisory Compensation Factor. **Human Capital Investment** shows what organisation invests in employees. It is a function of three measures: Development Rate, Training Investment, and Training Cost Factor. **Human Capital Depletion** is suffering for organisations mainly through turnover. Three measures are considered: Voluntary Turnover, Involuntary Turnover and Total Separation Rate.

**The Value Chain Scoreboard by Baruch Lev:** The Value Chain Scoreboard is an analytical model developed by Baruch Lev in 2001, based on Porter’s Value Chain. Purpose of this model is to identify the individual components in the company’s
processes and operations in order to isolate the impact they have on the value creation process; to identify the ways in which knowledge is developed, integrated, transformed, and employed (Lev, 2001). Lev explains that the purpose of such an information system is to make it easier to develop two major positive forces that are the main features of decision-making processes both on capital markets and in organisations: “democratisation”, the increasing participation of individuals in capital markets; and “outsourcing” of operations, growing need to involve outside agents in day-to-day operations based on increasing need of network organisation. Target is to allow individual investors analyse management reporting instead of relying on auditors or consultants.

Lev believes that “business chain” generally begins with the discovery of new ideas for products, services, or processes. Ideas can have three different sources: internal innovation processes, outside sources, network relationships.

The second stage in the Value Chain Scoreboard is crucial to attaining the technological feasibility for the products, services, or processes under development, where ideas are turned into products, or the service or process is implemented. Implementation requires multiple operations, but they can be grouped into three general categories: the establishment of forms of intellectual property, technological feasibility study, and finally, Internet use operations. This latter category significantly reduces the risks associated with product and service development.

The final stage is commercialisation includes the marketing of the product or service developed in the second stage, with the aim of generating sales revenues. When sales revenues exceed total costs, including investment costs, then the company creates value. Marketing leads to actions affecting customers, performance indicators ensuring good results, and finally, information on the company’s future prospects. This latter category is the only component that provides forward-looking information (e.g. share growth).

As may be observed, the focus in the Value Chain Scoreboard is on innovation processes and intangible assets. The indicators in the Value Chain Scoreboard are designed to be used in decision-making and for investor disclosure at different levels of detail. According to Lev, these indicators must be expressed in a quantitative form that can be standardised. This method is yet in theory not in practice.

4. A NEW PERSPECTIVE

It is observed that there are two generalities common to all the existing models:
1. Tangible and intangible assets have to be evaluated together.
2. Tangible values are determined inside the borders of the enterprise, whereas, intangibles are expected to include both internal and relational values.

The fact that there is no single success model that can be applied to all the companies in the knowledge economy, drives the need for a dynamic model that will be customised after investigating the realities of the company and the facts surrounding it. After performing a strategic analysis variables that are specific to an individual company can be found. A dynamic model of five steps is defined below.

1. **What will be measured?** All the existing models define certain arguments that are supposed to be measured which are not to be relevant for every company. Both internal and external values to be measured can be found through a survey performed on all the role players. Relevant questions asked to managers in Likert evaluation, employees, shareholders, customers, suppliers, business partners and even the competitors can be integrated by a Factor analysis which will detect the company specific measures. Loading on Varimax rotation through the following equation will give the factors to be measured.

\[
X_1 = v_{i1}F_1^* + v_{i2}F_2^* + v_{i3}F_3^* + \ldots + v_{im}F_m^* + e_i
\]

so that

\[
F^* = (V'V)^{-1}V'X
\]

in matrix form

**Equation 1**

This will enable the company to focus on the factors specific to its

2. **How to measure?** Each factor has its own character. Some can be measured in monetary values, others in ratios. The common unit of measure for all is to link to the strategic goals. Survey on the strategic goals of shareholders, managers and employees can be joined on a strategic map defined in terms of the factors which will result in the functions that define the measures. An example of relating factors in a strategic map is shown in the case study. This will define functions as in Equation 2.
This is a simple equation solved easily by using multivariate regression.

3. *Which importance?* Strategic goals influence the enterprise in the long term with different weights. Validation of the goals in different management levels of the enterprise will also determine the weight of each goal, $W_j$, which can be calculated through statistical variance analysis.

