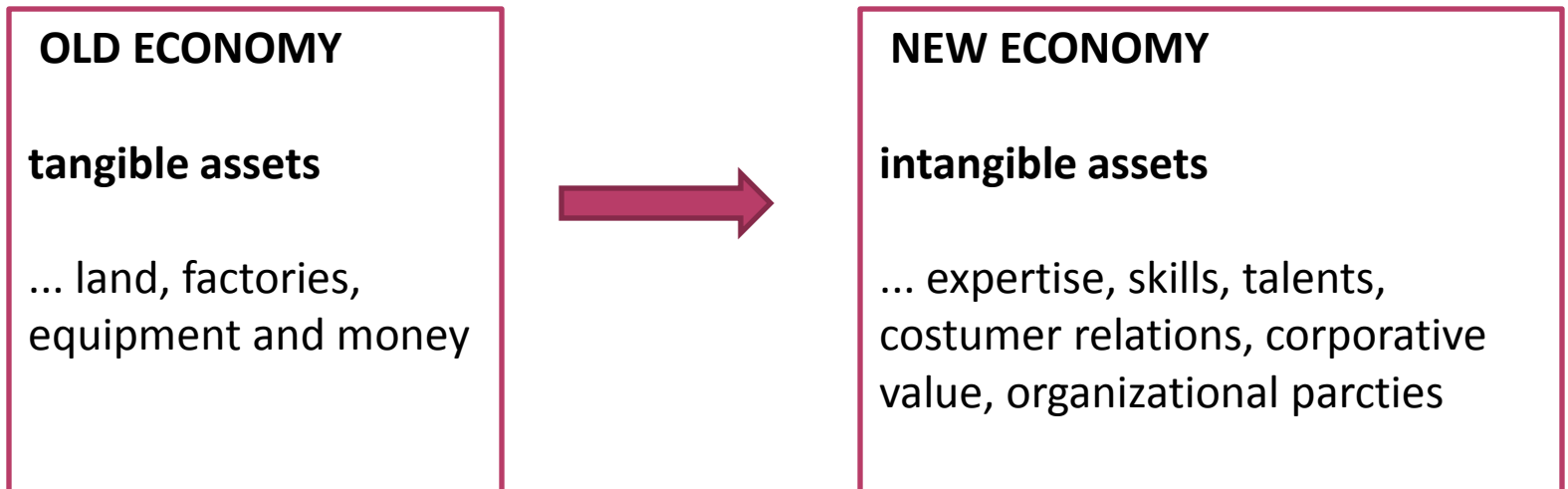# Intellectual capital and Financial Performance of Wood Processing Enterprises in Republic Croatia

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INTRODUCTION

✓ Evolution of economy has caused important changes in activity of companies on the global market.

✓ Nowadays we are observing a growth the importance of intellectual resources as an effective tool for increasing corporate competitiveness. This fact has caused the need to manage companies and to measure their performance in a new way.

OLD ECONOMY	NEW ECONOMY
tangible assets	**intangible assets**
... land, factories, equipment and money	... expertise, skills, talents, costumer relations, corporative value, organizational parcties

INTRODUCTION

✓ These non-tangible resources and the ability to exploit them accordingly form the essence of **intellectual capital** (**IC**) (Bontis, 1996).

✓ The most successful companies tend to have on IC that is 10 or 20 times the value of their material assets (Ross and et al., 2005)

INTRODUCTION

Definitions of intellectual capital

...Intellectual capital is the sum of the collective knowledge, experience, expertise, abilities and skills of the company on how to achieve greater results, provide better services or create other intangible value for companies

...Intellectual capital is the knowledge that exists within the company and which can be used to create a competitive advantage - in other words, it is the sum of everything that all employees know and what sharpens competitive advantage of the company

INTRODUCTION

✓ The basis of the measurement system that would fit the new business environment is the value, so it is logical, and so far the only understandable solution that the business results in the knowledge economy is an **added value**

Added value (VA)

✓ added value is completely objective indicator of business performance as both categories that form it, the output and input, are taken from market relations.

✓ It is simply calculated at all levels

✓ it can be calculated as needed, as well as current business reports: weekly, monthly, quarterly, annually.

