Evolution of Romanian Management Consulting Firms
from Alba County

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Abstract

This paper aims to investigate the factors that have an influence upon the company size of Romanian management consulting from Alba County. In this investigation we made a quantitative analysis using information from financial statement. We use Ordinary Least Squares OLS method with robust standard errors, consistent with panel-specific autocorrelation and heteroskedasticity. Our study is based on a panel database including 151 companies over the period of 5 years ranging from 2015 to 2019. The empirical results reveal that the independent variables (Financial Leverage Ratio, number of employees, age of firms, cash and profit) explains 32,6% of the variation of firm size calculated as sales logarithm.

Key words: firm size, profit, *age of firms, management consulting firms*
J.E.L. classification: L25

1. Introduction

Management consultants support management by providing resources such as time and knowledge and information. The main role of business and management consulting is to help the leaders and members of the management teams of the companies to which they provide these services, to achieve certain objectives, in other words how to get from point A to point B. Management consulting firms help entrepreneurs discover and analyze the strengths and weaknesses of the company and its operations and find ways to lead management team members to discover and solve problems. Discovering and analyzing strengths and weaknesses helps businesses understand where they are now and where they will go in the future. The role of consulting firms is to help firms develop more effective strategies, strengthen the organizational culture, help the management team make better decisions, increase individual and team responsibility in the firms to which they provide these services.

According to the Classification of activities in the national economy (CAEN), management consulting (MC) companies in Romania have Code 7022 and these companies provide consultations, guidance and operational assistance for companies and other organizations on management issues, such as: strategic and organizational planning, processes refurbishment, change management, cost reduction and other financial issues; marketing objectives and strategies; human resource planning and policies; compensation and retirement strategies; production planning and control planning.

According to FEACO, the European Federation of Consulting Associations management consulting includes identifying and investigating problems and/or opportunities, recommending appropriate actions and assisting in the implementation of these recommendations.

Table no. 1 The share of the value of management consultancy activities in the Value of services provided for economic agents

Year	The value of management consulting activities	Index	Market services provided for firms	Index	% MC in market services
2008	9684,6		162289,4		5,97%
2009	9240,2	95,41%	154458,2	95,17%	5,98%
2010	9724,8	100,42%	162542,8	100,16%	5,98%
2011	10477,9	108,19%	178467,2	109,97%	5,87%
2012	11820,8	122,06%	195969,1	120,75%	6,03%
2013	11628,8	120,08%	201505,9	124,16%	5,77%
2014	11605,5	119,83%	220479	135,86%	5,26%
2015	12559,6	129,69%	239515,4	147,59%	5,24%
2016	12959,1	133,81%	247661,9	152,61%	5,23%
2017	13291,4	137,24%	274306,2	169,02%	4,85%
2018	15202,8	156,98%	313848,8	193,39%	4,84%

Source: Authors' calculations on INSSE date

From table no.1 We notice that the value of management consulting activities increased from one year to another, compared to 2008 the increase was 56.98%, but this increase was achieved at a lower rate than the value of market services for enterprises. They increased by 93% in 2018 compared to 2008. The only year in which the index of the value of MC services exceeded the index of the value of consulting services was 2012 when the highest share of the value of MC services in total services was registered (6, 03%) Since 2012 this share has decreased every year reaching in 2018 4.84%.

Table no. 2 Evolution of the number of management consulting firms and their structure according to the number of employees

	Number of entities				The structure of number of entities %			
	2015	2016	2017	2018	2015	2016	2017	2018
MC firms	15812	14863	14300	15105	100%	100%	100%	100%
Active firms	513989	527930	553936	576684				
% in active firms	3,08%	2,82%	2,58%	2,62%				
0-9 persoane	15202	14277	13714	14517	96,14%	96,06%	95,90%	96,11%
10-49 persoane	542	508	508	507	3,43%	3,42%	3,55%	3,36%
50-249 persoane	56	62	60	60	0,35%	0,42%	0,42%	0,40%
peste 250 persoane	12	16	18	21	0,08%	0,11%	0,13%	0,14%

