

CONTROLLING AS A TOOL FOR SME'S PERFORMANCE

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Abstract

The aim of this paper to be focused to interaction between controlling implementation process in SME and evaluate its performance in process level maturity, business performance, HR and information system in company. The controlling as a management tool and its using is nothing untouchable for SMEs, but at present is developed controlling used only at small part of SMEs. This paper will focus primary to Czech SMEs and also its some specific parts which family business is and will compare data from SMEs with different controlling implementation and operating level and will look for interaction between controlling and business performance of SME. Purpose of this paper is defined main areas of controlling successfully implementation, focus on them most crucial implementation points and search for new opportunities for SMEs. These opportunities should be starting cross boarder cooperation, higher SME efficiency and stability.

Keywords

SMEs, Controlling, Management, Process, Information Systems

I. Introduction

The economic policy and its main goals are focused on challenges how the governments are creating system of taxation, budgeting, how to influencing to money supply and interest rates, or how to manage labor market². Common goal of economic policy is creating stable business environment on the highest level to support national economy. What is important is understanding, that SMEs and their supporting should have strong or essential influence for national economy and its developing. The controlling and understanding how to implementing controlling as a management tool in SMEs successfully should have essential impact to national economic and its developing.

Situation at present economic is challenging for Small and Medium Enterprises (SME)³. New trends in digitalization, hypercompetitive business environment, globalization and politically social situation is creating for SMEs great opportunities and threads also. The tool for SME which should help SMEs to be competitive and reach stable position on market is controlling as a management tool. Controlling is not only a tool for checking something, but it is great managerial tool oriented to future. The controlling as a management tool and its using is nothing untouchable for SMEs, but at present is developed controlling used only at small part of SMEs. The question is how support controlling implementation as an increasing trend for SME? The answer is not simple, but solutions are existing. The aim of this paper is to recognize main points of controlling implementation process to support its usage by SMEs.

SME business is sensitive to external influences and is very important part of EU economy. For its future development is necessary create condition for its supporting, include looking for performance management tools as an ERP system. "Small and medium-sized enterprises face a number of problems which are difficult to overcome due to the nature of these enterprises which are very sensitive to changes in the business environment" according Piotr (2016) "Achieving permanent

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² Based on state policy and organizational structure.

³ SME for this research is defined as a company under 50 million € turnover and under 250 employees. Full information about definition by European Commission (2018).

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success in this complex and dynamic environment has become very difficult, especially for small and medium-sized enterprises” wrote Petru, Havlíček (2017)

European SMEs are basic forces and create the backbone of the EU economy and they are also developing socio cultural society in regions. Its position in economy and society is irreplaceable. “SME are one of most important groups of employers and innovators in EU. SMEs employed 93 million people, accounting for 67 % of total employment in the EU-28 non-financial business sector and generating 57 % of value added in the EU-28 non-financial business sector. Almost all (93 %) of the SMEs were micro SMEs employing less than 10 persons.” European Commission (2017). SMEs are really important for any modern economic and especially in Czech Republic and for neighbor countries as Austria, Poland, Slovak and Hungary. The SMEs in these countries have similar culture, business culture and the controlling and its “meaning” is very similar same. Very important is to define some differences between SMEs in Czech Republic and Germany for example, where we should find more differences than by other neighbors already mentioned countries.

The SMEs are the main innovation force and the biggest entrepreneur in EU. The experiences from Slovak mentioned Rostarova, Rentkova (2016) “Start-ups are a new phenomenon of the last decade of years. There are several successful Start-ups in Europe and they are a part of small and medium enterprises. In the EU, the SMEs represent more than 99% of European enterprises and two thirds of private sector jobs and contribute to more than half of the total added value created by businesses in the EU. The SMEs represent the important element of the important "driving engine" of the European economic growth and the opportunity to create maintainable jobs. About 85% of all new jobs in the EU (from 2002 to 2010) were created by the SME. Nine out of ten SMEs are actually micro enterprises with fewer than 10 employees. Many of mentioned enterprises are Start-up companies with global potential.”

Very important part of researched companies is SME – family business. In Czech Republic is family business not defined by law, but it is possible, that definition of family business will be sun in Czech law system. Family business are special topic for Czech, because after end of communism were stabled many companies and now, is the time for over handing companies from old to new generation. The controlling and technologies should play main role throw over handing process, because the controlling as a management tool in company is a platform, which is able to solve some problems. When is this controlling managerial system developed by old and young generation, then many difficult situations will not increase, because this system will terminated it before. As mentioned Petru, Havlicek, Tomaskova, (2018) “Information and communication technologies integrate global operations of companies and their strategic functions, global networks are a reality for multinational corporations, changing not only the organization of production, logistics and sales, but also research, development, communication technologies, and the system of building and evaluation of customer relations.”

