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**Effective Strategic Action:  
Creating Dynamic Performance Framework Based  
on the Utilization of Synergy Effects of Bata,  
Japanese and Amoeba Management Systems**

Efektivní strategická akce:  
Tvorba dynamické soustavy výkonnosti založené na synergických  
efektech soustav řízení Bata, Japonské a Amoeba

Doctoral Thesis

Degree course: 6202V010 Finance

Supervisor: Prof. Ing. Milan Zelený, Ph.D.

Year: 2013



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## **LIST OF ABBREVIATIONS AND ACRONYMS**

ABC/M	Activity Based Costing / Management
AMS	Amoeba Management System
BCG	Boston Consulting Group
BMS	Bata Management System
BPR	Business Process Reengineering
BSC	Balanced Scorecard
B2B	Business-To-Business
B2C	Business-To-Consumer
CEO	Chief Office Executive
CIP	Customer-Innovations-Processes (Cycle)
CIPF	Customer-Innovations-Processes-Finance (Cycle)
CRM	Customer Relationship Management
EAT	Earnings After Taxes
EBIT	Earnings Before Interests and Taxes
EBITDA	Earnings Before Interests, Taxes, Depreciation and Amortization
EFQM	European Foundation for Quality Management
EPS	Earnings Per Share
ERP	Enterprise Resource Planning
EU	European Union
EVA	Economic Value Added
GDP	Gross Domestic Product
HR	Human Resource
HRM	Human Resource Management
ISO	International Organization for Standardization
ISO/TS	ISO /Technical Specification
IT	Information Technology
ICT	Information and Communication Technology
JETRO	Japan External Trade Organization
JIT	Just-In-Time

JMS	Japanese Management System
MVA	Market Value Added
R&D	Research and Development
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
ROS	Return on Sales
SWOT	Strengths-Weaknesses-Opportunities-Threats (Matrix)
TOC	Theory of Constraints
TQM	Total Quality Management
UDIO	Understand-Design-Implement-Operate (Cycle)
US	United States (of America)
USD	United States Dollar
VRIO	Value-Rarity-Imitability-Organization (Framework)
4P	Product-Price-Promotion-Place (Marketing Mix)
5S	Japanese method that uses a list of 5 Japanese words (seiri ó sort, seiton ó set in order, seiso ó clean, seiketsu ó systematize, shitsuke ó standardize)
7S	Strategy-Structure-Systems-Staff-Style-Skills-Super-Ordinate Goals (management model developed by McKinsey)

# ACKNOWLEDGEMENT

The writing of this Doctoral thesis has been one of the most significant academic challenges I have ever had to face. Without the support, patience and guidance of the following people who in one way or another contributed and extended their valuable assistance in the preparation and completion of this study, my Doctoral thesis would not have been completed. It is to them that I owe my deepest gratitude.

First and foremost, my utmost gratitude goes to my supervisor, Prof. Ing. Milan Zelený, Ph.D., for his excellent guidance, encouragement and support during my Doctoral studies. His wisdom, knowledge and commitment to the highest standards inspired and motivated me.

I am deeply indebted to my adviser Ing. Adriana Knápková, Ph.D. Her unfailing support, knowledge and valuable assistance as well as excellent advice and detailed review during the preparation of this study contributed to successful completion of my Doctoral thesis.

I really appreciate all the help I received from Ing. P emysl Pálka, Ph.D. I am especially grateful for the insights he has shared with me, for his useful advice, continuous encouragement and friendship.

I am particularly grateful to the Dean of the Faculty of Management and Economics, Prof. Dr. Ing. Drahomíra Pavelková, whom I respect very much, for her valuable suggestions and concise comments.

I would also like to thank to my colleagues and staff at Tomas Bata University in Zlín; I greatly appreciate their support.

I am heartily thankful to my family and friends who were always entirely supportive of my academic endeavours, believed in me and encouraged me to follow my dreams.

Most importantly, I would like to express my deepest gratitude to my husband for his love, support and constant patience without whose support this effort would have been worth nothing.

## **ABSTRACT**

The Doctoral thesis deals with an effective strategic action within a company ó the ability to cope with changing demands without losing focus and anticipating changes before they arise. The thesis aims to create a dynamic performance framework based on the utilization of synergy effects of selected management systems (Bata Management System, Japanese Management System and Amoeba Management System). The framework integrates basic elements that enable every aspect of the company (people, processes and systems, innovations, finance, social responsibility and ecology) to be monitored. Special emphasis is put on customers and innovations as a fundamental basis of competitiveness for firms while continually improving the quality of processes and products. Mutual synergy effects of these elements shall ensure fast communication, build lasting value not only for the company, but also for customers and employees and improve corporate performance and efficiency. All perspectives are fully integrated with each other and create a framework that is periodical, dynamic and competitive and that is able to withstand irrelevant disturbances and that is at the same time responsive to relevant changes. The thesis also includes a proposal for a methodology for the framework implementation in companies.

## **ABSTRAKT**

Doktorská práce se zabývá efektivní strategickou akcí v rámci firmy ó schopností vypo ádat se s m nícími se poflavky bez ztráty pozornosti a p edvídáním zm n, jakmile se objeví. Hlavním cílem práce je tvorba dynamické soustavy výkonnosti založené na synergických efektech vybraných soustav ízení (Ba a, Japonské a Amoeba). Soustava integruje základní elementy, které umožní monitoring každé stránky společnosti (lidské zdroje, procesy a systémy, inovace, finance, sociální zodpov dnost a ekologii) se speciálním d razem na zákazníky a inovace jako základ pro konkurenceschopnost firem p i neustále se zlep-ující kvalit proces a produkt . Vzájemné synergické efekty t chto element zabezpe í rychlou komunikaci, vytvo í dlouhotrvající hodnotu nejenom pro společnost, ale i pro zákazníky a zaměstnance a povedou ke zlep-ení podnikové výkonnosti a efektivity. V-echny perspektivy jsou mezi sebou pln integrované a vytvá í tím periodickou, dynamickou a konkurenceschopnou soustavu, která je odolná v i nepodstatným ru-ivým podn t m a zároveň citlivá k relevantním zm nám. Sou ástí práce je i vypracování návrhu metodologie pro implementaci soustavy v podnicích.

# INTRODUCTION

“Knowing is not enough; we must apply. Willing is not enough; we must do.”

Johann Wolfgang von Goethe

In the past few years, companies have faced large social, technological and economic changes. The recent world financial crises have put a lot of pressure on businesses from all sectors and of all sizes.

Efficiency and effectiveness are no longer sufficient in the global era. Explicability and ethics – not only doing things right but also doing the right things – are emerging as major components of corporate success, as Zelený (2008) points out. Key aspects of competitiveness have moved from data and information to knowledge and wisdom. Strategy and strategic action have upstaged efficient performance and flawless execution.

The world has changed. In the world of information, the notion of strategy has been reduced to the “mission-vision” descriptions and statements. In the world of knowledge, the notion of strategy has reinstated the action in the center. Your strategy is what you are doing, not what you are saying and, significantly, what you are doing is your strategy, no matter what you say.

Modern view of the strategy is not about a statement and its implementation, but about transforming one action portfolio into another, one implicit strategy into another.

Modern management frameworks have been continuously modified, changed or substituted according to the needs specified by customers, suppliers, markets or society. However, many of them still focus only on a description of an actual corporate action (strategy) rather than enabling the company to effectively transform corporate intentions into reality (e.g. behave like a living organism – learn, adapt and self-organize).

Only those frameworks that effectively integrate all corporate activities (that are reinforcing each other) in a single whole and create a cyclical system (while using synergy effects) that along with a dynamic leadership ensure lasting competitiveness, high performance and sustainability of a company may bring success in this ever-changing competitive environment.



# 1 CURRENT STATE OF THE RESEARCHED AREA

## 1.1 Management, Its Systems and Frameworks

### 1.1.1 Importance of Management

Management is one of the essential features of civilization. Throughout recorded history, wherever human beings have gathered together to undertake great works ó build monuments, found cities, establish trade routes, create business and industrial concerns, establish hospitals or universities or religious foundations, publish books and music ó there have been managers working on these projects, Witzel (2009) notes. As the late Peter Drucker observed, businesses do not run themselves. A business enterprise cannot survive without good management, or at least not for long. That was as true four thousand years ago as it is today.

There is no generally accepted definition of management as an activity, although the classic definition is still held to be that of Henri Fayol who defined management in 1916 as follows: To manage is to forecast and plan, to organize, to command, to coordinate and to control, Cole (2003) points out. His general statement about management in many ways still remains valid after more than ninety years, and has only been adapted by more recent writers.

Brech (1957) characterized management as a social process that consists of planning, control, coordination and motivation. Similarly, Koontz and O'Donnell (1984) delineated management as an operational process initially best dissected by analyzing the managerial functions, such as: planning, organizing, staffing, directing and leading, and controlling. On the contrary, Pearce, Robinson and Mason (1989) described management as the process of optimizing human, material and financial contributions for the achievement of organizational goals.

Peters (1988) summarized five areas of management that constitute the essence of proactive performance in our chaotic world:

- An obsession with responsiveness to customers,
- Constant innovation in all areas of the firm,
- Partnership ó the wholesale participation of and gain sharing with all people connected with the organization,
- Leadership that loves change (instead of fighting it) and instills and shares an inspiring vision, and,
- Control by means of simple support systems aimed at measuring the õright stuffö for today's environment.

The definitions proposed by Brech, Koontz and O'Donnell represent changes of emphasis rather than principle, Cole (2003) continues. Tom Peters' view of management, by comparison, shifts the emphasis away from describing what management is about and stresses what it is that managers need to do. A similar opinion is held by Hannagan (2007) who described a successful manager at a senior level as a person competent to have an understanding of all areas of the business in order to be able to deal sensibly with every function as well as strategically with the whole enterprise.

Our society could never exist as we know it today nor improve without forceful managers to lead their companies. Drucker (2006) highlighted this point when he said that effective management is probably the main source of developed countries and the most needed resource of developing ones. The manager, according to his opinion, is the dynamic, life-giving element in every business.

In short, managers who are able to successfully transform management intentions into reality and can effectively guide the organizations towards goal accomplishments are in high demand. However, many of them often fail in understanding that creating a brilliant strategy is nothing compared to executing it successfully. According to Davenport (2007), strategy execution has always been one of the most difficult problems in business. It has always been much easier to create a strategy document than to get employees to abide by it. The most important challenge has always been implementation of strategies in a company, not its formulation.

Sometimes, the word management is replaced with the word leadership.

The word leadership is used in two very different ways in every day conversation, according to Kotter (1990). Sometimes it refers to a process that helps direct and mobilize people and/or their ideas. At other times it refers to a group of people in formal positions where leadership, in the first sense of the word, is expected.

What constitutes good leadership has been a subject of debate for centuries. In general, we usually label leadership "good" or "effective" when it moves people to a place in which both they and those who depend upon them are genuinely better off, and when it does so without trampling on the rights of others. The function implicit in this belief is constructive or adaptive change.

Leadership within a complex organization achieves this function through three subprocesses which can briefly be described as such:

- Establishing direction ó developing a vision of the future, often the distant future, along with strategies for producing the changes needed to achieve that vision;
- Aligning people ó communication the direction to those whose cooperation may be needed so as to create coalitions that understand the vision and that are committed to its achievement;
- Motivation and inspiring ó keeping people moving in the right direction despite major political, bureaucratic, and resource barriers to change by appealing to very basic, but often untapped, human needs, values, and emotions.

The following table compares these summaries of both management and leadership within complex organizations.

Table 1: Comparing Management and Leadership. Source: Kotter (1990)

	<b>Management</b>	<b>Leadership</b>
<b>Creating an agenda</b>	Planning and Budgeting ó establishing detailed steps and timetables for achieving needed results, and then allocating the resources necessary to make that happen	Establishing Direction ó developing a vision of the future, often the distant future, and strategies for producing the changes needed to achieve that vision
<b>Developing a human network for achieving the agenda</b>	Organizing and Staffing ó establishing some structure for accomplishing plan requirements, staffing that structure with individuals, delegating responsibility and authority for carrying out the plan, providing policies and procedures to help guide people, and creating methods or systems to monitor implementation	Aligning People ó communicating the direction by words and deeds to all those whose cooperation may be needed so as to influence the creation of teams and coalitions that understand the vision and strategies, and accept their validity
<b>Execution</b>	Controlling and Problem Solving ó monitoring results vs. plan in some detail, identifying deviations, and then planning and organizing to solve these problems	Motivating and Inspiring ó energizing people to overcome major political, bureaucratic, and resource barriers to change by satisfying very basic, but often unfulfilled, human needs
<b>Outcomes</b>	Produces a degree of predictability and order, and has the potential of consistently producing key results expected by various stakeholders (e.g. for customers, always being on time; for stockholders, being on budget)	Produces change, often to a dramatic degree, and has the potential of producing extremely useful change (e.g. new products that customers want, new approaches to labor relations that help make a firm more competitive)

Nevertheless, passive dependence on leaders does not have to be always good for enterprises. Self-management of employees shall be an important factor for creating of a new management system.

Management without leadership produces only a competent performance because, although the manager organizes the team efficiently, the team is not motivated to give their very best. Wyatt (2010) thinks that when people work for a good leader they feel encouraged, supported and believed in. They want to contribute all that they are capable of, and they feel positive about the future. They feel less controlled, more encouraged. This empowering experience increases team enthusiasm and energy levels and helps create an expectation that the team will do well. But leadership alone is not enough. Leadership without management will fail through a lack of coordinated direction. Therefore, management and leadership together spark off the highest levels of achievement.

Great leaders and managers are well organized and are able to make the best use of time to achieve desired results, Adair (2002) describes. However, a lot of leaders run their companies to decline. Many leaders also wait for the consensus and fail to provide direction. Others fail to move in the appropriate direction while expecting and telling others to do so. Neither works. Therefore, it is very important that a leader does not stand back and leads the team he is in charge of.

Some time ago, some academics and consultants decided to solve the mystery of leadership and design the perfect leader, Owen (2009) notes. According to their findings, the perfect leader was creative and disciplined, visionary and detailed, motivational and commanding, directing and empowering, ambitious and humble, reliable and risk taking, intuitive and logical, intellectual and emotional, coaching and controlling. This leader also collapsed under the weight of overwhelming improbability. However, the good news is that we do not have to be perfect to be a leader. We have to fit the situation.

The Doctoral thesis focuses on a proposal for a new dynamic performance framework based on the utilization of synergy effects of selected management systems (Bata Management System, Japanese Management System, Amoeba Management System) that shall help managers to succeed in the ever-changing competitive environment and maximize corporate performance. Companies may further develop this framework by virtue of formulated corporate strategies and following the needs of customers and markets.

## 1.1.2 Evolution of Management Systems

In the past centuries, management systems as frameworks of processes being used to ensure that a company can fulfill all tasks required to achieve its objectives, have been continuously modified, changed or substituted according to needs specified by customers, suppliers, markets or society. Zelený (2005, 2007) summarizes evolutionary development of management systems as follows:

- Final-product orientation. The final product is a primary focus, the production process is considered secondary. Its operations and their sequences are technologically fixed or "given". Product quality is inspected in, mostly at the end of the process. Statistical quality control, inventory control, cost minimization, mass production, assembly lines, work specialization, hierarchies of command, mass consumption, statistical mass markets and forecasting are among the defining characteristics of this stage.
- Process-operations orientation. It is the high-quality process that assures the high-quality product, but not vice versa. The main focus is on the improvement of process operations. Quality of the process was understood as the quality of its operations. Powerful new concepts of Total Quality Management, Continuous Improvement (Kaizen) and Just-In-Time systems have characterized this stage. Although the operations are being improved, the process architecture and structural sequencing are kept intact and remain technologically "given".
- Integrated-process orientation. The focus of attention shifts from operations (circles) to linkages (arrows) – thus changing the process architecture itself. The reengineering of the process, re-integrating individual components into effective, more autonomous and even self-manageable wholes, has characterized this stage. The production process become a business process and therefore subject to qualitative redesign and reengineering (BPR). Discontinuous improvement and process innovation replaced the piecemeal continuous improvement. Traditional vertical hierarchies of command have flattened out into more horizontal, process-oriented networks. Mass customization, disintermediation, knowledge management and autonomous teams have started emerging.
- Extended-process orientation. In this current stage, networks of suppliers and communities of customers have extended the internal process into a functional and competitive whole. Both internal and external sources of knowledge and competitiveness form new core competencies. Supply and

demand chains management have emerged. Intranets and extranets have provided a communication medium for B2B (Business-To-Business) and B2C (Business-To-Consumer) exchanges. Quality has become bundled together with cost, speed and reliability.

- Distributed-process orientation. The emerging stage represents the most radical business refocusing so far. Through the global sourcing, sections and components of the internal process are being outsourced to external providers and contractors in search of the highest added value contribution. Long-term alliances are formed and companies are transforming themselves into networks. Network cooperation is replacing corporate competition: "competition" emerges. Globally distributed process brings forth new forms of organization, coordination and modular integration.
- Recycled process orientation. The sixth phase exhibits transition from the linear (input-output) model to the circular (input-output-input) model, where the output products are being deconstructed into new inputs. In this cyclical view of production we observe how the basic processes of living organisms are mirrored in social systems, particularly in companies and their management systems. Living organisms carry out their processes according to basic biological principles of recycling, regeneration and recovery.

The first three phases derived the competitive advantage almost exclusively from the internal resources of the firm, Zelený (2007) adds. At the end of the 1980s, the most radical fourth shift has occurred: the competitive advantage became increasingly derived from the external resources of the firm ó through the extended networks of suppliers and customers.

The evolutionary development of management systems finishes with the sixth phase (recycled process orientation). No more phases/stages can be distinguished. Nowadays, not only single components of management systems change; management systems change as a whole. Innovations arise from knowledge ranges of different fields and functions, i.e. reintegration instead of specialization.

The following figure displays the basic scheme of production and service delivery process. This scheme has remained unchanged and unchallenged for centuries of the engineering and economic descriptions of business management. What has been changing is the evolving focus of management on different parts and components of the basic scheme.

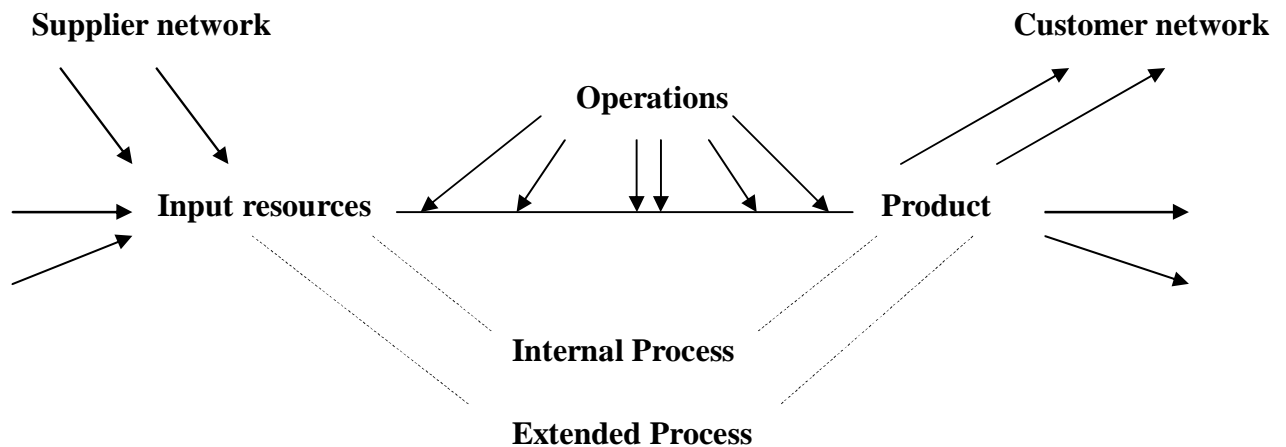


Figure 1: Basic Scheme: Product, Process and Networks. Source: Zelený (2007)

### 1.1.3 Present-Day Approaches To a Successful Management System

Running a business is harder today than ever before. The major problems lie in the speed and complexity of changes in the economy. In order to succeed in this competitive environment, companies must define right strategies and implement them effectively.

The competitive edge of modern-day business emerges from creation or discovery of a high performance management system, Bassett (1993) says. A system that increases efficiency, decreases cost or enhances quality confers immediate competitive advantage on its creator and sets a standard for the rest of the industry to follow. But once disseminated across the field of competition, it becomes the standard. Therefore, it is essential to keep on creating competitive advantage of a company continually.

Performance management can be defined as a systematic process for improving organizational performance by developing the performance of individuals and teams, Armstrong (2006) says. It is a means of getting better results from the organization, teams and individuals by understanding and managing performance within an agreed framework of planned goals, standards and competence requirements.

According to Lockett (1992), performance management is the development of individuals with competence and commitment, working towards the achievement of shared meaningful objectives within an organization which supports and encourages their achievement. Mohrman and Mohrman (1995) consider performance management as a process of managing the business. Similarly, Walters (1995) describes performance management as the process of

directing and supporting employees to work as effectively and efficiently as possible in line with the needs of the organization.

Performance management is a strategic and integrated approach to delivering sustained success to organizations by improving the performance of the people who work in them and by developing the capabilities of teams and individual contributors, Armstrong and Baron (2004) continue.

Performance management has to focus on organizational as well as individual capability, Armstrong (2009) continues. Processes for improving individual performance will not necessarily result in improvements in organizational performance. A strategic approach is required that involves fitting the performance management strategy to the firm's business strategy and context, and supporting the business and HR strategies through activities designed to improve organizational effectiveness.

In order to achieve an enhancement of a corporate performance and be able to compete with rivals, companies must define right strategies and use right management tools as well as effective and dynamic leadership.

Barney (2010) defines a firm's strategy as its theory of how to compete. The strategist's task is to formulate a theory of how to compete; and then, put it to the test through execution. Porter (1996) characterized the firm's strategy as the totality of its activities and not just a few critical or key ones. In large part, the difficulty of framing strategy execution is inherent in the phenomena, Kaplan & Norton (2000) and Hrebiniak (2005) note. The firm's theory of how to compete is a simplified abstraction from the complexity of any real business situation. In each real competitive situation, the firm's particular characteristics and history, the circumstances in the industry, and the details of each competitor, present unique challenges and opportunities. The strategy frameworks allow us to abstract from all of that detail and capture the essential elements of competition. But as we move towards execution, the detail becomes more important. The details of the firm's products and services, its activities and resources, its people, and nearly everything else about the firm, are the ingredients of execution. Clearly, getting the details right is enormously important to effective strategy execution. And frameworks for thinking about this problem, for helping to get the details right, are enormously beneficial.

The management systems (Bata Management System, Japanese Management System and Amoeba Management System) to be analyzed in the following chapters will play a significant role in a proposal for a new dynamic performance framework suggested within the Doctoral thesis. These systems can be described as "social" systems with a focus on continuous investments into



innovations, agility and flexibility of all processes, people and technologies, mutual synergy effects and fast communication; thus, they can build lasting value not only for a company, but also for customers and employees.

#### **1.1.4 Bata Management System**

One of uncommonly successful and by now inexplicably forgotten management systems which not only worked, but worked on a large scale, is the Bata Management System (BMS).

Zelený (1988) mentions that BMS integrated the following "modern" components into a single functional whole:

- Decentralized (better: distributed) organization, rooted in department autonomy, self-management, direct and immediate profit-sharing and full responsibility for quality;
- Automation and "robotics" support for fully flexible production layouts, combined with semi-automated statistical monitoring of performance;
- Employees' full co-ownership of the Enterprise based on long-term employment contracts and earnings re-investment program;
- Customer satisfaction (via product quality and its continuous improvement) as the dominant strategic principle of the enterprise;
- Maximum possible vertical integration: only a few suppliers, no middlemen and direct contact with the customer;
- Total quality of employee life (not just of "working life"): from the workplace, through personal health care, to employee housing and social services – all self-imposed company responsibility;
- Extensive "in house" management education (so called Bata School of Work and Management);
- No subsidies, no debt, no public stocks, no preferential customs quotas and no unions (all employees were "associates").

All of the above (and many more) principles were combined into a coherent, natural and highly effective system.

Bata's enterprise was organized and behaving as a living organism ó learning, adapting and self-organizing, Zelený (2010a) remarks to the point. Bata employees felt to be parts and components of a living organism, not of some well-oiled, well-crafted machinery. Bata Co. practiced the system of Ten Principles (see the following table), i.e. key dimensions and their practical realizations, which formed the Bata Management System (BMS).

Table 2: 10 Principles of the Bata Management System. Source: Zelený (2010a)

	<b>Dimension</b>	<b>Realization</b>
1	World class	Global benchmarking
2	Cooperation	Partnerships and alliances
3	Self-government	Private corporation
4	Participation	Profit sharing
5	Co-ownership	Employee capitalization
6	Self-management	Shop autonomy, internal markets
7	Co-entrepreneurship	Customer, internal and external
8	Competition	Internal benchmarking
9	Service to the public	Purpose of business
10	Synergy	Balanced system of all dimensions

Company was a privately held corporation, not a publicly owned one: there was no public stock and no public trading with company ownership. The company created a harmonious human, ecological and architectural co-existence with its immediate environs of Zlín and the Moravian region as a whole. Employees were partners and associates (co-workers), capable of effective cooperation, sharing and considerable sacrifice.

Bata advocated free competition in every aspect of human activity, any sort of workers or entrepreneurial organizations were contrary to his sense and his philosophy, Rybka (2008) points out. He always promoted the idea that in case of necessity a man should work even under the most adverse conditions. A man should never decide not to work. His image of free competition is expressed in the following quotation from his speech in 1931: "I have never viewed overpaying the people as a sin. On the contrary I viewed paying the salaries as high as possible as my employers duty." Bata simply believed that every individual must logically attain a bigger profit in a well-organized company than while working on his own.

Cekota (1968) and Le-íngrová (2008) mention that on another occasion Bata said: "Sharing of profit by the workers is my topic. We are granting you a share of the profit, not because we feel a need to spread the money among the workers, or just from the goodness of our hearts. Our aims in taking this step are entirely different. We want, with the help of this arrangement, to further reduce

our manufacturing costs. We think that our products are still too expensive and the workers' earnings too low. Therefore, we are granting you a share of the profit achieved and accounted in the workshops where you work.

A crucial dimension for BMS was its explicit purpose of business: "Service to the public." It helped to build lasting trust of customers and employees, brought in real earned profits and added value to all participants in the Bata enterprise. BMS is also characterized by workshop autonomy, benefits and education system for employees, usage of the newest technologies, motivation, profit sharing, communication etc.

The aims of business are historically significant and at least three models have been tried by entrepreneurs and corporate managers: shareholder dominance, customer dominance and employee dominance. Bata tried and succeeded with the fourth way suggested in the following diagram:

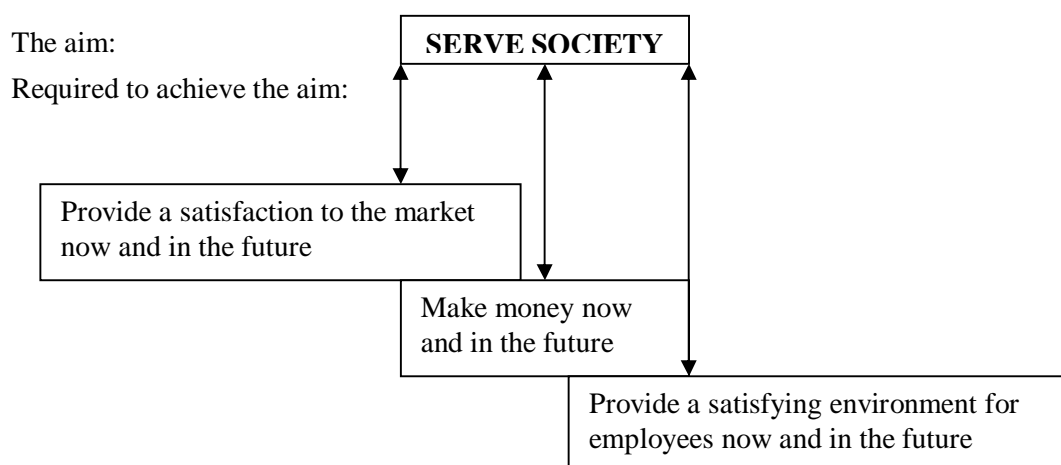


Figure 2: The Aim of the Bata Management System. Source: Zelený (2010a)

While the previous approaches weakened some means by promoting them to purposes, Bata created the first truly powerful, resilient and vastly successful business based on the synergy of all three complementary and indispensable means. This is why he was able to prosper through all the crisis of the 1920s, 1930s and 1940s. The remains of those glorious days carry the remains of the Bata Shoe Organization through even today.

### 1.1.5 Japanese Management System

Today, Japan is the most influential economy in Asia and the second largest economy in the world. It has been widely reported that Japanese management practices have had an enormous influence on Western management practices over the past decades. Decisions by consensus, lifetime employment, continuous training, and many more distinctive practices have brought remarkable economic success to many companies.

The success of Japanese companies in the world markets since the 1970s has attracted widespread attention, Pudelko and Haak (2005) say. What became known as the Japanese management model was the first non-Western model to question the supremacy of Western approaches to management, and its principles and practices were imitated in many ways in a number of other Asian countries, such as South Korea, Taiwan and Singapore. But learning from Japan was not only a phenomenon limited to Asian nations. Many Western corporations also adopted several aspects of Japanese management, particularly with regard to production processes, and Japanese management developed into a sub-discipline of management studies.

However, after a great boom in the 1970s and 1980s, in the 1990s and the 2000s the Japanese management system started to be considered to be a model of the past. Numerous factors have contributed to this, including:

- The long-lasting stagnation of the Japanese economy.
- Ill-advised macroeconomic policies.
- Delayed microeconomic reforms.
- Delayed corporate restructuring.
- The introduction of new technologies.
- Globalization-induced changes in the international competitive environment.
- The entry of new competitors that are aping Japanese management practices.
- Socio-demographic developments.
- Changes in the value system of Japanese society.

By the end of 2011 there had been a dramatic change in the mindset and behaviour of the Japanese in virtually all categories of industry and on all levels of management – a change based on the stark realization that the future of Japan depended on the rapid rationalization and globalization of both economy and society in general, De Mente (2012) points out. Companies had begun recruiting young employees – Japanese and foreign – who were multi-lingual and multi-cultural. Another of the advantages of the Japanese was the ongoing hold the

positive elements of their traditional culture had on the corporate world. Business management in Japan today is a hybrid of core concepts from the traditional culture and a growing number of Western business practices, and it is continuing to evolve.

Japanese companies can be understood as large families or clans in which all members share a common identity, Alston and Takei (2005) note. The fact that roughly 30% of all employees of large corporations found their jobs through personal contacts suggests the importance of personal recommendations and connections prior to employment.

Japanese companies are also known for their customer orientation and their high-quality products. Efficient business processes therefore play a major role in Japanese management, and many Japanese management concepts have been adopted and successfully integrated into Western management techniques and businesses. The most famous concept in a Japanese firm is kaizen, or continuous improvement, which is often considered a philosophy and aims at improving and perfecting all management processes within a firm, Haghirian (2010) continues.

We can distinguish between two types of kaizen: gemba (actual workplace) kaizen and teian (plan) kaizen. Gemba and teian kaizen both aim to develop higher production and quality standards. Kaizen is typically referred to in the context of quality control, but the Japanese apply it broadly, Rehfeld (1990) mentions. In many areas, they not only plan something and do it but also stop to see the result to determine how it could be done better.

If there is one point on which all authorities on Japan are in agreement, it is that Japanese institutions, whether businesses or government agencies, make decisions by consensus, Drucker (1971) adds. The Japanese debate a proposed decision throughout the organization until there is agreement on it. According to Sullivan (1992), Japanese managers see a work team as an environment where information is shared in pursuit of improved performance.

Another concept, which has become successful in Western firms, is the 5S System, which helps organize business and production processes within the firm, Haghirian (2010) notes. The 5S refers to five key words all starting with an ōSō in Japanese. The words describe how a workplace or production process can be effectively organized. The 5S System consists of five stages of a production process, which are:

- Seiri (sort)
- Seiton (set in order)
- Seiso (clean)

- Seiketsu (systematize)
- Shitsuke (standardize)

The words combined do not really make up a system but a set of guidelines regarding how to improve a business or production process, or any kind of standardized process, and maintain lasting, high-quality performance. Japanese factories are also exceptionally quiet and orderly, regardless of the type of industry, the age of a company, its location, or whether it is a U.S. subsidiary, Hayes (1981) remarks to the point. Moreover, tools, dies, and production equipment are not overloaded.

Japanese managers lay a great emphasis on long-term commitments ó from partnerships (customer, supplier) to lifetime employment. It is important to remember that a company's commitment to its lifetime employees also leads to a reciprocal commitment from employees to the company, Hayes (1981) points out. Recognizing that a no-layoff policy requires a work force level that lags behind sales demand, Japanese workers in the companies may work up to 60 hours of overtime per month when demand was high. Japanese workers are uniformly diligent and honest, Sakai (1990) mentions. If they are asked to build something to exact specifications, finish it by a certain date, and deliver it on time, they will do it. And they will do it right.

Although decision making in Japanese companies is bottom up, the power of the typical Japanese CEO is so great that no important decision can be made without first considering his wishes, Yang (1984) notes. While proposals are likely to start from lower-level executives, these executives generally propose what they believe to be the wishes of their superiors.

The Amoeba Management System that returns to the commencement of the enterprise with all employees acting as the managers belongs among highly interesting management systems recently developed in Japan.

### 1.1.6 Amoeba Management System

The Amoeba Management System (AMS) was as a managerial technique developed by Dr. Kazuo Inamori, the founder of the Kyocera Corporation in Japan.

The use of the word *ōamoebaō* is meant to capture the concept of an entity at its smallest, most elemental level, as well as to describe its life-like capability to *ōmultiply and change shape in response to the environmentō*, Inamori (1999) notes. In other words, amoeba management is intended to offer a spontaneous, homeostatic response to a business world that feature a rapid, dynamic change.

The *ōamoebasō* are independent, profit sharing and semi-autonomous teams or departments of three to fifty employees, Zelený (2005) continues. Each amoeba performs its own statistical control, profit system, cost accounting and personnel management. Amoebas complete, subcontract, and cooperate among themselves on the basis of the intracompany market, characterized by real market-derived transfer prices.

AMS seeks to structure a company into small, fast-responding, customer-focused, entrepreneurially-oriented business units operating like independent companies that share a united purpose, i.e., the parent organization's goals and objectives, Adler and Hiromoto (2009) go on. The amoebas are intended to act in coordinated independence from each other. The goal is to empower each amoeba to the point that each is akin to an independent company, with each seeking to manage its profitability.

In AMS, each amoeba unit makes its own plans under the guidance of an amoeba leader. All members of the amoeba unit pool their wisdom and effort to achieve targets. In this way, each employee takes an active role in the workplace and spontaneously participates in management. The outcome is *ōmanagement by allō*.

The amoeba system represents quite a revolutionary step beyond the traditional Toyota *ōjust-in-timeō* philosophy, Zelený (2005) remarks. At Kyocera, orders received by the sales department are passed directly to the amoeba of the final process. The rest of the amoebas in the proceeding processes are then given a free rein in working out mutual contracts: the intracompany market takes over. Kyocera Corporation remains one of the most profitable companies in Japan.

Thinking in biological systems is a change of paradigm in the world of management theory. It involves the idea to look upon the organization of a company like a living organism, Malik (2002) concludes.

## **1.2 Contemporary Strategies for Transforming Management Intentions into Reality and Aligning Performance Measurement Systems**

The need for companies to transform management intentions into reality and align their performance measurement systems with their strategic goals is well documented in the literature (Kaplan, 1983; Eccles, 1991; Gregory, 1993), Hudson, Smart, Bourne (2001) mention. To address this need a number of frameworks and processes (approaches) for the development of performance measurement systems have emerged. Among the most popular of these belongs the Balanced Scorecard (Kaplan and Norton, 1992) which emphasizes a balance between the use of financial and non-financial measures to achieve strategic alignment. The popularity of the Balanced Scorecard has acted as a catalyst for further research into the characteristics of, and approaches for developing, strategic performance measurement systems (Neely et al., 1996a; 1996b; Bititci et al., 1997; Oliver and Palmer, 1998).

### **1.2.1 Mastering Corporate Strategies to Create a Successful Management System**

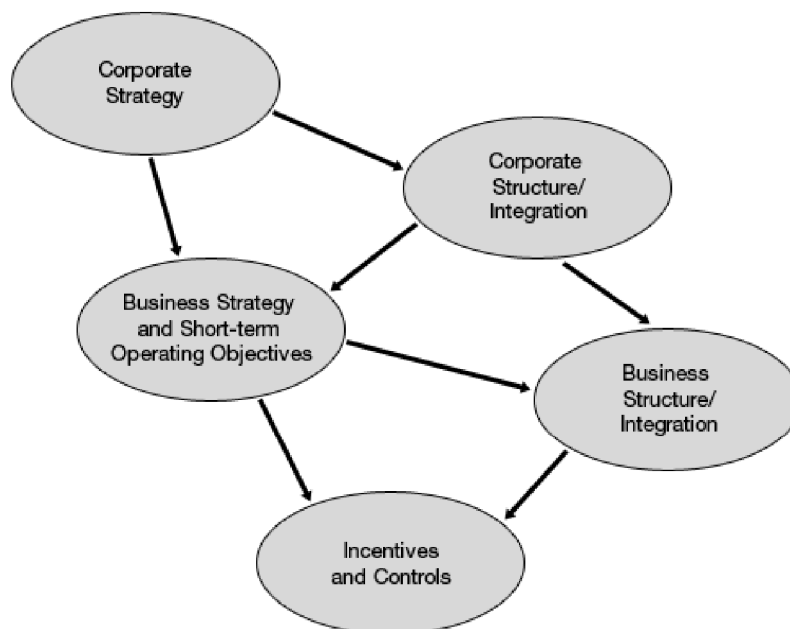
Formulation and implementation of business strategies is often connected with CEOs, corporate heads of strategy or shareholders. A brilliant strategy may put a company on the competitive map and increase its performance. Unfortunately, most companies struggle with implementation. Enterprises generally fail at execution because they go straight to structural reorganization (which produces only short-term gains) and neglect the most powerful drivers of effectiveness ó decision rights and information flow. What is the way to implement the business strategy effectively and which obstacles can harm the successful implementation?

Execution is critical to success, Hrebiniak (2005) notes. Execution represents a disciplined process or a logical set of connected activities that enables an organization to take a strategy and make it work. Without a careful, planned approach to execution, strategic goals cannot be attained. Developing such a logical approach, however, represents a formidable challenge to management. A host of factors, including politics, inertia, and resistance to change, routinely can get in the way of execution success.

According to the Hrebiniak model of strategy execution, Hrebiniak (2008), effective execution is impossible if strategies are flawed. The following figure begins with corporate strategy, which is concerned with the entire organization and focuses on areas such as portfolio management, diversification, and resource allocations across the businesses or operating units that make up the total



enterprise. At the business level, strategy focuses on products, services, and how to compete in a given industry or market segment. However, the picture of strategy execution is not yet complete because the creation of strategy, objectives, structure, accountabilities, and coordinating mechanism is not sufficient to ensure that individuals will embrace the goals of the organization.



*Figure 3: Hrebiniak's Implementing Strategy ó Key Decision and Actions. Source: Hrebiniak (2008)*

Despite its importance, execution is often handled poorly by many organizations. There still are countless cases of good plans going awry because of substandard execution efforts. This raises some important question. If execution is central to success, why don't more organizations develop a disciplined approach to it? Why don't companies spend time developing and perfecting processes that help them achieve important strategic outcomes? Why can't more companies execute or implement strategies well and reap the benefits of those efforts?

The simple answer is that execution is extremely difficult. There are formidable roadblocks or hurdles that get in the way of the execution process and seriously injure the implementation of strategy. The road to successful execution is full of potholes that must be negotiated for execution success.

Noble (1999) thinks that a myriad of factors can potentially affect the process by which strategic plans are turned into organizational action. Unlike strategy formulation, strategy implementation is often seen as something of a craft, rather than a science, and its research history has previously been described as fragmented and eclectic. It is thus not surprising that, after a comprehensive

strategy or single strategic decision has been formulated, significant difficulties usually arise during the subsequent implementation process. The best formulated strategies may fail to produce superior performance for the firm if they are not successfully implemented.

It is obvious that the biggest challenge for today's organizations is not formulation but rather strategy implementation. However, many companies fail in performance enhancement because they fail in implementing strategies into action. How can they overcome these obstacles in order to help firms' leaders to make necessary changes in the process of successful execution and strategy implementation?

Strategy is about making series of decisions that drive corporate action under specific coupling with company's environment and context. Because decisions are actions, so the strategy itself is action, not just a description of action, according to Zelený (2010b). In the area of traditional strategy, descriptions (information) have replaced action (knowledge), talk has replaced walk. Strategy is what company does, and what company does is its strategy. One cannot run a company just on descriptions and framed mission statements. The role of customers is crucial: the customer shapes strategy and triggers corporate action. Without respecting the customer there is no viable strategy. Customers, not corporate executives, determine if products and services add value, provide quality, are innovative or offer tradeoffs-free satisfaction.

Action and description of action are two very different domains and only rarely the two meet. Assorted corporate mission and vision statements are not strategy and have little to do with strategy. They are just descriptions of intentions, desires and plans ó just words substituted for action. This gap between knowing what to do and actually doing it can be excruciatingly real ó and it has been widening and getting worse even since the onset of the information era.

Zelený (2010b) provides a summary of the emerging view of strategy:

- Any core competency or competitive advantage is temporary. Effective strategy is based on a continuous search for new advantage and production of new competencies.
- Strategy emerges from a series of interrelated decisions aiming towards reducing or eliminating tradeoffs conflict.
- Strategy is action, not a description of action, i.e. what a company does, not what it says, is its strategy.

- All action takes places in the present, not in the future, not in the past; the rest are descriptions.
- Current organization reflects current portfolio of resources. Strategy transforms resource portfolio into a better resource portfolio. Organization and strategy are interdependent and mutually co-determinant.
- Organization is a self-renewing cycle of basic processes; structure is a time-spatial snapshot of the underlying organizational process: organization determines structure, not vice versa. The relationship between structure and strategy is irrelevant.
- Corporate strategy must involve changes in business model, not just in products and services; i.e. it must allow continuous reinvention of itself as a company and business.
- Corporate resources are not given, but must be continually designed and re-designed towards maximization of added value for both business and its customers.
- Accumulated knowledge and past experience is the platform for change, not information of future intent, mission or vision. (Anything that can be framed and hanged on the wall is not strategy.)
- Added value is a better measure of strategic success than profit maximization. All employees and corporate teams, units and departments must add value to justify their earnings.
- Customer is the driver of strategy and the validating source and measure of quality, innovation and knowledge. Customer does not prefer tradeoffs: he wants it all.
- Markets are continually and unpredictably changing and shifting. Long-term strategy, based not on forecast, but rooted in foresight, brings forth the necessary consistency of purpose.
- New products, services and business models are being launched and tested at steady and predictable pace, regardless the boom or bust circumstances. Doing the work of crisis without the crisis ó is a new corporate calling.
- Strategy cannot come from top-down in the form of descriptions and declarations. Neither can action percolate from bottom-up. Strategy emerges from the action cycle of Customer-Innovation-Processes-

Finance. CIPF should be the strategy of any business; only the measures of performance differentiate individual corporate strategies.

- Foresighting of trends, organizational adjustment and optimal conditions for CIPF-cycle functioning are the main charges of corporate leadership and executive management.
- Corporate strategy is not assembled like a Lego ó piecewise into a unified whole. Rather, strategy is grown and nurtured into its existence from the past action, not backwards from the future ó like a living organism, not like a contrived machine.

The above mentioned summary confirms that strategy as a competent and purposeful action will impress both competitors and customers. Strategy is about what you do, not about what you say you do. Strategy is about action, not about description of action. Strategy is about doing, not about talking. All corporations have strategy, whether they know it or not: it is embedded in their doing. Strategy is what you do. What you do is your strategy. Your action should be stronger and more reliable than your words, Zelený (2010b) summarizes.

Among managers who make strategy and researchers who study it, fierce battles have been fought over the right way to discover a strategy. In one corner stand advocates of analysis, deliberation, and planning: Managers should study the competitive forces in their environment, deduce a set of choices that helps the firm confront those forces, and then implement the choices. In the opposite corner are those who support what's termed an emergent approach: Managers should try things out, learn from experience, adjust, and gradually craft a strategy.

Gavetti and Rivkin (2008) consider both views (deliberate and emergent) as incomplete. They miss important other ways to search for a strategy, approaches that lie between deliberation and emergence. One way is analogical reasoning. After the period when industry conditions are wholly undefined but before economic cause and effect become sufficiently clear, an industry's environment offers clues that it is similar to other settings. Around 1996, for instance, the internet portal industry started to bear certain resemblances to traditional media. This enabled forward-thinking firms such as Yahoo, which saw the similarities early, to precede rivals in adopting effective practices from the established media business. Yahoo organized itself around "producers" developing online "properties" and invested deeply in its brand; some other portals on developing the faster search technology. Great strategists not only rely on emergence and deliberation at the right moments, but they also know when and how to employ analogies with care.

Porter (2008) adds that strategy can be viewed as building defenses against the competitive forces or finding a position in the industry where the forces are weakest.

Strategy execution has for too long lurched between two extremes, Davenport (2007) says. One camp, called "strategic engineering", envisions strategy execution as an engineering exercise, and view employees as cogs in a machine well-oiled by computers. In this view, the role of the senior executive team is to clearly articulate the strategy and specific objectives, to "cascade" those objectives throughout the organization, and to create process flows, performance measures, and automated reporting vehicles to ensure alignment and compliance down the organization chart. Strategy engineers often talk of maps, scorecards, and flow charts, as if the only real problem for organizations is to clearly describe what needs to be done by employees. The notion that those employees might have a better idea is seldom considered.

The other extreme, called "strategic anarchy", encourages executives to simply get out of the way of their employees' entrepreneurial and innovative energies. "Command and control" organizational structures are a relic of the past, according to this perspective. People know best how to do their own jobs, and it is those at the front line who interface with customers, after all.

Neither extreme, of course, is very useful for organizations attempting to perform well in difficult and changing business environments. The engineering approach neglects the fact that front-line employees do have to innovate and improvise much of the time, as any strategy, process, or metric won't always correspond with what it takes to be successful in the real world. The strategic anarchists ignore the need for organizations to move in a consistent, planned direction. Obviously right answer to effective strategy execution lies somewhere in the middle.

It is also important to mention some of the reasons that may cause failure in strategy implementation.

Failure while putting strategy into action can be caused by many factors. Among the most interesting according to Hrebiniak (2008) and Martin (2010) belong:

- Isolation from the workforce

First limitation factor in CEO's being able to create and follow through great strategy is their isolation from their own workforce. Information is idealized as it passes each management level resulting in good strategy being based on questionable data and ideals. Not so many CEOs spend time with staff at all levels and most importantly listen without passing

judgement. However, can this "method" help to build a more dynamic business with less need for radical change?

- Difficulties while connecting strategic choices

A good strategy is the product of the creative combination of two disparate logics but CEOs and strategists are seldom conditioned to become skilled at the requisite creative combination. The two most fundamental strategic choices are deciding where to play and how to win. These two decisions – in what areas will the company compete, and on what basis will it do so – are the critical one-two punch to generate strategic advantage. However, they cannot be considered independently or sequentially. In a great strategy, your where-to-play and how-to-win choices fit together and reinforce one another.

For example, operating only in your home country market may seem to be a perfectly fine where-to-play choice and winning on the basis of technological superiority a perfectly fine how-to-win choice, but their combination almost always produces a bad strategy – because of global economies of scale in R&D, some competitor will globalize and blow out the geographically narrow national player. These choices do not fit or reinforce.

The trouble is, CEOs do not usually get to the top by integrating different logics in that way. More often they rise by pushing a single logic. They like to analyze a problem and come up with a single, sufficient answer, like how to globalize or get costs under control or introduce a new product, rather than trying to look for answers to two questions that fit together elegantly.

Meanwhile, corporate strategists and strategy consultants get ahead by demonstrating mastery of all sorts of conceptual tools for analyzing where-to-play (five forces, profit maps, etc.) or how-to-win (experience curve, value chain, VRIO, etc.). However, there as yet is no analytical tool for combining a given where-to-play choice with a congenial how-to-win choice or vice versa. That takes creative insight. But the majority of people who seek to become corporate strategists or strategy consultants do so because they are much more comfortable with analysis than what they perceive as guesswork. So they tend to become expert at strategic analysis, not strategy. That is why CEOs and strategists so seldom produce good strategies. Strategy is a creative act and the way to produce good strategy is go beyond basic analysis to creatively integrate your choices concerning where you play and how you propose to win.

Furthermore, a good strategy goes beyond where-to-play and how-to-win choice. It includes *when*, too. A strategy for profits today/next year may not help a company succeed in the long term.

- Listening to consultants instead of thinking

Over the years strategy consultants try to adjust their advices and recommendations according to what they believe their client is willing and able to do. Even when they are creative enough to create a strategy that fits the firm completely, they still set up their recommendations to what they think the client's abilities to understand are.

- Planning and execution are independent

Strategy formulation and implementation are separate, distinguishable parts of the strategic management process. Logically, implementation follows formulation; one cannot implement something until that something exists. But formulation and implementation are also interdependent, part of an overall process of planning-executing-adapting. This interdependence suggests that overlap between planners and *doers* improves the probability of execution success. Not involving those responsible for execution in the planning process threatens knowledge transfer, commitment to sought-after outcomes, and the entire implementation process.

- Time

The successful implementation of strategy takes more time than its formulation. This can challenge managers' attention to execution details. The longer time frame can also detract from managers' attention to strategic goals. Controls must be set to provide feedback and keep management abreast of external *shocks* and changes. The process of execution must be dynamic and adaptive, responding to unanticipated events. This imperative challenges managers responsible for execution.

- Other execution-related problems

They include responsibility and accountability for execution activities and decisions that are not clear; poor knowledge sharing among key functions or divisions; dysfunctional incentives; inadequate coordination; poor or vague strategy; and not having guidelines or a model to shape execution activities and decisions.

There may appear also indirect factors:

- Indirect factors

Politics: Elections provide an opportune time to consider the effects government decisions have on business strategies.

