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**The Correlation between
Employee Engagement and Service Quality.
Case Study, Order Management, Customer Logistics**

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D e c l a r a t i o n

I declare, that this Master thesis

„ The Correlation between Employee Engagement and Service Quality

Case Study, Order Management, Customer Logistics “

I have written by myself.

All used literature sources and raw materials are stated in the list
attached

In Prague, 2011

Signature:

Title of the Master's Thesis:

The Correlation between Employee Engagement and Service Quality, Case Study, Order Management, Customer Logistics

Abstract:

The purpose of the presented research is to identify these of the areas that significantly matter for the strong positive correlation between the Employee Engagement and the Service Quality in a particular business case concerning business process improvement of an order management team in a multinational company. The significant areas are identified through a correlation analysis of the answers to an online survey. The results are used for further Measurement, Analysis, Improvement and Control of the key areas identified. The main findings are aimed to serve as a scientifically validated plan of action for the group in charge for the business process improvement in the order management team which is studied. Particularly, recommendations are provided how to increase the First Time Right performance metrics of the order management team through focus on the Define part of the DMAIC model in the Six Sigma methodology for business process improvement. Main findings: there is evidence for strong significant positive correlation between the employee engagement and the service quality factors in the answers of the respondents to the online survey questions; the team members' perception of the leadership style is positively correlated with their perception of the service quality.

Key words:

employee engagement, service quality, business process improvement, correlation, order management

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1 Introduction

Employee Engagement has become recently a major topic of interest and top strategic objective for many executive teams around the world. More than ever before, it is used as a metric for business success and is getting attention not only in the top levels of the organisation, but also on operational level. This paper is created with the goal to be informative, thought provoking and practical. As a case study, it gives an example how the issue of the employee engagement could be accounted for and used for improvement of the quality management in a particular order processing team, operating as a part of the global supply chain of a multinational company.

1.1 Motivation

The present diploma thesis work integrates two very important elements that characterize the modern business organisation. On one hand, the analysis is concerned with the employee engagement and its specifics, which is of interest for both academic researchers and practitioners. On the other hand, the focus is on how the employee engagement theory could be practically used in business to improve the service quality, which concerns not only the customer satisfaction, but also the innovative culture of the company, cost reduction and the business excellence in general.

The present work is motivated by a real business case taking place in the department “Order Management, Customer Logistics” of a multinational company. The target of the study are logistic managers, who are challenged by a business process improvement project that is being implemented in the department. The aim of the project is to improve the (Service Quality¹)

¹ By improvement in service quality, it is meant filling the “service quality gap“ which Ueno (2010) defines as “the gap between customer expectations and perceptions of performance”. (Ueno, 2010, p. 74) In the particular business case considered, service quality is measured by the First Time Right metrics i.e. how many customer orders were processed from the first time without being put in a claim for re-execution because of a mistake of the logistics team.

performance of the department's team through successful implementation of changes in the organizational procedures and without loss of sustainability in the working environment.

1.2 Research Objectives

The purpose of the present diploma thesis work is to investigate the relation between employee engagement and service quality. This will help the project managers to define whether and how the business process improvement project could be better implemented through strengthening the employee engagement in the department's team being investigated.

Particularly, a quantitative survey is made and based on the analysis of its results recommendations are given for further improvement of the regular measurement, analysis, and control of the key problematic areas identified.

The ultimate goal of the presented work is to provide comprehensive and useful information for increasing organizational and leadership effectiveness, productivity, quality and customer service of the logistics department being studied.

1.3 Methodological Background

The research presented steps methodologically on two main literature sources. On one hand, the key hypotheses tested are defined based on the general results of the Global Employee Engagement Report (2011). which imply that creating an environment that supports high performance has a strong correlation with employee engagement levels. On other hand, the performance measurements used in the analysis are constructed in compliance with the methodology of Ueno (2010) where seven fundamental features are identified for the management of service quality.

The literature sources are chosen in the pre-research literature analysis where many common points are identified between the seven fundamental

features claimed by Ueno (2010) and the content and structure of the Global Employee Engagement Report (2011). This makes the two sources fit well the particular problematics of the business case which is studied.

Additionally, in the technical part of the research, all activities of the studied team are analyzed according to the main components of the Six Sigma methodology – a.k.a. Define, Measure, Analyse, Improve and Control (DMAIC) model². The presented quantitative analysis contributes mainly to the first step of the DMAIC model (Define). However, its implications concern the activities in the remaining steps (Measure, Analyse, Improve and Control) of the model as well.

1.4 Research questions

The Case study aims to answer the following research questions:

Q1: Which factors important for the service quality correlate significantly also with the employee engagement?

Q2: What are the areas, which need improvement in order to achieve better engagement and service quality of the order management team?

1.5 Working hypotheses

The alternative hypotheses that will be checked in the study are as follows:

H1: There is positive correlation between the employee engagement and the service quality as measured based on the answers of the respondents to the online survey questions.

H2: The team members' perception of the leadership style is positively correlated with their perception of the service quality.

² Six Sigma Model is applied according to George et al. (2002, 2003a, 2003b).

1.6 Case study design

The case study is carried out as follows:

First, a literature review is conducted covering the areas of Employee Engagement, Self Determination Theory of Motivation and Business Process Improvement Ideology for Operational Excellence.

Second, the case study is feeded with data collected by a sociological survey carried out among the logistic managers in the studied team.

Third, the data observations were used to measure the magnitude and the significance of the correlation coefficients between different general aspects of the employee engagement suggested in the literature and the fundamental features supporting service quality.

Finally, the diploma thesis work was designed to support the improvement of the Define step processes as a major goal of the quality management project implemented in the studied department.

1.7 Practical limitations

Although there are many aspects of the employee engagement that can generally be related to service quality, the correlation analysis should provide scientifically validated statement which of them could be considered by the supervisor of the team as being sufficiently significant for the better execution of the business process improvement project. The interpretation of the results of the analysis however are limited by the statistical approach³ used. Namely, the correlation analysis is able to define the strength and sign but not the causality of the relation between two data vectors. So, the technical part of the study could show only how much interdependent are employee engagement and service quality. However, it is unable to reveal which of the two is cause and which

³ Newbold (1994), pp. 427-438

consequence of the other. Therefore, for making final conclusions the present study should rely on the predictions suggested by the general theory on the topic.

Concerning the fact that this is a case study and the number of observations is relatively small ($n=17$), its findings do not pretend to contribute generally to the topic. The presented research is rather a particular example how the relation between employee engagement and service quality could be used to improve the performance of an order management team at the logistics department of a multinational company. All solutions and recommendations are hereby proven to be valid only for this particular business case and further testing and research need to be done before they are considered to be applicable in other similar business cases.

1.8 Structure of the diploma thesis work

The content of the present diploma thesis work consists of summary of the findings, identification of key themes, and recommendations (action plan) based on the findings. The remainder of the work has the following structure:

The second chapter is dedicated to the case study itself. It describes the case, the key players and the problems they face.