The situation after world financial crisis was difficult for SMEs in Europe. The present performance status of SMEs is positive, but the question is, for how long? The developed managerial controlling system boosted by technology should be the way, how to develop this positive situation for future. “From year 2009 global competitive pressures have increased dramatically and influenced the performance SME's within EU and global retail sector. Nowadays, global retail sector has continued to recover reasonably well, expanding retail sales and profitability. R andD and innovations are beginning to pay off. International markets of advanced economies are showing increasing signs of promise” Bezic, Galovic, Stojcic (2016).

Controlling⁴

The research motivation was understanding SME and Family Business limitation and weaknesses as same as competitive advantages. There were recognized three main points for research. Controlling as a managerial tool for set up and audit SMEs processes, technology and its assimilation to enterprise and people in organization.

Bieńkowska, Kral, Zabłocka-Kluczka, (2017) explain strategic controlling as a supports the broadly understood formulation of the organization's strategy and prevention of larger irregularities in the course of its implementation. "Operational controlling in small and medium-sized companies is linked to the fulfilment of the basic short-term targets with a direct impact on the financial indicators. These are set by the financial department or are based on the requirements of the bank that determines them as the financial indicators for operational loans" as mentioned Havlicek, Schlossberger, (2013)

"The pace of changes in the entrepreneurial environment, market pressure, and the complexity of developed innovations have contributed to entrepreneurs' focus on seeking new opportunities for increasing the innovativeness level of their organizations. Joining forces and undertaking cooperation with other entities enable generating and implementing innovations that confer a competitive advantage on the market. However, it is not an easy process, especially for small entities that because of their nature are reluctant to undertake cooperation" as mentioned Monika, Andrzej, Malgorzata (2016). This is challenge and the controlling as a management tool should be the right tool for this problem successfully solving for SMEs.

Controlling as a managerial tool and its implementation should be crucial for SMEs near future developing and surviving also. One of the major challenges for SMEs in the near future will be the transition to industry 4.0 and its connection with the necessary implementation of advanced information systems based on the principles of modern controlling. These new methods of controlling will improve of previously separated management disciplines and concentrate them in a single information system based on controlling. "The crucial questions of present will be also effective usage of human capital and its development. Controlling system implemented to information system will support human resources capital and will open also cross boarder usage of these resources" as mentioned Pisar, Havlicek (2018)

Technology and information systems

New technologies support cost decreasing, usage of resources by higher efficiency, cooperation in business and share resources, risks and opportunities. There are much more opportunities, which technologies should support or create as well. The main question for SME is usually why to change something, what is operating well? That is huge mistake, because others⁵ will do that. This is great challenge and in near future the SME which will not implement new technologies and information systems will get to hard competition position in comparing whit others subject which will do it as soon as possible.

"The recent social changes at European level (BREXIT) draw attention to the behavior of entrepreneurs who have resisted the market due to innovative activities (new products, advanced

⁴ Controlling is not a tool or method, which is focused only to analysis historical data – especially accounting data and results. Modern Controlling is focused to future, to predict it - for example by forecasting and achieving of goals with importance of continual improvement. Controlling as a management tool is great for SMEs. Strategic controlling and its main purpose – to reach strategic goals is managerial responsibility, which is usually missing, or is in interest level minority. Strategic controlling is necessary for long-term goals, their achieving and future develop of SME. Strategic controlling is usually replaced or limited by operative tasks. Implementation of controlling as a managerial tool helps to find balance between strategic and operative tasks. Booth controlling parts together will make SME stronger in long-term objectives and also increase efficiency in operational tasks.

⁵ Conglomerates and middle-sized companies are much more innovative at questions of technology implementations. Usually it is caused by higher human resources and existence of some position or departments which are responsible for implementation process and innovations. Unfortunately, the SMEs are usually focused more for operative goals and have smaller possibilities or will to change something, what is at this moment operating well.

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technologies, new management and marketing approaches, modernization of the information system, intellectual capital), but also to those who have created a new business after their previous business went bankrupt or was voluntarily closed because it was not profitable.” Cretu (2017)

The common European market is great opportunity and “homogeneous environment”. Unfortunately, bonuses of common European market are used mostly by conglomerate, then SMEs. The problem is insufficient usage of some networking information system between SMEs. The solution for SMEs should be controlling-based management system supported by the computational capacity of the current IT systems are cutting edges and offer more efficiency and potential of SMEs. “Challenges of e-business development, growth and future implementation in companies across the world are in focus of strategies in many countries and political and economic associations.” Pihir (2013)