It is a measure that indicates how employees and management contribute to the creation of value

INTRODUCTION

VAIC model

- The VAIC model was developed and implemented by Ante Pulić
- It is a calculation of VA, as an indicator of a company's efficient use of IC.
- the basic idea behind this approach lies in determining the contribution of all company resources (human, structural, and physical) to the creation of VA, whichis calculated as:

VA = OUT- IN

HCE =VA/HC

SCE =SC/VA

ICE = HCE + SCE

MATERIALS AND METHODS

✓Empirical research included 32 small wood processing enterprises in Republic of Croatia. According to the 2007 National Classification of Activities, these enterprises fall into categories C16 - wood processing and C31 - furniture production, whose annual financial reports were listed on http://www.biznet.hr/ for a period from 2010 to 2012.

✓To be able to evaluate whether the size of some indicators are satisfactory or not, it is necessary to compare these indicators to specific sizes, which in fact represent a base of comparison.

— Net profit margin (NPM)
— Indicator of return on assets (ROA)
— Indictor of return on equity (ROE)
— The economic indicators

Conceptual model of the research
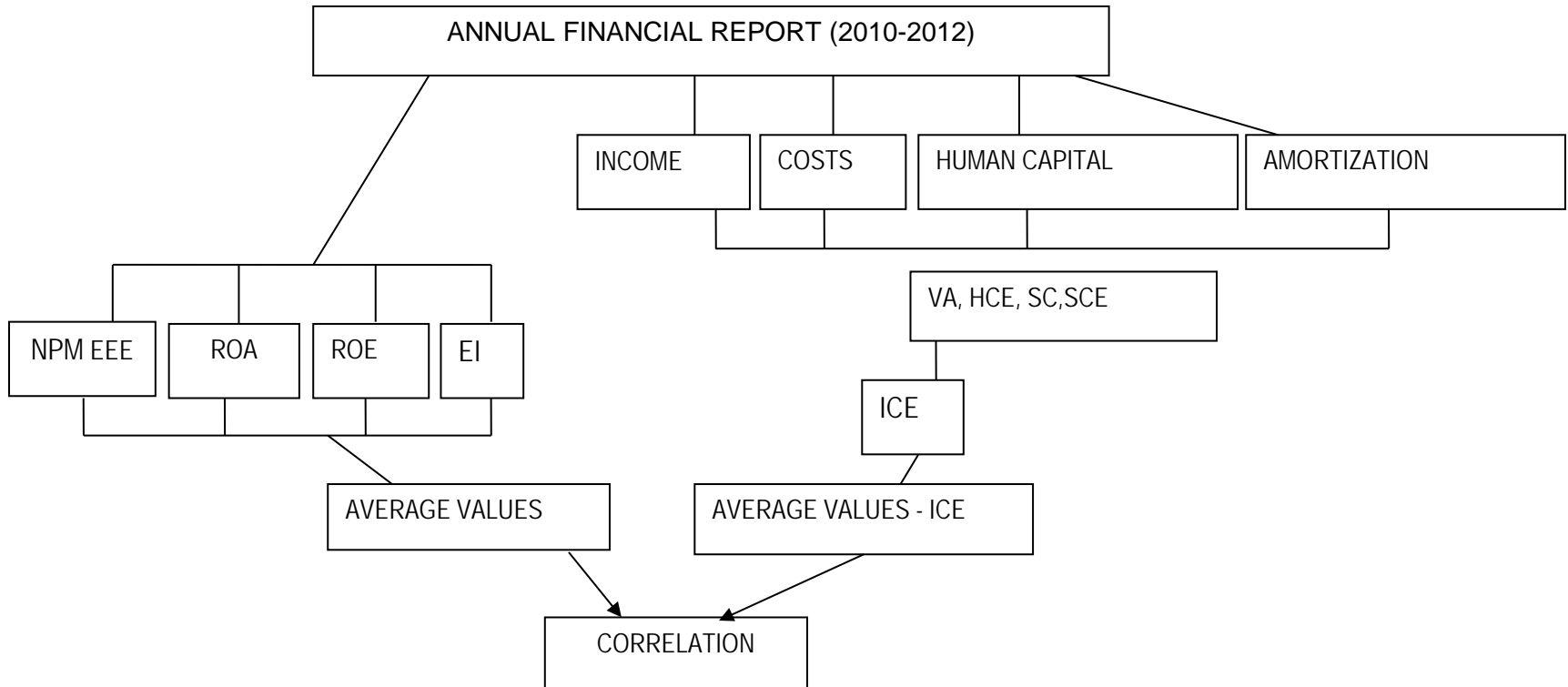
RESULTS

✓Mean values give us an insight into the overall correlation of parameters and their mutual influence on company business.

