INTELLECTUAL CAPITAL MANAGEMENT AWARENESS AND LEVEL IN MANUFACTURING INDUSTRY IN ANKARA

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─Abstract─
During the recent years the Intellectual Capital Management (ICM) literature has produced tens of models to support the various ICM activities, such as identification, measurement, valuation, acquisition and reporting Intellectual capital. However, the practice of applying these models seems to be a fairly new issue in many countries and organizations. Turkey is one of those countries who has just introduced with ICM. This study is a questionnaire based one that tries to find the awareness and level of ICM in Ankara region among manufacturing enterprises. Although awareness level is not sufficient there are some enterprises that have comprehensive framework in ICM.

Key Words: *Intellectual Capital Management (ICM), Awareness, Manufacturing industry*
JEL Classification: M19

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1. INTRODUCTION

In recent years, there are lots of technological and knowledge progress. Intellectual capital is one of the results of this progress. After 1990's this area has an exponentially increasing popularity. Unfortunately, in Turkey, we have introduced Intellectual Capital Management very late and many companies don't have any idea about this discipline and its benefits.

In this paper, we made a survey for 30 manufacturing companies and measure their Intellectual Capital Management awareness and level. We asked 14 questions for them and try to find different productions areas for a homogeny survey. Also we SPSS and we made Reliability test for determine results are reliable or not. After that we made Regression analyse to find relations.

2. LITERATURE

Michael Harvey et al. (1997) wrote about the role intangible assets play in the core competencies of businesses and how these assets can be protected from losing value over time. The authors recommended for implicit agenda for the protection of intangible assets that provide the company with its core competence. They offer a framework for accomplishing this agenda. J. Liebowitz et al. (1999) discussed the measurement and valuation of knowledge, especially pertaining to human capital, is an area of great interest. Also the authors proposed a valuation model for human capital.

In 2001, Joe Peppard et al. wrote a paper that added to current knowledge of relationship value by testing a hypothesized model of the intangible part of the value that is manifested in buyer–seller relationships and by developing a set of scales to measure the hypothesized dimensions. The authors focused, which synthesize a conceptual framework from the intellectual capital literature, are on business-to-business situations and on the value of the relationship to the seller, rather than to the buyer. B. Kitts et al. (2001) worked about the case of telecommunications software company APiON to illustrate how the company developed and implemented a growth strategy that allowed it to realize a dramatic increase in shareholder value through proactively focusing on harnessing its intellectual capital resources.

Roger Baxter et al. (2004) had developed a method for organizing company knowledge into a highly interpretable form of a 3D map. According to the map, managers can query the surrounding landscape, view the company's trajectory across the landscape, and calculate what parameters need to be changed to reach new locations. Authors talk about; Intellectual Capital mapping provides a novel knowledge management tool for understanding, managing, and representing a company's intangible knowledge assets. Dongwook Han et al. (2004) proposed a decision model based on the analysis of the conceptual framework of the qualitative characteristics of financial information and an examination of information quality of the information system. The application of the analytic hierarchy process makes it possible to extract weights for setting the priority among criteria in the mobile telecommunications industry. Karl-Heinz Leitner et al. (2004) wrote their experiences about implementation of Intellectual Capital into research organisations in Europe. They represent about their four years' experience and wrote about specifics, lessons and perspectives in intellectual capital.

Claire Eckstein (2004) reviewed existing and recently using accounting standards relating to intangibles. The author found some inconsistencies in the measurement and reporting of Intangibles, and some evidence is provided that suggests that recognition of intellectual Capital is in accordance with existing accounting principles. In 2005 Anna Watson et al. explored the implications of franchising on the intellectual capital development and knowledge management for retail organisations, given that for retail organisations asset intangibility is a particular feature. According to author, this breaks new ground in engaging currently topical concepts from leading-edge debates in the management literature to examine franchising in service sector businesses. Graeme Martin et al. (2005) explored the potential for human resources professionals to draw on the branding literature as a new performance discourse, which increasingly is believed by organizations to be a key area of interest for their members. In 2006, M.R. Martinez-Torres (2006) made an experiment to understand the use of intellectual capital in a knowledge-based organization and created a theoretical model. The model interconnects the intellectual capital components as a way of understanding the intellectual wealth of a learning organization.