“Technology These advanced managerial systems based on controlling are supporting increasing of efficiency, initiate effective supply chains, cutting cost – especially operational costs, support innovations leading to digitized interconnection and cooperation between individual SMEs and more others.” according Pisar, Havlicek (2018)

“The modern market is characterized by an exceptional supremacy of customers and the need of manufacturers to adapt as much as possible to the specificities of certain market segments. Information-communication technology has enabled efficient monitoring of the needs and habits of individual customers and streamlined the process of collecting data on customers and has made possible communication in a personalized manner to increase trust and loyalty toward providers of products and services.” (Smoljic, Stipanovic, Smoljic (2016)

Firms look to adopt technological innovations in hopes of realizing a variety of positive outcomes, such as to increase productivity and attain higher service levels without expending more resources as mentioned Prahalad, Mashelkar (2010)

“The external environment and strategic management are important elements for achieving competitiveness based on IT. SME have a small impact on the external environment and are strategically more oriented to shorter periods of time. To achieve sustainable competitive advantage, it is not enough to use just one strategy but several must be used along with a focus on internal capacity (knowledge, skills), business processes and innovations. SME can look for the source of competitiveness based on IT as long as they are information intensive” as mentioned Pintaric, (2011).

People in organization

People in organization is also crucial topic for successfully controlling system based on new technologies and information systems which should decide about success or all process failure. According Keijser et all. (2015) means, that „information and communication technologies (ICT) are promising for the long-term care of older and frequently frail people. These innovations can improve health outcomes, quality of life and efficiency of care processes, while supporting independent living. However, they may be disruptive innovations. As all European member states are facing an increasing complexity of health and social care, good practices in ICT should be identified and evaluated.” Technology and its implementation is about changes. People in natural will not accept changes but prefer own order. Any change include technology implementation is some disruptive element, which people mostly will refuse. This situation will recognise also at situations, when people welcome some technology implementation and “voting” for that, but subconsciously they acting against implementation.

“With technological progress, the life cycle of high-tech products becomes shorter, while the reduction of product development and time to market is significant. Under pressure from a highly competitive environment, the emphasis of the business strategy in many firms is on how the high-tech industry selects a proper business strategy, uses information technology, and develops an organisational culture in its customer relationship management (CRM) activities to provide better products and service quality to customers and increase their business performance.” Chung and collective (2012).

Implementing of any technology or innovative solution is not possible without continual human resources support during all implementation process. Also operating phase should be crucial, because people will naturally come back to old order. The purpose of this paper is also being focused for social technology and controlling implementation phase in SME, to recognise weakness and important milestones for successfully implementation.

The aim of this paper is being focused to controlling as a managerial tool for across the limitation of SMEs in European market, to understand and beware potential problem during implementation phase and how to optimizing enterprise processes to increase SMEs performance. The main research enterprise group is from Czech Republic and important part should be marked as a family business. This research is running continuously for years and use and compare data⁶ from d-base of SMEs that contains more than 3600 subjects.⁷

II. Research Methodology

Research of this topic needed combination of quantitative and qualitative research. Some data should be analyzed by numerical method as for example financial ratios, turnover etc. but other data need to social research⁸ and scaling before to be convert to numerical values and their statistical evaluating.

Problem formulation

Controlling and its level of implementation as well as its performance is not possible to evaluate directly, because there are many other factors with influence to final results. Then, before evaluation controlling performance is necessary understand to processes inside SME, people in organization and their engaging for controlling, business environment and others. Some data is simple to reach with needed accuracy financial ratios Return On Assets⁹ (ROA), Return On Equity¹⁰ (ROE), Current ratio¹¹, turnover¹² and others.¹³ It is possible to compare these data and their development with other business mode – especially with process maturity level CMMI¹⁴, with maturity of planning, communication and others.

Some data are accessible in necessary accuracy form. But controlling and its performance is also about used technology. These factors needed to being compare with people factor in SME. It is important understand, how people accepted changes caused by controlling or technology implementation. Without knowledge about communication throw SME structures and leaders are

⁶ Qualitative and Quantitative research of business model and processes SME, mostly registered in Czech Republic (more than 80%), Austria, Poland, Slovak and Hungary n=106 - till 5 July 2018.

⁷ D-base for research of family business in Czech Republic, operated by the University of finance and administration in Prague - till 5 July 2018.

⁸ Social research is necessary part of this research. For example, to evaluate communication during structures in SME, type of business model, people in organization satisfaction or their responsibility. There are many tasks which need personally meeting with SME representatives and use validated survey for that. These results are convert to numerical form and then analysed by statistical methods.

⁹ Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives a manager, investor, or analyst an idea as to how efficient a company's management is at using its assets to generate earnings.