Unexpected economy swings, economic growth rate.

Recent technological development, research, modernization, investments.

Neilson, Martin and Powers (2008) consider execution as a notorious and perennial challenge. Even at the companies that are best at it just two-thirds of employees agree that important strategic and operational decisions are quickly translated into action. As long as companies continue to attack their execution problems primarily or solely with structural or motivational initiatives, they will continue to fail. They may enjoy short-term results, but they will inevitably slip back into old habits because they won't have addressed the root causes of failure. Such failures can almost always be fixed by ensuring that people truly understand what they are responsible for and who makes which decisions and then giving them the information they need to fulfill their responsibilities.

When a company fails to execute its strategy, managers should not think about restructuring its processes. Fundamentals of good execution start with clarifying decisions right and making sure information flows where it needs to go. If managers get those right, the correct structure and motivators often become obvious.

Successful implementation of a strategy requires involvement of the entire organization. CEOs are generally open to the idea of the strategy process and they are aware of the fact that the execution is critical to success. It is mostly the implementation that creates obstructions. There are several obstacles that can impede the successful implementation. However, using right methods, frameworks or timing may reduce or minimize them as far as possible.



## 1.2.2 Right Timing of Corporate Strategies

In today's ultra-competitive world, getting superior results faster is absolutely critical to success. However, this hectic speed of life makes it easy to become side-tracked by things that steal priority and make us less effective. The growth and success are determined by two organizational needs. The first is the need for speed. The second is the need for results. Speed is the strategic engine needed to compete and win in a rapidly changing marketplace. Results determine the ability of leadership to execute and sustain a vision in the marketplace.

Timing can mean the difference between profit and loss, Johnson (2010) says. When a plan of strategic moves has been studied, approved and is ready for implementation, the next step is to choose timing wisely and judiciously. Though there may be much deliberation on financial or other strategies, the sum value of such deliberation is nearly always impacted by timing. When to buy, when to sell and when to hold is the conundrum in today's world.

Modeling the timing of strategic moves after the world's most advanced financiers reveals a certain unique ability to know and understand the role of time in each business transaction. It's also a skill that separates timing and strategies for the most beneficial results.

In consideration of the fact that finance has played a long-term role in business and personal stability, it's conceivable that some financial strategies have become time-tested. When one understands that finance, like business, is not static, the ability to predict highs and lows of financial situations is less murky. However, it is necessary to tolerate changes that occur without inflicting serious damage to financial security. It's a serious judgmental error to assume a constant upward financial strategy, given the many peripheral obstacles that can and do occur. The most stable financial mind understands that the low points can be a springboard to stability. Timing strategic moves should be compatible with highs and lows. Risk is always at the center of strategies. Timing strategic moves needn't be at the center of risk.

Strategic speed is not only about concocting brilliant strategies, Davis, Frechette and Boswell (2010) remark to the point. It's about leaders who know how to accelerate strategy execution by adopting the right mind-set and taking the right actions ó actions focused on mobilizing people. Strategic speed is where urgency meets execution, and that means you do not spend months drawing up complex plans in order to see results. If you as a leader can think and behave in speed-promoting ways, your strategies can gain immediate traction.

According to the Forum Corporation and Economist Intelligence Unit Global Speed Survey nearly 90% of the survey respondents agreed that speed of strategy execution is critical to their business. However, in most companies respondents rated their company's speed of strategy execution as low relative to its importance. What are the reasons and why do companies fail in acceleration of corporate strategy?

In crisis many companies usually prefer the wait-and-see scenario as their strategy. Only a few of them pursue acquisitions and invest in new projects. Timing in this era can be crucial for firm's future.

The magnitude of the recent economic crisis downturn in EU-27 can be clearly seen in the following figure, Eidmann (2010) continues. The level of EU-27 output in industry, construction and services peaked during the first or second quarter of 2008. The level of industrial output and services turnover reached a low point in the second quarter of 2009, since when both indices have been on an upward path – it should be noted that turnover is valued in current prices and so changes reflect price changes as well as changes in the underlying level of activity, whereas the production indices are volume indices showing the change after adjustment for price changes. In contrast, the latest data for construction production still shows negative rates of change, continuing a sequence unbroken since the beginning of 2008.

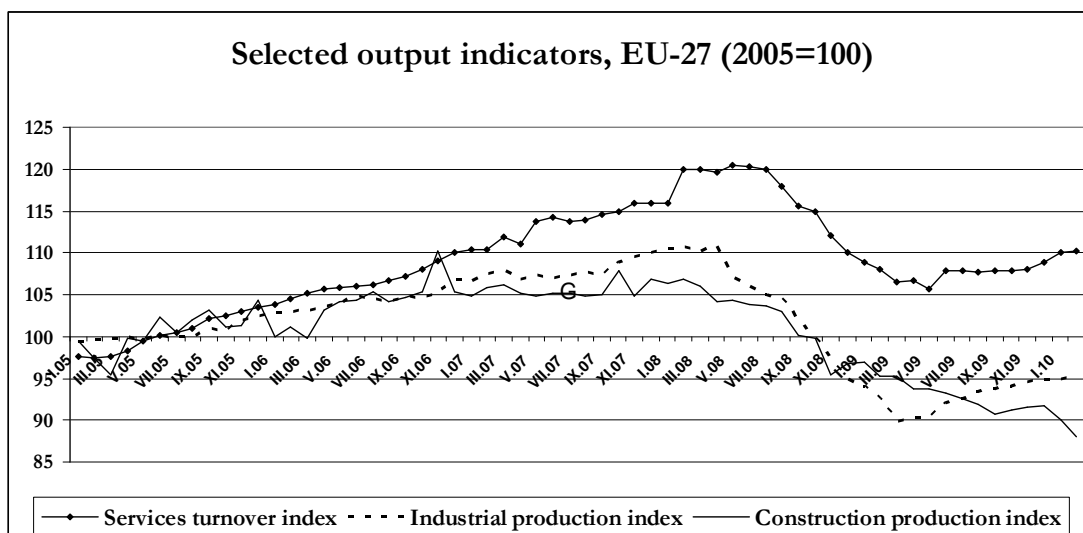


Figure 4: Selected Output Indicators, EU-27 (2005=100). Source: Eidmann (2010)

The following figure compares GDP levels of the crisis of 1907-08, the Great Depression of the 1930s and the recent crisis.

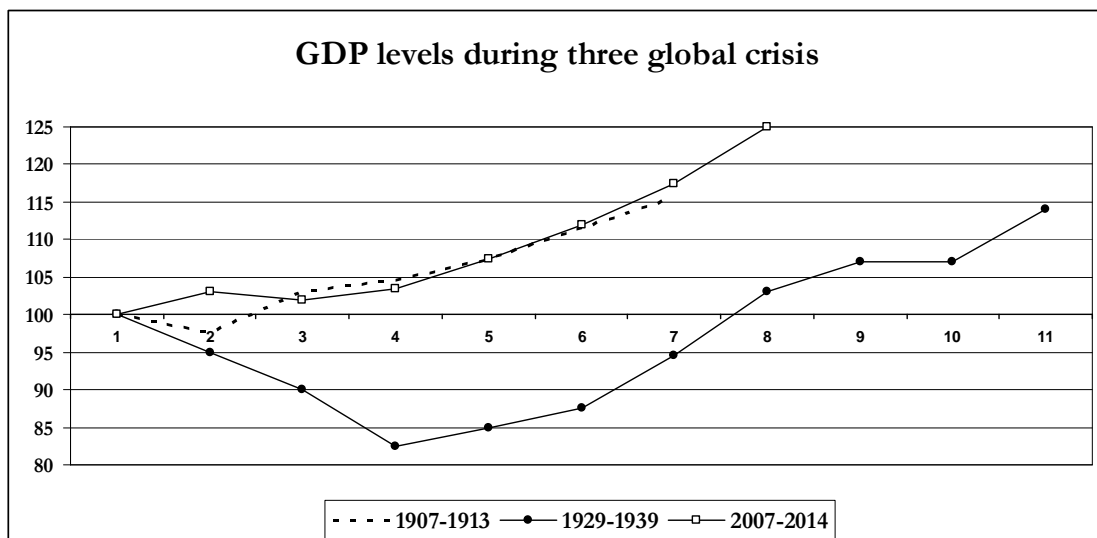


Figure 5: GDP Levels During Three Global Crises. Source: Eidmann (2010)

In the run up to the crisis and depression in the 1930s, several of these characteristics were shared, Buti and Székely (2009) point out. However, there were also key differences, notably as regards the lesser degree of financial and trade integration at the outset. By the late 1920s, the world economy had not overcome the enormous disruptions and destruction of trade and financial linkages resulting from the First World War, even though the maturing of technologies such as electricity and the combustion engine had led to structural transformations and a strong boost to productivity.

It used to be that a business transformation was a once-in-a-lifetime event, the sort of fundamental reset prompted by a rare, short-lived disruption such as a new technology, a devastating scandal, or a dramatic shift in costs, Couto, Ribeiro and Tipping (2010) note. But if the recent economic upheaval reveals anything, it is that companies of all sizes, in all industries, are operating in a more volatile, less predictable environment, and that change has become a way of life. To navigate such a rocky landscape, companies must be ready to repeatedly transform themselves ó indeed, to institutionalize the capacity to alter strategies again and again ó as business conditions require.

But a few companies are competent at doing this, although not for lack of trying. A review of businesses faced with õburning platformsö (which are enterprise-threatening events) would reveal that most have failed to make the transformation the situations demanded. The problem is that most companies don't have an adequately proactive road map for transformation. Instead, they attempt change on the fly, reacting to business disruption with equally explosive responses that may not be useful six months down the road or even sooner. A more carefully crafted strategy to manage internal or external change may seem beyond a company when it is actually facing a new obstacle or crisis, but if an

organization prepares for transformation (perhaps when it is not occurring), steering through it is far less difficult.

How quickly the world economy returns to normal and indeed, what "normal" is going to be will depend on hard-to-predict factors such as the fluctuations of consumer and business confidence, the actions of governments, and the volatility of global capital markets, Dobbs and Koller (2009) mention. Given the uncertainty, executives may easily give up in frustration, and await irrefutable evidence that the economy is turning around. But this approach could be a recklessly cautious one. Instead, executives must make educated decisions now by weighing the risks of waiting or of moving too early. And while better timing of acquisitions, and therefore the prices paid for them, can make a big difference in their ability to create value, the best way to minimize risk is to ensure that investments have a strong strategic rationale.

The greatest change in business in recent years has been the need for speed at every level, including vision execution. To execute with swiftness and get desired results, a methodology that combines several aspects must be enabled and utilized. Among these aspects, according to Jeary (2009), coach to the world's top CEOs and high achievers, belong:

- Clarity
- Focus
- Execution

The absence of clarity drains organizational energy. Lack of focus produces a culture of indecisiveness and excessive preparation. Poor execution degrades effectiveness, limits results and restricts growth.

The methodology of Tony Jeary combines awareness, operational practices, processes, and powerful information resources to enable leaders and organizations to get results within time frames that exceed conventional thinking. However, it is necessary to get away from errors, too.

In an environment in which margins for error are shrinking to near nil, CEOs recognize that they can no longer afford the luxury of protracted study and review before making choices, Palmisano (2010) continues. In a study led by IBM Institute for Business Value and IBM Strategy & Change (carried out between September 2009 and January 2010), CEOs said they are learning to respond swiftly with new ideas to address the deep changes affecting their organizations. Shuzo Sumi, President and Chief Executive Officer of Tokyo Marine Holdings, Inc. believes that the management environment is rapidly becoming more complex and in these uncertain times, the need for effective and

swift decision making is more important than ever. Corporate heads are generally aware of the need of fast reactions in order to compete with rivals. However, creativity, dedication, focus on sustainability or global thinking are important leadership qualities that help in the new and fast economic environment and have significant effect on corporate strategies.

One of the ways how to enhance the strategic speed is simplicity, Jeary (2009) notes. Elimination of unnecessary and time consuming processes that are effortful for customers as well as employees and other stakeholders, simplification of the organization's bureaucracy or integration of functions that enable faster decisions are challenges for CEOs nowadays.

To problematic issues that can decelerate strategic speed mainly belong:

- Low product quality
- Inefficient resource allocation
- Slow response to the marketplace
- Lack of innovative, competitive products
- Uncompetitive cost structure
- Inadequate employee involvement
- Irresponsible customer service

Success begins with vision built on the foundations of clarity, focus, and execution, is powered by speed and culminates in results, Jeary (2009) continues. Leadership can enable it all through strategic speed, which can be replicated and applied to every objective and tactic. Clarity and focus provide your plan of "what" and "how", but when it's time to get things done, it's about actually "doing" it. This might sound simple, maybe even overly so, but this is where you are going to spend most of your time. Approaching it well-prepared and with the right philosophy will make all the difference towards your success. Without clear communication, however, nothing will be accomplished. Developing and mandating communication standards is the best way to energize the executional thinking of an entire organization.

Any strategy can be dramatically enhanced, and execution intensified, when an organization has clearly articulated and communicated their strategies and tactics throughout all levels of the organization. If business leaders learn to be creative, remain committed and goal seeking, they will achieve strategic speed (faster results) sooner than they expect.

### 1.2.3 Management Frameworks and Their Influence on Corporate Strategy

Many useful frameworks for understanding how firms can compete effectively have been introduced so far. Richardson (2005) summarized the most popular ones as follows:

- the Five-Forces Framework (Porter, 1980) organizes and gives meaning to the numerous measures and characteristics of industries;
- the Generic Strategy Framework (Porter, 1980) reveals the fundamental approaches to gaining competitive advantage;
- the Generic Building Blocks Framework (Hill & Jones, 2001) defines the basic dimensions along which a firm can outperform its competitors;
- the SWOT Analysis Framework is widely used to assess strategic situations;
- the VRIO Framework (Barney, 2002) tells us under what conditions a firm's resources can enable it to gain and sustain a competitive advantage;
- the Value-Chain Framework (Porter, 1985) allows us to analyze the firm's activities and sources of competitive advantage.

Some of the frameworks can be useful in strategy execution or in putting the strategy into action. But on the whole, the frameworks are most useful in strategy formulation, as Hrebiniak (2005) mentions. As we move into execution, the standard frameworks leave us with a fragmented and incomplete understanding of how the firm's strategy should be translated into action.

Kaplan and Norton (1996) were also aware of a necessity of building of a systematic process that builds consensus and clarity about how to translate a unit's mission and strategy into operational objectives and measures and constructed an organization's first Balanced Scorecard. According to them, the scorecard should represent the collective wisdom and energies of the senior executive team of the business unit. Unless the team is fully engaged in the process, a successful outcome is unlikely. Executives of adopting organizations were using the Balanced Scorecard to align their business units, shared service units, teams, and individuals around overall organizational goals, Davenport and Norton (2000) remark.

Most companies, in implementing the strategy management system based on the Balanced Scorecard, as Kaplan and Norton (2008) note, followed a sequence that generally began with Principle 1 (mobilize the executive team), followed quickly by Principle 2 (translate strategy into a strategy map of linked strategic objectives with an accompanying Balanced Scorecard of measures and targets) and Principle 3 (align the various parts of the business through linked scorecards). Principle 4 required redesign of some key Human Resource systems

(goal-setting, incentives), while Principle 5 required the redesign of various planning, budgeting, and control systems. Kaplan and Norton found that companies were able to get breakthrough results just by implementing Principles 1, 2, and 3 in their entirety and performing a few basic activities in Principle 4, such as a program to communicate strategy to employees, and, following one practice in Principle 5, instituting a new management meeting to review strategy. This limited approach produced results until the leader who had introduced the program departed. The message was clear; a strong leader using the tools of Principles 1, 2, and 3 could mobilize, focus, and align the organization to achieve excellent performance. However, because the new approaches had not been embedded in the ongoing management systems of the organization (Principle 5), the performance was often not sustained.

In order to secure continuous (event. discontinuous) improvement of company performance managers started to use several models (tools) that helped them to analyze and plan a company's strategic, tactical and operational position and provided answers to important questions. Van Assen, Van Den Berg and Pietersma (2009) categorized these models in a matrix. Some examples are mentioned in the following table. Nevertheless, no management model, or group of models, can guarantee that a manager or consultant will deal with an organizational problem objectively and to the best of their ability. Models can none the less provide valuable insights and a sound framework for making appropriate business choices. Management models and theories can help managers and consultants to gain clarity in business by reducing the complexities and uncertainties involved ó nothing more, but definitely nothing less.

Companies in particular must assume a broader role than simply delivering value to their shareholders, Neely, Adams and Kennerley (2002) conclude. To be successful over time, even for and on behalf of shareholders, businesses must think about the wants and needs of all of their stakeholders and endeavour to deliver appropriate value to each of them.

Table 3: Examples of Management Models and Their Categorization. Source: Van Essen, Van Den Berg, Pietersma (2009)

<b>Model matrix</b>	Strategy and organization	Finance and governance	Marketing and sales	Operations, supply chain management and procurement	Innovation and technology management	HRM, leadership and change
<b>Strategic</b>						
BCG matrix	x					
Blue Ocean Strategy					x	
Competitive analysis: Porter's five forces	x					
Greiner's growth model	x					
Market-driven organization			x			
Off-shoring / outsourcing	x					
Scenario planning	x					
Strategic dialogue	x					
Strategic human capital planning						x
Strategic human resource management model						x
SWOT analysis	x					
The value chain	x					
Value-based management		x				
<b>Tactical</b>						
7-S framework	x					
Activity-based costing	x					
Benchmarking		x				
Business process redesign				x		
Competing values						x
Core quadrants						x
DuPont analysis		x				
Innovation circle					x	
Kotler's 4Ps of marketing			x			
Lean thinking / just-in-time				x		
Mintzberg's configurations	x					
Six sigma				x		
The EFQM excellence model	x					
<b>Operational</b>						
Balanced scorecard		x				
Kaizen / Gemba house				x		
Mintzberg's management roles						x
Risk reward analysis	x					
Root cause analysis / Pareto analysis				x		
Six thinking hats of de Bono						x
The Deming cycle: plan-do-check-act				x		
Value stream mapping				x		



## 1.2.4 Aligning Corporate Performance Measures

As Gregory (1993) points out, none of the existing performance measurement systems consider the need for a management process with the purpose of keeping systems viable as context differentiates. How measurement systems evolve after implementation is a question that few researchers have tried to answer, Waggoner et al. (1999) continues. Neely (2005) points out five key research issues for performance measurement:

- How to design and develop enterprise performance management rather than measurement systems?
- How to measure performance across supply chains and networks rather than within organizations?
- How to measure intangible as well as tangible assets for external disclosure as well as internal management?
- How to develop dynamic rather than static measurement systems?
- How to enhance the flexibility of measurement systems so they can cope with organizational changes?

It is apparent that corporations need tools to integrate and update measurement systems rationally and systematically as context and opportunities change, Gregory (1993) says. Without a process keeping the measurement system viable measuring becomes valueless and even destructive, Salloum and Wiktorsson (2009) continue.

Gregory (1993) concurs and states that the need for a dynamic approach to performance measurement is not widely addressed; viable processes which can be used by management teams in a consistent manner are inquired. Few organizations appear to systematically manage their measurement systems over time. This creates a paradox with organizations using metrics that are obsolete or redundant due to the unfamiliarity of changing them, Waggoner et al. (1999) mentions. As it is generally accepted both in academia and practice that business strategy is dynamic and ever changing in nature a consensus is growing strong that performance measurement systems must be accounted for when direction changes, Najmi, Rigas and Fan (2005) state. In addition, Gregory (1993) reasons that none of the existing measurement systems emphasize the need for a management process with the purpose of nurturing the measurement system and keeping it viable. Instead the management is seen as a once-off initial occurrence.

Salloum and Wiktorsson (2009) argue that a management process is paramount in order to create a dynamic and flexible measurement system. As sound measures are derived from either corporate strategies or stakeholders interests a

proactive and efficient performance management process linking strategic objectives to measures is of essence. A proactive performance management process will anticipate contextual change and trigger rapid change throughout an organization as strategy differs. An efficient performance measurement process will create a system that is able to withstand irrelevant disturbances and that is at the same time responsive to relevant changes.

According to Kennerley and Neely (2003), the design and use of performance measurement systems have received considerable attention in recent years. Many organizations have redesigned their measurement systems to ensure that they reflect their current environment and strategies. However, the environment which organizations compete in is dynamic and rapidly changing, requiring constant modification of strategies and operations to reflect these changing circumstances. Despite this, few organizations appear to have systematic processes in place to ensure that their performance measurement systems continue to reflect their environment and strategies.

When monitoring indistinguishable measurements organizations will exacerbate the feeling of their individuals that measures are not to work with, but only to report, Cokins (2004) states. Therefore, measures need to be cascaded so that employees are given the opportunity to directly affect the monitored measures and control the outcome of their actions. If this emphasis is reached then higher focus will be generated towards finding appropriate measures for each layer of the organization.

In order to reach alignment, well articulated strategic objectives and an underlying strategic hypothesis is essential. The strategic objectives need to be cascaded down throughout the organization to the lowest operational level. However, it is of essence for the measurement system that the strategic objectives at the top of the organization are clearly aligned to the objectives and performance measures at the lowest operational level. This process is called in popular terminology for the "cascading process" and is extremely difficult to implement effectively, Viane and Willems (2007) continue.

In an analysis based on the common characteristics of performance measurement systems in literature, Taticchi and Balachandran (2008) list communication/alignment as one of the most common features of measurement systems. However, in the same article the authors argue that performance measurement systems need guidelines to effectively communicate measures internally within the organization to create goal alignment. Several tools are proposed such as single indicators, dashboards, icons and smileys.

A literature study conducted by Johnston and Pangatichat (2008) concluded that the benefits of strategically alignment performance measures are:

- Informing the organization regarding the direction of strategy.
- Communicating priorities of strategy.
- Creating a shared base of understanding.
- Monitoring and tracking the implementation of strategy.
- Aligning short-term actions with long-term goals.
- Consistent behaviour with strategy.
- Visible goals and means.
- The links between the performance of individuals and sub-units are made clear.
- Integration overemphasis on local objectives, thus reducing sub-optimization.
- Focusing change efforts.
- Permitting and encouraging organizational learning.

Kennerley and Neely (2003) discuss four pre-requisites for enabling a measurement system to become and stay evolving:

- Process ó existence of a process for reviewing, modifying and deploying measures.
- People ó the availability of the required skills to use, reflect on, modify and deploy measures.
- Systems ó the availability of flexible systems that enable the collection, analysis and reporting of appropriate data.
- Culture ó the existence of a measurement culture within the organization ensuring that the value of measurement, and importance of maintaining relevant and appropriate measures, is appreciated.

### **1.2.5 Selected Management Tools for Maximizing of Corporate Performance**

Over the past three decades, management tools have become a common part of executives' lives, Rigby (2011) mentions. Whether trying to boost revenues, innovate, improve quality, increase efficiencies or plan for future, executives have looked for tools to help them. The current environment of globalization and economic turbulence has increased the challenges executives face and, therefore, the need to find the right tools to meet these challenges.

To do this successfully, executives must be more knowledgeable than ever as they sort through the options and select the right management tools for their companies. The selection process itself can be as complicated as the business issues they need to solve. They must choose the tools that will best help them make business decisions that lead to enhanced processes, products and services and results in superior performance and profits. Undoubtedly, choosing the right management tools has its effect on company's performance and profits.

Successful use of management tools requires an understanding of the strengths and weaknesses of each tool as well as an ability to creatively integrate the right tools, in the right way, at the right time. The secret is not in discovering one magic device, but in learning which mechanism to use, and how and when to use it. In the absence of objective data, groundless hype makes choosing and using management tools a dangerous game of chance.

According to Mignanelli (2012) of Balanced Scorecard Collaborative, 95% of typical workforce does not understand its organization's strategy and 90% of organizations fail to execute their strategies successfully. Moreover, 70% of organizations do not link middle management incentives to strategy and 60% of organizations do not link strategy to budgeting.

Companies typically realize only a part of their strategies' potential value because of defects and breakdowns in planning and execution, Mankins and Steele (2005) continue. Talk to almost any CEO, and you are likely to hear similar frustrations. For despite the enormous time and energy that goes into strategy development at most companies, many have little to show for the effort. Companies on average deliver only 63% of the financial performance their strategies promise (see the following figure). Even worse, the causes of this strategy-to-performance gap are all but invisible to top management. Leaders then pull the wrong levers in their attempts to turn around performance – pressing for better execution when they actually need a better strategy, or opting to change direction when they really should focus the organization on execution. The result: wasted energy, lost time, and continued underperformance.

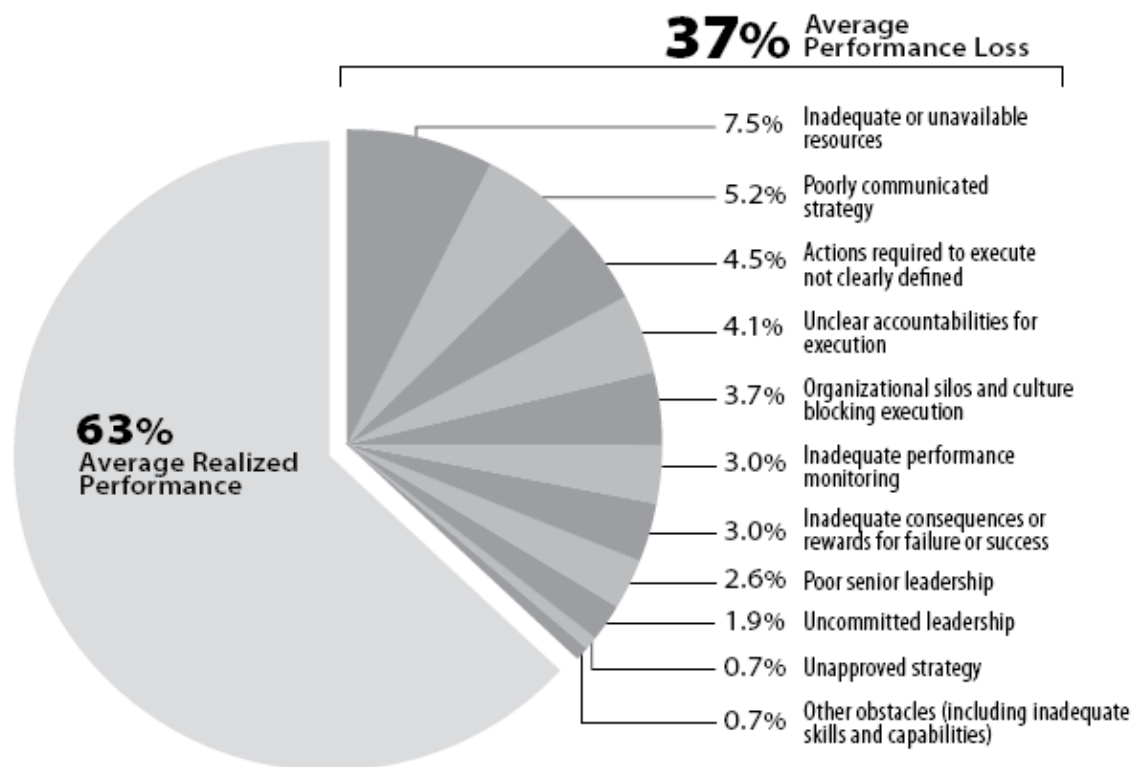


Figure 6: Where the Performance Goes. Source: Mankins, Steele (2005)

According to the research held by Marakon Associates, in collaboration with the Economist Intelligence Unit, a selected group of high-performing companies have managed to close the strategy-to-performance gap through better planning and execution, Mankins and Steele (2005) carry on. These companies (e.g. Barclays, Cisco Systems, Dow Chemical and 3M) develop realistic plans that are solidly grounded in the underlying economics of their markets and then use the plans to drive execution processes make it far less likely that they will face a shortfall in actual performance. And, if they do fall short, their processes enable them to discern the cause quickly and take corrective action. While these companies' practices are broad in scope – ranging from unique forms of planning to integrated processes for deploying and tracking resources – experience suggests that they can be applied by any business to help craft great plans and turn them into great performance. Furthermore, these companies use combinations of management tools that help them in enhancement of performance of their firm and, influence the whole corporate strategy.

According to Bain's Management Tools and Trends Survey 2009 that analyzed data from executives around the world about the management tools they use and how effectively those tools are performed, executives generally utilize more than 1 tool in their companies. The recent findings revealed both common themes and distinct differences across regions and industries. Overall, tool use has declined worldwide since 2006 (see the following figure). Although most

executives were primarily worried about successfully tackling short-term financial pressures, they were generally optimistic about the future of their companies.

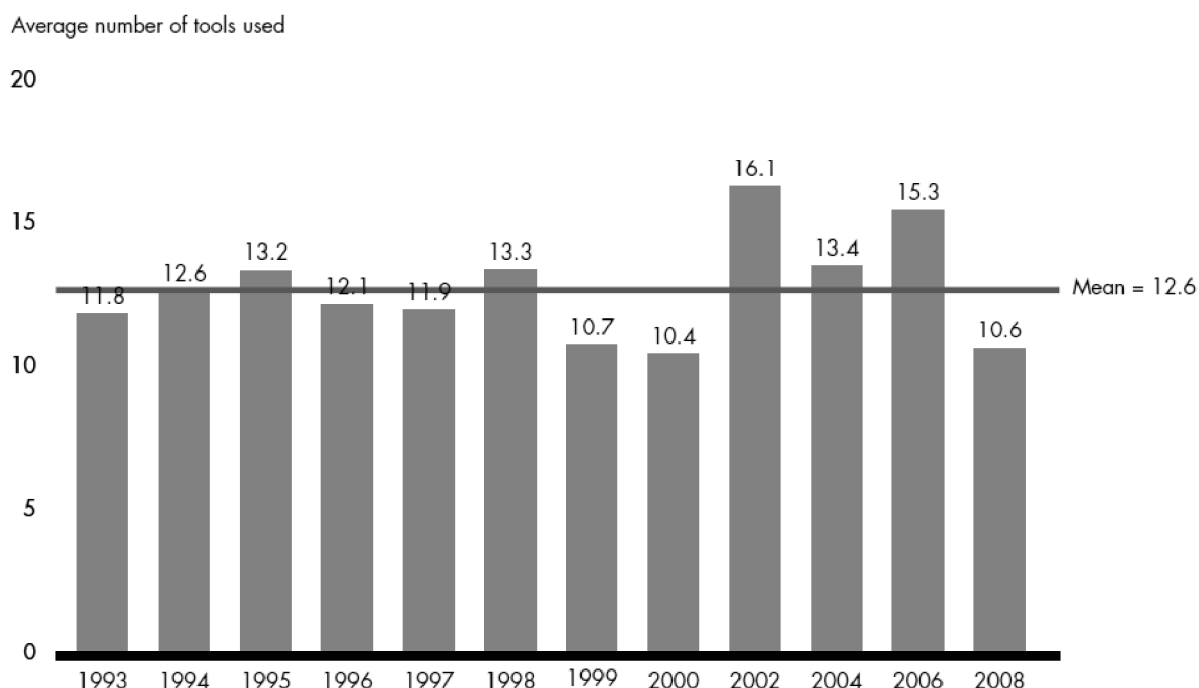
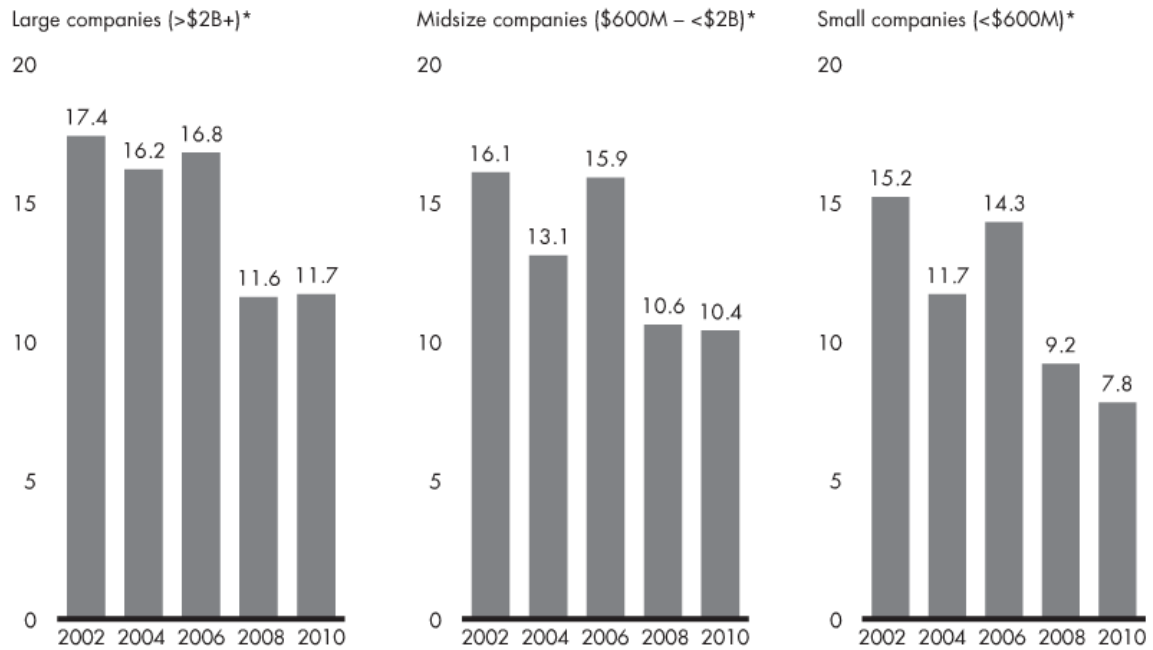


Figure 7: Tool Usage Dropped Dramatically in 2008. Source: Rigby, Bilodeau (2009)

Tools usage tends to ebb and flow with economic conditions, Rigby and Bilodeau (2011) state. In boom years, companies use more tools, rising with larger budgets and the launching of more initiatives. In tough times, companies cut back on almost everything, including management tools. Therefore, it is no surprise that worldwide tool use has steadily declined since 2006, hitting the lowest level in 2011. The average now is 10 tools, down from 11 tools in 2008 and 15 tools in 2006.

Large companies consistently use more tools than smaller firms (see the following figure), Rigby and Bilodeau (2011) go on. On average, they use about 30% more tools, and in downturns the gap actually expands. In 2010, large and midsize companies used approximately the same number of tools as they did when the survey was conducted two years ago. Small companies used an average of nine tools in 2008 and only eight in 2010. Typically, smaller, budget-constrained companies are the first to abandon tools when the economy sours.



\*Based on annual revenues

Figure 8: Larger Firms Use More Management Tools. Source: Rigby, Bilodeau (2011)

In 2009, executives expressed deep concerns about the long-term effects of the downturn (see the following figure), Rigby and Bilodeau (2011) continue. Seven out of ten worried about their ability to meet earnings targets, and growing numbers turned to cost-cutting tools such as downsizing and outsourcing to cope with slowing sales.

	Agree	Disagree
Culture is as important as strategy for business success	89%	4%
Our ability to change is a significant competitive advantage	81%	8%
Innovation is more important than cost reduction for long-term success	80%	8%
It feels like economic conditions are improving in our industry	74%	13%
Countries should reduce trade barriers and increase free trade agreements	69%	8%
Taking care of customers and employees should come before shareholders	68%	17%
We have used the recession to improve our competitive position	65%	13%
The recent downturn has changed consumer behavior for at least three more years	64%	17%
Government regulation of business will increase over the next five years	64%	14%
Over the next three years, we will focus more on revenue growth than cost reduction	63%	21%
A growing percentage of our products and services behave like commodities	59%	20%
Outsourcing may be politically unpopular, but everyone benefits in the end	51%	22%
Our top executives are comfortable taking higher risks for potentially higher returns	50%	29%
I am very concerned about how we will meet earnings targets in 2011	49%	31%
We will pursue sustainability initiatives even if they hurt our profits	46%	28%
Insufficient consumer insight is hurting our performance	45%	30%
Our international revenues will grow faster than domestic revenues over the next five years	45%	31%
Local companies will be more successful than multinationals in emerging markets	39%	31%
Almost all of today's market leaders will still be leaders five years from now	35%	44%
We are planning for economic stagnation over the next two to three years	24%	56%

Figure 9: The View on Management Trends. Source: Rigby, Bilodeau (2011)

Today, executives overwhelmingly cite revenue growth as their organizations' most important priority over the next three years – three times more often than any other priority, and six times more often than cost containment (see the following figure), Rigby and Bilodeau (2011) indicate. Executives are concerned that consumer behaviour will not immediately bounce back to prerecession levels. Among large companies (those with more than USD 2 billion in revenues), 59% fear that the downturn has changed consumer behaviour for at least three more years, suggesting that consumers will be less willing to spend money in certain product categories. Still, that is down from 75% who believed so in 2009. Furthermore, three quarters of the 1,230 executive participants from a broad range of industries, countries and company sizes told to Bain and Company that it feels like economic conditions are improving in their industry. Only a quarter of respondents expect the economy to stagnate over the next two or three years. And an increasing number of respondents believe that today's market leaders still will be leaders in five years – a sentiment that reflects confidence in the ability of top businesses to continue to outperform competitors that were weakened by the downturn.

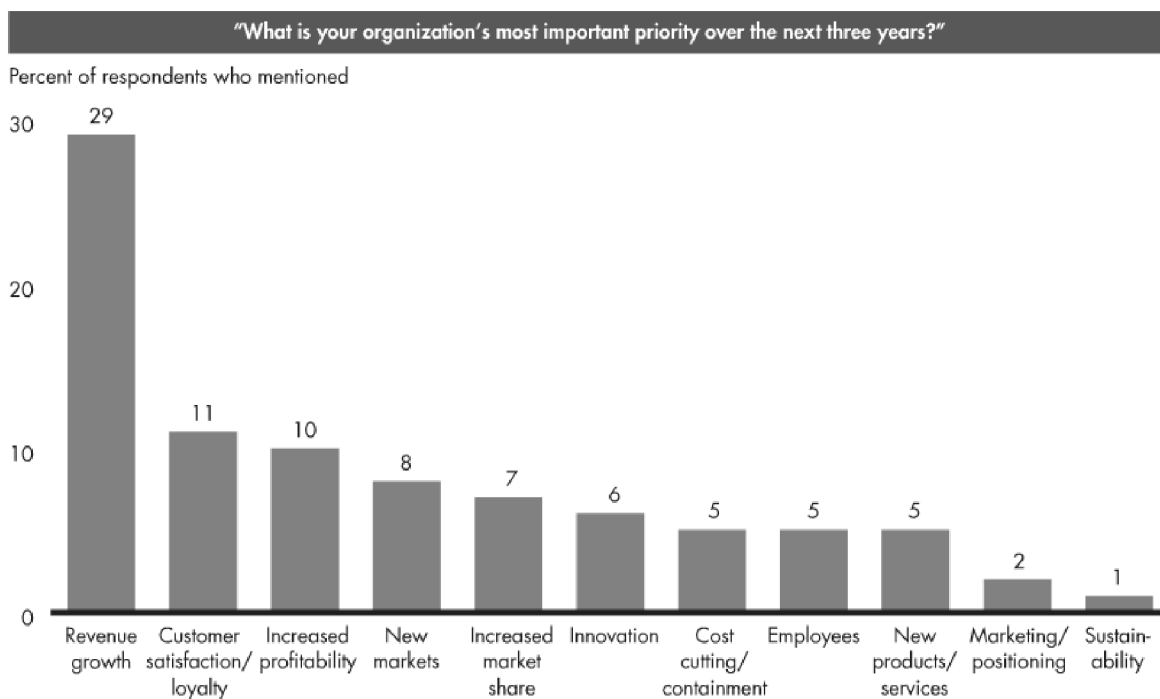


Figure 10: Revenue Growth is a Key Priority for Executives. Source: Rigby, Bilodeau (2011)

The survey found out that tried-and-true tools provided continued comfort through the downturn (see the following figure). In addition to benchmarking, the most widely used tools were strategic planning and mission and vision



statements. These are time-tested tools that have rated in the top 10 for usage over the years, regardless of the economic climate.

	Global	North America	Europe	Asia	Latin America
Benchmarking	1	3	1	4	3
Strategic planning	2	2	3	2	1(t)
Mission and vision statements	3	4	5(t)	3	1(t)
Customer relationship management	4	1	2	1	6
Outsourcing	5	6	5(t)	5	4
Balanced scorecard	6	12(t)	8(t)	10(t)	5
Change management programs	7(t)	9	4	8(t)	9
Core competencies	7(t)	5	8(t)	6	10(t)
Strategic alliances	9	7	7	8(t)	8
Customer segmentation	10	15(t)	12	10(t)	7

Note: (t) = tied

Figure 11: Top 10 Most Used Tools. Source: Rigby, Bilodeau (2011)

On the following figure we can see a satisfaction with the tools.

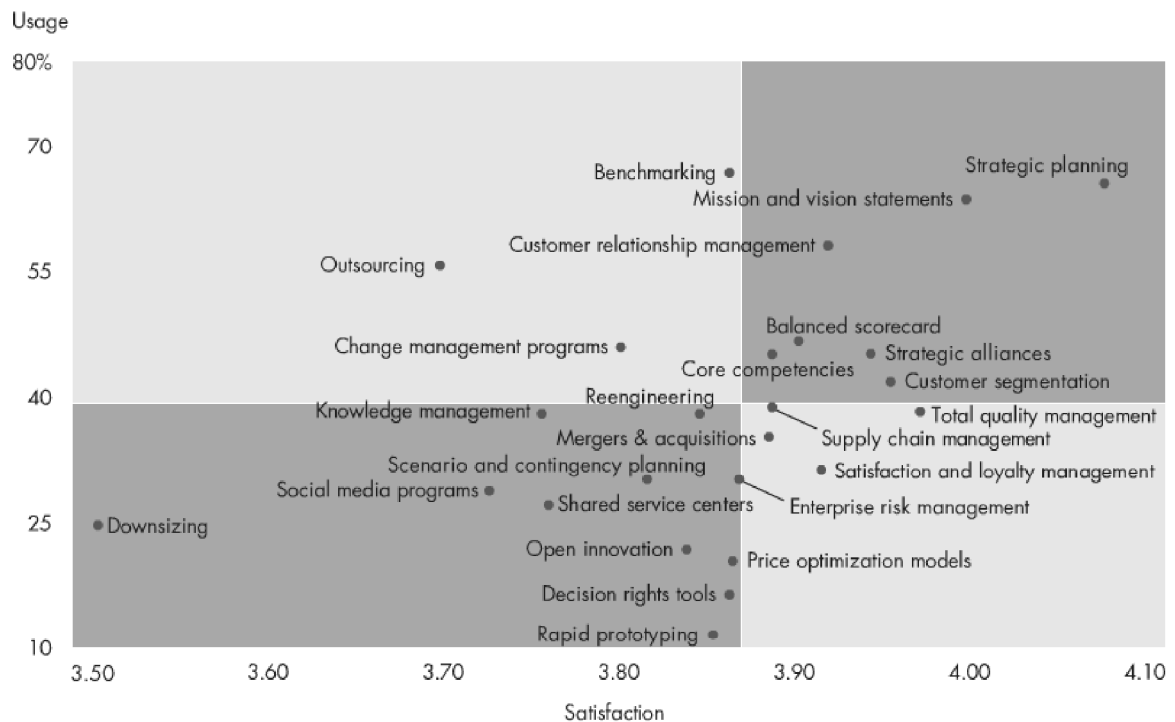


Figure 12: 2010 Usage and Satisfaction (on a Scale of 1 to 5). Source: Rigby, Bilodeau (2011)

Strategic planning is the tool with the highest satisfaction rating, Rigby and Bilodeau (2011) indicate. Other tools with above-average satisfaction scores include mission and vision statements, total quality management, customer segmentation and strategic alliances. There were clear satisfaction losers. Downsizing, outsourcing and shared service centres – all of which are used to reduce head count – are three of the five tools with below-average satisfaction scores. The other two tools with low satisfaction ratings are knowledge management and social media programmes.

### **1.2.6 Innovations as a Strategic Necessity and C-I-P-F Cycle**

Innovation has always been a fundamental basis of competitiveness for firms, regions and nations according to Pervaiz and Shepherd (2010). Heightened levels of competition arising from globalization have sensitized companies to the importance of possessing ability to develop and leverage knowledge and learning. Whilst the market system has always rested on its capacity to create new products and new ways of producing them, contemporary society's search for higher standards of living and thirst for new ways of fulfilling increasingly sophisticated needs requires more rapid innovation. Competition in this environment necessitates building innovative capacity through an enhanced knowledge and learning capability. There is little doubt that innovation is a critical factor in the success and prosperity of organizations and societies, but the precise nature of its role and its impact remains highly complex.

Innovation is not a new phenomenon. Every human has the tendency to think about new and better ways of doing things and to try them out in practice. Without it, the world in which we live would look very different.

Among the very first management systems that realized the importance of investment into human capital belongs the Bata Management System that can be characterized by extraordinary productivity and effectiveness. Every employee became an owner and capitalist. Tomas Bata proclaimed his first slogan "Thinking to the people, labour to the machines" at the factory gate. Employment was stable and long term. Bata claimed that the quality of employee life was a primary concern of the employer (not of the state).

Innovation is also about customers, Webb (2010) adds. What customers want, but also what they need or don't even know they want. Henry Ford once said: "If I had asked the market what they wanted, they would have said a faster horse." True innovators are so close to their customers they know what they need – and how to deliver exceptional value to satisfy that need – even more than the customers do.

Innovation is a strategic necessity in the global era, Zelený (2006) notes. The process of innovation must be integrated and embodied within the entire cycle of the business process. It has to be continuous, purposeful and strategically coherent. Innovation cannot remain an isolated function of selected, qualified individuals or departments. It cannot wait for inspiration or creative enlightenment, nor can it be dependent on certain attributes or characteristics of innovative individuals.

Every individual works in and is a part of some key corporate processes; all of these processes are subject to both continuous and often discontinuous improvement. That means that continuous (quantitative) and discontinuous (qualitative) innovation drives must be embodied in each individual and embedded in the system of their daily interaction and work.

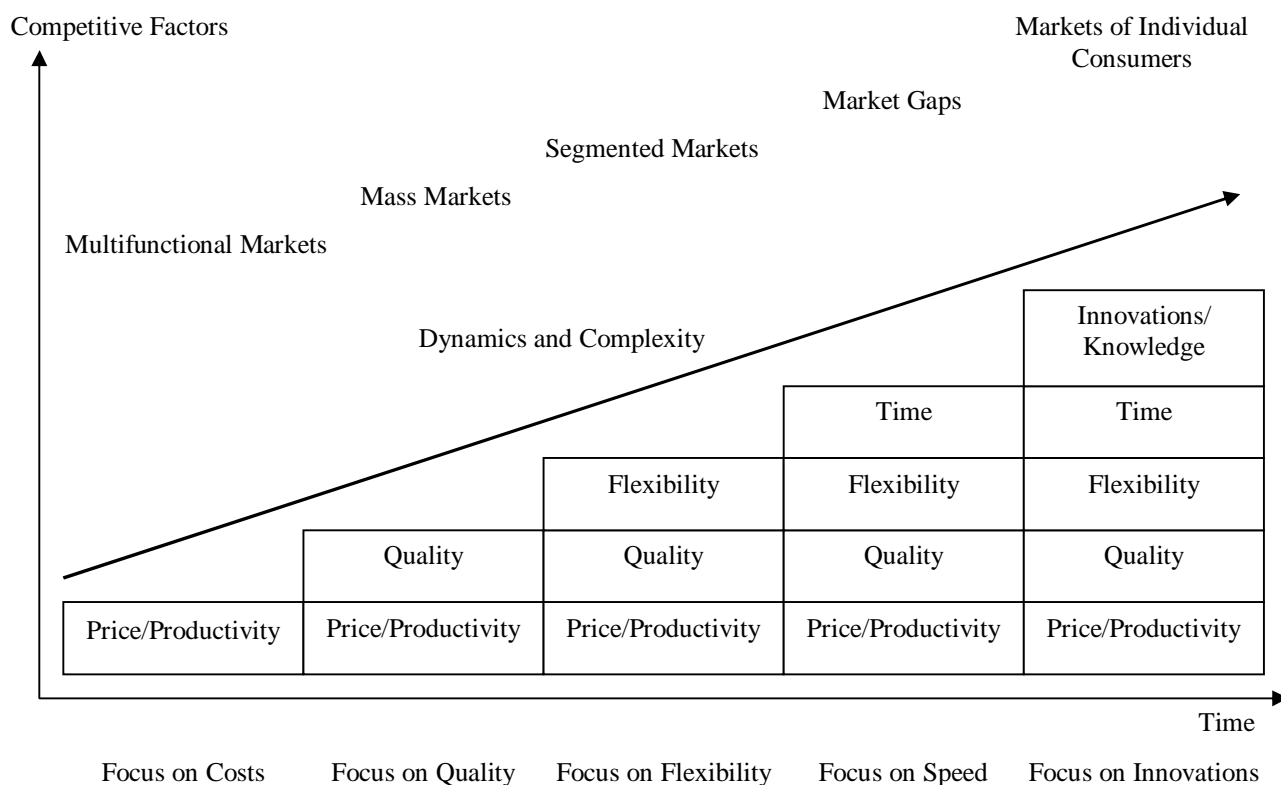


Figure 13: Changing of Markets and Competitive Factors. Source: Ko-turiak, Debnár (2007)

Ko-turiak and Debnár (2007) point out that customer value distinguishes the innovation from the simple change. But the innovation is not to be only a breakthrough technical solution. Generations of technical changes on the product or technological advantage in the production process have not necessarily led to success. Many companies have a perfect product, produced by an excellent technology. They have the only limitation ó the customers don't

buy them, because they don't see any reason to buy them. They did not find the customer value. Innovation must generate "something new" for the customer life - simplification, risk elimination, convenience, better price, fun, image and emotions, style or environmental friendliness.

The following figure shows four basic areas for customer value creation.