✓Through the correlation of the mean values of indicators of all companies, as the most important element this paper hypothesis is tested.

✓**H: The efficiency of intellectual capital affects on the profitability of wood processing enterprises in Rebublic Croatia.**
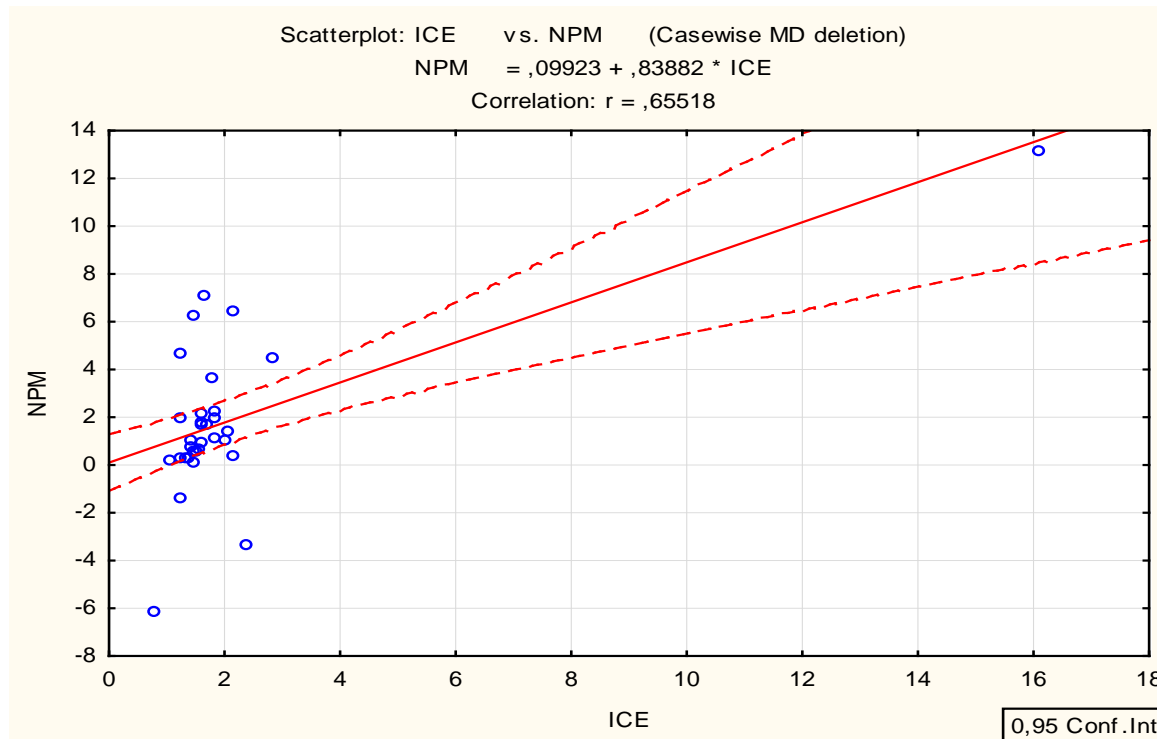
RESULTS

✓The descriptive statistics is shown in Table 1, which includes minimum values, maximum values, values for means for all variables, and standard deviation for each variable. The data refer to the analysed period from 2010 to 2012.

| Variable	Descriptive Statistics							
	Valid N	Mean	Median	Minimum	Maximum	Variance	Std.Dev.	Standard Error
NPM	32	1,8372	1,10275	-6,1546	13,1776	10,9912	3,3153	0,5861
ROA	32	2,9968	1,49479	-4,7745	19,1365	23,6301	4,8611	0,8593
ROE	32	10,1214	5,47256	-13,4755	49,0837	180,3197	13,4283	2,3738
EI	32	1,1518	1,01608	0,7922	5,4526	0,6183	0,7863	0,1390
ICE	32	2,0719	1,58231	0,7971	16,0881	6,7054	2,5895	0,4578

RESULTS

✓Net profit margins (NPM) correlates with ICE and the highest correlation coefficient is 0, 6552. The correlation between the indicators with statistical significance at the 5% (p = 0.05) level and of that intensity is considered to be a strong connection.