¹⁰ Return on equity (ROE) is the amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

¹¹ The current ratio is a liquidity ratio that measures a company's ability to pay short-term and long-term obligations. To gauge this ability, the current ratio considers the current total assets of a company (both liquid and illiquid) relative to that company's current total liabilities.

¹² The amount of business that a company does in a period of time – one business year in CZK or convert to CZK

¹³ These ratios and indicators are not significant for all economy, but they are different for any kind of industry. Significant and this ratios evaluation is inside same industry or for SME developing analysis during periods.

¹⁴ The Capability Maturity Model Integration (CMMI) method was used for process levels and their maturity evaluating. CMMIs focus on improving processes in an organization. They contain the essential elements of effective processes for one or more disciplines and describe an evolutionary improvement path from ad hoc, immature processes to disciplined, mature processes with improved quality and effectiveness. Carnegie (2006).

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supporting these changes should be any great project include controlling implementation destined to failure.

Research model

For this research is needed to collect financial data – ratios and evaluate them in relation with data from personal interviews and social research based on reliability¹⁵ structured survey. The available D-base sample is too large and not homogenous¹⁶ for analysis. Some representative randomized sample¹⁷ will be analyzed from quantitative research part and qualitative researched data will be used for relation between controlling and SME stability and performance. General data will be analyzed by correlations and regressions methods. These data will be used to comparison case studies results with correlation and regression analysis of variables.

Variables:

- HR communication – people communication effectivity throws SME organizational structures.
- Process maturity level – evaluation is based on The Capability Maturity Model Integration (CMMI) in five levels (Initial, Managed, Defined, Quantitatively Managed, Optimizing).
- IS (information system) and technology implementation level evaluated in scale based on personnel survey in SME.
- Operation controlling maturity level evaluated in scale based on personnel survey in SME.
- Strategic controlling maturity level evaluated in scale based on personnel survey in SME.

Together, this model will propose results to understand if controlling is the way how support SMEs to higher performance and stability in future. The result will be compared by information from case studies examples.

Methodology

1. Variable values will be proceeding by correlation, linear regression¹⁸ and will be calculated the Cronbach alpha¹⁹ for sample reliability validation. Calculation will be proceeding by IBM SPSS ver. 25 statistical program. This procedure should confirm the validity of the questionnaire part of the research.

2. Pearson's correlation coefficient
$$r = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}}$$
 formula no. 1

3. Enterprise in researched D-bases tested if enterprise is full filling SME criteria according European Commission definition. After this selection will be created sample for research.

¹⁵ Reliability in statistics and psychometrics is the overall consistency of a measure. A measure is said to have a high reliability if it produces similar results under consistent conditions. Validation of research survey was proceeded on sample of 14 SMSs based on personnel experiences and SME knowledge.

¹⁶ Companies in different industries have different business condition indicators, by randomising of the research sample from same industry we will get homogenous sample for research.

¹⁷ For randomise sample was used excel function RANDBETWEEN, which was applicated on ID of the individual line with the SME record. The final analysed sample after this function has n=106.

¹⁸ In statistics, linear regression is a linear approach to modelling the relationship between a scalar response (or dependent variable) and one or more explanatory variables (or independent variables). The case of one explanatory variable is called simple linear regression.

¹⁹ Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability. A "high" value for alpha does not imply that the measure is unidimensional. If, in addition to measuring internal consistency, you wish to provide evidence that the scale in question is unidimensional, additional analyses can be performed. Exploratory factor analysis is one method of checking dimensionality. SPSS (2018).

4. For SMEs in researched sample will be calculated financial ratios and evaluate variables based on personnel survey in SME.

$$ROE = \frac{\text{Net Income}}{\text{Shareholder's Equity}} \text{ formula no. 2}$$

$$ROA = \frac{\text{Net Income}}{\text{Average Total Assets}} \text{ formula no. 3}$$

$$\text{Current Ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} \text{ formula no. 4.}$$

5. On case studies with known controlling implementation level will be defined basic points for successfully controlling and technology management system implementation. Because the financial ratios are different for every industry sector, then the SMEs for case studies analysis will be from industry sector – services. For case studies will be randomized companies sample²⁰ which have different controlling maturity level. One SME for every level.

III. Statistical analyses

The data for analysis was collected by personnel research survey in SMEs. The survey was validated for reliability on sample of 14 SMEs, which were researched by some person with detailed knowledge of SMEs. The final survey and evaluation methodology were updated and collected data (variables) was checked on reliability test by Cronbach alpha.

