

CONTROLLING AND BUSINESS EFFICIENCY

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Abstract

Managing business successfully in dynamic environment requires effective controlling system. Controlling is the process of defining objectives, planning and management control so that every decision maker can act in accordance with agreed objectives. Controlling function as a separate department contributes business efficiency through ensuring transparency of business result and business processes. Controlling takes place when manager and controller cooperate.

The aim of this paper is to investigate the effectiveness of controlling function (i.e. controlling department) in Croatian companies and to address the specific features of the function that contribute significantly to overall business performance. The research is conducted on the sample of companies listed on the Regulated market of the Zagreb Stock Exchange. Survey is used as a method to collect the data regarding the controlling function, while financial data necessary for the research are extracted from the published financial statements. Results of the research indicate that controlling department has positive effects on the business performance.

Key words: *Dynamic environment, Management, Controlling, Business performance*

1. INTRODUCTION

Controller, controllership and controlling are not among the most clearly defined terms, both in theory and in practice. Preißler (2007: 14) argues that everybody has their own idea of what controlling means or should mean, and everybody means something different. This is partly because controlling is primarily a phenomenon found in practice, and its development has been rather different in Anglo-Saxon countries than in German-speaking countries, as well as in other western European countries.

The notion of “Controlling”, as it is commonly used in German-speaking countries, may be regarded as an equivalent term for management accounting, diverging into the fields of planning and performance management. However, it is more strongly separated from financial accounting than management accounting tends to be in other cultural contexts (Becker and Messner, 2005: 418).

According to the definition provided by The International Group of Controlling (IGC)¹ controllers design and accompany the management process of defining goals, planning and controlling and thus have a joint responsibility with the management to reach the objectives. This means following:

- Controllers ensure the transparency of business results, finance, processes and strategy and thus contribute to higher economic effectiveness.
- Controllers co-ordinate sub-targets and the related plans in a holistic way and organise a reporting-system which is future-oriented and covers the enterprise as a whole.
- Controllers moderate and design the controlling process of defining goals, planning and management control so that every decision maker can act in accordance with agreed objectives.
- Controllers provide managers with all relevant controlling information.
- Controllers develop and maintain controlling systems.

Controller positions are a response to increasing competitive pressure and the growth in company size. Osmanagić Bedenik and Lalovac (2007: 88) argue that the mission of controlling is the implementation and effective application of certain instruments conducive to business transparency and the enhancement of management sensibility towards internal and external changes, which ultimately results in the strengthening of the vitality of a company.

Depending on the management level we can distinguish operational and strategic controlling. Operative controlling includes management activities that cover setting objectives, planning and controlling in the mid-term and single year time frame. The main goal is to increase business efficacy while its objectives are liquidity, profitability, financial stability, etc. On the other hand, strategic controlling includes those management activities that comprise the planning, testing, implementation and monitoring of strategies. It has a long term orientation determined by strategy plan and gives management professional assistance in order to increase overall business effectiveness. The objectives of strategic controlling could be existing and future potentials for success, market shares, new products, etc.

