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Editorial

Dear readers.

That´s a great pleasure for me to introduce you new issue on International Journal of Entrepreneurial Knowledge, which includes the four interesting research papers. In last months we have indicated the increasing interest for publication in our journal from different countries of the world. We are very pleased that we have succeeded in establishing the high quality journal, which covers the different fields of entrepreneurship, which is one of the most developing fields of scientific research. Our journal tries, from its first issue to contribute to the discussion in this field. In present conditions it is very hard to succeed in competition of thousands different research journals all over the world and get attention of the authors.

Current issue includes nine interesting research studies, which I hope, will contribute to the extension of the knowledge in the field of entrepreneurship. I would especially like to thank to our editorial board members, prof. Zelený and prof. Rubinstein, for their comprehensive articles. We have also decided to include interesting paper which focuses on the comparison in two rugby leagues, which in fact doesn´t accurately fit to the journal scope, but brings the untraditional focus on specific sport field.

To conclude, let me state, that we work on increasing quality of the journal, and expect the soon indexing of our journal in SCOPUS database, which could dramatically extend the impact of the journal.

Your Editorial Board

FIRMS' AGGRESSIVENESS AND RESPECTIVE PERFORMANCE:
AN EMPIRICAL STUDY UNDER PAKISTANI SCENERY

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ABSTRACT

The study investigates capital structure of all non-financial listed firms on Pakistan Stock Exchange (PSX) for the period of 2008 to 2014. To test the relation between firm aggressive behavior and its performance, the study uses exponential generalized least square regression by employing control variables. Levin, Hadri and ADF test are used to know the stationarity of data. Furthermore different diagnostic tests like VIF, Weisberg test for heteroskedasticity and Breusch and Pagan Lagrangian multiplier test for random effects are used to check the data normality. Results of the study reveals that financial managers' aggressiveness regarding financial policy is negatively, while aggressiveness regarding investment policy is positively effecting the firm's performance. The study also found that with the passage of time, firms in Pakistan have been devastating their performance. That's why study found negative relation between firms' age and dependent variables.

KEYWORDS

Capital Structure, Firm's Performance, ROI, ROA.

JEL CLASSIFICATION

B26, D04, D22, F65

1.   INTRODUCTION

Financial performance of the firm and its value is greatly affected by the design of its capital structure. The research work of Modigliani (1958) put light on determinants of capital structure and factors that affecting this decision. So the issue regarding working capital management is getting immense consideration after the Modigliani (1958) hypothesis. Various researcher work on this concept to reveal the main idea, which enriches literature in the following forms:
(a) Modigliani (1958) proposes that capital structure design has no relation with firm value
(b) Modigliani (1963) contended that interest expense is beneficial to the firm as it work as tax shield for the firm. So their study recommends high use of leverage in the capital structure.
(c) The point L in Figure 1 postulates the optimal capital structure position. If debt is furthermore boost from point L, financial distress cost increases compare to leverage benefits.

(d) This balanced association will supplementary be changed when taking into consideration the effect of other variables like agency conflicts, informational asymmetry, financial distress etc…

(e) The concluding concern of the study integrates the inclination of management towards financial preference selection (Myers 1984). By doing this, there is not full control in the finance manager hands plus there's sufficient equity balance for firm's robust solvency position.
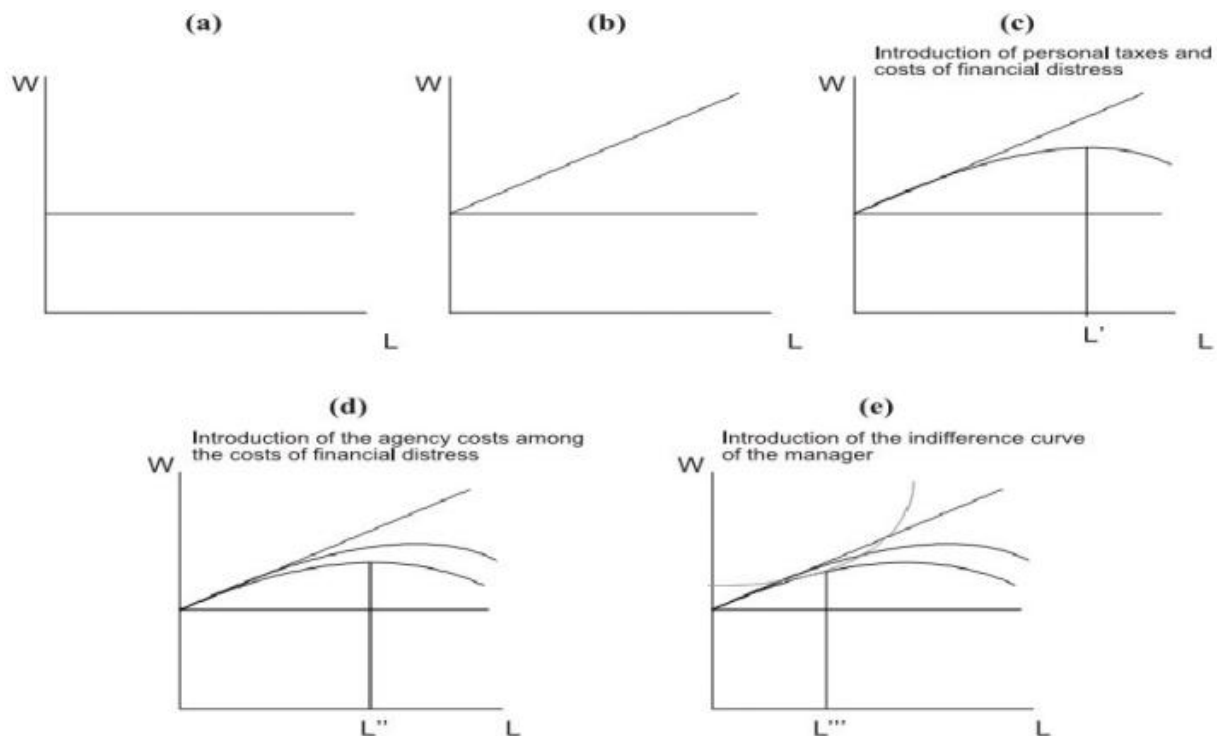
Key: W: firm value; L: leverage; L', L'' and L''': optimal capital structure

Figure 1: taken from La Rocca, (2007)

Previous researches mainly study the working capital and its impact on firm performance (Harris, 1991; Rajan, 1995; Akhtar, 2005; Shah, 2007; Ezeoha, 2008 and Akhtar, 2009). However this study try to identify the manager aggressiveness regarding working capital management and its impact on firm operation in the long and short run.

1.1 Problem statement

From the past few decades, it has been observed from the literature that decisions of finance manager regarding working capital are generally overlooked. The problem structures its shape when finance manager aggressive decision regarding designing capital structure affecting the firm performance. The study attempts to identify such aggressiveness of finance manager while dealing with working capital during the business course.

1.2 Research objectives

The study attempts to analyze the finance managers' aggressiveness regarding handling working capital of the company at corporate level.

1.3 Significance of the study

In Pakistan, there are many factors which play vital role in effecting the firm performance or are uncourageous to the business environment like financial constraints awarded by the government

impoverished infrastructure, political instability, low transparency position etc. Because of noised and inefficient market structure, it is very difficult for the firms (non-financial) listed on PSX to maintained optimum capital structure. In such scenario, the role of finance manager in any organization becomes tough as on one hand, he has to boost up the firm's worth by appreciated the firm's performance. The major intention of the research is to investigate the capital structure design effect on performance of the firm during the period of 2008 to 2014 in Pakistan.

2.   LITERATURE REVIEW

2.1 Conceptual Review

One of the major rationales of fluctuating firm performance is the design selection of capital structure. Major use of leverage yield tax shield but also hoisting insolvency cost distress. So there's a capital structure mix in which tax shield marginal benefit is more than its bankruptcy cost. Harris (1991) contended that capital structure is associated to the balance between bankruptcy gain from both managers and shareholders and insolvency cost. Therefore because of more benefit of highest leverage ratio, it is beneficial to both managers and shareholders. Though literature take too lightly the liquidation overheads of bankruptcy or restructuring, or the united curiosity of shareholders and managers, which direct organizations to employs high leverage ratio than optimal in their capital structure.

2.2 Theoretical Review

2.2.1 Irrelevant and Relevant Theory
Modigliani (1958) postulates that firm's worth is impassive under certain assumptions like efficient market hypothesis, no transaction or impoverishment cost and taxation is irrelevant. It means choice of leverage is extraneous and external and internal finances are faultlessly alternate to each other.

2.2.2 Agency Cost Theory
Berle (1932) contended the relation between principal (shareholders) and agent (manager). This relationship came into notice when one or more principals hire one or more agents to work on their behalf in the company. This phenomenon creates opportunity for the manager to put their interest prioritized to principal's interest.

2.2.3 Pecking Order Theory
Developed by Allen (1993) assert that firm's financing needs decides the level of leverage. The theory postulates that typically companies used their retain earning at first in priority to sponsor their projects. Secondly company call for external debt and finally the alternative of issuing new share and generating equity is exercise to fuel their project engine. The theory is cited by Akhtar (2005), Ezeoha (2008), Rajan (1995), Shah (2007), Harris (1991), and Akhtar (2009) in their research work.

2.3 Empirical Literature

Literature exposes that many researcher work on working capital management but particularly the aggressiveness area is still vague in Pakistan. Gupta and Huefner, (1972); and Gupta (1969) apply variant financial ratios in working capital management among industries. Their study found variation among industry w.r.t. leverage, liquidity, profitability and performance. Johnson (1970) strengthens the previous work by indulging more samples using random effect test. Pinches et al., (1973) categorize different financial ratios using FCA and concluded that they're constant over the longer period.

Various researchers contended that firm capital structure regarding current assets and current liability altered within industry eventually Soenen (1993); Ozkan, (2001); Harford et al., (2005) and Padachi, (2006). The significance of capital structure arrangement especially working capital is analyzed by Filbeck (2005) by considering manager policy of 32 non-financial listed companies in United State. Their study postulates a momentous variation found among industry sooner or later.

Association between conservative and aggressive working capital portion of capital structure is analyzed by Nazir (2009) by taking a total of 263 non-financial listed firms on PSX for the period of 1998 to 2003. Researchers employed LSD and ANOVA test for data analysis. The result shows variant outcomes regarding working capital aggressiveness and conservativeness transversely diverse industries in Pakistan. Furthermore, correlation test corroborated that divergence across industry is significant over 6 years. Researcher found adverse association between firm's profitability and aggressiveness in working capital management policies (AIP and AFP).

The study on hand updates the literature regarding aggressiveness in working capital impact on profitability of the company measured by ROI and ROA.

3.   METHODOLOGIES

3.1 Universe of the study

The study is conducted for the rationale to provide a complete review about the relationship of the capital Structure design and its effect on firm performance. For this purpose, the study uses all non-financial listed companies domiciled at Pakistan Stock Exchange as universe of the study for the period of 2008 to 2014. A total of 527 firms are analyzed at first stage which is slimed to 267 firms after meeting the sample selection criterion which makes a total of 1869 observations. The whole population is taken as a census for the analysis.

3.2 Sampling Design

At first stage, 527 non-financial listed firms on PSX are selected whose financial secondary data is available for the study period i.e. 2008-2014. Following firms are excluded from the sample:
1.   Banks, investment companies, and insurance companies as their capital structure are different from the non-financial sector firms, which possibly distort our analysis.
2.   Incomplete data for study period
3.   Firms those are suspended or delisted during the study period.
4.   Firms having standard deviation more than 3 at any variable (dependent or independent)

Study Sample Selection

Total indexed firms at first stage for the study period	527
Less: Firms having incomplete data for the study period	(162)
Less: Firms with negative equity	(77)
Less: Firms having standard deviation more than 3	(21)
Study sample for non-financial listed firms:	267

3.3 Data Collection

Data is collected from the state bank of Pakistan publications, balance sheet analysis of joint stock companies listed on Karachi stock exchange, financial highlights which are reliable sources of data

in Pakistan. Furthermore data are also gathered from financial statements which exists in the annual reports downloaded from the company's respective websites of entire non-financial listed firms for the year 2008-2014 based on the subjective sampling.

3.4 Justification of Variables

Degree of firm's aggressiveness (in working capital) and its marginal role on overall performance (Weinraub, 1998) is the intent of the study. The study takes firm performance (ROI and ROA) as dependent while aggressiveness (AIP and AFP) as independent variables. In order to cop the more rationalization, the study employs major contributory variables to minimize standard error.

3.4.1 Dependent Variable

(1) Return on Investment (ROI) $_{it}$ =	$\dfrac{\text{Average}(EAT_{it} + EAT_{it-1})}{\text{Average}(Equity_{it} + Equity_{it-1})}$
(2) Return on Assets (ROA) $_{it}$ =	$\dfrac{\text{Average}(EAT_{it} + EAT_{it-1})}{\text{Average}(Asset_{it} + Asset_{it-1})}$

3.4.2 Independent Variable

(1) Aggressive Investment Policy (AIP) $_{it}$ =	$\dfrac{\text{Average}(\text{Current Asset}_{it} + \text{Current Asset}_{it-1})}{\text{Average}(Asset_{it} + Asset_{it-1})}$
Lesser ratio indicates comparatively aggressive policy and vice versa	
(2) Aggressive Financing Policy (AFP) $_{it}$ =	$\dfrac{\text{Average}(\text{Current Liability}_{it} + \text{Current Liability}_{it-1})}{\text{Average}(Asset_{it} + Asset_{it-1})}$
Lesser ratio indicates comparatively conservative policy and vice versa	

3.4.3 Control Variable

Several researcher uses control variable in their studies while measuring firm performance (Smith and Begemann, 1997; Lamberson, 1995; Deelof, 2003; Teruel, 2005; Lazaridis and Tryfonidis, 2006 and Eljelly, 2004). The study on hand employs the following control variables to cope the elucidating aspects of firm performance which eventually curtail standard error. The study selected below mentioned control variables because they are not the major focus of the study but has major association with the dependent variables (Table 4.2).

(1) Return on Equity (ROE) $_{it}$ =	$\dfrac{(\text{Net Profit before Tax})_{it}}{\text{Average}(Equity_{it} + Equity_{it-1})}$
(2) Return on Capital Employed (ROCE) $_{it}$ =	$\dfrac{(\text{Net Profit before Tax})_{it}}{\text{Average}(\text{Capital Employed}_{it} + \text{Capital Employed}_{it-1})}$
(3) Growth of the firm (GROWTH) $_{it}$ =	$\dfrac{(Sales_{it} - Sales_{it-1})}{(Sales)_{it-1}}$
(4) Size of the firm (SIZE) $_{it}$ = Logarithm of total assets	
(5) AGE = Firm's date of incorporation (Logarithm of Age)	

ROE and ROCE is taken as control variable (Murugesu, 2013; and Zhang and Toppinen, 2011) because of scheming other than ROI and ROA variables. GROWTH, SIZE and AGE are taken as control variable because of the modified industry nature.

3.5 Model Specification
3.5.1 Analytical framework and empirical model specification
As the study is empirical nature and uses secondary data for analysis, it is the strength of the work to uses panel data for a longer period of time (2008-2014). In panel regression estimation, the data

is doubly indexed (cross-sectional and time series) which making a huge data as sample of the study. Furthermore, panel data has the characteristics of controlling the endogeneity and heterogeneity problems. So the panel regression model analyzes the individual specific factor in different cross sections and in different time series of dependent variable with the independent variables (Hausman & Taylor, 1981).

The fundamental structure of panel regression model is:

$$Y_{it} = \beta X'it + \alpha Z'i + \mathcal{E}_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{ (1)}$$

In the above equation (1), the endogeneity is denoted by X'_{it} and the individual effect or heterogeneity is expressed by Z'_t which postulates a stable and recognizable and non-recognizable variables. OLS evaluation supplies proficient and steady approximation of the original considerations (Kyereboah, 2007). Except when Z'_t is non-recognizable and associated with X'_{it} then it need to use the other parametric tests because using of OLS in this situation will ultimately distort the fundamental objective of the analysis.

3.5.2 Model specification
From the literature, the study applies panel data analysis (fixed-effect, random-effect and OLS model) in order to analyze the depiction of capital structure on firm performance. The study has the following models in order to examine the hypothesis:
Firm performance = f (Aggressive Investment Policy, Aggressive Financial Policy, Return on Equity, Return on Capital Employed, Firm Growth, Firm Size, Firm AGE)

3.6 Firm performance measured by ROI
3.6.1 Pooled Regression Model
$$ROI_{it} = \alpha_0 + \alpha_1 AIP_i + \alpha_2 AFP_i + \alpha_3 ROE_i + \alpha_4 ROCE_i + \alpha_5 GROWTH_i + \alpha_6 SIZE_i + \alpha_7 AGE_i + \mathcal{E}_{1it}$$
$$\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{ (2)}$$

3.6.2 Fixed Effect Model
$$ROI_{it} = \alpha_0 + \alpha_1 AIP_{it} + \alpha_2 AFP_{it} + \alpha_3 ROE_{it} + \alpha_4 ROCE_{it} + \alpha_5 GROWTH_{it} + \alpha_6 SIZE_{it} + \alpha_7 AGE_{it} + \sum_{i=1}^{267} \alpha_i idum + \mathcal{E}_{1it}$$
$$\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{ (3)}$$

3.6.3 Random Effect Model
$$ROI_{it} = \alpha_0 + \alpha_1 AIP_{it} + \alpha_2 AFP_{it} + \alpha_3 ROE_{it} + \alpha_4 ROCE_{it} + \alpha_5 GROWTH_{it} + \alpha_6 SIZE_{it} + \alpha_7 AGE_{it} + \mu_i + \mathcal{E}_{1it}$$
$$\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{ (4)}$$

3.7 Firm performance measured by ROA
3.7.1 Pooled Regression Model
$$ROA_{it} = \alpha_0 + \alpha_1 AIP_i + \alpha_2 AFP_i + \alpha_3 ROE_i + \alpha_4 ROCE_i + \alpha_5 GROWTH_i + \alpha_6 SIZE_i + \alpha_7 AGE_i + \mathcal{E}_{2it}$$
$$\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{ (5)}$$

3.7.2 Fixed Effect Model
$$ROA_{it} = \alpha_0 + \alpha_1 AIP_{it} + \alpha_2 AFP_{it} + \alpha_3 ROE_{it} + \alpha_4 ROCE_{it} + \alpha_5 GROWTH_{it} + \alpha_6 SIZE_{it} + \alpha_7 AGE_{it} + \sum_{i=1}^{267} \alpha_i idum + \mathcal{E}_{2it}$$
$$\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{ (6)}$$

3.7.3 Random Effect Model
$$ROA_{it} = \alpha_0 + \alpha_1 AIP_{it} + \alpha_2 AFP_{it} + \alpha_3 ROE_{it} + \alpha_4 ROCE_{it} + \alpha_5 GROWTH_{it} + \alpha_6 SIZE_{it} + \alpha_7 AGE_{it} + \mu_i + \mathcal{E}_{2it}$$
$$\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{ (7)}$$

4. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

The study analyzes the data on hand in two major parts. In first part, data is expressed using descriptive analysis. While in the second part, data is empirically examined using inferential analysis using variant statistical software packages like EView, STATA and Gretl.

4.2 Interpretation and Analysis of Data

4.2.1 Descriptive Statistics
This part shows the general nature of data on hand for analysis purpose like mean, Std. Dev., minimum and maximum etc…

Standard deviation value of all the variables in Table 4.1, Appendix exposes that data used in the study is normally distributed. ROI and ROA values are asymmetrically distributed with a long tail moving towards left. It means firms in Pakistan are recurrently gaining little and few extreme losses. The Kurtosis values of ROI and ROA crossing the high degree of leptokurtic.

4.2.2 Correlation Analysis
Table 4.2, Appendix exposes the correlation analysis among variables (dependent and independent) of the study. Correlation analysis (Table 4.2, Appendix) postulates that there is high degree of association among return proxies of the study. The study found slight negative impact of aggressive financial policy on firms return. Growth has no concern with the firm performance (ROI and ROA) while Age is statistically significant with ROA while show no association with ROI.

4.3 Test of Hypothesis

4.3.1 Regression Analysis
This part of the study analyzes the panel data on hand to reveal the effect of explanatory variables on performance of the firm in Pakistan for the period of 2008 to 2014. The research work employs OLS model considering identical intercept overtime. The analysis also indulges the consideration of variant intercept for every firm in Pakistan by conducting fixed-effect model and random-effect model.