Variables:

- HR communication ²¹ – people communication effectivity throws SME organizational structures.
- Process maturity level ²² – evaluation is based on The Capability Maturity Model Integration (CMMI) in five levels (Initial, Managed, Defined, Quantitatively Managed, Optimizing).
- IS (information system) and technology implementation level²³ evaluated in scale based on personnel survey in SME.
- Operation controlling maturity level²⁴ evaluated in scale based on personnel survey in SME.
- Strategic controlling maturity level²⁵ evaluated in scale based on personnel survey in SME.

Table 1 Case processing summary compute Cronbach's Alpha

Cases	Valid	106	93,8
	Excluded *	7	6,2
	Total	113	100,0

*Listwise deletion based on all variables in the procedure.

Source: Authors data analyzed by IBM SPSS ver. 25 program (2018)

²⁰ SME sample will be randomized by business performance indicators and their values will be around model median.

²¹ HR communication scale: no = 0, low = 1, medium = 2, high = 3, excellent = 4.

²² Process maturity level (CMMI) scale No = 0, initial = 1, managed = 2, defined = 3, quantitatively managed = 4, optimizing = 5.

²³ IS (information system) and technology implementation level scale: no = 0, low = 1, medium = 2, high = 3, excellent = 4.

²⁴ Operation controlling maturity level scale: No = 0, low = 1, medium = 2, high = 3, excellent = 4.

²⁵ Strategic controlling maturity level scale: No = 0, low = 1, medium = 2, high = 3, excellent = 4.

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Table 2 Variable reliability statistics

Cronbach's Alpha	N of Items
,922	5

Source: Authors data analyzed by IBM SPSS ver. 25 program (2018)

Analysis of Cronbach's Alpha with value proved high reliability of tested variables. The Cronbach's Alpha coefficient ,922 declare excellent internal consistency. N = 5 variables, which reliability in one research model was tested. Pearson's correlation coefficient calculation in table 3 declares high correlation between researched variables. This statistic method used on researched sample declare high interactions between people, technology, process maturity level and level of implemented operation and strategic controlling process level maturity variables.

Table 3 Variables correlations statistic - Pearson's correlation coefficient²⁶

		HR communication	Process maturity level	Operation controlling	Strategic controlling	IS and technology
HR communication	Pearson Correlation	1	,828**	,744**	,760**	,684**
	Sig. (2-tailed)		,000	,000	,000	,000
	N	106	106	106	106	106
Process maturity level	Pearson Correlation	,828**	1	,798**	,705**	,739**
	Sig. (2-tailed)	,000		,000	,000	,000
	N	106	106	106	106	106
Operation controlling maturity level	Pearson Correlation	,744**	,798**	1	,676**	,619**
	Sig. (2-tailed)	,000	,000		,000	,000
	N	106	106	106	106	106
Strategic controlling maturity level	Pearson Correlation	,760**	,705**	,676**	1	,600**
	Sig. (2-tailed)	,000	,000	,000		,000
	N	106	106	106	106	106
IS (information system) and technology implementation level	Pearson Correlation	,684**	,739**	,619**	,600**	1
	Sig. (2-tailed)	,000	,000	,000	,000	
	N	106	106	106	106	106

** Correlation is significant at the 0.01 level (2-tailed).

Source: Authors data analyzed by IBM SPSS ver. 25 program (2018)

IV. Case studies

Following case studies will be analyzed based on previous understanding proved by statistic method, that this research variables and financial ratios analysis are significant for evaluating of SME business performance. SMEs in case studies will have fictional name, because protection and law requirements.

Company no. 1²⁸

Company basic business facts introduction. Controlling maturity level at operational and strategic level = 0, process maturity level = 1 incomplete, IS and technology implementation level = 0, HR

²⁶ formula no. 1.

²⁷ A Pearson correlation is a number between -1 and 1 that indicates the extent to which two variables are linearly related. The Pearson correlation is also known as the "product moment correlation coefficient" (PMCC) or simply "correlation". SPSS (2018).

²⁸ SME ID in research sample = 13.

communication level = 0, turnover in thousands 7,480, ROE²⁹ = 6.18 ROA³⁰ = 2.63 Current ratio³¹ = 1.24 number of employee's category 0-5.

This SME is owned and managed by one person (which acquired company through inheritance), which is supported by some family members. The main business operation is offering services and rent pension with equipment to other company, which is operated this business. The owner is not investing to this company and is not pay renovation investments at necessary level. There is not concept for developing company and at present there is only aim to spend money which this company is generating. The ROE, ROA and current ratio analysis is significant for risky business operations and low level of planning if any. If we can prognose future, then this company without necessary management changes will probably close in near future.

Company no. 2³²

Company basic business facts introduction. Controlling maturity level at operational and strategic level = 1, process maturity level = 1 incomplete, IS and technology implementation level = 1, HR communication level = 2, turnover in thousands 7,452, ROE³³ = 16.10 ROA³⁴ = 11.5 Current ratio³⁵ = 2.04 number of employee's category 0-5.