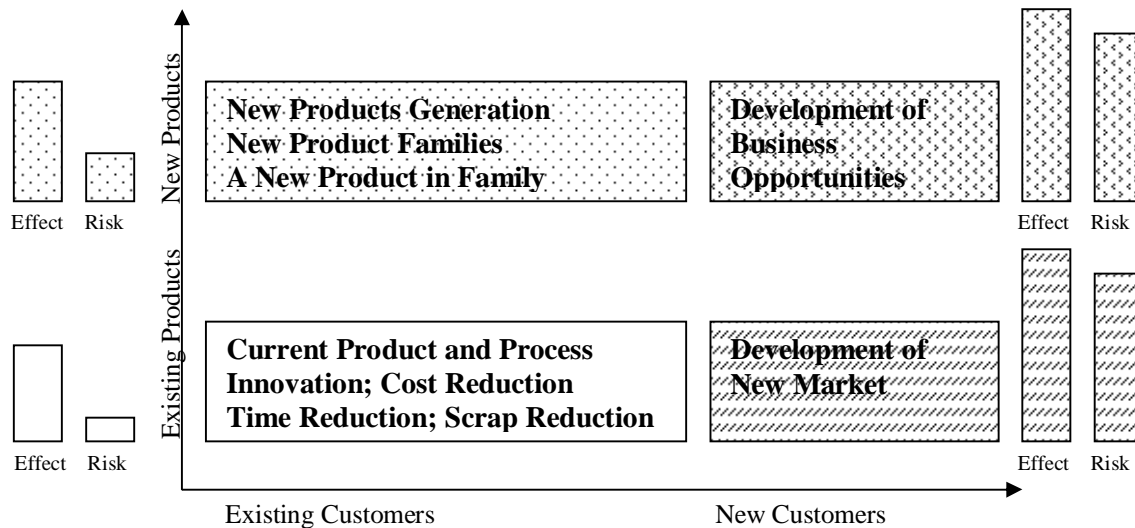


Figure 14: Four Areas of Customer Value Creation. Source: Ko-turiak, Debnár (2007)

The new customer value can be generated by new, different or higher value. Mann (2002) defines two ways of thinking regarding innovations:

Table 4: Two Ways of Thinking Regarding Innovations. Source: Mann (2002)

Trade-Off Thinking	Breakthrough Thinking
High Quality OR Low Cost	High Quality AND Low Cost
Affordable OR Customized	Affordable AND Customized
First Cost OR Life Cycle Cost	First Cost AND Life Cycle Cost
Flexible OR Rigid	Flexible AND Rigid
Big OR Small	Big AND Small
Adaptor OR Innovator	Adaptor AND Innovator
A OR B	A AND B

All systems contain contradictions - something gets worse as something gets better (e.g. strength versus weight). Traditional approach usually accepts a compromise or a trade-off, but this is often not necessary. Powerful, breakthrough solutions are the ones that don't accept the trade-offs. Such solutions are actively focused on contradictions and they are looking for ways of eliminating the compromise.

In spite of its obvious importance, innovation has not always received the scholarly attention it deserves according to Fagerberg, Mowery and Nelson (2004). For instance, students of long-run economic change used to focus on factors such as capital accumulation or the working of markets, rather than on innovation. This is now changing. After many years of streamlining of the business and manufacturing processes many managers are now asking how to increase the competitiveness of their companies, Ko-turiak and Debnár (2007) say. Many cost reduction strategies led in many cases only to a temporary success. The previous problems are back and the improvement potential is decreasing. Like the Yo-Yo effect in a slimming programme. BPR, BSC, Lean, Six Sigma, TOC, and other new miraculous methods are applied. Sometimes successfully, sometimes not.

Any innovation must add value, Zelený (2006) points out. There are two kinds of value to be considered: value for the business and value for the customer. Both parties to the transaction must be able to derive value, both must benefit: the business ó in order to make it; the customer ó in order to buy it.

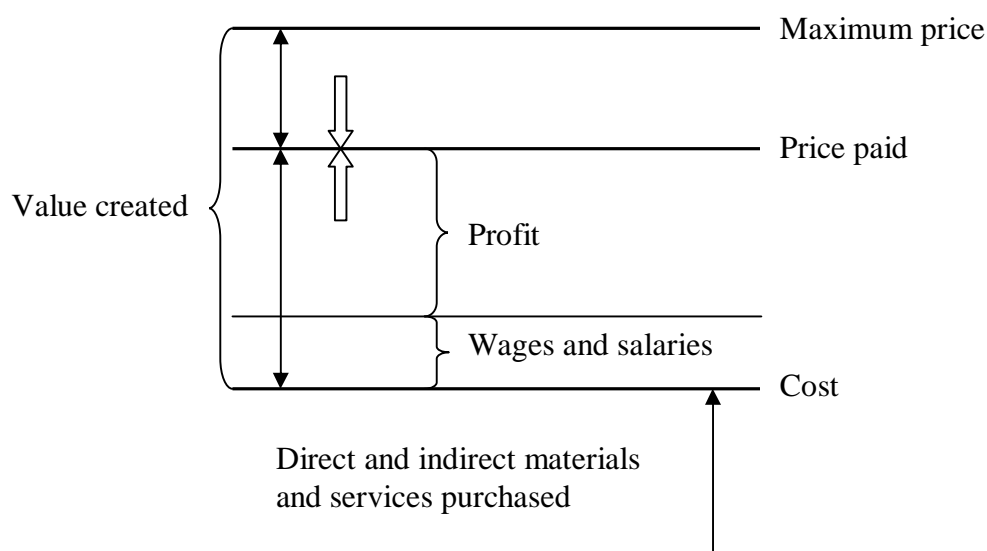


Figure 15: Adding Value for the Customer. Source: Zelený (2006)

It is clear that the innovation process must be customer driven, continuous and cyclical, embodied in the corporate strategy and embedded in business systems and organization. Firms that are willing to stay competitive and maintain their business activities in future have to invest into their employeesøtrainings, health conditions or collective free-time activities.

Innovation process is a self-reinforcing and continually repeating cycle of activities. It starts with understanding (U) what a customer wants and how the resources are to be used to satisfy him. Then a corresponding design (D) solution is prepared and its value-adding (and money-making) potentials

evaluated. If they are found to be significant, the design is implemented (I). The actual service delivery is achieved through its actual operation (O).

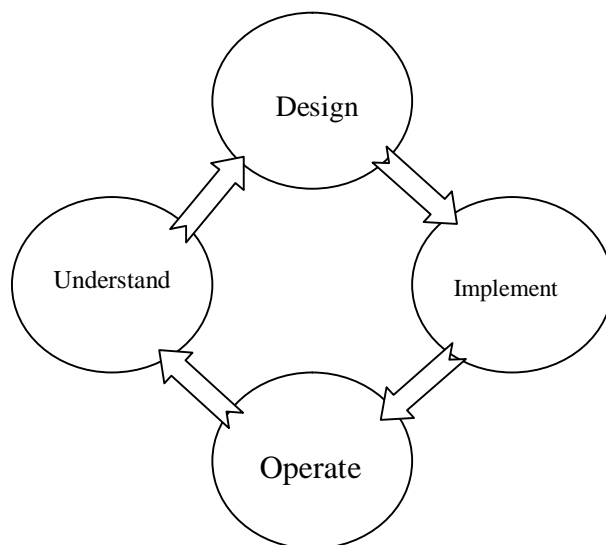


Figure 16: Innovation U-D-I-O Cycle. Source: Zelený (2006)

The U-D-I-O cycle is a simplified interpretation adapted from Jackson (2004). This is a self-reinforcing learning cycle which must be continually repeated if any learning from operating is to take place. The cycle must be effective, i.e. delivering the right answers to the right questions, not just efficient, i.e. delivering the right answers to possibly wrong questions and thus developing wrong services and products quickly and cheaply, Zelený (2006) concludes. This would be the worst possible outcome.

It is clear that the U-D-I-O cycle must become embedded in the organization of a company.

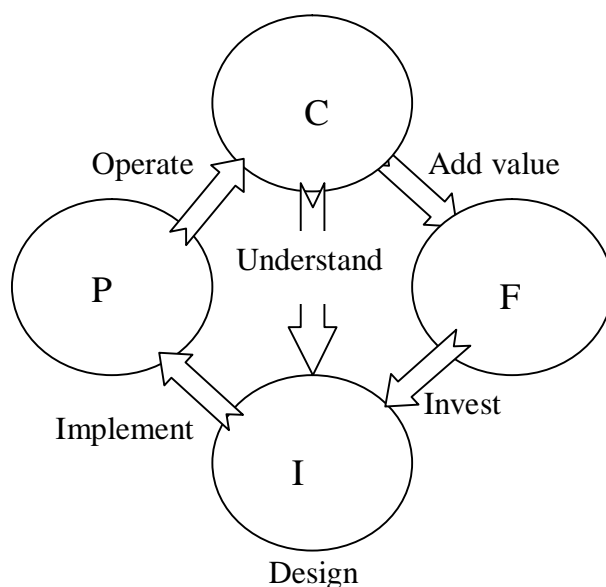


Figure 17: Cyclical Business Organization. Source: Zelený (2006)

In the above mentioned figure, Zelený (2006) shows a highly simplified cyclical business organization, based on the interconnection of processes rather than the static display of functions, roles or positions. Each business has to coordinate four basic dimensions: Customer (C), Innovation (I), Processes (P) and Finance (F). According to Jackson (2004), all business, as a minimum, has to use resources/processes to satisfy the customer in order to make money. Innovation can be viewed as the fourth dimension, necessary for assuring the long-term, sustainable performance of business.

So, in a healthy business organization we can distinguish two interwoven cycles:

- C-I-P, the Knowledge Cycle, which transforms customer information into innovative products and processes and operates them in order to serve and satisfy the customer
- C-I-P-F, the Money Cycle, indicating the overall circulation of capital. It transforms customer satisfaction into money and then reinvests the money in order to redesign the processes so that their operation serves the customer better, creates more value for him and therefore more money for the business.

Both cycles (C-I-P and C-I-P-F) are embedded within each other and are mutually reinforcing. They represent the overall strategy of business. Each cycle, in each of its iterations, enhances (or should enhance) experience, learning and knowledge among the employees and managers of a corporation. Without continuous knowledge enhancement there can be no innovation enhancement.

### **1.2.7 Alignment of Management Tools With Planning and Execution Processes**

As mentioned earlier, the root of the problem in strategy implementation is often in choosing the wrong management tools that bit by bit, almost imperceptibly, have taken the place of strategy. This action often has a negative effect on company's performance. Most of the companies (as stated in the research held by Bain & Company) use several management tools in order to lay out the potential risk of failure of one of the tools applied in their firm's methodology. Benchmarking, Strategic planning and other tools often result in operational improvements (if applied individually) but are unable to translate those gains into sustainable enhancement of performance and profitability.

As significant as the strategy-to-performance gap is at most companies, management can close it. A number of high-performing companies have found

ways to realize more of their strategies' potential. Rather than focus on improving their planning and execution processes separately to close the gap, these companies work both sides of the equation, raising standards for both planning and execution simultaneously and creating clear links between them.

The research held by Marakon Associates, in collaboration with the Economist Intelligence Unit, suggests to follow seven rules that apply to planning and execution, Mankins and Steele (2005) mention. Living by these rules enables firms to assess any performance shortfall objectively and determine whether it stems from the strategy, the plan, the execution, or employees' capabilities. And the same rules that allow them to spot problems early also help them prevent performance shortfalls in the first place. These rules may seem simple – even obvious – but when strictly and collectively observed, they can transform both the quality of a company's strategy and its ability to deliver results. The seven rules, according to Marakon Associates, are the following:

- Rule 1: Keep it (=strategy) simple, make it concrete.
- Rule 2: Debate assumptions, not forecasts.
- Rule 3: Use a rigorous framework, speak a common language.
- Rule 4: Discuss resource deployments early.
- Rule 5: Clearly identify priorities.
- Rule 6: Continuously monitor performance.
- Rule 7: Reward and develop execution capabilities.

The prize for closing the strategy-to-performance gap is huge – an increase in performance of anywhere from 60% to 100% for most companies. But this certainly understates the true benefits. Companies that tight links between their strategies, their plans, and, ultimately, their performance often experience a cultural multiplier effect. Over time, as they turn their strategies into great performance, leaders in these organizations become much more confident in their own capabilities and much more willing to make the stretch commitments that inspire and transform large companies. In turn, individual managers who keep their commitments are rewarded – with faster progression and fatter paychecks – reinforcing the behaviours needed to drive any company forward, Mankins and Steele (2005) conclude. This evaluation enables to improve the corporate performance but has an influence on a long-term strategy, profitability and competitiveness of a company.

Creating value for shareholders as well as enhancement of company's performance and customer satisfaction are the most important and key activities for today's companies. The success lies in effective strategies and dynamic leadership. Developing and implementing right management tools help business leaders in a decision process and, in consequence, in translating strategies into



action. Managers usually combine several tools that help to enhance company's performance. These tools (if combined properly) involve all necessary information necessary for the right management decisions. However, a lot of managers use tools that lack nonfinancial criteria or are not strategically relevant. Therefore, it is essential to clarify the strategy well and determine or adjust management tools according to achievements of desired results.

Executives all around the world do not rely on one or two management tools for effective decisions within a company. The use of several tools lays out the potential risk of failure of one of them. Over the past several years the number of tools being utilized by managers has increased dramatically (approx. 10-15 tools per company). However, recent findings confirm that the average number of management tools applied in companies has declined since 2006 (approx. 9-10 tools per company).

Over the years, satisfaction with the management tools has increased. Among the most popular belong benchmarking, strategic planning, and mission and vision statements. However, these tools are much more effective when they are part of a major organizational effort. Managers who switch from tool to tool undermine employees' confidence. Moreover, decision makers achieve better results by championing realistic strategies and viewing tools simply as a mean to achieving a strategic goal.

Most of management tools help in a decision making process and, therefore, have a serious impact on future of a company. To be able to understand them properly it is essential to know the right timing and pros and cons of every management tool utilized for creating strategies and other important decisions done by CEOs. Using the right management tools in the right way and at the right time helps managers make business decisions to lead to enhanced processes, product and services and result in superior performance and profits.

In consequence, management tools can help managers in finding right strategies and decisions. However, management tools cannot "create miracles" if a leader does not think "strategically". They are not a cure-all. Nevertheless, using management tools certainly helps in defining corporate strategies and enhances performance if applied well.

## **2 OBJECTIVES OF THE DOCTORAL THESIS, RESEARCH QUESTIONS AND DOCTORAL THESIS OUTLINE**

### **2.1 Objectives of the Doctoral Thesis**

The main objective of the Doctoral thesis is to **propose a dynamic performance framework** based on the utilization of synergy effects of selected management systems, performance concepts and measures. Interconnection between the Bata Management System, Japanese Management System and Amoeba Management System shall establish a framework to be used as a basis for each company's strategic management with a focus on successful transformation of management intentions into reality. Every company should further develop the framework according to its particular needs and requirements of customers, markets, stakeholders etc. The principles of the framework can be used in companies of different size, legal form or industry focus.

The framework shall represent a transition from the traditional corporate structures of the 20<sup>th</sup> century into such structures that will thrive in the 21<sup>st</sup> century and, therefore, shall fundamentally influence performance, competitiveness, profitability, effectiveness, and, overall success of a company. The dimensions to be applied in this framework are not new or special. However, by adding the quality of interconnection between the relevant management systems I aim to create a system that is periodical, dynamic and competitive.

The framework's focus on continuous investments into innovations, agility and flexibility of all processes, people and technologies, mutual synergy effects and fast communication shall build lasting value not only for a company, but also for customers and employees.

Furthermore, the following sub-objectives shall be achieved in the Doctoral thesis:

- To analyze existing management systems, concepts, measures and corporate strategies for transforming management intentions into reality with a special focus on the Bata Management System, Japanese Management System and Amoeba Management System.
- To identify synergy effects of selected management systems and use them in order to propose of a dynamic performance framework.

- To identify and compare contemporary approaches to performance management and measurement in companies located in the Czech Republic.
- To analyze performance of Japanese and other companies located in the Czech Republic in a selected industry sector.
- To pursue case studies of selected companies utilizing techniques of the Bata Management System, Japanese Management System and Amoeba Management System.
- To establish a dynamic performance framework based on the utilization of synergy effects of selected management systems, performance concepts and measures.
- To propose a methodology for the framework implementation in companies.

## 2.2 Research Questions

By virtue of the research of acquirable resources and findings obtained, the following research questions of the Doctoral thesis have been set:

RQ 1: Can interconnection between the Bata Management System, Japanese Management System and Amoeba Management System create synergy effects resulting in enhancement of corporate performance, competitiveness, and, overall success of a company?

RQ 2: Is it possible to establish a dynamic performance framework based on the utilization of synergy effects of selected management systems, concepts and measures leading to enhancement of corporate performance and competitiveness that would be applicable in real business environment?

The Doctoral thesis aims to answer both research questions that are closely related to the main objective as well as sub-objectives of the thesis.

## 2.3 Doctoral Thesis Outline

Doctoral thesis processing methodology comprises the following steps:

- Extensive literature research (critical literature review) focused on existing management systems, concepts, measures and corporate strategies for transforming management intentions into reality with a focus on the Bata Management System, Japanese Management System and Amoeba Management System.
- Identification of synergy effects of selected management systems and their utilization for a proposal for a dynamic performance framework.
- Identification and comparative analysis of contemporary approaches to performance management and measurement in companies located in the Czech Republic (irrespective of the owner's country of origin).
- Comparative analysis of performance of Japanese and other companies located in the Czech Republic in a selected industry sector.
- Case studies of selected companies utilizing components of the Bata Management System, Japanese Management System and Amoeba Management System.
- Establishment of a dynamic performance framework based on the utilization of synergy effects of selected management systems, performance concepts and measures.
- Proposal for a methodology for the framework implementation in companies.

Table 5: Doctoral Thesis Outline. Source: Own Elaboration

<i>Quarter / Year</i>	Formulation of a research problem	Research objectives and questions construction	Conceptualizing a research design and thesis outline	Proposal of research methods	Extensive literature research	Identification of synergy effects of selected management systems	Analysis of contemporary approaches to performance management and measurement in companies in CZ	Analysis of performance in Japanese and other companies in CZ	Case studies of selected companies	Establishment of a dynamic performance framework	Proposal for a methodology for the framework's implementation in companies
III/08											
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### 3 RESEARCH METHODOLOGY

This chapter describes selected research methods that have been used within the Doctoral thesis processing and have contributed to the successful fulfilment of the main research objective as well as sub-objectives and finding answers to research questions.

Qualitative and quantitative research methods used during the research:

- **Extensive literature research** focused on existing management systems, concepts, measures and corporate strategies for transforming management intentions into reality with a major focus on the Bata Management System, Japanese Management System and Amoeba Management System

Critical literature review was based on professional international publications, articles from specialist journals (preferably included in the Thomson Reuters Web of Science database, ERIH or SCOPUS database) or in conference proceedings registered by the Thomson Reuters Conference Proceedings Citation Index ó Science or Social Science & Humanities database, annual reports, on-line databases, professional studies and case studies.

Within the critical literature review, the literature has helped to identify theories and ideas - **deductive approach** ó in which a theoretical or conceptual framework was developed and has been subsequently tested using data. Furthermore, **inductive approach** helped to relate the explored data and has developed theories from them to the literature.

- Summarizing **content analysis** belongs to quantitative research methods that study the content of communication (books, websites, etc.). Content analysis has been used mainly for detailed analysis of selected management frameworks and their perspectives having influence on corporate performance, and, furthermore, it has been used to find synergy effects of selected management systems.

Along with the content analysis, a **comparison** between selected management frameworks has been made.

- Contemporary approaches to performance management and measurement in companies located in the Czech Republic have been examined on the basis of the quantitative research ó **questionnaire surveys**.

Survey 1 as a part of a research project entitled "Creating A Model for Measuring and Managing Performance of Companies" funded by the Grant Agency of the Czech Republic (Grant Number 402/09/1735) was conducted between 2009 and 2010 and was focused on companies located in the Czech Republic (irrespective of the owner's country of origin).

Survey 2 was conducted in 2012 and focused on Japanese companies located in the Czech Republic. Selected methods of Japanese management practices being used in Japanese companies located in the Czech Republic were also analyzed in Survey 2.

- **Structured interviews** carried out with managers of selected companies followed questionnaire surveys. Interviews were held in 2011 and 2012. It is mainly the relevant information obtained and the exploration of managers' opinions in detail that belong among the benefits of structured interviews.
- **Case studies** have searched into what degree the theoretically critical aspects of management systems, performance measurement and management exist in practice and how they are applied.

Furthermore, apart from the qualitative and quantitative research methods mentioned above, the following supporting research methods have been used:

- **Analysis and synthesis** as scientific methods always go hand in hand and complement one another. Every synthesis is built upon the results of a preceding analysis, and every analysis requires a subsequent synthesis in order to verify and correct its results. Analysis and synthesis belong among the most utilized scientific methods. During the research, various management systems, concepts and measures have been analyzed. Synthesis has interconnected the results of the analysis with critical literature review and contributed to final proposal for a dynamic performance framework.
- **Abstraction and concretization**  
Abstraction is a process or result of generalization by reducing the information content of a concept or an observable phenomenon, in order to retain only information, which is relevant for a particular purpose. Abstraction has been used mainly during the identification and analysis process of management systems. Concretization is an opposite process to abstraction. It means concretizing a general principle or idea by delineating, particularizing, or exemplifying it. By virtue of concretization



selected management systems which have impact on corporate performance were determined.

- **Induction, deduction and abduction**

Inductive reasoning is commonly construed as a form of reasoning that makes generalizations based on particular examples. Deductive reasoning constructs or evaluates deductive arguments. Deductive arguments are attempts to show that a conclusion necessarily follows from a set of premises or hypotheses. Abduction (or retroduction) uses guessing for a selection of the best hypotheses worth trying. A dynamic performance framework was proposed using the inductive, deductive and abductive reasoning.

- **Analogy** as a cognitive process of transferring information from a particular subject (source) to another particular subject (target) has helped to determine synergy effects of selected management systems that have a significant influence on corporate performance in order to build up a dynamic performance framework to be used in companies.
- Causal relations (relations between causes and effects) have been examined by **causal analysis**. The main aim of the causal analysis is to discover cause and determine the size or degree of effect on the resulting phenomenon. This method has been used to find out causal relations among selected management systems and their impact on the company's performance, profitability, effectiveness, competitiveness and self-sustainability.
- **Selected scientific research methods** (e.g. statistical, descriptive methods). Statistical methods have been used mainly in performance comparison between Japanese and other companies located in the Czech Republic.

## 4 MAIN RESULTS OF THE RESEARCH

Since the Lehman Shock of September 2008, the world economy has remained in a rather unpredictable state. Meanwhile, global market competition has continued to intensify. For a company this often creates a need to develop an organizational structure and strategic performance framework that is strong and able to fight.

The main result of the Doctoral thesis is to formulate a **proposal for a dynamic performance framework** based on the utilization of synergy effects of selected management systems - Bata Management System, Japanese Management System and Amoeba Management System. All the three management systems utilize common elements that facilitate monitoring of every aspect of the company, and thereby detailed management of the entire organization. Moreover, they also put emphasis on returning to the commencement of the enterprise with all employees acting as the managers through developing a management method that divides an organization into small units with all rights and responsibilities and lay great stress on customers and innovations as a fundamental basis for competitiveness of firms while continually improving the quality of processes and products.

From the historical point of view, a lot of companies that have utilized techniques of the Bata, Japanese or Amoeba Management Systems in their corporate management have generally practiced high-profit management and have experienced considerable improvement in business performance. However, each of the above mentioned management systems lacks some particular techniques that are commonly utilized by the other system and, thus, it creates a vulnerable space for improving corporate efficiency and performance.

It is assumed that mutual synergy effects of selected management systems to be utilized in the newly proposed dynamic performance framework shall bring greater benefits for the company than when utilizing selected management systems separately and individually.

In order to set a dynamic performance framework that utilizes methods derived from corporate strategies or stakeholder interests, a proactive and efficient performance framework linking strategic objectives to measures must be established. The framework shall reflect various aspects ó ranging from strategy, organizational structure, globalization, organizational learning, corporate finance, corporate governance, human resource management and production management to innovation, social responsibility, ecology and other topics.

The following chapters are devoted to describing selected techniques of the Bata Management System, Japanese Management System and Amoeba Management System (incl. their synergy effects) that will be utilized to establish the dynamic performance framework. The framework shall help companies to create a system that is able to withstand irrelevant disturbances and that is at the same time responsive to relevant changes.

The performance framework will take into consideration a proactive performance management process. Therefore, contemporary approaches to performance management and measurement in companies located in the Czech Republic will be analyzed. Subsequently, performance of Japanese and other companies located in the Czech Republic in a selected industry sector will be measured and analyzed, too.

Furthermore, case studies of companies utilizing components of selected management systems will investigate into what degree the theoretically critical aspects of management systems, performance measurement and management exist in practice and how they are applied.

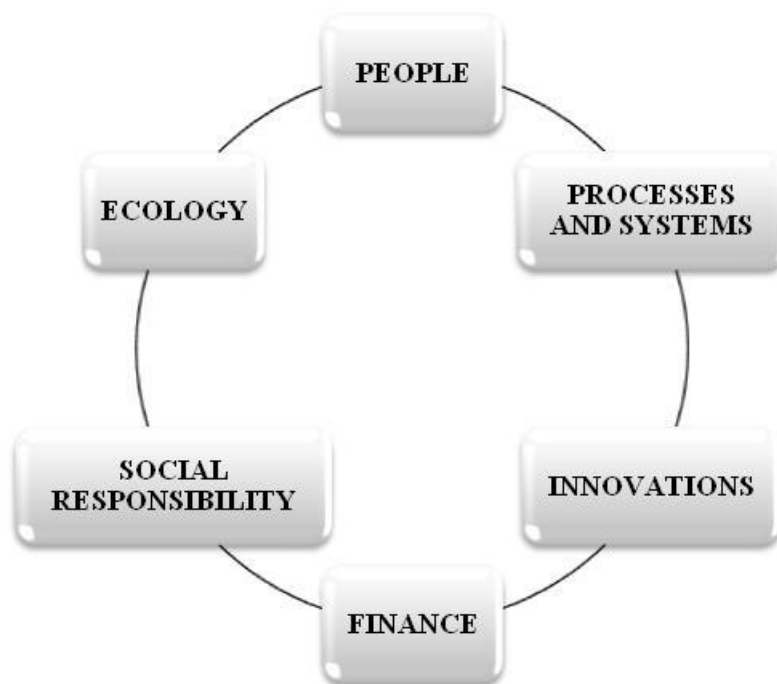
Finally, a dynamic performance framework based on the utilization of synergy effects of selected management systems will be established and a methodology for the framework implementation in companies will be proposed.

The outcomes of my research shall contribute to science, practice as well as research activity at the faculty.

## 4.1 Identification of Selected Management Systems for Utilization in Companies

The main aim of this chapter is to identify possibilities of utilization of selected management systems in enhancing corporate performance and competitiveness based on extensive literature search. Mutual synergy effects of the Bata Management System, Japanese Management System and Amoeba Management System will be further utilized in the proposal for a dynamic performance framework.

Within the identification of possibilities of utilization of selected management systems in the proposal for a dynamic performance framework, key areas are defined for further analysis. These areas can all be outlined separately, but increasingly as an entire system, or a business model. They result from dimensions that each business has to coordinate (people, processes and systems, innovations and finance) and are supplemented by dimensions that are rather new (social responsibility and ecology) but highly important in today's society (see the following figure).



*Figure 18: Key Dimensions Each Business Has to Coordinate. Source: Own Elaboration*

### 4.1.1 Identification of Bata Management System

The Bata Management System has sometimes been described as the so-called "Japanese-type" management system of today. However, it was the Japanese who were studying the principles of this remarkable system in Zlín in the early thirties of the 20th century. The system worked so phenomenally that the whole U.S. shoe industry felt threatened by it in that period.

The Bata Management System can be characterized by its principle saying that the most important capital of a company is knowledge and not money, buildings or technology. Bata also demonstrated that in order to become competitive, employee well-being and customer satisfaction along with continuous innovations not only in technology, but in processes and organization, shall become the principal objective of the enterprise.

Tomas Bata was not only a pioneer of the modern production and marketing of footwear, but more importantly of the development and business implementation of what in the business world of today is known as organizational behaviour.

The main factor of the Bata Management System is the emphasis on technology and on achieving a requisite organization that would simultaneously enhance efficiency and encourage innovation and motivate the workers. Allied to this was a strong sense of moral and social responsibility. Reintegration of labour and knowledge, multi-functionality, flexibility, autonomy and self-management were crucial aspects of the system, too.

The People perspective is characterized by full co-ownership of the enterprise by employees based on long-term employment contracts, benefits based on employee performance (i.e. motivation), full employee responsibility for quality and clearly defined employee responsibilities. Moreover, Tomas Bata paid attention to in-house management education (e.g. Bata School of Work and Management), educating of a multifunctional worker (fully rotational in his technological group) and team spirit. Earnings re-investment programme was developed in order to generate motivation in the employees. Bata Management System is also known for forming no unions within a company (all employees were "associates"). Customers were considered the priority area in the Bata Management System.

Customer satisfaction achieved thanks to high quality products and the continuous improvement in the quality served as the dominant strategic principle of the enterprise. Direct contact with customers was established. The motto "Our customer, our master" clearly reflects how important customers really were in

the company. The suppliers' perspective is characterized by long-term commitments with only a few suppliers and no middlemen.

Processes and systems are characterized mainly by decentralized (distributed) organization, department autonomy and self-management. Automation and robotics support for fully flexible production layouts, global benchmarking, synergy within all dimension and mutual communication among all parts was specific for the Bata Management System, too. The company's system was focused on analyzing, understanding and learning. Integration instead of division of labour was encouraged. All company secrets were revealed including personnel, market and accounting information. Organization was flexible and people-oriented. Just-in-time concept as well as rotational system of preventive maintenance of all machinery carried out with ever stopping production and total in-house adaptation and re-building of all purchased machinery belonged among other main characteristics of the Bata Management System.

Bata paid attention to continuous innovations and improvement in the quality products as well as processes. Assurance of continually high-quality output including rewards to individuals for quality improvements and penalties to teams for quality failures was of much importance in the company. The companies were aware of the fact that it was necessary to use the latest technology in order to remain competitive.

Financial perspective is characterized by direct and immediate profit-sharing, semi-automated statistical monitoring of performance, no debt, no public stocks and no preferential customs quotas.

Service to the public, focus on total quality of employee life (including personal health care, employee housing or social services) were the main aspects of the Social responsibility perspective. Moreover, the Bata company invested a lot of resources into municipal and regional development and took pride in moral behaviour and ecological thinking.

In order to enable the newly established framework to develop, people, processes and systems, innovations, finance, social responsibility and ecology must be taken into consideration (as mentioned earlier). Therefore, all the three management systems (Bata Management System, Japanese Management System and Amoeba Management System) will be applied and the key features to be used to establish a dynamic performance framework will be identified for consequent comparison of their mutual synergy effects.

The main advantages of the selected techniques of the Bata Management System within the defined dimensions are described in the following figure:

## People

- **Employees:**
  - Full co-ownership of the enterprise based on long-term employment contracts
  - Earnings re-investment programme
  - Benefits based on employee performance (motivation)
  - Full responsibility for quality
  - Team spirit
  - Quality of employee life
  - In-house management education (Bata School of Work and Management)
  - Educating of multifunctional worker - fully rotational in his technological group
  - No unions (all employees were "associates")
  - Clearly defined responsibilities
  - Knowledge of languages required
- **Customers:**
  - Customer satisfaction (via product quality and its continuous improvement) as the dominant strategic principle of the enterprise
  - Direct contact
  - Our customer, our master
- **Suppliers:**
  - Few suppliers (no middlemen)

## Processes and Systems

- Decentralized (distributed) organization
- Department autonomy
- Self-management
- Automation and "robotics" support for fully flexible production layouts
- Global benchmarking
- Synergy (balanced system of all dimensions) - communication
- System: analyze, understand, learn
- Integration instead of division of labour
- Whole-system orientation
- No company secrets (everything was public incl. personnel, market and accounting information)
- Organizational flexibility
- Human-oriented enterprise
- Just-in-time concept
- Rotational system of preventive maintenance of all machinery (carried out without ever stopping production)
- Total in-house adaptation and re-building of all purchased machinery

## Innovations

- Continuous innovation and improvement of quality of products and processes
- Assurance of continually high-quality output (rewards to individuals for quality improvements, penalties to teams for quality failures)
- Usage of newest technologies
- Innovation does not apply to technology only, but should be applied to systems and organization

## Finance

- Direct and immediate profit-sharing
- Semi-automated statistical monitoring of performance
- No debt, no public stocks, no preferential customs quotas

## Social Responsibility

- Service to the public
- Focus on total quality of employee life (personal health care, employee housing, social services,...)
- Moral behaviour
- Investments into municipal and regional development (building of social infrastructure)

## Ecology

- Ecology thinking

Figure 19: Selected Components of the Bata Management System Within Given Dimensions. Source: Own Elaboration

### 4.1.2 Identification of Japanese Management System

The world is changing ó fast. If you want to succeed in today's global market, you need to re-examine your old strategies and face the new competition head on. But how do so? Look at Japan. In spite of several economic downfalls and countless challenges, Japan is on the verge of a major economic revival.

Based on several articles, surveys and researches, the American (USA), Japanese and German management techniques have been considered the best in the world over the past few decades. However, in the last few years the economic environment has drastically changed in Japan and resulted in profound changes in companies' structures and other practices. In respect of such changes, Japanese managers' work values and attitudes have likewise changed.

The traditional Japanese management model has been perceived by many observers as being in a crisis recently. The key reasons for Japan's economic crisis and its perseverance during the so-called "lost decade" of the 1990s were mainly to be found on the macro level, which was beyond the control of corporate managers. Many Japanese managers have expressed without hesitation the view that the Japanese management model is in need of a change. Several weaknesses of the Japanese model could be mentioned in comparison to the US model. The US model is generally identified with strategies and is profit and shareholder value oriented. Among the other advantages of the US model (in comparison with the Japanese management techniques used in the 1970s and 1980s) belong mainly the major consideration of market outcomes, globalization, mergers, acquisitions and selling of company divisions, flexibility, promptness and mobility. Nevertheless, the Japanese have always had their ability to change their methods and their course rapidly in times of distress and the Japanese Management System has always been able to adapt to a changing environment very fast.

Nowadays, the Japanese Management System seems to have overcome the major difficulties. It has integrated new, frequently Western-inspired management principles with traditional Japanese management concepts, and has thus attained a new state of stable equilibrium in which its components are again mutually reinforcing each other, establishing a coherence and consistency within the model itself as well as with the global economic context and the domestic cultural and institutional context. Business management in Japan today is a hybrid of core concepts from the traditional culture and a growing number of Western business practices, and it is continuing to evolve.

After two decades of relative decline, Japan appears to be coming back and Western companies are well advised to be aware of it. Japanese companies have



been succeeding in combining a new focus on strategy, profit orientation, global outlook and flexibility with their traditional strengths of efficient processes, quality orientation, attention to detail and the capacity to win a substantial degree of loyalty from their employees. As a consequence, Japanese companies are much more powerful competitors than ever before.

There are a number of other significant factors that will help determine whether or not Japan remains a world-class economic power. One of these key factors is Japan's ability to develop new technology. Another factor is the entrepreneurship and the third factor is a wiser and more effective use of female workforce.

The most well-known concept of Japanese management is Kaizen – a Japanese term for "continuous improvement". It shall be considered rather as a philosophy than a management activity or management technique. The main aspect of kaizen lays in its integration within every single business process.

<b>KAIZEN (continuous improvement)</b>	
<b>AIM</b>	create highest value and quality for customers
<b>BY MEANS OF IMPROVING</b>	productivity
	safety for all employees
	business process effectiveness
<b>WHILE</b>	reducing waste
<b>OVERALL GOAL</b>	enhance the quality of products
	maximize cost efficiency
	maximize safety of manufacturing processes

*Figure 20: Kaizen Concept. Source: Own Elaboration*

Japanese management techniques appear to have systematic processes in place to ensure that their performance measurement systems continue to reflect their environment and strategies. Japanese companies are excellent in their ideas of change and improvement. Every process and activity can be improved at any time which is essential for thriving in today's ever-changing business environment.

Participative decision-making, decision by consensus, large family awareness with all employees sharing a common identity, harmonious relationships and

loyalty belong among the main characteristics of the People perspective. Society is group-oriented ó well-being of the entire team is more important than the well-being of an individual. All employees are responsible for improving business processes. Safety for employees, life-time employment, seniority system, job rotation (genchi genbutsu) and reflection meetings (analysis, discussion, feedback) are defined among other characteristics of the system. All employees are motivated (rewards) and encouraged to improve processes; new ideas are appreciated. Companies also pay attention to staff trainings and education of employees. The main stakeholders in the Japanese Management System are employees, then clients and shareholders. There are many enterprise unions within a company. õThe customer is kingö is the main motto of companies utilizing the Japanese Management System ó enterprises are customer-oriented and create long-term commitments (partnerships). The same applies to suppliers.

Processes and systems are defined by continuous emphasis put on improving the quality of products and processes. A total quality management (total quality control) is applied. Quality circles, just-in-time production, lean production, limitation of product defects, maximizing safety of manufacturing processes and business process effectiveness belong among the other key elements of the Japanese management techniques. 5S (sort, set in order, clean, systematize, standardize) system for improving the business/production processes while maintaining high-quality performance is utilized. Corporate governance (insider system of management and control), clearly defined procedures and rules and safety are important, too. For Japanese companies improving productivity by means of investments into innovations and, thus, creating competitive advantage is of significant importance within the entire business process.

Within the financial perspective creating the maximum value possible for customers and maximizing cost efficiency are the main characteristics. Financial and non-financial objectives are of importance in order to secure long-term survival, independence and growth of a company. Key target figure is a long-term market share.

Japanese companies are also oriented towards social responsibility (moral behaviour and action) as well as ecology perspectives. Environmental management and staff education, nature protection, reducing waste, better resource utilization, energy saving, resource saving create a recycling-based society.

The main advantages of the selected techniques of the Japanese Management System within the defined dimensions are described in the following figure:

## People

- **Employees:**
  - Participative decision-making (decision by consensus)
  - Large family (employees share a common identity, harmonious relationships have a high priority)
  - Loyalty
  - Group-oriented society (well-being of the whole team is more important than the well-being of one individual)
  - Shared responsibility (all employees are responsible for improving business processes)
  - Safety for employees
  - Life-time employment
  - Seniority system
  - Genchi Genbutsu (Go and See) - job rotation
  - Reflection meetings (analysis, discussion, feedback)
  - Motivation of employees (rewards) for improving of processes, new ideas, ...
  - Strong focus on trainings
  - Main stakeholders: 1. employees, 2. clients, 3. shareholders
  - Enterprise unions
- **Customers:**
  - Customer orientation ("customer is king")
  - Long-term commitments (partnerships)
- **Suppliers:**
  - Long-term commitments (partnerships)

## Processes and Systems

- Continuous emphasis on improving quality of products, processes, ...
- Total quality management (total quality control)
- Quality circles
- Just-in-time production
- Business process effectiveness
- Lean production
- Limitation of product defects
- Maximizing safety of manufacturing processes
- 5 S (sort, set in order, clean, systematize, standardize) - improving the business/production process while maintaining high-quality performance
- Safety
- Clearly defined procedures and rules
- Corporate governance: insider system of management and control

## Innovations

- Improving productivity by means of investments into innovations (creating competitive advantage)

## Finance

- Creating highest value for customers
- Maximizing cost efficiency
- Financial and non-financial objectives of importance in order to secure long-term survival, independance and growth of a company
- Key target figure: long-term market share

## Social Responsibility

- Environmental management
- Environmental education to employees
- Nature protection
- Moral behaviour and action

## Ecology

- Reducing waste, better resource utilization
- Energy saving, resource saving
- Recycling-based society

Figure 21: Selected Components of the Japanese Management System Within Given Dimensions. Source: Own Elaboration

### **4.1.3 Identification of Amoeba Management System**

A persistent challenge for companies as they grow is the objective to maintain the high level of dynamism and employee commitment that drove their success in the early days. Over the years, thoughtful managers and management theorists have formulated many approaches to coping with the problem, including self-managing teams, self-organizing systems and division spinoffs - all aimed at giving managers and employees more responsibility and accountability for the performance of their own profit centers.

Especially effective in dynamic and highly competitive environments, the Amoeba Management System has been successfully adopted in more than 400 companies around the world. At the heart of this innovative management system there is a business philosophy based on doing the right thing as a human being and the leadership potential of all employees.

This philosophy, coupled with a simple and precise micro-divisional management and accounting system that enables the distribution of leadership and management responsibility among small self-supporting units called *amoebas*, can help organizations achieve a high degree of flexibility and market sensitivity.

While individual amoebas are supposed to seek out ways to make money on the products and services they offer, they are also expected to look beyond their own interests and work for the good of the company as a whole.

The Amoeba Management Systems is based on the human mind. Occasional competition among amoebas does not affect mutual respect and support and allows company to wield power as a unified entity.

People perspective of the Amoeba Management Systems is characterized by enabling each employee to take an active role in the workplace and spontaneous participation in management (business partners). Management by all is encouraged. Employees are stimulated to act like the owner of a small and independent company. High-trust, opportunities for intellectual development of all employees or team-based environment that supports personal initiatives are of great importance, too. Companies are focused on customers and have long-term partnerships with suppliers.

Processes and systems utilize mainly the following attributes: small, profit-sharing and semi-autonomous teams or departments acting like independent companies that share a united purpose of the parent company; companies act

like a living organism; strong cooperation among all teams; intra-company market; fast-responding, entrepreneurially-oriented business units; each amoeba unit makes its own plans under the guidance of an amoeba leader; information flows focus on disseminating and receiving information related to organizational values and management philosophy and organization-wide and amoeba-level performance; organizational integration; coordinated action (each amoeba ensures its coordinated, harmonious and successful action); total quality management/kaizen approach to quality and cost + entrepreneurial dynamism; high-quality products that are respected and valued by customers; transparency in all activities; full-bodied performance system; fast response to highly competitive and quickly changing external environment; self-sustainability and auto-poiesis (self-production).

Organizational-wide effort to make improvements to product/service cost, quality and innovation are the main features of the Innovations perspective.

Within the financial perspective the key characteristics involve profit and loss responsibilities of each amoeba and performing statistical control, profit system, cost accounting, personnel management, etc. by each amoeba.

The Amoeba Management System lays great emphasis on social responsibility and ecology perspectives. Through joint effort of employees companies contribute to the advancement of society. Employees have a strong work ethic and are ecology-focused.

The main advantages of the selected techniques of the Amoeba Management System within the defined dimensions are described in the following figure:

## People

- **Employees:**
  - Each employee takes an active role in the workplace and spontaneously participates in management (business partners)
  - Management by all
  - Employees are encouraged to act like the owner of a small, independent company
  - High-trust
  - Opportunities for intellectual growth of all employees
  - Team-based environment that supports personal initiatives
- **Customers:**
  - Customer-focused company
- **Suppliers:**
  - Long-term commitments (partnerships)

## Processes and Systems

- Small, profit-sharing and semi-autonomous teams or departments acting like independent companies that share a united purpose (of the parent company)
- Company acting like a living organism
- Strong cooperation among all teams
- Intra-company market
- Fast-responding, entrepreneurially-oriented business units
- Each amoeba unit makes its own plans under the guidance of an amoeba leader
- Information flows focus on disseminating and receiving information related to organizational values and management philosophy and organization-wide and amoeba-level performance
- Organizational integration
- Coordinated action (each amoeba ensures its coordinated, harmonious and successful action)
- Total quality management / kaizen approach to quality and cost + entrepreneurial dynamism
- High-quality products (that are respected and valued by customers)
- Transparency in all activities
- Full-bodied performance system
- Fast response to highly competitive and quickly changing external environment
- Self-sustainability and auto-poiesis (self-production)

## Innovations

- Organizational-wide effort to pursue improvements in product/service cost, quality and innovation

## Finance

- Each amoeba performs its own statistical control, profit system, cost accounting, personnel management, ...
- Profit and loss responsibilities of each amoeba

## Social Responsibility

- Through joint effort of employees contribute to the advancement of society
- Strong work ethic

## Ecology

- Ecology-focused society

*Figure 22: Selected Components of the Amoeba Management System Within Given Dimensions. Source: Own Elaboration*



## **4.2 Synergy Effects of Selected Management Systems and Their Utilization for a Proposal for a Dynamic Performance Framework**

This chapter is going to describe synergy effects of the Bata Management System, Japanese Management System and Amoeba Management System and their utilization for a proposal for a dynamic performance framework.

The selected management systems utilize joint techniques that facilitate monitoring of every aspect of the company ó ranging from people, processes and systems, innovations and finance to social responsibility and ecology. Moreover, they also put emphasis on employees acting as the managers and on dividing an organization into small units with all rights and responsibilities. Great emphasis is laid upon customers and innovations as well as continuous enhancement of quality (not only of products but of processes and organization, too).

Mutual synergy effects of the Bata Management System, Japanese Management System and Amoeba Management System to be utilized in the newly proposed dynamic performance framework shall bring greater benefits to a company than utilizing selected management systems individually.

Synergy effects will be examined and analyzed in a the following groupings:

- Bata Management System and Japanese Management System
- Bata Management System and Amoeba Management System
- Japanese Management System and Amoeba Management System

### **4.2.1 Synergy Effects of Bata Management System and Japanese Management System**

Mutual synergy effects of the Bata Management System and Japanese Management Systems will be analyzed within given dimensions that each business has to coordinate (people, processes and systems, innovations, finance, social responsibility and ecology).

Within the People perspective we can see similarities mainly in the area of staff responsibility for improving business processes/quality of products etc., long-term employment, team spirit including sharing of common identity and harmonious relationship as a high priority, obtaining benefits (both financial and non-financial) as a motivation based on employee performance, focus on in-house education and trainings, job rotation (educating of multifunctional worker), regular/irregular meetings (analysis, discussion, feedback), loyalty of employees and orientation towards customer satisfaction.

On the other hand, the Bata Management System preferred co-ownership (all employees acting as managers), set up earnings re-investment programme, paid attention to the quality of employee life (not only at workplace), lacked enterprise unions and middlemen (in terms of suppliers). The Japanese Management System differs from the Bata Management System mainly by decisions by consensus, seniority system and existence of enterprise unions.

Processes and systems are characterized by joint emphasis put on improving the quality of products/processes/organization in order to satisfy customers' requirements and needs to get the highest performance, business process effectiveness, limitation of product defects, maximizing safety of manufacturing processes, rotational system of preventive maintenance of all machinery carried out without ever stopping production, clearly defined procedures and rules, system based on analyzing, understanding and learning and just-in-time production.

Dissimilarity of the Bata management techniques in the perspective of Processes and systems lie in the decentralization of the organization with departmental autonomy and self-management. Moreover, Bata laid emphasis on total in-house adaptation and re-building of all purchased machinery, human-oriented enterprise, whole-system orientation and organizational flexibility. Japanese techniques are supported by the Japanese way of thinking and working including techniques like kaizen, kanban or 5S (sort, set in order, clean, systematize, standardize) i.e. improving the business or production processes while maintaining high-quality performance.

In the third perspective focused on Innovations both systems found conformity in supporting continuous investments into innovations of products / processes and organization. Using the newest technologies continually assures high-quality output and creates competitive advantage, too.

Similarities in the Financial perspective can be found mainly in maximizing cost efficiency while maintaining high-quality products and, subsequently, creating highest value for customers. Bata Management System is also known for direct and immediate profit-sharing and no debts, no public stocks and preferential customs quotas. Key target figures for Japanese companies focus on long-term market share.

Moral behaviour and action and service to public (incl. investments into municipal and regional development) are the main characteristics that both systems share in the perspective of Social responsibility.



Ecology thinking, environmental management and staff education, nature protection or reducing waste and better resource utilization belong to common aspects of both systems in the perspective of Ecology.

Table 6: Synergy Effects of the Bata Management System and Japanese Management System. Source: Own Elaboration

<b>Synergy effects of Bata Management System and Japanese Management System</b>	
<b>Bata Management System</b>	<b>Japanese Management System</b>
<b>PERSPECTIVE: PEOPLE</b>	
Responsibility for improving business processes/quality	
Long-term employment (life-time employment)	
Team spirit	
Benefits (financial/non-financial motivation) based on employee performance	
Trainings / Education	
Job rotation	
Reflection meetings	
Customer-focused organization	
Loyalty	
<b>PERSPECTIVE: PROCESSES AND SYSTEMS</b>	
Emphasis on improving quality of products/processes	
Business process effectiveness	
Limitation of product defects	
Maximizing safety of manufacturing processes	
Clearly defined procedures and rules	
Just-in-time production	
<b>PERSPECTIVE: INNOVATIONS</b>	
Continuous investments into innovations of products / processes / organizationí	
<b>PERSPECTIVE: FINANCE</b>	
Maximizing cost efficiency	
Creating highest value for customers	
<b>PERSPECTIVE: SOCIAL RESPONSIBILITY</b>	
Moral behaviour and action	
Service to public	
<b>PERSPECTIVE: ECOLOGY</b>	
Environmental management	

#### **4.2.2 Synergy Effects of Bata Management System and Amoeba Management System**

Mutual synergy effects of the Bata Management System and Amoeba Management Systems will also be analyzed within given dimensions that each business has to coordinate (people, processes and systems, innovations, finance, social responsibility and ecology).

Within the People perspective the two systems share similarities in co-ownership (all employees act as business partners). Management by all is generally encouraged in companies that utilize one of the above mentioned systems. Each employee takes an active role in the workplace and spontaneously participates in management. Moreover, employees are encouraged to act like owners of a small, independent company. Both systems put great emphasis on providing opportunities for intellectual development of all employees (incl. various staff trainings and further education). The companies have a team-based environment and support personal initiatives including responsibilities for improving business processes and their quality. Companies in both systems are customer-focused.

Processes and systems are characterized by emphasis being put on improving the quality of products and processes, departmental autonomy, self-management and organizational flexibility. A company acts like a living organism with coordinated action producing high-quality products that are respected and valued by customers. Moreover, self-sustainability and autopoiesis (self-production) are key elements for fast response of processes to a highly competitive and quickly changing external environment. Business units closely cooperate with each other and are fast-responding and entrepreneurially-oriented. Information flows focus on disseminating and receiving information related to organizational values and management philosophy and organization-wide performance. Therefore, all information is spread within the entire organization very fast and communication is secured at the highest level possible. Continuous investments into innovations of products, processes and organization form key similarities shared by both systems. Organization-wide effort to pursue improvements in products and services, costs or quality, as well as using the newest technology are embedded in companies.