4.3.2 Capital Structure and firm performance measured by ROI
Table 4.3, Appendix exposes the relation between capital structure and firm's performance (ROI) in Pakistan for the period of 2008 to 2014. The p-value of F-statistics 645.68 $(0.000 < 0.05)$, 245.93 $(0.000 < 0.05)$ and 4287.58 $(0.000 < 0.05)$ contended that all the independent variables are mutually statistically significant at pooled-model, fixed-effect model and random-effect model in explicating deviation in the firm's performance in Pakistan. The p-value of Hausman test (0.000) postulating that difference in fixed-effect and random-effect models coefficients is systematic. So the study accept the alternative hypothesis thus acknowledge and infer the fixed-effect model for data analysis, which contradicting the study of Lawal, (2014).

Fixed effect model organize the lost variables that are variant in cases while constant overtime. This let the data alter overtime and exposing independent variable impact on dependent variable.

$$Y_{ij} = \alpha_j + \beta X_{ij} + \varepsilon_{ij} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{(8)}$$

For i cases within j group
Therefore α_j is a separate intercept for each group
It is equivalent to solely at within group variations:

$$Y_{ij} - \overline{Y}_j = \beta(X_{ij} - \alpha_j \overline{X}_j) + \varepsilon_{ij} - \overline{\varepsilon}_j \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (9)$$

X-bar-sub-j means of X for group j, etc.

Model is within group because all the variables are centered on mean of each group.

The results at Table 4.3, Appendix exposes that firm's aggressive policy regarding investment has statistically positive impact on firm performance. While aggressive financial policy negatively impacts the firm performance. It means firms in Pakistan if uses more fixed liability instead of current liability, it'll perform better. On the other hand, if firms put into practice high degree of current assets, it has positive impact on its performance. Furthermore; all the other control variables (except ROE and SIZE of the firm) negatively effecting the firm performance. ROCE and AGE shows negative and statistically non significance with respect to ROI in measuring firm performance.

4.3.3 Capital Structure and firm performance measured by ROA

Table 4.3, Appendix exposes the connection between capital structure design and firm's performance (measured by ROA) in Pakistan for the period of 2008 to 2014. The *F*-statistic *p*-value postulates that 388.96 (0.000 < 0.05), 164.56 (0.000 < 0.05) and 1958.97 (0.000 < 0.05) contended that all the independent variables are strongly statistically significant at pooled-model, fixed-effect model and random-effect model in explicating variation in the firm's performance in Pakistan. The *p*-value of Hausman test (0.000) postulating that difference in fixed-effect and random-effect models coefficients is organized. So the study accept the alternative hypothesis, which means fixed-effect model fit for data analysis, which is also contradicting with the study of Lawal *et al.,* (2014).

The results at Table 4.3, Appendix exposes that firm's aggressive policy regarding investment has statistically positive impact on firm performance. While aggressive financial policy negatively impacts the firm performance. It means firms in Pakistan if uses more fixed liability instead of current liability, it'll perform better. On the other hand, if firms put into practice high degree of current assets, it has positive impact on its performance. Furthermore; all the other control variables (except GROWTH and AGE of the firm) has positively affecting the firm performance. AGE shows negative and statistically non significance with respect to ROA in measuring firm performance.

Table 4.4 postulates the Levin-Lin-Chu panel unit root testing at level (1) and at first difference.

The hypotheses of unit root testing are:
H0: Panels contain unit roots
H1: Panels are stationary

The *p*-value of dependent and independent variables contended that all the variables are stationary at level and first difference. While the Hadri LM stationary test postulates that ROI data contain unit root at level (1) and at first difference, it is stationary. After this, the study run the panel co-integration model because the pre-condition of panel co-integration model is the variable must unit root at level but when converted into first difference, then it will become stationary. Hadri LM test can fulfill the condition of panel co-integration model, so it can be considered as benchmark of the study. The result in Table 4.4, exposes that except D_ROI, all the other variables at level (1) and at first difference contains some unit roots because of the longer period of time and high number of cross sections.

5.   SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The research is about to find the finance manager's aggressive and conservative behavior regarding restructuring the capital structure of the firm (esp. working capital). The study try to find (in the context of Pakistani setting) that what style of manager's are successful in boosting the firm's performance.

The numerical findings gauge the finance manager aggressiveness and put in the existing literature that such behavior shows favorable impact on investment policy. But with the passage of time, such policy need to be reconstructed otherwise it'll shows unfavorable outcomes in the long run.

Finance managers' aggressiveness in working capital holding financial policy shows unfavorable outcomes. But, in the long run, such decision shows fruitful results. The reason behind this comprises of some behavioral partialities like fresh or unexperienced manager when take one fruitful decision, their next decisions are based on less rationality due to overconfidence. But with the passage of time, they faces many such bad experiences and are trained to cope with such kind of problems (Jensen and Meckling, 1976).

The study found that finance managers' aggressiveness regarding investment policy in the short run, while conservativeness regarding financial policy in the long run shows favorable outcomes in Pakistan. The above hypothesis is tested and verified in the study and it is found that decision of the finance manager is successful up to 51.91% in the investment policy and 41.94% in the financial policy (Table 4.3).

5.2 Conclusion

The novel consequences of this study is important to manage the investment and financial policy of all non-financial listed firms in Pakistan. The study discloses the relation between dependent variables (ROI and ROA) and independent variables (AIP and AFP). A sample of 267 non-financial listed firms from all sectors of PSX (after meeting the sample selection criterion) for the period of 2008 to 2014 making a total of 1869 observations. Pearson correlation (2-tailed at 5% significance level) (Table 4.2, Appendix) reveals that AFP is negative and significant while AIP is positive and significantly associated with dependent variables. All the control variables are positively and statistically significantly associated (at 5% level of significance) with the firm performance except AGE in case of ROI.

The findings of the study reveal that aggressiveness of the finance manager regarding current liability adversely affecting the firm's performance. It means in designing capital structure of Pakistani non-financial listed firms on PSX, finance manager needs to be conservative regarding short term financial policy. Elaborately when increasing in the company's short term debt compare to its total assets yields negative results on firm's performance in Pakistan (-26.6% in case of ROI and -20.3% in case of ROA).

On the other hand, aggressiveness regarding firm's investment policy postulates a positive impact on overall performance of the firm (seen from AIP respective coefficient). It means Pakistani non-financial firms when designing the capital structure employee the current assets on maturity financial policy basis, it yield fruitful results in the short run. It is also observed from the results in Table 4.3, Appendix that with the passage of time, firms in Pakistan devastating their performance.

That's why study found negative relation between firms' age and ROI (−25.4%) and ROA (−17.8%).

Hausman test score favor to pick fixed effect model for data analysis (p-value = 0.000 from Table 4.3, Appendix) in case of ROA. The study found that ROA is adversely affected when firms in Pakistan increase their long term debt compare to capitalization or their leverage ratio. The study found that as the time passes, Pakistani firm's performing well which is displayed in the form of favorable statistical significance in the Table 4.3, Appendix. Leverage ratio has little concern with the firm's performance (ROA).

5.3 Recommendation

From the above findings, the study recommends certain actions directing the corporate governance and finance manager of the companies in Pakistan. Most of the firms in Pakistan finance the tangible fixed assets by short-term debts. Regarding short-term debt, this research work found unfavorable results with the firm performance (in both ROI and ROA cases). So the study recommends analyzing a scale on which aggressiveness of the finance manager regarding funding postulates negative impact on firm performance.

The research work gave direction to finance manager that if he want to create firm value and boost up its performance in the market, it need to design an optimal capital structure which congruence the firms current assets with the maturity matching policy.

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Appendix

Table 4.1: Descriptive Statistics

Variables	Mean	Std. Dev.	Skewness	Kurtosis	Minimum	Maximum
ROI	0.068071	0.251620	-2.116738	19.616974	-2.08677	1.771462
ROA	0.041206	0.099530	-3.234840	50.811686	-1.65149	0.406255
AIP	0.462992	0.204154	0.177328	-0.271240	0.000874	0.999594
AFP	0.375796	0.170659	0.072003	-0.557938	0.000000	0.892639
ROE	0.127650	0.320601	0.243567	13.056689	-1.95829	2.800278
ROCE	0.106261	0.229753	1.364374	18.466890	-1.94783	2.319279
GROWTH	1.067346	0.585424	6.054620	56.659875	0.000000	8.369427
SIZE	6.479196	0.712418	0.091951	0.428504	3.841172	8.695685
AGE	1.438564	0.283940	-2.050464	8.197873	0.000000	2.107210

Table 4.2: Pearson Bivariate Correlations Analysis

Description		1	2	3	4	5	6	7	8	9
ROI	Pearson	1	.841	.189	-.053	.829	.744	.089	.238	.045
(1)	Sig		.000	.000	.023	.000	.000	.000	.000	.051
ROA	Pearson	.841	1	.233	-.150	.684	.729	.098	.268	.103
(2)	Sig	.000		.000	.000	.000	.000	.000	.000	.000
AIP	Pearson	.189	.233	1	.422	.205	.285	.071	-.051	-.018
(3)	Sig	.000	.000		.000	.000	.000	.002	.027	.432
AFP	Pearson	-.053	-.150	.422	1	.026	.029	.059	.028	-.076
(4)	Sig	.023	.000	.000		.269	.206	.011	.219	.001
ROE	Pearson	.829	.684	.205	.026	1	.920	.173	.229	.047
(5)	Sig	.000	.000	.000	.269		.000	.000	.000	.041
ROCE	Pearson	.744	.729	.285	.029	.920	1	.183	.234	.081
(6)	Sig	.000	.000	.000	.206	.000		.000	.000	.000
GRTH	Pearson	.089	.098	.071	.059	.173	.183	1	.168	-.016
(7)	Sig	.000	.000	.002	.011	.000	.000		.000	.502
SIZ	Pearson	.238	.268	-.051	.028	.229	.234	.168	1	-.020
(8)	Sig	.000	.000	.027	.219	.000	.000	.000		.399
AGE	Pearson	.045	.103	-.018	-.076	.047	.081	-.016	-.020	1
(9)	Sig	.051	.000	.432	.001	.041	.000	.502	.399	

Note: *, ** and *** shows the significance level at 10%, 5% and 1% level of significance.

Table 4.3: Capital Structure Aggressiveness and Firm Performance (measured by ROI and ROA)

Variables	Pooled		Fixed Effect		Random Effect	
	ROI	ROA	ROI	ROA	ROI	ROA
AIP	0.120 ***	0.079 ***	0.291 ***	0.189 ***	0.126 ***	0.111 ***
AFP	−0.164 ***	−0.137 ***	−0.266 ***	−0.203 ***	−0.168 ***	−0.158 ***
ROE	0.766 ***	0.043 *	0.680 ***	0.051 *	0.760 ***	0.044 ***
ROCE	−0.204	0.231 ***	−0.253	0.154 ***	−0.205 ***	0.204 ***

GROWTH	−0.025 ***	−0.007 **	−0.021 ***	−0.009 ***	−0.025 ***	−0.009 ***
SIZE	0.027 ***	0.018 ***	0.167 ***	0.084 *	0.028 ***	0.022 ***
AGE	0.006	0.014 *	−0.254	−0.178	0.007	0.012 *
Const	−0.160 ***	-0.107 **	−0.721 ***	−0.276	−0.167 ***	−0.134 ***
No. of Obs.	1869					
R^2	0.7083	0.5940	0.5191	0.4194	0.7083	0.5890
F (*p*-value)	645 (0.00)	388 (0.00)	245 (0.00)	164 (0.00)	4287 (0.00)	1958 (0.00)
Hausman (ROI)			212.33 (0.000)			
Hausman (ROA)			934.94 (0.000)			

Note: *, ** and *** shows the significance level at 10%, 5% and 1% level of significance.

Table 4.4: Unit Root testing at Level (1) and First difference

	Levin-Lin-Chu		*Hadri LM Stationary*		*Fisher ADF*	
Variables	Statistics	*p*-value	Statistics	*p*-value	Statistics	*p*-value
ROI	-34.2511	0.0000	20.2354	0.0000	1878.79	0.0000
D_ROI	-5.4e+02	0.0000	0.3135	0.3770	2565.62	0.0000
ROA	-44.9769	0.0000	22.5098	0.0000	1805.37	0.0000
D_ROA	-34.2511	0.0000	3.9294	0.0000	2481.35	0.0000
AIP	-47.2540	0.0000	18.4439	0.0000	4046.45	0.0000
D_AIP	-1.3e+02	0.0000	7.8984	0.0000	3136.55	0.0000
AFP	-4.4e+03	0.0000	19.9799	0.0000	3358.00	0.0000
D_AFP	-6.6e+02	0.0000	5.9114	0.0000	3170.63	0.0000

Table 4.5: Diagnostic Tests

Descriptions	ROI	ROA
Mean VIF	2.83	2.83
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	225.67 (0.0000)	254.99 (0.0000)
Breusch and Pagan Lagrangian multiplier test for random effects	9.92 (0.0000)	159.66 (0.0000)
	For a matrix composed of the selected series: const ROI ROA AIP AFP ROE ROCE Growth Size Lage	
Collinearity check	Condition number = 37.6908 A condition number greater than 50 is commonly regarded as indicating strong collinearity.	

Diagram 1: Data Normality Diagram
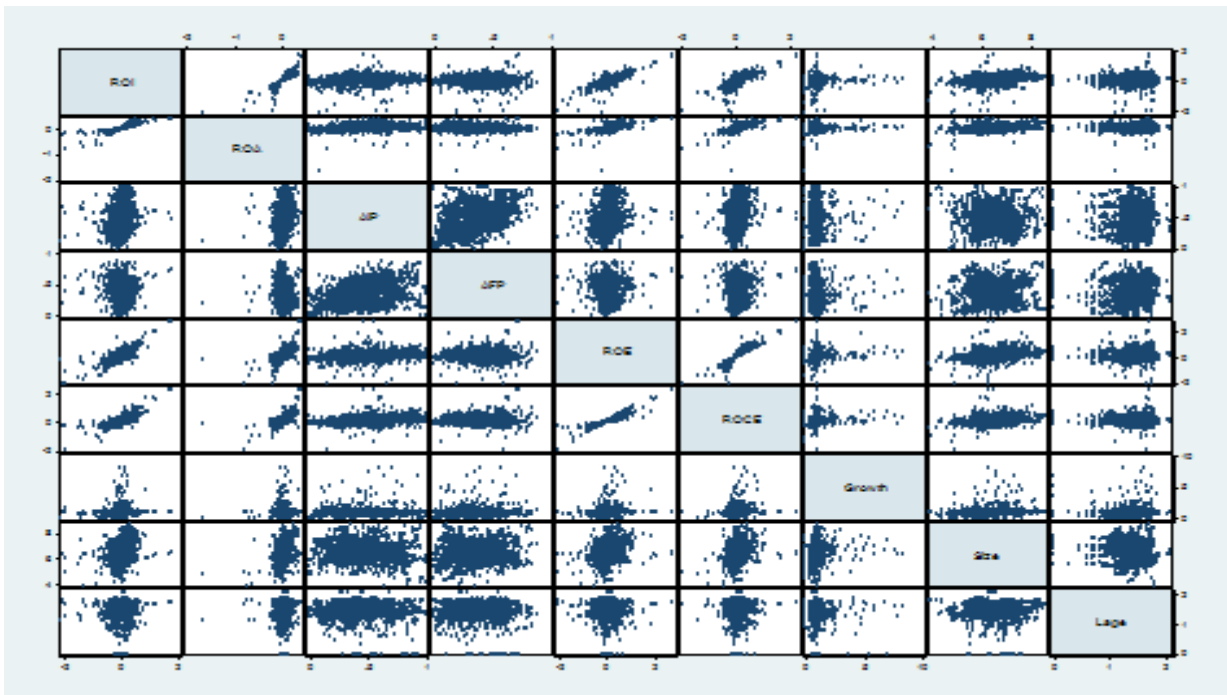
Diagram 2: Regression Line
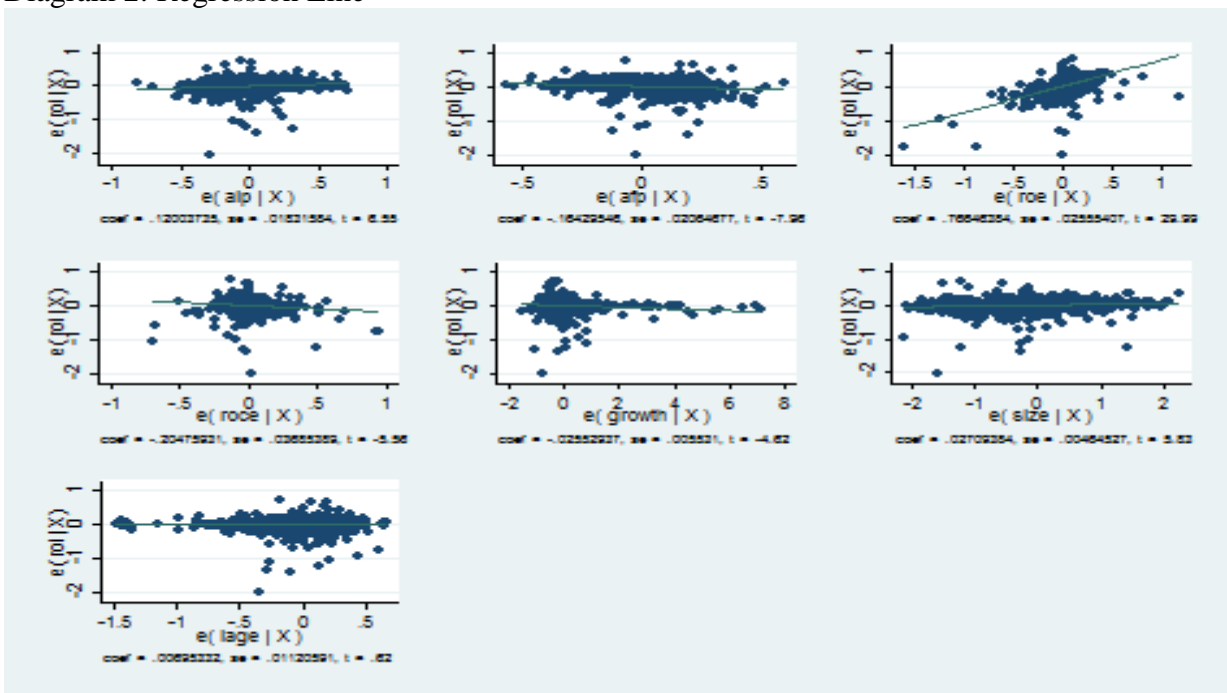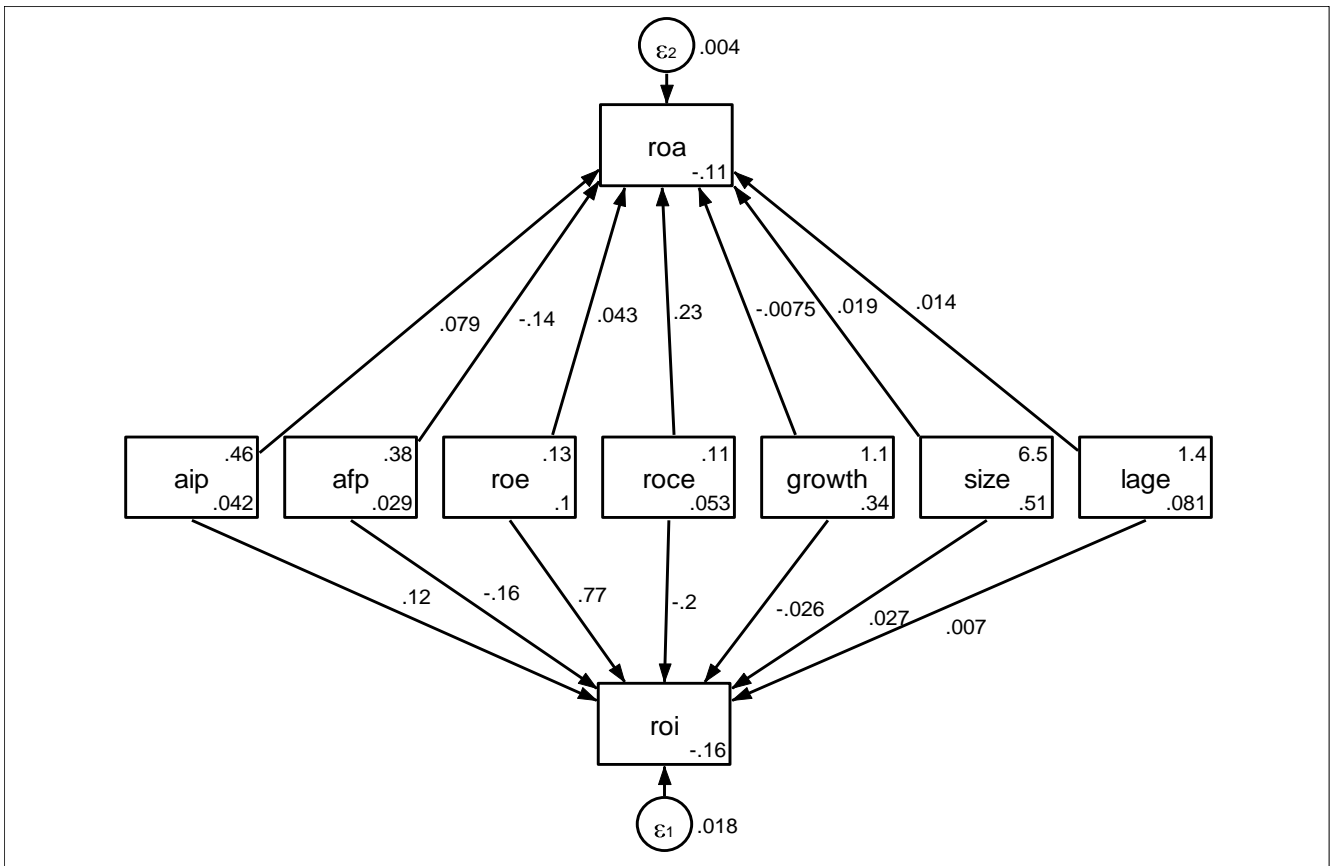
Footnote