This company is operating small family business, which is focused to offering services in horticulture as field cultivation and crops harvesting. This SME is owning equipment and machinery and is specialized for smaller fields and horticultural companies. There are working family members and company is managed by father – founder. This company has all significant factors for family business. Management style is autocratic and needs for change something what is working is on low level. Controlling as a management style is low but is there. Company is focused on operational controlling at financial and operating goals. Strategic controlling is visible at questions of planning investment to reach new market share and equipment as a tractor³⁶. The current ratio suggests, that company is holding money to cover seasonality in industry. Communication throw company is not bad but limited by authoritarian owner. For some situation is this management style advantage, because the company is flexible, but from the other hand this management style and communication is defending innovations and process developing. Technology used in SME is on low level – it is information system Pohoda.³⁷This software is supporting many additional functions which are not used, because owner prefer paper and calculators. Unfortunately, this factor decreasing effectivity of all business. If we can prognose future, for this company will be critical hand overring process to young generation (father founder is getting to be retired) and business decisions in 3 years period after hand overring process.

Company no. 3³⁸

Company basic business facts introduction. Controlling maturity level at operational and strategic level = 2, process maturity level = 3 defined, IS and technology implementation level = 2, HR

²⁹ formula no. 2.

³⁰ formula no. 3.

³¹ formula no. 4.

³² SME ID in research sample = 106.

³³ formula no. 2.

³⁴ formula no. 3.

³⁵ formula no. 4.

³⁶ Tractor is investment for minimum 8 years and longer and cost more than year turnover. That is reason, why the investment to tractor is understand as a strategic goal.

³⁷ Economic and Accounting Program POHODA – basic information system for SME in Czech.

³⁸ SME ID in research sample = 106.

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communication level = 2, turnover in thousands 216,820, ROE³⁹ = 18.60 ROA⁴⁰ = 12.65 Current ratio⁴¹ = 2.11 number of employee's category 101-250.

This company form is Ltd. and operating maintenance services for shopping centers and others companies. The core of business is offer cheap services and this company is using low paid employees usually as older people or foreign workforce. Basic structure of company is top management with HR, financial, CRM departments. Company is using developed information system for coordinating business operation. The problematic part is low level skilled blue collars. This lowest SME structure is not able accept in full scale communication in company and to be full skilled for their operation. This problem should solve higher level of automatization. Unfortunately, the revenues from higher automatization will not pay the cost. Controlling as a management tool is operating well in Top management and basic business operation (operation controlling). Strategic controlling is used and medium developed at HR strategy, market share strategy and innovation strategy. Wider controlling usage – for example on lowest employee's level is not possible at the moment, because people on lowest position will not accept changes, which controlling brings. They refuse it by explanation "I do not understand" – but it means "I will not". This company based on financial results and ratios is operating well. ROE and ROA is positive and current ratio says that SME is financial stable and conservative. This company is developing and based on interviews with managing director, the present positive company statement is caused by controlling implementation, investment to technology and company communication culture. This company is stable growing and innovating.

Company no. 4⁴²

Company basic business facts introduction. Controlling maturity level at operational and strategic level = 4, process maturity level = 5 optimized, IS and technology implementation level = 4, HR communication level = 4, turnover in thousands 59,940, ROE⁴³ = 41.17 ROA⁴⁴ = 32.71 Current ratio⁴⁵ = 3.16 number of employee's category 6-15. All indicators are on highest level.

This company is only 2 years old and is operating on IT services worldwide. The form of company is Ltd. This company is great example, how the controlling processes with necessary technology and company throw structure communication should boost the business. This company has only 11 employees⁴⁶ and was founded on controlling principles⁴⁷. The controlling is here at every simple process. Controlling implementation level is highest and for this level is significant process of continuous improvement. All processes and business operations are continuously evaluated and if there is deviation, then is launched process of deviation causality launched and started process of solution searching. This solution is tested and if necessary, this procedure is launched again. Company has clearly defined own goals at operation and strategic controlling also. One of most important goals in company are HR goals and strategy include personnel development, CRM strategy and goals and Innovation strategy and goals.

Company has clearly defined and throw company structures communicated mission, vision and strategic plan. The main strategic goal is preparing company for sell in five years. Till this point the main strategy is to increase company value, double market share in 2 years and search for new technological solutions opportunities and innovations.

³⁹ formula no. 2.

⁴⁰ formula no. 3.

⁴¹ formula no. 4.

⁴² SME ID in research sample = 17.

⁴³ formula no. 2.

⁴⁴ formula no. 3.

⁴⁵ formula no. 4.

⁴⁶ Till 10th May 2018.