Further, review of the literature on the topic is provided. It is presented in two different chapters. Chapter 3 provides technical information for the functional role of the department studied in the context of the industrial sector to which its principal company belongs. It describes what is meant by Operational Excellence and Business Process Improvement of the Supply Chain and Logistics of a multinational company specialized in the telecommunication equipment industry. Chapter 4 presents the existing literature on the main topic of research, summarizing selected theories from the Organisational Sociology and Psychology.

Chapter 5 describes the method of research and its strategy.

Chapter 6 presents the core analysis and main findings. The findings are discussed in the light of the research objectives and refer to the literature review.

The main conclusions and recommendations are given in chapter 7. It summarizes the key findings and provides list of recommendations for the managers of the order management team. It also investigates in more details the limitations of the research in terms of methodology and suggestions for improvement and further research on the topic.

2 Case Study background

Before presenting the literature review it is necessary to introduce the reader into the setting and give more information about the challenging task of the order management team in question, the background of the problem, how it did start and the plan of action created to solve this task.

The Dillpoma thesis work investigates the case of an order management team, part of the supply chain of a multinational company operating in the telecom equipment market. The team management group consists of 19 employees with the role of Market Logistic Managers, who operate in this organisational unit since January 2010. So, the management group is new as well as the setting of the processes in the way they are today.

The daily work of each Market Logistic Manager (MLM) involves sales order release and purchase order change; material sourcing; risk and deviation analysis and investigations; re-planning; active issue solving; proactive alerts and solution generation to ensure 100% delivery. In the picture below can be seen the main steps in the process of ensuring 100% delivery: Each Market Logistic Manager works in all three steps on the rotation principle, changing every two months.



Figure 1: Order management process steps

Many of the group members have additional responsibility and take care for a specific customer (a telecom company) in terms of follow up of issues, special case solutions, handling of urgent requests. There is no direct customer communication and in this case as customer is considered the Contract Execution Managers (CEM)– main interface of the group and point of customer contact, who are responsible for the delivery of the whole project in many cases consisting of several contracts.

The need for a Business Process improvement project arose after an worldwide employee survey within the organisation, executed at the end of 2010 called The Dialog. The Dialog survey is carried out every year to measure how the Improvement Process Management Process is adhered to in the local organization and also address the perceived quality of the discussions. The results from the latest survey indicated some unsatisfactory areas in the section Operational Excellence.

With the help of brainstorming, brainwriting and team discussion and debate, agreement was reached and three main areas for improvement were selected by the Order Management team to focus on:

- Quality – First time right
- Inspire employees taking responsibility
- Co-operation

Respectively, the team was divided into three groups each responsible for the improvement of one of these areas.

Summary of the Dialog survey data collected from the Market Logistic Managers in this order management team is presented graphically below. The present study is interested only on the results in area Quality measured by the First Time Right metrics. Figure 1 shows the consultants' performance results while figure 2 presents employees' performance results. It is evident the decrease in both groups on this indicator. The employees' rating (4-5) of Quality - First

Time Right- has sunked to 14% from 33% last year, while the consultants rating drops with 5 percentage points to 35%. This is a very negative signal. Moreover, the employees' performance rating coincides with their better knowledge of the company, longer experience and broader overview of the companies processes. It has to be taken into account that this order management team started its operation in January 2010 with a new version of the integrated management information system with which the team works. So, the first half of the year was indicated to be an addaptation period, where many changes were done in the processes and new features of the system were identified and implemented.

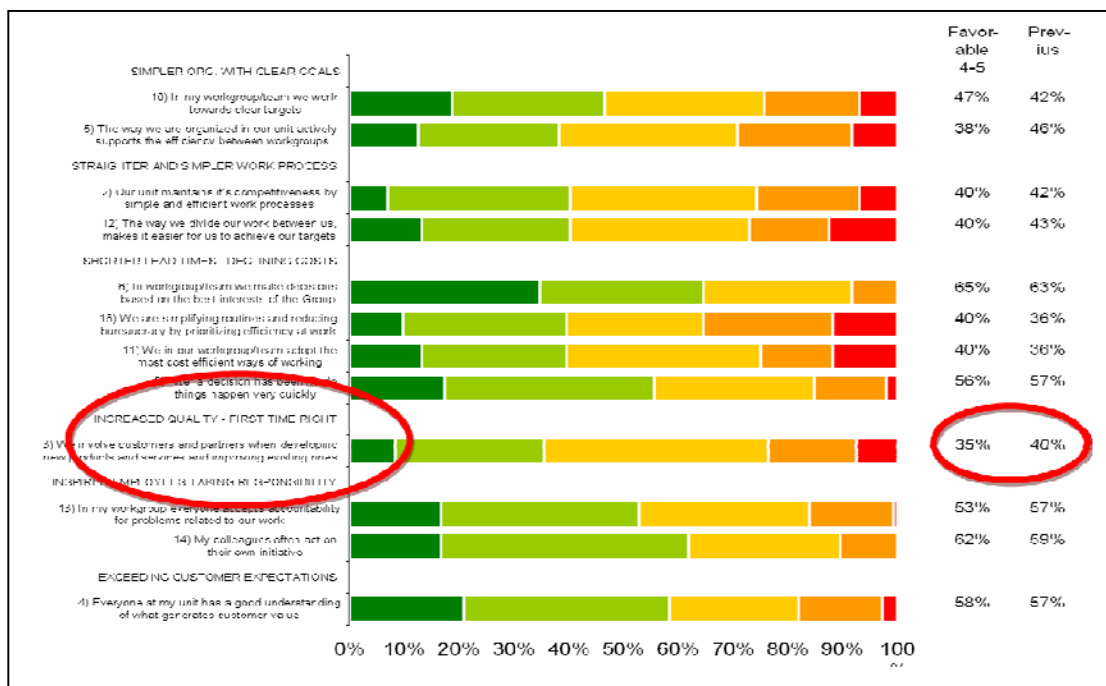


Figure 2: HCI Web-poll Customer Logistics Q4 2010 – Consultants, OPERATIONAL EXCELLENCE (Questions: 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 16)