Source: Authors' calculations on INSSE date

From the data of table no.2 it is noted that the share of the number of MC companies had a decreasing evolution from 2015 to 2017 from 3.08% to 2.58%, after which in 2018 this share increased to 2.62%. As a structure of the number of companies depending on the number of employees, it is observed that the largest share, over 95% are companies that have 0-9 employees. In the dynamics, there is an increase in the share of companies with over 250 employees from 0.08% to 0.14%, given that their number has almost doubled and the decrease in the share of companies with 10-49 people from 3.42% to 3.36%

Most large MC companies are not in fact consulting companies, but are management services companies created by companies operating in other fields of activity.

Table no. 3. Evolution of the number of employees of Romanian management consulting companies in 2015-2018

MC Firms with:	No. emploees				Index 2018/2015	Structure of MS Firms			
	2015	2016	2017	2018		2015	2016	2017	2018
0-9 persoane	18294	17424	16720	16323	89,23%	42,60%	38,79%	38,99%	37,84%
10-49 persoane	9905	9532	9622	9901	99,96%	23,06%	21,22%	22,44%	22,95%
50-249 persoane	5587	6877	6370	6234	111,58%	13,01%	15,31%	14,85%	14,45%
peste 250 persoane	9162	11086	10172	10683	116,60%	21,33%	24,68%	23,72%	24,76%
Total	42948	44919	42884	43141	100,45%		100%	100%	100%

Source: Authors' calculations on INSSE date

We notice an increase in the number of employees within MC companies in 2018 compared to 2015 by 0.45% but their distribution within companies is different. Comparing the year 2018 with 2015, we notice that the share of employees in companies with over 250 employees increased by 1.44% and the share of companies with over 250 employees by 3.43%, decreasing their number in companies with less than 50 people.

*Figure no.1. Evolution and structure of management consulting firms turnover in 2015-2018*
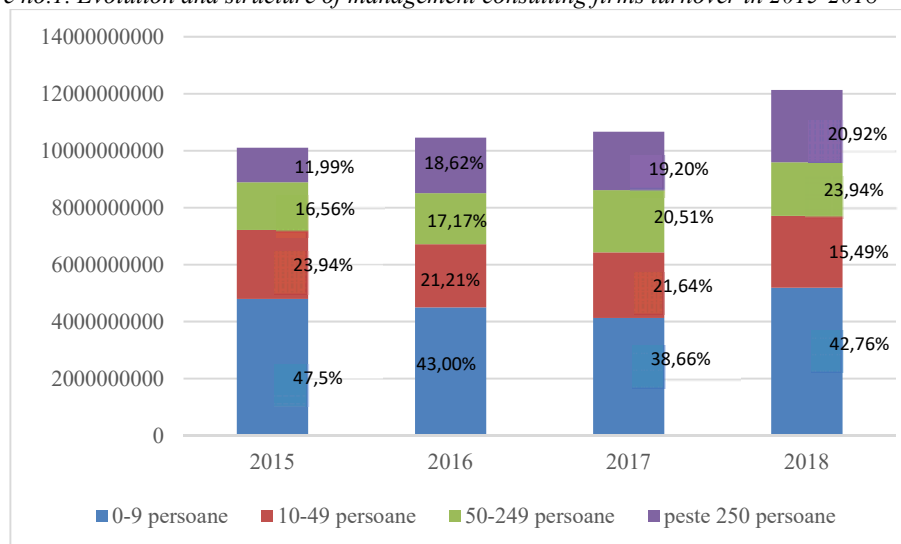
Source: Authors' calculations on INSSE date

The turnover of MC companies had an increasing evolution, in 2018 compared to 2015 it increased by 20.10% and by categories of companies the highest increase in turnover was registered in the case of companies with over 250 employees (with 109%) although their share in turnover is only 20.92%.

As an evolution of the CA structure, we notice the share of over 40% of the turnover achieved by companies with 0-9 persons and the decrease of this share by 4.74% in 2018 compared to 2015. Also, the share of turnover achieved by companies with 10-49 decreased persons with 8.45%, instead increased the share by 7.38% and 8.93% respectively of the turnover achieved by the companies with 50-249 employees and of those with over 250 employees.