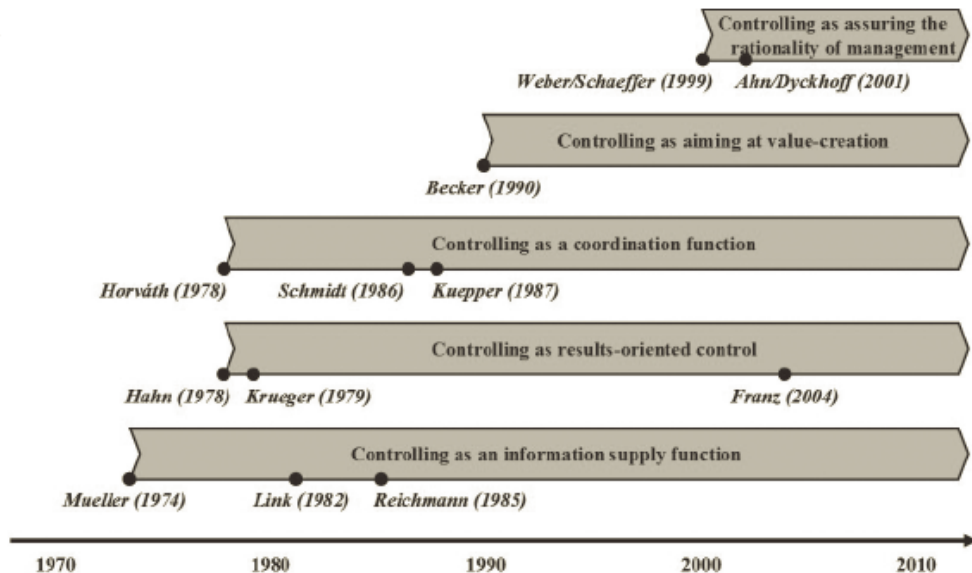
The aim of this paper is to analyze the impact of controlling function on business performance in companies which are listed on Croatian capital market. Moreover, we want to determine if some

¹ http://www.igc-controlling.org/EN/_leitbild/leitbild.php [accessed 03/09/12]

specific characteristic of controlling function contribute to business efficiency. The paper is organized as follows. Section 2 provides theoretical background for the research and the review of the previous relevant literature. Section 3 describes the sample, data and research design. Section 4 presents and discusses main empirical results, and the conclusions are presented in the last section.

2. THEORETICAL BACKGROUND AND LITERATURE REVIEW

The origins of controlling in its modern sense lie in the United States, where the first controller positions were established in companies at the end of the 19th century. Controllers (also called “comptrollers”) essentially carried out financial duties. In 1931 the “Controller’s Institute of America” was founded, which was later renamed to “Financial Executives Institute”. In the FEI catalogue of tasks, controllership is represented as a subset of tasks within financial management, counterbalanced by the tasks of treasurers. The terms controller and controlling were introduced to western European countries only in the second half of the last century by local subsidiaries of American companies. In contrast to Anglo-Saxon countries, in German speaking countries controlling is commonly regarded as a discipline on its own, rather than simply synonym for management accounting (Messner et al., 2008: 130).



Source: Becker, W., Baltzer, B. And Ulrich, P. (2011: 45)

Figure 1. The development of controlling conceptions over time

Today in large companies controlling generally exists as separate department. According to the research presented in 1988 at the 2nd congress on Controlling in St. Gallen, Switzerland separate controlling department already existed in 5% enterprises up to 100 employees, in 51% enterprises with 100 to 500 employees, in 70% enterprises with 500 to 1000 employees, and in 96% enterprises over 1000 employees (Osmanagić Benedik, 2004: 43). Stemming from practice, controlling at first had a hard time to gain acknowledgment in academic research. Namely, there were no existing body of academic knowledge that scholars could build on (Messner et al., 2008). As a result, controlling research was generally highly theoretical, conceptual and descriptive in nature.

The average share of empirical articles published in Germanic academic journals by the mid-1990s was around 20% of all controlling articles and it arose to around 28% on average with fluctuations in subsequent years (Messner et al., 2008). Moreover, the empirical research was predominantly based on quantitative studies and oriented towards analysing scope of controllership and positioning of controlling in the formal organization structure, as well as on document analyses like analyses of job advertisements (Becker and Messner, 2005; Wagenhofer, 2006; Becker et al. 2011).