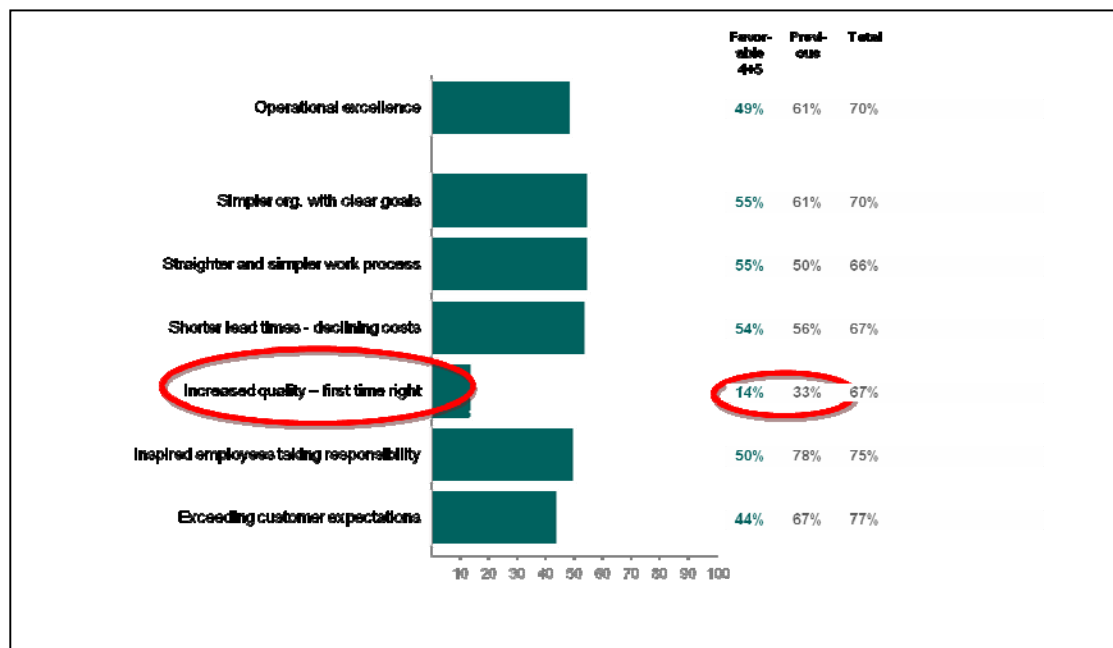


Figure 3: DIALOG 2010, OPERATIONAL EXCELLENCE Employees– INDEX (HCI SUB-INDEX)

The main goal of the improvement group - Quality First Time Right is to use the DMAIC (Define, Measure, Analyse, Improve, Control) model of Six Sigma and try to improve the quality of performance in terms of doing things First Time Right. The present research aims to support their efforts by defining (the first part of the DMAIC method – Define) the problem and providing further recommendations of how to accomplish the remaining stages in the Six Sigma methodology (Measure, Analyse, Improve, Control).

The group Quality – First Time Right consists of seven members of the order management team. The project Business Process Improvement was assigned for 6 months and the group had its first meeting in the middle of february 2011. At the end of the six months period it is expected the group to present the results of the project in front of the whole order management team.

As a result of many discussions, debates, formal and informal meetings, there has been implication that there are different ways of influencing service quality. However, one topic which goes beyond the standard understanding of

Business Process Improvement was mentioned in the group quite often. The power of employee engagement and its interdependence with the performance. Initially, not all members of the group understood and accepted the idea. Nevertheless, after a summarized presentation of the main research papers on the topic, it was decided by consensus that it should not be neglected and a green light was given for further research in this direction.

As a full-time member of both the order management team and the improvement group, the author of the present Diploma thesis was assigned the role of improvement consultant and researcher in the area of employee engagement and service quality. Respectively, she was assigned the task to investigate deeper how the interaction between these two concepts apply to the particular problem with the quality improvement in the order management team. To find out if there is a correlation between employee engagement and service quality and how this knowledge can be used in practice. Therefore, the findings and the recommendations of the thesis are going to be used by the improvement group – Quality First Time Right and help the work on the project. In particular, they are meant to support the application of the DMAIC model of the Six Sigma methodology mainly in its first stage - Define.

3 Literature Review I – Industry / Sector Overview

Nowadays telecom market is characterised as one of the fast developing industry world wide. The intensity of innovations and improvements is so high that it makes it difficult for all companies to check up and be competitive. All developments and evolutionary events have great impact on each of us, as we are daily consumers of the services and products offered by the telecoms in each country. On the other side the penetration of wireless internet and the launch of new technologies as LTE and 3G and 3G greatly increases the communication levels not only between people but also devices or machines.

The fact that we have better and more ways of communicating puts a high pressure on each company in the industry to optimize its operations to be more competitive and benefit from the growth of the industry.

3.1 Sectoral Overview – Telecom market in brief

In what follows, extractions are provided from the Barclays Capital report from November 2010 on telecommunications market. The aim is to give a short overview of the new trends and expectations in the industry.

Devices: The migration of smartphones and the emergence of Apple have upset the handset market status quo. In 2011, a paradigm shift in the industry is expected, with feature phones being replaced by smartphones and becoming the major growth driver of the handset market, states the report of Barclay Capital (November 2010).

In the US and Western Europe the Smartphones penetration is expected to be 35-40% in 2010 migration should accelerate to 50-60% in the next 12-18 months, driven by the established Smartphones ecosystem.

There are several swing factors to Barclays projections concerning the growth in Asia. In 2010 the Smartphone penetration was only 9-10 %, but the

progress of 3G data rollouts of the operators, the price elasticity on the low end Android phone volume in China and India may change the figures in the future.

Applications: Facebook launched "Messages" service which combines instant messaging, SMS and e-mail. On the other side Apple announced a task force of mobile operators to develop an embedded SIM solution that will include programmable SIM card capabilities to enable remote activation. The move is expected to speed the development of M2M (machine to machine) services. The task force will deliver a technical solution as an evolution of the current SIM provisioning mechanisms.

Facebook is positioning as a communication hub: Messaging hub – unifying e-mail, SMS and other IM systems; Voice hub- integrated with Skype and Vonage; Document hub – integrated with Microsoft Office Web Apps, so users can create view and share Word, Excel and Power Point, Content sharing hub – 30 billion photos, web links, news stories, blog posts, videos, etc. shared each month and Rating hub – over 2 million web sites have incorporated Facebook's "like" button. In other words Facebook's ambitions will impact the telecoms industry "Relatively soon, we'll stop using arbitrary 10-digit numbers and bizarre sequences of characters to connect to each other. We will just select friends by name and be able to share with them instantly"⁴.

Operator strategies: In terms of wireless launches and investment, top news is that Japan's Softbank Mobile launches its dual-carrier HSDPA network and will have theoretical download limit of 42Mbps. The company is confident it achieve 60% population coverage by June 2011, which eclipses DoCoMo, which is promising 20% LTE coverage by March 2012.

Macro economy: Analysis Mason research shows that wireless broadband will fuel economy growth in South Africa. According to EIU

⁴ Seligstein's post from 11/02/2011 on the Facebook blog, <http://blog.facebook.com/blog.php?post=452288242130>; Last visited: 11/05/2011.

(Economist Intelligence Unit) , the most intense macro risks for companies are growth outlook, inflation challenges and exchange rates.

Having in mind the future trends of the industry, further more it will be presented the main issues which this industry faces in terms of Supply Chain Management.

Supply Chain Management is stated by many authors and practitioners to be the key area of the business where competitive value can be generated by improving processes, implementing new technologies and reducing costs, this correlating in better operational and business excellence and customer and shareholders satisfaction.

3.2 Supply Chain Overview

This subsection identifies the main trends in Supply Chain Management around the world according to the eighth annual Global Survey of Supply Chain Progress 2010 carried out among 11 000 executives, leaders and logistic specialist from different industries worldwide to represent their opinion about the situation in the branch.

One of the most important findings is that the Supply Chain Management was pointed as having a core business importance by 82 percent of the interviewee and almost the same percentage think that it is strongly influencing the business. When probed on the impact of supply chain efforts on immediate improvement costs, only 6 percent claimed that they see no impact, which makes SCH one of the major means to find cost improvement – right behind reduction in staff.