ROI	Return on Investments
ROA	Return on Assets
AIP	Aggressive Investment Policy
AFP	Aggressive Financial Policy
ROE	Return on Equity
ROCE	Return on Capital Employed
GROWTH	Firm's Growth
SIZE	Firm's Size
AGE	Firm's Age
EAT	Earnings after Tax
PSX	Pakistan Stock Exchange
GLS	Generalized Least Square
OLS	Ordinary Least Square
MM	Modigliani and Miller
L	Leverage
W	Firm Value
ANOVA	Analysis of variance and covariance
LSD	Least Square Deviation

SOCIAL CUSTOMER RELATIONSHIP MANAGEMENT: A CASE STUDY

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ABSTRACT

Social Customer Relationships Management (CRM) is a current business trend providing new channels of two-way communication with customers through social media sites, such as Facebook, Twitter etc. Social CRM enables companies to interact in an easy and contemporary way directly with customers as well as to track customer interactions and their social influence. In this paper we examine the importance of CRM, e-CRM and Social CRM for businesses. We provide perspectives on objectives and types of CRM, the working cycle of CRM, the stages of a CRM Strategy and technology tools that are used in CRM. Social CRM is in particularly analyzed, since this new trend requires active engagement by customers and other stakeholders. The engagement process is essential to successful Social CRM and to successful social business practices. Finally, we describe experiences from three family businesses that introduced Social CRM as a result of a project carried out as an assignment in the 'Social Media Networking' module of the MSc course in 'Web Intelligence' at the Department of Informatics of Alexander Technological Educational Institute of Thessaloniki. The assignment of the groups was to create a Social CRM Strategy in collaboration with a company. This study is a follow-up of the outcome of the projects carried out in the autumn semester 2014 and 2015. The results show that all three companies consider that Social CRM is an excellent tool for obtaining real time valuable data about customers and a cheap way to reach them.

JEL CLASSIFICATION

JEL M, JEL Z

KEYWORDS

CRM, Social CRM, e-CRM, Social Networking, Social Media Marketing

INTRODUCTION

Customer Relationship Management (CRM) is a process that companies use in order to improve business relationships with customers. Companies do this by using strategies and technologies to manage and analyse customer interactions, as well as data, throughout the customer lifecycle (Rouse, 2014). Their aims are to acquire, retain and increase customers. However, the main goal of CRM is to increase customer loyalty and in turn to improve business profitability.

Objectives and Types of CRM

CRM sets specific objectives, namely to include improvements regarding customer satisfaction and business sales enhancement. It can be divided into four basic types, based on characteristics. These are Strategic CRM, Operational CRM, Analytical CRM and Collaborative CRM (Tutorialpoint, 2014). Strategic CRM is a type of CRM, in which companies collect information about customers and market trends, in order to offer a better proposition to the customer. Operational CRM is focusing on the customer and includes business processes, such as services, marketing and sales. The following automations are included in Operational CRM: Sales Force Automation, Marketing Automation, and Service Automation Sales. Force Automation automates crucial sales of the company and the administrative functions of the sales force team. Marketing Automation automates marketing processes, such as customer segmentation and Customer Data Integration (CDI), which is the process of consolidating and managing customer information from all available sources (Rouse, 2005). Service Automation Sales diagnose and resolve issues related to products. Analytical CRM collects, stores and captures data from customers. It also includes the following applications: Sales Data (products, purchasing history), Financial Data (purchase history and credit score) and Marketing Data (customer response rates to marketing campaigns). Finally, in Collaborative CRM companies provide help to customers by sharing any information collected from interactions.

CRM strategies and Technology Tools

A successful CRM Strategy contains three fundamental areas: "*who your customers are*" meaning that it is necessary for a company to understand what kind of relationships it has to build with each customer, "*How both parties obtain value from the relationship*", pointing to a conclusion that both sides must obtain benefits or else a different strategy is needed, "*Systems and software are only as effective as* the strate*gy behind them*", focusing on the importance of improving relationships through communications. As for the technology tools for Customer Retention, companies use tools such as Data Warehousing (DW), Data Mining, Database Queries and On Line Analytical Processing (OLAP). Data Warehouses are huge repositories of customer related data, accepted from various databases. Data Mining is a process of extracting patterns from large data sets, by using certain methods, in order to effectively collect these data sets for analysis and forecasting. By using Database Queries companies can access, modify and manage the databases through Structured Query Language (SQL) commands. OLAP is a known process of multidimensional analysis of elements which offers advanced abilities to the information analysis of a Data Warehouse.

1. FROM CRM TO e-CRM AND SOCIAL CRM

The first-generation applications of CRM appeared in 1980s in the form of Customer Information System (CIS). They were single function solutions designed to support a specific set of employees (Du, 2013). Nowadays with the evolution of technology a web-based CRM, called e-CRM, uses internet based technologies, such as forums, websites and emails to achieve CRM objectives (Technopedia, 2017). In other words, companies can interact with customers by using the internet. The main challenge of e-CRM is to offer successful communication and information regarding the topic of interest, in order to cover the particular needs of the customer. The internet provides a

simple and ideal method, where customers can get answers they seek for, using sections for Frequently Asked Questions (FAQ), forums or chat rooms.

In addition to e-CRM there is also another new trend of CRM, called Social CRM. Social CRM is a customer relationship management process that provides communication through social media sites, such as Facebook and Twitter (Rouse, 2010). A business can create a particular page, usually called fan page, for the company in different social media sites, to quickly get information about users, who are interested in their products. In response to customer comments, a business can reply quickly to their questions, potential negative feedbacks, or product problems either by posting new comments, or by communicating with personal messages. By using Social CRM, companies can get higher reputation through offering the best possible solutions and suitable products to customers. According to a survey conducted by IBM in October 2010 (Davis, 2011), nearly 80% of companies have a social media presence and most use social media for Customer Relationship Management purposes. The results of this survey shows us that Social CRM is a very important tool for business. In the following sections, we provide information about the usefulness and the challenges of CRM, eCRM and Social CRM.

1.1 The Working Cycle of CRM

Every CRM model contains a working cycle in companies that is oriented to the customer. The CRM model contains phases, which are followed by the business in order to achieve its goals. The following figure introduces the flow of the current model (Marketing Teacher, 2017).

Figure 1: CRM model (Marketing Teacher, 2017).

1. Customer Acquisition – This is the process to attract a customer and convince him of making his first purchase.
Growth – Companies focus on increasing the number of their customers through market orientation, innovative Information Technology (IT), such as the use of physical devices to create, store, secure all forms of electronic data, and value creation.

2. Customer Retention – Customers return to the company and buy again. It is anticipated that they purchase a similar product or service.
Growth – Through market orientation, innovative IT and value creation, companies focus on increasing the number of their customers who will purchase from them regularly.

3. Customer Extension – Customers are regularly returning to purchase from the company. This time they have been informed about new products or services that may not be related to their original purchase. The main purpose on this stage is to retain them as customers for extended products or services.

Growth – Through market orientation, innovative IT and value creation, the company focuses on increasing the number of their customers who purchase additional or supplementary products and services.

1.2   The Stages of a CRM Strategy

Preparing and implementing an adequate strategy for achieving desired result takes time. The following stages are used to build successful relationships with consumers (Sharp, 2003).

1. ***Interacting*** - In this stage, a dialog is been established between the customer and the organization. The discussion is referring to a series of interactions (eg. product in- information, product complaints) and transactions (eg. product order, service request).

2. ***Analyzing*** - Meaning that it is necessary to apply marketing practices (e.g. meeting the needs of customers, setting the accurate price) in order to create interactions that build valued relationships.

3. ***Learning*** - The purpose of this stage is about learning and to apply the information gained from analyzing customer behavior in order to create interactions between the customer and the organization.

4. ***Planning*** - The last stage is about planning the best possible market strategies and plans to meet the requirements of each customer, who is related with the particular organization.

The above steps are crucial for implementing a successful strategy, because today's consumers are much better informed, better educated and more demanding regarding the products and services that they require.

2.   TYPES OF CRM

Customer Relationship Management software is being used by businesses, to guide them into an effective communication with their customers. Thus, the main purpose of a CRM application, is to help an organization understand the needs and behaviors of its customers and provide them better quality of service. There are four types of CRM applications: Strategic, Collaborative, Operational and Analytical to perform all these activities (Johnson, 2002).

Figure 2 shows the different CRM types and the relationship between them.
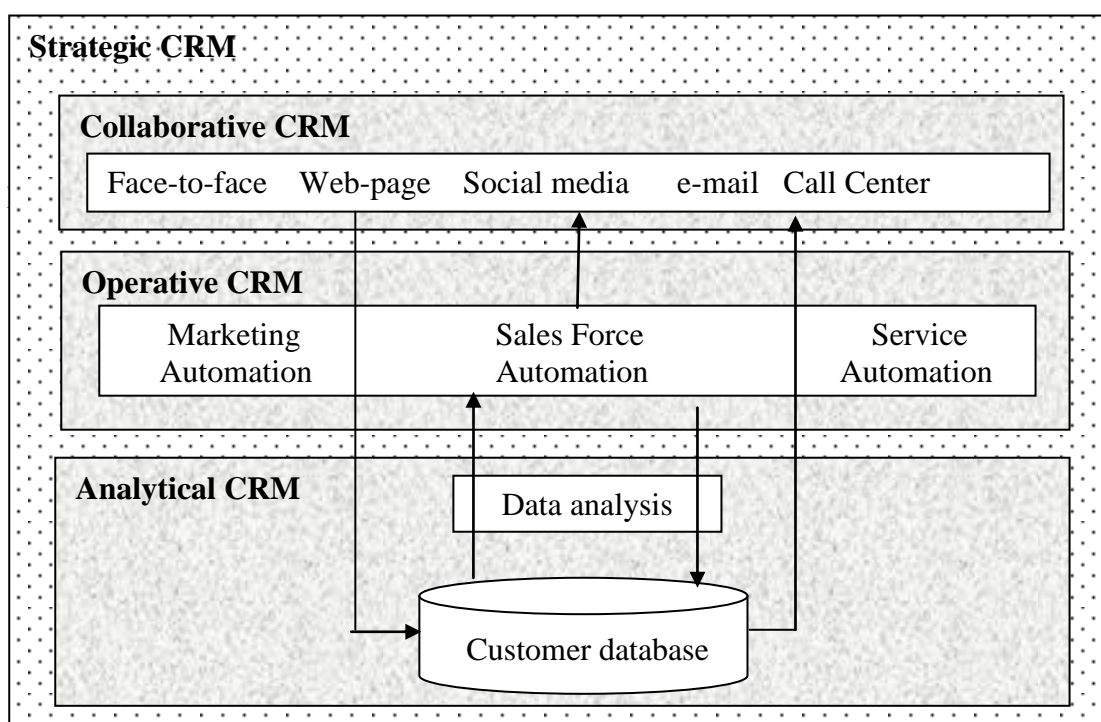
Figure 2: CRM types and their uses (adopted from Johnson, 2002)

Strategic CRM is focused on winning and retaining customers by creating and delivering better value propositions than competitors. The method is performed through capturing and collecting candidate data and market trends. As soon as the company completes the information analysis, it is able to adapt to customer requirements. The organizations will be in a better position to recognize the buying behavior of the customers and offer them better proposals.

Collaborative CRM is responsible for gathering data through various channels (fax, phone, web, e-mail) of communication of the enterprise with the customer. It can benefit the services of a company, because it manages the data in a way that facilitates interactions with customers. Collaborative CRM employs new communication systems, such as web forums, Voice over Internet Protocol (VoIP), and chat rooms. Thus, valuable information can be shared between companies and their business partners or customers.

Operational CRM refers to direct interaction between the customer and the company. Those interactions can be face-to-face, through websites, or calling centers. Operational CRM includes the following automations: Sales Force Automation, Marketing Automation and Service Automation. Sales Force Automation (SFA) was the original form of operational CRM.SFA is the application of technology to manage selling activities. It automates nearly a great amount of industry's sales and the administrative functions of sales force. For example, it is able to automate accounts management, contacts management, quote management sales management, monitor customer needs and their buying behaviors, as well as demographics. SFA tools are designed to improve sales productivity. Marketing Automation (MA) applies technology to marketing processes. It provides information about the external operational environment of an industry, including competitors and market trends. The intention of MA applications are meant to improve marketing's campaign profitability. This particular CRM software is well known as "front office" solution, due to its direct activity with the customer. Service Automation (SA) automates services requests, complaints, product   returns and information requests. There are multiple communication channels (web, telephone, fax, face to face) to diagnose and solve product issues. SA is also capable of using Computer Telephony Integration (CTI), to provide advanced solutions.

Analytical CRM analyzes the information that was captured through Operational CRM in order to segment customers and enhance both customer and company value. The data is stored to repositories and categorized into sales (purchase history), financial (payment history, credit score), marketing (campaign response, loyalty scheme data) and service data. Analytical CRM helps companies to apply the best possible selling approach between customer groups. The interaction among high value customers, may be completed by "face to face" selling. As for the low value customers, they will probably be contacted by tele sales.

2.1   The e-CRM process

Many companies, due to internet's vital role on business life, apply eCRM, *to reduce customer-service costs, tighten customer relationships and most important, further personalize marketing messages and enable mass customization* (Namchul, 2005). The challenge of Ecrm is focused on specific information and communication about a product or a service that fits customer needs. It can be defined as an application which uses internet based technologies to achieve CRM objectives. The purpose is to retain customers and increase their loyalty to the organization. As we implement eCRM process, three steps in the life cycle is proposed (Buttle, 2010):
 1. *Data collection*: Refers to the information regarding customer preferences. Data is collected via websites, social media, emails and questionnaires.

2. *Data aggregation*: A technique that companies use to filter and analyze customer needs, in order to realize requests of customers.
3. *Customer interaction*: Companies provide specific feedbacks, to fulfil customer needs.

3 DIFFERENCES BETWEEN e-CRM AND CRM

An adequate method to succeed in Customer Relationships would be to integrate existing CRM processes with e-CRM applications (Pan and Lee, 2003). In order to apply this particular procedure, we need to understand the variances between CRM and eCRM. The traditional CRM model focuses on marketing sales, service support and customer interaction, through the integration of people and technology. As for the electronic version, it expands the techniques of CRM, through electronic channels, combining them with e-business applications for the implementation of the strategy. Figure 3 shows the main differences between e-CRM and CRM.

	Customer Data	Analysis of Customer Characteristics	Customer Service
CRM	**Data Warehouse** - Customer Information - Transaction History - Products Information	**Transaction Analysis** - Customer Profile - Past Transaction History	**Target Marketing** - Static Service - One-way Service - Time and Space Limit
e-CRM	**Web-house** - Customer Information - Transaction History - Products Information - Click Stream - Contents Information	**Transaction Analysis** - Customer Profile - Past Transaction History **Activity Analysis** - Exploratory Activities (Navigation, shopping cart, shopping pattern etc.)	**1:1 Marketing** - Real Time Service - Two-way Service - At Any Time - From Anywhere

Figure 3: CMR in comparison to e-CRM
(adapted from Harrigan and Choudhury, 2010)

From figure 3 we conclude that CRM is offers many strategies into the area of business, but e-CRM offers possibilities to analyzing customer data and customer characteristics to a greater extent. Customer activities are captured through web-sites and social media. Another important difference is that e-CRM offers real time and two-way services at anytime from anywhere.

4 SOCIAL CRM

Social media, such as Facebook, Twitter, LinkedIn, YouTube, Google (+ and Analytics) etc. have become an integral part of modern society, and they have completely changed the way we communicate, share and co-create information. More and more businesses tend to use social media in order to advertise their brand and their products and also to achieve better communication with the consumers. (Siakas et al., 2014a). Social media has created new scope for CRM (Pan and Lee, 2003). Social CRM accounts for a new generation of enlightened customers. It is a business strategy supported by a technology platform and social characteristics, in order to provide beneficial value in a trusted business environment. Social Media Technologies are used to provide real time

communications between customers and businesses (van Bruggen et al., 2010; Verhoef et al., 2010). This new approach of CRM uses social media to interact with customers. It requires strong relationships and conversations and is based on a customer engagement model depicted in figure 4. The main steps in the customer engagement model of Social CRM, include the following concepts: Customer Relationship Orientation, Relational Information Processes and Social CRM Technology Adoption. The concept of customer relationship orientation focuses on the implementation of a strategy for better understanding customer needs, through the development of close personal relationships, interactions and social exchanges (Chen and Ching, 2007). When a company gathers the required information Relational Information Processes takes place. Four dimensions of relational information processes have been reported by Harrigan and Choudhury (2012), namely information capture, information integration, information access, and information use. Information capture involves the gathering of information from users' posts in different social media, such as Facebook, LinkedIn, Twitter etc. Information integration requires the integration of customer information from all interactions to advance into a conclusion about each customer relationship. Information access to customer information is used by employees and strategic marketing decision makers (Chen and Ching, 2007). Finally the CRM Technology Adoption '*actually refers to the acceptance on part of the businesses for the collection, integration, and analysis of customer data, and subsequent communication with customers*' (Jayachandran et al. 2005). This collection and analysis of the data is acquired by social media technology tools or web applications. Harrigan and Choudhury (2012) propose that the outcome from Social CRM implementation along with the customer engagement model and the technologies in social media leads to increased trust, brand loyalty, co-creation and empowerment.
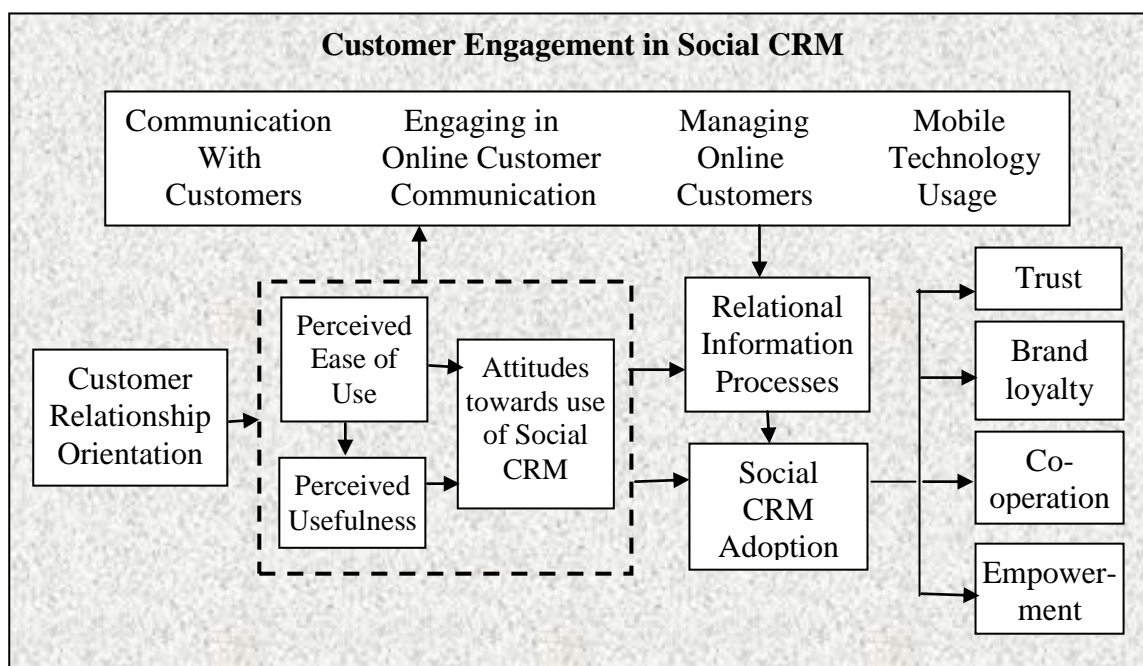
Figure 4: The Conceptual Model for Customer Engagement in Social CRM (adopted from Harrigan and Choudhury (2012))

Figure 4 proposes that customer engagement in Social CRM is achieved through customer relationships orientation, communication with customers and management of online customers through social media, mobile technologies and web-site usage. Customer Relationship Orientation includes dimensions such as perceived ease of use, perceived usefulness and attitudes towards use of Social CRM. In a study by Siakas et al. (2017) in students' perception of using social media in education it was found that other factors important for social media adoption were infrastructure for using social media, social influence and experience of using social media were important factors for

social media adoption. It is likely that these factors also influence the readiness and attitude of customers towards Social CRM. The relational information processes include analysis of customer characteristics through customer transactions and activity analysis. The model suggests that the final outcome creates increased levels of trust, loyalty, co-creation and customer empowerment.