Scatterplot: ICE vs. NPM (Casewise MD deletion)
NPM = ,09923 + ,83882 * ICE
Correlation: r = ,65518

RESULTS

✓Correlation coefficient of the average values of ROA and efficiency intellectual capital in the reference period from 2010 to 2012, for 32 companies, amounts to 0.63056; such a correlation is positive and high.

Scatterplot: ICE   vs. ROA   (Casewise MD deletion)
ROA   = ,54434 + 1,1837 * ICE
Correlation: r = ,63056
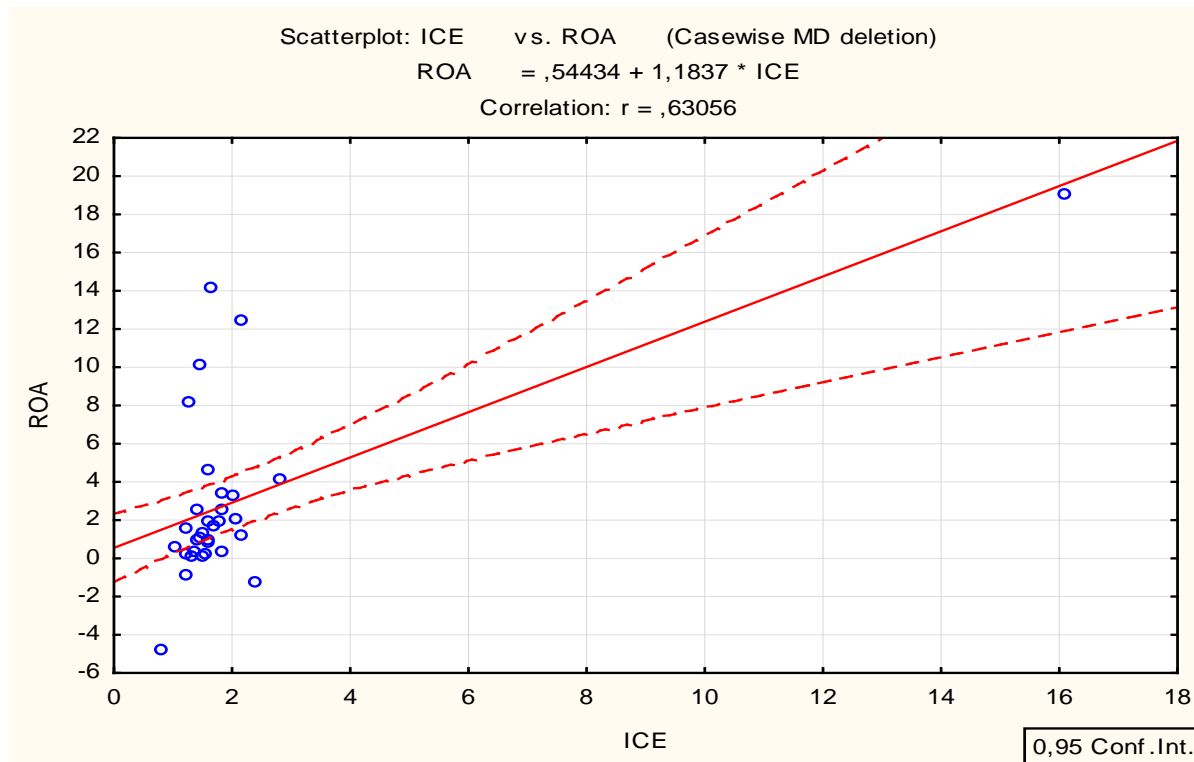
RESULTS

✓Correlation of return on total equity (ROE) and ICE is 0.24765, which is positive and very weak, there of the conclusion is that there is no connection.