The research on controlling in Croatia is also largely theoretical and descriptive, while existing empirical analysis are commonly based on surveys exploring the existence and characteristics of controlling in the companies. Likewise, Osmanagić Bedenik (2003, 2007) conducted two separate studies on controlling in Croatia and made comparative analysis of the results. The research showed that the number of controlling departments increased gradually in Croatian companies (in 2001 53% of companies had controlling department while the proportion of companies with independent controlling department in 2007 was 74%). Nevertheless, controlling basic functions are still oriented towards operative management using mainly operative instruments and internal quantitative information. Similarly, the research conducted by Špac and Mošnja-Škare (2009) indicated that controlling was implemented in more than 60% of the most successful Croatian companies and that was considered a very important factor for companies' success. Our study is built on previous researches by investigating the effectiveness of controlling in Croatian companies and specific features of the function that contribute to business performance.

3. SAMPLE AND METHODOLOGY

This section explains the sources of empirical data, variables and methods used in empirical research. Firstly, we want to investigate if companies with controlling department have greater business efficiency (measured by different profitability ratios) compared to companies without controlling

department. Secondly, by using subsample of companies that have controlling department we analyze whether some specific characteristics of controlling department contribute significantly to overall company's profitability.

3.1. Sample description

The population from which the sample is drawn represents the companies listed on the Regulated market of the Zagreb Stock Exchange (ZSE)². This population is selected because it is assumed that there is a high probability that such companies have a controlling department. Survey is used as a method to collect the data regarding the controlling function, while financial data necessary for the research are extracted from the published financial statements available on ZSE. The survey questionnaire was carried out from March to June 2012. The questionnaires were sent and returned by e-mail. From totally 176 questionnaires sent, 39 were returned (i.e. the survey's response rate is 22,6%).

Table 1. The structure of the sample by industry

Industry	Frequency	Percent	Controlling department exists	Controlling department doesn't exist
Financial service	10	25,6	10	0
Manufacturing	16	41,0	13	3
Wholesale and retail trade	5	12,8	2	3
Other services	8	20,5	5	3
Total	39	100,0	30	9

Source: estimated according to data from authors' data base

Initial analysis of the results shows that 30 companies (76,9%) have controlling department, while 9 companies (23,1%) don't have controlling department. The most important reasons for establishing controlling department were global economic and technological changes in contemporary business environment. Controlling department is most frequently established in financial sector. According to the ownership structure, almost all analyzed foreign companies have controlling department (13 out of 14 companies), in contrast to 68% (17 out of 25) of domestic companies that have controlling department. The most frequent number of employees in controlling department is between 4 and 6.

² www.zse.hr

Similarly to the research carried out by Osmanagić Bedenik (2007), our research indicates that controlling is still principally oriented to operative level of management.

3.2. Model specification and variable description

In order to identify what specific characteristics of controlling function contribute to overall business performance, we developed following regression model:

$$ROA = \beta_0 + \beta_1 NoC + \beta_2 VarA + \beta_3 OuIn + \beta_4 OpEff + \beta_5 lnSize + \varepsilon \quad (1)$$

The corporate efficiency is dependent variable and it is approximated by return on assets (ROA). We use accounting-based measures since accounting returns reflect a company's internal efficiency rather than market fluctuations. Number of employees in controlling department (NoC) is used as explanatory variable and we expect that number of controllers is positively related to business efficiency. Variable VarA is used because the majority of respondents in our survey answered that controlling activities are oriented towards operative objectives and that the most frequent operating activity (i.e. 30% of cases) is plan variance analysis. OuIn is dummy variable that takes value 1 if the formation of controlling department is initiated from persons outside the company. Variable OpEff represents the opinion on controlling effectiveness. It is measured by Likert scale, where number 1 means that controlling is not effective and number 5 means that controlling is very effective. The majority of respondents answered that controlling is effective (46,7%) and very effective (30%).

Table 2. Variable description

Variable	Symbol	Description/Measurement
Return on assets	ROA	Operating profit / Average total assets
Return on equity	ROE	Net profit / Average stockholders' equity
Number of controllers	NoC	Number of controllers / Total number of employees
Variance analysis	VarA	One if variance analysis the most frequent operating activity and zero otherwise
Outside initiation	OuIn	One if existence of controlling department is initiated from persons outside the company and zero otherwise
Opinion on controlling effectiveness	OpEff	Variable measured by Likert scale
Size of company	lnSize	Nature logarithm of total asset

Finally, logarithmic transformation of total assets (lnSIZE) is included to control the differences in size of companies and in other omitted variables. Description and the measurement procedures of selected variables are presented in Table 2.