Companies aiming to use Social CRM need to be aware of the target group characteristics regarding degree of social media access. Figure 1 shows the S-curve, which is important for understanding when Social CRM is most efficient.
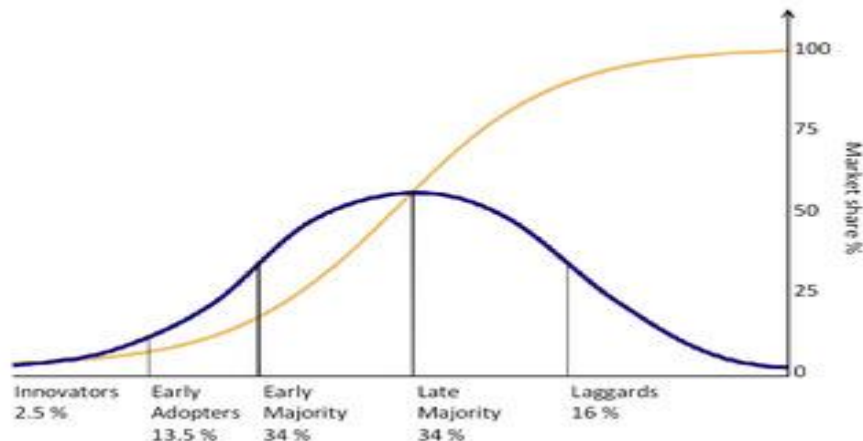
Figure 5. Take-up of New Technologies (Rogers, 1962; Fisher and Pry, 1971)

With successive groups of consumers adopting a new technology (shown in blue), its market share (yellow) will eventually reach the saturation level. In mathematics the S curve is known as the logistic function (Rogers, 1962; Fisher and Pry, 1971).

Social Media is characterized as the power of Word of Mouth accomplished through a bottom-up approach and crowd-sourcing (Siakas et al., 2014a; 2014b). Engagement in the Social Media means that customers or stakeholders become active participants rather than viewers. Participants engage in all forms of social discourse by acting together to equalize the market positions of manufacturers, suppliers, business and organizational leaders, customers and stakeholders in general. The engagement process is essential to successful Social CRM and to successful social business practices (Evans and McKee, 2010). The choice of suitable Social Media Networks, such as Facebook, Twitter, blogs, Wikis, newsletters etc., is important for obtaining expected results according to the marketing strategy. For example, targeted marketing is based on the characteristics of the target group we like to reach and the social media network should be chosen based on characteristics of the users of the Social Media (interests, age, gender etc.). Social Media Marketing is also called Word-of-mouth marketing or Viral Marketing, because it utilizes the nature of the social networks and the engagement of the participants. It spreads and diffuses the context in a new manner by involving the target groups unconsciously through competitions, comments (posts), ratings and interactions in general.

Regular users of social media, consider it a great place to find others working in the field, to share and build on information, rather than multiple users reinventing the wheel. With an increased focus on authenticity, trust and relationships are built through regular interaction, whether that is with new external contacts, or for internal communications. Users become adept at adapting to each new system.

5. THE CASE STUDY

Three small Greek family businesses were accordingly introduced to a suitable Social CRM strategy created by three respective groups of MSc students. Each group consisted of 3-4 students enrolled in the 'Social Media Networking' module[1] at the MSc Programme in 'Web Intelligence' at the Department of Informatics of Alexander Technological Educational Institute of Thessaloniki. The assignment of the groups was to create a Social CRM Strategy in collaboration with a company. The aims were also to help the companies implement the strategy suitable to the company aims and to create measures of the outcomes. The task included the following steps:

- Creation of a Social Media Vision: Determination of desired state.
- Formation of a Social Media Strategy: Identification of target group and differentiating activities.
- Establishment of Aims and Objectives: Identification of core competencies (differentiation from competitors).
- Determination of how to measure strategic success: Determination of Key Process Indicators (KPIs) and targets.
- Development of an Action Plan: Assignment of roles and responsibilities, content creation and process definition.
- Follow-up and continuous improvement.

In practice this meant that the InCISIV framework that had been developed under the auspices of the VALO[2] project was implemented. The InCISIV framework facilitates the study of the relationships between Innovation, Communication and Valorization (actions of dissemination and exploitation) (Siakas and Georgiadou, 2012).
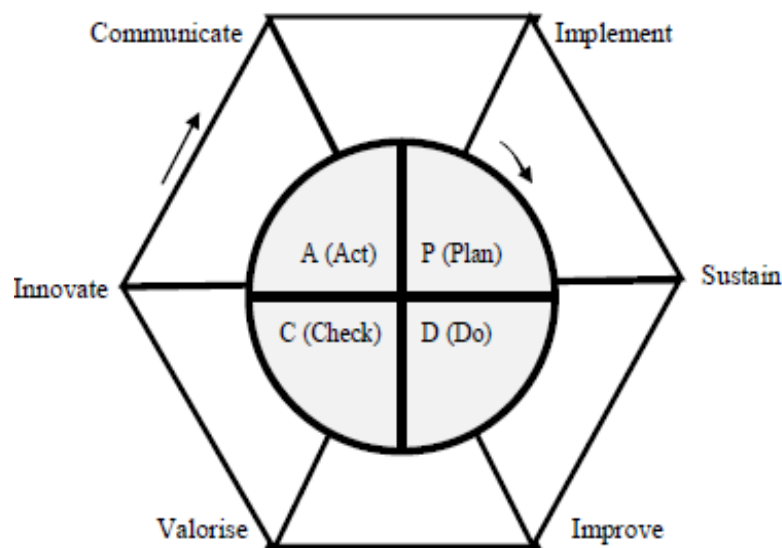
Figure 6: The InCISIV framework (Siakas and Georgiadou, 2012)

In the InCISIV framework the Deming Plan-Do-Check-Act Cycle, also called PDCA cycle (Deming, 1986) is embedded in the process quality model in an effort to focus project managers, project teams as well as evaluators to identify, plan, monitor, evaluate and improve their valorization of projects, activities and innovation. In our case study Social Media was used as a tool for valorization. The framework is depicted in figure 6 and shows two cycles which interact at every stage, delivering outputs incrementally. InCISIV allows for agile responses to change,

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[1] http://www.it.teithe.gr/masters/mscsemesters
[2] www.valo.teithe.gr

planning the quality strategy, continuous reviewing and evaluation of project progress and quality of deliverables as well as improvement suggestions.

At each stage activities are planned, carried out, outputs are evaluated and processes improved. The quality of outputs is thus continuously monitored, and sustainability is improved. As shown in the InCISIV framework every stage goes through the PDCA cycle and slowly the journey approaches its ultimate goal via different levels that have different characteristics (Siakas and Georgiadou, 2012).

The first step, the Innovation stage, comprised the new innovative way of communicating the core competencies to potential stakeholders (the target group) through the implementation of the social media strategy. Valorization is a continuous process that starts in the early stages of a lifecycle of a project and/or a product and is continuously improved according to the feedback from the target group/potential stakeholders for increased sustainability. The Social Media strategy and the embedded PDCA cycle helped to identify, plan, monitor, evaluate, improve and manage the valorization through Social Media activities and core competences.

Three family businesses implemented the InCISIV Framework through a Social CRM strategy with the help of the students.

5.1 Company 1: A very small hotel in Northern Greece

The family business hotel consists of 10 rooms with a fire-place and Jacuzzi in the rooms. The main customers until now were Greek clients who wanted to discover the hot springs or the ski centers in the surroundings of the hotel mainly during weekends. Most of the bookings were made through the Internet. Since the hotel owner is a young person he was open to new innovative ways of reaching the customers, in particular customers from abroad. Figure 7 shows the main areas of social media use in a hotel.

Figure 7: Uses for social media in a hotel (source: logannathan.com.au)

Gaining customer loyalty is an important hotel objective. Satisfied customers tend to come back and also tend to recommend the hotel to family and friends. The social media is an important mean for word-of-mouth marketing and customer participation (comments, photos and ratings). The main

social media means that were implemented are: Facebook, Twitter, Foursquare and Youtube, as well as Trivago, Trip Advisor and Booking.

The first results of the implemented Social CRM were reported in Siakas et al. (2014b). The use of social media increased the bookings with 7-8% in November 2014 compared to the previous year, despite the drawback of the financial crises. The branding was identified to have improved; the new customer base was identified to come mainly from abroad. The bookings were extended to week days and Sunday evenings. Customers comments were positive and customer ratings at Booking.com in March 2017 are 9,4/10. The owner is very satisfied with the results of the strategy developed through the Social CRM in collaboration with the students.

5.2 Company 2: A very small 'cold-cuts and cheese' shop in Northern Greece

The cold-cuts and cheese shop in Northern Greece demonstrated a significant improvement in brand name and customer comments and ratings after the implementation of the social media strategy (Siakas et al., 2014b).   The students together with the owner carried out a SWOT analysis identifying the Strengths, Weaknesses, Opportunities and Threats. The Social Media Tools that were used are blog, Google+, Facebook, Twitter (multiple options of interaction), Google maps-places (interaction between customer and shop), as well as recipe competitions and campaigns through Facebook and Google AdWords. The results were very promising with a big number of visits in the blog, likes, posts and rating 4.8/5 (March 2017) in Facebook, as well as improved branding and increased sales. The owner is enthusiastic about the results. The Facebook is the far most popular social media used in particular by the younger generations, who ask for specific ingredients from the recipes. This movement has created a search for new innovative products and uses of existing products.

5.3   Company 3: A small medical center in Northern Greece

The third family business is a medical center for men and women, with innovative and specialized units in the fields of In Vitro Fertilization (IVF), maternal-fetal medicine, genetics and molecular biology. The center provides services and offers modern solutions to all kinds of infertility problems. The main concern is a humane approach providing psychological support to couples, combined with results, both in prevention and treatment. The center has around 20 members of staff.

The owner of the medical center asked for collaboration with the students one year after having seen a presentation of the student project from previous year. Two different groups of students worked with the company in 2015 and proposed two different Social Media Strategies. In end of 2016 the company employed a Digital Marketing manager, who would also be responsible for the presence of the company on Social Media.

5.4 Responses of the three companies to the interview questions

Table 1 shows the responses from the three companies to the interview questions.

Table 1: Responses to the interview questions by the three companies

	Company-1	Company-2	Company-3
Do you apply the social media strategy proposed?	Yes, we to continue and follow the strategy as planned.	Yes, we apply the social media strategy proposed three years ago by the students	No
	Yes, there is a person who	The owner manages himself	Digital Marketing manager

	monitors the customer posts and responds to their messages.	the webpage and follows the social media posts	started 3 months ago
Frequency of following posts	Twice a week	At least five times daily	Daily
Employee opinions regarding Social Media	The employees and the business operators believe that social media have an important role in promoting the business. Because of this we continue to frequently update the profile of the enterprise in the various instruments.	The store employees are very positive regarding the use of social networks and actively participate in creating own posts.	Necessary
Customer opinions	Customer feedback is mostly positive. If there is negative criticism, we take this into account in order to improve our business. If we make a change in the business, we inform it in our profiles on the various social networks so that our customers will know.	A positive acceptance by customers, this savvy of many likes and comments to my posts.	Particularly positive
Have your customers increased due to presence of your business at social media? What are the advantages you can see with using Social CRM?	Our main advantage is the new clientele. Customers who visit us usually report their opinions about our company through the social networks they participate in and so their friends become our new customers. Customers have increased and in most cases they are friends of friends. New clients usually book though the booking.com website.	With the help of social media we created a new clientele mainly at younger ages. Social media has the advantage of image presentation. I can upload photos of my products in my store and customers are coming and asking to buy the photos.	It is too early to say
Customer ages	The target group of the company is 18+ years. Customers participating in social networks are usually from 18-60 years.	Customers of all ages are engaged in social media, but most active ages are 25- 55 years old.	20 - 55 years old
Challenges/difficulties	There is a huge competition in the region in the field. For this reason, we strive to become better and to show it through Social Networks	I must give daily attention to the posts, but it is now easier and more affordable thanks to smartphones.	
Most popular social media tool?	Mainly Facebook and Tripadvisor	Certainly Facebook is the most popular	Facebook and Youtube
How do you measure success?	From the opinion of customers who come to our hotel. Several times they inform us that they have learned about our hotel through Facebook, booking, Tripadvisor, etc.	A long term goal is to increase customers. Daily we measure likes and annotations on our posts	Readability and increasing incidents
Future plans	Soon it will refresh our profile and also add "Pinterest".	We will continue our presence on Facebook, but we also plan to create accounts on other social media.	It is something new for us, we will expand depending on the needs of each time period

From table-1 we conclude that company-1 and company-2 implemented the social CRM proposed by the students in 2014. Both companies are very satisfied with the outcomes and also plan to extend their presence on social media in the future. Company-3 worked with the students on a social media strategy one year later (in 2015). The company has not applied the social media strategy proposed by the students, but instead recently employed a Digital Marketing manager, who is expected to actively promote the company through social media. The company already uses Facebook and YouTube in its social media marketing.

When asking the interviewed companies about what advice they would give to other companies the following advice was given '*A social networking strategy can only make good for an enterprise, provided the strategy is adjusted properly to the business and its needs. Social media is a contemporary word-of mouth tool that helps the company to be advertised and improved (when acting on negative comments) and this leads to increased profits'*.

6. CONCLUSIONS

This paper examined the importance of CRM, e-CRM and Social CRM for businesses. In particular Social CRM, a new trend that requires active engagement by customers and other stakeholders, was analyzed.

We described experiences from three family businesses that introduced Social CRM as a result of a project carried out as an assignment in the 'Social Media Networking' module of the MSc course in 'Web Intelligence' at the Department of Informatics of Alexander Technological Educational Institute of Thessaloniki. The assignment of the groups was to create a Social CRM Strategy in collaboration with a company.

The results showed that all three companies consider that the advantages for a company of the appearance on social media are cost-related due to the free nature of their use and viral nature of social media that increased the customer base. The disadvantages were related to the time that was needed to monitor the traffic on the different social networks.

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TESTING EMA INDICATOR FOR THE CURRENCY PAIR EUR / USD

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ABSTRAKT

The aim of this paper is to verify the effectiveness of EMA indicator according to selected time intervals. The underlying assumption is that, on longer timescales EMA is profitable and provides more relevant signals. The second objective of this paper is to test the signals of indicators in different months. It is believed that in September and January the number of trading signals on this indicator will increase. Testing will be done on the five-minute time frame. The test will be subjected to 65,000 rate values of the EUR / USD currency pair. Effectiveness of the analysis will be evaluated on the basis of digital (binary) option. Business strategy is based on EMA crossover indicator of current exchange rate. By the contribution there were confirmed hypotheses about more profitable signals when selecting a greater timeframe breadth of moving average. There was also confirmed an increased amount of signals in September, but not in January.

KEY WORDS

Digital option, technical analysis, forex, exponencial moving average

JEL CLASSIFICATION

CODE G150, G170

1.   INTRODUCTION

Technical analysis offers a multitude of options to respond to the changing situation on the markets with currency pairs. In their survey Taylor and Allen (1992) found that on the UK market at least 90% respondents use technical analysis in making decisions about their portfolios. Camphbell (1997, p. 27) even considers the possibility of predicting financial asset prices as the main issue of financial econometrics. In a study of Oberlechner (2001) can also be obtained the use of technical analysis in comparison with the fundamental one. Obelechner (2001) focused only on trading and even divided the traders according to time horizon of trading. According to the logic technical analysis is more widely used by intraday traders, 65.3%, while traders holding period of currency more than 1 year from 67.9% they tend to focus on fundamental analysis.

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The aim of this paper is to verify the effectiveness of EMA indicator according to selected time intervals. The underlying assumption is that, on longer timescales EMA is profitable and provides more relevant signals. The second objective is to test the signals of indicators in different months. It is believed that in September and January the number of trading signals on this indicator will increase.

2.   THEORETICAL BACKGROUND

Technical analysis predicts future movement of rates based on the analysis of past prices with the use of qualitative methods such as graphical analysis as well as quantitative methods, such as moving average, exponential moving average, or using a combination of both. In accordance with the basic definition of Murphy (1999, p. 3), basic prerequisites of technical analysis are market prices that reflect all events, courses changing trends and historical prices tending to be repeated.

Technical analysis tries to predict the future development of prices on the base of analysis of past development (Murphy, 1999). For this purpose multiple methods can be used. The basis is always mathematical statistics (Kaufman, 2013). Possibilities of technical analysis should be divided into two groups, namely technical indicators and price action.

Systems based on the price action are known even in the 18th century, when the Japanese on their trades with rice applied first candle charts. Today they are published slightly less than the technical indicators, for example, K. H. Lee, G. S. Jo (1999), and are the subject of research rather on the base of programming, such as ´Izumi at all´ (2006).

There are a number of technical indicators. Some are traditional and have been known for decades. Already in 1988 Colby issued encyclopedia of technical market indicators (Colby, 1988). More than three decades ago George Lane published his Lane's stochastic oscillator (Lane, 1984), or even in 70s the Relative Strength (RS) was developed by Wilder (1978). In the 80s-90s of 20th century for instance John Bollinger published Bollinger Bands indicator (Bollinger, 1992) which belongs to the group of channel systems that were already described by Kaufman (1987) and by this the list of indicators does not end.

Of more recent for example Chaikin oscillator is known (Achelis, 2001), and now widely used indicator MACD staged by Appel (2005). In 2007 (Cheung & Kaymak, 2007) the concept of combining technical indicators and fuzzy logic was introduced. Abbasi and Abouec took advantage of the system derived from neuro-fuzzy logic (Abbasi, Abouec, 2008). In 2009 Chavarnakul & Enke (2009) developed a hybrid model of stock trading using neuro-fuzzy concept called Genetic Algorithm (NF-GA). In 2015, the technical indicators (MACD in particular, and less well-known indicator Gann-Hilo) and fuzzy logic was used again (Chourmouziadis and Chatzoglou, 2015). Currently, there have always been new indicators constructed, such as Rubell at all (2016) based on both the fuzzy modeling, and a combination of statistical and mathematical indicators. The current ones are then subjected to various tests (da Costa, 2015).