Regarding the factors that influenced the increase, respectively the decrease of the companies' turnover, the ones that occupy the first places are: the EU financing programs and the diversification of the services offered to the clients in case of the increase of the companies, legislative and economic in case of decrease in turnover of companies.

Figure no. 2 Management consulting in Romania, 2018
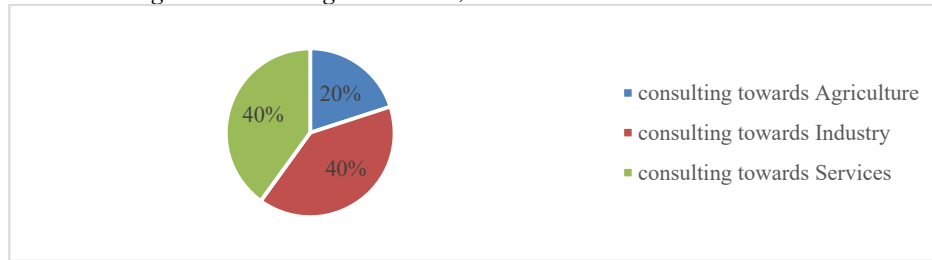
Source: AMCOR, Romanian association of Management Consulting Companies

For many consulting firms The European Funds continue to be a serious business driver. Management consultants are engaged both in the preparation of the proposals and in the implementation of the EU funded projects. International projects represent roughly 40% of the overall MC market in year 2018.

2. Literature review

Some papers analized the factors that generate the expansion of firm's activity.

Mateev and Anastasov (2010) and Sampagnaro and Lubrano Lavadera (2013) argue that firm size is one of the most important factor that generate firm growth. Mateev and Anastasov (2010) analyze a sample of 560 SMEs from Eastern and Central european countries and argue that „*leverage, current liquidity, future growth opportunities, internally generated funds, and factor productivity*", but also firm size measured as total assets explain the extension of firm, although age and ownership seem not to be important.

Sampagnaro and Lubrano Lavadera (2013) analyze Italian firms for the period between 2001 and 2008 and the growth of sales is affected by the age of the firm, firm size and the capacity of internal financing.

Avdullahi and Ademi (2020) suggest, after analyzing 600 businesses in Kosovo, that business age affect the firm's sales, and, in case of the firm size, their results suggest that the sales is growing as long as the number of employees of the firm is bigger.

Jeger et al. (2016) analyze the financial factors that affect the SMEs growth especially in times of economic downturns and suggest that, because of their lower access to external financing, the strategy adopted by these kind of firm is generally an organic one.

Islam et al (2011) analyzed, based on survey data, the importance of the entrepreneur and of the firm characteristics on the perceived success of the SMEs and their results show that, for Bangladesh, firm characteristics seem not to influence the success of the firm, contrary to the entrepreneurial aspects of the owner and the managing team.

Uwitonze and Heshmati (2017) analyzing the service firms from Rwanda find that most important factors that affect the turnover are the gender of the manager, openness and taxes. Hitt et al (2001) analyze 93 of the largest law firms in the US and suggest that human capital is very important for firms to realize better results, the effect of human capital being curvilinear. This suggest that after some time, the results will grow as the capacities of the personnel will be higher. Also, their results argue for a positive effect of leveraging human capital on the firm performance.

Megaravalli and Sampagnaro (2019) analyzed the determinants of firm sales growth for 45,000 family business in Italy, and highlighted that the most important factors are liquidity ratio, solvency ratio, cash flow and and firm age.

In a literature review adressed to knowledge-intensive business services, Muller and Doloreux (2009) find that there is no consensus about the definition of KIBS, but also that most of the empirical studies investigate aspects related by innovation in this kind of services. Di Giacinto et al (2020) analyze the geographical location of knowledge-intensive business services and finds that there are located especially is in the urban space, because of a better productivity and a benefit provided by the vicinity of firms they work for.