4. EMPIRICAL RESULTS

Firstly we intended to investigate if there is difference in profitability between companies that have controlling department and those that don't have controlling department. In order to test the difference in profitability between mean values of the two independent groups we used both parametric t-test and nonparametric Mann-Whitney U test. We used two different accounting measures of business profitability: return on asset (ROA) and return on equity (ROE).

Table 3. Difference in profitability between alternative groups

Variable	Mean	Std. Error	Student's t- test	Mann-Whitney U test
	Difference	Difference	(t-statistic)	(z-statistics)
ROA	0,030222	0,010121	2,986***	-3,002***
ROE	0,153722	0,153722	4,015***	-3,384***

Notes: *statistically significant at the 0.1 level; ** at 0.05 level; ***at 0.01 level respectively.

Student t-statistics are adjusted for heterogeneity of variances when necessary.

Source: estimated according to data from authors' data base (n=39)

As we can see from Table 3 both tests statistics indicate that there is a statistically significant difference between mean values of profitability ratios ROA and ROE. Namely, companies with controlling department have on average higher profitability than companies without controlling department.

After that we used a subsample of companies that have controlling department in order to analyze effects of some specific characteristics of controlling department on business profitability. The results of the estimated regression model are presented in Table 4. The results from Table 4 report that only two variables have statistically significant influence on company's profitability. Initiation of controlling function from outside of company (InOu) is negatively related to profitability. This means that it only makes sense to install controlling department in those companies where management is aware of the importance of controlling function and controlling practice. Namely, controlling is a management activity and should not be thought of as being exclusively the professional controller's job. Also, results indicate that effective controlling function is related positively with business

efficiency, since variable OpEff is statistically significant at 1% level. Therefore, by increasing the effectiveness of controlling department a company can improve its performance.

Table 4. Regression model estimated using Expression (1)

Variable	Coeff.	SE	Beta	t-statistic	VIF
Constant	-0,147	0,070		-2,096**	
NoC	-0,008	0,011	-0,112	-0,710	1,196
VarA	-0,012	0,016	-0,147	-0,771	1,746
InOu	-0,015	0,020	-0,116	-0,745**	1,162
OpEff	0,036	0,011	0,683	3,328***	2,009
InSize	0,002	0,002	0,128	0,840	1,009
R ²		0,497			
Adjusted R ²		0,392			
Durbin-Watson		2,209			
F-value		4,736***			

Notes: *statistically significant at the 0.1 level; ** at 0.05 level; ***at 0.01 level respectively

Source: estimated according to data from authors' data base (n=30)

Calculated multicollinearity tests suggest that collinearity is not serious issue (i.e. variance inflation factors are lower than 5). Tested model is overall statistically significant (F-statistic 4,736 and corresponding p-value 0,004) with adjusted R-square of 0.392.

5. CONCLUSION

Controlling represents a function within a management system that increases business efficiency, and thereby its ability to assimilate changes within a company and outside of it. Controlling realizes its purpose by coordinating and integrating business functions and by providing information for ensuring the rationality of executive actions, particularly concerning planning and monitoring. The aim of this paper was to investigate the effectiveness of controlling function in Croatian listing companies and the characteristics of controlling that contribute to business efficiency. Overall, results of the research indicate that effective controlling has positive effects on the business efficiency.

However, the analysis in this paper is limited in several ways and many other aspects of the issue can be investigated in the future. The main limitation of our research is rather small sample. Moreover, the research can be enhanced by adding other variables that explain controlling function and determinants

of its efficacy in more details and to investigate the reasons why companies in Croatia are still oriented towards operative level of management and not strategic.

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