Technical analysis can be applied to stock markets, commodity and currency. It can also be applied both to the shares directly, and to CFD and also to the derivative products of various kinds (options, futures, swaps). For example, the options still offer further options. One of them is a combination of options forming a variety of option strategies (Kolková, 2006). Others are a variety of exotic options, such as digital or binary, which were discussed for example by Rick Thachuk (2010), Jaworsky (2006), Jurník (2013) or Cánfas (2013). Regarding the use of technical analysis on these new financial products has been still little published. Alternatively, if so the attention is directed

almost exclusively to the pricing of options such as Hong joong y and Kyoung-sook Moonz (2011), Zmeskal (2010), Thavaneswarana at all (2013) and Miyake (2016).

Foreign exchange rate (hereinafter referred to as forex) is the largest financial market in the world with a daily transaction volume exceeding 5 trillion dollars. It is a decentralized market, and therefore, unlike other assets the currencies can be traded 24 hours a day.

The risk is a permanent element in any investment activity, and therefore also on the forex market. Technical analysis according to Hada and Adamuta (2015) plays a significant role in the prevention of risks and is a key point for hedging risk in transactions with currency pairs. Since Forex trades are particularly high-risk, moreover, in conjunction with digital options, it is also advisable to use technical analysis for predicting future changes.

3. RESEARCH METHODS

Implementation of technical analysis in a particular market is based on thorough preparation of trading system. This can be described according to Costa (2015) as a set of rules that define conditions for the commencement or termination of trading. In this paper we will set up a trading system based on technical indicator EMA.

3.1 Moving Averages

Moving averages quantify the average value of the data in the breadth of its timeframe. For example, 7-day moving average is an average value in the last week, 14- days in the last two weeks. After combining of moving averages of all days, we can make a curve of moving average. The platforms enabling trades on the forex in most cases include the ability to represent moving averages automatically. Therefore traders are a very used tool, but without knowledge of their principles, however, they are worthless.

Exponential Moving Average (EMA hereinafter) is considered a better tool than the simple moving average (Elder, 2006), because it gives more weight to current data and corresponds to changes in prices faster than the simple one. It can be expressed as,

$$EMA = P_1 \cdot K + EMA_0 \cdot (1 - K), \text{ where}$$

$$K = \frac{2}{N+1},$$

where N is the number of days to quantify the EMA,

P_1 Is today's course and

EMA_0 Is yesterday's value of EMA.

In this paper, we applied again trading system based on EMA crossing with the current exchange rate, when crossing above is the signal to sell and an opposite crossing means the purchase. There is used 9-day, 10-day, 12-day and 26-day EMA.

3.2 Methodology for evaluating the performance of the trading system

For analysis there were used the courses of EUR/USD currency pair. Data acquisition program Metatrader4 was used and the data with a five minute timeframe were subjected to the analysis. For a five-minute data there were analyzed 65,000 values of courses in the period from 03/06 /2015 to 19/04//2016. These data were drawn from the program Metatrader 4 that downloads offered by

most brokers. Through all broker (for example markets.com, cixmarkets, XTB, admiralmarkets and so one) then this program can draw data.

According to the trading system as defined in chapter 3.1, there were searched trading signals both to buy and to sell. Digital options with triple expiration were applied to these signals with the following logic: digital options up to the signals to purchase and digital options down to the signals for sale. In the current period digital options have 85.01% rate of return (for example, a broker XTB on the Basic Account). Based on this measure the total profits of the trading system are then calculated. All calculations are performed in Excel.

4.   RESULTS

In Table 1 there are presented the results of the trading system for EUR/USD back-testing and then applied using a digital option.

Table 1   **Testing of EMA According to Time Frame**

Indicator	Total Number of Signals	Number of Signals Generating the Profit	Percentage of Profitable Signals	Profit Using Digital Options
EMA 9	13 951	10 771	77,21%	15,63%
EMA 10	13 223	10 272	77,68%	16,04%
EMA 12	12 079	9 456	78,28%	16,55%
EMA 26	8 123	6 418	79,01%	17,17%

(Source: Author)

The table clearly shows that the choice of a higher timeframe leads to increased number of profitable trades and also to increased overall profits. Although it is a difference in tenths of percentage points a default assumption can be considered relevant.

Furthermore, the indicator EMA was tested in different months. It was confirmed that in the month of September there was an increased number of trades. This increase was up to two-fold, but did not generate higher profits. When using the binary options trades in September with all selected EMA indicators would be lost. The month of September can also be described as the lossiest month. The increase in the number of transactions has not been confirmed either in January. Among the most profitable months there were October, February and March. This clearly shows the use of the results in practice economics.

Table 2   **Testing of EMA in Different Months**

		June	July	August	September	October	November	December	January	February	March
9-day EMA	Signals	1 209,00	1 497,00	1 240,00	2 357,00	1 356,00	1 301,00	1 278,00	1 284,00	1 258,00	1 456,00
	Received Signals	913,00	1 142,00	960,00	1 011,00	1 067,00	1 007,00	987,00	988,00	992,00	1 131,00
	Percentage	75,52%	76,29%	77,42%	42,89%	78,69%	77,40%	77,23%	76,95%	78,86%	77,68%
10-day EMA	Number of Signals	1 139,00	1 417,00	1 164,00	2 235,00	1 282,00	1 251,00	1 208,00	1 218,00	1 198,00	1 390,00
	Received Signals	871,00	1 094,00	909,00	965,00	1 014,00	974,00	930,00	941,00	943,00	1 094,00
	Percentage	76,47%	77,21%	78,09%	43,18%	79,10%	77,86%	76,99%	77,26%	78,71%	78,71%
12-day EMA	Number of Signals	1 027,00	1 305,00	1 084,00	2 025,00	1 200,00	1 143,00	1 120,00	1 112,00	1 066,00	1 272,00
	Received Signals	786,00	1 008,00	850,00	860,00	962,00	900,00	861,00	870,00	842,00	1 015,00
	Percentage	76,53%	77,24%	78,41%	42,47%	80,17%	78,74%	76,88%	78,24%	78,99%	79,80%
26-day EMA	Number of Signals	731,00	829,00	748,00	1 327,00	784,00	807,00	750,00	726,00	706,00	848,00
	Received Signals	562,00	649,00	581,00	575,00	627,00	642,00	599,00	561,00	575,00	678,00
	Percentage	76,88%	78,29%	77,67%	43,33%	79,97%	79,55%	79,87%	77,27%	81,44%	79,95%

(Source: Author*)*

5.   DISCUSSION AND CONCLUSION

The results of this work show that the length of the time frame is very important when deciding about the indicator, which will be used for technical analysis. The analysis clearly demonstrates the fact that the forex shops with EUR / USD currency pair is preferable EMA with higher timeframe. Differences in generated profitable signals were very small and percentage differences were in tenths of a percent, however the effect was evident. Further the increase in trading signals has been proved in the month of September. This increase, however, did not offer a higher profit strategy. The month of September can be described as the most loss month of the period under review. In the month of January, there was not demonstrated a greater activity in signal generation, as well as there was not a higher profitability in this period. Among the most profitable months there can be included October, February and March.

The subject of further testing could be other strategies based on averages, for example, crossing of moving averages, or sequence of moving averages, or a combination of indicators based on averages with others, for example oscillators and torque indicators, volatility indicators, or indicators of support and resistance. Alternatively, other currency pairs, commodities, indices and stocks might be subjected to further exploration. It could also be an interesting moment to examine profitability of individual strategies over the years of formation when it is assumed that at the time the indicator gave a higher percentage of profitable signals.

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THE SPECIFIC CHARACTER TRAITS OF YOUNG ENTREPRENEURS IN SLOVAKIA

Monika SOBEKOVÁ MAJKOVÁ, Aleksandr KLJUČNIKOV

ABSTRACT

Worldwide scientific researches present the entrepreneurs have to declare specific characteristic traits to be successful in the business. This paper is focused on the comparison of the specific character traits between potential young entrepreneurs and other young people. The aim is to compare the three chosen character traits differences between these two focus groups by using the statistical method of Pearson´s chi-square and bring the answers on the questions why some people incline to becoming the entrepreneurs more intensively than others, and what are the differences between them in relation to the character traits and their personality characteristics. The research was conducted among 1233 young people in all regions of Slovakia in 2012. The results show, that young people who plan to become an entrepreneur, are more creative, willing to face the risk, more confident in the solvation of complicated problems and difficult tasks with the opposite group of respondents.

KEY WORDS

entrepreneurial traits, character traits, personal qualities of entrepreneurs, potential entrepreneurs, young entrepreneurs

JEL CODE

G11, G32

INTRODUCTION

Slovak, Czech and other foreign researchers (e.g. Belás at al. 2016, Deáková et al. 2010, Korauš at al.2015, Frese and Gielnik, 2014, Mura and Machová, 2015, Sidik, 2012, Sharma, Bozatzis and Jain, 2011, Tu et al., 2012, Soomro and Shah, 2015, Hvide and Panos, 2014, Knőrr et al., 2013 and Soininen et al., 2012, Košičiarová and Vincúrová, 2015 etc.) state that entrepreneurs have to have special personal qualities and characteristics to be successful in business. Sobeková et al. (2015) along with many other authors declare that entrepreneurs and SMEs are an important part of each market economy. But what about the young people who decided to become an entrepreneur? Can we identify the same character traits in their case or not? In this paper we have collected the evidence that may bring the answer on this fundamental question. The research, conducted in 2012 among more than twelve hundred young people in Slovakia, was aimed to prove that in relation to the chosen character traits potential young entrepreneurs are significantly different than people without entrepreneurial ambitions. The research team formulated a hypothesis that there are statistically significant differences in character traits of potential young entrepreneurs and other

young people. The aim of the research was to find solid statistical evidence to prove this statement. Statistical method of Pearson´s chi-square statistics was used for its verification.

1   Literature Review

The authors Sharma, Bozatzis and Jain (2011, p. 125) present the thought there may be no entrepreneurship without an entrepreneur. Due to the missing special individual personality features that are necessary for entrepreneurship not every person can or will become an entrepreneur. People without entrepreneurial ambitions may have a lack of psychological attributes, social functions and situational factors. The framework of the potential entrepreneur abilities and description of the entrepreneurial behaviour created by earlier research studies describes the entrepreneurship as a multidimensional process, and the character traits belong to its components. The researchers found that despite of the existence of favourable factors, a potential entrepreneur might decide not to exploit entrepreneurial opportunity; certain people act differently than others in exactly the same situation. We suppose that they act differently than others exactly because of the special character traits.

Behaviour in business is determined by many factors and character traits are one of the most important. Deáková et al. (2010) considers such features and capabilities as self – reliance, courage, responsibility, determination, creativity, scholarship and perseverance as the most important personal qualities of the entrepreneurs. It is necessary to look for specific knowledge and behaviours to increase the efficiency of administrative and production processes in a private company (Dobrovič at al., 2016). According to Belás et al. (2013) the entrepreneurs´ personal characteristics are very important in relation to the financial performance of the company.

According to Frese and Gielnik (2014) the entrepreneurs should have several personal traits that make them capable to act as the entrepreneur, investor, marketing specialist, seller etc. Soomro and Shah (2015) in their study declare that knowledge, skills and attitudes belong to the main characteristics of the potential entrepreneurs.Sidik (2012) confirms that entrepreneurs tend to manage their businesses by using strong and specific personal qualities. Delgado – García et al. (2012) proved on the sample of 335 entrepreneurs from the multiple industry fields in Spain that entrepreneurs' emotions and traits have the impact on the company goals. Esfahani and Pour (2013) presented the study about the effects of entrepreneurial characteristics of educational managers on the innovativeness of school organization. In their study they observed such entrepreneurial characteristics as: creativity, risk, seeking of challenges and ambiguity tolerance. Their findings indicate that such factors as the ownership status of schools and challenge seeking traits are significantly related to the innovativeness of school organizations.

Misra and Kumar (2000) brought a proposal of the framework describing the psychological profile of the entrepreneur and his behaviour, while Sharma, Boyatzis and Jain (2011) based on more than ten years lasting research study summarized the entrepreneur´s attitudes and personal characteristics as follows: innovativeness, creativity, proactivity, risk-taking propensity, internal locus of control, self-efficacy, tolerance for ambiguity, social intelligence, extraversion, miscellaneous competencies.

The first observed character trait in the research was *the ability to take the risk*. Kozubíková et al. (2015) examined the relationship between personality characteristics and approach to the perception and management of business risks. The results of their study showed a high level of confidence of individual groups of entrepreneurs in evaluation of their ability to manage financial risk and high intensity of entrepreneurial optimism regardless of the personal traits of the entrepreneurs. It is obvious that only some types of people are able to accept and face the risk. The risk is a very

common phenomenon in business, and it should be very difficult and stressful for the common people to face it. Kvietok (2013) states that only certain types of people are able to make the decision to take the risk of doing business. It is even more evident in the field of start-ups because of the higher risk level. Hvide and Panos (2014) declare that individuals who are more risk tolerant are more likely to open a start-up. Knőrr et al. (2013) and Soininen et al. (2012) classified the risk taking as the personal predisposition of becoming an entrepreneur. This character trait is also considered as the entrepreneurial trait by Misra and Kumar (2002) and Sharma, Boyatzis and Jain (2011). Ključnikov et al. (2013) highlight that only entrepreneurs with high risk tolerance and specific personal characteristics are able to handle the entrepreneurial risks of doing business abroad. At the base of the previous studies we can conclude that the character traits do have an impact on the ability to take the risk, along with the other factors, such as the gender or level of education. Belás et al. (2015) confirms that the gender of the entrepreneur and the level of education do not belong to the significant factors in relation to the approach of the SME entrepreneurs to financial risk management in the environment of the Czech companies.

Creativity was the next observed character trait. Bujor and Avasilcai (2016, p. 25) wrote that according to the Austrian economist Joseph Schumpeter (2012) the entrepreneur is someone who is able to "*convert a new idea or invention into a successful business*."

Creativity and the ability to bring a new idea are of the needed personal traits of entrepreneurs. Knőrr et al. (2013) and Almeida et al. (2014) confirm this statement. Almeida (2014) declared that the entrepreneurial individuals are characterized as enterprising and creative with some degree of social and investigative skills. This character trait is considered for entrepreneurial trait also by Misra and Kumar (2000) and by Sharma, Boyatzis and Jain (2011)

The *ability to solve a problem and make a decision* were the last observed character traits. Tu et al. (2012) together with the other authors (Douglas, 2005; Forbes, 2005) declared that knowing and exploring how individuals decide and solve their problems is necessary. Saravathy (2001) defined the existence of two basic types of entrepreneurial decision making – causation and effectuation decision making. They described the first type of decision making as the process where the entrepreneurs rely on analysis and estimations to explore and develop exiting and potential markets. Second type of decision making uses integrated decision making and imagination to create a new market.

According to Brockner et al. (2004) future entrepreneurs may focus on the identification of opportunities and processes in business, which is an example of causational decision making process. Effectuation decision making refers to the use of creativity and imagination in developing new markets or needs of customers.

Bujor and Avasilcai (2016, p. 25) declare that entrepreneurship can be taught. "*The will, skills, knowledge are some of the features that we can learn and improve through practice. Entrepreneurs go through life looking for opportunities to sell, innovate to bring value to customers and all their shareholders. The highest and hardest is to reproduce this value, the greater are their profits, and benefits.*" The research team and also many other authors in their studies proved that the entrepreneurs have to declare special abilities and skills that are not common for all people to be successful in business.

A large amount of literature is focused on the personal attitudes and education that helps to support entrepreneurship, but there is a lack of studies comparing the potential entrepreneurs and common people, focused on the differences between them. This is the reason to consider this study to be rewarding for academic research and economy practice.

2   Research Methodology and Scientific Methods of Survey

This part of the paper contains information about the scientific methods used in our research, about the way of data collection, the characteristics and size of the data sample, and information about alternative working hypotheses.

The research focused on the obstacles in starting business organised in cooperation with the Association of Young Entrepreneurs in Slovakia was performed in 2012 as a national research in Slovakia. The data were collected by an online questionnaire, so the choice of respondents was stochastic. The questionnaire was also placed on the specialized economic web-portals, focused on SMEs. The respondents were divided into two groups – the first one included young people who presented a potential to become the entrepreneur (n = 908), and the second group contained young entrepreneurs up to 34 years old (n = 325). This paper is focused on the first observed group – young people with the age up to 34 years that had ae entrepreneurial potential (n=908). According to the calculated sample the research team assumes that the data are representative, and have the reliability of 95 %. The sampling error of +/- 5 % should be considered. The minimum size of the sample should be calculated according to the formula $n = (Z)^2 \times p \times q) / 0,05^2$ where p and q is the share of the sample and Z for 95 % reliability is 1.96. The size of the minimum sample was 384, while the real size of our sample was 908. 71.48 % (n = 649) of respondents (46.84 % of them were male and 53.16 % female) declared that they plan to become an entrepreneur in the future. 28.52 % of the respondents (n = 259) stated that they don´t want to do a business in the future (21.52 % of them were male and 78.48 % female).

Formulation the Survey Hypotheses
Microsoft Excel (Office 2007) and its possibilities in data processing (pivot tables) were used for the analysis of the researched data. The tools of descriptive statistics (averages and percentage) were the important instruments of the research. The methods of comparison and deduction were used for the data analysis. The statistical method of Pearson´s chi-square at the significance level of 5 % was applied by using the statistical software available at www.socscistatistics.com for the verification of the existence of the statistically significant dependences and differences between the selected factors. If the calculated p-value was lower than 5%, the null hypothesis was rejected, and the alternative hypothesis was adopted. Due to the length limitations the paper presents the results of the selected problems. The arguments we constructed using the method of expert estimation.

The research team compared the following character traits of the respondents from the group of potential entrepreneurs and their counterparts:
- Ability to accept and face the risk
- Creativity and new ideas
- Ability to solve a complex task

The authors defined four working alternative hypothesis (H1 – H3) for each of chosen character trait, the accuracy of which was verified by the statistical methods.
H1: Young people who want to become an entrepreneur are willing to face the risk much more intensively than others. We assume this character trait is one of the most important for the entrepreneurs.
H2: Potential entrepreneurs are statistically significantly more creative than young people without entrepreneurial ambitions. We assume that creativity is an essential character trait of the entrepreneurs, who are forced to be creative in solving problems and finding interesting solutions.

H3: Future young entrepreneurs are more confident, more capable to solve complex tasks in comparison with other young people. They have to face more tasks, problems and challenges they are confronted with and they have to believe they can do it.

3   Results and Discussion

The ability to face and accept the risk was the first observed character trait. Table 1 presents the obtained results. We assumed that this character trait is a typical personal trait of the entrepreneurs. Since they do business in permanently changing environment and they have to be able to face the business risks. Potential entrepreneurs (65.18 %) are willing to accept and face the risk almost twice as likely as other young people (37.45 %). These results allow us to *confirm alternative working hypothesis H1* with 99 % level of probability ($\chi^2 = 89.2903 = \chi^2_{0,01 \text{ with } 2 \text{ dgf}}{}^2$). *P-value* is < 0.00001.

Tab.1: Pearson´s chi-square calculation

There is no problem for me to take risks	Disagree		Agree		Don´t know		Total	
	%	absolute values (AV) and chi-square subtotals	%	absolute values and chi-square subtotals	%	absolute values and chi-square subtotals	%	AV
PYE*	23.11	151(204.10)[13.81]	65.18	423(364.14)[9.51]	11.56	75(80.76)[0.41]	100.00	649
OYP**	49.03	127 (73.90)[38.15]	37.45	73(131.86)[26.27]	13.51	35(29.24)[1.13]	100.00	235
Total	-	278	-	496	-	110	**100.00**	**884**[3]

Source: own processing
* Potential young entrepreneurs
 **Other young people

The results of the study are conformal with the opinions of such experts as Misra and Kumar (2000) and Sharma, Boyatzis and Jain (2011) who consider risk-taking as one of the most important character trait of the entrepreneurs. It should be very difficult and stressful to face the risk for common people. This fact was also confirmed by Kvietok (2013) who stated that only a specific type of people is able to make the decision to take the risk of doing business, which is more evident for start-ups due to the higher risk level. Hvide and Panos (2014) declared that individuals who are more risk tolerant are more likely to start-up firms.

Creativity and ability to bring new ideas was the second observed character trait that should be specific for the entrepreneurs. The research team supposed that potential young entrepreneurs will be more creative than other young people. The value of Pearson´s chi-square statistic was $\chi^2 = 63.7899 = \chi^2_{0,01 \text{ with } 2 \text{ dgf}}$. This result allows us to confirm alternative working hypothesis H2. The level of probability was 99 % and *p-value* is < 0.00001. Chi-square calculation confirms that there are statistically significant differences in the level of creativity between potential young entrepreneurs and other young people. Potential entrepreneurs are statistically significant more often more creative than other young people because they are forced to be creative in problems solving and identification of interesting solutions.