Scatterplot: ICE   vs. ROA   (Casewise MD deletion)
ROA   = ,54434 + 1,1837 * ICE
Correlation: r = ,63056
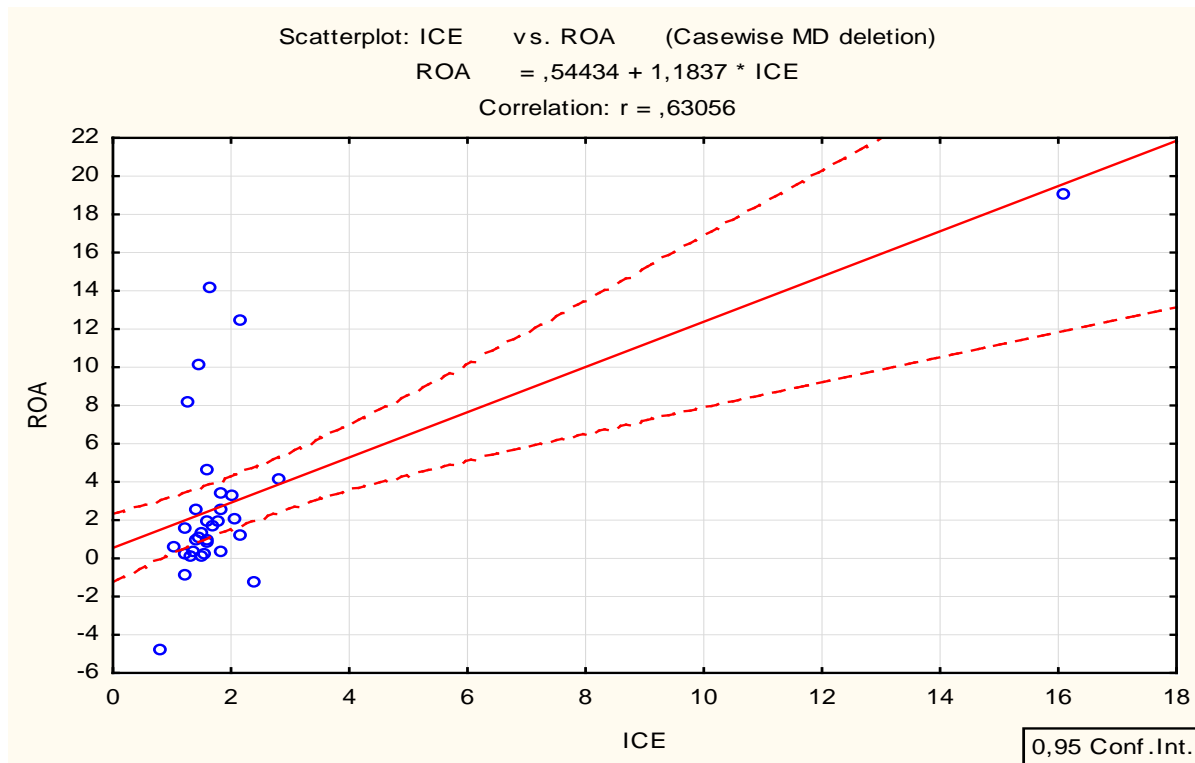
✓Business efficiency correlates with ICE in very low intensity, which is negligible at the level of -0.0541.

CONCLUSION

✓The intellectual capital efficiency and the need for quantifying insufficiently defined concepts introduced us into the sphere of intangible assets to which a numerical value was assigned to in this paper, and thus determine its importance.

✓The study establishes the role and impact of IC efficiency as one of the key resources in creating new values and in company management. In assessing the importance the significance of human capital should not be underestimated. For this reason, this model was chosen, based on the annual financial statements and suitable for a comparative analysis of the enterprises.

✓The profitability of the company is shown through three indicators of profitability, which are considered the most representative.

✓By testing set hypothesis about the impact of the intellectual capital efficiency on the profitability of the company for 32 wood processing enterprises in the Republic of Croatia, the results were obtained, from which we can conclude that the **hypothesis is partially confirmed.** There are connections between variables and they are positive (NPM and ROA), however, depending on the indicator of profitability the intensity varies.

THANK YOU FOR ATTENTION