Some researchers Pleitner *et al.(*1998) and Dass (2010) investigated the strengths that are common to SMEs compared to larger companies. These strenghts are: high quality standards and individualized product/service offerings while enjoying a flexible cost structure, flexibility through the concentration of decision-making authority and short information structure, spontaneous ability to adapt to changing market environments and customer needs, and ability to avoid overpowering ideology and bureaucracy through personalized communication.

3. Research methodology

In most investigated specialized articles written by foreign and Romanian authors, the size of the company calculated as ln (sales) or Ln (total assets) is an independent variable that influences the profit or rates of return (Lazăr, 2015, Pantea et. All 2014, or a control variable (Anton 2016).

Dang *et al*, (2010) made a research about use firm size measures (total assets, total sales, and market value) of equity in empirical studies. They find that 49 papers use total assets, 20 papers use market capitalization, 16 papers use sales, and 2 papers use number of employees for firm size measure. In their opininon literature has little to say about the rationale of using a certain measure of firm size for specific corporate finance research, and no paper provides a comprehensive assessment of the sensitivity of empirical results in corporate finance to different measures of firm size.

In this research we tried to determine which are the factors that influence the size of the company calculated as ln (sales), so the size of the company is considered as a variable dependent on other factors.

In our study, we aim to make a contribution to the existing literature through empirical evidence of five-year data from 2015-2019 of the management consulting Romanian firms of Alba county.

In our study we used a date base of financial statement of Romanian firms of Alba county which have 7022 CAEN cod for 2015-2019 period. First, we have 249 firms but we eliminate the firms that were established after year 2015 to have date for the investigate period. Thus, 151 companies remained in the database.

We use Ordinary Least Squares OLS method with robust standard errors, consistent with panel-specific autocorrelation and heteroskedasticity.

Variables:

The dependent variables in our model is the size of the firm which is calculated as natural logarithm of turnover.

The regressors of the model, the explanatory variables used in our analysis are:
- Financial Leverage Ratio (FLR) is Debt-to-Equity Ratio and is calculated as Total Debt / Total Equity. Each industry has different debt to equity ratio benchmarks, as some industries tend to use more debt financing than others. Because Majority of MC firms are smaller businesses, they have, a low debt-to-equity ratio.
- No_employees$_{it}$ is number of employees of firm i in year t

Within the consulting companies from Alba county, we notice, depending on the number of employees, over 98% have less than 10 employees.
- Age$_{it}$ is age of firms, is number of years between the data setelment of firm i and year t
- Cash. Cash represents cash in cash and bank accounts. We consider cash the blood circuit of a company, without cash companies cannot carry out their activities of any kind starting from the moment of establishment and continuing with the daily constraints from raising receivables and paying suppliers, making proposed investments, and so on.
- profit is calculated as revenue minus expences.

For the variables profit and cash, due to the fact that we also had negative values, we proceeded to rescale the indicators adding the minimum of the variable plus 1 and after we proceeded to logarithm the variables
- return on assets **(**ROA**)** calculated as Profit/Total assets

Table no. 5 Descriptive statistics for LN_CA model

	N - observations	Mean	Std. Dev.	Min	Max
LN_CA	497	11.08757	1.81329	4.394449	16.67793
FLR	645	1.666682	21.77718	-268.381	242.3755
No_employees	651	3.079877	24.12193	0	375
LN_Cash	649	8.999451	2.753405	0	13.05299
Age	700	10.33571	4.73717	1	28
LN_Profit	649	12.61507	.569424	0	14.9369
ROA	639	1.349537	4.864556	0	103.333

Source: Authors' calculations

The first step in methodology was to check the stationarity of the variables in the Panel Regression Model with Fisher Test.

The estimates are run through OLS panel data method with robust standard errors, consistent with panel-specific autocorrelation and heteroskedasticity. The impact of independent variables on LN_CA is examined on the annual basis through the following baseline models specification.