Similarities in the Financial perspective can be found mainly in maximizing cost efficiency, creating highest value for customers and profit and profit and loss responsibilities of each team. Moreover, each team in both systems exerts its own control (incl. finance, accounting, personnel or statistics ó depending on the company). Moral behaviour and action and contribution to the advancement of

society belong to main characteristics of the Social responsibility perspective. Moreover, environment friendly management is encouraged naturally.

Based on the findings, the Bata Management System shows a higher level of similarity with the Amoeba Management System than with the Japanese Management System due to a faster response to rapidly changing external environment, self-management, departmental autonomy, fast-responding, entrepreneurially-oriented business units and fast dissemination of information within a company.

Table 7: Synergy Effects of the Bata Management System and Amoeba Management System. Source: Own Elaboration

<b>Synergy effects of Bata Management System and Amoeba Management System</b>	
<b>Bata Management System</b>	<b>Amoeba Management System</b>
<b>PERSPECTIVE: PEOPLE</b>	
Co-ownership (employees act as business partners)	
Management by all	
Opportunities for intellectual growth of all employees (trainings / education)	
Team-based environment supporting personal initiatives	
Customer-focused company	
Responsibility for improving business processes/quality	
<b>PERSPECTIVE: PROCESSES AND SYSTEMS</b>	
Emphasis on improving quality of products/processes	
Department autonomy	
Self-management	
Organizational flexibility	
Self-sustainability and autopoiesis (self-production)	
Fast response to highly competitive and quickly changing external environment	
Fast responding, entrepreneurially-oriented business units	
Strong cooperation among all teams	
Fast dissemination of information	
<b>PERSPECTIVE: INNOVATIONS</b>	
Continuous investments into innovations of products / processes / organizationí	
<b>PERSPECTIVE: FINANCE</b>	
Maximizing cost efficiency	
Creating highest value for customers	
Profit and loss responsibilities of each team	
<b>PERSPECTIVE: SOCIAL RESPONSIBILITY</b>	
Moral behaviour and action	
Contribution to the advancement of society	
<b>PERSPECTIVE: ECOLOGY</b>	
Environmental management	

### **4.2.3 Synergy Effects of Japanese Management System and Amoeba Management System**

Mutual synergy effects of the Japanese Management System and Amoeba Management Systems will also be analyzed within given dimensions that each business has to coordinate (people, processes and systems, innovations, finance, social responsibility and ecology).

Within the People perspective similarities can be found in team-based environment that supports personal initiatives. Both companies perform the called "group-oriented" society where well-being of the whole team is more important than the well-being of an individual. Within the large family, employees share a common identity and harmonious relationships have a high priority. Life-time employment or safety of employees is very important, too. All employees have a lot of opportunities for intellectual growth - there is a strong focus on staff trainings. Benefits (either financial or non-financial) are usually based on employee performance. Employees are very loyal. Organizations are customer-focused.

On the other hand, differences in the People perspective between the Japanese and Amoeba Management Systems can be seen in the speed of processes. While Japanese system relies on decision by consensus (participative decision-making) or seniority system, the Amoeba Management System is much more flexible. Each employee takes an active role in the workplace and spontaneously participates in management - i.e. s/he is a business partner. Moreover, employees are encouraged to act like the owners of a small, independent company. These elements are also visible in the Bata Management System.

Great emphasis put on improving the quality of products and processes is the main characteristics of Processes and systems - similarly as in the Bata Management System. Within the processes, limitation of product defects or maximizing safety of manufacturing processes is required. Total quality management and kaizen approach to quality and cost are adopted. However, the traditional Japanese Management System lacks entrepreneurial dynamism in comparison to the Amoeba management practices. In both systems, procedures and rules are clearly defined.

Within the Innovation perspective, continuous investments into innovations of products, processes and organization are the main characteristics of both systems.

Financial perspective focuses on maximizing cost efficiency and creating maximum value for customers. Financial and non-financial objectives shall secure long-term survival, independence and growth of a company.

Social responsibility is characterized by moral behaviour and action of all employees, contribution to the advancement of society and strong work ethic.

Both systems enforce ecology-focused society and focus on reducing waste, better resource utilization, energy and resource saving and recycling.

Table 8: Synergy Effects of the Japanese Management System and Amoeba Management System. Source: Own Elaboration

<b>Synergy effects of Japanese Management System and Amoeba Management System</b>	
<b>Japanese Management System</b>	<b>Amoeba Management System</b>
<b>PERSPECTIVE: PEOPLE</b>	
Team-based environment that supports personal initiatives	
Group-oriented society	
Large family - employees share a common identity	
Life-time employment	
Safety for employees	
Opportunities for intellectual growth of all employees	
Benefits (financial/non-financial motivation) based on employee performance	
Customer-focused organization	
Loyalty	
<b>PERSPECTIVE: PROCESSES AND SYSTEMS</b>	
Emphasis on improving quality of products/processes	
Business process effectiveness	
Limitation of product defects	
Maximizing safety of manufacturing processes	
Total quality management / kaizen approach to quality and cost	
Clearly defined procedures and rules	
<b>PERSPECTIVE: INNOVATIONS</b>	
Continuous investments into innovations of products / processes / organization	
<b>PERSPECTIVE: FINANCE</b>	
Maximizing cost efficiency	
Creating highest value for customers	
<b>PERSPECTIVE: SOCIAL RESPONSIBILITY</b>	
Moral behaviour and action	
Contribution to the advancement of society	
<b>PERSPECTIVE: ECOLOGY</b>	
Environmental management	

### **4.3 Analysis of Contemporary Approaches to Performance Management and Measurement in Companies Located in the Czech Republic**

The performance framework to be established within the Doctoral thesis will take into consideration a proactive performance management process. Therefore, contemporary approaches to performance management and measurement in companies located in the Czech Republic will be analyzed in this chapter.

Within the Doctoral studies, a research focused on an analysis of contemporary approaches to performance management and measurement in companies located in the Czech Republic has been conducted. The main research that focused on companies located in the Czech Republic (irrespective of the owner's country of origin) was complemented by an additional research focused on Japanese companies located in the Czech Republic.

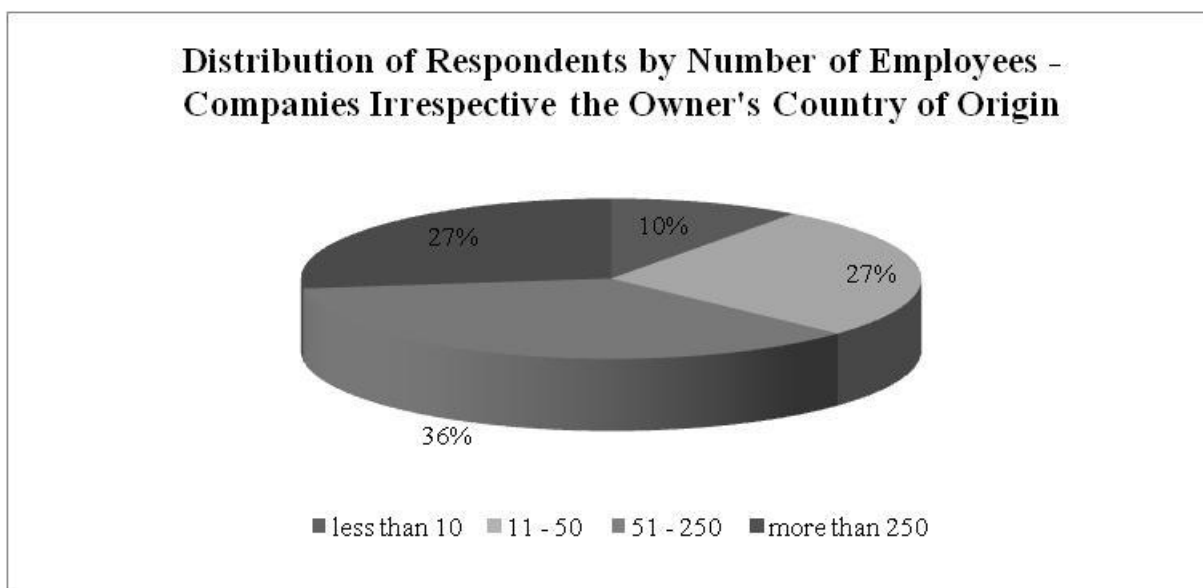
The main aim of the research was to find out which performance concepts and tools (measures) are being used in today's companies. Moreover, the additional research tried to find out whether Japanese companies located in the Czech Republic use similar performance concepts and measures as Czech companies located in the Czech Republic and whether performance indicators of Japanese companies in the Czech Republic achieve better results than performance indicators of Czech companies in the Czech Republic due to Japanese management practices utilized in every subsidiary of a Japanese company all over the world.

Performance concepts and measures are generally used by organizations to implement and drive strategic objectives. However, they can also be used to reward employees financially and measure if a company meets its goals.

The search for new and effective management practices is common to all companies in the world. It is natural that a company eager to enhance its performance tries to investigate the sources and techniques of other companies' successes and failures. With careful planning, analysis and patience, a company may achieve substantial results. It must be willing to learn, implement and modify new methods of different management systems that have proved to work on a large scale.

Contemporary approaches to performance measurement and management in companies located in the Czech Republic irrespective of the owner's country of origin were based on the quantitative research (questionnaire survey) that was carried out between 2009 and 2010.

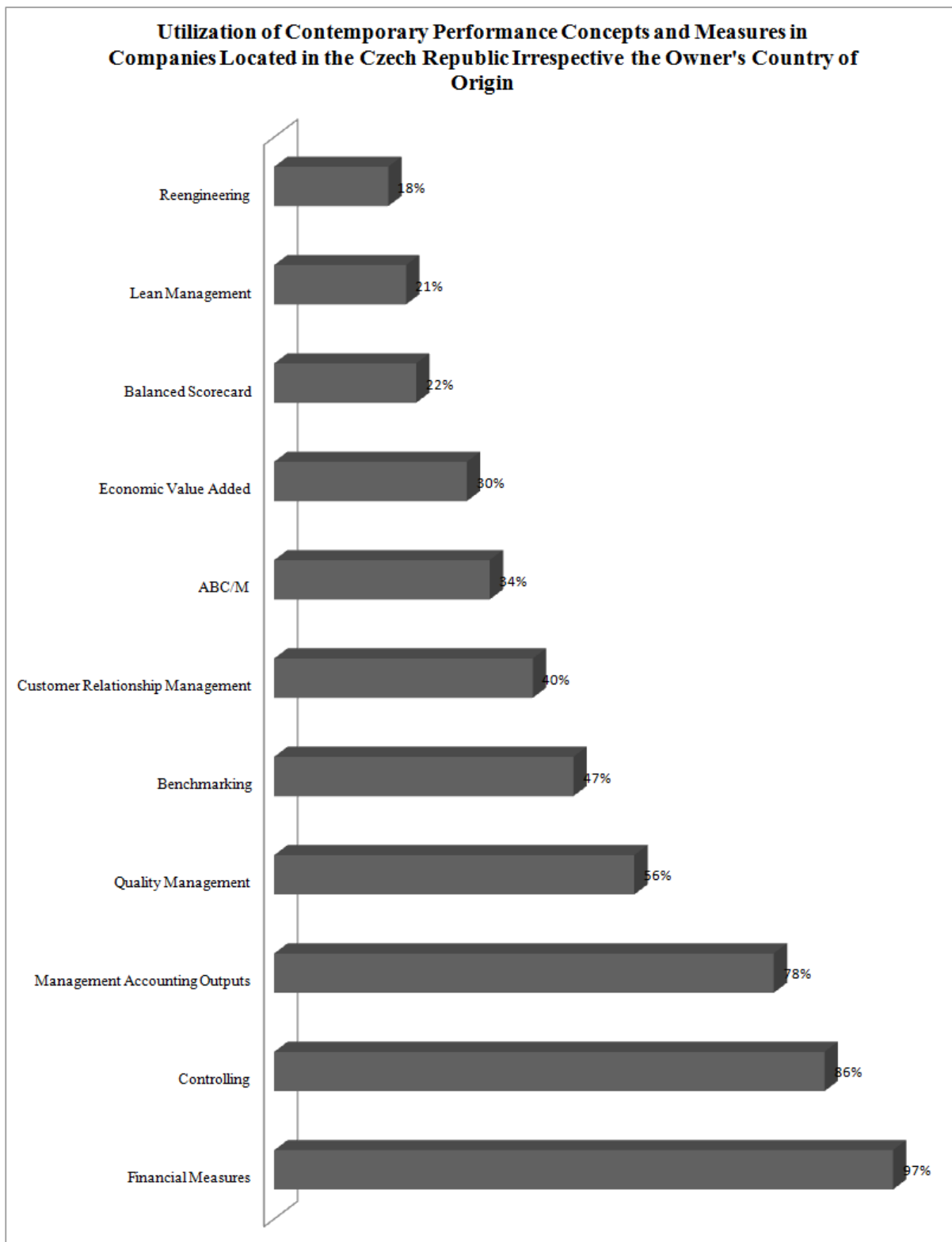
Within the research project entitled "Creating A Model for Measuring and Managing Performance of Companies" funded by the Grant Agency of the Czech Republic (Grant Number 402/09/1735), 402 responses from companies in the Czech Republic were obtained. 27% of companies had more than 250 employees, 36% of companies had between 51 and 250 employees, 27% of companies had between 11 and 50 employees and 10% had less than 10 employees (see the figure below). Moreover, 50% of companies researched within the survey were oriented towards manufacturing, 30% on services and 20% on commerce.



*Figure 23: Distribution of Respondents by Number of Employees in Companies Irrespective the Owner's Country of Origin. Source: Own Elaboration*

Economic and financial information was analyzed via the Albertina database that represents a unique database of all registered companies in the Czech Republic. Access to the database was provided by the Faculty of Management and Economics of Tomas Bata University in Zlín.

Within the research it was found out that companies located in the Czech Republic irrespective of the owner's country of origin mostly use financial measures (97%), controlling (86%), management accounting outputs (78%) and quality management tools (56%) to measure performance development the most (see the following figure). On the contrary, reengineering is utilized in 18% of companies, lean management in 21% of companies and Balanced Scorecard in 22% of companies. 30% of companies use Economic Valued Added (EVA) and 34% of companies use ABC/M in their activities. Customer Relationship Management (CRM) is introduced in 40% of companies and Benchmarking in 47% of companies.



*Figure 24: Utilization of Contemporary Performance Concepts and Measures in Companies Located in the Czech Republic Irrespective the Owner's Country of Origin.  
Source: Own Elaboration*



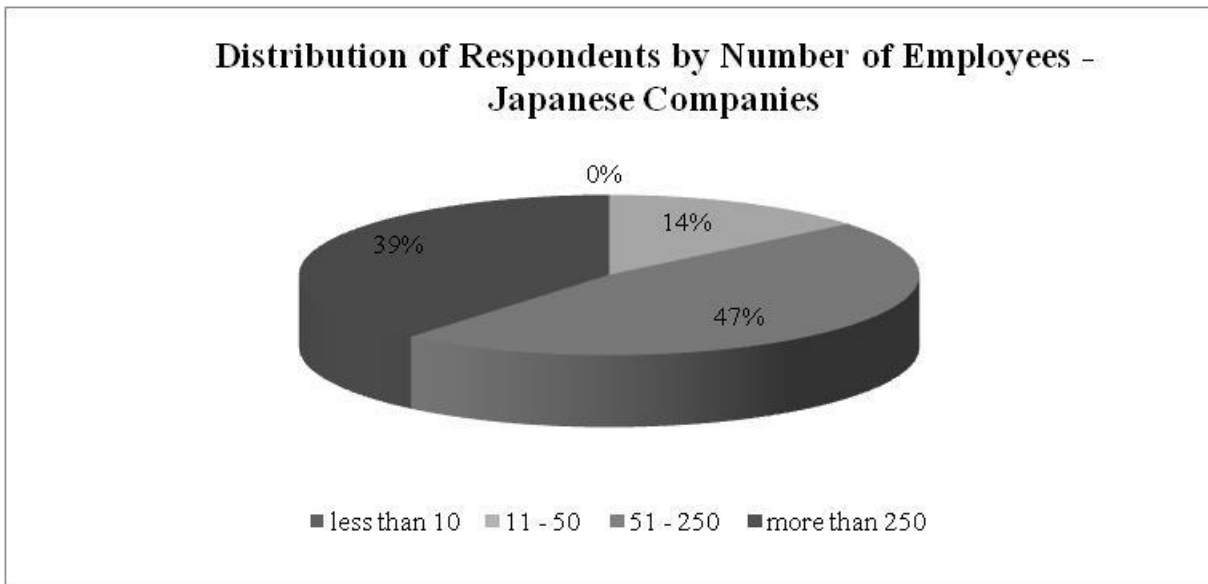
The additional research that focused on contemporary approaches to performance measurement and management in Japanese companies located in the Czech Republic was based on a quantitative research (questionnaire survey) that was carried out in cooperation with Japanese companies in 2011 and 2012.

The main aim of the research was to find out whether Japanese companies located in the Czech Republic use similar performance concepts and measures as Czech companies located in the Czech Republic.

Furthermore, the research focused on companies' performance in order to find out whether performance indicators of Japanese companies in the Czech Republic achieve better results than performance indicators of Czech companies in the Czech Republic due to Japanese management practices utilized in every subsidiary of a Japanese company all over the world. The results are independently analyzed in the following chapter.

Within the research, 109 Japanese companies of different size, legal form and business focus were approached (email/phone/online questionnaire/personal visits) to complete a short questionnaire. In addition, economic and financial information was analyzed from the Albertina database that represents a unique database of all registered companies in the Czech Republic. Access to the database was provided by the Faculty of Management and Economics of Tomas Bata University in Zlín.

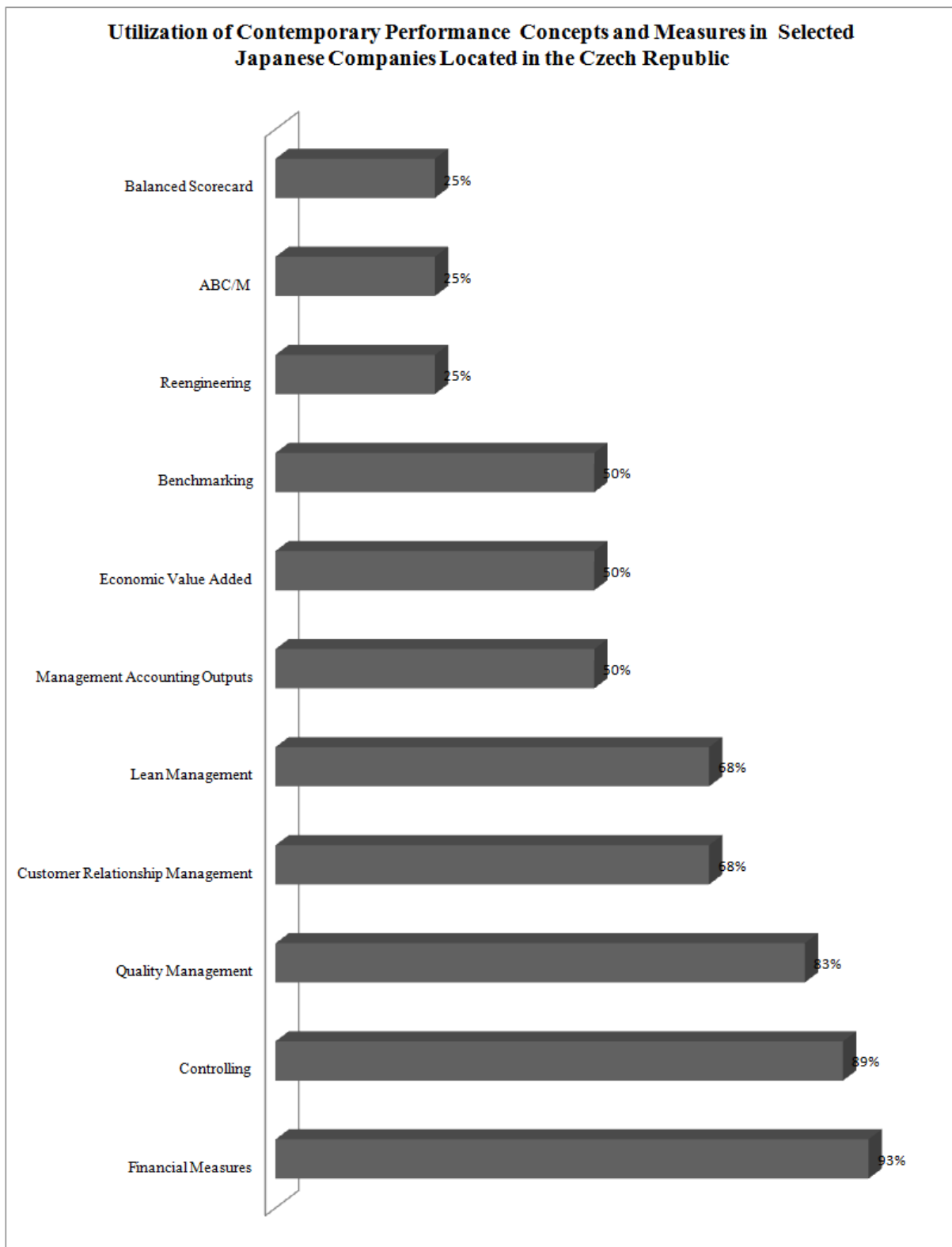
45 responses from companies in the Czech Republic were obtained. All the completed questionnaires that were delivered back came from manufacturing companies. 39% of the aforementioned companies had more than 250 employees, 47% of companies had between 51 and 250 employees and 14% of companies had between 11 and 50 employees (see the figure below).



*Figure 25: Distribution of Respondents by Number of Employees in Japanese Companies. Source: Own Elaboration*

Within the research it was found out that Japanese companies mostly use financial measures (93%), controlling (89%) and quality management tools (83%) to measure performance development the most (see the following figure). On the contrary, the modern tools for performance measurement (Balanced Scorecard, ABC/M, Reengineering) are introduced only in 25% of Japanese companies. 50% of companies use Benchmarking, Economic Value Added (EVA) and Management Accounting Outputs to measure their performance. Tools such as Customer Relationship Management (CRM and Lean Management are utilized in 68% of companies.

The number of respondents within the research represents approx. 23% of all Japanese companies in the Czech Republic. Therefore, the questionnaire findings may be distorted.



*Figure 26: Utilization of Contemporary Performance Concepts and Measures in Selected Japanese Companies in the Czech Republic. Source: Own Elaboration*

The analyzed results of both surveys indicate that financial measures have been proved to serve as the basis for performance measurement and management across various types of companies ó from small-sized to big-sized, from manufacture-oriented to services-oriented, etc. They are useful indicators of the firm's performance and financial situation and are easy to calculate from the information provided by the financial statements. That is probably one of the reasons why financial measures have continuously been utilized in the majority of companies all over the world.

However, these traditional financial measures often fail to capture the true picture of a firm because they focus on the past. Therefore, a smart manager should always take into account other tools that may help him/her to succeed in the ever-changing competitive environment that we are facing today.

Similar results were accomplished in the research study carried out by Marr (2004) which states that 91% of firms measure financial indicators and in the research performed by Znamenacek (2004) that confirms the use of financial indicators in 85% of companies.

The research also shows that controlling and quality management tools are also very popular. Companies located in the Czech Republic irrespective of the owner's country of origin utilize management accounting outputs, benchmarking and customer relationship management, too. Among other favourite concepts and measures of Japanese companies there are the customer relationship management and lean management (in connection with the Japanese Management System). On the other hand, Balanced Scorecard, ABC/M or reengineering do not play a significant role in performance management and measurement in both surveys.

## **4.4 Analysis of Performance of Japanese Companies Located in the Czech Republic**

As many as 200 Japanese companies of both manufacturing and non-manufacturing industries and research institutes have been attracted by the Czech Republic (based on information provided by the Japanese Chamber of Commerce and Industry in the Czech Republic). Based on the research survey on the Japanese Manufacturing Affiliates in Europe and Turkey carried out by the Japan External Trade Organization (JETRO) in 2010, the Czech Republic, which has attracted the highest number of Japanese companies among Central and Eastern European countries, has emerged as the fourth largest manufacturing base for Japanese firms in Europe (after the three Western European giants, namely the UK, France and Germany). The largest Japanese presence is observed in the transportation machinery parts (almost 40%) followed by electric and electronic parts, ceramics, soil and stone, general machinery (including moulds and machine tools) and electric and electronic machinery.

The main aim of this chapter is to analyze the performance of Japanese companies located in the Czech Republic that focus on manufacturing of transportation machinery parts (due to their largest share in manufacturing industry in the Czech Republic) and compare their results with financial situation of firms in the same industry in the Czech Republic (irrespective the owner's country of origin).

Economical and financial information of Japanese companies is analyzed by means of the Albertina database that represents a unique database of all registered companies in the Czech Republic. Access to the database was provided by the Faculty of Management and Economics of Tomas Bata University in Zlín.

The research focused on the following ratios of financial analysis:

- Profitability ratio (Return of Equity),
- Liquidity ratio (Current Ratio),
- Solvency/leverage ratio (Total Debt to Total Assets) and
- Activity ratios (Receivables Turnover and Inventory Turnover).

Before starting the research the following research question had been set:

RQ: Is it possible to prove and verify that Japanese companies located in the Czech Republic (transportation machinery parts) achieve better performance results than other companies in the same industry sector due

to selected techniques of Japanese management system that are implemented and utilized in every Japanese company all over the world?

Based on the data obtained from the Albertina database (selection criteria: NACE 30, legal form: limited liability company, joint stock company), 31 Japanese companies and 149 other companies (irrespective of the owner's country of origin) in the transportation machinery parts industry sector in the Czech Republic were identified.

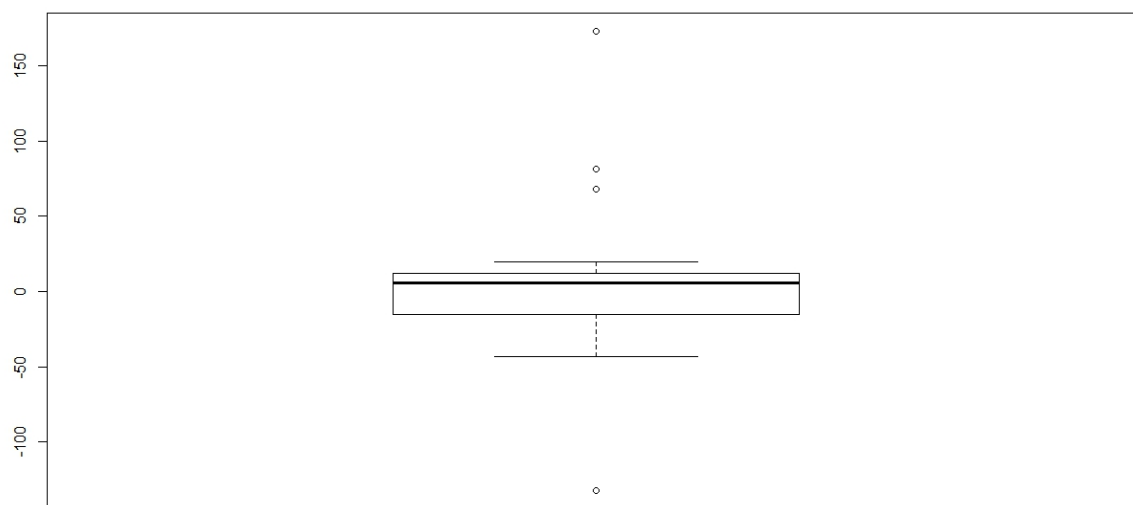
Within the research, only the period between 2005 and 2010 was taken into consideration as the data for 2011 and 2012 have not been available for the majority of Japanese companies in the Albertina database yet.

The data obtained from the Albertina database were further analyzed by the R free software environment for statistical computing and graphics in order to exclude outliers. Outliers are observations that are numerically distant from the rest of the data selected and that are the most extreme values (they include the sample maximum and sample minimum, or both).

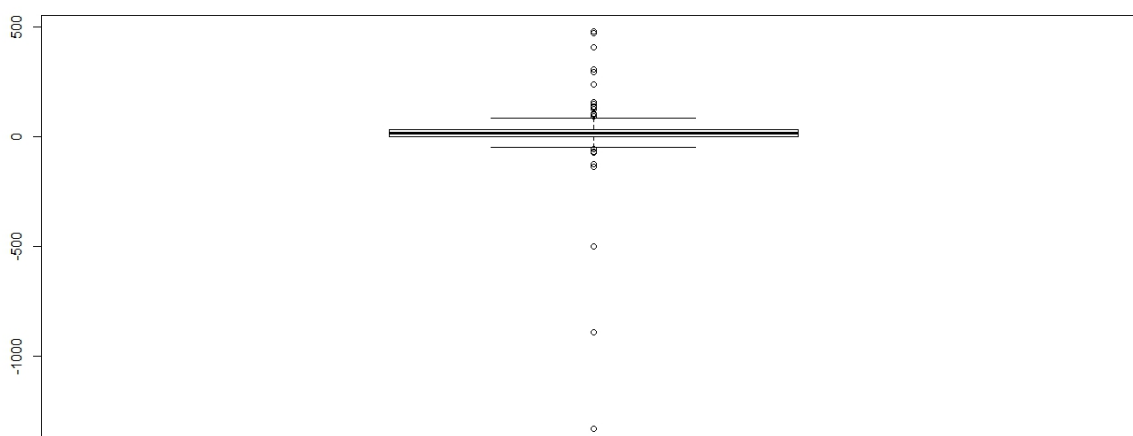
#### 4.4.1 Analysis of Profitability

The ROE (Return on Equity) measure was used within the analysis of profitability.

In the analysis of profitability, 4 outliers from the sample of Japanese companies were excluded and 24 outliers from the sample of other companies were excluded ó using the statistical method of boxplots. A boxplot (see below) provides a graphical view of a set of data and signifies where the median, quartiles, maximum and minimum are.



*Figure 27: Boxplot of Japanese Companies in the Czech Republic (Transportation Machinery Parts) ó Profitability Ratio. Source: Own Elaboration*



*Figure 28: Boxplot of Other Companies in the Czech Republic (Transportation Machinery Parts) ó Profitability Ratio. Source: Own Elaboration*

Table 9: Comparison of 6-Year ROE Average (Without Outliers) in Japanese Companies in the Czech Republic (Transportation Machinery Parts) ó Profitability Ratio. Source: Own Elaboration

Japanese Companies in the CZ (Without Outliers) - Transportation Machinery Parts								
Profitability Ratio - Return on Equity (ROE) - in %								
	Company	2005	2006	2007	2008	2009	2010	Average
1	Company	3.30%	13.41%	12.28%	-0.01%	-8.24%	-7.45%	2.22%
2	Company	3.82%	15.12%	3.98%	-8.37%	-1.65%	-4.06%	1.47%
3	Company	15.72%	66.05%	28.99%	-140.21%	-52.96%	-62.68%	-24.18%
4	Company	-53.46%	11.47%	13.95%	-4.69%	10.90%	-85.62%	-17.91%
5	Company	-3.11%	-11.45%	-16.13%	-19.06%	-13.12%	-28.51%	-15.23%
6	Company	-319.79%	51.41%	60.04%	-42.14%	29.48%	7.92%	-35.51%
7	Company	4.74%	0.56%	7.36%	6.46%	23.00%	9.77%	8.65%
8	Company	-27.91%	3.85%	3.27%	-46.33%	27.73%	22.06%	-2.89%
9	Company	15.58%	30.75%	28.26%	8.05%	6.05%	-11.02%	12.95%
10	Company	1.57%	47.24%	21.39%	-6.39%	14.56%	6.79%	14.19%
11	Company	-19.91%	11.07%	5.62%	-0.14%	-6.57%	7.99%	-0.32%
12	Company	30.54%	25.66%	13.67%	-5.62%	4.53%	14.52%	13.88%
13	Company	-51.93%	12.56%	-9.37%	122.42%	-3.76%	-5.26%	10.78%
14	Company	-394.35%	72.49%	56.47%	0.71%	5.42%	1.66%	-42.93%
15	Company	2.40%	3.96%	0.17%	-54.31%	-60.09%	-132.62%	-40.08%
16	Company	-10.49%	-59.61%	-48.37%	-132.16%	22.16%	33.36%	-32.52%
17	Company	1.57%	36.60%	14.02%	21.54%	6.79%	11.79%	15.39%
18	Company	12.04%	15.89%	25.29%	24.06%	26.42%	16.17%	19.98%
19	Company	-2.57%	17.98%	23.69%	9.95%	6.83%	10.12%	11.00%
20	Company	1.70%	5.98%	N/A	-12.50%	5.88%	3.84%	0.98%
21	Company	11.19%	15.39%	7.91%	5.13%	6.16%	5.78%	8.59%
22	Company	9.66%	21.59%	14.47%	12.07%	-3.31%	8.70%	10.53%
23	Company	-6.35%	12.69%	14.94%	4.54%	2.34%	11.38%	6.59%
24	Company	8.98%	12.24%	23.76%	6.11%	0.29%	-16.24%	5.86%
25	Company	-59.21%	25.71%	28.12%	-27.99%	22.20%	1.18%	-1.67%
26	Company	29.77%	3.39%	9.51%	-33.70%	-83.00%	-21.24%	-15.88%
27	Company	13.70%	12.84%	10.44%	10.44%	2.63%	5.19%	9.21%
								<b>-2.85%</b>

The 6-year ROE average in Japanese companies in the Czech Republic (transportation machinery parts) after excluding outliers reached minus 2.85%.



Table 10: Comparison of 6-Year ROE Average (Without Outliers) in Other Companies in the Czech Republic (Transportation Machinery Parts) ó Profitability Ratio. Source: Own Elaboration

Companies in the CZ (Without Outliers) - Transportation Machinery Parts								
Profitability Ratio - Return on Equity (ROE) - in %								
	Company	2005	2006	2007	2008	2009	2010	Average
1	Company	N/A	N/A	N/A	N/A	N/A	-49.01%	-49.01%
2	Company	21.43%	13.00%	18.28%	22.74%	9.20%	14.99%	16.61%
3	Company	N/A	-107.64%	58.12%	5.85%	27.65%	31.24%	3.04%
4	Company	31.80%	31.92%	1.06%	13.25%	88.96%	2.34%	28.22%
5	Company	-21.07%	17.84%	44.49%	15.59%	35.90%	33.17%	20.99%
6	Company	N/A	N/A	N/A	N/A	N/A	48.45%	48.45%
7	Company	21.42%	27.57%	17.69%	26.72%	2.27%	0.53%	16.03%
8	Company	-5.24%	-9.56%	1.09%	0.63%	0.70%	N/A	-2.48%
9	Company	23.62%	34.56%	22.56%	18.31%	6.02%	13.92%	19.83%
10	Company	N/A	N/A	N/A	N/A	N/A	31.11%	31.11%
11	Company	7.02%	9.13%	9.74%	2.61%	8.01%	16.65%	8.86%
12	Company	21.61%	16.94%	42.67%	15.76%	7.64%	N/A	20.92%
13	Company	N/A	N/A	-2.04%	2.01%	0.50%	N/A	0.16%
14	Company	11.92%	4.47%	15.29%	5.09%	31.24%	14.77%	13.80%
15	Company	8.38%	65.28%	39.68%	-1.52%	23.51%	48.49%	30.64%
16	Company	6.40%	-3.44%	-0.99%	2.83%	13.96%	4.96%	3.95%
17	Company	N/A	239.72%	-59.47%	N/A	N/A	N/A	90.13%
18	Company	35.60%	-204.36%	149.19%	-399.11%	117.31%	40.20%	-43.53%
19	Company	N/A	N/A	N/A	3.44%	3.15%	N/A	3.30%
20	Company	-7.02%	N/A	N/A	N/A	N/A	N/A	-7.02%
21	Company	N/A	N/A	N/A	N/A	24.71%	17.06%	20.89%
22	Company	10.39%	8.77%	17.50%	-33.14%	-27.35%	44.58%	3.46%
23	Company	N/A	7.17%	37.43%	133.51%	61.65%	44.06%	56.76%
24	Company	18.19%	28.34%	29.85%	31.90%	23.10%	32.40%	27.30%
25	Company	46.04%	34.75%	13.98%	43.35%	21.38%	2.25%	26.96%
26	Company	N/A	N/A	N/A	N/A	N/A	-23.38%	-23.38%
27	Company	62.79%	47.40%	45.69%	16.04%	14.37%	15.16%	33.58%
28	Company	N/A	N/A	N/A	N/A	78.22%	-16.75%	30.74%
29	Company	N/A	N/A	N/A	N/A	20.76%	18.21%	19.49%
30	Company	1.03%	2.44%	2.78%	12.05%	15.77%	21.64%	9.29%
31	Company	0.90%	-89.72%	N/A	N/A	N/A	N/A	-44.41%
32	Company	42.58%	-39.95%	-183.33%	28.11%	N/A	N/A	-38.15%
33	Company	9.87%	3.68%	11.17%	7.57%	10.80%	9.76%	8.81%
34	Company	N/A	N/A	N/A	N/A	-1.54%	6.25%	2.36%
35	Company	83.76%	113.94%	-195.17%	104.02%	86.58%	58.20%	41.89%
36	Company	5.21%	19.45%	27.85%	29.18%	20.82%	10.95%	18.91%
37	Company	15.21%	12.77%	22.46%	14.53%	5.52%	N/A	14.10%
38	Company	22.09%	17.27%	17.54%	15.23%	15.07%	10.80%	16.33%
39	Company	N/A	124.17%	39.07%	-14.95%	N/A	N/A	49.43%

40	Company	21.15%	179.62%	61.37%	53.87%	39.80%	39.05%	65.81%
41	Company	N/A	N/A	N/A	N/A	-1.10%	1.99%	0.45%
42	Company	4.74%	12.68%	13.28%	-10.29%	1.87%	-72.69%	-8.40%
43	Company	17.42%	13.40%	13.40%	14.90%	16.81%	-2.99%	12.16%
44	Company	-10.40%	N/A	2.38%	-12.89%	7.87%	1.07%	-2.39%
45	Company	17.58%	54.82%	50.55%	28.74%	21.52%	54.85%	38.01%
46	Company	N/A	N/A	N/A	-133.88%	282.28%	60.28%	69.56%
47	Company	N/A	N/A	N/A	N/A	N/A	-48.65%	-48.65%
48	Company	8.75%	4.56%	34.76%	-25.87%	31.06%	N/A	10.65%
49	Company	-28.44%	17.06%	36.35%	41.43%	15.22%	30.90%	18.75%
50	Company	N/A	3.21%	0.44%	-6.20%	-14.69%	N/A	-4.31%
51	Company	N/A	N/A	N/A	N/A	1.19%	11.79%	6.49%
52	Company	-203.92%	31.73%	28.75%	49.68%	63.46%	24.49%	-0.97%
53	Company	N/A	1.29%	0.26%	-1.20%	-19.70%	-25.92%	-9.05%
54	Company	-17.48%	17.11%	49.62%	-195.96%	67.03%	35.24%	-7.41%
55	Company	N/A	-36.86%	29.17%	65.71%	8.05%	31.29%	19.47%
56	Company	-111.01%	N/A	47.13%	-3.28%	-8.88%	N/A	-19.01%
57	Company	N/A	7.92%	-4.91%	N/A	N/A	N/A	1.51%
58	Company	0.27%	N/A	N/A	N/A	N/A	N/A	0.27%
59	Company	4.40%	-9.10%	8.26%	N/A	N/A	N/A	1.19%
60	Company	-19.93%	-30.01%	0.32%	0.20%	1.23%	5.38%	-7.14%
61	Company	113.88%	47.00%	0.39%	0.20%	2.73%	1.79%	27.67%
62	Company	3.71%	16.24%	32.96%	15.70%	2.80%	N/A	14.28%
63	Company	246.43%	82.24%	54.56%	13.68%	28.41%	23.69%	74.84%
64	Company	4.08%	9.39%	21.66%	28.28%	8.51%	7.76%	13.28%
65	Company	N/A	N/A	N/A	-69.84%	92.36%	37.73%	20.08%
66	Company	N/A	N/A	2.77%	-7.06%	14.87%	N/A	3.53%
67	Company	16.14%	N/A	N/A	N/A	N/A	N/A	16.14%
68	Company	8.95%	6.12%	6.70%	-31.15%	N/A	N/A	-2.35%
69	Company	-7.68%	-5.83%	N/A	N/A	N/A	N/A	-6.76%
70	Company	-0.29%	-1.28%	-1.26%	-2.62%	-5.04%	8.37%	-0.35%
71	Company	36.88%	14.95%	45.34%	N/A	N/A	N/A	32.39%
72	Company	N/A	N/A	N/A	N/A	-8.70%	-54.62%	-31.66%
73	Company	12.92%	13.79%	15.50%	6.83%	10.47%	2.49%	10.33%
74	Company	N/A	N/A	N/A	N/A	-59.77%	137.77%	39.00%
75	Company	N/A	-2.61%	N/A	N/A	N/A	N/A	-2.61%
76	Company	N/A	N/A	N/A	N/A	0.99%	1.46%	1.23%
77	Company	43.02%	21.22%	21.20%	2.08%	7.01%	11.50%	17.67%
78	Company	94.16%	63.57%	48.52%	30.28%	5.79%	N/A	48.46%
79	Company	30.65%	21.65%	31.79%	12.21%	-36.72%	N/A	11.92%
80	Company	-11.91%	-9.24%	8.24%	-2.61%	-21.97%	N/A	-7.50%
81	Company	10.21%	13.81%	17.12%	28.38%	24.35%	N/A	18.77%
82	Company	N/A	16.26%	15.82%	19.57%	11.74%	9.39%	14.56%
83	Company	-15.75%	-0.06%	N/A	-3.00%	-0.25%	-0.71%	-3.95%
84	Company	N/A	N/A	10.31%	1.88%	0.22%	N/A	4.14%

85	Company	-78.71%	1.73%	220.76%	48.13%	-138.17%	-59.43%	-0.95%
86	Company	8.66%	34.52%	35.37%	12.76%	N/A	N/A	22.83%
87	Company	24.59%	21.80%	22.23%	39.08%	-0.28%	N/A	21.48%
88	Company	N/A	N/A	N/A	N/A	-24.46%	N/A	-24.46%
89	Company	-40.66%	107.02%	28.10%	93.23%	N/A	N/A	46.92%
90	Company	N/A	N/A	N/A	N/A	-2.28%	-13.22%	-7.75%
91	Company	-277.42%	39.22%	7.83%	35.66%	31.75%	56.03%	-17.82%
92	Company	14.01%	35.90%	96.09%	64.79%	49.22%	46.63%	51.11%
93	Company	N/A	N/A	N/A	-2.09%	69.18%	-5.40%	20.56%
94	Company	N/A	N/A	17.87%	16.77%	-8.30%	29.52%	13.97%
95	Company	N/A	N/A	N/A	N/A	-56.16%	12.22%	-21.97%
96	Company	26.48%	7.20%	2.23%	2.29%	-11.84%	44.40%	11.79%
97	Company	11.78%	9.10%	10.25%	11.83%	0.40%	-17.57%	4.30%
98	Company	36.83%	50.25%	48.95%	64.85%	58.63%	66.40%	54.32%
99	Company	N/A	N/A	28.59%	-4.48%	1.57%	18.24%	10.98%
100	Company	N/A	1.72%	19.44%	N/A	N/A	N/A	10.58%
101	Company	N/A	N/A	N/A	N/A	N/A	-23.14%	-23.14%
102	Company	-0.91%	-1.87%	1.26%	2.70%	3.44%	2.68%	1.22%
103	Company	9.84%	29.01%	18.27%	6.04%	29.36%	29.26%	20.30%
104	Company	N/A	N/A	41.39%	11.63%	52.84%	49.84%	38.93%
105	Company	382.27%	8.45%	-3.10%	14.61%	4.08%	N/A	81.26%
106	Company	2.88%	1.62%	-1.05%	-15.88%	-19.00%	-9.46%	-6.82%
107	Company	40.68%	40.63%	32.27%	22.93%	18.69%	11.61%	27.80%
108	Company	-24.15%	7.11%	27.02%	N/A	N/A	N/A	3.33%
109	Company	23.01%	23.15%	34.30%	31.67%	1.58%	N/A	22.74%
110	Company	N/A	N/A	N/A	N/A	-17.56%	0.70%	-8.43%
111	Company	169.02%	84.33%	41.31%	-27.42%	-351.39%	52.17%	-5.33%
112	Company	62.81%	37.14%	25.93%	26.78%	-9.27%	39.87%	30.54%
113	Company	26.76%	25.82%	40.71%	12.63%	19.05%	21.61%	24.43%
114	Company	25.73%	66.98%	56.93%	99.84%	77.07%	72.24%	66.47%
115	Company	-32.51%	21.70%	2.57%	2.54%	N/A	N/A	-1.43%
116	Company	N/A	N/A	N/A	N/A	N/A	20.63%	20.63%
117	Company	3.55%	0.49%	31.44%	14.81%	21.35%	17.71%	14.89%
118	Company	58.93%	94.79%	88.61%	95.66%	93.02%	7.27%	73.05%
119	Company	N/A	-26.48%	-23.61%	-20.06%	N/A	N/A	-23.38%
120	Company	N/A	20.38%	24.72%	23.29%	-330.30%	73.40%	-37.70%
121	Company	N/A	N/A	N/A	-1.01%	-1.38%	-45.31%	-15.90%
122	Company	0.47%	0.54%	0.30%	0.28%	8.74%	N/A	2.07%
123	Company	N/A	N/A	N/A	N/A	63.40%	17.48%	40.44%
124	Company	N/A	25.60%	1.99%	3.95%	N/A	N/A	10.51%
125	Company	N/A	N/A	N/A	2.53%	112.29%	-146.16%	-10.45%
								<b>12,16%</b>

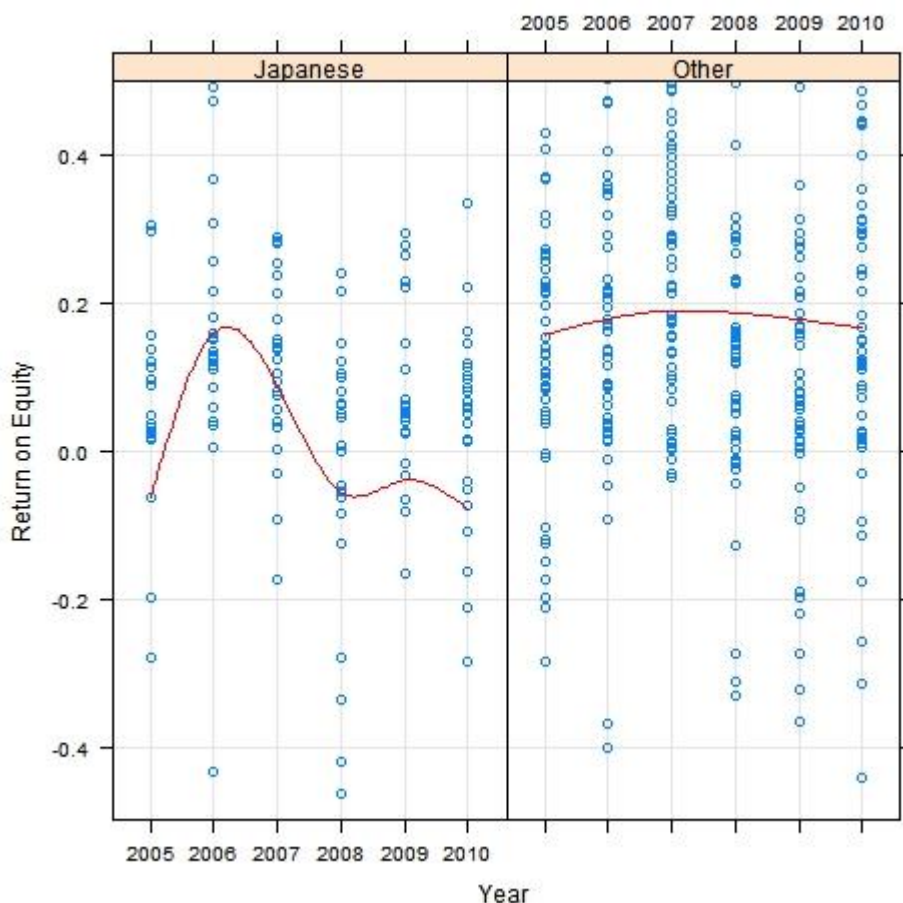
The 6-year ROE average in other companies in the Czech Republic (transportation machinery parts) after excluding outliers reached 12.16%.

In order to get more precise data, companies lacking more than 6 statistical observation units or 3 and more values within 1 measure (e.g. ROE) were excluded. Missing values were completed using linear regression.

Furthermore, intervals that cover 90% of the range (based on credibility  $\sigma$  outliers that are unevenly distributed are excluded if the distribution is asymmetric) were identified and the lowest 5% and the highest 5% of the data were excluded (quantile-based identification).

Regarding the ROE, the lowest value within the interval is minus 2.0436 and the highest value within the interval is 1.2761.

The following figures represent the development of the ROE within the given period (2005-2010) including spline, a smooth polynomial function that predicts the development tendency.



*Figure 29: Development of ROE (Including Spline Function) in Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts) Profitability Ratio. Source: Own Elaboration*

The following figure shows the boxplot (within the given period). The black spots indicate the median value. Boxes stand for interquartile ranges. Box and whisker plots are uniform in their use of the box: the bottom and the top of the box are always the 25<sup>th</sup> and 75<sup>th</sup> percentile (the lower and upper quartiles, respectively), and the band (black spot) near the middle of the box is always the 50<sup>th</sup> percentile (the median). The data not included between the whiskers are plotted as an outlier with a small circle.