⁴⁷ As sad the founder during personal interview. Founder finish degree on economic school in 2014.

Very important for business operations is company's Enterprise Resources Planning system (ERP) VISION⁴⁸, which is customized and is operating any simple business process in company. It is also accessible through mobile phone and is supporting on-line data exchange. This system is operating business operations, CRM, operation controlling task on high automatized level, internal communication platform and others. The great factor is, that all employees are from IT industry and love technology. There is not strong symptom of technology and changes refusing problem. Some external free lenders are not evolved to this system and the company is spending money for training program to change it.

V. Conclusion

The aim of this paper was recognise interaction between controlling implementation process in SME and evaluate its performance in process level maturity, business performance, HR and information system in company. This goal is full filled. During the research process was on researched sample recognized, that this research variables (HR communication, People communication effectivity, Process maturity CMMI, IS and technology implementation level, operation and strategic controlling implementation maturity level) and their development is crucial for SMEs business performance. Reliability and consistence were proved by Cronbach Alpha and Person's correlation coefficient. Reached values support full filling of this goal on high level of reliability and consistence.

During this research and qualitative research (personal interviews) was recognized, that controlling is great tool and its development and implementation should be great management tool for higher business performance and company future development. Unfortunately, the controlling as a management tool is in higher implementation and maturity levels usually used in more innovative and bigger companies. During research we recognized, that small companies till 15 employees and with turnover till 25,000,000 CZK (1,000,000 €) are usually not using or developing controlling maturity level. Based on researched SME sample and qualitative research is significant, that controlling should be the difference between hi-business performance company and the others.

Based on qualitative research we recognize, that there are main factors, which are defending successfully implementation or controlling development in company.

- Human factor – it is most important factor of all. During interviews we get understanding, that innovation and new technologies are usually supported through all structures. From director to blue collars. But the problem started, when the implementation process started and this will bring changes. Naturally, people will not like changes. It is expected and it is basic knowledge for successfully implementation and operation in future. For example, director will support this innovation till time, then he understood, that he does not need 2 secretaries, but only one (but one is great coffee maker and second is great for communication with customers), or till time to change own work habits and change paper reports to reports in mobile phone. This is, that we can recognize through all structures in company and unfortunately also in interactions with or suppliers, customers etc. It is necessary to understand it and invest energy and spent money through all implementation process to support these changes. Explain, train, motivate, lead – simply work with people and look for representatives from all company structure levels for support these changes and implementations. People are scared from something new and they afraid because they can be expecting job losing, they can doubt if they can do it, they should be lazy etc. People and their implementation process involvement in organization, communication and their support are necessary for controlling implementation.
- Technology and information systems – especially ERP systems are really powerfully to support controlling performance in company. Some automatization process, widely enhanced possibilities to cooperation, data analysis, automatization and others will dramatically

⁴⁸ VISION is ERP system, which is built on SAP base. This system is highly developed and offer automatic data exchange with third companies.

Controlling as a Tool for SMEs Performance

decrease operating costs and allow much easier achieving of strategic goals. The problem is investment to technology implementation. Especially in companies till 15 employees and 1 million € turnover⁴⁹ is cost of information system and new technology not accepted as an investment which should support business operation. The usual arguments follow. Why to change our system (paper and calculator), if it works? Why to buy it? We need hire more employees. Yes, it is useful, but now we have other priorities (usually operation management tasks). But investment to technologies and information systems will no be always about huge investments. For example, in case of information systems there are two main solutions. Buy a “box” software, which allow start modern solution and usually the price is under 1000€. If company – especially small company will operate with this software, then is possible upgrade it or invest to customized solution, which is in compare with box solution much more expensive, but also offer great possibilities how boost business.

- Implementing controlling and technologies is not about take “Old system” and digitalized it. It is about complexify process audit, about recognise new solutions and about searching for new opportunities. It need time and it is never ending process. Then the controlling implementation have good chance to move for highest maturity implementation level and hold this position for future. The often failure is caused by old processes digitalizing. Then the company receive some improvement, but only small part of possible.
- We are limited only by our imagination and mind. It is also true for controlling and technologies. Controlling as a management tool is forced company to stay in continuously improvement mode. Then the need of innovations is much stronger. If there is need for innovation, then the business in generally will improve. For example – controlling system boosted by IS should evaluate suppliers, check quality, analysed order volume, inform that financial ratios are out of range, will operate automatically with third subjects etc. The company will be able to analyse information on-line and react quickly. What is better? Have information about 50% cost increasing in one week on house construction process with 2 months delay or right now?

This research and its result shows a way, how to support SMEs and their business stability and their future performance. Controlling as a management tool is great for business performance increasing and with understanding of possible problems and challenges should be implementation process much easier and more successfully. Research of this problem is great task for near future.