Many leaders of top companies like Microsoft, Samsung, Dell, and Bridgestone, directly responsible for the financial accountability of the European supply support the above findings. They presented their main issues and concerns, participating in the Extended Supply Chain conference in London in March 2011. In an article published on www.supplychainbrain.com, one of the

main supply chain meeting points for proffeciaonl, Michael Burkett, Managing Vice President of Gartner presents the latest news and perceptions.

Supply chain is viewed as “enabler” of the company by majority of leaders, one fift of them claim that it is “the weapon” of the company and the rest perceive it as a “cost center” All of this statements poin out the importance of this part of the organisation, which can be also see in the way how the results are reported. Most of the top supply chain executives report directly to the CEO of the company and several even have their seats in the board of the directors or report directly to the vice chairman.

The recession, the 2010 volcano eruption in Iceland, and, most recently, the earthquake and tsunami in Japan caused many turbulances in the supply chains around the world. Transportation problems, global material shoratages, and even the vanishing of whole factories in Japan turned the stage in to a „burning point“ and effected and is steel effecting all lead times and deliveries, causing unsatisfied customer and additional costs to the organisations.

We need to keep in mind that any turbolences and cuts in the chain, measured in hour or days, greatly effect the deliveries as lead times are prolonged, deadlines are not met and logistic managers need to face the reallity of unhappy customer, who expects the goods at a specific date. In many cases additinal costs, measureed sometimes in milions of Euros‘, are generated due to use of alternative – faster transport means just to meet the requested delivery date and keep the contract.

Further more if we speak about supllly chain management in the telecom industry and specifcilly on the market of Telecom equipment vendors, it is important to pint out one fact – the aggressive politic and penetration of Huawei. All big players on the market and all companies are keeping an open eye on the performanse of Huawei. The Cinesse company reported 16 % servise grolbal growth in Q2 2010, major part driven from Eeastern Europe and Middle East - EMEA and APAC - Assia and the Pacific. Strong growth in Americas and declin in

APA is expected. Around 350% YoY (Year over Year) was reported in North America, 140 % YoY in Latin America, 50 % growth YoY in EMEA and 12% in APAC (source: Telecom infrastructure services (TIS) banchmark report 2Q10 by Techology Business Research)

Companies like Nokia, Ericsson, Alcatel- Lucent and ZTE are providing sollusions and compete as supplier not only with products, survices and prices, but nowadays the strongest advantage is who has better and faster supply chain. The world market shares of all this companies is chaging for quartal to quartal due to the high demand of the telecoms around the world and their choice of suppliers. The experience of Key Account Managers, shows that delivery precision and shorter lead times are one of the main arguments when winning a contract.

To summarise, the high competative environment of the telecom equipment vendnors, the presure for lower prices, flexibility and cost reduction in the supllly chain, escalates the the need for optimisation and improvement of all possible processes in the supply chain. Main goal is reduction of lead times, better visibility and planning.

3.3 Process Management and Business Process Improvement

First Process Managements thoughts and references in the literature dates from the 60's and 70's, but it gain more and more popularity after 1993 when the article of M.Hammer and J. Champ " Reingenieering" was published. Since then reserchers and practitioners have strong interest in applying this approach. There are several reasons why process management became so popular and it gave impuls for developing of different methodologies for improving the processses of the organisation untill today. The higher qualification of todays employee, the change in the working invironment – stimulating creativity and inovation, the idetification of the employees, not only with its department goals, but also the companies goals and the increase of cooperation with in the company

are only one of the factors which supported the popularity of Process Management.

Today's reality is that every multinational company is using one or another approach of Business Process Improvement. Starting with TQM, Lean, Kaizen, Six Sigma we can continue and the list with all methodologies will be long enough to describe the implementation and different way of thinking of today's organisations in terms of quality improvement.

Business Process Improvement is a key activity in all organisations these days and as it was already pointed out main issue in the supply chain organisations and departments. The initiatives usually targetted at one unit or group, impacts the whole organisation. Many authors and professionals suggest that if the improvement activities are managed as a strategic project, the success has bigger probability.

Business Improvement initiatives are continuous. The organisation needs to evaluate and refine all process during its growth in order to do its business as efficient as possible.

In order to understand the way of thinking of the Order management group, main actor in this case study it is needed to give a brief overview of the method used for all improvement activities - Six Sigma. In the lines below is presented a short comparison between the well known TQM (Total Quality Management and Six Sigma) This is meant to give a link and understanding of the concept of the Diploma thesis.

3.3.1 TQM vs. Six Sigma

In manufacturing and service industry both TQM and Six Sigma are used and have many similarities. Six Sigma is relatively new concept, but is not designed to replace TQM, it only pushes the process of improvement a bit further and delivers more precise and sharper results as it uses statistical methods for monitoring and control of the processes.

Total Quality Management (TQM) often refers to the development and maintenance of the organisational systems – requirement for the business processes. Main approach is following standards and making incremental improvements, as well as establishing culture of collaboration within the company.

Six Sigma on other side, focuses on continuous improvements for achieving almost perfect results and reducing the number of defects. Processes are monitored by statistical methods and very often Six Sigma focuses on taking quality improvements to the next level, further than TQM, especially when TQM reaches situations when no more improvements can be made. In many cases the result can be the same – producing better quality product or providing better quality service. Six Sigma helps companies to reduce cost and eliminate waste, that provide no value to the customer (main activity in the Lean method as well). It focusses on improving all the operations with a single business process, whereas TQM stresses on individual operations within unrelated business process and can be a part-time activity and can be managed by a “non-dedicated” managers. This means that the managers are implementing the activities as a part of their daily work, not as an assignment and acting as dedicated Change managers.

There is one main point in which Six Sigma is better than TQM. It is based on the DMAIC (Define, Measure, Analyze, Improve and Control) method and planned as a project with full understanding of the financial gains from the improvement. The organisations that have implemented only TQM are lacking this knowledge, cannot make precise measurements, cannot identify exact problems and providing solutions that can be measured.

In conclusion, although many TQM tools and techniques are similar or may appear similar to those of Six Sigma, there is a difference in the strategic focus and systematic application and has the potential to achieve more than TQM. Nevertheless many authors predict that Six Sigma will outlast TQM, it should

kept in mind, that TQM provides valuable information and knowledge, which should not be neglected, but used in the future to improve and may be modify the Six Sigma methodology.

3.3.2 Six Sigma and the DMAIC model

The methodology Six Sigma is a worldwide well-proven customer satisfaction and cost reduction improvement approach applicable in a variety of areas such as supply, manufacturing, design, financial and market processes. It is a strategic management initiative where you get a bottom line impact through improved customer satisfaction, Cost of Poor Quality savings and increased revenues.

The methodology is in many ways a new way of improving business results though the tools are not new. Joseph Juran and W. Edwards Deming used this approach in the 1970's and Motorola in the 1980's, when successfully introduced its quality program. They showed the financial benefits and other companies like Texas Instruments, IBM and ABB started to implement the Six Sigma methodology. When Motorola won the prestigious Baldrige Quality Award in 1989 many other companies realized the real benefit of Six Sigma and started their own Six Sigma programs. Maybe the most recognized company is General Electric who runs a top down implementation of Six Sigma since 1996. Six Sigma contributed alone to gain General Electric's a profit of \$3200 M in 1997. Nokia also runs a Six Sigma implementation since 1997. They turned to a consultant who was one of the early key persons at Motorola to be their Six Sigma guide.