In 2009, Ken McPhail talked about three topics in his paper. Firstly, drew on a broad review of the accounting literature to explore how intellectual capital is being defined and constructed within that literature. Secondly, provided a post structural analysis of the way ethical knowledge emerged within the intellectual capital statements of an early innovator in Intellectual Capital reporting. Finally, author gave tentatively hints towards the moral and civic potential of alternative conceptualizations of ethical knowledge networks at the margins of the knowledge economy and considers some areas for further research in this regard.

Ya-Hui Hsu et al. (2009) used interviews and the survey method to discuss the relationships governing intellectual capital, organizational learning capability and new product development performance. According the authors, results are based on empirical data from Taiwan's integrated circuit design industry, and are generated by the Partial Least Squares method. Results show that human capital and relational capital actually improve new product development performance through organizational learning capability. Wei-Shen Tai et al. (2009) proposed a paper about a suitable model for intellectual capital performance evaluation by combining 2-tuple fuzzy linguistic approach with multiple criteria decision making method. According to authors, based on the proposed model, its feasibility is demonstrated by the result of intellectual capital performance evaluation for a high-technology company in Taiwan.

G. Scott Erickson et al. (2009) worked on research concerning the level of knowledge assets possessed by firms in business oriented vs. consumer-oriented industries. The author's research also covers the level of competitive intelligence activity in these industry groups, estimating the level of interest of competitors in acquiring another firm's knowledge assets. Ilanit Gavious et al. (2009) examined the valuation implications of human capital both for a broad sample of firms and for subsamples of high-technology firms and low-technology firms. According the author's results suggest that the market appears to value compensation expenses not as expenses but as if they serve as a proxy for a human asset that is omitted from the balance sheets. Also their findings are consistent with human capital comprising a more sizable portion of the value of high-technology firms than of low-technology firms.

3. SURVEY RESULTS

In the survey part of our work, we went to 30 manufacturing enterprises in Ankara area and we asked these companies, 14 questions. We used 5 point ratings system in our survey. Then we use SPSS program for analysing our data. First of all, we made a reliability analysis for our data. The value of α = 0,915 which is very good result.

In Ankara, 7 manufacturing companies gave an answer about they are strongly no information, 4 companies have no information, 4 companies are neutral, 8 companies have information and 7 companies have strongly information about ICM. However, only 8 companies think that, they applied ICM.

Then we make a linear regression test. We asked "Do you heard about IC" and are applying IC in your company. The R square value is 0,773. This means there are strong relation between hearing IC and applying IC in manufacture industry in Ankara. Also we checked that the result is significant.

We use linear regression for our data. Our depended value is applying Intellectual capital management and our independed values are; staff turnover, creativity, innovation, keeping talented staff, human resource management strategy, salary and carrier management, learning organisation, customer relationship management, and in-house training. We try to determine and explain our depended value with independed values. The SPSS results are shown in table1.

Table1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.942[a]	.887	.845	.554

The results show us, there is a strong relation between depended and independent values. The R square value is 0.887. This means, the ratio of %88 we can explain our dependent data by using independent data's. Also, in the Annova test the significance value is 0.000 Thus our relation is significant under $p<0.001$ level.

4. CONCLUSION

During the recent years the Intellectual Capital Management literature has produced many of models to support the various Intellectual Capital Management activities, such as identification, measurement, valuation, acquisition and reporting Intellectual capital. However, the practice of applying these models seems to be a fairly new issue in many countries and organizations. Turkey is one of those countries who has just introduced with. In this paper, we made an investigation about Intellectual Capital Level in manufacturing industry in Ankara-Turkey. We made a survey for medium size and big size manufacturing companies. We asked about, were they hearing about Intellectual Capital Management and are they using it in their company. In our survey, there are 14 questions for measuring awareness and level of ICM.

The results shown us, most of companies have an idea about Intellectual Capital Management but only some of companies have comprehensive framework in ICM.

For future works, we can investigate relation between ICM and research-development department and other departments. Also we'll plan to make a survey in other sectors like service sector and mixed sectors in Ankara, and make a general model about Intellectual Capital Management awareness and level in the capital of Turkey.

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