The results of the research confirm that potential entrepreneurs are statistically significantly more creative than other people. This finding agrees with the opinion of Bujor and Avasilcai (2106) and

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[2] Degrees of freedom
[3] Grand total in chi-square calculation

Schumpeter (2012) who defined the entrepreneur as someone who is able to "*convert a new idea or invention into a successful business.*" The results are also conformal with Knőrr et al. (2013) and Almeida et al. (2014) who confirmed this statement, and Almeida (2014), Misra and Kumar (2000) and Sharma, Boyatzis and Jain (2011) who agreed that creativity is an important character trait of the entrepreneurs.

Alternative working hypothesis H3 was focused on the ability to solve complex tasks. The research team again assumed that this ability is an important character trait for future entrepreneurs. This assumption was confirmed. Ability to solve complex tasks was marked as a character trait for 90.76 % of the potential entrepreneurs. It is by 10.84 % more than in case of other young people. The differences between these two groups are statistically significant. The value of chi-square statistic was ($\chi^2 = \mathbf{29.9824} = \chi^2_{\mathbf{0,01\ with\ 2\ dgf}}$). This result allows us to *confirm alternative working hypothesis H3* at the level of probability of 99 %. *P-value* is < 0.00001.

The research team proved that not every young man has a potential to become and an entrepreneur in general because their character traits are different and some people do not have personal characteristics suitable to become an entrepreneur. This scientific outcome is very important for economic practice in Slovak Republic. It is linked to the alarming issue of young people's unemployment, one of the substantial problems of the European Union and Slovakia. According to Eurostat youth unemployment rate was at the level of 33.7 % in 2013, and and decreased on the level of 29.7 % in 2014, while the average EU level was just 23.7 % in 2013 and 22.2 % a year later. Slovakia declares the tendency to support young unemployed people to start their own business. The general support system does not evaluate whether all of the thousands of young unemployed people are suitable candidates for doing business. Basically every person can start doing business if he wants to. Our results indicate that the state support should be focused on people with interesting business ideas and whose personal profile matches the ones of the potential entrepreneur. We think that is the way how to effectively provide the state support for young entrepreneurs.

CONCLUSION

The research results proved that the abilities and personal traits of the entrepreneurs are different in comparison with other young people. These findings, that are conformal with a large number of scientific studies presented in literature review, allows us to confirm that such specific character traits as the creativity, ability to face a risk, ability to solve a tasks and changing risk is more typical for young entrepreneurs in comparison with other members of the society. By the tools of Pearson´s chi-square statistic we proved this fact at 99 % level of probability for all observed character traits. These evidence might be interesting and suggestive for policy makers. While comparing chosen character traits and their occurrence among young potential entrepreneurs and other young people we found that potential entrepreneurs are significantly different. This fact indicates that general broad-based state support in starting new business might have insufficient effectivity, and its narrowing for the people who meet certain requirements might be effective.

The strength of the presented research is in the homogeneity of the sample in comparison with the basic data set and the size of the sample. The research has some limitations. The most important limitation is the fact that the respondents fulfilled the questionnaire online, and the research team was unable to organize a more detailed face to face interview. The next limitation was the territorial focus of the research and the size of the sample. The future direction of the presented research will be focused on a comparative analysis of the entrepreneurial perception of financial and credit risks in a wider geographical area of the countries of V4.

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EMPIRICAL EVIDENCE OF ENTREPRENEURIAL COMPETENCIES AND FIRM PERFORMANCE: A STUDY OF WOMEN ENTREPRENEURS OF NIGERIA

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ABSTRACT

The purpose of current study is to investigate the effects of entrepreneurial competencies on firm performance of businesses owned by Nigerian women entrepreneurs. The 200 respondents of this study are women entrepreneurs operating micro-business units in Kaduna state, Nigeria. Survey questions was used to collect data. The study utilises SPSS and SmartPLS 2.0 to analyse the data. The findings indicated that strategic, opportunity and organizing competencies significantly affect the firm performance of women entrepreneurs in Nigeria.

KEYWORDS

JEL CLASSIFICATION

1. INTRODUCTION

Entrepreneurs has been gaining more interest in recent years due to its' ability to create jobs, alleviate poverty and as innovator to new goods and services (Adesua-Lincoln, 2012). According to Cohoon, Wadhwa, and Mitchell (2010) entrepreneurship, enables societal and economic transformation by providing the community with wealth. Thus, with such importance attached to entrepreneurship, there is an urgent need to investigate the type of competencies required to make entrepreneurial endeavour a success.

Competencies of the entrepreneurs are one of the significant determining factor for success, performance and growth or failure of business operation (Brinckmann, 2008; Kiggundu, 2002; Mitchelmore & Rowley, 2013). Furthermore, women entrepreneurs mostly operate small scale type of businesses which requires the businesses to depend mainly on the competencies of the owner. Thus, understanding the nature of such competencies in the context of women entrepreneurs is very important (Mitchelmore & Rowley, 2010; Mitchelmore, Rowley, & Shiu, 2014).

However, female led businesses in Nigeria like their counterpart in other parts of the world face numerous business challenges which ranges from competing with foreign-made products to bigger and smaller businesses owned by male entrepreneurs in their country. For them to remain in business despite these hitches, they need competencies that will enable them to present their goods and services to their customers at price that will yield better sales and profitability. In view of preceding discussion, Mitchemore et al. (2014) suggested that further studies need to be conducted on competencies of women entrepreneurs and its relationship with their business success. Therefore, the aims of this study are: To examine the effects of strategic, opportunity and organizing competencies on firm performance.

2. LITERATURE REVIEW

2.1 Women Entrepreneurs in Nigeria

According to Woldie and Adersua (2004) globally, the numbers of women entrepreneurs have increased and their impact is just beginning to be felt. The number of business owned by them continues to increase steadily worldwide. It was estimated that firms owned by women accounted for 25% to 33% of all businesses globally (National Foundation for Women Business Owners, 1998) as cited in Woldie and Adersua (2004). Report from World Bank Group (2013), shows that women contribution to economic growth and massive reduction of poverty around the world. In addition to this, the report also showed that in the United States, for example, women-owned firms are growing at more than double the rate compared to other firms, contributing nearly $3 trillion to the economy and they created 23 million jobs. It was projected that in the year 2018, more that than half of 9.72 million new jobs that will be created in the US in SMEs sector will be created by SMEs owned by women (VanderBrug 2013).

The same situation exists in Nigeria. Dated back to the pre-colonial and post-colonial era, women dominated ownership of both wholesale and retail businesses in Nigeria (Aderemi, Ilori, Siyanbola, & Adegbite, 2008). Women entrepreneurs in Nigeria are major contributors to economic growth and they have generated employment to a teeming population (Iyiola & Azuh, 2014). Evidence can be found in the report of the survey conducted by SMEDAN and National Bureau of Statistics (2013), which shows that women-owned business was able to generate 22,591,229 employments across Nigeria. Wholesale/retail businesses gained the highest portion of over 14 million which represent 62.66% of the total jobs generated by women entrepreneurs. Mining and quarrying produced the lowest rate of employment generation, where they generated barely 15 thousand jobs.

Women-owned businesses have been expanding to almost all the sectors of the economy. For instance, they are making progress towards establishing their presence in businesses in the formal sector and many businesses in the informal sector are owned by women. Their involvement in agricultural activities enables them to provide a sizable percentage of the labour force on the farm and they supplied domestic food in Nigeria. Ukonu and Tafamel (2011) stated that their entrepreneurial activities in both micro, small and medium scale production activities and their involvement in the formal/informal sector have added value to the economy of Nigeria. The social aspects of the women themselves and their immediate environment were not left out.

Therefore, it is obvious that women entrepreneurs in Nigeria are major contributors to the economy, as they strive to make a difference in the socio-economic arena. Their localities not only benefited from their numerous ideas, energy, and capital resources. They were also able to generate jobs as well as open more business opportunities for suppliers and other business chain (Iyiola & Azuh, 2014). Empowering women economically in Nigeria is a key factor in improving the economy. This

is one of the reasons for Nigeria to seek for more empowerment for women entrepreneurs to promote rapid economic development (Adetoyinbo, 2015).

2.2 Entrepreneurial Competency

Competency as a term has long been used in most management literature. It can be divided into two; that is natural and unnatural competence. Meutia and Ismail (2012) stated that natural competence consists of characteristic, attitude, self-image and social role. Unnatural or learned competence is skills that are needed when a task is done, which is acquired through practical and theoretical learning. This includes; skills, knowledge and experience. Therefore, entrepreneurial competencies are the underlying characteristics possessed by an individual which assist them to execute the tasks in a manner that is most befitting (Lazar & Paul, 2015).

2.2.1 Strategic Competency

Strategic competency is related to setting, evaluating and implementing the strategies for the whole firm (Man, Lau, & Chan, 2002). Ahmad, Ramayah, Wilson, and Kummerow (2010a) articulated strategic competency as the ability of the entrepreneur to monitor progress toward strategic goals, prioritise task to agree with business objectives, identify long-term issues, threats or opportunities, current actions to be in line with strategic goals, matched the outcome against strategic goals, redesign business to achieve long-term goals adequately, determine strategic actions through weighing costs and benefits. It is also, the ability to setup long term strategic plan that relates to the vision of the organization and also develops strategies that will enable the achievement of the plan (Stonehouse & Pemberton, 2002).

2.2.2 Opportunity Competency

Among the central functions of the entrepreneurs, is to be able to identify and make the best use of business opportunities that can stimulate the performance of the firm. Opportunity competency comprises of the entrepreneurial activities in actively seeking new opportunities, identifying opportunities, and developing the opportunities (Seabela & Fatoki, 2014). Hoyos-Ruperto, Romaguera, Carlsson, and Lyytinen (2013) stated that the positive perception of numerous opportunities available in the marketplace is one of the important conditions that are crucial to the success of the firm. It means that women entrepreneurs that want accelerated growth for their business should take possession of this type of competency with seriousness. If not her business will not experience growth as expected.

2.2.3 Organizing Competency

Organizing competency is the capacity of the entrepreneur to direct, lead, delegate, encourage, plan and schedule work, develop program and prepare the finances of the firm (Kaur & Bains, 2013). This competency is related to managerial competency (Umeze & Ohen, 2015). It involves managing both internal and external programs of the organization, for instance, promotion of firm's goods and services, proper financial management, logistics and management of human resources (Lans, Verstegen, & Mulder, 2011; Wickramaratne, Kiminami, & Yagi, 2014).

Furthermore, this competency also involves a process of breaking down the task into convenient obligations or duties, in which task will be grouped and qualified staff will be responsible for its execution as planned (UNESCO-Nigeria TVE, 2010). Thus, organizing competency will aid women entrepreneurs in the efficient coordination of all resources of their firms for optimum utilization. By ensuring that right thing is done at the right time by the right people.

2.3 Firm Performance

In the field of strategic management, firm performance has been considered as one of the ultimate criterion variable (Aziz & Mahmood, 2011). It is a central issue in business activities. Therefore, achieving it demand adequate and diligent planning and commitment (Shehu & Mahmood, 2014). According to Oo (2013) firm performance could mean the success level of the business in the market within which it operates. Business performance can also be referred to as the yardstick use to quantify results achieved by the firm for a period (Sucipto, Oktaviani, & Rizal, 2015). Whatever the definition adopted, as indicated by Trkman (2010) business performance evaluation is a critical issue. Hence the performance enables monitoring of either success or failure of the organization. Meanwhile, issues such as customer brand loyalty, an increase in the volume of sales, customer satisfaction, growth in market shares and adequate return on investment are integral components of firm performance (Morgan, 2012).

2.4 Research Framework

This research framework is proposed for empirical investigation of the relationship between the constructs.

Entrepreneurial Competency
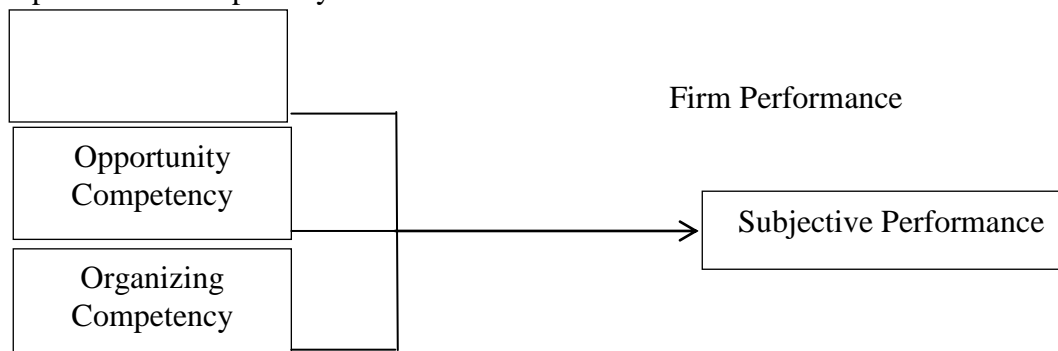
Figure 1 **Research Framework** (Variables adopted from Man, 2001; Ahmad, 2007)

For women entrepreneurs to achieve business success, acquiring and leveraging on their competencies is of critical importance. Competencies will enhance the competitiveness of their enterprises in the market (López-Gamero, Molina-Azorín, & Claver-Cortes, 2009). Thus, resources and capabilities possessed by the entrepreneurs will provide them with the avenue to perform better than their competitors and achieve remarkable success in their business endeavours. Base on the foregoing discussion and research framework in figure 1, the following hypotheses were formulated:

H1: Strategic competency will have positive and significance effects on firm performance.
H2: Opportunity competency will have positive and significance effects on firm performance.
H3: Organising competency will have positive and significance effects on firm performance.

3. RESEARCH METHODS

3.1 Sample and Data Collection

The sample of this study comprised of 200 women entrepreneurs. They are running various micro businesses in Kaduna state, Nigeria. Simple random sampling technique was adopted for this study. To obtain the 200 respondents, the process involves picking of pieces of paper in box, which

contains the names of the women entrepreneurs, as provided by Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) Kaduna state office. This process was done until 200 women entrepreneurs were picked. Thus, the data were collected using questionnaires.

3.2 Survey Instrument

Survey instrument used to measure entrepreneurial competencies such as strategic, opportunity and organizing competencies was extracted from the work of Man (2001). Each of the female entrepreneurs were requested to rate the items that best described the competencies they possessed. A five point Likert-scale was used. The ratings started from 1 strongly disagree to 5 strongly agree. Furthermore, survey instrument used for measuring firm performance was adopted form Chandler and Hanks (1993) . The rating was also based on five point Likert-scales, starting from 1 = very dissatisfied to 5 = very satisfied.

4. RESULTS

This section presents findings of this study. Two softwares were used, which comprised of Statistical Package for social sciences (SPSS) and Partial Least Square (SmartPLS) version 2.0. SPSS was used for data entry and purification. SmartPLS was used for higher statistical analysis. In this study, no case of missing data and extreme case of outlier was recorded.

The profiles of the respondents as showed in Table 1, revealed that majority of the respondents were 21 years and above. This means that, majority of women entrepreneurs are matured business owners. Although, many of the respondents' level of education are below university degree but they have been running their businesses for many years. They have considerable years of business experience which is useful for them in day to day running of their businesses.

Table 1 **The profile of the respondents**

Description	Frequency (n=200)	Percentage (%)
Age		
20 or below	53	26.5
21 – 40	91	45.5
41 or above	56	28.0
Marital Status		
Married	112	56.0
Single	61	30.5
Divorced	12	6.0
Widowed	15	7.5
Children		
Yes	130	65.0
No	70	35.0
Years in the current business		
5 years or below	51	25.5
6 – 10 years	75	37.5
11 years or above	74	37.0
Level of education		
Secondary or lower	36	18.0
Diploma/NCE	48	24.0
HND/First degree	78	39.0
Post graduate	32	16.0
Others	6	3.0

Type of business		
Service	39	19.5
Trade	83	41.5
Manufacturing	54	27.0
Agriculture	24	12.0

NCE = National Certificate of Examination
HND = Higher National Diploma.

Furthermore, test for common method bias was conducted, because data for the constructs were gathered using the same questionnaire from a single respondent. Harman's single factor test was conducted to identify potential problem. The result showed that 7 distinct factors emerged which was responsible for 59.57% of variance from un-rotated factor analysis that used the Eigen-value greater that one criterion. The first factor only explains 24.23% of the variance. Hence no single dominant factor emerged. Therefore, common method bias can be concluded not to be an issue in the data collected for this study.

4.1 Measurement Model Evaluation

The measurement model evaluation of this study was done to determine the reliability of the items and construct validity. It is made-up of internal consistency reliability and constructs validity to establish items reliability and constructs' accuracy (Hair, Hult, Ringle, & Sarstedt, 2014).

4.1.1 Reliability Analysis

In the evaluation of internal consistency reliability, outer loadings and their respective indicator reliability are presented to portray Composite Reliability. This is because, Composite reliability emphasises on individual item reliability which must be 0.5 or above (Hair et al., 2014). However, Hulland (1999) argue that indicator is said to be reliable if the value is 0.4 or above. The result of this study revealed that all indicators are reliable. Hence, the values were greater than 0.4 as recommended. Similarly, all composite reliability (CR) measurements are more than the cut-off values of 0.70 recommended by (Hair et al., 2014). This indicates that all the constructs are reliable as shown in Table 2.

4.1.2 Construct Validity

Convergent validity and discriminant validity are evaluated to indicate construct validity. While the convergent validity is examined through the outer loadings and AVE. Discriminant Validity is examined through Fornell-Larcker criterion.

4.1.3 Convergent Validity

Hair, Black, Babin, and Anderson (2010) argue that, 0.6 or higher is the minimum outer loading coefficient in a measurement model. Hair et al. (2014) suggested 0.70 or higher as minimum outer loading. Furthermore, Hair et al. (2014) suggested an AVE value of 0.50 or above shows that, on average, the variable explains more than half of the variance of its indicators. Table 2 showed that, all the outer loadings are above 0.60 while the (AVE) have achieved 0.50 and above.

Table 2 **Parameter Estimates of the Measurement Model**

LV	MV	Outer Loadings	IR	CR	AVE
STRCOM	STRCOM2	0.683	0.466	0.828	0.547

LV	MV		IR	CR	AVE
	STRCOM3	0.704	0.496		
	STRCOM5	0.778	0.605		
	STRCOM6	0.789	0.623		
OPPCOM	OPPCOM1	0.920	0.846	0.819	0.696
	OPPCOM3	0.738	0.545		
ORGCOM	ORGCOM1	0.731	0.534	0.891	0.540
	ORGCOM2	0.790	0.624		
	ORGCOM3	0.794	0.630		
	ORGCOM4	0.684	0.468		
	ORGCOM5	0.753	0.567		
	ORGCOM6	0.714	0.510		
	ORGCOM7	0.666	0.444		
FIRMPER	FIRMPER2	0.698	0.487	0.843	0.519
	FIRMPER4	0.632	0.399		
	FIRMPER5	0.718	0.516		
	FIRMPER6	0.758	0.575		
	FIRMPER7	0.787	0.619		

LV = latent variable, **MV** = Manifest variable, **CR**= Composite Reliability, **AVE**=   Average Variance Extracted, **IR** = Indicator Reliability. (Result extracted from PLS2.0 software)

4.1.4 Discriminant Validity

It means that, a variable is unique and captures phenomena not represented by other varying constructs in the model. The most popular method used in determining discriminant validity of construct is Fornell-Larcker criterion. It indicated that square root of AVE of each variable greater than the correlation for each construct. The figures in bold in Table 3 are all greater than each of the coefficients on which they have been placed. This indicates that, a Discriminant Validity of constructs has been achieved (Hair et al., 2014). The result of discriminant validity is present in Table 3.