Six Sigma is recognized to bring Business case orientation and bottom line results, actively participating leadership from senior- to line management, a data driven, fact based statistical mindset, Variation and/or defect reduction, Focus on process performance, Customer orientation and a sense of urgency

The methodology DMAIC is an abbreviation of Define, Measure, Analyze, Improve and Control. There is a logical flow of activities and suitable tools back

these up. DMAIC is generic but not standardized. On the highest level, the employees need always to conduct the five phases in all types of improvement objectives but the tools used in every phase are dependent on the task and are not always the same.

Many partitions use the DMAIC methodology when an existing product, process or service is not meeting customer specification or is not performing adequately. The methodology is applicable when you can explain the present situation as $Y = F(x_1, x_2, x_3 \dots x_n)$. It is meant that a result "Y" (the quantitative goal that you want to improve) is an effect of a number of influencing parameters or causes " $x_1, x_2, x_3 \dots x_n$ ".

As nothing is permanent except change, it is very important to give the customer more value and to be more efficient in the ways of working. It is very crucial to drive the right changes in an efficient manner. This is why companies around the world set up improvement projects. One of the main issues in this topic is that there is a need of change in terms of not only processes, but also behavioral – key factor for sustainability of the new implementations. In addition, here comes the importance to engage employees on all levels, otherwise all work and effort might be waste of time and resources.

3.4 Service quality – the 7 crucial factors of Ueno (2010)

In search for the fundamental features supporting service quality Ueno (2010) provides an overview of the theory and research done in the area of TQM, Internal Marketing and the study of service quality gaps. As a result, he identifies 7 common factors critical for the management of service quality:

- 1. Recruitment and selection** - Poor service quality is in many cases connected with having wrong people on the wrong place.
- 2. Training** – minimizes the risk of human errors and quality of human service in general.
- 3. Teamwork** – lack of teamwork has great impact on service

performance. Information can be missed, valuable synergy effects neglected.

4. Empowerment – shifts the level of service performance to much higher levels. Very often, the employees need to have the freedom to act and judge on their own when providing a service. This is due to the simultaneous production and consumption, when service is delivered.

5. Performance appraisals and rewards – feedback from managers is a signal for the employee. It can be used to guide employee's behavior by rewarding the outstanding performance

6. Communication – lack of communication is the issue, which can most frustrate an employee and this could easily be transferred into customer dissatisfaction and poor service quality.

7. Culture of the organization – it is critical for the successful management of service quality, as in this area it is very difficult to have direct control of the quality and employee's behavior. The culture can only give guidelines for right manner of acting.

These factors were identified, but the literature does not state which of them is more important than others. Akiko Ueno reached this conclusion and like this made contribution to support service quality.

Based on literature review of many authors dedicated their work to TQM she managed to extract 15 principles of TQM commonly discussed by the academic world. Employee selection, commitment, involvement, and participation; training and education; teamwork; empowerment; performance appraisals/measurement, recognition and reward; communication; cultural change; management style, understanding, commitment, involvement and leadership, designing, planning, measurement, cost of quality, tools and techniques, internal and external customer focus, continuous improvement. These 15 principles were claimed to be the requirements for initiating TQM or contributing to the successful implementation of TQM. When taking into account that we deal with the term service quality, the author suggests that even though

TQM was designed in the manufacturing sector, it can be used when improving services. This what attracted the attention of the sector are mostly the soft aspects of TQM, that are not material or physical and hard to measure, such as human contact between employee and customers, customer care and the internal marketing – seeing employees as customers and concentrating on the relationship between the employees themselves.

Furthermore, his article he discusses the variety of terminology and elements of internal marketing used by the authors in the academic world, having different emphasis on different elements. Nevertheless, she manages to select the most common categories and presents the 12 elements of internal marketing. Contributing to success and developing of service culture are recruitment and selection, training, teamwork; empowerment, performance measurement and reward system, communication; culture; top management, commitment, involvement and leadership; employee commitment and involvement; Internal marketing segmentation and targeting; internal marketing research; HR issue including motivation and job satisfaction. The 12 elements are claimed to makes easier quality improving and service delivery.

Last, but not the least Akiko Ueno looks into the study of Service quality gaps and concentrates his effort to identify the main strategies for closing gap 3 only.

The gap model first appeared in the literature in 1985 when Parasuraman, Zeithmal and Berry published in Journal of Marketing his study “A conceptual model of service quality and its implications for future research” they stated that the model is “conceptualization of service quality as the gap between customer expectation and perception of performance”

Gap 3 is the difference between customer-driven service, design, standards and a service delivery. It exists due to the four main reasons: employee roles; customer participation; intermediaries (a negotiator who acts as a link between parties); and demand and supply. In other words, it appears when

service providers are unable or unwilling to meet the service standards.

Many authors propose strategies for closing gap 3. Akiko Ueno examines the different terminologies, suggestions, and similarities. Finally, she identifies 12 factors. They are possessing in these acknowledgments of the researchers and are crucial for the service quality, presented below:

Corresponding features		
Internal marketing	TQM	Strategies to close gap 3
Recruitment and selection		Recruitment and selection
Training		Training
Teamwork		Teamwork
Empowerment		Empowerment
Performance appraisals and reward		Service performance measurements and reward
Feedback and two-way communication		Two-way communication
Culture		Service culture
Top management commitment and involvement		
Employee commitment and involvement		
Internal marketing segmentation		
Internal marketing research		
Motivation and satisfaction		
		Service oriented process
		Technology and equipment
		Internal marketing
		Internal service quality
		Managing external customer

Notes: 1. Employee selection, commitment, involvement, and participation; 2. Training and Education; 3. Teamwork; 4. Empowerment; 5. Performance appraisals/measurement, recognition and reward; 6. Communication; 7. Cultural change; 8. Management style, understanding, commitment, involvement and leadership; 9. Designing; 10. Planning; 11. Measurement; 12. Cost of quality; 13. Tools and techniques; 14. Internal and external customer focus; 15. Continuous improvement

Figure 4: Corresponding features between internal marketing, TQM and strategies to close gap 3

The seven corresponding features in the table above are likely to be applicable in any organizations in the service sector and even the research literature is large and ever growing the factors can give guidelines to managers when trying to improve service quality.

Combining the knowledge and the information about the sector, the specifics of the supply chain service, the settings of this particular case study, me as author of this thesis have tried to explore these statements and use them to investigate the connection and relation of employee engagement with the seven factors supporting service quality.

4 Literature Review II – Area of Organizational Sociology and Psychology Theory

Employee engagement has ambiguous meaning among academic researchers and practitioners. The term is very often used in conversations not only between managers and in with clients, but also is very popular topic among the HR consultants. Recently the number of surveys, global, regional and organisational, carry the title Employee Engagement Survey. The term gains more and more popularity in the business in general and it is a challenging topic for reserch in the academic circles as it is still not precisely deffined by any model or theory. Authors are joining effort and using close interaction with practitioners to try to find the best interpretation and meaning of this concept.