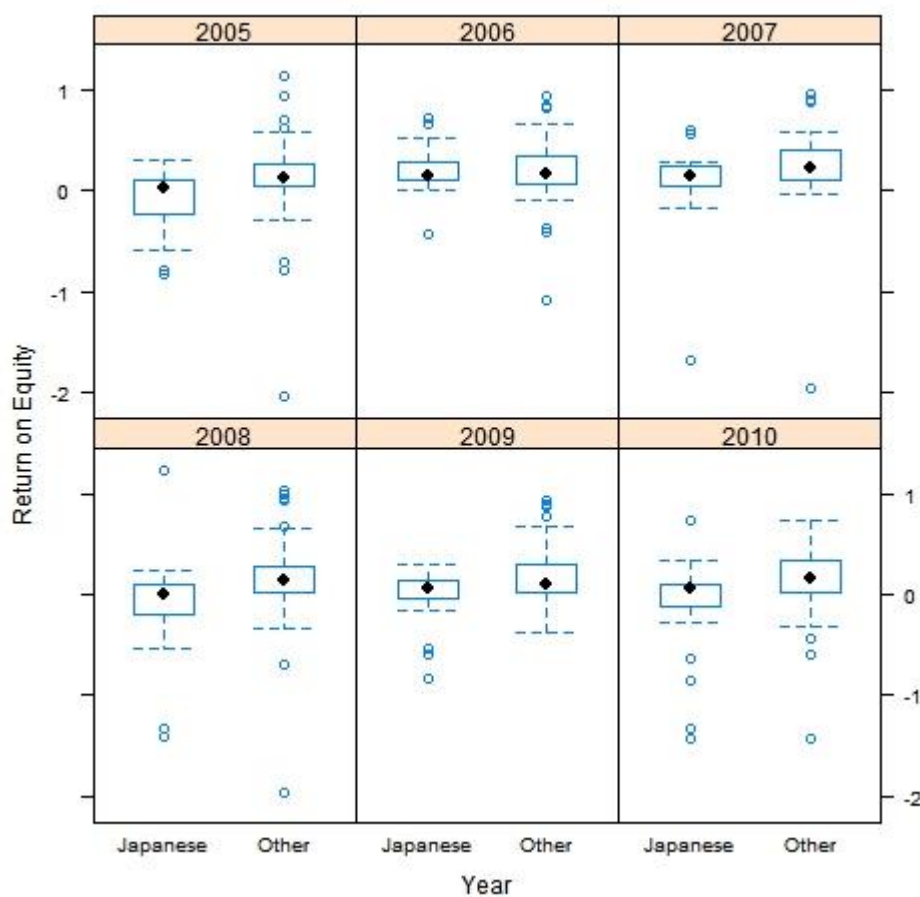
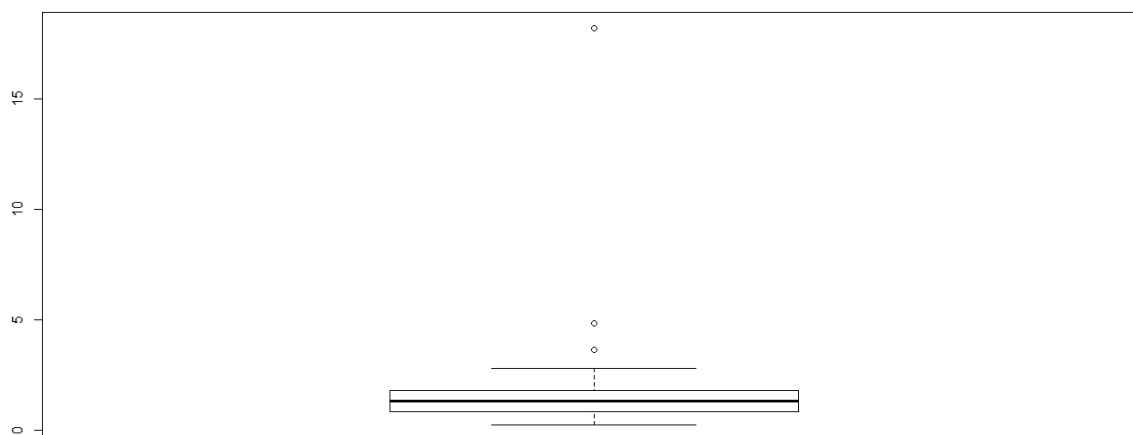


Figure 30: Boxplot Within Selected Years - Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts) ó Profitability Ratio. Source: Own Elaboration

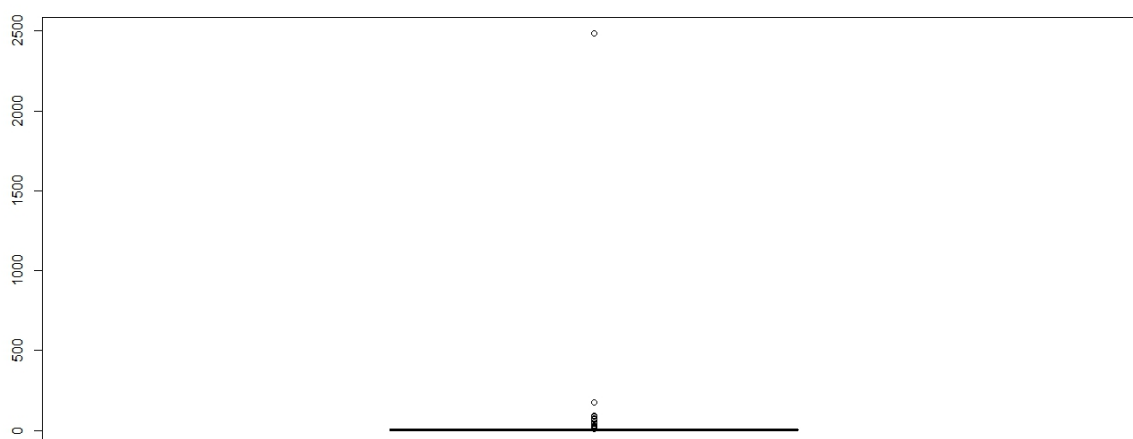
#### 4.4.2 Analysis of Liquidity

The Current Ratio measure was utilized within the analysis of liquidity.

In the analysis of liquidity, 3 outliers from the sample of Japanese companies were excluded and 13 outliers from the sample of other companies were excluded ó using the statistical method of boxplots. A boxplot (see below) provides a graphical view of a set of data and signifies where the median, quartiles, maximum and minimum are.



*Figure 31: Boxplot of Japanese Companies in the Czech Republic (Transportation Machinery Parts) óLiquidity Ratio. Source: Own Elaboration*



*Figure 32: Boxplot of Other Companies in the Czech Republic (Transportation Machinery Parts) óLiquidity Ratio. Source: Own Elaboration*

Table 11: Comparison of 6-Year Current Ratio Average (Without Outliers) in Japanese Companies in the Czech Republic (Transportation Machinery Parts) ó Liquidity Ratio. Source: Own Elaboration

Japanese Companies in the CZ (Without Outliers) - Transportation Machinery Parts								
Liquidity Ratio - Current Ratio								
	Company	2005	2006	2007	2008	2009	2010	Average
1	Company	0.46	0.50	0.44	0.29	0.24	N/A	0.39
2	Company	1.05	1.19	1.54	2.19	4.61	1.17	1.96
3	Company	2.13	1.78	0.96	0.68	0.92	1.14	1.27
4	Company	0.56	1.28	0.95	0.71	0.40	0.90	0.80
5	Company	N/A	1.30	0.95	1.05	1.06	1.21	1.11
6	Company	N/A	7.63	0.24	0.50	1.75	0.56	2.14
7	Company	1.26	0.53	0.75	0.85	0.63	0.99	0.84
8	Company	1.15	1.13	1.19	1.30	1.51	1.62	1.32
9	Company	1.24	1.01	0.99	0.79	0.74	0.97	0.96
10	Company	1.03	1.62	2.03	1.57	1.61	1.56	1.57
11	Company	N/A	1.31	1.41	1.17	1.24	1.49	1.32
12	Company	0.48	0.54	0.52	0.57	0.61	0.63	0.56
13	Company	0.93	1.30	1.02	0.99	1.57	2.69	1.42
14	Company	1.45	0.91	0.64	0.62	0.39	0.39	0.73
15	Company	1.07	0.69	0.74	0.76	0.89	0.96	0.85
16	Company	1.60	2.28	1.60	1.12	0.80	0.55	1.33
17	Company	9.58	0.83	0.23	0.39	0.43	0.44	1.98
18	Company	1.10	1.25	1.36	1.48	1.74	1.84	1.46
19	Company	0.90	0.86	1.16	1.39	1.65	2.24	1.37
20	Company	0.71	0.64	1.03	1.57	2.03	4.11	1.68
21	Company	2.29	3.20	N/A	1.70	3.18	3.60	2.79
22	Company	2.13	1.90	2.37	3.93	1.70	1.35	2.23
23	Company	2.05	1.93	0.87	0.97	1.17	1.78	1.46
24	Company	0.74	0.86	1.81	N/A	N/A	2.20	1.40
25	Company	0.39	0.33	0.25	0.18	0.20	0.23	0.26
26	Company	1.00	N/A	N/A	1.83	0.74	1.31	1.22
27	Company	0.45	0.43	N/A	0.31	0.26	0.41	0.37
28	Company	0.74	0.96	0.95	1.05	0.92	0.54	0.86
								<b>1.27</b>

The 6-year Current Ratio average in Japanese companies located in the Czech Republic (transportation machinery parts) after excluding outliers reached 1.27.

Table 12: Comparison of 6-Year Current Ratio Average (Without Outliers) in Other Companies in the Czech Republic (Transportation Machinery Parts) ó Liquidity Ratio. Source: Own Elaboration

Companies in the CZ (Without Outliers) - Transportation Machinery Parts								
Liquidity Ratio - Current Ratio								
	Company	2005	2006	2007	2008	2009	2010	Average
1	Company	N/A	N/A	N/A	N/A	N/A	1.06	1.06
2	Company	7.87	1.00	2.07	1.88	2.18	5.03	3.34
3	Company	N/A	0.99	1.12	1.14	1.30	1.57	1.22
4	Company	1.78	1.97	2.01	1.73	3.67	1.29	2.08
5	Company	5.94	1.42	1.88	1.51	1.47	1.52	2.29
6	Company	N/A	N/A	N/A	N/A	N/A	7.81	7.81
7	Company	2.04	2.20	2.62	5.02	9.53	3.89	4.22
8	Company	N/A	1.04	0.42	N/A	N/A	N/A	0.73
9	Company	6.74	8.47	12.48	11.11	2.80	7.80	8.23
10	Company	N/A	N/A	N/A	N/A	N/A	9.96	9.96
11	Company	4.35	2.67	2.69	3.00	2.91	3.66	3.21
12	Company	1.37	1.58	2.24	2.37	3.75	N/A	2.26
13	Company	0.72	0.93	2.37	2.40	3.32	1.34	1.85
14	Company	1.87	1.86	2.01	1.58	N/A	2.07	1.88
15	Company	1.83	3.53	3.55	5.04	3.84	1.19	3.16
16	Company	3.12	N/A	N/A	N/A	0.79	0.95	1.62
17	Company	N/A	0.52	0.67	N/A	N/A	N/A	0.60
18	Company	0.53	0.78	1.53	1.09	0.72	0.49	0.86
19	Company	N/A	N/A	N/A	0.91	0.80	N/A	0.86
20	Company	N/A	N/A	N/A	N/A	1.69	3.76	2.73
21	Company	1.23	1.31	1.93	1.03	0.89	1.21	1.27
22	Company	N/A	N/A	1.43	2.56	2.08	1.06	1.78
23	Company	N/A	N/A	N/A	N/A	0.27	N/A	0.27
24	Company	N/A	N/A	1.49	1.63	2.76	1.77	1.91
25	Company	1.34	1.96	2.37	1.62	1.98	2.25	1.92
26	Company	N/A	N/A	2.09	N/A	N/A	N/A	2.09
27	Company	N/A	N/A	N/A	N/A	N/A	8.04	8.04
28	Company	0.52	0.58	1.38	1.73	1.67	1.53	1.24
29	Company	N/A	N/A	N/A	N/A	1.05	1.04	1.05
30	Company	N/A	N/A	0.96	0.71	7.21	4.80	3.42
31	Company	N/A	N/A	N/A	N/A	1.31	1.45	1.38
32	Company	N/A	N/A	N/A	N/A	1.27	1.27	1.27
33	Company	1.34	1.68	1.57	1.36	1.36	1.29	1.43
34	Company	1.12	1.22	N/A	N/A	N/A	N/A	1.17
35	Company	1.58	1.55	1.26	22.70	N/A	N/A	6.77
36	Company	4.03	4.39	4.96	6.16	9.68	3.04	5.38
37	Company	N/A	N/A	N/A	N/A	0.03	0.04	0.04
38	Company	1.04	N/A	N/A	N/A	N/A	N/A	1.04
39	Company	1.07	0.95	1.06	N/A	N/A	1.48	1.14



40	Company	1.32	1.57	1.83	2.09	2.01	2.78	1.93
41	Company	2.27	1.19	1.34	1.69	1.13	N/A	1.52
42	Company	2.78	2.64	2.81	5.93	7.64	12.47	5.71
43	Company	N/A	N/A	N/A	0.78	N/A	N/A	0.78
44	Company	N/A	0.97	0.94	0.93	N/A	N/A	0.95
45	Company	0.22	0.02	N/A	N/A	N/A	N/A	0.12
46	Company	25.79	1.54	0.56	0.29	0.61	0.76	4.93
47	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
48	Company	1.57	1.83	2.12	1.95	2.59	2.16	2.04
49	Company	2.35	2.23	1.50	1.50	1.55	1.49	1.77
50	Company	4.51	3.22	3.37	3.65	2.81	3.46	3.50
51	Company	2.92	1.29	1.58	0.84	1.05	2.07	1.63
52	Company	N/A	N/A	N/A	1.01	0.63	0.39	0.68
53	Company	0.90	0.86	N/A	N/A	N/A	N/A	0.88
54	Company	6.92	2.77	2.12	3.06	1.35	N/A	3.24
55	Company	0.41	0.52	0.70	0.74	0.68	0.70	0.63
56	Company	N/A	1.01	1.22	1.29	1.27	N/A	1.20
57	Company	1.58	1.48	1.39	1.36	1.67	2.18	1.61
58	Company	1.39	1.65	1.61	1.48	1.30	2.00	1.57
59	Company	0.91	1.24	0.91	1.13	1.26	1.16	1.10
60	Company	N/A	N/A	N/A	N/A	1.56	0.46	1.01
61	Company	N/A	N/A	0.87	0.92	1.78	1.61	1.30
62	Company	0.65	N/A	0.39	0.30	0.37	N/A	0.43
63	Company	N/A	2.32	3.66	N/A	N/A	N/A	2.99
64	Company	1.61	1.83	N/A	N/A	N/A	N/A	1.72
65	Company	N/A	N/A	N/A	N/A	N/A	3.49	3.49
66	Company	2.47	2.13	1.88	N/A	N/A	N/A	2.16
67	Company	2.54	1.59	2.65	1.26	1.68	1.96	1.95
68	Company	N/A	1.83	1.79	1.53	1.58	1.98	1.74
69	Company	3.49	3.11	3.47	4.71	2.03	N/A	3.36
70	Company	0.81	0.90	0.99	1.02	1.10	1.42	1.04
71	Company	1.74	1.50	N/A	N/A	2.98	2.71	2.23
72	Company	N/A	N/A	N/A	N/A	1.24	1.42	1.33
73	Company	N/A	N/A	0.67	0.56	0.47	N/A	0.57
74	Company	2.39	N/A	N/A	N/A	N/A	N/A	2.39
75	Company	1.14	1.06	1.10	0.93	N/A	N/A	1.06
76	Company	0.17	0.15	N/A	N/A	N/A	N/A	0.16
77	Company	2.59	0.65	1.40	1.16	1.22	1.49	1.42
78	Company	1.30	0.70	0.85	N/A	N/A	N/A	0.95
79	Company	1.00	1.48	2.27	1.74	2.71	4.13	2.22
80	Company	N/A	N/A	N/A	N/A	N/A	0.09	0.09
81	Company	1.13	6.33	N/A	N/A	N/A	N/A	3.73
82	Company	N/A	N/A	N/A	N/A	N/A	9.54	9.54
83	Company	1.79	1.60	1.45	1.11	N/A	1.58	1.51
84	Company	3.42	2.25	5.88	5.66	31.51	N/A	9.74

85	Company	N/A	N/A	1.40	1.16	1.26	1.49	1.33
86	Company	2.43	2.51	6.14	1.47	1.35	N/A	2.78
87	Company	1.31	1.07	1.14	1.48	1.07	N/A	1.21
88	Company	6.46	5.19	2.67	N/A	N/A	11.98	6.58
89	Company	6.74	3.52	2.10	1.18	0.60	N/A	2.83
90	Company	N/A	2.94	N/A	N/A	2.58	2.52	2.68
91	Company	N/A	N/A	3.04	0.57	0.12	0.24	0.99
92	Company	N/A	N/A	1.40	1.18	1.15	N/A	1.24
93	Company	1.03	0.94	0.57	0.99	1.24	1.27	1.01
94	Company	1.39	1.77	1.53	1.44	N/A	N/A	1.53
95	Company	3.21	2.29	3.10	6.55	3.05	3.63	3.64
96	Company	N/A	N/A	N/A	N/A	3.86	N/A	3.86
97	Company	N/A	N/A	0.11	0.91	1.14	1.37	0.88
98	Company	N/A	1.45	2.37	4.13	2.42	N/A	2.59
99	Company	0.92	0.94	0.94	1.00	1.06	N/A	0.97
100	Company	2.11	2.14	1.20	1.56	1.58	2.39	1.83
101	Company	N/A	N/A	N/A	N/A	0.86	1.08	0.97
102	Company	N/A	N/A	2.93	2.98	3.52	3.42	3.21
103	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
104	Company	3.03	3.76	16.67	9.65	11.20	3.90	8.04
105	Company	N/A	N/A	N/A	N/A	0.98	N/A	0.98
106	Company	1.53	1.52	1.54	1.69	2.09	1.47	1.64
107	Company	1.23	1.54	1.97	2.67	2.79	4.47	2.45
108	Company	N/A	N/A	5.77	4.96	9.27	4.27	6.07
109	Company	N/A	0.74	0.03	N/A	N/A	N/A	0.39
110	Company	N/A	N/A	N/A	N/A	N/A	5.11	5.11
111	Company	N/A	N/A	N/A	0.70	0.12	N/A	0.41
112	Company	3.78	2.98	2.24	2.18	3.40	4.04	3.10
113	Company	1.70	1.86	1.41	1.58	1.53	1.19	1.55
114	Company	0.77	0.98	1.14	0.92	0.36	0.78	0.83
115	Company	N/A	N/A	0.12	5.73	1.86	2.64	2.59
116	Company	N/A	1.34	0.79	N/A	N/A	N/A	1.07
117	Company	0.71	0.64	1.03	1.57	2.03	4.11	1.68
118	Company	6.31	6.15	7.64	6.95	2.01	1.40	5.08
119	Company	2.29	2.39	2.39	1.80	1.83	2.20	2.15
120	Company	1.85	1.54	2.40	N/A	N/A	N/A	1.93
121	Company	1.29	1.20	1.29	1.87	1.78	N/A	1.49
122	Company	N/A	N/A	N/A	N/A	1.13	1.07	1.10
123	Company	1.00	1.13	1.52	1.57	1.16	1.23	1.27
124	Company	1.39	1.42	1.17	1.17	1.17	1.58	1.32
125	Company	1.87	1.35	2.78	1.47	1.53	0.91	1.65
126	Company	1.14	2.16	2.18	1.32	2.11	1.60	1.75
127	Company	2.49	2.43	2.12	3.00	N/A	N/A	2.51
128	Company	N/A	N/A	N/A	N/A	N/A	0.02	0.02
129	Company	N/A	2.55	2.05	1.18	1.89	3.90	2.31

130	Company	N/A	1.02	0.61	N/A	N/A	N/A	0.82
131	Company	2.51	1.56	1.20	1.60	1.44	1.45	1.63
132	Company	N/A	2.23	2.02	1.37	0.96	1.02	1.52
133	Company	0.88	0.75	0.91	0.78	0.51	0.38	0.70
134	Company	N/A	N/A	N/A	0.01	2.37	0.60	0.99
135	Company	0.50	0.42	0.39	0.39	0.33	N/A	0.41
136	Company	N/A	0.34	0.41	0.40	N/A	N/A	0.38
								<b>2.22</b>

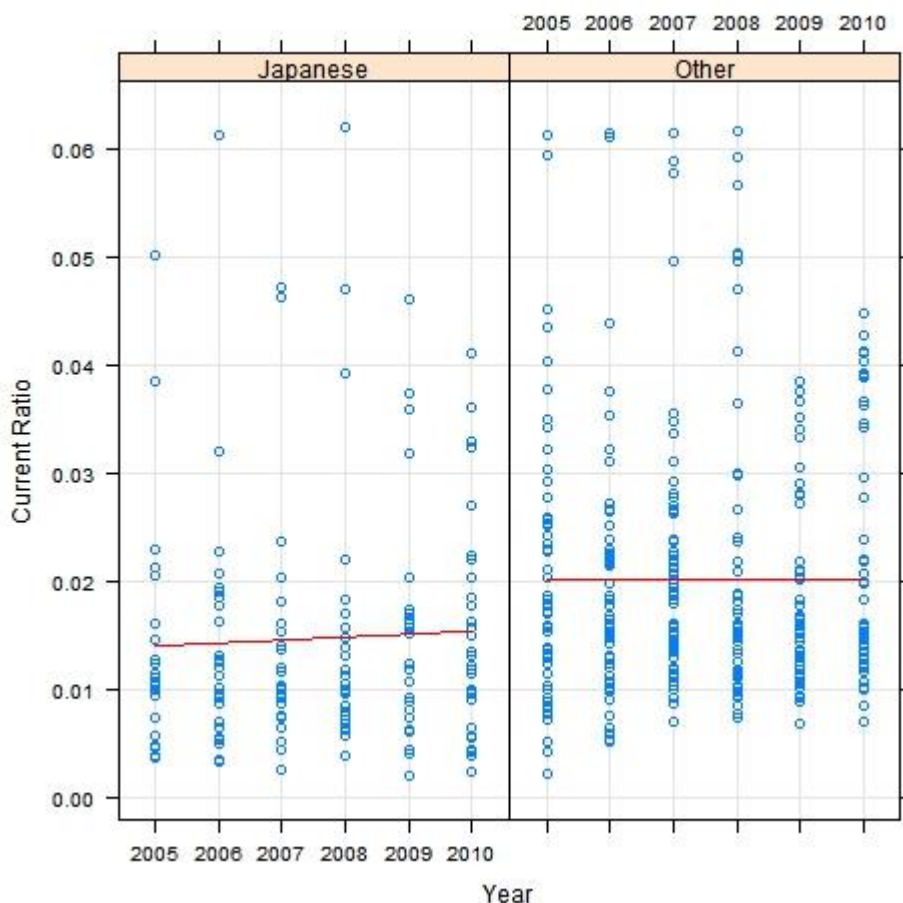
The 6-year Current Ratio average in other companies in the Czech Republic (transportation machinery parts) after excluding outliers reached 2.22.

In order to get more precise data, companies lacking more than 6 statistical observation units or 3 and more values within 1 measure (e.g. Current Ratio) were excluded. Missing values were completed using linear regression.

Furthermore, intervals that cover 90% of the range (based on credibility  $\sigma$  outliers that are unevenly distributed are excluded if the distribution is asymmetric) were identified and the lowest 5% and the highest 5% of the data were excluded (quantile-based identification).

Regarding the Current Ratio, the lowest value within the interval is 0.0018 and the highest value within the interval is 0.0631.

The following figures represent the development of the Current Ratio within the given period (2005-2010) including spline, a smooth polynomial function that predicts the development tendency.



*Figure 33: Development of Current Ratio (Including Spline Function) in Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts) ó Liquidity Ratio. Source: Own Elaboration*

The following figure shows the boxplot (within the given period). The black spots indicate the median value. Boxes stand for interquartile ranges. Box and whisker plots are uniform in their use of the box: the bottom and the top of the box are always the 25<sup>th</sup> and 75<sup>th</sup> percentile (the lower and upper quartiles, respectively), and the band (black spot) near the middle of the box is always the 50<sup>th</sup> percentile (the median). The data not included between the whiskers are plotted as an outlier with a small circle.

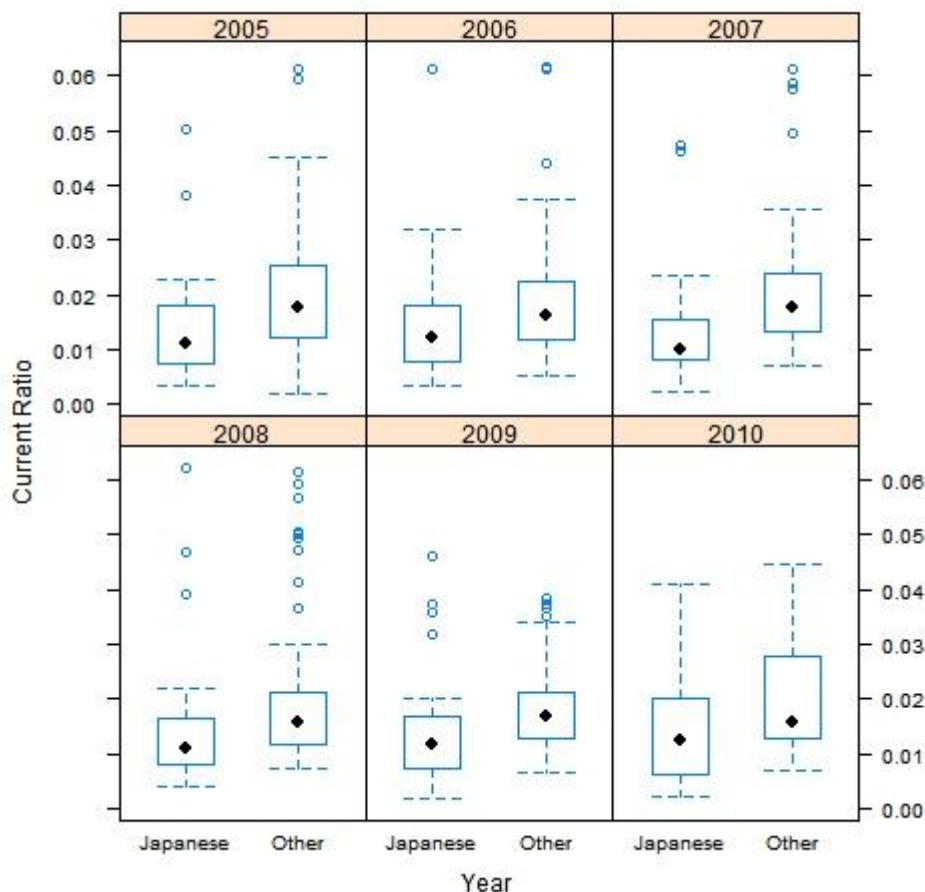
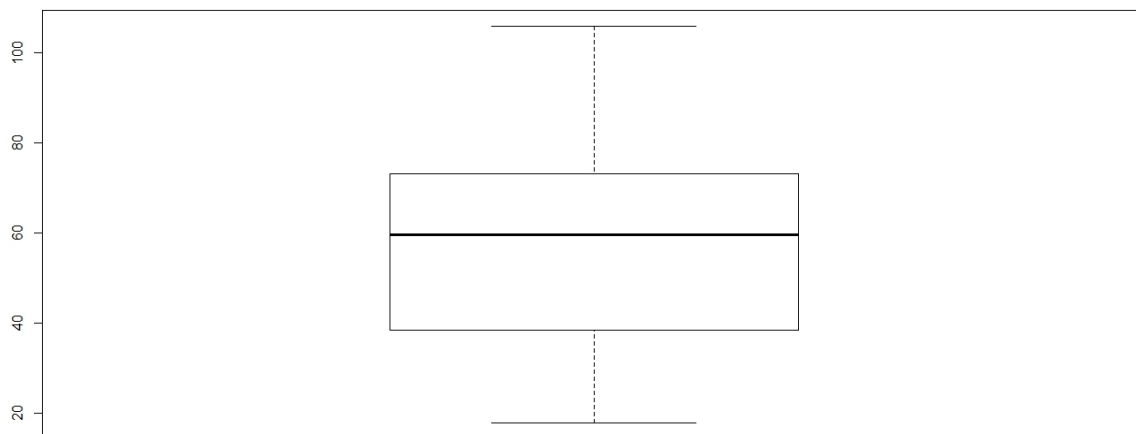


Figure 34: Boxplot Within Selected Years - Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts) ó Liquidity Ratio. Source: Own Elaboration

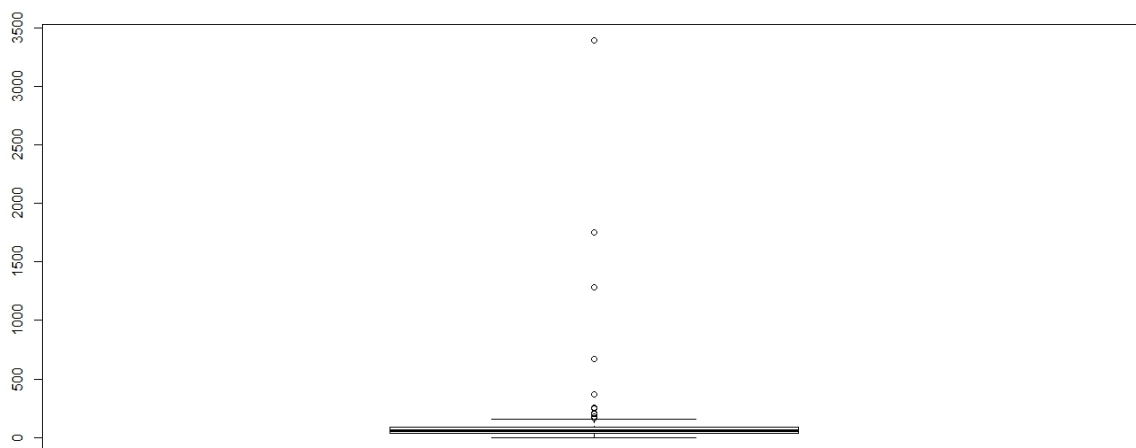
### 4.4.3 Analysis of Solvency

The Total Debt to Total Assets measure was used within the analysis of solvency.

In the analysis of solvency, 0 outliers from the sample of Japanese companies were excluded and 10 outliers from the sample of other companies were excluded ó using the statistical method of boxplots. A boxplot (see below) provides a graphical view of a set of data and signifies where the median, quartiles, maximum and minimum are.



*Figure 35: Boxplot of Japanese Companies in the Czech Republic (Transportation Machinery Parts) ó Solvency Ratio. Source: Own Elaboration*



*Figure 36: Boxplot of Other Companies in the Czech Republic (Transportation Machinery Parts) ó Solvency Ratio. Source: Own Elaboration*

Table 13: Comparison of 6-Year Total Debt to Total Assets Ratio Average (Without Outliers) in Japanese Companies in the Czech Republic (Transportation Machinery Parts) ó Solvency Ratio. Source: Own Elaboration

Japanese Companies in the CZ (Without Outliers) - Transportation Machinery Parts								
Solvency/Leverage Ratio - Total Debt to Total Assets - in %								
	Company	2005	2006	2007	2008	2009	2010	Average
1	Company	90.38%	79.06%	67.87%	113.72%	122.51%	N/A	94.71%
2	Company	46.80%	43.12%	33.68%	24.34%	12.62%	30.84%	31.90%
3	Company	52.99%	41.58%	44.50%	47.45%	29.36%	21.87%	39.63%
4	Company	89.97%	66.63%	59.86%	83.88%	86.87%	75.20%	77.07%
5	Company	N/A	71.78%	74.41%	63.66%	56.21%	53.60%	63.93%
6	Company	N/A	2.79%	15.66%	19.86%	18.36%	33.04%	17.94%
7	Company	94.40%	95.99%	91.40%	77.56%	83.51%	77.23%	86.68%
8	Company	66.21%	73.89%	73.99%	66.59%	56.59%	53.06%	65.06%
9	Company	59.46%	69.79%	73.87%	80.00%	66.76%	54.46%	67.39%
10	Company	78.76%	69.27%	56.66%	52.96%	48.48%	51.55%	59.61%
11	Company	N/A	83.27%	67.62%	50.64%	42.52%	40.50%	56.91%
12	Company	76.89%	75.97%	75.23%	73.25%	72.59%	67.16%	73.52%
13	Company	50.81%	42.05%	42.33%	37.17%	27.30%	22.98%	37.11%
14	Company	87.72%	99.30%	93.39%	93.44%	133.89%	57.59%	94.22%
15	Company	96.53%	88.96%	64.88%	64.36%	54.87%	49.05%	69.78%
16	Company	24.38%	18.48%	26.11%	45.09%	62.99%	84.16%	43.54%
17	Company	5.02%	33.95%	67.06%	80.65%	92.95%	90.30%	61.66%
18	Company	82.63%	69.73%	60.87%	43.93%	44.57%	25.02%	54.46%
19	Company	60.96%	64.91%	64.94%	59.51%	51.07%	49.04%	58.41%
20	Company	59.57%	55.05%	54.23%	46.14%	38.81%	30.06%	47.31%
21	Company	96.10%	101.66%	84.40%	74.85%	73.43%	66.17%	82.77%
22	Company	22.96%	18.73%	N/A	35.90%	18.59%	19.19%	23.07%
23	Company	54.81%	42.24%	30.04%	44.09%	51.58%	46.13%	44.82%
24	Company	23.29%	46.72%	18.66%	17.54%	17.81%	22.34%	24.39%
25	Company	16.22%	24.21%	43.90%	39.45%	36.68%	26.16%	31.10%
26	Company	46.36%	41.58%	25.47%	N/A	N/A	21.11%	33.63%
27	Company	78.32%	82.96%	95.00%	96.90%	73.84%	70.97%	83.00%
28	Company	87.11%	N/A	N/A	69.40%	70.51%	63.91%	72.73%
29	Company	110.63%	135.77%	N/A	106.41%	94.67%	81.71%	105.84%
30	Company	80.85%	72.72%	65.20%	65.58%	63.28%	66.75%	69.06%
31	Company	15.19%	13.86%	27.41%	25.45%	31.76%	31.93%	24.27%
								<b>57.92%</b>

The 6-year Total Debt to Total Assets ratio average in Japanese companies in the Czech Republic (transportation machinery parts) after excluding outliers reached 57.92%.

Table 14: Comparison of 6-Year Total Debt to Total Assets Ratio Average (Without Outliers) in Other Companies in the Czech Republic (Transportation Machinery Parts) ó Solvency Ratio. Source: Own Elaboration

Companies in the CZ (Without Outliers) - Transportation Machinery Parts								
Solvency/Leverage Ratio - Total Debt to Total Assets - in %								
	Company	2005	2006	2007	2008	2009	2010	Average
1	Company	N/A	0.22%	8.03%	69.97%	117.23%	110.66%	61.22%
2	Company	N/A	N/A	N/A	N/A	N/A	94.72%	94.72%
3	Company	241.64%	293.52%	60.68%	59.59%	40.93%	43.36%	123.29%
4	Company	N/A	89.11%	82.56%	75.67%	65.79%	62.93%	75.21%
5	Company	55.30%	50.71%	49.77%	57.76%	26.80%	77.38%	52.95%
6	Company	16.35%	67.96%	60.57%	59.87%	53.61%	52.15%	51.75%
7	Company	47.03%	44.23%	37.67%	19.77%	10.40%	25.57%	30.78%
8	Company	N/A	93.23%	189.25%	N/A	N/A	N/A	141.24%
9	Company	0.35%	0.06%	0.02%	N/A	N/A	N/A	0.14%
10	Company	19.69%	16.85%	5.89%	4.75%	13.23%	4.65%	10.84%
11	Company	N/A	N/A	N/A	N/A	N/A	14.94%	14.94%
12	Company	16.52%	24.50%	31.25%	29.18%	27.77%	18.59%	24.64%
13	Company	54.47%	57.23%	43.23%	45.50%	30.10%	N/A	46.11%
14	Company	89.50%	99.62%	74.50%	38.42%	39.25%	57.53%	66.47%
15	Company	N/A	N/A	N/A	1.97%	1.95%	N/A	1.96%
16	Company	76.22%	74.19%	69.89%	75.31%	N/A	63.53%	71.83%
17	Company	52.22%	27.34%	25.51%	19.50%	25.77%	70.84%	36.86%
18	Company	16.38%	0.11%	0.15%	N/A	40.75%	69.47%	25.37%
19	Company	N/A	113.80%	107.23%	N/A	N/A	N/A	110.52%
20	Company	188.38%	128.95%	64.51%	91.60%	138.86%	205.97%	136.38%
21	Company	N/A	N/A	N/A	20.70%	52.25%	N/A	36.48%
22	Company	0.58%	N/A	N/A	N/A	N/A	N/A	0.58%
23	Company	N/A	N/A	N/A	N/A	30.90%	6.59%	18.75%
24	Company	35.54%	43.83%	28.80%	66.29%	74.68%	43.13%	48.71%
25	Company	N/A	N/A	72.14%	71.66%	58.45%	40.96%	60.80%
26	Company	N/A	N/A	59.01%	51.32%	26.37%	45.82%	45.63%
27	Company	56.42%	39.76%	31.60%	52.48%	44.69%	39.68%	44.11%
28	Company	N/A	N/A	19.22%	N/A	N/A	N/A	19.22%
29	Company	N/A	N/A	N/A	N/A	N/A	12.44%	12.44%
30	Company	83.20%	70.56%	54.29%	44.09%	31.03%	30.82%	52.33%
31	Company	N/A	N/A	N/A	N/A	95.62%	95.71%	95.67%
32	Company	N/A	N/A	104.07%	141.51%	13.88%	20.82%	70.07%
33	Company	N/A	N/A	N/A	N/A	72.80%	61.10%	66.95%
34	Company	N/A	N/A	N/A	N/A	79.03%	79.04%	79.04%
35	Company	66.35%	53.68%	51.18%	55.17%	55.18%	52.87%	55.74%
36	Company	93.54%	75.91%	N/A	N/A	N/A	N/A	84.73%
37	Company	61.96%	63.05%	78.33%	4.41%	N/A	N/A	51.94%
38	Company	23.10%	16.40%	14.24%	14.31%	12.04%	21.67%	16.96%
39	Company	N/A	N/A	N/A	N/A	96.75%	96.54%	96.65%



40	Company	95.97%	N/A	N/A	N/A	N/A	N/A	95.97%
41	Company	148.39%	125.92%	105.28%	N/A	N/A	62.06%	110.41%
42	Company	60.52%	53.41%	48.45%	42.92%	39.02%	32.92%	46.21%
43	Company	63.68%	64.45%	55.53%	55.38%	74.49%	N/A	62.71%
44	Company	25.30%	27.91%	23.18%	10.32%	8.04%	5.75%	16.75%
45	Company	N/A	N/A	N/A	128.00%	N/A	N/A	128.00%
46	Company	N/A	120.40%	120.03%	133.53%	N/A	N/A	124.65%
47	Company	97.44%	103.29%	106.21%	111.72%	117.56%	130.77%	111.17%
48	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00%
49	Company	41.95%	43.01%	35.67%	36.78%	31.94%	58.08%	41.24%
50	Company	37.16%	35.94%	50.25%	50.25%	53.15%	57.26%	47.34%
51	Company	21.85%	30.52%	29.14%	25.09%	33.26%	26.49%	27.73%
52	Company	26.36%	61.54%	48.64%	75.15%	70.36%	55.73%	56.30%
53	Company	N/A	N/A	N/A	71.39%	111.91%	147.14%	110.15%
54	Company	N/A	N/A	N/A	N/A	N/A	7.50%	7.50%
55	Company	100.50%	103.91%	N/A	N/A	N/A	N/A	102.21%
56	Company	38.75%	53.64%	62.61%	55.69%	60.22%	N/A	54.18%
57	Company	86.70%	84.24%	77.71%	63.07%	58.25%	62.28%	72.04%
58	Company	N/A	55.96%	50.41%	52.24%	51.23%	N/A	52.46%
59	Company	N/A	N/A	N/A	N/A	N/A	2.97%	2.97%
60	Company	82.71%	67.60%	71.82%	73.69%	59.75%	45.66%	66.87%
61	Company	26.66%	22.13%	22.68%	24.92%	35.66%	46.26%	29.72%
62	Company	76.10%	88.35%	73.17%	91.98%	76.77%	73.36%	79.96%
63	Company	N/A	N/A	N/A	N/A	100.44%	80.07%	90.26%
64	Company	N/A	N/A	97.97%	94.79%	94.56%	91.68%	94.75%
65	Company	117.49%	N/A	175.25%	196.85%	178.35%	N/A	166.99%
66	Company	N/A	30.73%	14.06%	N/A	N/A	N/A	22.40%
67	Company	80.39%	73.93%	N/A	N/A	N/A	N/A	77.16%
68	Company	N/A	N/A	N/A	N/A	N/A	135.50%	135.50%
69	Company	53.48%	62.61%	55.86%	N/A	N/A	N/A	57.32%
70	Company	23.96%	34.59%	31.08%	62.16%	56.98%	41.48%	41.71%
71	Company	N/A	50.58%	49.42%	62.17%	64.47%	53.58%	56.04%
72	Company	23.70%	27.73%	24.97%	17.70%	56.13%	N/A	30.05%
73	Company	99.29%	95.01%	91.00%	86.27%	81.42%	65.49%	86.41%
74	Company	52.27%	52.55%	N/A	N/A	34.35%	42.75%	45.48%
75	Company	N/A	N/A	N/A	N/A	76.04%	63.20%	69.62%
76	Company	N/A	N/A	121.58%	136.75%	166.39%	N/A	141.57%
77	Company	39.17%	N/A	N/A	N/A	N/A	N/A	39.17%
78	Company	75.07%	76.69%	84.71%	90.38%	N/A	N/A	81.71%
79	Company	47.94%	67.14%	71.37%	76.46%	75.23%	64.82%	67.16%
80	Company	46.73%	62.89%	65.80%	N/A	N/A	N/A	58.47%
81	Company	N/A	N/A	N/A	N/A	84.55%	89.39%	86.97%
82	Company	49.09%	36.83%	23.77%	29.04%	19.94%	14.09%	28.79%
83	Company	N/A	N/A	N/A	N/A	N/A	127.26%	127.26%
84	Company	N/A	N/A	N/A	N/A	N/A	10.48%	10.48%

85	Company	71.81%	65.35%	61.10%	75.26%	N/A	60.99%	66.90%
86	Company	29.21%	44.51%	9.91%	9.48%	2.18%	N/A	19.06%
87	Company	N/A	N/A	54.62%	70.99%	73.84%	60.46%	64.98%
88	Company	32.99%	34.02%	24.14%	51.78%	44.95%	N/A	37.58%
89	Company	44.19%	47.92%	45.56%	50.94%	57.22%	N/A	49.17%
90	Company	14.22%	22.30%	41.13%	N/A	N/A	11.59%	22.31%
91	Company	18.53%	45.62%	66.02%	99.42%	149.36%	N/A	75.79%
92	Company	N/A	44.35%	N/A	N/A	45.68%	49.22%	46.42%
93	Company	N/A	N/A	14.81%	22.42%	20.64%	11.73%	17.40%
94	Company	N/A	N/A	95.05%	79.53%	83.75%	N/A	86.11%
95	Company	89.81%	89.07%	118.05%	97.84%	75.95%	39.79%	85.09%
96	Company	70.29%	55.88%	62.71%	67.47%	N/A	N/A	64.09%
97	Company	36.53%	44.19%	35.09%	22.30%	21.61%	16.08%	29.30%
98	Company	N/A	N/A	N/A	N/A	25.88%	N/A	25.88%
99	Company	N/A	N/A	100.64%	92.76%	75.51%	72.59%	85.38%
100	Company	N/A	107.88%	80.75%	60.18%	31.95%	N/A	70.19%
101	Company	N/A	N/A	N/A	N/A	N/A	0.57%	0.57%
102	Company	95.40%	92.26%	90.71%	86.44%	84.87%	N/A	89.94%
103	Company	58.94%	58.82%	80.81%	63.57%	72.35%	49.07%	63.93%
104	Company	N/A	N/A	N/A	N/A	94.72%	84.21%	89.47%
105	Company	N/A	N/A	31.68%	35.34%	28.18%	33.92%	32.28%
106	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00%
107	Company	80.67%	76.15%	82.00%	79.58%	85.62%	91.34%	82.56%
108	Company	N/A	N/A	N/A	N/A	106.42%	N/A	106.42%
109	Company	64.92%	62.83%	61.42%	56.02%	48.35%	49.02%	57.09%
110	Company	65.88%	55.35%	38.96%	28.83%	27.14%	18.23%	39.07%
111	Company	N/A	N/A	15.74%	17.83%	9.78%	16.45%	14.95%
112	Company	N/A	N/A	N/A	N/A	N/A	18.72%	18.72%
113	Company	13.02%	14.30%	17.43%	24.32%	17.98%	14.39%	16.91%
114	Company	69.91%	65.39%	74.81%	79.11%	76.03%	81.81%	74.51%
115	Company	85.77%	76.84%	69.87%	62.80%	120.98%	97.18%	85.57%
116	Company	N/A	N/A	85.63%	17.45%	41.29%	32.27%	44.16%
117	Company	N/A	74.84%	126.73%	N/A	N/A	N/A	100.79%
118	Company	96.10%	101.66%	84.40%	74.85%	73.43%	66.17%	82.77%
119	Company	11.35%	8.57%	7.07%	5.62%	10.62%	12.25%	9.25%
120	Company	51.52%	44.71%	45.22%	52.40%	49.62%	40.42%	47.32%
121	Company	53.12%	64.77%	41.65%	N/A	N/A	N/A	53.18%
122	Company	58.15%	73.00%	69.17%	43.94%	48.31%	N/A	58.51%
123	Company	N/A	N/A	N/A	N/A	29.76%	40.85%	35.31%
124	Company	97.09%	86.26%	80.67%	83.72%	96.13%	89.47%	88.89%
125	Company	61.53%	55.57%	69.78%	64.68%	55.86%	48.69%	59.35%
126	Company	58.32%	58.45%	44.14%	26.43%	27.47%	53.05%	44.64%
127	Company	85.23%	59.46%	51.78%	80.10%	70.57%	69.84%	69.50%
128	Company	39.45%	40.93%	43.73%	30.95%	N/A	N/A	38.77%
129	Company	N/A	N/A	N/A	N/A	N/A	81.91%	81.91%

130	Company	N/A	83.40%	79.34%	71.23%	51.15%	25.65%	62.15%
131	Company	N/A	97.71%	142.23%	N/A	N/A	N/A	119.97%
132	Company	34.15%	59.88%	78.60%	58.61%	65.73%	60.75%	59.62%
133	Company	N/A	0.70%	-0.30%	0.22%	N/A	N/A	0.21%
134	Company	N/A	76.77%	72.66%	61.89%	91.46%	70.35%	74.63%
135	Company	62.50%	72.94%	64.71%	79.44%	102.08%	128.51%	85.03%
136	Company	N/A	N/A	50.70%	78.74%	N/A	N/A	64.72%
137	Company	N/A	N/A	N/A	26.37%	26.91%	92.40%	48.56%
138	Company	N/A	N/A	N/A	N/A	148.88%	156.31%	152.60%
139	Company	N/A	N/A	N/A	0.87%	143.53%	110.20%	84.87%
								<b>60.29%</b>

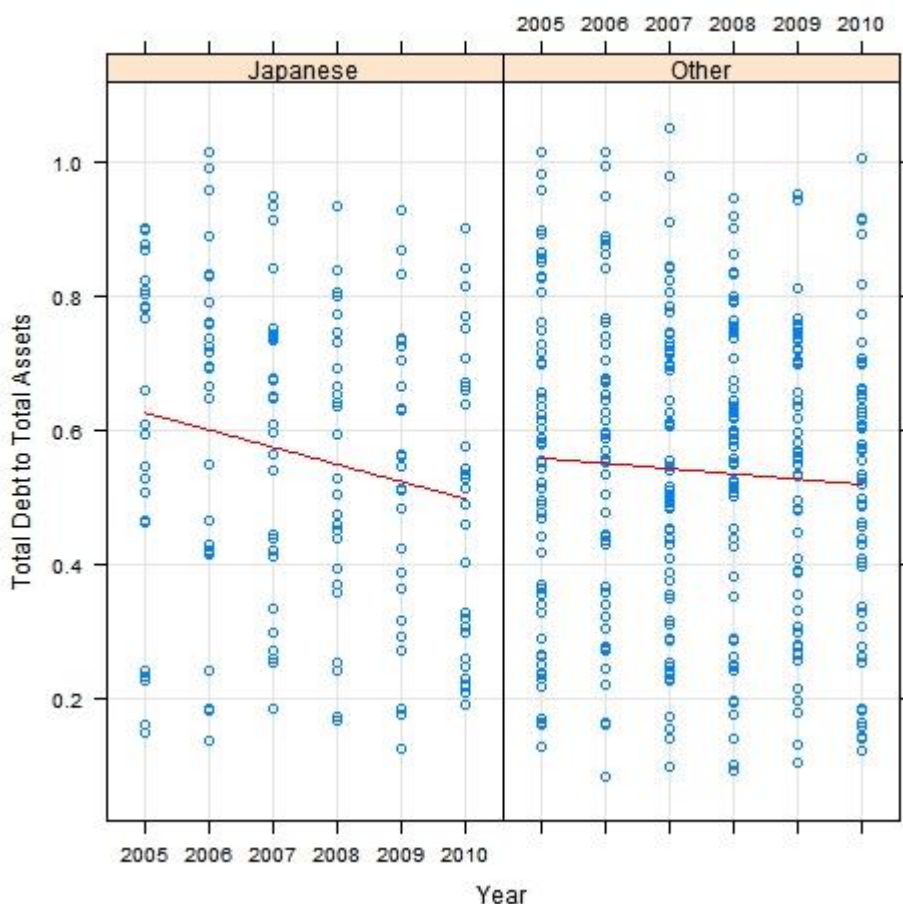
The 6-year Total Debt to Total Assets ratio average in other companies in the Czech Republic (transportation machinery parts) after excluding outliers reached 60.29%.

In order to get more precise data, companies lacking more than 6 statistical observation units or 3 and more values within 1 measure (e.g. Total Debt to Total Assets Ratio) were excluded. Missing values were completed using linear regression.

Furthermore, intervals that cover 90% of range (based on credibility  $\sigma$  outliers that are unevenly distributed are excluded if the distribution is asymmetric) were identified and the lowest 5% and the highest 5% of the data were excluded (quantile-based identification).