Table 3 **Discriminant validity of construct Fornell-Larcker criterion**

	FIRMPER	OPPCOM	ORGCOM	STRCOM
FIRMPER	**0.720**			
OPPCOM	0.338	**0.834**		
ORGCOM	0.384	0.265	**0.735**	
STRCOM	0.388	0.345	0.385	**0.740**

FIRMPER = Firm performance, OPPCOM = Opportunity competency, ORGCOM = Organising competency, STRCOM = Strategic competency. (Result extracted from PLS2.0 software)

4.2 Structural Model Evaluation

The paths of the relationship between the independent and dependent variables were computed in the structural model and bootstrap analysis was done to evaluate the statistical significance of the path coefficient. The significance levels were set at $p < .10$ $p < .05$ and $p < .01$. The critical values are 1.65, 1.96 and 2.57. The confidence levels are taking at 90%, 95% and 99% respectively. The 500 bootstrapping depicting coefficients for the paths regression effects is presented in figure 2.
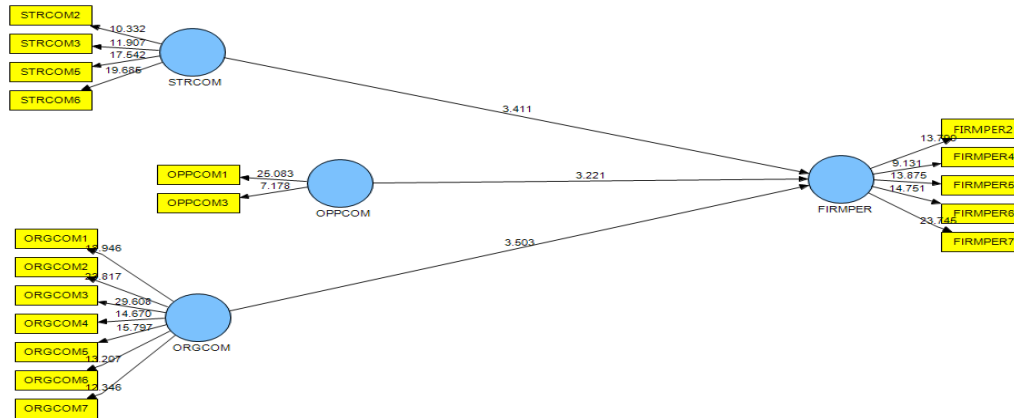
Figure 2 **PLS 500 Bootstrap Graph (Extracted from PLS2.0 software)**
STRCOM = Strategic competency, OPPCOM = Opportunity competency, ORGCOM = Organising competency, FIRMPER = Firm performance.

From the regression results all the three constructs of independent variables were positively and significantly related to firm performance. Strategic competency (STRCOM) with (β = 0.227, t = 3.411, p < 0.01) has a direct positive and significance effect on firm performance (FIRMPER). Opportunity competency (OPPCOM) with (β = 0.195, t = 3.221, p < 0.01) has a direct positive and significance effect on firm performance (FIRMPER). Similarly, organizing competency (ORGCOM) with (β = 0.245, t = 3.503, p < 0.01) has a direct positive and significance effect on firm performance (FIRMPER). Therefore, hypotheses H1, H2 and H3 of this study were all supported. Table 4 shows the statistical detail of parameter estimates of direct effect relationships for this study.

Table 4 **Parameter Estimates of Direct Effect Relationships**

Hypotheses	Path	B	SE	*P value*	*t* value	Decision
H1	STRCOM -> FIRMPER	0.227	0.066	0.000	3.411***	Supported
H2	OPPCOM -> FIRMPER	0.195	0.061	0.000	3.221***	Supported
H3	ORGCOM -> FIRMPER	0.245	0.070	0.000	3.503***	Supported

***significant at p < 0.01, **significant at p < 0.05, *significant at p < 0.10, All hypotheses are one tailed. (Result extracted from PLS2.0 software)

4.3 Coefficient of Determination (R^2)

As a degree of model's predictive accuracy, R^2 represents the exogenous constructs' combined effects on the endogenous construct. Scholarly researches consider 0.67, 0.33 and 0.19 as substantial, moderate and weak respectively (Chin, 1998). In this structural model, the three exogenous variables; strategic competency (STRCOM), opportunity competency (OPPCOM) and organizing competency (ORGCOM) explained 25% of the variance in firm performance (FIRMPER) as dependent variable. The Coefficient of Determination (R^2) for this study is considered weak.

4.4 Effect Size (f^2)

This is an evaluation of fundamental impact of exogenous variables on the endogenous variable when the former is omitted from the model. Chin (2010) stated that, in social science researches, 2% effect sizes are small but acceptable, 5-10% moderate, while 11% and above are substantial.

Paterson, Harms, Steel, and Credé (2016) stated that, based on the opinion of Cohen, lots of effects in the social sciences are mostly small, but acceptable. The effect size f^2 was determined using this formula:

$f^2 = \dfrac{R^2 \text{ inclusive} - R^2 \text{ exclusive}}{1 - R^2 \text{ inclusive}}$

where;

R^2 inclusive = Variance explained coefficient when the variable is included in the model.

R^2 exclusive = Variance explained coefficient when the variable is excluded.

1 = constant

The effect size as presented in Table 5 consist of STRCOM (0.054), OPPCOM (0.038) and ORGCOM (0.062). The result of the interaction between the independent variables and dependent variable indicated that the effect of strategic and organizing competency on firm performance are moderate but effect of opportunity competency is small on firm performance. Therefore, all the three independent variables of this study have significant effect on the dependent variable.

Table 5 **Effect Size (f^2)**

Variable	R^2inclusive	R^2exclusive	Effect (f^2)	Size
STRCOM	0.248	0.207	0.054	Moderate
OPPCOM	0.248	0.219	0.038	Small
ORGCOM	0.248	0.201	0.062	Moderate

STRCOM = Strategic competency, OPPCOM = Opportunity competency,
ORGCOM = Organising competency.

4.5 Predictive Relevance (Q^2)

To obtain predictive relevance of exogenous variables on the endogenous variable, Cross-Validated Redundancy is used. Every dth data point in the construct 's indicators are omitted and evaluates the parameters with the remaining data points. The omission distance is usually chosen between 5 to 10. For this study 7 was chosen. Hair et al., (2014) stated that values greater than zero shows that exogenous constructs have predictive relevance for the endogenous construct. Table 6 presents the result of predictive relevance for this study. The table showed that all independent variables have predictive relevance on dependent variable. Hence, all Q^2 have values > 0.

Table 6 **Predictive relevance (Q^2)**

	Endogenous variable
Number of Rounds	Firm Performance
Case 1	0.159
Case 2	0.124
Case 3	0.042
Case 4	0.111
Case 5	0.145
Case 6	0.092
Case 7	0.127

All cases were obtained by 1 – SSE/SSO using blindfolding technique.
SSE = Sum of Square Error. SSO = Sum of Square Observation. (Result extracted from PLS2.0 software)

5. DISCUSSION

The result of this study proved that entrepreneurial competency plays a significant role in successes recorded by the Nigeria women entrepreneurs. Their competency enables them to triumph in the market despite stiff competition in their respective business environment.

In one hand, the result obtained in this study agrees with the result of the study conducted by some of the previous researchers. On the other hand, it did not concur with others. For instance, the study conducted by Man, Lau, & Snape, (2008) indicated that there is a direct relationship between strategic competency and business performance especially when investment efficiency was used to evaluate the performance of the firm. Study conducted by conducted by Man and Lau (2005) revealed that business entrepreneurs Hong Kong ranked low in strategic competency. They claimed that scope of their business is low, they don't need strategic competency.

However, the results of this study proved that it is of utmost importance for business owners to have long term and comprehensive plan for the business. Plans and its resultant execution cannot be achieved without possession of competencies. Hence, strategic competency possessed by women entrepreneurs in Nigeria enables them to take their business forward.
Similarly, opportunity competency is considered as one of the most distinctive competencies for the business owners. Business opportunities are those needs and want of the customers to be satisfied. It is not every business opportunity that is profitable. They must be evaluated before investing in it. The result obtained in this study shows that women entrepreneurs in Nigeria can actively search and make fortuitous discovery of business opportunities. They understood that discovery of profitable business opportunities will provide avenue for their business to achieve success. Thus, opportunity competency encouraged women entrepreneurs in Nigeria to take considerable risks which eventually turn out to be a profitable business venture.

Furthermore, the result of this study proved that organizing competency has the capacity to improve the performance of a business firm. This is similar to study conducted by Ahmad (2007) who indicated that those entrepreneurs in Australia and Malaysia spend most of their time in planning and organizing human and other physical resources of their firms. They understood that without organizing these resources, business success will be far away from them. Women entrepreneurs in Nigeria also took their time to ensure that they organised their resources, they delegate task effectively and motive one or few staff working with them. Through this, performance of their firm was enhanced. Efficient coordination of the little resource in the disposal of entrepreneur successes can be achieved. Therefore, the results obtained from this study proved that entrepreneurial competencies such as strategic, opportunity and organizing competencies can influence the success of firms owned by women entrepreneurs in Nigeria.

6. CONCLUSION

In any profit-making firm, the owner of such business is the most vital element. The owner is the one responsible for the provision of all necessary resources needed for day to day running of the business to achieve success. They also have in their mind where they want the business to be in the future, which will be made known to their employees and subordinates. Therefore, for women entrepreneurs in Nigeria acquiring and implementing competencies has become very crucial. The confirmation obtained from this study proved the link between competencies of women entrepreneurs and success of their firms. To this end, government of Nigeria and other stakeholders need to focus their attention on issues that is related to entrepreneurial development of women such as, giving them qualitative training and retraining, provision of loan facilities at a low interest. The

women entrepreneurs have the potential to contribute to economic development of Nigeria via job creation and poverty alleviation.

It is therefore, recommended that future research need to focus on women entrepreneurs in informal sector, hence this study questionnaires were administered to women entrepreneurs in formal sector. Mixed method research approach can also be conducted for more understanding of competencies of women entrepreneurs, its interaction and deployment to improve performance of their businesses.

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PRINCIPLES OF WORKPLACE DEMOCRACY: CASES FROM THE CZECH REPUBLIC

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ABSTRACT

The article is about the concept of management of democratic companies in the Czech Republic with a focus on the principles of workplace democracy. The analysis is based on four case studies of democratic companies. The case studies have been drawn up on the basis of a questionnaire survey among the workers of companies and interviews with their executives. The research has shown the importance of even a high rate of implementation of the various principles in all surveyed companies. The best rated principle is "dialogue and listening". In the case of the principle of "reflection and assessment", it will show certain deficiencies in the provision of feedback. Principles of workplace democracy identified in interviews mostly agree with the principles referred to in the literature. Resulting from the research, it proposes recommendations and suggestions for further research.

KEY WORDS

democratic company, workplace democracy, freedom-based principles, management

JEL CLASSIFICATION

L26, M10

INTRODUCTION

In the 20th century many authors have considered that the bureaucratic organizations are technically capable of achieving the highest productivity and they have thought that they are the best possible solution for a fast developing world. Many theorists, however, have referred to the negative consequences of bureaucratic controlled organization which are as follows; frequent conflicts between employees and management, stopping production, illegal strikes, or even the violent

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clashes (Carney, Getz, 2013: 43). The area of technology, geopolitics and lifestyle has over the last fifty years changed fundamentally; however, the management has changed just a little. These slight changes, however, are not able to keep up with the speed of innovation and other global changes (Hamel, Breen, 2008: 17-18). Slinták (2015) stresses the need to change the philosophy of management based on a culture of "how" to a management philosophy based on a culture of "why". An organization should choose a new direction, which will be different from that of the earlier, which also requires a new look at the known issues (Handy, 2015), it should learn new ways of thinking and acting, in order to be able to adapt to changing conditions (Senge, 2006). Senge´s concept of the learning organization is one of the approaches that is defined against traditional authoritative "checking" organizations. Senge emphasizes the transition to management based on the five disciplines (personal mastery, mental models, shared visions, team learning and systems thinking). Laloux (2014) also focuses on the values, practices and structures of the organization. Laloux comes with the concept of the so-called teal organisations that should be built on a shared sense of values, intrinsic motivation and self-management. Another hot concept is holacracy. Main structure of holacracy is an organization in circles, not in a hierarchy tree (Robertson, 2015). The concept of holacracy has gained great attention in management magazines, often in the context of the transformation of the company Zappos towards holacracy (e.g. Useem, 2015, Bernstein et al., 2016, Reingold, 2016). Some authors see to build to the concept of holacracy more sceptically. Birkinshaw (2014) points out that holacracy is one of a series of concepts that appear behind the highly acclaimed, but firms would be treated with these concepts very carefully. Their contribution can only be used if the company thoroughly consider the possibility of the introduction of the popular consultancy models and approaches. Pfeffer (2013) argues against efforts to create new management theory (particularly of power and influence), based on the belief that companies must start to work in a different way (to be more global, more dynamic, more innovative, less formal and hierarchical, more highlighting the teams and teamwork). In his opinion, the current theory can cover and describe ongoing changes.

The aim of the article is to analyse the application of the management principles of the democratic companies, and the perception of the importance of these principles from the perspective of the management of the company and from the perspective of employees. Even though the literature, appearing in management functioning of democratic organizations, descriptions are not yet implemented researches attesting to the applying placed principles. Attention is focused more on minor aspects, for example increasing the autonomy and self-control in companies, in particular self-managed teams (e.g. Proenca, 2010). There are studies focusing on the area of the social-moral climate in democratic companies (Weber et al., 2009, Verdorfer, Weber, 2016), but the contribution and effectiveness of the management of the democratic companies have not yet been explored more deeply. Researches in Germany have demonstrated the interest of the employees on the implementation of the principles of the democratic companies, at the same time, however, the big perception difficulties implementing these principles for managers (Boes et al., 2015). In the Czech Republic's efforts to popularize the topic appears democratic companies in the specialized press (for example Kejhová, 2015) and there is issued known publications to promote freedom at work (e.g. Semler, 2011, Hsieh, 2013), but researchers and academics do not pay too much attention to the democratic companies.

1 LITERATURE REVIEW

The concept of the democratic companies can be found in the literature also under other terms such as "democracy at work" (Ducasse, 2016; Fenton, 2006, 2012), "democratic enterprise" (Gratton, 2004), "post-bureaucratic organization" (Maravelias, 2007), "organizational democracy" (Yazdani, 2010), "F-Form companies" (Getz, 2009), „an organization without a leader" (Brafman, Beckstrom,

2006) or "labor-cooperative company" (Ducasse, 2016). The authors use these concepts in different contexts and individual concepts are intertwined. In the Czech Republic, there is relatively few resources on the topic of management, but the most frequently appearing terms "freedom at work" and "freedom-based company" (Carney, Getz, 2013). The above stated terminology does not consider companies managed in the traditional way as undemocratic or non-free in the legal concept. This is the concept of the management and functioning of the organization, based and emphases on certain aspects or principles. For example the democratic organization is emphasized by the concept of empowering all members of the organization (McAuley et al., 2006).

Among the examples cited of firms often based on the new concept of management include the aforementioned Zappos (Hsieh, 2013), Semco (detailed in Semler, 2011), FAVI (e.g. Laloux, 2014, Carney, Getz, 2013), and W. L. Gore & Associates (e.g. Slinták, Tučková, 2016). In the Czech Republic is the most frequently cited free company is Etnetera (Kejhová, 2015).

Democratic companies are characterized by certain principles, characteristics or values, and differ from other firms. The authors present different concepts and principles of the democratic companies. Their comparison is shown in the following Table 1. If a principle cannot be compared with any other, is listed on a line, by itself.

Fenton (2012), Petersen (2012) and partially Hamel (2013) render principles of freedom-based company in a structured manner and in a coherent list. The other authors have mentioned the principles in a flat structure, rather as part of their works and it has been necessary to prepared that from their works. Petersen (2012) is based on Hamel's conclusions (Hamel, Breen, 2008), which speak of the so-called Management 2.0, which according to Hamel's conclusions about a new management for the 21st century. Hamel and Breen (2008) do not call these principles as principles of freedom-based company, but rather as principles or areas that is necessary to apply for the success of companies at this time. For example, adaptability and flexibility is an important value for the companies that want to thrive in today's world. Petersen (2012) states the basic twelve principles and the principles of money and capital, ownership, and the terminology lists as accidental, but there are also useful to cite. Ducasse (2016), in his article, underlines in particular the ownership of company by employees, which in turn has an impact on other principles. For example, if an individual owns something, then he or she also accepts responsibility and should also have the right to make decisions. Viggain (2011) indicates an example of a company in which they tried to apply the formula of effective democracy: Efficient democracy = trust + delegation + accountability. Viggain (2011) also mentions that for the company, there are important the high performance teams and the ability to be an organization that continuously learns, which is related to the Hamel´s adaptability and flexibility.

Table 1 **Principles of workplace democracy**

Yazdani (2010)		Participative management	Staff vote right												
Ducasse (2016)	Ownership		Co-decision												

Fenton (2012)	Hamel, Breen (2008), Hamel (2013)	Petersen (2012)	Carney, Getz (2013)	Viggian (2011)
Accountability	Leaders' responsibility	Ownership		Shared responsibility and producibility
Individual and collective	Involvement and cooperation	Cooperation and activity	Involvement	Staff involvement
Choice		Autonomy		Self-management
Decentralization	Decentralization	Decentralization		Lower hierarchy decentralization/delegation
Purpose and vision	Meaning and vision	Meaning	Meaning and vision	
Dialogue and listening	Community / association	Community		
Transparency	Transparency / Openness	Openness		
Integrity		Trust		Trust
Reflexion and evaluation	Peer assessment			
Fairness and dignity				
	Adaptability and flexibility	Experiment		Learning organisation
		Speed		High performance teams
	Meritocracy	Meritocracy		
	Financial bonus by the rate of assistance	Money and capital		
	Self-determination			
		Serendipity		
		Terminology		

(Source: own processing, by Fenton, 2012: 61, Hamel, Breen, 2008: 155-156; Hamel, 2013: 174, Petersen, 2012, Carney, Getz, 2013, Viggian, 2011: 6-7, Ducasse, 2016: 32, Yazdani, 2010)

Each of the principles has mutual links and some of the principles could be considered as principles of the parent. When examining the principles, the authors of the research exhaled from the concept of Fenton (2012). Defined principles of the democratic companies can be understood differently and because of this, there is a description of each of the principles and their importance below. Some of the principles may be semantically mingled or to have reciprocal links.

Meaning and vision
Hajzler (2017) perceives this principle as "a setting the meaning of the company so that it is understandable and magnetic. Defining the vision in order to give direction to the organization and the people inside and around it". The meaning and the vision is a key principle for a democratic organization that determines whether an employee can go along with where the company is going and if he or she will be involved, or not and in this case, it will be more appropriate for him or her to work somewhere else. According to Slinták (2016) the profit or market value cannot be served as sufficient justification for the purpose of the organization.

Dialogue and listening
Fenton (2012) in this principle stresses that the discussions should be conducted so as to provide a new level of meaning, connections and ideas. To ensure that people are willing to say their views

out loud, is needed them to be listened to. And it's not just about listening to subordinate by superiors, but listen for all to all.

Fair play and honour

This principle encompasses the idea of justice and equality. Although this principle was given only by Hajzler (2017) and Fenton (2012), the authors consider this principle as important. This does not mean that the newcomer will have the same powers as a long-time experienced staff, however each should be behaved with "fair play and honour" (Fenton, 2012).

Transparency

Transparency or openness of information in the company also means that "everyone shall have access to the information they need for independent decision making, including information about the financial results and business strategy" (Hajzler, 2017). It is also about the willingness of all the people in the company to share the information (Petersen, 2012). A prerequisite for this principle is "that people want to do things right, but to find out what is proper, they need a large amount of information." (Hamel, 2013: 244) And to ensure that the information they have, they need to be open. To ensure that the people in the company can work with the information; they need to understand them and know how to dispose of them (Hajzler, 2017).

Responsibility

The company with the responsibility creates an environment in which it is clear who is responsible to whom and for what, and, secondly, towards the inside of the company but also on the outside (Hajzler, 2017). Responsibility means that it is possible to rely on the person and do not need to control. Wilson (2011: 119) draws attention to the fact that the effective use of self-management strategies leads significantly to reduce the importance of the monitoring and controlling of employees.

Ducasse (2016: 32) understands the principle of responsibility not only as a responsibility to one to another, but also as a responsibility to the company. By this, Ducasse means that employees have to be co-owners, whether in the form of stock ownership, or in the form of bonuses.

But it is not only about the ownership from the perspective of finance. Harrison and Freeman (2004: 53) state that this is even a greater degree of ownership of the process and outputs of the organization.

Involvement

Schaufeli et al. (2002: 74) characterize involvement as "a positive, satisfying, work-related mental condition characterized by high levels of energy, dedication to work and enthusiasm." They further argue that involvement is a long-term status of mind that is not focused on a particular object, event, individual or behaviour.