The present diploma thesis has the ambition to combine and intergate the existing definitions in one presentation which is easy to read and understand. Main sources of information were global Employee Engagement surveys, articals published in different academic journals and common literature. Detailed list with the publications is available in the bibliography section. In the lines bellow the reader can find some of the main features supporting the measurment of engagement and overview of the main understanding of the topic.

As it was already mentioned the concept of Employee engagement is new and it adds interpretive value going beyond the traditional thinking. The common point of view of representatives from the organisational management worldwide is driven by claims that Employee Engagement drives bottom-line results. The HR consulting firm Hewitt Associates LLC, have established a conclusive, compelling relationship between engaement and profitability through higher productivity, sales, customer satisfaction and employee retention, when they presented the results of their survey in 2005. Aon Hewitt's research in 2010 shows also very supportive to the above statement results. The findins indicate a continuous strong correlation between Employee Enagement and finicial performance of the organisation, even in the period of reccsion and turbulence on the markets. For example companies with high employee angement (more then

65%, had total shareholders returns 22% more than the average. On other side the organisations with employee engagement lower than 45% (low engagement) had total shareholder returns 28% under the average.

It is true that much has been written about the importance of Employee Engagement and its link to performance, but discussion is still undergoing about what actually drives the engagement of the workers and how companies can best maintain high engagement level in their employees.

There are many other evidences in the literature that the topic of Employee Engagement is “hot”, different relations were investigated and proved, companies more and more design their surveys to try to map the Voice of the Employee (VoE) and make the best use of it. But what actually Employee Engagement is? What are the main drivers? How it can be connected to the existing theoretical knowledge of Motivation, where many can agree is the place where Employee Engagement should have its share. The next paragraphs give some answers to the above questions in order the topic to be better understood and the analysis of the collected primary data executed in the best possible way.

4.1 The definitions of Employee Engagement

Numerous definitions of Employee Engagement can be found not only in academic papers, but also derived from the practise. As many other psychological constructs in the history, Employee Engagement also suffers from the lack of precision at this early stage of development.

As a folk term Employee Engagement is often described as Psychological state, Performance Construct, disposition or some combination of all. As psychological state it can be seen as involvement, commitment, attachment or mood. Effort and organisational citizenship behaviour (OCB) are examples of Performance constructs and when we speak about disposition, it is associated mainly with the Positive affect (PA).

In the literature for example Wellins and Concelamn (cited by W. Macey and B. Schnider in “ The Meaning of Employee Enagement”) suggested that engagment is “ an amalgamation of commitment, loyalty, productivity and ownership” and “ the illusive ownership that motivates employees to higher(or lower) levels of performance. On other site other autora as Dvir, Eden, Avolio and Shamir, (cited by W. Macey and B. Schnider in “ The Meaning of Employee Enagement”) define active engagment in terms of “ high level of activity, initiative and responsibility” Both groups of authors reffer to EE as a performance construct and specific construct – involvement, initiative, sportmanship, altruism. The Enagement is described both attitudinally and behaviuorally.

It is very clear that author are not in agreement what actually engagement is and about what construct there are they reffering to. There are variour of conceptualisations of engagements as a state, trait or behaviour.

In the “Essential guide to Employee Engament” by Sarah Cook, can be found examples, key learning points and check lists to apply the knowledge about Employee Enagement. By the author Employee Enagement is “ personified by the passion and energy employees have to give of their best to the organization to serve the customer. It is all about the willingness and ability of employees to give sustained discretionary effort to help their organization succeed.”

Main characteristics of Employee Enagement are commitment to the organisation, the beleif in the organisation, preparedness to go above and beyond what is expected in order to deliver outstanding service to the customer. It is more psychological contarct with the company then a phisical one. The survey results available for the public show that the employees make a choice about how they behave and the degree to which they are engaged. Enaged employees are prepared to invest their effort for the success of the organisation. In other words Engagement can be summed up into the following points, showing how possitive the employees: think about the organization; feels about the organization; is proactive in relation to achieving organizational goals for customers, colleagues

and other stakeholders. Figure 5. Presents the triangle used by Sarah Cook. “Engagement therefore is about what employees think rationally about their employers, what they feel about them, their emotional connection, as well as what they do and say as a result in relation to their co-employees and their customers”

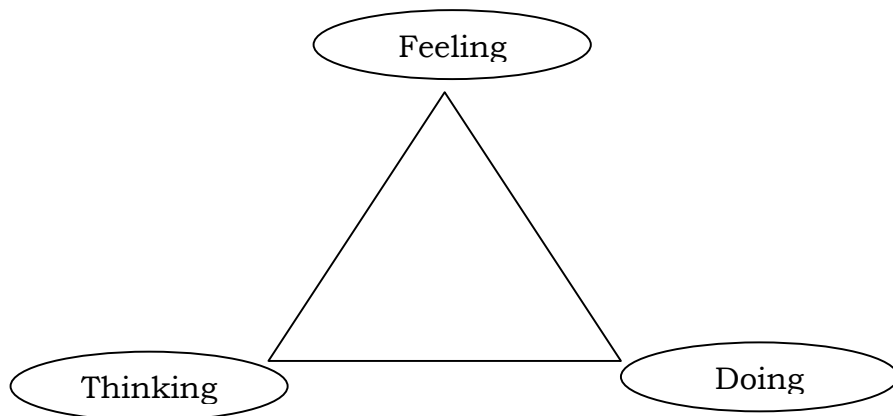


Figure 5: The employee engagement triangle

Many theories in the organisational behaviour literature have been trying to explain what Engagement is, but only after the publication of Macey and Scheider “The meaning of Employee Engagement” the academic world and the practitioners have a better understanding of the components of this so complicated and fashionable term. Their research have been drawn on numerous publications and theories and is still a topic of discussion in the academics circles, due to the lack of strong unifying theory to be used as guideline. Nevertheless, it is considered that the propositions of Macey and Scheider are essential and should be used in research. For example, J. Mayer and M. Gagne suggest that with combination of the knowledge of Self-Determination theory of motivation, the research in this area can step ahead and reach new findings. “academic researchers have an opportunity to leapfrog practice to lead new developments in engagement theory and practice.” (Employee Engagement from a Self-

Determination theory perspective, Industrial and Organisational Psychology 1,2008).

The essentials of Self- Determination theory of motivation are reviewed further in the paper, whether now it will be focused on the key components of Employee Engagement by W. Macey and B. Schneider.

4.2 The Key components of Employee Engagement

For better understanding and illumination of unique components of Employee Engagement, the below table was created and will be a main point of reference in following few paragraphs. It is a summary of the overall framework and the main dimensions of Employee Engagement: The trait Engagement, The psychological state of Engagement- the State Engagement and the Behavioral Engagement. It also shows that job attributes and leadership are assumed to be main effects of the state and behavioral engagement.