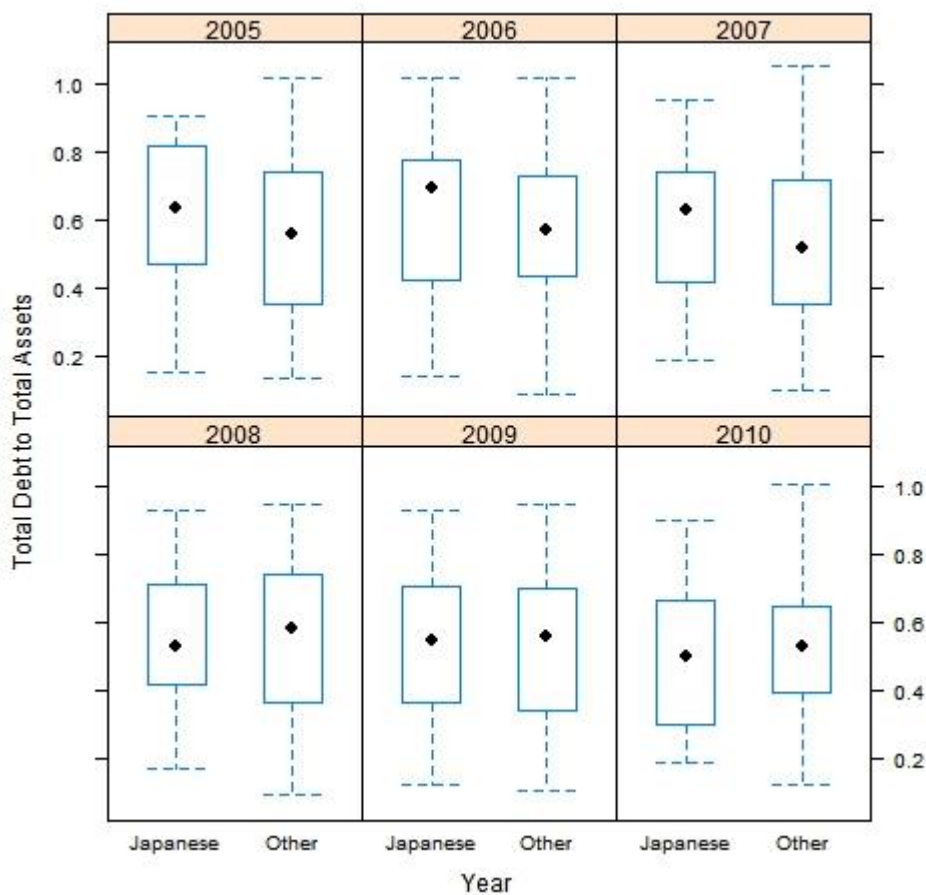
Regarding the Total Debt to Total Assets Ratio, the lowest value within the interval is 0.0022 and the highest value within the interval 1.1066.

The following figures represent the development of the Total Debt to Total Assets Ratio within the given period (2005-2010) including spline, a smooth polynomial function that predicts the development tendency.



*Figure 37: Development of Total Debt to Total Assets Ratio (Including Spline Function) in Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts) - Solvency Ratio. Source: Own Elaboration*

The following figure shows the boxplot (within the selected years). The black spots indicate the median value. Boxes stand for interquartile ranges. Box and whisker plots are uniform in their use of the box: the bottom and the top of the box are always the 25<sup>th</sup> and 75<sup>th</sup> percentile (the lower and upper quartiles, respectively), and the band (black spot) near the middle of the box is always the 50<sup>th</sup> percentile (the median). The data not included between the whiskers are plotted as an outlier with a small circle.

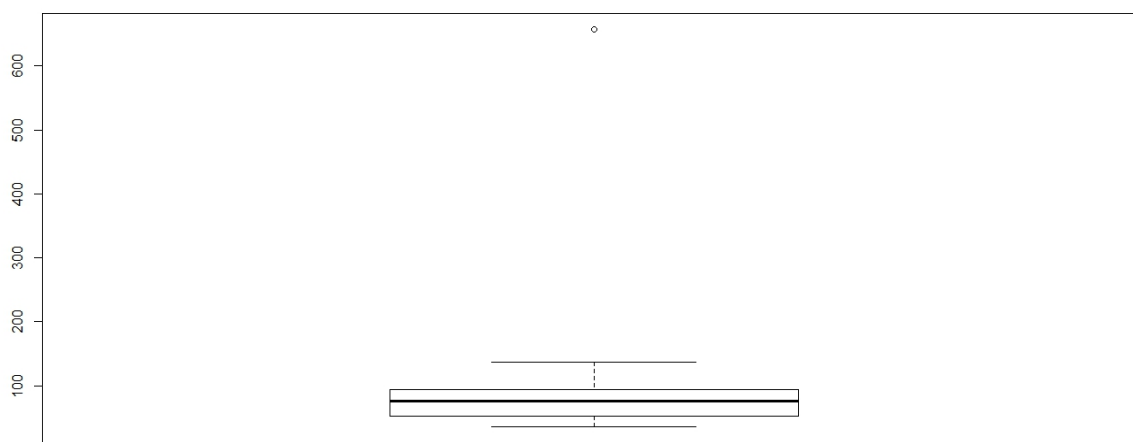


*Figure 38: Boxplot Within Selected Years - Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts) ó Solvency Ratio. Source: Own Elaboration*

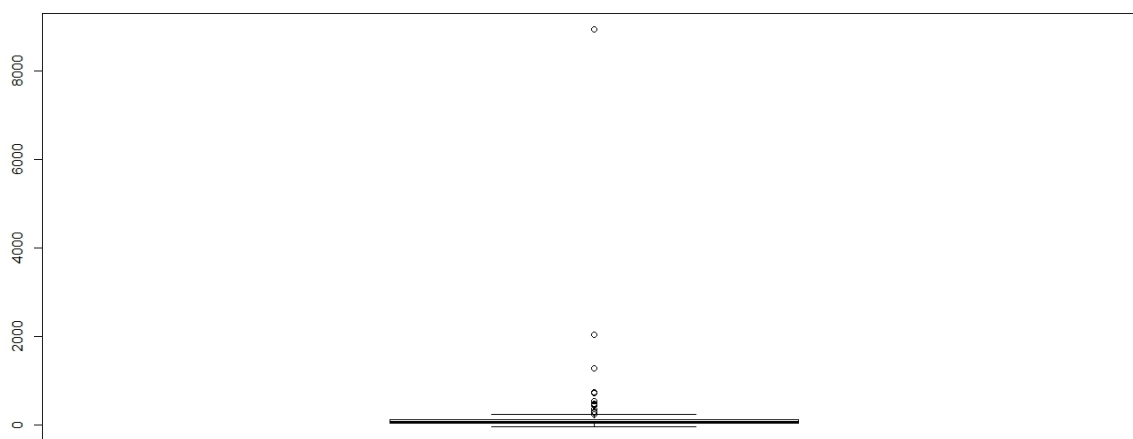
#### 4.4.4 Analysis of Activity

The Receivables Turnover measure and the Inventory Turnover measure were used within the analysis of activity.

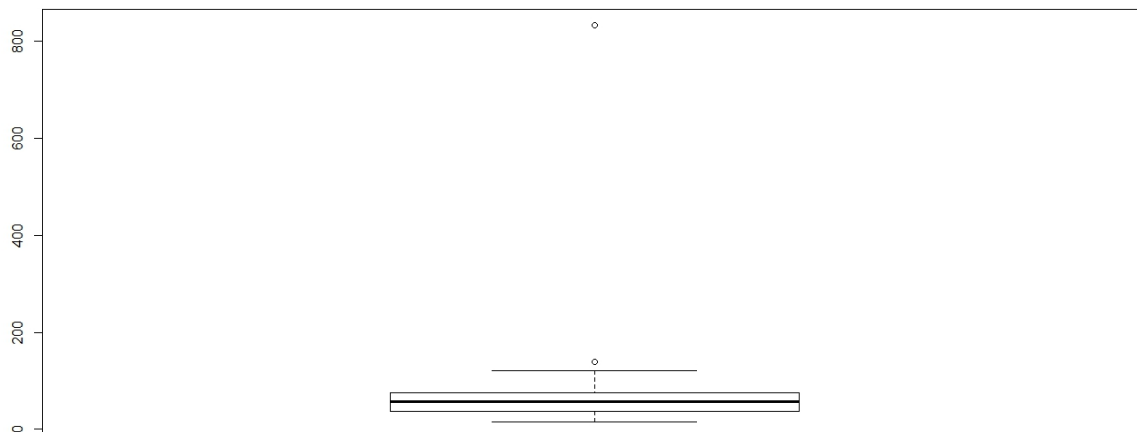
In the analysis of activity, 1 (Receivables Turnover) / 2 (Inventory Turnover) outliers from the sample of Japanese companies were excluded and 12 (Receivables Turnover) / 14 (Inventory Turnover) outliers from the sample of other companies were excluded ó using the statistical method of boxplots. A boxplot (see below) provides a graphical view of a set of data and signifies where the median, quartiles, maximum and minimum are.



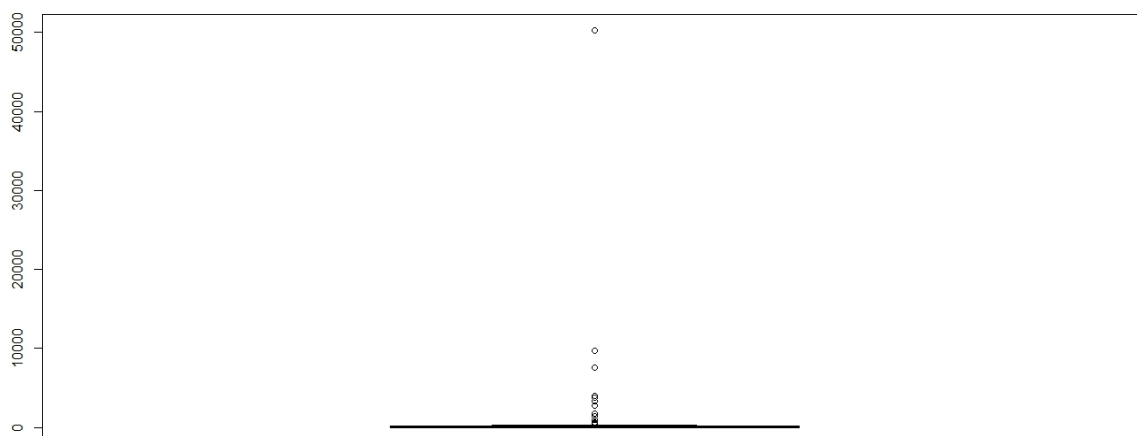
*Figure 39: Boxplot of Japanese Companies in the Czech Republic (Transportation Machinery Parts) ó Activity Ratio (Receivables Turnover). Source: Own Elaboration*



*Figure 40: Boxplot of Other Companies in the Czech Republic (Transportation Machinery Parts) ó Activity Ratio (Receivables Turnover). Source: Own Elaboration*



*Figure 41: Boxplot of Japanese Companies in the Czech Republic (Transportation Machinery Parts) Activity Ratio (Inventory Turnover). Source: Own Elaboration*



*Figure 42: Boxplot of Other Companies in the Czech Republic (Transportation Machinery Parts) Activity Ratio (Inventory Turnover). Source: Own Elaboration*

Table 15: Comparison of 6-Year Receivables Turnover Average (Without Outliers) in Japanese Companies in the Czech Republic (Transportation Machinery Parts) ó Activity Ratios. Source: Own Elaboration

Japanese Companies in the CZ (Without Outliers) - Transportation Machinery Parts								
Activity Ratio ó Receivables Turnover - in days								
	Company	2005	2006	2007	2008	2009	2010	Average
1	Company	65	80	54	32	39	N/A	54.00
2	Company	127	100	97	95	86	47	92.00
3	Company	118	65	99	145	42	42	85.17
4	Company	73	39	41	34	31	36	42.33
5	Company	N/A	51	37	38	32	41	39.80
6	Company	78	46	46	39	40	48	49.50
7	Company	129	109	111	95	99	100	107.17
8	Company	186	114	106	1	56	65	88.00
9	Company	105	79	85	60	91	78	83.00
10	Company	N/A	102	76	73	70	79	80.00
11	Company	75	75	83	71	85	65	75.67
12	Company	117	N/A	N/A	78	92	97	96.00
13	Company	186	57	54	36	24	47	67.33
14	Company	271	83	109	90	91	89	122.17
15	Company	140	125	119	116	119	123	123.67
16	Company	N/A	N/A	232	102	119	97	137.50
17	Company	101	49	57	41	64	61	62.17
18	Company	66	50	85	54	89	66	68.33
19	Company	215	137	121	104	129	102	134.67
20	Company	44	30	29	30	56	30	36.50
21	Company	48	51	N/A	39	46	40	44.80
22	Company	51	51	39	37	31	45	42.33
23	Company	73	40	52	33	40	51	48.17
24	Company	142	51	84	64	82	63	81.00
25	Company	87	62	48	N/A	N/A	63	65.00
26	Company	121	35	44	57	55	35	57.83
27	Company	93	N/A	N/A	65	70	79	76.75
28	Company	57	93	92	68	226	160	116.00
29	Company	55	57	31	65	59	43	51.67
30	Company	67	87	66	78	74	83	75.83
								<b>76.81</b>

The 6-year Receivables Turnover average in Japanese companies in the Czech Republic (transportation machinery parts) after excluding outliers reached 76.81 days.



Table 16: Comparison of 6-Year Receivables Turnover Average (Without Outliers) in Other Companies in the Czech Republic (Transportation Machinery Parts) ó Activity Ratios. Source: Own Elaboration

Companies in the CZ (Without Outliers) - Transportation Machinery Parts								
Activity Ratio - Receivables Turnover - in days								
	Company	2005	2006	2007	2008	2009	2010	Average
1	Company	N/A	N/A	N/A	N/A	N/A	25	25.00
2	Company	83	102	52	63	69	252	103.50
3	Company	N/A	27	64	27	67	137	64.40
4	Company	42	55	16	29	17	38	32.83
5	Company	N/A	129	71	35	24	46	61.00
6	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
7	Company	143	107	40	124	193	148	125.83
8	Company	N/A	88	20	N/A	N/A	N/A	54.00
9	Company	72	N/A	N/A	N/A	N/A	N/A	72.00
10	Company	75	84	79	77	130	57	83.67
11	Company	20	22	19	20	27	41	24.83
12	Company	25	60	40	62	30	N/A	43.40
13	Company	55	40	97	93	87	84	76.00
14	Company	N/A	N/A	N/A	N/A	21	N/A	21.00
15	Company	88	73	51	66	N/A	56	66.80
16	Company	27	26	24	58	31	42	34.67
17	Company	N/A	47	240	N/A	N/A	N/A	143.50
18	Company	15	41	5	30	45	100	39.33
19	Company	N/A	N/A	N/A	10	55	N/A	32.50
20	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
21	Company	N/A	N/A	N/A	N/A	50	36	43.00
22	Company	61	118	134	162	113	75	110.50
23	Company	N/A	N/A	107	98	66	73	86.00
24	Company	N/A	N/A	N/A	N/A	106	N/A	106.00
25	Company	N/A	N/A	27	28	5	14	18.50
26	Company	60	72	71	89	70	74	72.67
27	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
28	Company	45	31	25	37	61	48	41.17
29	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
30	Company	N/A	N/A	N/A	N/A	N/A	75	75.00
31	Company	N/A	N/A	N/A	N/A	12	7	9.50
32	Company	N/A	N/A	N/A	N/A	8	5	6.50
33	Company	271	112	126	75	84	113	130.17
34	Company	23	43	N/A	N/A	N/A	N/A	33.00
35	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
36	Company	110	74	45	51	103	300	113.83
37	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
38	Company	102	N/A	N/A	N/A	N/A	N/A	102.00
39	Company	25	31	126	N/A	N/A	65	61.75

40	Company	118	138	114	89	93	70	103.67
41	Company	73	50	39	18	28	N/A	41.60
42	Company	72	86	56	58	56	87	69.17
43	Company	N/A	6	2	1	N/A	N/A	3.00
44	Company	54	24	N/A	N/A	N/A	N/A	39.00
45	Company	92	N/A	287	108	95	170	150.40
46	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
47	Company	43	46	24	45	36	22	36.00
48	Company	100	99	118	118	115	170	120.00
49	Company	48	N/A	42	29	42	38	39.80
50	Company	63	68	46	69	56	102	67.33
51	Company	N/A	N/A	N/A	266	256	40	187.33
52	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
53	Company	287	64	N/A	N/A	N/A	N/A	175.50
54	Company	122	102	60	78	85	N/A	89.40
55	Company	42	50	70	65	51	104	63.67
56	Company	N/A	164	213	235	357	N/A	242.25
57	Company	N/A	N/A	N/A	N/A	N/A	4	4.00
58	Company	118	84	129	163	97	123	119.00
59	Company	112	106	80	70	122	181	111.83
60	Company	17	26	26	42	34	53	33.00
61	Company	N/A	N/A	N/A	N/A	36	23	29.50
62	Company	N/A	N/A	9	15	9	9	10.50
63	Company	N/A	138	182	N/A	N/A	N/A	160.00
64	Company	76	66	N/A	N/A	N/A	N/A	71.00
65	Company	136	160	94	109	131	475	184.17
66	Company	N/A	24	46	80	45	27	44.40
67	Company	38	44	53	34	47	N/A	43.20
68	Company	48	53	125	101	132	111	95.00
69	Company	50	58	N/A	N/A	44	69	55.25
70	Company	N/A	N/A	N/A	N/A	6	2	4.00
71	Company	N/A	N/A	116	185	106	N/A	135.67
72	Company	50	N/A	N/A	N/A	N/A	N/A	50.00
73	Company	44	47	79	70	N/A	N/A	60.00
74	Company	31	204	N/A	N/A	N/A	N/A	117.50
75	Company	88	77	66	116	140	72	93.17
76	Company	58	58	98	N/A	N/A	N/A	71.33
77	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
78	Company	27	30	32	35	42	55	36.83
79	Company	N/A	N/A	N/A	N/A	N/A	-8	-8.00
80	Company	N/A	48	N/A	N/A	N/A	N/A	48.00
81	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
82	Company	9	11	10	15	N/A	6	10.20
83	Company	8	25	26	33	49	N/A	28.20
84	Company	N/A	N/A	57	55	177	80	92.25

85	Company	85	85	104	76	54	N/A	80.80
86	Company	71	51	50	116	88	N/A	75.20
87	Company	94	216	131	N/A	N/A	68	127.25
88	Company	158	199	692	229	125	N/A	280.60
89	Company		285	N/A	N/A	261	320	288.67
90	Company	N/A	N/A	139	41	67	N/A	82.33
91	Company	22	22	32	183	14	16	48.17
92	Company	40	19	21	30	N/A	N/A	27.50
93	Company	23	58	69	31	59	N/A	48.00
94	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
95	Company	N/A	N/A	N/A	81	50	64	65.00
96	Company		225	251	162	65	N/A	175.75
97	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
98	Company	9	7	14	25	11	N/A	13.20
99	Company	60	59	89	100	102	43	75.50
100	Company	-36	N/A	N/A	N/A	N/A	N/A	-36.00
101	Company	N/A	N/A	N/A	N/A	205	149	177.00
102	Company	N/A	N/A	101	145	143	114	125.75
103	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
104	Company	47	20	68	43	75	15	44.67
105	Company	34	29	38	24	25	30	30.00
106	Company	21	34	44	23	38	24	30.67
107	Company	N/A	N/A	69	98	83	141	97.75
108	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
109	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
110	Company	N/A	N/A	N/A	434	59	N/A	246.50
111	Company	188	247	203	160	110	104	168.67
112	Company	10	6	41	37	10	2	17.67
113	Company	20	27	25	21	36	48	29.50
114	Company	N/A	N/A	8	808	169	136	280.25
115	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
116	Company	44	30	29	30	56	30	36.50
117	Company	48	45	31	64	26	37	41.83
118	Company	19	36	37	75	63	62	48.67
119	Company	36	43	53	N/A	N/A	N/A	44.00
120	Company	66	105	120	73	147	N/A	102.20
121	Company	N/A	N/A	N/A	N/A	82	135	108.50
122	Company	51	53	51	76	71	66	61.33
123	Company	11	12	22	35	19	42	23.50
124	Company	150	265	113	130	273	303	205.67
125	Company	111	81	90	153	73	116	104.00
126	Company	61	64	72	62	N/A	N/A	64.75
127	Company	N/A	N/A	N/A	N/A	N/A	20	20.00
128	Company	N/A	441	25	5	132	245	169.60
129	Company	N/A	85	54	N/A	N/A	N/A	69.50

130	Company	14	6	12	32	38	55	26.17
131	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
132	Company	N/A	32	26	20	37	34	29.80
133	Company	41	45	45	56	28	31	41.00
134	Company	N/A	N/A	N/A	85	N/A	N/A	85.00
135	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
136	Company	N/A	N/A	N/A	N/A	131	301	216.00
137	Company	N/A	121	50	43	N/A	N/A	71.33
								<b>68.70</b>

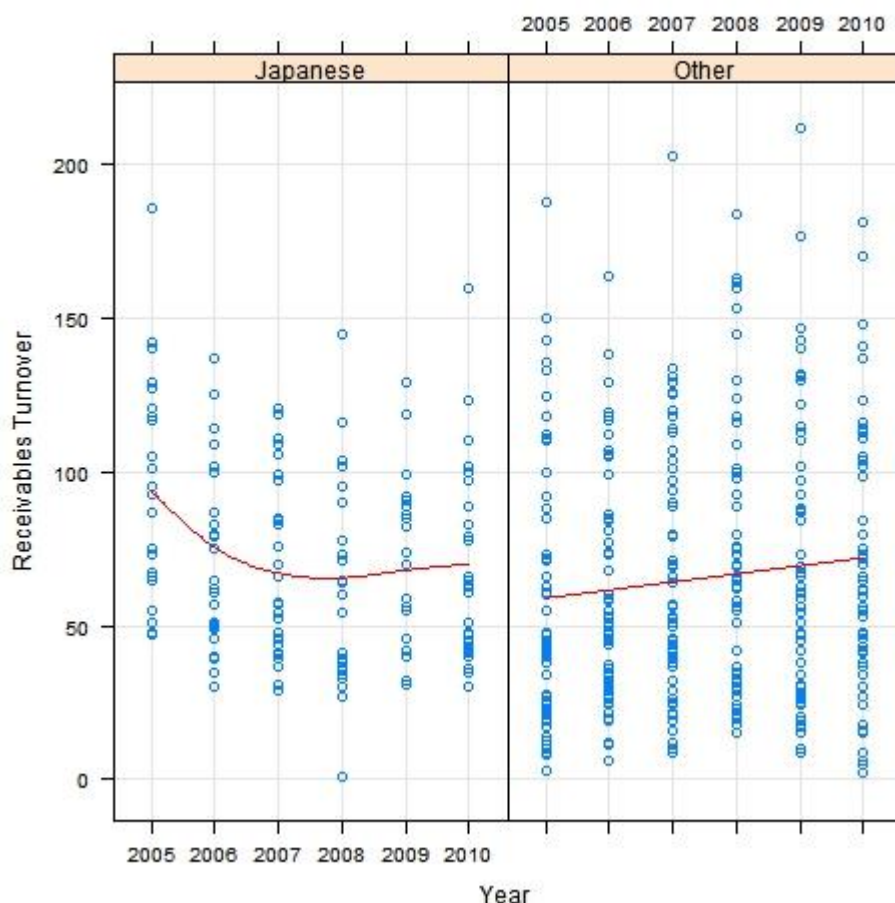
The 6-year Receivables Turnover average in other companies in the Czech Republic (transportation machinery parts) after excluding outliers reached 68.70 days.

In order to get more precise data, companies lacking more than 6 statistical observation units or 3 and more values within 1 measure (e.g. Receivables Turnover Ratio) were excluded. Missing values were completed using linear regression.

Furthermore, intervals that cover 90% of the range (based on credibility  $\delta$  outliers that are unevenly distributed are excluded if the distribution is asymmetric) were identified and the lowest 5% and the highest 5% of the data were excluded (quantile-based identification).

Regarding the Receivables Turnover Ratio, the lowest value within the interval is 1 and the highest value within the interval is 213.

The following figures represent the development of the Receivables Turnover Ratio within the given period (2005-2010) including spline, a smooth polynomial function that predicts the development tendency.



*Figure 43: Development of Receivables Turnover Ratio (Including Spline Function) in Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts) - Activity Ratio. Source: Own Elaboration*

The following figure shows the boxplot (within the given years). The black spots indicate the median value. Boxes stand for interquartile ranges. Box and whisker plots are uniform in their use of the box: the bottom and the top of the box are always the 25<sup>th</sup> and 75<sup>th</sup> percentile (the lower and upper quartiles, respectively), and the band (black spot) near the middle of the box is always the 50<sup>th</sup> percentile (the median). The data not included between the whiskers are plotted as an outlier with a small circle.

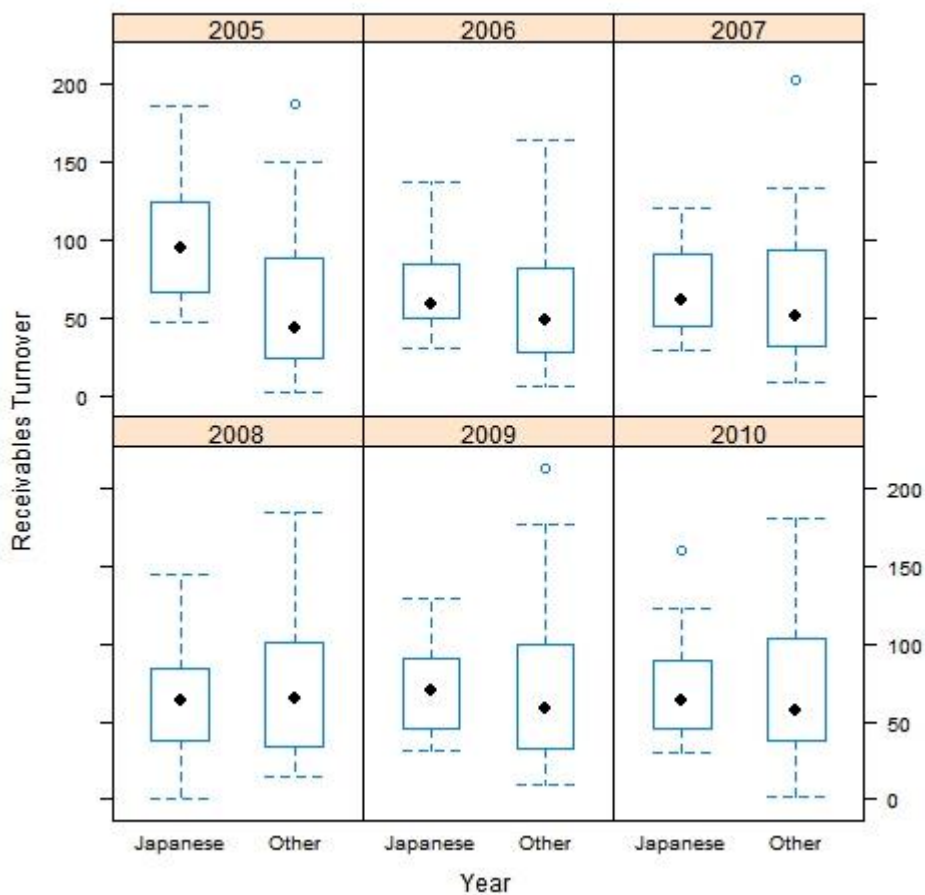


Figure 44: Boxplot Within Selected Years - Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts) ó Activity Ratio (Receivables Turnover). Source: Own Elaboration

Table 17: Comparison of 6-Year Inventory Turnover Ratio Average (Without Outliers) in Japanese Companies in the Czech Republic (Transportation Machinery Parts) ó Activity Ratios. Source: Own Elaboration

Japanese Companies in the CZ (Without Outliers) - Transportation Machinery Parts								
Activity Ratio - Inventory Turnover - in days								
	Company	2005	2006	2007	2008	2009	2010	Average
1	Company	29	226	25	38	33	N/A	70.20
2	Company	109	46	51	64	45	52	61.17
3	Company	44	33	35	53	45	38	41.33
4	Company	92	45	35	61	58	71	60.33
5	Company	N/A	89	56	65	49	50	61.80
6	Company	75	21	19	20	31	34	33.33
7	Company	149	115	80	79	59	69	91.83
8	Company	90	38	42	48	36	30	47.33
9	Company	85	63	57	75	54	55	64.83
10	Company	N/A	21	31	25	26	25	25.60
11	Company	27	11	9	20	15	14	16.00
12	Company	34	N/A	N/A	60	57	49	50.00
13	Company	118	90	60	54	85	67	79.00
14	Company	50	24	16	22	19	19	25.00
15	Company	50	52	47	93	62	48	58.67
16	Company	52	29	42	29	78	25	42.50
17	Company	119	130	85	81	81	67	93.83
18	Company	213	111	94	126	97	65	117.67
19	Company	134	168	112	119	114	80	121.17
20	Company	35	28	N/A	47	22	26	31.60
21	Company	75	44	60	76	63	65	63.83
22	Company	37	32	35	32	57	53	41.00
23	Company	40	6	14	49	47	34	31.67
24	Company	39	26	18	N/A	N/A	31	28.50
25	Company	213	68	53	60	57	43	82.33
26	Company	77	N/A	N/A	35	53	66	57.75
27	Company	59	66	40	35	34	29	43.83
28	Company	30	22	23	21	16	39	25.17
29	Company	55	44	49	36	41	30	42.50
								<b>55.51</b>

The 6-year Inventory Turnover average in Japanese companies in the Czech Republic (transportation machinery parts) after excluding outliers reached 55.51 days.

Table 18: Comparison of 6-Year Inventory Turnover Ratio Average (Without Outliers) in Other Companies in the Czech Republic (Transportation Machinery Parts) ó Activity Ratios. Source: Own Elaboration

Companies in the CZ (Without Outliers) - Transportation Machinery Parts								
Activity Ratio - Inventory Turnover - in days								
	Company	2005	2006	2007	2008	2009	2010	Average
1	Company	N/A	N/A	205	318	293	358	293.50
2	Company	N/A	N/A	N/A	N/A	N/A	228	228.00
3	Company	287	199	96	117	199	160	176.33
4	Company	N/A	55	93	28	43	24	48.60
5	Company	9	8	33	44	85	93	45.33
6	Company	N/A	135	112	234	149	165	159.00
7	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
8	Company	87	101	108	87	93	252	121.33
9	Company	N/A	237	15	N/A	N/A	N/A	126.00
10	Company	1	N/A	2	N/A	1	1	1.25
11	Company	N/A	N/A	N/A	N/A	N/A	32	32.00
12	Company	101	131	172	183	211	119	152.83
13	Company	65	56	74	59	86	N/A	68.00
14	Company	4	58	44	17	57	209	64.83
15	Company	N/A	N/A	N/A	5	N/A	N/A	5.00
16	Company	149	165	145	201	N/A	100	152.00
17	Company	14	10	10	7	3	12	9.33
18	Company	6	N/A	N/A	N/A	N/A	81	43.50
19	Company	N/A	110	218	N/A	N/A	N/A	164.00
20	Company	72	52	107	145	305	149	138.33
21	Company	N/A	N/A	N/A	28	41	N/A	34.50
22	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
23	Company	N/A	N/A	N/A	N/A	32	10	21.00
24	Company	73	55	49	120	108	88	82.17
25	Company	N/A	N/A	53	55	41	56	51.25
26	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
27	Company	N/A	N/A	69	56	21	25	42.75
28	Company	N/A	N/A	N/A	39	22	21	27.33
29	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
30	Company	20	41	35	28	23	38	30.83
31	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
32	Company	N/A	N/A	N/A	N/A	104	119	111.50
33	Company	N/A	N/A	N/A	N/A	148	165	156.50
34	Company	24	28	91	72	45	34	49.00
35	Company	87	90	N/A	N/A	N/A	N/A	88.50
36	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
37	Company	161	151	99	97	90	124	120.33
38	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
39	Company	61	N/A	N/A	N/A	N/A	N/A	61.00



40	Company	135	116	165	N/A	N/A	81	124.25
41	Company	49	45	52	51	50	82	54.83
42	Company	89	79	57	92	66	N/A	76.60
43	Company	37	33	47	53	70	64	50.67
44	Company	N/A	101	133	28	N/A	N/A	87.33
45	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
46	Company	N/A	N/A	N/A	2	1	N/A	1.50
47	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
48	Company	197	266	256	363	478	468	338.00
49	Company	79	59	80	80	87	68	75.50
50	Company	73	N/A	63	74	59	76	69.00
51	Company	22	25	28	24	17	22	23.00
52	Company	N/A	N/A	N/A	331	185	162	226.00
53	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
54	Company	439	194	N/A	N/A	N/A	N/A	316.50
55	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
56	Company	74	84	56	53	87	101	75.83
57	Company	N/A	8	3	4	4	N/A	4.75
58	Company	N/A	N/A	N/A	N/A	N/A	4	4.00
59	Company	106	32	41	62	50	79	61.67
60	Company	68	73	79	75	89	76	76.67
61	Company	52	103	48	53	61	62	63.17
62	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
63	Company	N/A	N/A	95	115	143	91	111.00
64	Company	N/A	7	31	N/A	N/A	N/A	19.00
65	Company	37	46	N/A	N/A	N/A	N/A	41.50
66	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
67	Company	157	154	171	N/A	N/A	N/A	160.67
68	Company	257	296	191	164	178	168	209.00
69	Company	N/A	59	35	110	57	59	64.00
70	Company	40	35	38	46	64	N/A	44.60
71	Company	24	18	8	9	6	6	11.83
72	Company	36	39	N/A	N/A	31	40	36.50
73	Company	N/A	N/A	N/A	N/A	62	58	60.00
74	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
75	Company	206	N/A	N/A	N/A	N/A	N/A	206.00
76	Company	215	107	168	67	N/A	N/A	139.25
77	Company	188	130	N/A	N/A	N/A	N/A	159.00
78	Company	129	197	179	208	283	152	191.33
79	Company	16	22	12	N/A	N/A	N/A	16.67
80	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
81	Company	18	22	15	40	36	110	40.17
82	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
83	Company	N/A	156	N/A	N/A	N/A	N/A	156.00
84	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00

85	Company	112	116	64	92	N/A	40	84.80
86	Company	63	92	61	71	72	N/A	71.80
87	Company	N/A	N/A	8	36	25	10	19.75
88	Company	14	20	8	28	21	N/A	18.20
89	Company	110	83	73	131	265	N/A	132.40
90	Company	7	6	3	N/A	N/A	23	9.75
91	Company	N/A	139	N/A	N/A	137	172	149.33
92	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
93	Company	N/A	N/A	89	75	72	N/A	78.67
94	Company	271	419	72	710	436	75	330.50
95	Company	53	51	95	135	N/A	N/A	83.50
96	Company	6	9	11	15	36	N/A	15.40
97	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
98	Company	N/A	N/A	N/A	95	32	121	82.67
99	Company	N/A	16	72	34	30	N/A	38.00
100	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
101	Company	48	39	28	42	30	41	38.00
102	Company	35	N/A	N/A	N/A	N/A	N/A	35.00
103	Company	N/A	N/A	N/A	N/A	577	205	391.00
104	Company	N/A	N/A	23	51	64	81	54.75
105	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
106	Company	75	81	116	92	71	253	114.67
107	Company	66	66	60	71	109	95	77.83
108	Company	9	4	8	21	7	10	9.83
109	Company	N/A	N/A	13	13	15	9	12.50
110	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
111	Company	67	65	67	47	38	33	52.83
112	Company	3	3	7	23	2	N/A	7.60
113	Company	15	12	12	9	8	13	11.50
114	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
115	Company	N/A	240	68	N/A	N/A	N/A	154.00
116	Company	134	168	112	119	114	80	121.17
117	Company	81	68	69	78	80	86	77.00
118	Company	80	85	107	116	144	132	110.67
119	Company	46	110	53	N/A	N/A	N/A	69.67
120	Company	4	3	1	1	27	N/A	7.20
121	Company	N/A	N/A	N/A	N/A	2	11	6.50
122	Company	185	136	117	138	157	154	147.83
123	Company	48	48	60	59	40	34	48.17
124	Company	217	295	122	194	332	691	308.50
125	Company	170	99	87	157	115	126	125.67
126	Company	8	26	6	6	N/A	N/A	11.50
127	Company	N/A	N/A	N/A	N/A	N/A	14	14.00
128	Company	N/A	N/A	N/A	90	243	350	227.67
129	Company	N/A	64	66	N/A	N/A	N/A	65.00

130	Company	22	28	20	30	19	31	25.00
131	Company	N/A	43	48	46	56	39	46.40
132	Company	38	50	42	47	57	49	47.17
133	Company	N/A	N/A	N/A	139	N/A	N/A	139.00
134	Company	N/A	N/A	N/A	N/A	N/A	N/A	0.00
135	Company	N/A	211	211	117	N/A	N/A	179.67
								<b>75.21</b>

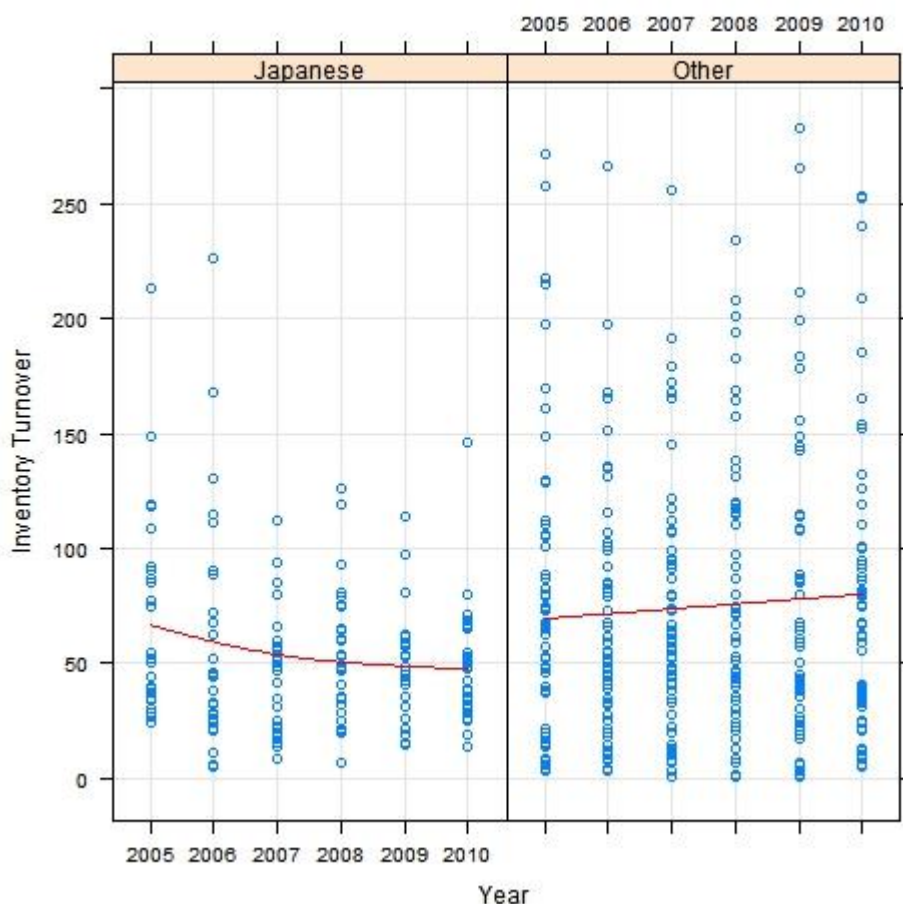
The 6-year Inventory Turnover average in other companies in the Czech Republic (transportation machinery parts) after excluding outliers reached 75.21 days.

In order to get more precise data, companies lacking more than 6 statistical observation units or 3 and more values within 1 measure (e.g. Inventory Turnover Ratio) were excluded. Missing values were completed using linear regression.

Furthermore, intervals that cover 90% of the range (based on credibility  $\sigma$  outliers that are unevenly distributed are excluded if the distribution is asymmetric) were identified and the lowest 5% and the highest 5% of the data were excluded (quantile-based identification).

Regarding the Inventory Turnover Ratio, the lowest value within the interval is 1 and the highest value within the interval is 296.

The following figures represent the development of the Inventory Turnover Ratio within the given period (2005-2010) including spline, a smooth polynomial function that predicts the development tendency.



*Figure 45: Development of Inventory Turnover Ratio (Including Spline Function) in Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts)  $\sigma$  Activity Ratio. Source: Own Elaboration*

The following figure shows the boxplot (within the given years). The black spots indicate the median value. Boxes stand for interquartile ranges. Box and whisker plots are uniform in their use of the box: the bottom and the top of the box are always the 25<sup>th</sup> and 75<sup>th</sup> percentile (the lower and upper quartiles, respectively), and the band (black spot) near the middle of the box is always the 50<sup>th</sup> percentile (the median). The data not included between the whiskers are plotted as an outlier with a small circle.

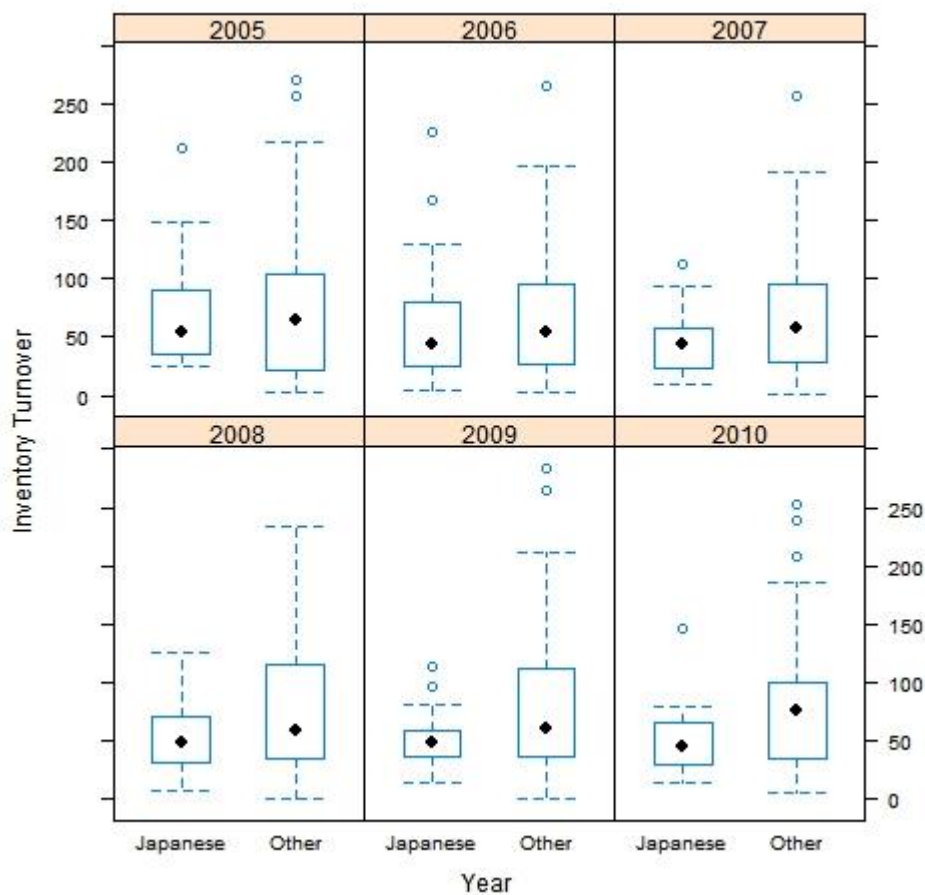


Figure 46: Boxplot Within Selected Years - Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts) ó Activity Ratio (Inventory Turnover). Source: Own Elaboration

#### 4.4.5 Summary of Analyses

Table 19: Summary of Analyses. Source: Own Elaboration

Ratios	Japanese companies	Other companies
Profitability Ratio (ROE)	-2.85%	12.16%
Liquidity Ratio (Current Ratio)	1.27	2.22
Solvency Ratio (Total Debt to Total Assets)	57.92%	60.29%
Activity Ratio (Receivables Turnover)	76.81 days	68.70 days
Activity Ratio (Inventory Turnover)	55.51 days	75.21 days

Within the profitability analysis, a profitability ratio Return on Equity (ROE) was taken into consideration. Profit ratios measure the efficiency with which the company uses its resources. The more efficient the company, the greater is its profitability. The change in a company's profit ratios over time tells whether its performance is improving or deteriorating.

Return on Equity (ROE) indicates how profitable a company is by comparing its net income to its average shareholders' equity. It measures how much the shareholders have earned for their investment in the company. The higher the ratio percentage, the more efficient management is in utilizing its equity base and the more profit is earned by the investors. In general, financial analysts consider return on equity ratios in the 15-20% range as representing attractive levels of investment quality.

We can see a big difference between ROE in Japanese companies that reached minus 2.85% and ROE in other companies that reached 12.16%. Therefore, other companies managed to achieve better results.

Company's liquidity is a measure of its ability to meet short-term obligations. An asset is deemed liquid if it can be readily converted into cash. Liquid assets are current assets such as cash, marketable securities, accounts receivable, etc. Current Ratio belongs to the most commonly used liquidity ratios.

Current Ratio is mainly used to give an idea of the company's ability to pay back its short-term liabilities with its short-term assets. The higher the Current Ratio, the more capable the company is of paying its obligations. A Ratio under 1 suggests that the company would be unable to pay off its obligations if they are due at that point.

Current Ratio of Japanese companies reached 1.27 whereas Current Ratio of other companies reached 2.22. Therefore, other companies managed to achieve better results.

Solvency ratios measure the ability of a company to pay its long term debt and the interest on that debt. Solvency ratios help the business owner determine the chances of the firm's long-term viability.

The Total Debt to Total Assets ratio is the percentage of the total debt financing the firm uses as compared to the percentage of the firm's total assets. It helps to see how much of the assets are financed using debt financing. A higher percentage indicates more leverage and more risk.

Japanese companies reached lower Total Debt to Total Assets ratio (57.92%) in comparison to other companies (60.29%); thus, assets of other companies are financed by debt to a greater extent than assets of Japanese companies.

Activity ratios measure how quickly a company can convert some of its assets into cash, or revenue. Within the analysis, two activity ratios were assessed, namely the Receivables Turnover and the Inventory Turnover.

The Receivables Turnover measures the company's ability to collect outstanding account receivables balances. This ratio determines how quickly a company collects outstanding cash balances from its customers during an accounting period.

The Inventory Turnover indicates how often the company turns its inventory into revenue.

Within the analysis of activity the Receivables Turnover of Japanese companies reached 76.81 days whereas other companies reached 68.70 days, therefore, other companies managed to achieve better results. The Inventory Turnover reached 55.51 days in Japanese companies in comparison to 75.21 days in other companies, thus, Japanese companies managed to achieve better results.

Before starting the research the following research question had been set:

RQ: Is it possible to prove and verify that Japanese companies located in the Czech Republic (transportation machinery parts) achieve better performance results than other companies in the same industry sector due to selected techniques of Japanese management system that are implemented and utilized in every Japanese company all over the world?

A: Within the research it was found out that Japanese companies located in the Czech Republic (transportation machinery parts) achieved better results in the solvency ratio (Total Debt to Total Assets) and the activity ratio (Inventory Turnover) in comparison to other companies in the same

industry sector. On the other hand, other companies reached better results in the profitability (Return on Equity), liquidity (Current Ratio) and activity (Receivables Turnover) ratios.

Therefore, based on the research results it is not possible to prove that Japanese companies located in the Czech Republic in the transportation machinery parts industry sector achieve better performance results than other companies in the same industry sector due to selected techniques of Japanese management system that are implemented and utilized in every Japanese company all over the world.

The following table and figures compare all the selected ratios (profitability, liquidity, solvency and activity) of Japanese and other companies within the given period (2005-2010). In the figures we can see similar trends in all the ratios that had been chosen for the research in both Japanese and other companies in the transportation machinery parts industry sector, as well as the influence of financial crises, particularly that of 2008.