The controlling and understanding how to implementing controlling as a management tool in SMEs successfully should have essential impact to national economic and its developing. The “greatest things” are compounded from the “small one things”. The controlling and its implementation should be very important way, how to support national economic policy. The question for next research is if the resources, policy and economy system are supporting controlling implementation, or if there are some areas for improving and if there is space for new ideas and solutions?

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References

Bezic, H., Galovic, T. and Stojcic, N. (2016). *The profitability of SMEs within retail sector of advanced EU economies*. Paper presented at the 464-470. Retrieved January 27, 2018 from <https://search.proquest.com/docview/1854280769?accountid=37662>.

⁴⁹ Average rounded median of research sample

- Bieńkowska, A., Kral, Z. and Zabłocka-Kluczka, A. (2017). Selected functional solutions of strategic controlling in organisations operating in Poland. *Management*, 22(1), 101-118.
- Carnegie M. (2006). *CMMI for Development*. Retrieved June 20, 2018 from <http://repository.cmu.edu/cgi/viewcontent.cgi?article=1378&context=sei>.
- Chung, Y. C., Hsu, Y. W., Tsai, S. C., Huang, H. L. and Tsai, C. H. (2012). The correlation between business strategy, information technology, organizational culture, implementation of CRM and business performance in high-tech. *South African Journal of Industrial Engineering*, 23(2), 1-15. Retrieved June 19, 2018 from <https://search.proquest.com/docview/1036954730?accountid=37662>.
- Cretu, R. F. (2018). *Analysis of the opportunities and threats of innovative SMEs in the EU*. Paper presented at the 233-242. Retrieved June 26, 2018 from <https://search.proquest.com/docview/2057969359?accountid=37662>.
- European Commission, (2018). *What is an SME?*, Retrieved January 25, 2018 from http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en.
- Havlíček, K. and Schlossberger, O. (2013). New trends of management of European SMEs: The M-C model. *European Research Studies*, 16(4), 43-55. Retrieved June 19, 2018 from <https://search.proquest.com/docview/1637638590?accountid=37662>.
- Keijser, W., De Manuel-Keenoy, E., D'angelantonio, M., Stafylas, P., Hobson, P., Apuzzo, G. and Senn, A. (2016). DG connect funded projects on information and communication technologies (ICT) for old age people: Beyond silos, CareWell and SmartCare. *The Journal of Nutrition, Health and Aging*, 20(10), 1024-1033.
- Monika, S., Andrzej, S. and Malgorzata, O. (2016). *Barriers for cooperation between small enterprises and their environment*. The context of innovativeness Polish small enterprises. Paper presented at the 687-694. Retrieved June 11, 2018 from <https://search.proquest.com/docview/1856836917?accountid=37662>.
- Petrů, N. and Havlíček, K. (2017). Family entrepreneurship in the Czech Republic on the verge of first generation handover. *Journal of International Studies*, 10(4), pp.119-130.
- Petrů, N., Havlíček, K. and Tomášková, A. (2018). Comparison of marketing vitality and non-family companies doing business in Czech Republic. *Economics and Sociology*, 11(2), 138-156.
- Pihir, I. (2013). Challenges of measuring the direct effects of E-business in SMEs. *Vedecké Práce Materiálovotechnologickej Fakulty Slovenskej Technickej Univerzity v Bratislave so Sídлом v Trnave*, 21, 137.
- Pintaric, N. (2011). Competitiveness based on IT for small and medium enterprises. Paper presented at the 243-249. Retrieved June 17, 2018 from <https://search.proquest.com/docview/1323000030?accountid=37662>.
- Piotr, D. (2016). Restructuring of Small and Medium-Sized Enterprises the European Perspective. In *International Conference on European Integration. Ostrava: VŠB-TU Ostrava, Faculty of Economics*, 190-196.
- Pisar, P. and Havlíček, K. (2018). *Proceedings of the 4th International Conference on European Integration 2018: Advanced Controlling and Information Systems Methods as a Tool for Cohesion and Competitiveness of the European Union*. Ostrava: VŠB - Technical University of Ostrava, 1273.
- Rostarova, M. and Rentkova, K. (2016). *Using of structural funds by SMEs and start-Ups in Slovak Republic*. Paper presented at the 425-432. Retrieved June 29, 2018 from <https://search.proquest.com/docview/1858230761?accountid=37662>.
- Smoljic, M., Stipanovic, B. and Smoljic, H. (2016). *Impact of CRM systems on the performance of entrepreneurial entities in Croatia*. Paper presented at the 498-502. Retrieved Max 05, 2018 from <https://search.proquest.com/docview/1854280579?accountid=37662>.