The Components of Employee Engagement			
Trait Engagement	Psychological State of Engagement - State engagement		Behavioral Engagement
	The old wine in a new bottle	The new wine - the affective nature of SE(focus on affect)	The extra-role-behaviour
Positive Affect (PA) Proactive Personality Conscientiousness Auto-telic	Satisfaction Commitment Job involvement Psychological Empowerment	Positive Affect (PA) Involvement of the self	Organizational Citizenship Behavior(OCB) Role expansion Proactive behavior and personal initiative

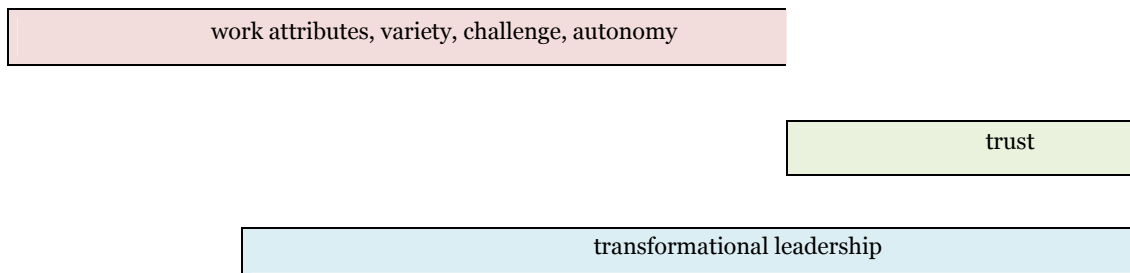


Figure 6: The components of employee engagement

The State Engagement

The area, which have received the more attention in the prior literature is the psychological state of engagement – the state engagement. It is also considered as both dependent and independent variable in table 4 and claimed to a central issue in the topic.

It can be shortly described as the feeling of energy absorbtion, attachment, enthusias, wher there is an increase emphasis on absorbtion, affect and passion and less emphasis on satisfaction, job involvement and organisational commitment. The involvement, commitment and empowerment are also

suggested to be part of the psychological state of engagement. The authors of this concept W. Macey and B. Scheider present the idea as the “ the old wine in a new bottle” and “ the new wine”, which is the affective nature of the state enagement.

Before enreaching as with their new propositions about these concepts, they make an overview of the traditional understanding of the terms. It is point out that all can have relevance for the state engagement. The new label of the old wine with distingushabel characteristics and -"feel" and the old constructs connoting affect and feeling are relevant, but the aspect in the old constructs connoting satisfaction and contentment are not relevant to state engagement “engagement cannottes activation, whereas satisfaction cannottes satiation”.

The old wine in a new bottle

Engagement as Satisfaction from resource availability, opportunity for development, clarity of expectations.

“Satisfaction when assessed as satiation is not in the same conceptual space as engagement. Satisfaction when assessed as feelings of energy, enthusiasm and similary possitive affective states becomes a facet of enagement”

Engagement as Commitment – the organisatioanl and task/goal commitment, psychological state of attachment, the binding force between the individual and the organisation, beeing part of the family, effort, pride, not the description of the conditions that might yield the commitment, just the psychological state

“Organisational commitment is an important facet of the engagement when it is conceptualised as possitive attachment to the larger organisational entity and measured as a willingness to extert energy in support of the organisation, to feel pride as an organisational memeber and to have personal identification with the organisation”

Engagement as Job involvement - the job is the key antecedent of the state engagement, engagement and involvement in the task is critical to the overall state of engagement. The key is the job, not the organisation.

“Job involvement (including task engagement and job commitment) as traditionally conceptualised and assessed is an important facet of the psychological state of engagement”

Engagement as psychological Empowerment – the two-dimensional model: the experience of authority and responsibility and the four-dimensional model: this dimension includes meaning (sense of purpose), competence (self-efficacy), feeling of self-determination (feeling of control) and impact (belief that one's efforts can make a difference). In other words the outcomes of empowerment include: effort, persistence and initiative.

“Feelings of empowerment that connote an inclination to action vis-a-vis work (feeling of self-efficacy and control and impact from one's action) comprise another facet of state engagement”

The work attributes, variety, challenge and autonomy has direct effect on State engagement as well as the leadership.

The new wine

The new wine is the affective nature of the State Engagement, there is great focus on effect. It makes it clear how the old constructs are inadequate when measuring, shows that engagement suggests a different emphasis seenable in individual discussions in the literature.

Engagement as Positive Affect (PA) – the activated pleasant affect, it connotes activation and pleasantness. Positive affect markers for the Positive and Negative Affect Schedule (PANAS) include attentive, alert, enthusiastic, inspired, proud, determined, strong and active (Watson, Clark & Tellegen, cited by W. Macey and B. Scheider). These markers are very often used as contemporary

engagement definitions. In the popular management press it is used as passion and excitement or simply emotional engagement.

“ Positive Affect associated with the job and the work setting connoting or explicitly indicating feelings of persistence, vigor, energy, dedication, absorption, enthusiasm, alertness and pride occupies a central position in the conceptualization of State Engagement. Conversely, measures of psychological states that are devoid of direct and explicit indicators of effective and energetic feeling are not measures of State Engagement in whole or part”

Engagement as Involvement of the self – the self-esteem, the self-efficacy and the self-identity. As “ people can use varying degrees of themselves . physically, cognitively and emotionally, in the roles they perform... the more people draw on their selves to perform their roles ... the most stirring are their performance. (Kahl, cited by W. Macey and B. Scheider)

“State Engagement additionally refers to the investment of the self in the person’s work and the perceived importance of work outcomes and organisation membership to that person’s identity”

The authors of “ The meaning of Employee Engagement” agree that engagement as a state has strong connoting high level of involvement as passion and absorption in the work and the organisation as well as enthusiasm and alertness (affective energy) and sense of self-presence at work. It is very important to underline that the state of engagement results in and/or is hand in hand with the engagement behavior, but differs from that behavior. That state engagement has a psychological outcome, which is personally relevant, whereas the behavioral engagement has outcomes, which are relevant for the organisation. This point is critical to have a separate focus on state engagement and behavioural engagement.

The Behavioral Engagement

The model of table 4. Engagement can be seen as behavior, which can be observed. In other words it implies something special, extra or at least atypical. It is known that some employees are engaged more than others, that they invest extra time, brain power and energy. extra-role-behaviour

The Organisational citizenship behaviour, the proactive personal initiative, the role expansion and the adaptivity are considered main key words when speaking about Behavior engagement. This extra effort can be compared as a reservoir of energy that the employee has and can choose to draw from. If the organisations have the “know how” to harness this potential will likely enjoy great competitive advantage. Unfortunately, the extra effort is not easily defined, it is very limiting view of engagement and being “extra” implies more than the standard, which bring us to the question “What is the standard?” To summarise this specific issue W. Macay and B. Scheider give us their proposition 7:

“Engagement behaviour include innovative behaviours, demonstration of initiative, proactively seeking opportunities to contribute, and going beyond what is, within specific frames of reference, typically expected or required.”

The Engagement as OCB – Organisational Citizenship Behaviour – there are certain behaviours that are important for the company and its success, but not formally defined as part of the job and therefore not explicitly rewarded.