Table 20: Comparison of Ratios within 2005-2010. Source: Own Elaboration

<b>Japanese and Other Companies in the CZ (Without Outliers) - Transportation Machinery Parts</b>						
<b>Profitability Ratio - Return on Equity (ROE) - in %</b>						
<b>Companies</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Japan	-28.99%	17.59%	13.61%	-11.19%	-0.35%	-7.28%
Other	15.59%	20.33%	21.16%	7.82%	11.04%	14.19%
<b>Japanese and Other Companies in the CZ (Without Outliers) - Transportation Machinery Parts</b>						
<b>Liquidity Ratio - Current Ratio</b>						
<b>Companies</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Japan	1.46	1.41	1.04	1.11	1.22	1.37
Other	2.47	1.83	2.12	2.36	2.40	2.57
<b>Japanese and Other Companies in the CZ (Without Outliers) - Transportation Machinery Parts</b>						
<b>Solvency/Leverage Ratio - Total Debt to Total Assets - in %</b>						
<b>Companies</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Japan	62.69%	60.87%	57.09%	59.99%	57.83%	49.44%
Other	60.05%	62.03%	59.82%	57.80%	60.82%	57.13%
<b>Japanese and Other Companies in the CZ (Without Outliers) - Transportation Machinery Parts</b>						
<b>Activity Ratio - Receivables Turnover - in days</b>						
<b>Companies</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Japan	107.04	71.04	77.67	63.45	73.69	68.10
Other	64.85	78.46	78.13	87.40	79.39	86.50
<b>Japanese and Other Companies in the CZ (Without Outliers) - Transportation Machinery Parts</b>						
<b>Activity Ratio - Inventory Turnover - in days</b>						
<b>Companies</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Japan	78.89	61.04	45.69	54.39	51.21	45.50
Other	85.01	89.66	72.68	90.78	98.70	103.65



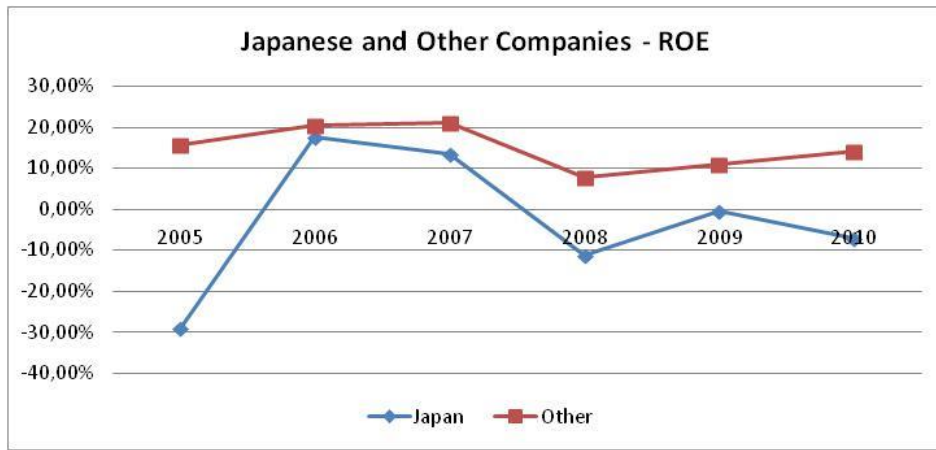


Figure 47: ROE Development (Without Outliers) in Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts). Source: Own Elaboration

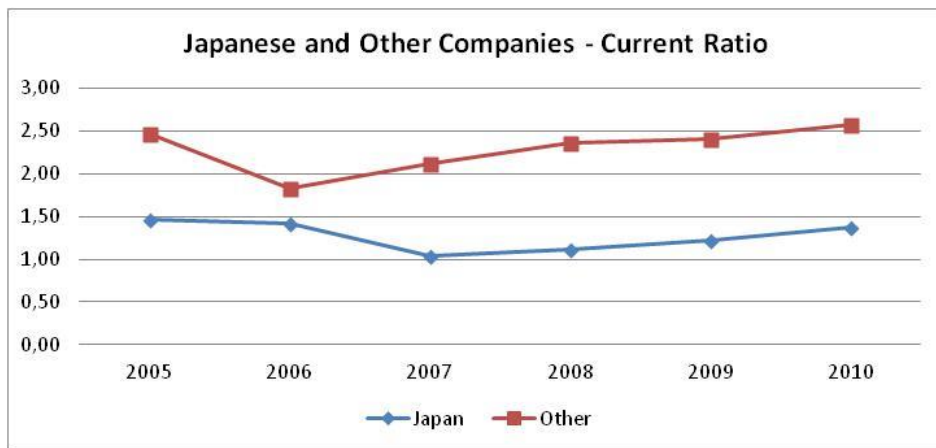


Figure 48: Current Ratio Development (Without Outliers) in Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts). Source: Own Elaboration

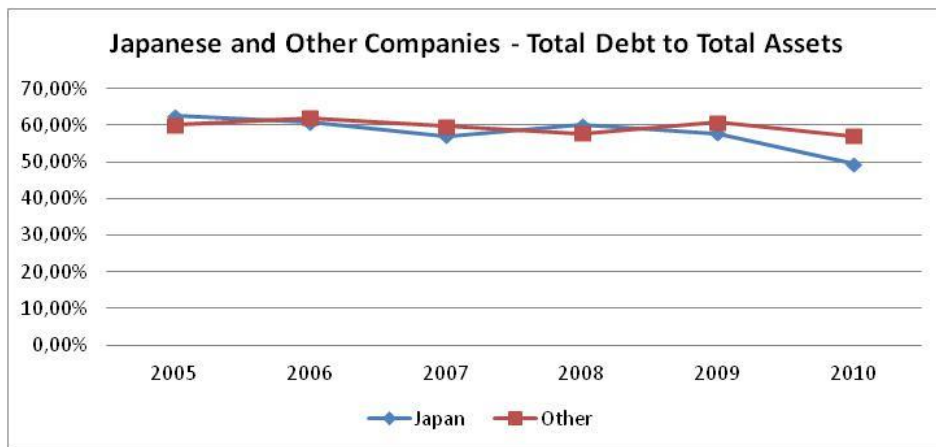


Figure 49: Total Debt to Total Assets Ratio Development (Without Outliers) in Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts). Source: Own Elaboration

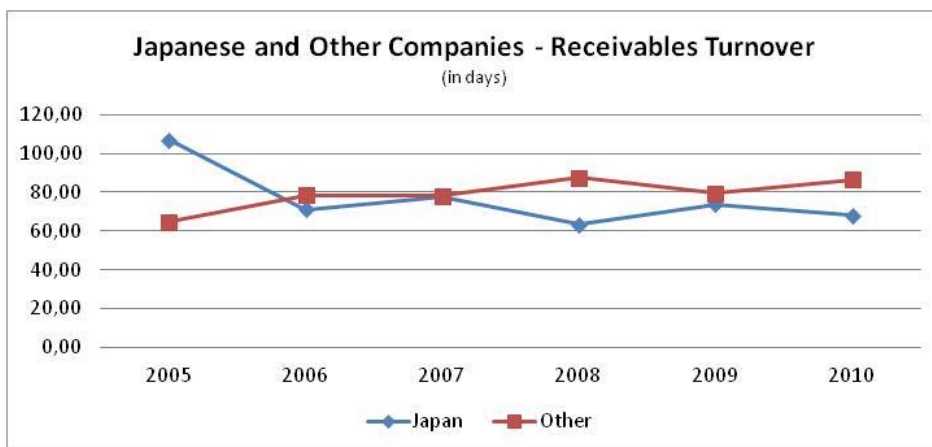


Figure 50: Receivables Turnover Development (Without Outliers) in Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts). Source: Own Elaboration

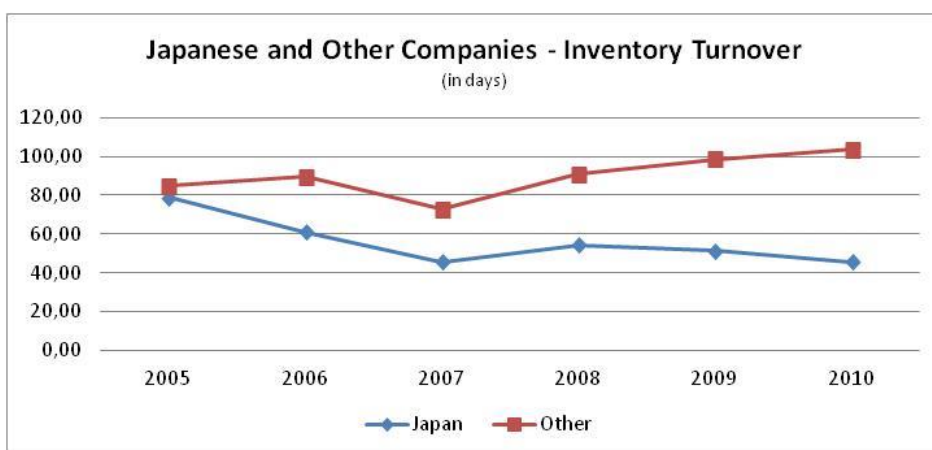


Figure 51: Inventory Turnover Development (Without Outliers) in Japanese and Other Companies in the Czech Republic (Transportation Machinery Parts). Source: Own Elaboration

## 4.5 Case Studies of Companies Utilizing Components of Selected Management Systems

Based on the research findings (questionnaire surveys, performance evaluation,í ), two companies that utilize (either intentionally or unintentionally) components of selected management systems (Bata Management System, Japanese Management System, Amoeba Management System) and achieve above-average figures in performance and other financial indicators in comparison to their competitors have been selected for further investigation using structured interviews and case studies.

The case study process has followed the process map suggested by Yin (2008) as illustrated in the following figure. The starting point was the theoretical framework. When a clear picture of the academic landscape was generated the focus shifted to the selection of case studies. The choice was made to focus on two separate case studies. After the choice of case studies the data collection protocol was designed. Two components created the base of the protocol:

- Observations of archived data (financial data obtained from the company and from the Albertina database; annual reports, manuals, etc.)
- Interview study

Two Japanese manufacturing companies located in the Czech Republic have been chosen for the study. Both companies were established in the Czech Republic in 1997 and belong among the first Japanese companies to start manufacturing business in the Czech Republic after the Velvet Revolution in 1989.

The first companyø (case A) business activity focuses on pyrotechnic manufacturing. The second companyø (case B) business activity focuses on textile manufacturing.

The objective with both case studies was to search into what degree the theoretically critical aspects of performance measurement and management exist in practice and how they are applied.

The data collection was composed of two parts: an analysis of the archived data and interviews. The financial data were scrutinized in order to create an accurate picture of what the current situation looked like. Afterwards, interview studies with managers of both companies were initiated. Each interview took between 60 to 120 minutes.

## 4.5.1 Case Study A

### Case Study A óManagement System, Strategy and Vision

Case A , a joint-stock company, is a manufacturer of pyrotechnic initiators and gas generators used in automobile occupant protection modules (airbags and seat-belt pretensioners) with more than 250 employees. Its parent company is a traditional Japanese manufacturer in the field of special chemistry. It is a major producer of pharmaceuticals, industry dyes, industrial explosives, airbag inflators, special resins for electronics, jet-printer inks, agro-chemicals. It has the annual turnover of 1.2 billion USD and employs more than 4,300 people in several locations in Japan and abroad. The company aims to continuously provide society with the best products through ceaseless progress and the combined forces of consciences.

Based on the interviews and data provided, in order to produce high-quality products the following key activities are pursued: providing accurate product information, sales activities to meet needs, effective quality management and cost reductions to provide products at appropriate prices. Ceaseless progress is supported by joint efforts to improve the quality of products, expanding sales of existing products, developing new products or launching new businesses. The combined forces of consciences are comprised of compliance, consideration for safety and environment, an independent and autonomous approach and team work.

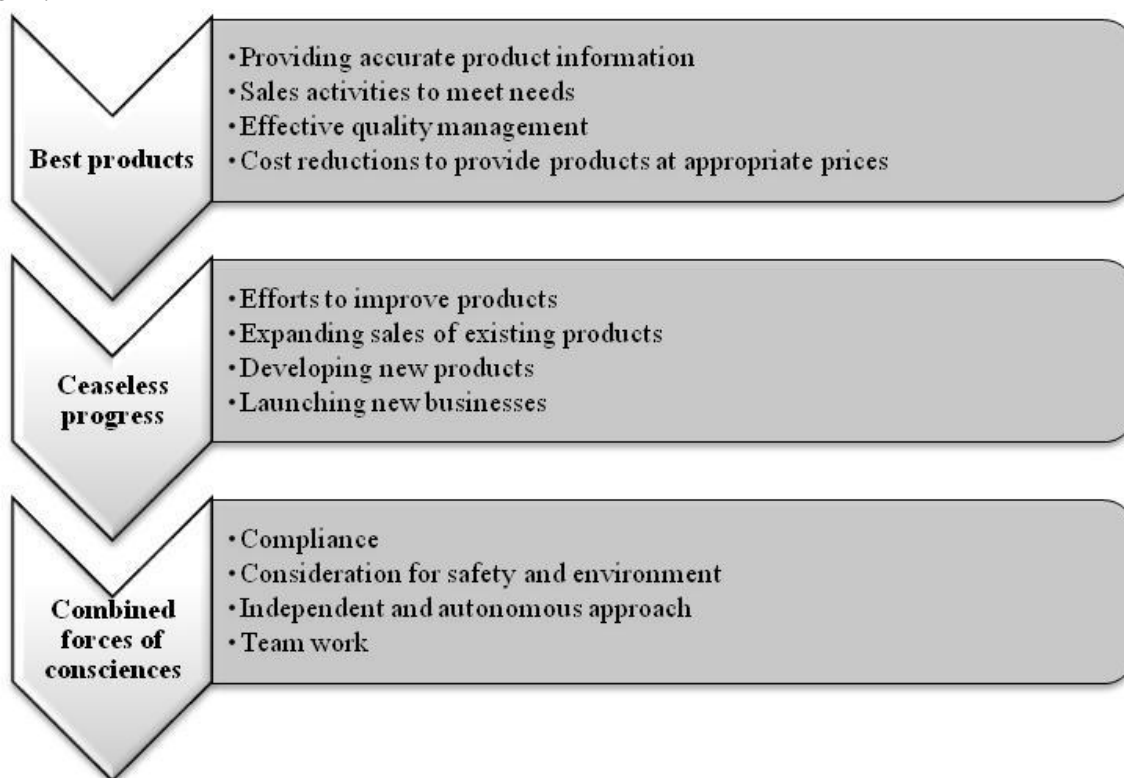


Figure 52: Corporate Vision of Case A. Source: Internal Sources of Case A

Case A company shares the same values as its parent company within the selected perspectives:

- Business operations
  - Careful attention to safety and reliability of its products and services
  - Providing customers with products and services satisfying their needs
  - Complying with the words and spirit of relevant laws and regulations, as well as with its internal rules
  - Conducting fair, transparent and open competition
  - Respecting the culture and customs of each country and region where subsidiaries are located
  - Appropriate managing and utilizing company assets
  - Seeking to improve the efficiency of business operations so as to achieve a continuous growth
  - Dealing firmly with anti-social forces (do not yield to unjustified or illegal requests)
  
- Relationship with society
  - Promoting coordination and cooperation with society
  - Contribution to society as a good corporate citizen
  - Disclosing information concerning on its business operations to customers, local society, employees and business partners, based on objective facts, in an adequate and timely manner
  - Giving consideration to the impact of its business on the global environment
  - Aiming to achieve environmentally friendly business operation, by not only by compliance with relevant laws and regulations, but also by establishing voluntary standards
  
- Management of business information
  - Adequate protection of any information obtained through its business operations
  - Developing countermeasures safe-guarding against information leakages and unauthorized external and internal access
  - Acknowledgement of the proprietary nature of information (intellectual property) and respect of rights of others
  
- Relationship between the company and individuals
  - Complying with labour laws and regulations to ensure a safe and comfortable working environment

- Respecting the fundamental human rights and privacy of the individuals

In order to abide the above mentioned principles, Case A has established a Code of Business Conduct that all executives and employees act in accordance with.

- Code of Conduct on Business operations
  - Product safety and quality
  - Provision of product information
  - Fair and impartial trade
  - Prohibition of excessive gifts and entertainments
  - Priority on ethics
  - Prohibition of pursuit of individual benefits
  - Compliance with local laws and regulations and respect for international norms, cultures and customs
  - Adequate protection and efficient utilization of corporate assets
  - Active efforts for operational improvement
  - Exclusion of anti-social forces, criminal and/or other illegitimate sources
  
- Code of Conduct on the Relationship with society
  - Social action programmes
  - Exchange with local societies
  - Adequate and timely disclosure of information
  - Thorough crisis management
  - Prohibition of insider trading
  - Environmental coexistence
  - Environmental protection efforts
  
- Code of Conduct for the Management of business information
  - Protection of business information
  - Protection of personal information
  - Appropriate use of information system
  - Respect for the rights of other people
  
- Code of Conduct on the Relationship between the company and individuals
  - Maintenance of the working environment
  - Prohibition of harassment and abuse of power
  - Respect for human rights and privacy

Within the Action Policy the following statements have been set:

- Listening to the valuable opinions of customers
- Real communication to improve mutual understanding
- Being responsive to market changes through discussion and action
- Thinking cost-conscious, but maximizing product value
- Getting the job done in teams that really work

Case A utilizes an Integrated Management System that was developed according to the ISO/TS 16949:2009 and ISO 14001:2004 standards and applies to the development, production and sale of electric initiators and micro-gas-generators for automotive safety systems.

The company performs regular internal audits and training activities for all employees to improve quality management system continuously. It has implemented the KAIZEN system of proposals that encourages all employees to work towards the common goal, namely a better and more effective company. Other methods of the Japanese Management System are utilized, too ó e.g. Just-In-Time, JIDOKA (autonomous control of production defects), GENBA (orientation to operations), RINGI system (consensus decision-making), seniority system, KEIRETSU (long-term relationships with partners) and the Amoeba Management System.

### **Case Study A ó Performance Management and Measurement**

Based on research findings, case A utilizes the following concepts and measures for performance management and measurement:

- More than 2 years
  - Financial measures
  - Controlling
  - Balanced Scorecard
  - Management Accounting Outputs
  - Reengineering
  - Lean Management
- Less than 2 years
  - Economic Value Added (EVA)
  - Quality Management
  - Customer Relationship Management

Among the main reasons for launching a system for performance management and measurement belong mainly strategic planning, strategy verification, management of relationships among stakeholders, controlling of a company and motivation and reward systems. On the other hand, everyday decision-making,

communication or duties set by the laws and regulations do not belong to significant reasons for launching a system for performance management and measurement.

The following areas of corporate management are important for performance measurement in Case A: finance, customer, internal processes, employees, IS/ICT, health and safety and innovations.

Performance in Case A is also influenced by the following factors: profitability, financial stability, costs and revenues, maintaining existing and getting new customers, customers satisfaction, quality of product including price, service and range of products, resources utilization (human, assets, property, materials, í ), logistics, sales and marketing, production process (including its effectiveness and flexibility of production, new technologies, í ), corporate management (strategies, organization), internal corporate environment, quality of human resources, innovation activity, research and development, knowledge management, etc.

### **Case Study A ó Financial Analysis of Selected Ratios**

Within the financial analysis, a 10-year development of selected ratios have been taken into consideration ó i.e. profit/loss of current accounting period, equity, profitability ratios - return on equity (ROE), return on assets (ROA), solvency/leverage ratio ó total debt to total assets ratio and liquidity ratios ó current ratio and quick ratio.

Equity in Case A shows constantly growing figures - except for a slight decrease in 2008 caused by financial crisis. Profit and loss of current accounting period grew continually between 2001 and 2006. In 2007 and 2008 we can see a slight decrease. Since 2009 the figures have started to increase again.

A company is said to be highly leveraged if it uses more debt than equity, including stock and retained earnings. Debt has a lower cost because creditors take less risk; they know they will get their interest and principal. However, debt can be risky to the firm because if enough profit is not made to cover the interest and principal payments, bankruptcy can occur. A recommended zone for Debt-to-Assets-Ratio ranges from 30% to 60%. From 2001 to 2005, Case A's total debt to total assets ratio oscillated from approx. 50% to 60%. From 2006 company has started to decrease using more debt than equity continually. The total debt to total assets ratio reached approx. 23% in 2010.

Within the research, two profitability ratios (Return on Equity ó ROE, and Return on Assets ó ROA) were taken into consideration. Profit ratios measure



the efficiency with which the company uses its resources. The more efficient the company, the greater is its profitability. The change in a company's profit ratios over time tells whether its performance is improving or declining.

Return on Equity (ROE) indicates how profitable a company is by comparing its net income to its average shareholders' equity. It measures how much the shareholders earned for their investment in the company. The higher the ratio percentage, the more efficient management is in utilizing its equity base and the bigger return the investors receive. In general, financial analysts consider return on equity ratios in the 15-20% range as representing attractive levels of investment quality. ROE in Case A started to grow significantly from 2003. In 2005 it reached its peak and declined steadily till 2008 (red numbers ó company did not earn a profit). Since 2009 we can see an increase nearing to the recommended range (15-20%).

Return on Assets (ROA) indicates how profitable a company is relative to its total assets. This ratio illustrates how well management is employing the company's total assets to make a profit. The higher the return, the more efficient management is in utilizing its asset base. Investment professionals prefer to see a company's ROA come in at no less than 5%. In case A we can see similar development like in ROE, i.e. increase from 2003, peak in 2005, decrease till 2008 and since then the values have been increasing again.

Company's liquidity is a measure of its ability to meet short-term obligations. An asset is deemed liquid if it can be readily converted into cash. Liquid assets are current assets such as cash, marketable securities, accounts receivable, etc. Current and Quick ratios belong to two commonly used liquidity ratios.

Current ratio is mainly used to give an idea of the company's ability to pay back its short-term liabilities with its short-term assets. The higher the current ratio, the more capable the company is of paying its obligations. A ratio under 1 suggests that the company would be unable to pay off its obligations if they are due at that point.

Quick ratio is an indicator of a company's short-term liquidity. The quick ratio measures a company's ability to meet its short-term obligations with its most liquid assets. The higher the quick ratio, the better the position of the company is.

Development in liquidity ratios in Case A shows great similarities. Since 2002 there has been a moderate increase in both ratios that resulted in quick increase since 2008.

### Case A - Profit/Loss of Current Accounting Period and Equity

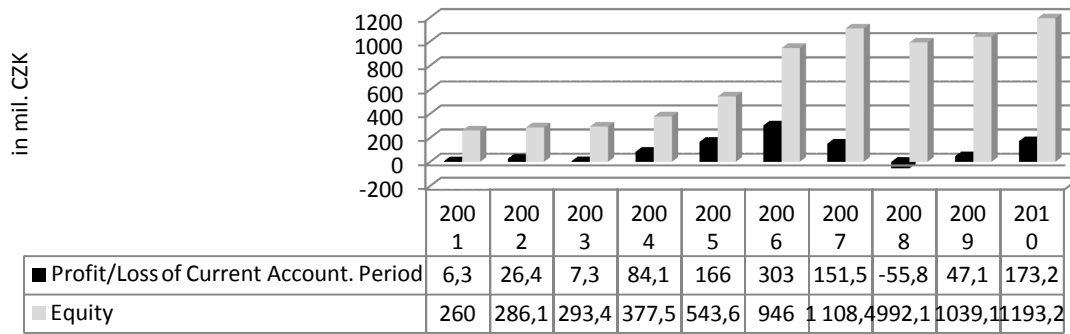


Figure 53: Development of Profit/Loss of Current Accounting Period and Equity in Case A. Source: Own Elaboration

### Case A - ROE, ROA, Total Debt To Total Assets Ratio

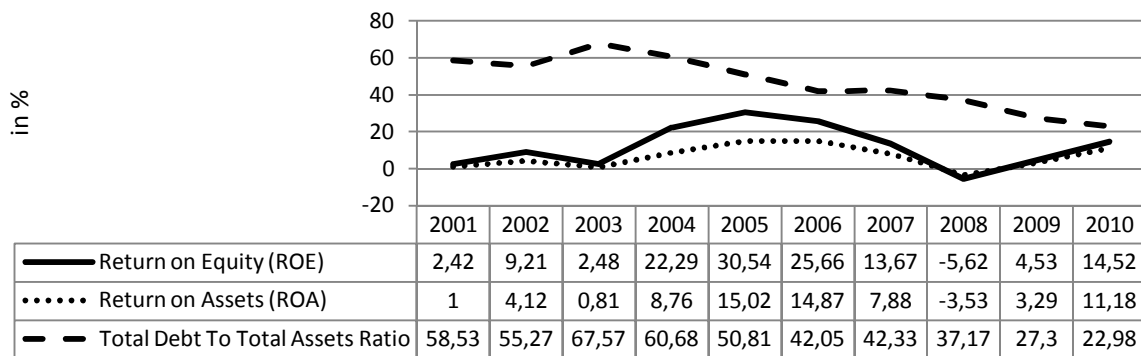


Figure 54: Development of Profitability and Solvency/Leverage Ratios in Case A. Source: Own Elaboration

### Case A - Liquidity Ratios

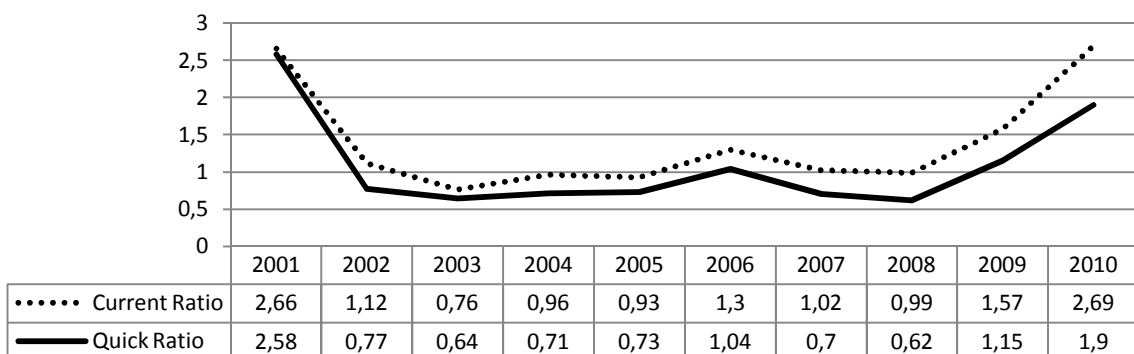


Figure 55: Development of Liquidity Ratios in Case A. Source: Own Elaboration

## 4.5.2 Case Study B

### Case Study B óManagement System, Strategy and Vision

Case B , a limited company, is a manufacturer of high quality polyester taffeta fabric. Its parent company is the world's leading manufacturer of synthetic fibers and textiles with 199 subsidiaries and affiliated companies in 17 countries and areas around the world. The diversified businesses include fibers and textiles, plastics and chemicals, housing and engineering, pharmaceuticals and medical products, and new products and other businesses including carbon fiber and electronics and information-related products.

Based on interviews and data provided, corporate goals in the 21<sup>st</sup> century are:

- To be an integrated chemical group based on three business domains (diversified synthetic materials, advanced & end products, fashion, trade & information)
- To pursue growth on a global scale
- To exhibit the integrated capabilities conferred by the company's group management practices
- To promote the globalization of corporate activities
- To play a positive role in protecting the global environment, placing the first management priority on safety, accident prevention, and environmental preservation
- To make a contribution to society as a sincere corporate citizen and to create a lively and attractive corporate culture

Case B pays special attention to quality management system with the aim on continuous improvement of all company activities as well as customer satisfaction. Each year company top management led by managing director sets company policy as well as quality policy.

Corporate policy goals for 2011:

- Safety First, Zero Accident (continuous improvement of environment protection)
- Customers' Satisfaction through Excellent Quality
- Expansion of Profits

- Taffeta: Transforming high value-added items
- Airbag: Increase of sales and production quantity
- Waterless plate cutting: Full production of two machines

Quality policy focuses on customers, management, employees involving, procedural approach, system approach, continuous improvement, access to decision making based on facts and mutually-profitable supply relationships.

- Orientation to customer
  - Fulfilment of customers' requirements
  - Trying to anticipate customers' expectations
- Management
  - Managers are creating such a background and conditions for employees on the lowest positions to motivate them to participate in the realization of the company objectives
- Employees involving
  - Involving all employees in all activities of company and by means of their knowledge and abilities participating to successful functioning of company
- Procedural approach
  - By means of a procedural approach (succession of activities modifying with the help of sources inputs to final product) achieving effectiveness of all activities during the realization of quality and environmental objectives
- System approach
  - By means of system approach (binding regulations for management and evaluations of processes) achieving higher effectiveness
  - Abiding this regulations ó reaching optimal results and avoiding faults and misunderstanding
- Continuous improvement
  - Stable goal of company
  - Condition of success, increase of competitive advantage and stabilization and social reliance of all employees
- Access to decision making based on facts
  - Making decisions only on the basis of facts (analysis of available data)

- Adherence to legal requirements and close cooperation with administrative agencies
- Mutually profitable supply relationships
  - On the basis of confidence and cooperation achieving mutually profitable supply relationships with suppliers

At the end of 2004, Case B has successfully received Quality Management System certification according to ISO 9001:2000. In order to meet additional requirements of automotive industry specified by ISO/TS 16949:2002 technical standard, the management system at that time based on ISO 9001:2000 standard had to be adapted. Certification audit according to ISO/TS 16949:2002 standard has been carried out in April 2008. It has confirmed that management system in Case B fully complies not only with ISO 9001:2000 standard but also with specific requirements on management system requested from suppliers of automotive industry manufacturers according to ISO/TS.

Environment protection is another area which Case B focuses on and pays special attention. From long-term perspective, Case B complies with all requirements of environmental legislation. This fact has been proved by Integrate Pollution Prevention & Control (IPPC) approval received in 2006.

The objective of Case B is to manufacture products with regard to the best interests of final customers. One of significant achievements on this way is a certificate Oeko-Tex standard 100, internationally recognized mark for safe and harmless textiles. This certification includes yearly testing of products in accredited laboratory abroad and is a sound guarantee that the products are safe.

In compliance with Law on packages, Case B applies an integrated system of use and packaging waste recycling. Case B complies with legal requirements thorough conclusion of a Contract of Collective compliance of take-back and recovery of packaging waste with authorized packaging company.

Based on above mentioned activities, Case B has decided to implement, apply in daily practice and continuously improve Environmental management system according to ISO 14001:2004 standard. An approach of environmental protection is firmly embedded in mind of company employees. All departments set up individual objectives based on environmental policy reviewed on yearly basis by company top management.

Case B has a well established and certified integrated management system which is characterized as follows:

- Safety First
- Focus on customers' requirements and expectations
- Certification according to ISO 9001:2000 (January 2005)
- Certification according to ISO 14001:2004 (January 2007)
- Certification according to ISO/TS 16949:2002 (May 2008)
- Well managed and continuously improved processes

The company performs regular Japanese Management System. Other methods of Japanese Management System are utilized, too e.g. Just-In-Time, JIDOKA (autonomous control of production defects), GENBA (orientation to operations), RINGI system (consensus decision-making), seniority system, KEIRETSU (long-term relationships with partners) and Amoeba Management System.

### **Case Study B ó Performance Management and Measurement**

Based on research findings, case B utilizes the following concepts and measures for performance management and measurement:

- More than 5 years
  - Financial measures
  - Controlling
  - Management Accounting Outputs
  - Quality Management
  - Benchmarking
- Less than 5 years
  - Lean Management
  - Customer Relationship Management

Among the main reasons for launching a system for performance management and measurement belong mainly strategic planning, strategy verification, management of relationships among stakeholders, controlling of a company, communication and motivation and reward systems. On the other hand, everyday decision-making or duties set by the laws and regulations do not belong to significant reasons for launching a system for performance management and measurement.

The following areas of corporate management are important for performance measurement in Case B: finance, customer, internal processes, employees, IS/ICT, health and safety and innovations.

Performance in Case B is also influenced by the following factors: profitability, financial stability, costs and revenues, maintaining existing and getting new

customers, customers satisfaction, quality of product including price, service and range of products, resources utilization (human, assets, property, materials, í ), logistics, sales and marketing, production process (including its effectiveness and flexibility of production, new technologies, í ), corporate management (strategies, organization), internal corporate environment, quality of human resources, innovation activity, research and development, knowledge management, etc.

### **Case Study B ó Financial Analysis of Selected Ratios**

Similarly to Case A, the analysis in Case B focused on 10-year development of profit/loss of current accounting period, equity, profitability ratios - return on equity (ROE), return on assets (ROA), solvency/leverage ratio ó total debt to total assets ratio and liquidity ratios ó current ratio and quick ratio, first (see the following figures).

Equity in Case B shows on average slightly growing figures with peaks in 2004 and 2006. Company did not earn a profit from 2001 till 2009 (except from 2004). However, in 2010 a profit and loss of current accounting period returned to black numbers again.

A company is said to be highly leveraged if it uses more debt than equity, including stock and retained earnings. Debt has a lower cost because creditors take less risk; they know they will get their interest and principal. However, debt can be risky to the firm because if enough profit is not made to cover the interest and principal payments, bankruptcy can occur. A recommended zone for Debt-to-Assets-Ratio ranges from 30% to 60%. In the 10-year development, Case B's total debt to total assets ratio has been decreasing from approx. 70% in 2001 to 50% in 2010.

Within the research, two profitability ratios (Return on Equity ó ROE, and Return on Assets ó ROA) were taken into consideration. Profit ratios measure the efficiency with which the company uses its resources. The more efficient the company, the greater its profitability is. The change in a company's profit ratios over time tells whether its performance is improving or deteriorating.

Return on Equity (ROE) indicates how profitable a company is by comparing its net income to its average shareholders' equity. It measures how much the shareholders earned for their investment in the company. The higher the ratio percentage, the more efficient management is in utilizing its equity base and the bigger return the investors receive. In general, financial analysts consider return on equity ratios in the 15-20% range as representing attractive levels of investment quality. ROE in Case B has been increasing since 2009. From 2001

till 2009, the company did not make any profit, therefore, the indicator was in red numbers.

Return on Assets (ROA) indicates how profitable a company is relative to its total assets. This ratio illustrates how well management is employing the company's total assets to make a profit. The higher the return, the more efficient management is in utilizing its asset base. Investment professionals prefer to see a company's ROA come in at no less than 5%. In case B we can see similar development like in ROE, i.e. increase and return to black numbers since 2009.

Company's liquidity is a measure of its ability to meet short-term obligations. An asset is deemed liquid if it can be readily converted into cash. Liquid assets are current assets such as cash, marketable securities, accounts receivable, etc. Current and Quick ratios belong to two commonly used liquidity ratios.

Current ratio is mainly used to give an idea of the company's ability to pay back its short-term liabilities with its short-term assets. The higher the current ratio, the more capable the company is of paying its obligations. A ratio under 1 suggests that the company would be unable to pay off its obligations if they are due at that point.

Quick ratio is an indicator of the company's short-term liquidity. The quick ratio measures the company's ability to meet its short-term obligations with its most liquid assets. The higher the quick ratio, the better the position of the company is.

Development in liquidity ratios in Case B shows great similarities. We can see a decrease in both ratios between 2001 and 2005. Both ratios have been increasing moderately since 2006.



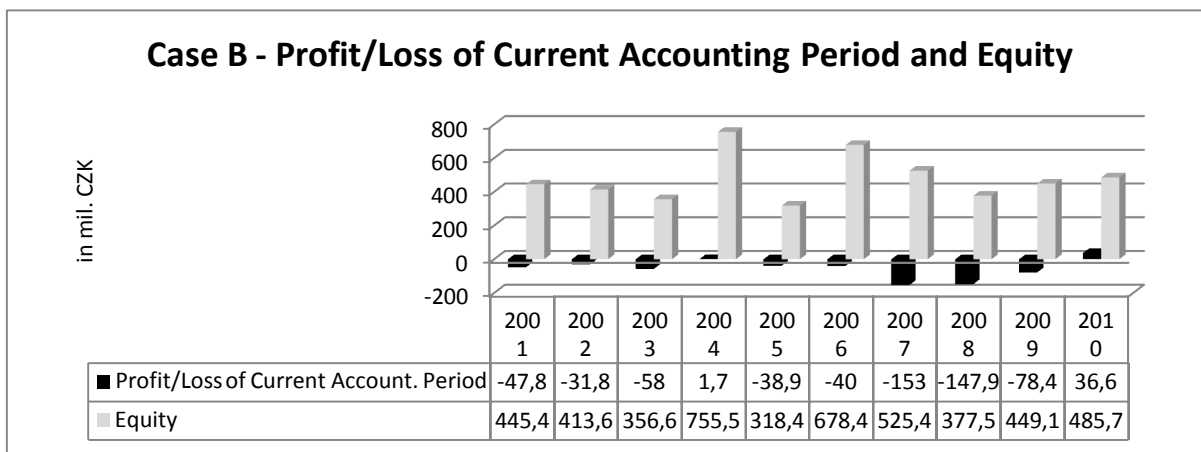


Figure 56: Development of Profit/Loss of Current Accounting Period and Equity in Case B. Source: Own Elaboration

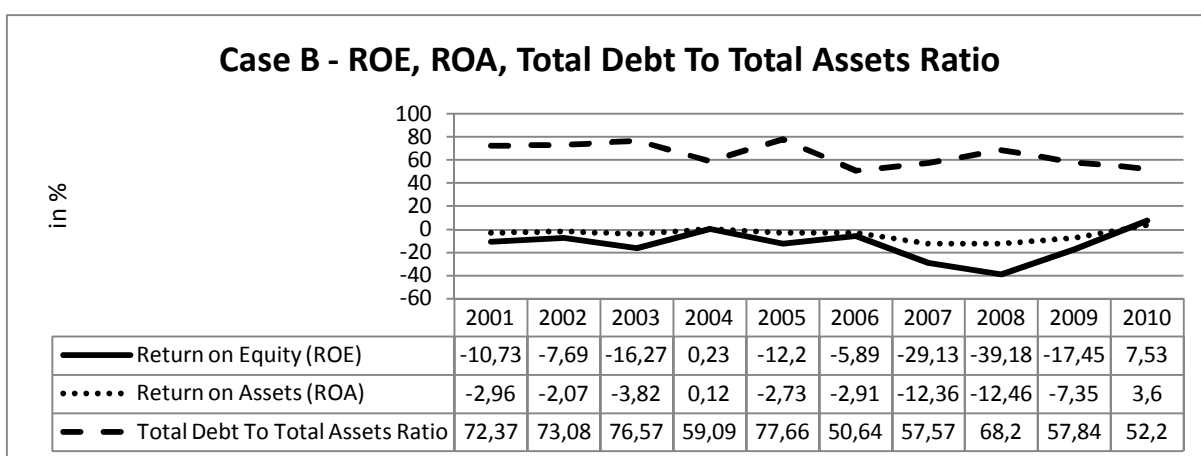


Figure 57: Development of Profitability and Solvency/Leverage Ratios in Case B. Source: Own Elaboration

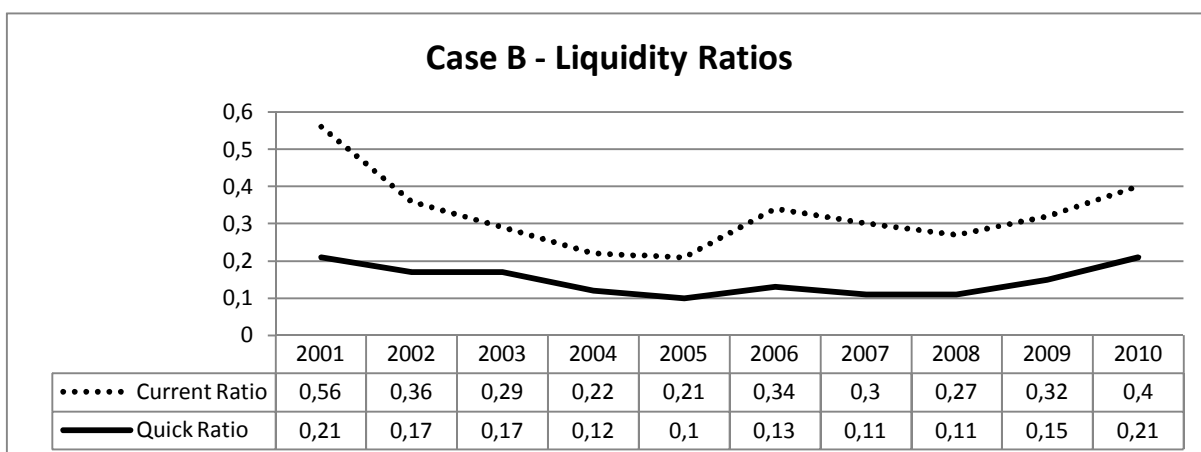


Figure 58: Development of Liquidity Ratios in Case B. Source: Own Elaboration

## **5 ESTABLISHING A DYNAMIC PERFORMANCE FRAMEWORK BASED ON THE UTILIZATION OF SYNERGY EFFECTS OF SELECTED MANAGEMENT SYSTEMS**

In the following chapter a dynamic performance framework based on the utilization of synergy effects of selected management systems ó Bata Management System, Japanese Management System and Amoeba Management System is going to be formulated. Mutual synergy effects of all the three systems shall lead enhance corporate performance and efficiency.

In order to establish a dynamic performance framework that utilizes methods derived from corporate strategies or stakeholder interests (based on the selected management systems), a proactive and efficient performance framework linking strategic objectives to measures is necessary. Since all organizations do something, all organizations already have a strategy. The framework shall include various aspects ó ranging from strategy, organization structure, globalization, organizational learning, corporate finance, corporate governance, human resource management and production management to innovation, social responsibility, ecology and other issues. A key factor is to integrate all components in a single whole.

Mutual synergy effects of the Bata Management System, Japanese Management System and Amoeba Management System will be analyzed within given dimensions that each business has to coordinate (people, processes and systems, innovations, finance, social responsibility and ecology). They will be further classified and properly sequenced based on their importance and frequency of occurrence in selected management systems. Finally, all perspectives will be fully integrated within each other to create a system that is able to withstand irrelevant disturbances and that is at the same time responsive to relevant changes.

Within the People's perspective in all the three selected management systems, customer is the driver of the strategy and the validating source and measure of quality, innovation and knowledge.

During the past decades customers have changed from the relatively uninformed, unsophisticated and unskilled local customers to global customers. Generally speaking, global customers want to get the product and services cheaper, better and faster. Based on this fact, a successful company shall produce its high quality products and provide its services at low cost and high speed.



*Figure 59: Synergy Effects of BMS, JMS and AMS ó People Perspective. Source: Own Elaboration*

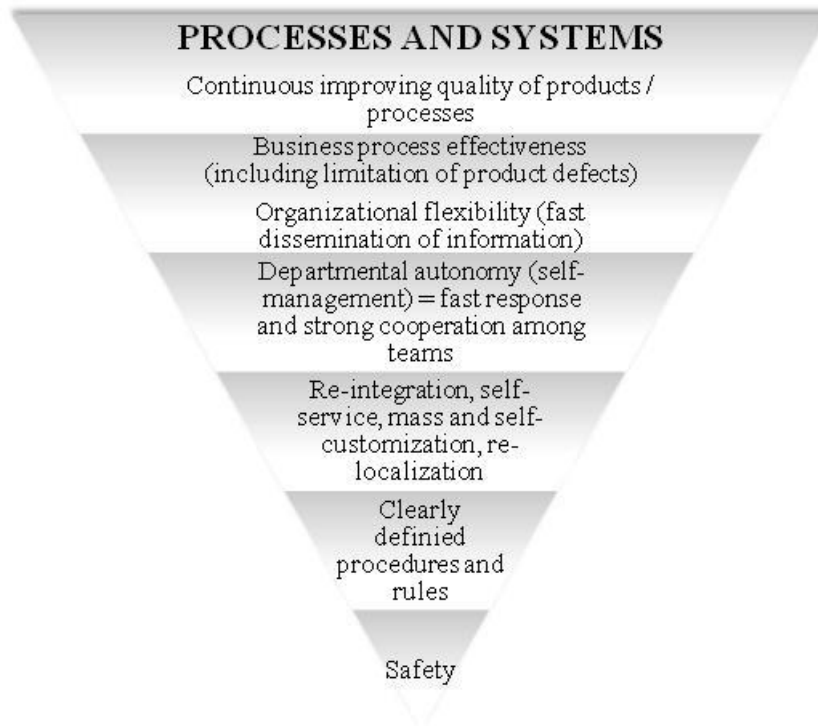
Loyalty of customers shall be considered as a key target of every company. Customer satisfaction achieved thanks to high quality products and the continuous (event. discontinuous) improvement in the quality should be set as the dominant strategic principle of each company. Moreover, disintermediation (direct communication with customers and elimination of middle man) is crucial for a company, too.

Responsibility of each employee for improving business processes / products including benefits based on employee performance (or penalties to teams for quality failures) serve as a source of motivation and simultaneously as spontaneous participation in management of the organization.

Effective collaboration (team-based) among employees has become the cornerstone of any successful business. It is essential that employees feel to form part of a company.

Moreover, skilled employees that are offered enough opportunities for intellectual development support long-term sustainable strategy of a firm with a long-lasting impact on customers.

Employment shall be stable and long term with an impact on safety and well-being of employees not only in the workplace.



*Figure 60: Synergy Effects of BMS, JMS and AMS ó Processes and Systems Perspective. Source: Own Elaboration*

Properly set processes and systems are the basis for running a successful business. All the selected management systems lay a great emphasis on continuous improving of the quality of products and services. However, nowadays discontinuous (disruptive) improvement in the quality of products, services and business models is driving innovation processes. These improvements are more indicative of the current needs than the traditional continuous improvement.

All processes shall constantly assure high-quality output while eliminating breakdowns and stoppages, i.e. a focus shall be put on safety and business processes effectiveness including reduction of product defects.

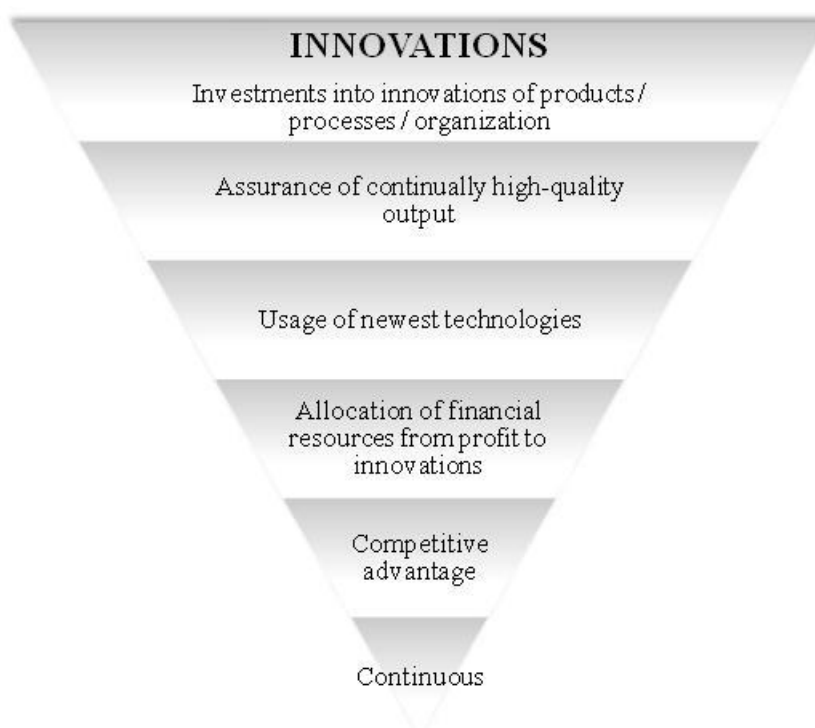
Total strategic flexibility can be achieved by breaking the large organization into smaller units with their own autonomy and responsibility. This decomposition will lead to faster response, entrepreneurial dynamism and self-sustainability. Clearly defined procedures and rules help to coordinate the action smoothly and result in transparency in all activities.

Nowadays, the process of reintegration is accelerating, too. This process leads to a smaller number of workers (that perform and coordinate larger portions of processes), operations and product parts needed. Empowerment through self-service or self-help (by customers that are able to perform services more

effectively) has also been influencing the stereotypes of corporate processes recently.

Processes in a company shall take into consideration a mass and self-customization (integration of a customer in the production and delivery processes), too.

Last but not least, a shift from localization through globalization to re-localization has been monitored recently. In re-localization, regions, localities and communities are supported. Local products and services are enhancing individuals and community through self-service, disintermediation and mass customization.

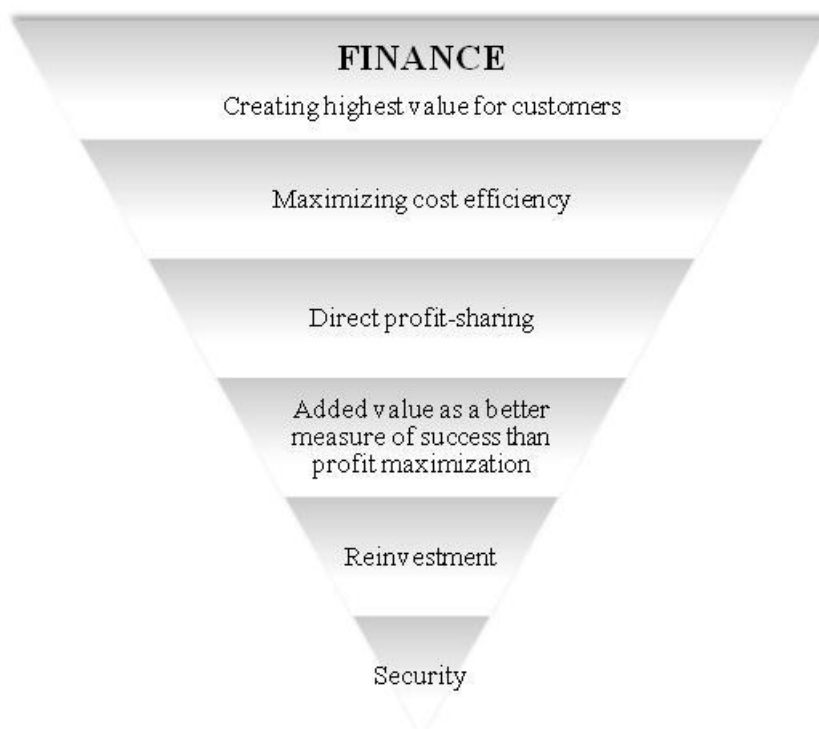


*Figure 61: Synergy Effects of BMS, JMS and AMS ó Innovations Perspective. Source: Own Elaboration*

In order to become extraordinarily productive, effective and to achieve competitive advantage, continuous innovations not only in products and services but also in the entire organization and its processes are necessary. Inner sustainability of a company requires innovations.

Allocation of a part of financial resources from profit into innovations is a must in most cases.

However, the process of developing new technologies is often influenced by technology support nets (barrier to innovation) supported by politics, investors, money, etc. It is necessary to bypass the existing support nets and create new ones in parallel.



*Figure 62: Synergy Effects of BMS, JMS and AMS ó Finance Perspective. Source: Own Elaboration*

Creating maximum value for customers and maximizing cost efficiency are considered as key factors for success within financial perspective in all the three selected management systems. Direct and immediate profit-sharing leads to higher effectiveness.

Corporate resources must be continually designed and re-designed to maximize the added value for the business and its customers. Therefore, added value serves as a better measure of success than profit maximization. All employees must add value to justify their earnings.

When a business begins to generate profits, it is essential to reinvest them back into the business to improve the company or expand operations.

Two researches that were conducted within the Doctoral studies have confirmed that financial measures, controlling, management accounting outputs, as well as quality management, benchmarking and customer relationship management belong among the most frequently used performance concepts and tools (measures) today's companies. Therefore, the financial perspective belongs

among the key perspectives that influence strategic decisions of a company. Nevertheless, financial measures have a number of limitations and weaknesses; therefore, concepts that connect strategic and operative management, are linked to the company's value and communicate fast among all parts and are essential for everyday monitoring and enhancing of corporate performance.

For many companies, an important part of running a business is getting to the top of financial measures of corporate performance. The profitability is generally measured by the key standard measures, and that particularly gross profit margin, operating margin, net profit margin, Return on Capital Employed (ROCE), Return on Equity (ROE), Return on Assets (ROA) etc. Among other commonly used accounting ratios there are mainly liquidity ratios, efficiency ratios or financial leverage or gearing ratios.