4. *How to value?* Any goal can be valued in monetary terms. The value of $G_i$ is to be given in dollars even if it is a quality value like increase in customer satisfaction. Satisfied customer increases his purchasing value which is easily converted to monetary values. Yet to find the value of each factor, Goal programming is applied so that the factors which integrate the values to minimize the discrepancies in goals will be calculated. Priorities of goals are to be determined objectively which means that they should be validated through the role players.

\[
G_j = \beta_0 + \beta_1 F_1^* + \beta_2 F_2^* + \beta_3 F_3^* + \ldots + \beta_m F_m^*
\]

**Equation 2**

Minimise \( Z = \sum_{j=1}^{n} W_j (d_j^+ + d_j^-) \)

subject to

\[
\beta_0 + \beta_1 F_1^* + \beta_2 F_2^* + \beta_3 F_3^* + \ldots + \beta_m F_m^* - d_j^+ + d_j^- = G_j
\]

\[
\beta_i \geq 0 \quad \text{for} \quad i = 0, \ldots, m
\]

\[
d_j^+ \geq 0 \quad \text{for} \quad j = 1, \ldots, n
\]

\[
d_j^- \geq 0 \quad \text{for} \quad j = 1, \ldots, n
\]

**Equation 3**
As a result of solving this problem each factor is assigned a monetary value ready for reporting.

5. **When to value?** Annual measurement will give a basis for the budget and the financial evaluation. It is suggested that measurement is reviewed in terms of accounting periods. If accounting period is accepted to be three months the calculation will be reviewed and run in three months.

6. **How to Report?** It is an intangible reporting that is a supplement to the accounting system. Though everything can be summarized in the balance sheet, since recording the factor values conflict with the classical accounting books, it is kept as a different report.

5. **CASE STUDY: Kayseri and Vicinity Electricity Distribution A.Ş.**

The above measurement is run as a pilot study in Kayseri and Vicinity Electricity Distribution A.Ş. after a survey on 25 Enterprise Customers, 17 suppliers, 14 managers, 3 Shareholders and 125 employees. The results are as follows:

1. Resources will be evaluated in five classes as structural capital, human capital, financial capital and residential capital.
2. They have noticed that unhappy employees were higher than expected.
3. When budget is reviewed with the new vision it is observed that share of structural capital is 36%, relational capital 26%, 29% in financial capital, 6% in human capital and 3% in residential capital. This clarified reasons of irritation in the work force.
4. Relating intellectual capital with financial rating has convinced management to apply a mathematical model to allocate investments. Hence, KCETAŞ was eager to apply results of business model defined in this study.

5. They were already planning to implement human performance system when this study has started but, a method independent of managers was difficult to find. Having seen the results of scoring in business model, they have decided to use scoring system in performance evaluation.

6. Competitors urging to enter the region through the study period helped them understand importance of residential capital as well as relational capital. Hence, they started looking for new projects.

7. Organisational issues were real surprise for the General Manager, who has just been in the company for last two years. Having seen the results of goal
survey, managers are focused on lean organisation for which they requested a work-shop training to be held in April 2004.

7. CONCLUSION

Fastest improving component of knowledge management, Intellectual Capital Measurement is becoming the performance tool as knowledge economy evolves. Since standardised success models are no more applicable, intellectual capital measures are studied to create a framework for company specific business models in vertical industries.

Energy distribution industry is instigating these new concepts as a follower, for the reason that heavy competition is brazened out only after privatisation. In developing countries privatisation has very recently started or yet to start. Biggest challenge of these companies is to circumvent hesitations of guaranteed subscribers without degradation to service quality, whilst complying with the new market regulations. Reconstruction of a balanced business ground relies on relations, structure and work force as well as finance.

The proposed model has the following differentiating features:

1. Regional requirements are combined with the industrial requirements and the solution is designed accordingly.
2. Promotion of a statistical tool for survey evaluation guarantees the objectivity of the model.
3. Linear Goal Programming model is used to combine values of different parties and financial measurement of the company which facilitates comprehension and application of the model.
4. A clear path is drawn for strategic decisions and it is demonstrated visually.
5. Results of the model are easy and fast to apply, as it is currently done in Kayseri ve Civan Elektrik Dağıtım A.Ş.

This study and pilot application in the case company have proven once more that Accounting is not a science of data recording any more. Globalisation has enforced more analysis and synthesis on the data which are historical so that the future of the company can be predicted more realistically. If legislation on the subject is also updated, accounting will certainly be enriched by additional reports. The classical recording of people as cost will delay the improvement of any company.

8. REFERENCES