With the principle of involvement is related to other concepts such as initiative, engagement, participation, and interest and proactivity. Yazdani (2010) as the two basic characteristics of the democratic organisation mentions the participatory management and provides more space for the opinion of the employees. The principle of the involvement, therefore, includes both the interests of the employees, but also an initiative to bring new impulses.

Co-decision

The co-decision procedure in the company means that the decision is not made only by superiors, but all may participate in the decision making. This is the freedom of employees to make decisions without the prior consent of senior management (Petersen, 2012). Hajzler (2017) explains the principle of co-decision as follows: "decision-making processes should be set up so that each

member of the organization should have an opportunity to decide what to do, when, where, with whom and for how much."

Integrity
This is partly about setting up the life of the organization and individuals so that its actions are in accordance with ethical and moral principles (Hajzler, 2017, Fenton, 2012), but this is not just about the ethical and moral principles. It is also about trust that Petersen (2012) describes the trust as a faith in the fact that everyone within the team will behave with the best knowledge and conscience. The integrity of the company, therefore, refers to both the organization as a whole and to individual members of the organization.

Decentralization
Fenton (2012) talks about the power, which is distributed and shared across the organization. This is the approach where the decision-making right is not exercised in a hierarchical structure from the top downwards, but it is rather kept in smaller units throughout the organization (Petersen, 2012). The principle of decentralization is, therefore, closely related to the concept of "reduced hierarchy". Viggian (2011: 6) states that many theorists and practitioners indicate the reduced hierarchy of management as one of the elements of the democratic company.

Reflexion and assessment
In a democratic organization, there should be a culture of learning, and the constant desire to improve (Fenton, 2012: 61), this helps the reflection and evaluation. Hamel (2013: 174) stresses that this should be all about peer feedback, not the feedback from the top.

Each of the ten principles listed above has for the freedom-based management its relevance. Some of the principles are relevant more, some less, but how Fenton stresses (2012: 60) the real value in the organization these principles brings when they are practised all. Individual principles link other principles. It is possible to discern that some principles are for the others as key ones. A key principle is a principle that when an unsuccessful application will also affect the successful application of other principles.

2 METHODOLOGICAL BASES

Research on using case studies in the last 30 years has seen an extraordinary increase in social-scientific research, including research on business and management (Dul, Hak, 2008). One of the important issues in a methodology for the case studies includes the size of the research sample. It is usually assumed that there is no ideal number of cases and that the number between four and ten usually provides good results. Research which is carried out using case studies does not aspire on compliance with the requirement of the representativeness of the sample (Štrach, 2007). The multiple-case design method has been applied. In the case of multiple-case designs, it is important to monitor the replication logic rather than sampling logic. Individual case studies are perceived in a manner similar to multiple experiments (Yin, 1994).

The research was carried out in the period March−April 2017. Data collection was conducted using a questionnaire survey and using the interview with the heads and leaders of the companies. The questionnaire was carried out and recorded using docs.google. The evaluation of the questionnaire was carried out in the program IBM SPPS Statistics 22 (frequency, median) and in Microsoft Excel (donvar). Interviews were recorded in the forms of audio and then transliterated.

The research sample was selected using the methods of "snowball". As the first company was chosen the company of Raynet, at the meeting with Raynet were recommended the other companies

– Court of Moravia, Na stejné lodi and the company of Impact Hub. The last company - Bidding Tools was selected due to the contact search on Impact Hub, which ultimately was not selected.

In addition to the semi-structured interviews and questionnaires were used for research, also other resources: Web sites the companies investigated, media interview from the site, internal documents and observations in participating in the consultation. The following Table 2 summarizes which methods were applied in the individual companies.

Table 2 **Applied methods in the companies**

METHOD	RAYNET	COURT OF MORAVIA	BIDDING TOLLS	NA STEJNÉ LODI
Interview	✓	✓	✓	✓
Questionnaire	✓	✓	✓	✓
Websites	✓	✓	✓	✓
Website interview	✓	x	✓	x
Internal documents	✓	x	x	x

(Source: own processing)

The interviews were conducted with managers or statutories of the companies, and the interview was conducted using the premade themes which the researcher followed from the part. The interviews were focused on a brief introduction of the company, the introduction of the freedom of work, principles of freedom-based management, the advantages and disadvantages of the procedure, the appropriateness of freedom-based management for other companies, and recommendations for further research. In this article, there are evaluated the responses of block-oriented in principles of management.

The questionnaire was carried out using a Web form www.docs.google.com. The questionnaire was inspired by Hajzler´s (2017) questionnaire that contains questions related to the principles of the democratic companies. Hajzler (ibid) applies this questionnaire to measure the application of the principles in organizations. The questionnaire contained two main parts: the application of the principles of freedom-based management and the importance of the principles of freedom-based management. Each part has 35 questions. The questions were divided according to the principles of freedom-based management.

Some of the principles were represented by four questions and the other for example, only two. In the first part, the respondents were asked to rate how much do they agree with the following statements, and in the second part, they were asked to rate the extent to which the values are defined by using the phrases important to them. In both cases the assessments were conducted on a scale from 1 to 5, with each value was defined such as verbally „very agree," " even disagree, or agree", etc.

The poll was carried out in four companies for which was the assumption that they have free management – Raynet, Court of Moravia, Bidding Tools, and Na stejné lodi. Table 3 summarizes the basic information concerning the companies. The questionnaire was sent by managers; therefore it is not possible to evaluate the rate of return. The research of the sample survey was counted the answers of all the people, for a total of 31 responses. Representation of respondents from different companies is not uniform. Questionnaire was filled in by 12 men and 19 women. Bidding Tools - 11 respondents, in the case of Court of Moravia - 9 respondents, 6 respondents were from the company of Raynet and 5 people from Na stejné lodi.

Table 3 **Key data of the companies**

	RAYNET	**COURT OF MORAVIA**	**BIDDING TOOLS**	**NA STEJNÉ LODI**
Respondent in the interview	Martin Bazala	Petr Pouchlý	Rostislav Urbánek	Martin Tyšer, Tomáš Buchwaldek
Based in	Ostrava	Brno	Ostrava	Ostrava
Lifetime in years	12	4	3	2
Staff number in a team	20	15-20	25-30	12
Democratic organisation since establishment	x	✓	✓	✓

(Source: own processing)

3 DESCRIPTION OF THE CASES

Raynet, s.r.o.
Raynet is one of the most successful software companies dealing with cloud-based CRM. Twelve years ago, it was founded largely by students in the traditional way. After six years, the company was transformed into a democratic company. The largest number of employees in the history of the Raynet was about thirty-five employees; currently it has about 20 employees.

Court of Moravia, s.r.o.
Court of Moravia deals with the so-called playful design and gamification. This group of people first existed as a group of friends, and then a non-profit organization that conducted the experiential games and training in various areas. Four years ago, the company started as a legal firm. Currently, the number of employees varies between 15 and 20, while some workers are part-time only, for example due to parent leaves.

BiddingTools Group, s.r.o.
Bidding Tools was established three years ago. At the beginning, there was a group of people created the exact projects to automate the process of bidding. The company currently has about twelve to fifteen employees at full-time contracts and almost the same number of part-time workers and trainees. The team consists of a total of about twenty-five to thirty people.

Nastejnelodi.cz, s.r.o.
Na stejné lodi is the accounting firm that focuses on accounting, tax optimization and use of accounting data for strategic purposes. The company officially began two years ago; however, it has been in process for four years. The current number of employees is twelve persons.

4 RESULTS

4.1 Questionnaire

The highest ordinal dispersion (dorvar) in examining the application of the principles has been identified in statements aimed at access to information about the financial results of the company (n. 10, Transparency, dorvar 1.503), on the ability to affect the amount of own financial evaluation (n. 25, Co-decision, dorvar 1.357) and the existence of tools providing feedback (n. 35, Reflection and assessment, dorvar 1.303). In contrast, the lowest ordinal dispersion has been reported for claims focused on the ability to come up with an idea which others will be heard (n. 6, Dialogue and listening, dorvar 0.062). All claims relating to the principle of "dialogue and listening" have the lowest median 5 and dorvar. The only item with a median 3 had the claim concerning the possibility of agreeing, for how much money the employee will work (n. 25). Five claims have reached a median of 4 (two of them relating to the principle of decentralization and two "reflection and assessment").

In evaluating the importance of the principles have been recorded minor differences between ordinals variances, no claim of median reached lower than 4.

In the case of individual companies, the median is less than 3 has been observed in reviews the application of the access to the financial results of the company (median 2, company Bidding Tools).

Table 4 **Principles of workplace democracy – results from questionnaires**

N.	Principle	Question	Median Demand	Dorvar Demand	Median Relevancy	Dorvar Relevancy
1	Meaning and vision	The Mission of our company (why does it exist) is for people in our company really attractive.	5	0,583	4	0,685
2		Defined vision (what we want to achieve in your company) gives our company direction.	5	0,783	5	0,791
3	Dialogue and listening	Our company actively creates opportunities for open discussion of all the people in the company.	5	0,225	5	0,643
4		Most of the people in our company can actively listen to others with a goal to reach an agreement.	5	0,375	5	0,444
5		Our company is actively creating opportunities for dialogue with customers, suppliers and others.	5	0,437	4	0,867
6		People in our company can come up with any idea (suggestion, idea, problem, solution, disapproval) and others will listen to it.	5	0,062	5	0,337
7	Fair play and honour	People in our company are not dividing to "child" and "parent". There is a prevailing feeling that we are equal.	5	0,549	4	0,87
8		Both financial and non-financial rewards in our company are distributed fairly.	5	1,040	5	0,623
9	Transparency	All the people in our company have access to the information they need for independent decision making.	5	0,499	5	0,293
10		All the people in our company have access to information about the financial results of the company.	5	1,503	4	0,798
11		All the people in our company have access to information about the strategy of the company.	5	0,475	4	0,681
12		People in our company understand information about our company (about strategy, about the results of the procedures, etc.) and can deal with them.	5	0,724	5	0,630
13		The operation of our company is transparent to our customers.	4	0,970	4	0,944
14	Responsibility	Our company develops the principle of personal responsibility of the employees.	5	0,466	5	0,559
15		People in our company know who is responsible for what.	5	0,837	5	0,346
16		Our company is built on ethical principles.	5	0,620	5	0,837
17	Involvement	In our company there is a sense of belonging to the company.	5	0,774	5	0,615
18		The emphasis on unity is in balance with the company focusing on the	5	0,737	5	0,508

		own identity of every person in our company.				
19		People in our company are willing to work even beyond the scope of their duties.	5	0,620	4	0,903
20		People in our company are coming up with ideas by themselves and are willing to implement them.	5	0,579	5	0,546
21	Co-decision	People in our company can agree on what they will do.	5	0,695	4,5	0,569
22		People in our company can agree on where and when they will work	5	0,653	5	0,638
23		People in our company can agree on with whom will they work.	5	1,024	4	0,622
24		People in our company may agree on how they will work.	5	0,612	5	0,681
25		People in our company can agree on for how much they will work.	3	1,357	4	0,827
26	Integrity	What our company is doing is in accordance with what it says.	5	0,88	5	0,362
27		In our company there is mutual confidence from management and employees.	5	0,566	5	0,293
28	Decentralization	People in our team decide on most of what they do on their own.	4	0,724	5	0,783
29		Knowledge and power in our company are spread out, rather than concentrated in one place.	5	0,787	4	0,860
30		People in our company communicate directly – communication channels don't go through a middleman.	5	0,658	5	0,793
31		If the management of our company received a "blow to the head", the company will continue to operate.	4	0,912	4	0,630
32	Reflexion and assessment	People in our company have plenty of feedback.	4	0,857	5	0,490
33		At our company feedback is primarily constructive.	5	0,537	5	0,569
34		People in our company understand the importance of feedback.	5	0,644	5	0,566
35		In our company we have tools that help us get feedback (e.g. questionnaires, moderated meetings, scoreboard, ...)	4	1,303	4	0,867

(Source: own processing)

4.2 Interviews

Principles listed below were expressed in interviews, however, many of the companies have not been explicitly mentioned when querying for the principles of workplace democracy, but in other parts of the interviews. If the principle applied in the company, the check box is marked "✓". If the principle clearly does not apply, the check box is marked "x". If it is not possible to determine whether it can be applied, the check box is marked with "?". If the principle is applied only partially, the check box is marked with "+/-".

Majority of the principles of management identified in the interviews agree with the principles stated in the theoretical findings. The most important appear to be openness, accountability, transparency, and regular meetings, which is a tool for effective dialogue and listening.

Table 5 **Comparison of below mentioned principles of workplace democracy**

PRINCIPLE	RAYNET	COURT OF MORAVIA	BIDDING TOLLS	NA STEJNÉ LODI
Openness & trust	✓	✓	✓	✓
Responsibility	✓	✓	✓	✓
Honour and fair play	✓	✓	✓	✓
Roles of the leaders	✓	✓	✓	✓
Self-management	✓	✓	x	✓
Organizational structure	✓	✓	x	✓
Transparent accounting	✓	✓	x	✓
Transparent payments	✓	✓	x	?
Profit sharing	✓	✓	x	✓

Career prospects	✓	+/-	✓	✓
Long-time sustainability	?	?	?	✓

(Source: own processing)

Responsibility

The surveyed democratic companies give employees more freedom; however, they require a high degree of responsibility, which is the key to the effective functioning of democratic companies. A company's values document Na stejné lodi describes the concept of responsibility as "always do 100% to meet the promises that we have made." If there are people who are trainees and do not yet have a sufficient level of responsibility, is not given such a degree of freedom. It is possible to say that the degree of freedom is proportional to the degree of responsibility of the employee.

Leader from Bidding Tools: *„When they become temporary workers, they can have some freedom and it is again a gradual process. In people, where we find that they are able to take responsibility and get some freedom, we gradually give it to them."*

Roles of the leaders

An important value is also an example of leaders and honesty and fairness. It is necessary to corporate leaders to do what they demand from the others and so that they would be the example.

Leader from Bidding Tools: *„If I hear people say 'do the best, do the best ' and come here at 10am and at 2pm I go home, it probably won't work. But when people see me in the morning, they see that I'm staying here late and on weekends I'm sending emails, so it is again another thing."*

Leaders are also important in the implementation of freedom into the organization. Carney, Getz (2013: 93) states that "change must begin from the leader himself." It is not possible to establish freedom from below.

Leader from Court of Moravia: *„The first thing is to say, if that's what we want to do. The organization must decide that it wants to do it. Ideally its leadership. If not, the bottom turns horribly wrong. (…) It has to come from the head. It does not happen from the bottom."*

The roles of leaders in the democratic companies vary from the traditional way of management by leaders trying to give support to the less experienced, not to manage them. The aim is that each man was able to control the majority of his/her work.

Leader from Bidding Tools: *„The primary role of a leader is not to be a parent, but to help a man in his personal growth and move it forward."*

Organizational structure

Hierarchy of the democratic companies surveyed is very flat. The organizational structure of these companies is more circular than the pyramid. This is the exact "amoebas" (departments such as design, business, and support) that can intermingle. In many cases, the organizational structure is not directly written down, but still, everybody knows who is responsible for what. If this is a project management, in the framework of the projects there are responsible persons for a given project. People in the company do not have official titles, but the team knows who are the "experienced ones".

Leader from Court of Moravia: *„The unofficial hierarchy is located on seniors and on who is how capable."*

Intrapreneurship

Freedom-based management is trying to make the staff entrepreneurs inside the company – to manage themselves, work with responsibility, with risk, with finance, with profit and loss.

Leader from Raynet: *„People in the company are partially leaving the employee's position and getting into the position of the entrepreneur. The more people are 'the firm', the more they start to have fun and have a greater involvement."*

Transparent economics

In order for people to be intrapreneurial individuals, it is necessary to provide them enough information. This is for example, to have opportunity to look at the financial statements of the company. The surveyed companies provide their employees with spreadsheets, reports and statistics on the economic situation of the companies that support the motivation of employees, because they see what effect their work has, or can have. This transparency is also leading to fair play of the staff, as each activity is obvious and can be seen by anyone.

Leader from Court of Moravia: *„The fact that each crown is traceable, there is no risk that someone would take away something."*

A part of the open economics is open salaries. In Bidding Tools are in this area, however, in the early days and they did not set it.

Leader from Bidding Tools: *„The only thing where I'm not sure if we will one day show transparently to everyone who gets how much money. So far, it is not so."*

Staff salaries

The company indicate the different systems of the financial remuneration and each company worth its own system. Probably there is no one universal model reviews for democratic companies, but it is more of an individual matter dependent on the nature of the business.

Raynet and Bidding Tools have flat monthly salaries. In the Court of Moravia, people are rewarded by the hours worked, which they shall report and evaluation also depends on the type of project. Trust and honesty of people in a democratic company is necessary, because the employees themselves show the number of hours worked and no one checks whether it is reported correctly, even though it would be possible to trace.

Leader from Court of Moravia: *„For all the time that we have not had any case that someone has abused. On the contrary, I solved the opposite problem that guys have spent more time on it than reported, and they thought it's stupid to report so many hours, because they thought that they could have done it more efficiently."*

In contrast with an hourly salary in the Court of Moravia, in Na stejné lodi, they feel that hourly salary is the "anachronism of communism and killing innovation." In Na stejné lodi the reward is set up in the employee contract as part of the fixed part but in fact it is a majority of the variable part.

Profit sharing

The common practice of the surveyed democratic companies is the involvement of their employees to profit distributions. A specific system for allocating profit in the companies differs. The employees divide a certain part of the employees profit by using mutual dialogue and the co-decision procedure, which is a condition that came to the consent of all involved.

Leaders from Na stejné lodi: *„They have only one condition, that all must agree. If one does not agree, then we will decide."*

Employees in Raynet can distribute the profit only at the stage of "Staging", "Stable" and "Partner". Raynet employees divide only a quarter of profit, the rest is divided among the owners, business and charitable purposes.

Meetings
Difference of openness in democratic businesses is supported by regular meetings. In the company of Raynet also exists in the rule that anyone from the company may participate in any meeting that interests him. This does not mean that anyone could talk to anything, but it means that any employee may hear what is discussed at the meetings and can know what's happening. The investigated companies have essentially a very flexible working time, however, one of the few things which are required, is to be part of the joint meetings.

CONCLUSIONS AND IMPLICATIONS

Ducasse (2013: 32) claims that the freedom-based management can bring higher profits and greater productivity of the company. The research, however, does not explicitly claim this. Whether the freedom-based management is in the right direction in the area of management in the 21st century, it might be possible to evaluate in a few years. The authors recommend to be carried out comparative research in the area of profitability of democratic and traditional companies. In this research, it will be needed to carefully choose the company with traditional and freedom-based proceedings which involved into the category of similar in terms of size, product, and other benchmarks.

It is recommended to do qualitative research barriers for implementation of corporate freedom. It would be a research that should reveal the reasons for the fear of the introduction of this model. In addition to the barriers it is also recommended to determine whether people are interested in a freedom-based way to manage people (employees and managers), and if so, to what extent.

Furthermore, it is recommended to execute the questionnaire survey in companies with traditional management and subsequently compare 1) whether the principles of democratic companies are for employees of traditional companies important and how much and 2) whether the application of the principles of democracy in companies with traditional management is lower than for firms with the freedom-based management. If it turned out that even people in companies with traditional management long for application of the principles of freedom in their work, it would be appropriate to consider the introduction of workplace democracy to more companies.

The recommendation is also to perform longer-term research of selected companies and survey on them the development of their application of freedom-based management. This may be the companies that are managed traditionally, but they plan to transform into the democratic company, but also democratic business to observe, what long-term effect does the freedom-based management has on them.

The research has certain restrictions, which are for example: a small research sample and a short history of the companies surveyed. The research reaches the four companies, while the questionnaire was replied on average by seven people. Therefore, it is necessary to mention that this research is a good beginning of research in the field of freedom-based management, but for the wider practice, it is necessary to extend and focus the research on other directions. The analyzed companies are rather less-sized companies. From this perspective, it would be appropriate to implement research in larger companies. The subjects have a short corporate history and many of them are in the early stages of the application of workplace democracy. It is therefore not yet possible to conclusively point to the success of these examples. For further research, it is

recommended to be executed a renewed research in these companies for a number following years, which confirms the validity of the recorded facts.

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