However, traditional financial measures fail to capture the true picture of the firm's value propositions because they focus on the past. They are only part of the information that managers need in order to successfully guide their organizations through highly competitive markets. Financial results are generally measured in monetary terms. The income statements that are prepared for particular departments are modeled on the income statement of the company.

Among measures that are being increasingly applied in investor-owned organizations nowadays there are market value added (MVA) measures and economic value added (EVA) measures. Unlike traditional profitability measures, both MVA and EVA measures take into account the cost of equity capital.

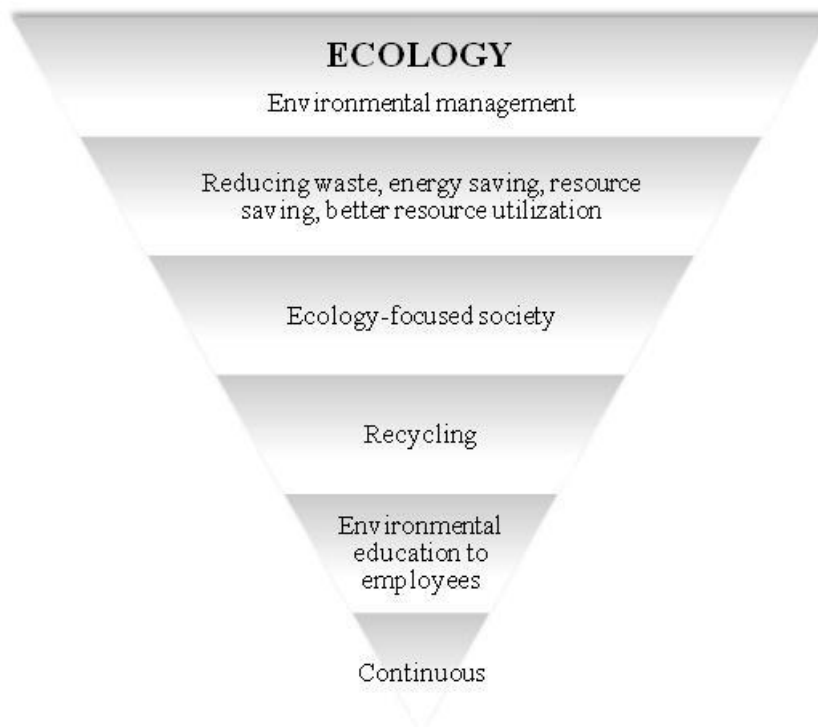
Thus, the mission of a company should not be focused on earning profits and return on investments only. Wise executives shall be prepared for the future by means of investing in competence, cultivation of the customer relationship, creating maximum value possible for customers and maximizing cost efficiency.

Within the Social responsibility perspective, moral behaviour and action, contribution to advancement of society, service to public, strong work ethic, and continuous education in the field are emphasized in all the selected management systems.

Ecology perspective focuses mainly on environmental management, continuously reducing waste, energy and resource saving, better resource utilization, recycling and environmental education to employees. Companies shall become ecology-focused.



*Figure 63: Synergy Effects of BMS, JMS and AMS ó Social Responsibility Perspective. Source: Own Elaboration*



*Figure 64: Synergy Effects of BMS, JMS and AMS ó Ecology Perspective. Source: Own Elaboration*



Nowadays, any competitive advantage is temporary. The dynamic performance framework is based on a continuous search for new advantages within the production of products, services etc. while enhancing all internal processes focused on people, systems, innovations, finance, social responsibility and ecology (see figure below). The key factor is their integration and mutual synergy.

Strategy cannot come from top-down in the form of descriptions and declarations. Neither can action percolate from bottom-up. Strategy emerges from the framework People ó Processes and Systems ó Innovations ó Finance ó Social Responsibility ó Ecology. Successful organizations possess adaptability, i.e. the ability to meet changing demands without losing focus. The framework shall help in reacting to, addressing, and even anticipating necessary changes as they arise. The framework shall be understood as a living organism, not as a contrived machine.

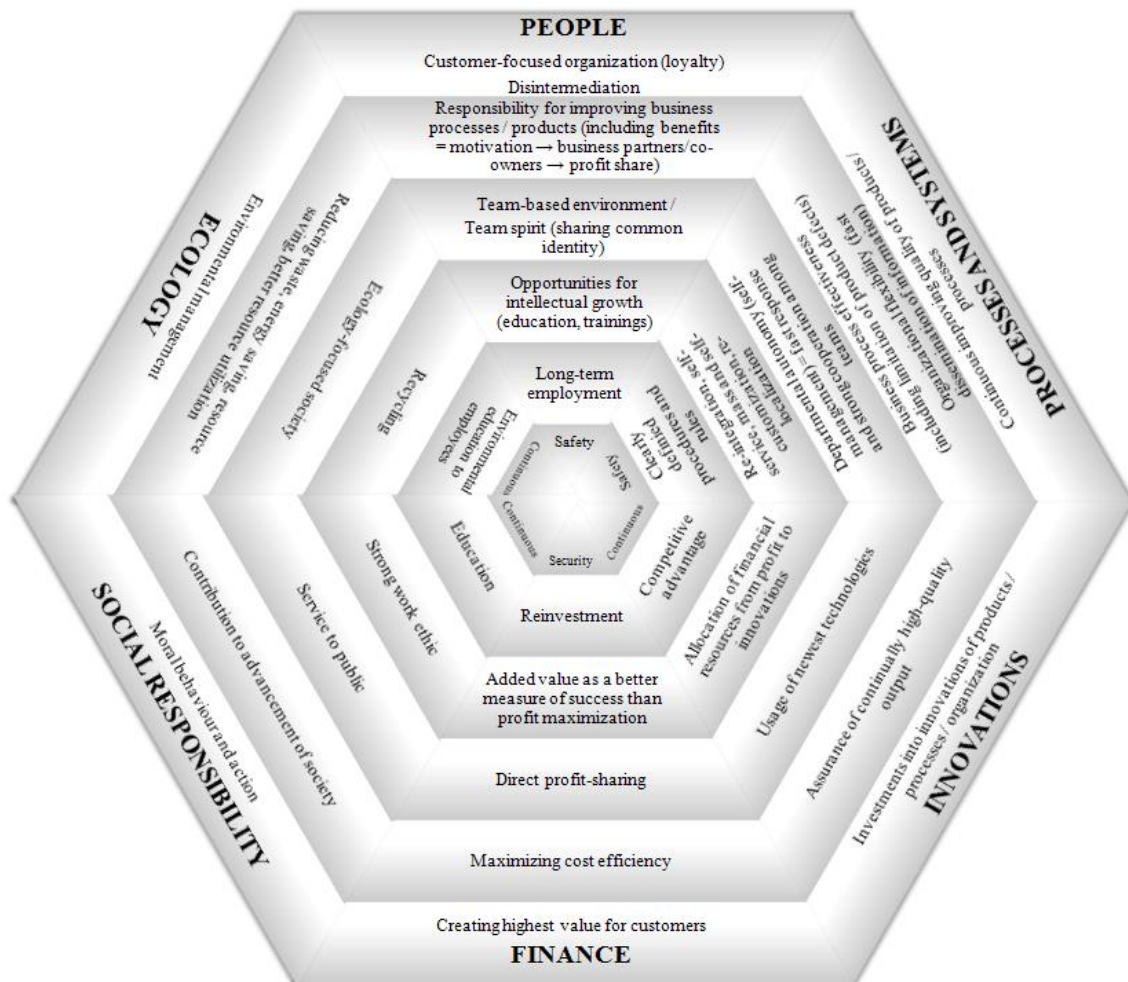


Figure 65: Synergy Effects of BMS, JMS and AMS ó All Perspectives. Source: Own Elaboration

## 6 PROPOSAL FOR A METHODOLOGY FOR THE FRAMEWORK IMPLEMENTATION IN COMPANIES

The following chapter describes a proposal for a methodology for implementation of the dynamic performance framework in companies.

Creating an effective strategic action within a company is not an easy task. However, its development is essential nowadays. Such a process shall follow the outlined steps in the subsequent figure.



*Figure 66: Development of Effective Strategic Action. Source: Own Elaboration*

Firstly, it is important to identify the key activities of a company, reveal its actual strategy and analyze whether it is embedded in action.

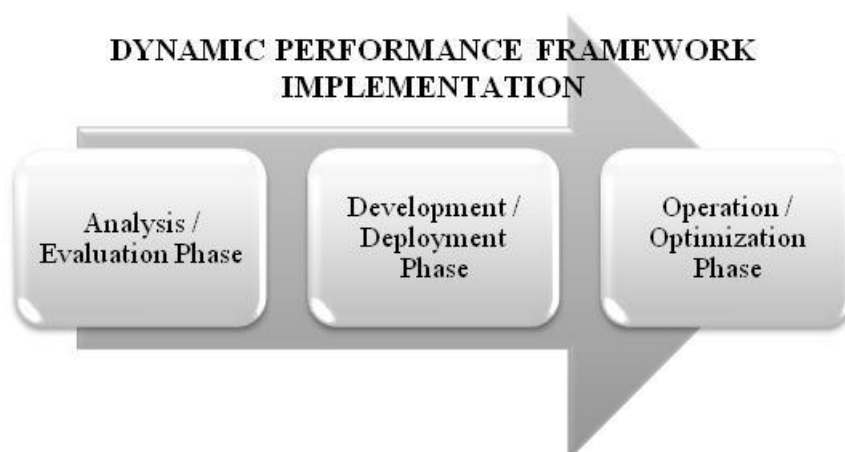
Evaluation of performance of the key activities shall follow. A company should find out whether its activities address the needs of customers and markets. Companies today are defined by customers and markets they serve and the products or services they sell. They are not defined by their missions and visions, by their symbolic statements. Moreover, they should find out how to strengthen the reinforcement of activities among each other and how changes in one activity eliminate the need to perform others. Companies may also use benchmarking; however, the key emphasis should not be laid upon similarities

in products/services among the competitors but in market gaps ó today's imperative is differentiation.

According to the performed evaluation, some activities should be removed or changed and new activities may be added. Moreover, a company will realize what activities should be conserved (what activities identify a company). The strategy of "changing everything" (utilized by enthusiastic newcomers to management) often fails.

Finally, a newly changed activity map is outlined and becomes functionally reliable. A dynamic framework (not only for the purposes of communication) that actually describes the action (strategy) can be established.

Implementation of the proposed dynamic performance framework based on the utilization of synergy effects of selected management systems (Bata Management System, Japanese Management System, Amoeba Management System) will follow the below mentioned phases. Each perspective shall go through an analysis/evaluation phase, a development/deployment phase and an operation/optimization phase.



*Figure 67: Phases of the Dynamic Performance Framework Implementation. Source: Own Elaboration*

The analysis/evaluation phase represents an official start of the framework implementation process in a company. The main aim is to analyze current state-of-the-art/position of a company within the selected perspectives (People, Processes and Systems, Innovations, Finance, Social Responsibility and Ecology) and evaluate their effectiveness/performance. In this phase, issues that have not been done yet but are important for the future development of a the company shall be revealed.

Based on the analysis/evaluation phase, key activities are developed and deployed by means of customizations, integrations, specifications and

migrations in order to successfully pursue their transition to reach the final target.

An actual execution can be seen in the operation/optimization phase which also reviews all activities and makes adjustments to increase their effectiveness.

Within the analysis/evaluation phase in the People perspective it is necessary to perform an analysis of employee commitment and engagement to corporate performance first. Employee satisfaction does not necessarily go hand in hand with company's productivity. However, it is important to find out a current state-of-the-art of employee satisfaction (including their loyalty).

Employees must be motivated (e.g. by benefits, opportunities for intellectual development, non-financial methods of motivations, etc.). An analysis of contemporary employee benefits and other motivational tools (financial, non-financial) to performance should be executed.

An analysis of the impact of one's own responsibility on improving business products/processes on employee performance is closely connected with an analysis of positive employee behaviours and attitudes towards customers. Therefore, an analysis of customer satisfaction (and their loyalty) ó e.g. by conducting surveys - should conclude the analysis/evaluation phase.

Within the development/deployment phase and based on the data obtained in the analysis/evaluation phase, a company should work on raising employee and customer satisfaction by establishing favourable conditions for reaching desired outcomes, e.g. building team-based environment that secures effective collaboration among employees, giving staff the opportunity to develop intellectually (education, trainings, etc.) and many others.

The operation/optimization phase focuses on continuous team spirit ensuring, provision of long-term employment and other financial/non-financial motivators. Moreover, disintermediation (direct communication with customers and elimination of middlemen) shall be effectively carried out.

Employee and customer satisfaction should be considered a priority by the corporate management in order to secure long-term survival of a company. The reason for this lies in higher employee commitment (and satisfaction) that leads to higher customer satisfaction.

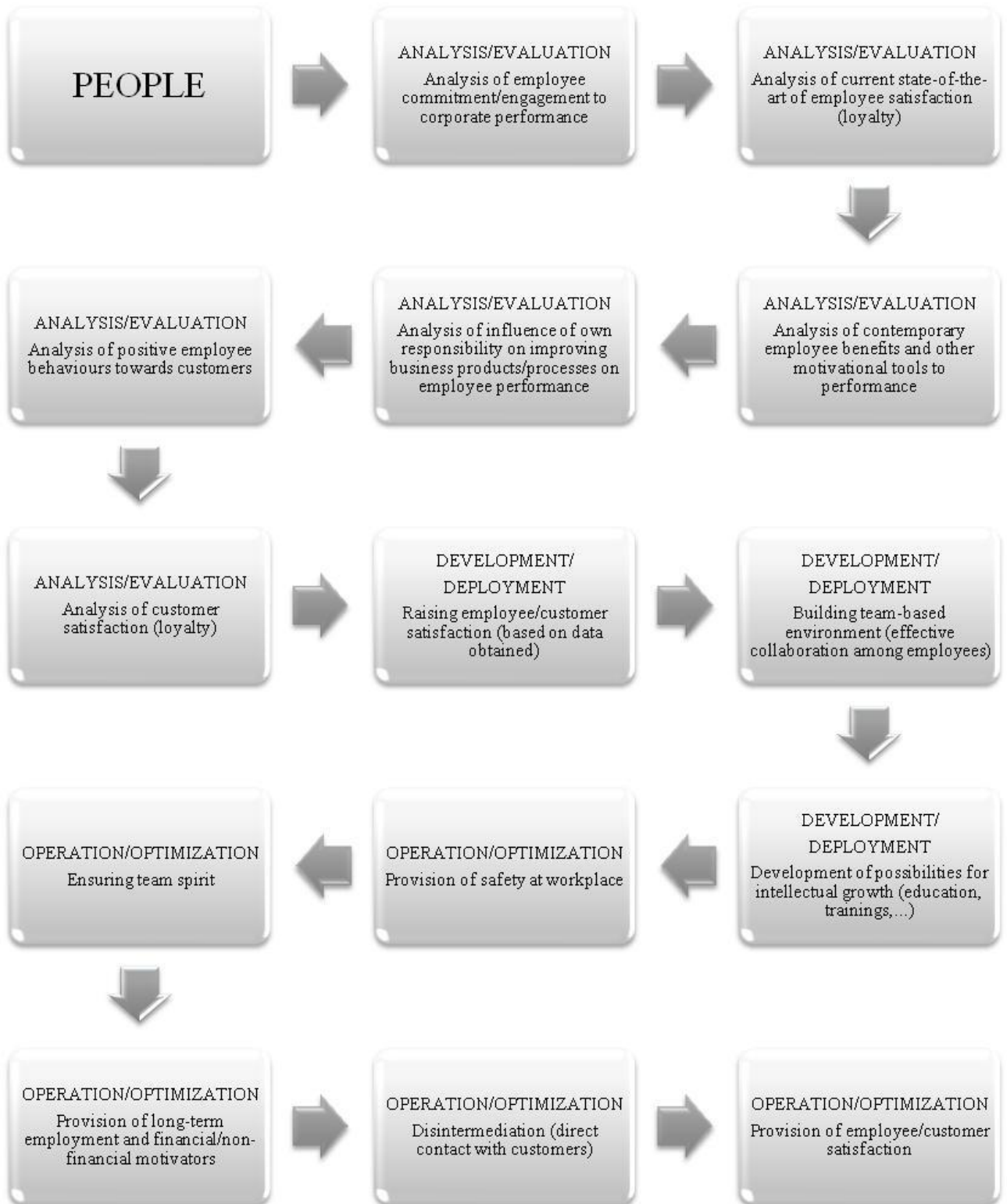


Figure 68: Dynamic Performance Framework Implementation ó People Perspective.  
Source: Own Elaboration

The quality of processes and systems should be continuously and discontinuously improved in every company. Within the analysis/evaluation phase in the Processes and systems perspective, identification and an analysis of the key processes in a company (including their mutual synergy effects) should be carried out. Performance of these processes should be measured followed by an analysis of business processes effectiveness and an analysis of organizational flexibility. The analysis/evaluation phase should be concluded by an analysis of performance / effectiveness of continuous, or discontinuous improvement in the quality of products and processes.

Based on the analyses carried out, a development of a new activity map shall follow. This map will remove activities that are no longer needed within the business processes in a company and will change or add new activities that will secure further development of corporate processes and systems. A special focus should be put on differentiation of products and processes as a special emphasis should not be laid upon similarities in products/services among the competitors but on market gaps. Fast and effective dissemination of information within a company should be developed, too. Departmental autonomy with its fast response and strong cooperation among teams may help in the process itself.

A process of re-integration takes place in three basic domains. The first is focused on process tasks/activities, the second on labour and the third on knowledge.

Customer (and supplier) integration within a company's processes is another key issue that should be taken into consideration. Customer is a key driver of corporate performance; therefore, an integrated customer becomes the source and the main purpose of the firm's strategy, tactics and operations. Only the customers know what they prefer and why.

Outsourcing to customers (self-service, self-help empowerment) is a natural process leading to disintermediation, customer integration and mass customization. Service work first got outsourced, then it got offshored, and now it is getting passed on for the last time to the customers.

Mass and self-customization as a new way of designing, producing, selling and distributing products and services is also influenced by customers' needs, yet provided at the cost of mass-produced items.

The operation/optimization phase shall also focus on re-localization (regions, localities and communities are supported), guaranteeing safety at work and establishing clearly defined procedures and rules.



Within the Innovations perspective, an analysis of the effectiveness of investments into innovations of products, processes or organization must be carried out first. This analysis should be followed by an analysis of investments into the newest technologies in the past years and their effectiveness and overall impact on corporate performance and an analysis of competitive advantage of contemporary and former innovations of a company (and their competitiveness). The analysis/evaluation phase should be concluded by an analysis of innovations integration within the entire cycle of business processes.

Based on the analyses carried out, an innovation process that is customer driven, continuous, cyclical, and, embodied in the corporate strategy and embedded in business systems and organization should be developed.

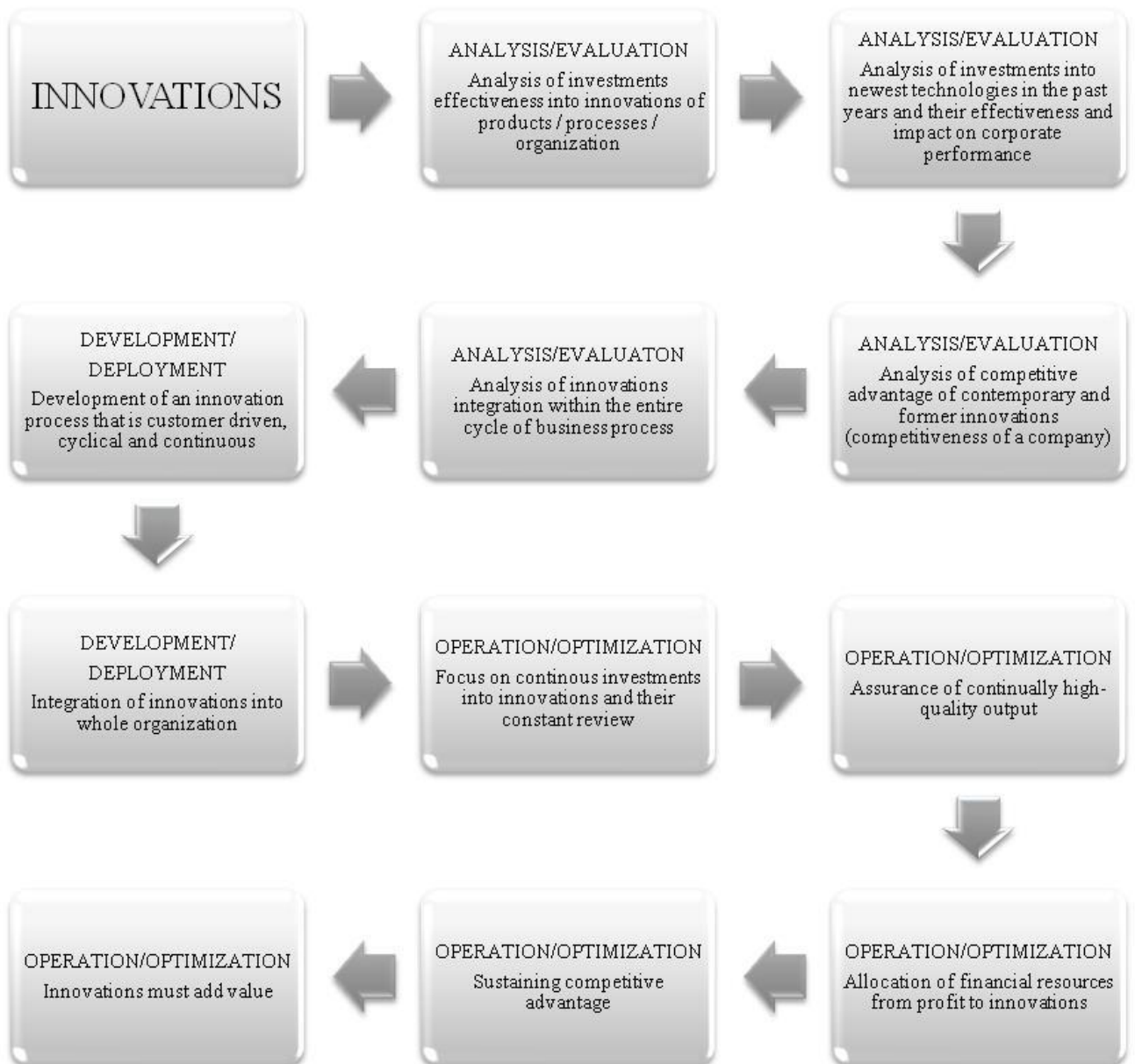
The operation/optimization phase shall focus on continuous investments into innovations and their constant review, assurance of continually high-quality output (products, services, etc.) and sustaining competitive advantage in the market. A company should invest a part of its financial resources from profit into innovations, too. Last but not least, innovations must add value.

Within the Financial perspective, a financial analysis of a company (including an analysis of cost efficiency) and an analysis of performance of a company should be carried out in the analysis/evaluation phase first.

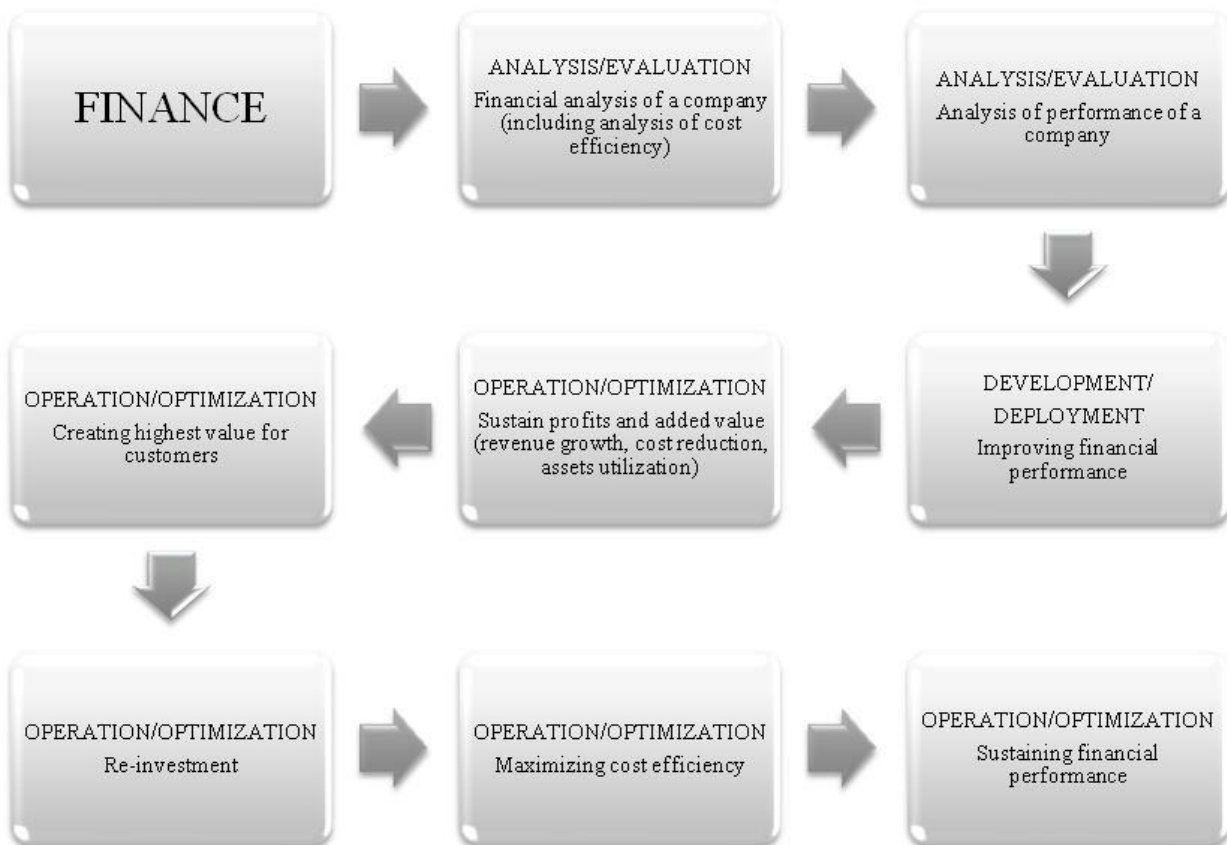
The development/deployment phase should focus on improving the overall financial performance of a company.

In order to achieve sustainable financial performance, the operation/optimization phase should focus on sustaining profits and added value (revenue growth, cost reduction and assets utilization), creating maximum value for customers, re-investments and maximizing cost efficiency.





*Figure 70: Dynamic Performance Framework Implementation ó Innovations Perspective. Source: Own Elaboration*



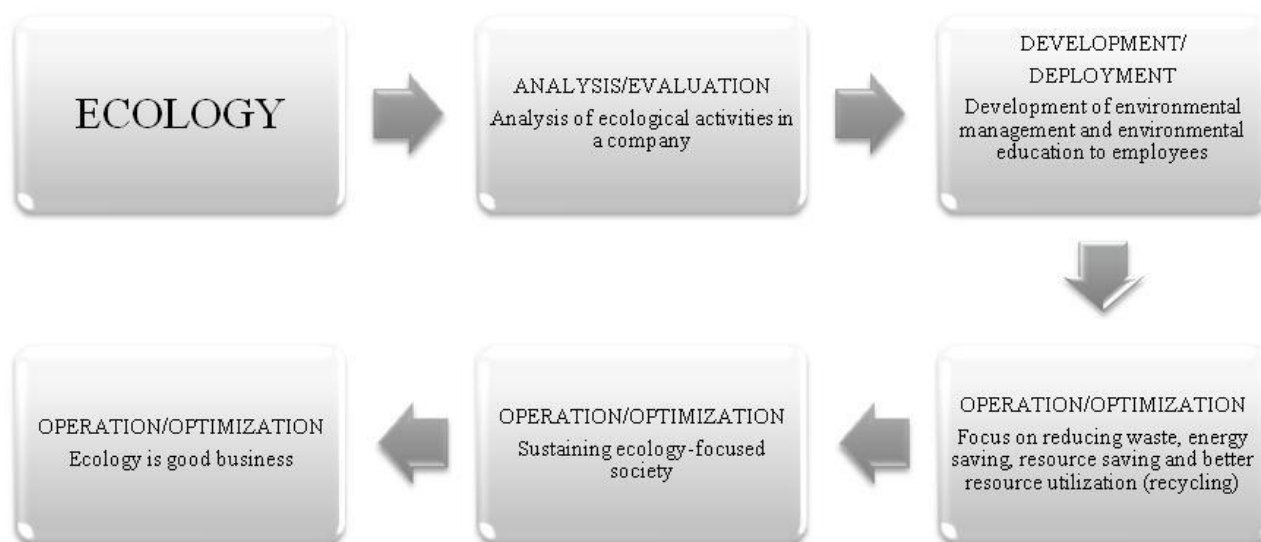
*Figure 71: Dynamic Performance Framework Implementation ó Finance Perspective.  
Source: Own Elaboration*



*Figure 72: Dynamic Performance Framework Implementation ó Social Responsibility  
Perspective. Source: Own Elaboration*

Within the Social responsibility perspective, an analysis of activities connected with social responsibility issues should be carried out. Within the development/deployment phase, continuous education in the sphere of social responsibility should follow. Companies should focus on service to public, contributions to the advancement of society and should sustain strong work ethic and moral behaviour and action.

Within the Ecology perspective, an analysis of ecological activities that are being held in a company should be performed first. Afterwards, development of environmental management (including environmental education to employees) should continue. In the operation/optimization phase, companies should continuously focus on reducing waste, on energy saving, resource saving, better resource utilization and recycling. Moreover, a company shall be ecology-focused because ecology is good business.



*Figure 73: Dynamic Performance Framework Implementation ó Ecology Perspective.  
Source: Own Elaboration*

In order to implement the dynamic performance framework based on the utilization of synergy effects of selected management systems (Bata Management System, Japanese Management System, Amoeba Management System) in a company, all the perspectives (People, Processes and Systems, Innovations, Finance, Social Responsibility and Ecology) shall go through three phases (Analysis/Evaluation, Development/Deployment and Operation/Optimization). Only then can the framework can serve as a fundamental basis of competitiveness for firms and can contribute to effective strategic action of a company with a significant influence on corporate performance.

## 7 ANSWERING THE RESEARCH QUESTIONS

Before starting the research, the following research questions had been set:

RQ 1: Can interconnection between the Bata Management System, Japanese Management System and Amoeba Management System create synergy effects resulting in enhancement of corporate performance, competitiveness, and, overall success of a company?

A 1: Interconnection between the Bata Management System, Japanese Management System and Amoeba Management System shall create synergy effects resulting in enhancement of corporate performance, competitiveness, and, overall success of a company. On the basis of the synergy effects a viable system shall be developed, that will secure, enhance and preserve communication among its parts. Successful implementation of corporate strategies requires an involvement of the entire organization. The framework based on the synergy effects of selected management systems, performance concepts and measures shall help managers to clearly articulate and communicate their strategies and tactics throughout all levels of the organization.

RQ 2: Is it possible to establish a dynamic performance framework based on the utilization of synergy effects of selected management systems, concepts and measures leading to enhancement of corporate performance and competitiveness that would be applicable in real business environment?

A 2: The new framework will link all processes in a company that form the basis for the firm's organization, strategic and tactical goals, financial resources, expansion of human resources, knowledge management, innovation cycle, development of strategic environment, etc. Moreover, a new social responsibility as well as ecology perspective will be added. It will develop entrepreneurial spirit by empowering all employees and instilling in them a sense of belonging and identification and making them proud to be business partners. It will inspire an organization-wide effort to effect improvements in product/service cost, quality and innovation. Therefore, it is assumed that the newly constructed framework shall establish a dynamic performance framework leading to enhancement of corporate performance and competitiveness and shall be applicable in real business environment.

## **8 CONTRIBUTION TO SCIENCE AND PRACTICE**

The main result of the Doctoral thesis is a **proposal for a dynamic performance framework** based on the utilization of synergy effects of selected management systems - Bata Management System, Japanese Management System and Amoeba Management System.

The results of the research can be analyzed in three chapters: Contribution to Science, Contribution to Practice and Contribution to Educational and Research Activity at the Faculty.

### **8.1 Contribution to Science (Theory)**

From the theoretical point of view, the results of the research will broaden current knowledge about management systems, frameworks and their perspectives and will thus result in enhancement of corporate performance, competitiveness and effectiveness. Moreover, a proposal for a dynamic performance framework based on the utilization of synergy effects of the Bata Management System, Japanese Management System and Amoeba Management System will be formulated.

### **8.2 Contribution to Practice**

The main contribution to practice is a proposal for a methodology for the dynamic performance framework implementation in companies. The framework interconnecting all important dimensions (people, processes and systems, innovations, finance, social responsibility and ecology) for effective strategic action will enable companies to enhance their corporate performance, effectiveness, competitiveness and their future viability.

### **8.3 Contribution to Educational and Research Activity at the Faculty**

The results of the research can contribute to educational and research activity at the Faculty, too. The newly created dynamic performance framework, proposal for a methodology for the framework implementation in companies as well as a theoretical summary of management systems, frameworks and strategies being used in companies may enrich teaching and learning at the Faculty as well as bring a new perspective to the researched area.

The researched field has been investigated within the below mentioned research projects:

1. Creating a Model for the Performance Measurement and Management of Enterprises  
Grant Agency of the Czech Republic ó No. 402/09/1739  
Project duration: 2009 ó 2011  
Project investigator: Ing. Adriana Knápková, Ph.D. (Department of Finance and Accounting, Faculty of Management and Economics, Tomas Bata University in Zlín)
  
2. The Development and Evaluation of the Performance by Cluster Policies, of Clusters and their Members with the Usage of the Principles of Benchmarking  
Internal Grant Agency ó No. IGA/61/FaME/10/A  
Project duration: 2010 ó 2011  
Project investigator: Ing. Eva Jir íková, Ph.D. (Centre for Applied Economic Research, Faculty of Management and Economics, Tomas Bata University in Zlín)

## 9 CONCLUSION

The Doctoral thesis focused on establishing of a dynamic performance framework based on the utilization of synergy effects of the Bata Management System, Japanese Management System and Amoeba Management System.

The framework does not focus on a description of an actual corporate action (strategy) but enables a company to effectively transform corporate intentions into reality by linking strategic areas of corporate activities (that are reinforcing each other) and thinking of them as a single unit. Thus, it creates a periodical, dynamic and cyclical system (while using synergy effects) that along with a dynamic leadership ensures lasting competitiveness, high performance and sustainability of a company. The framework includes various aspects ó ranging from people, processes and systems, innovations and finance to social responsibility and ecology. At the same time, it is able to withstand irrelevant disturbances and is responsive to relevant changes. The key factor is the integration of all components in a single whole and mutual synergy.

Within the research, existing management systems with a major focus on the Bata Management System, Japanese Management System and Amoeba Management System were analyzed and, subsequently, mutual synergy effects of these systems were defined and used in a proposal for a dynamic performance framework.

Moreover, contemporary approaches to performance management and measurement in companies located in the Czech Republic were defined and compared within two research projects. Furthermore, performance of Japanese and other companies located in the Czech Republic in the transportation machinery parts industry was analyzed (based on the selected measures of financial analysis) and two case studies of the selected companies utilizing components of the Bata Management System, Japanese Management System and Amoeba Management System were carried out.

On the basis of the data obtained, a dynamic performance framework based on the utilization of synergy effects of selected management systems was outlined. Moreover, the thesis also includes a proposal for a methodology for the framework implementation in companies.

Therefore, the outcomes of my research shall be of great benefit to science, practice as well as research activity at the Faculty of Management and Economics of Tomas Bata University in Zlín.

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## Education

2008 ó present      **Doctoral degree programme** in  
Economic Policy and Administration; course: Finance  
Tomas Bata University in Zlín  
Faculty of Management and Economics  
Centre for Applied Economic Research

2005 ó 2007      **Follow-Up Master degree programme** in  
Economic Policy and Administration; course: Finance  
Tomas Bata University in Zlín  
Faculty of Management and Economics

Tomas Bata Foundation Prize for the best Master thesis  
written in English

2002 ó 2005      **Bachelor degree programme** in  
Economics and Management; course: Management and  
Economics  
Tomas Bata University in Zlín  
Faculty of Management and Economics

1998 ó 2002      **Grammar School Zlín**, Lesní tvr 1464, 760 01 Zlín  
Leaving exams cum laude

## Other Education

2006      Language course in Rome, Italy  
2005      Language course in Rome, Italy  
2004      Language course in Vienna, Austria  
2003      Language course in Cambridge, UK  
2002      Language course in Florence, Italy

## Languages

English	Advanced Level (C1)	
	2005 BEC II. (Business English Certificate II.)	B2
	2001 FCE (First Certificate in English)	B2
	2001 State Exam in English	B2
German	Intermediate Level (B2)	
	2004 State Exam in German	B2
	2002 Sprachdiplom Stufe II.	C1
Italian	Intermediate Level (B1)	
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2011 ó present	Head of International Office, Rectorate Tomas Bata University in Zlín
2007 ó 2011	International Projects Coordinator, International Office Rectorate, Tomas Bata University in Zlín
2004 ó 2007	Teacher in Mervin language school, Malenovice
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## Professional Activity ó Research Projects Participation

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Grant Agency of the Czech Republic ó No. 402/09/1739  
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Project investigator: Ing. Adriana Knápková, Ph.D. (Department of Finance and Accounting, Faculty of Management and Economics, Tomas Bata University in Zlín)
2. The Development and Evaluation of the Performance by Cluster Policies, of Clusters and their Members with the Usage of the Principles of Benchmarking  
Internal Grant Agency ó No. IGA/61/FaME/10/A  
Project duration: 2010 ó 2011  
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## **Professional Activity ó International Projects Participation**

1. Web-based Information Service for Higher Education Students (WISHES)  
Erasmus Mundus Programme of the European Commission  
Project duration: 2008 ó 2011  
Project coordinator: University of Paderborn, Germany
2. International Visegrad Summer School 2010 on Investment of Financial Resources on Financial Markets  
International Visegrad Fund  
Project duration: 2010  
Project coordinator: Tomas Bata University in Zlín, Czech Republic
3. Improving the Efficiency of Student Services (IMPRESS)  
Tempus Programme of the European Commission  
Project duration: 2012 ó 2015  
Project coordinator: Northumbria University, United Kingdom

## **LIST OF APPENDICES**

Appendix A: Questionnaire ó Research on Contemporary Approaches for Performance Measurement and Management in Companies Located in the Czech Republic

Appendix B: Questionnaire ó Research on Contemporary Approaches for Performance Measurement and Management in Japanese Companies Located in the Czech Republic



# Appendix A: Questionnaire ó Research on Contemporary Approaches for Performance Measurement and Management in Companies Located in the Czech Republic

Projekt **Tvorba modelu pro m ení a ízení výkonnosti podnik** byl podpo en Grantovou agenturou R, reg. . projektu 402/09/1739

## DOTAZNÍK

### M ENÍ A ÍZENÍ VÝKONNOSTI PODNIKU

#### Základní charakteristiky podniku

Název a sídlo společnosti (místo):

\_\_\_\_\_

Rok založení:

\_\_\_\_\_

Převažující podnikatelská činnost (OKE, NACE-CZ):

\_\_\_\_\_

Právní forma:

\_\_\_\_\_

Přítomnost zahraničního kapitálu:

ANO

NE

Počet zaměstnanců:

méně než 10

10 až 50

51 až 250

více než 250

Obrat v roce 2008 (v mil. Kč):

do 50 mil. Kč

50 až 100 mil. Kč

101 až 250 mil. Kč

více než 250 mil. Kč

Převažující zaměření:

výroba

služby

obchod

jiné

Jaké důvody pro zavedení systému měření a řízení výkonnosti v podniku považujete za relevantní? Ohodnotěte škálou 1 až 5, kde: 1 – nevýznamný důvod, 5 – velmi významný důvod.

	1	2	3	4	5
Controlling podniku	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strategické plánování	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Každodenní rozhodování	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operativní strategie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Komunikace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Motivace a odměňování	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Řízení vztahů se stakeholdery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Povinnost stanovená zákonem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Označte, které koncepty nebo nástroje používáte pro řízení a měření výkonnosti.

	Využíváme		
	> 5 let	2 - 5 let	< 2 roky
Finanční ukazatele na základě dat z finančního účetnictví	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Výstupy z manažerského účetnictví	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ABC/M (procesní řízení)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controlling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Balanced Scorecard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ekonomická přidávaná hodnota, případně spojené další koncepty Value Based Management (hodnotového řízení)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Řízení kvality, uveďte konkrétní nástroje:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benchmarking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reengineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lean Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer Relationship Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jiný nástroj, uveďte:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Charakterizujte vztah měření výkonnosti a strategie ve Vaší společnosti:

- Měření výkonnosti vychází ze strategie a cílů společnosti a pomáhá při jejich tvorbě
- Měření výkonnosti nevychází ze strategie a cílů společnosti, které jsou formulovány
- Strategie a cíle nejsou formulovány, měření výkonnosti je prováděno u konkrétních činností a procesů
- Jiný názor:

Jak významné jsou pro měnění výkonnosti jednotlivé oblasti řízení podniku?  
Ohodno te –kálou 1 ó 5, kde: 1 ó nevýznamná, 5 ó velmi významná oblast.

	1	2	3	4	5
finan ní	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
zákaznická	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
oblast interních proces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
zam stnanc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IS/ICT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
zdraví a bezpe nost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
inovace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
dal-í:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Poufíváte systém m ěnění a řízení výkonnosti k hodnocení (odm ěování) manafer ?

- ano, výsledky systému jsou provázány se systémem odm ěování
- ne, výsledky hodnocení výkonnosti nemají vliv na odm ěování
- ne, ale chceme provázat výsledky s odm ěováním

Jak siln ě ovliv ují následující faktory výkonnost Va-eho podniku?

Ohodno te –kálou 1 ó 5, kde: 1 ó nevýznamný faktor, 5 - velmi významný faktor.

	1	2	3	4	5
Ziskovost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finan ní stabilita	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Výnosy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Náklady	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Udrfění a získávání nových zákazníků	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spokojenost zákazníků	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Produkt z pohledu zákazníka ó kvalita, cena, servis, sortiment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vyuflití zdroj (lidé, majetek, suroviny, í )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Logistika ó nákup, skladování, p eprava	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prodej a marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Výrobní proces ó efektivita a flexibilita výroby, technologie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
řízení firmy ó strategie a organizace firmy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vnit ní prost edí firmy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Kvalita lidských zdroj	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inovační aktivita, výzkum, vývoj	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Knowledge management a IS/ICT, znalostní základna, sdílení	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Další faktory, uveďte jaké:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Označte finanční výkonnostní metricka, která vyhovuje k měření stanoveného cíle:

ziskovost (rentabilita):	
investovaného kapitálu (ROI)	<input type="checkbox"/>
vlastního kapitálu (ROE)	<input type="checkbox"/>
aktiv (ROA)	<input type="checkbox"/>
tržeb (ROS)	<input type="checkbox"/>
náklad	<input type="checkbox"/>
zisku na akcii (EPS)	<input type="checkbox"/>
absolutní výše zisku:	
istý zisk	<input type="checkbox"/>
zisk před zdaněním	<input type="checkbox"/>
EBIT	<input type="checkbox"/>
EBITDA	<input type="checkbox"/>
ukazatele vyhovující cash flow	<input type="checkbox"/>
EVA	<input type="checkbox"/>
tržní hodnota, příp. MVA	<input type="checkbox"/>
velikost tržeb	<input type="checkbox"/>
přidaná hodnota	<input type="checkbox"/>
jiné metricka:	<input type="checkbox"/>

Vyhovuje Vám podnik nástroje finanční analýzy?

- Ano, ale pouze k hodnocení minulého a současného vývoje finančního zdraví podniku
- Ano, i pro hodnocení plánovaného budoucího vývoje podniku
- Nepoužívá vůbec

Jaká kritéria využíváte pro hodnocení ekonomické efektivity investičních projektů ?

- efektivnost investičních projektů
- nákladová kritéria
- stejná současná hodnota
- reálné opce
- doba návratnosti
- rentabilita investice
- vnitřní výnosové procento investice
- srovnání s obdobnými příležitostmi
- kvalifikovaný odhad (intuice)
- používáme jiné kritérium, a to:

Čím jsou způsobeny výkyvy ve výkonech budoucích tržbách?

Ohodnotěte škálou 1-5, kde: 1 - nevýznamný faktor, 5 - velmi významný faktor.

	1	2	3	4	5
Fluktuací cen obchodovaných komodit primárně nutných k výrobě v případě, že se jedná o:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
změnou preferencí konečného zákazníka, na kterou musíte reagovat (např. móda)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rychlým technologickým vývojem a nutností kapitálově náročných investic (flexibilní technologie, informační systémy, atd.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Výkyvy v poptávce po produktech na jejich odběratelích v případě, že se jedná o přímý:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zásahy státu (regulace, právní úprava, zdanění, infrastruktura)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jiné faktory, jaké:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Máte vyřazenou hodnotu značky své firmy?

- Ano
- Ne, uvažujeme o vyřazení
- Ne, neuvažujeme o vyřazení

Ozna te možnost, která odpovídá situaci ve Vašem podniku ve vztahu k měření výkonnosti jednotlivých procesů :

Má každý podnikový proces definován ukazatel pomocí kterého se měří a hodnotí?

Je dána periodičita zaznamenávání hodnot daného ukazatele?

Je definována odpovědnost za hodnocení ukazatele?

Jsou stanoveny nápravné opatření při překročení hodnoty ukazatele?

Existují údaje za poslední účetní období o nákladovosti podnikového procesu?

Slouží hodnocení podnikových procesů jako základ pro jejich zlepšování?

ANO	NE
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Ozna te, jaké softwarové nástroje používáte pro měření a řízení výkonnosti?

tabulkový procesor (kalkulátor, např. Excel)

ERP systémy

Software vytvořený na zakázku

Packaged software

Finanční a ekonomickou krizi vnímáte spíše jako:

příležitost pro Vaši firmu

hrozbu pro Vaši firmu

Změnila krize přístup vedení firmy k řízení výkonnosti?

Ano, a to tímto způsobem:

Ne

Změnila krize přístup vedení firmy k měření výkonnosti?

Ano, a to tímto způsobem:

Ne

Jméno a pozice respondenta:

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Vaše názory a připomínky:

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## Appendix B: Questionnaire ó Research on Contemporary Approaches for Performance Measurement and Management in Japanese Companies Located in the Czech Republic

### DOTAZNÍK

#### Základní charakteristiky podniku

Název a sídlo společnosti (msto):

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Rok založení v R:

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Název a sídlo mateřské společnosti (msto):

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Převažující podnikatinnosti (OKE, NACE-CZ):

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Právní forma:

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Počet zaměstnanců:

méně než 10       10 ó 50       51 ó 250       více než 250

Převažující zaměření:

výroba       služby       obchod       jiné

Jaké důvody pro zavedení systému měření a řízení výkonnosti v podniku považujete za relevantní?  
Ohodnotěte škálou 1 ó 5, kde: 1 ó nevýznamný důvod, 5 ó velmi významný důvod.

	1	2	3	4	5
Controlling podniku	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strategické plánování	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Každodenní rozhodování	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operativní strategie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Komunikace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motivace a odměňování	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Řízení vztahů se stakeholdery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Povinnost stanovená zákonem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Označte, které koncepty nebo nástroje používáte pro řízení a měření výkonnosti.

	Využíváme		
	> 5 let	2 - 5 let	< 2 roky
Finanční ukazatele na základě dat z finančního účetnictví	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Výstupy z manažerského účetnictví	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ABC/M (procesní řízení)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controlling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Balanced Scorecard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ekonomická přidaná hodnota, případně spojené další koncepty Value Based Management (hodnotového řízení)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Řízení kvality, uveďte konkrétní nástroje:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benchmarking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reengineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lean Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer Relationship Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jiný nástroj, uveďte:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Charakterizujte vztah měření výkonnosti a strategie ve Vaší společnosti:

- Měření výkonnosti vychází ze strategie a cílů společnosti a pomáhá při jejich tvorbě
- Měření výkonnosti nevychází ze strategie a cílů společnosti, které jsou formulovány
- Strategie a cíle nejsou formulovány, měření výkonnosti je prováděno u konkrétních činností a procesů
- Jiný názor:



Jak významné jsou pro měnění výkonnosti jednotlivé oblasti řízení podniku?  
Ohodno te –kálou 1 ó 5, kde: 1 ó nevýznamná, 5 ó velmi významná oblast.

	1	2	3	4	5
finan ní	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
zákaznická	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
oblast interních proces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
zam stnanc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IS/ICT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
zdraví a bezpe nost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
inovace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
dal-í:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Jak siln ovliv ují následující faktory výkonnost Va-eho podniku?  
Ohodno te –kálou 1 ó 5, kde: 1 ó nevýznamný faktor, 5 - velmi významný faktor.

	1	2	3	4	5
Ziskovost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finan ní stabilita	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Výnosy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Náklady	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Udrfění a získávání nových zákazníků	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spokojenost zákazníků	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Produkt z pohledu zákazníka ó kvalita, cena, servis, sortiment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Využití zdroj (lidé, majetek, suroviny, í )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Logistika ó nákup, skladování, p eprava	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prodej a marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Výrobní proces ó efektivita a flexibilita výroby, technologie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ízení firmy ó strategie a organizace firmy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vnit ní prost edí firmy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kvalita lidských zdroj	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inova ní aktivita, výzkum, vývoj	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Knowledge management ó IS/ICT, znalostní základna, sdílení	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dal-í faktory, uve te jaké:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Jak významné jsou pro měnění výkonnosti vybrané metody japonského stylu řízení?  
 Ohodnote –kálou 1 ó 5, kde: 1 ó nevýznamná, 5 ó velmi významná oblast.

	1	2	3	4	5
KAIZEN (neustálé zdokonalování)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
JUST-IN-TIME (v . systému KANBAN)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
JIDOKA (autonomní kontrola výrobních defektů)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GENBA (orientace na provoz)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RINGI systém (kolektivní rozhodování a konsensus)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Systém seniority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
KEIRETSU (třídenní a trvalé pracovní vztahy se spolupracujícími podniky)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amébní systém řízení (améba = nejmenší, podnikatelsky efektivní, sebe řídicí a výrazně autonomní tým ó tzv. špodnik v podnikuó)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Jméno a pozice respondenta:

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Vaše názory a připomínky:

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