(1) $LN\_CA = \beta_0 + \beta_1 \times FLR_{i,t} + \beta_2 \times No\_employees_{i,t} + \beta_3 \times Cash_{i,t} + \beta_4 \times Age_i + \beta_5 \, xProfit_{it} + \varepsilon_{i,t}$

(2) $LN\_CA = \beta_0 + \beta_1 \times FLR_{i,t} + \beta_2 \times No\_employees_{i,t} + \beta_3 \times Cash_{i,t} + \beta_4 \times Age_i + \beta_5 \, xROA_{it} + \varepsilon_{i,t}$

where $FLR_{i,t}$ denotes Total Debt/Total equity (annual %) for firm i in year t,

$No\_employees_{i,t}$ represents medium number of employees of company i in year t,

$Cash_{it,} = LN(Cash)$ represents cash in cash and bank accounts, for firm i in year t,

$Profit_{it} = Ln (profit)$ for firm i in year t,

$ROA_{it} = Profit/Total \, Assets$ for firm i in year t,

Age_{it} represents number of years from the date of establishment of firm i until year t

$\varepsilon_{ij,t}$ is an *id* error term specific to firm i in year t.

Table no. 6 presents the correlation matrix for the variables. There aren't correlations bigger than 0.5 between regressors and all variables used.

Table no. 6. Correlation matrix LN_CA model

	LN_CA	FLR	No_emplyees	LN_Cash	Age	LN_Profit	ROA
LN_CA	1.0000						
FLR	-0.0605	1.0000					
No_emplyees	0.2888	0.0097	1.0000				
LN_Cash	0.4540	0.0266	0.0104	1.0000			
Age	-0.0145	- 0.0932	-0.0533	0.0104	1.0000		
LN_Profit	0.2048	-0.0542	0.1033	0.0995	0.0584	1.0000	
ROA	-0.0115	-0.0367	0.0479	-0.2529	0.0012	- 0.0051	1.0000

Source: Authors' calculations

According to the table no.6, we notice that there is an inverse connection between the turnover and the age of the company, which means that the newer the company is on the market, the higher the sales.

Between number of employees and age is an inverse relation, in case of MC firms if firms have more age this does not mean that firms have more employees. Over 98% of management consulting firms have les 10 employees.

There is an inverse link between return on assets and sales, most of these companies have a significant share of current assets and the higher the rate of fixed assets the company has lower profit and vice versa.

4. Findings

We have performed the regression based on the variables which were included into the model and we have examined the results.

Table no. 7. Empirical results of panel regression for ln_CA

	(1)	(2)	**Expected sign**
VARIABLES	ln_CA	ln_CA	
FLR	-0.00574	-0.00606	-
	(0.00572)	(0.00563)	
Profit	0.352		+
	(0.289)		
cash	0.400***	0.434***	+
	(0.0475)	(0.0485)	
Age	0.00950	0.0133	+
	(0.0133)	(0.0135)	
No_employees	0.0198***	0.0204***	+
	(0.00303)	(0.00307)	
roa		0.0304	+
		(0.0278)	
Constant	2.553	6.585***	
	(3.524)	(0.542)	
Observations	494	495	
R-squared	0.326	0.318	
adj. R-sq	0.319	0.311	
rmse	1.499	1.508	

Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Source: Authors' calculations

In the LN_CA model, the sample is comprised of 494 observations and the expanatory index of the model, which consists in the R-squared, is at the medium level of 32,6%. The independent variables explains 32,6% of the variation of LN_CA.

The remaining 71.4% of the company's size is explained by other variables that are qualitative such as: economic factors, management factors, socio-cultural factors, political factors, legal factors and other factors.

5. Conclusions

We have performed the regression based on the variables which were included into the model and we have examined the results. In the LN_CA model, the sample is comprised of 494 observations and the expanatory index of the model, which consists in the R-squared, is at the medium level of 32,6%. The independent variables explains 32,6% of the variation of LN_CA. The rest of 71,4% is explained by other variable.

However, our research is based on firms from one county. Future research can get conclusive findings by increasing the number of firms and make comparison between counties, to find if there are economic factors that influence the size of the firms. We can include in our model qualitative factors such as: style of management, relation with the clients and other factors.

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