“Engagement behaviour includes actions that, given a specific frame, go beyond what is typical, usual, ordinary, and/or ordinary expected”

The Engagement as role expansion – the choice of the employee to perform extra role task, for example to “pay back” for having been treated well. It is an atypical behaviour in a comparatively sense. For example some workers perform a greater breadth of task than others. In the literature it is explained with

the level of autonomy and cognitive ability, in other words it is related to self-efficacy.

“Role expansion, behavior that reveals attention to wider range of tasks than is typical or usual, is a facet of engagement behavior”

The Engagement as Proactive behaviour and personal initiative
– it is connected by three facets: self-starting, proactivity and persistence. These behaviours also go beyond expectations and supports organisational effectiveness.

“Behavioral engagement is adaptive behavior intended to serve an organisational purpose whether to defend and protect the status quo in response to actual or anticipated threats or to change and/or promote change in response to actual or anticipated events”

Behavioural Engagement consists of all facets that have strategic focus in service of the organisational objectives. Many of them contain the notion “going beyond the usual or typical” It needs always to have frame of reference, like other groups, individuals or companies and to deal with performances that have been claimed as adaptive and innovative. The diploma thesis is not designed in order to explore the behavioural engagement as there is no reference group or company in order to be compared, therefore it is mainly used to generate ideas in the final recommendational part of the thesis.

The Engagement as a Dispositional construct – Trait Engagement

Further, in this paragraph it will be briefly summarised the knowledge about third type of Engagement – Trait Engagement - the personal characteristic or the disposition of the individual.

The Positive Affect as Trait Engagement - the enduring tendency to experience positive affect: energetic, enthusiastic person.

The Proactive personality as Trait Engagement – the general tendency to create or influence the work environment. It was demonstrated that correlates with sales success and career success and performance

The Conscientiousness as Trait Engagement - individuals who are hard working, ambitious, confident and resourceful, correlates with the measures of performance

The Autotelic personality as Trait Engagement - refers to people who engage in activities for their own sake rather than for specific gains or rewards, open to new challenges, persist in challenging tasks and be ready to engage, factors that contribute to arriving at and maintaining a state flow.

Evidently there are many points suggesting that State Engagement and engagement behaviours are at least partially the result of dispositional influence or in other words based on personal characteristics of the employees. The markers of this construct are seen by researchers as overlapping with words in the definitions of engagement (passion and activation). Moreover, this point of view comes to the suggestion that people who demonstrate engagement behaviour are more likely to choose environments that will provide the opportunity to do so. Therefore main task and challenge for the organisations is to proactively work to create environment and benefit from such behavior.

“ Trait engagement comprises a number of interrelated facets, including trait positive affectivity, conscientiousness, the proactive personality. These all suggest

the tendency to experience work in positive, active, and energetic ways and to behave adaptively(i.e. displaying effort by doing beyond what is necessary and initiating change to facilitate organisationally relevant outcome.

To summarise, Trait Engagement influence and reflects into the State Engagement and further to the Behavioral. Great impact on it has the work attributes, the variety of the job and autonomy and the challenge it is connected with. Leadership doesn't effect Trait engagement. State Engagement and Behavioural Engagement are mainly influenced by the nature of the work people do and the leadership – the managers ways of working (see table 4). It is very important to mention that the leadership nature has a direct effect on trust and indirect effect through the creation of trust on behavioural engagement. “ Feeling of trust mediate the relationship between leadership behavior and behavioral engagement such that feelings of trust is the psychological state between leader behavior and behavioral engagement. Thus, leaders create trust in followers, and it is the trust followers experience that enables behavioral engagement. “

In the publication of Emeraldinsights “Employee Engagement” Human Resource Management, volume 16, number 3 from 2008 is great source of information representing a review of selected articles from over 400 of the world's top management publications on the topic. Here are only some of the findings from those researches relevant for the further analysis in the diploma thesis and greatly supporting the above theory.

“ The drivers of enthusiasm at the ideas-generation stage and the development stage of innovation are personal results, behaviour of champions and networking, and that the drivers of enthusiasm at the launch stage are personal results, business performance and networking. Concludes that the inhibitors of enthusiasm are gaps in commitment, trust, engagement and results within the company and development partners at the development stage and gaps in commitment, trust, engagement and help at the launch stage. Overall, underlines the role that enthusiasm plays in supporting innovation..”

“ A positive relationship was found between strategic HR roles and organizational commitment; identifies how psychological empowerment facilitates organizational learning capabilities, leading to higher commitment.”

“ Only those managers who felt that their supervisors were supportive reported that the intervention significantly increased their perceptions of maintenance control and impact four months after the intervention, while archival measures of unit performance and affected work attitudes were also improved by the interventions.”

4.3 Self – Determination Theory of Motivation

Intrinsic and Extrinsic motivation

The first model of intrinsic and extrinsic motivation was presented by Porter and Lawler (1968), building on Vroom's (1964) expectancy – valence theory of motivation. Intrinsic motivation involves people doing an activity because they find it interesting. From the activity itself they derive spontaneous satisfaction. On the other side extrinsic motivation needs a connection or instrument to bind the activity itself and some consequence. Tangible or verbal rewards are examples of extrinsic consequence to which the activity leads, so the satisfaction comes not from the activity itself but from the knowledge about the reward.

Porter and Lawler (1968) advocated that the total job satisfaction is a combination of intrinsic and extrinsic satisfaction. Making the job more interesting and stimulating the intrinsic motivation on one side, and promoting the employees based on effective performance – stimulation the extrinsic motivation were their main points assuming that intrinsic and extrinsic rewards are additive, yielding the total job satisfaction. This work generated further research in the academic world and much of the approach was confirmed and refined (see Mitchell 1974). However, additivity of intrinsic and extrinsic motivation was controversial and under debates. The research of Deci (1971) and Deci & Ryan (1980) implied that intrinsic and extrinsic motivation can be both positively and negatively interactive rather than additive. Based on experiments

and the Cognitive evaluation Theory they proposed to explain the effects of extrinsic motivation on intrinsic motivation.

The Cognitive Evaluation Theory - CET

Cognitive Evaluation Theory suggests that there are certain external factors, which weaken the intrinsic motivation. They tend to decrease the feeling of autonomy, motivate a change in perceived **locus of causality (PLOC)** from internal to external. In other words The external factors as tangible (touchable) rewards, deadlines (Amabile, DeJong & Lepper, 1997, quoted in Gagne and Deci, 2005), surveillance (Lepper&Greene, 1975, quoted in Gagne and Deci, 2005) and evaluations (Smith, 1975, quoted in Gagne and Deci, 2005) undermine the Intrinsic motivation. On other side some outside factors such as giving the choice about task engagement tend to strengthen the feeling of autonomy, cause a shift in PLOC from external to internal and increase intrinsic motivation.

Locus of causality (PLOC): A dimension used in the Attribution theory of Fritz Heides, which relates to a competitor's perception of the cause of success or failure. The locus of causality may be internal (i.e. based on the competitor's own characteristics, such as ability or effort) or external (i.e. due to factors such as luck, outside the control of the competitor).

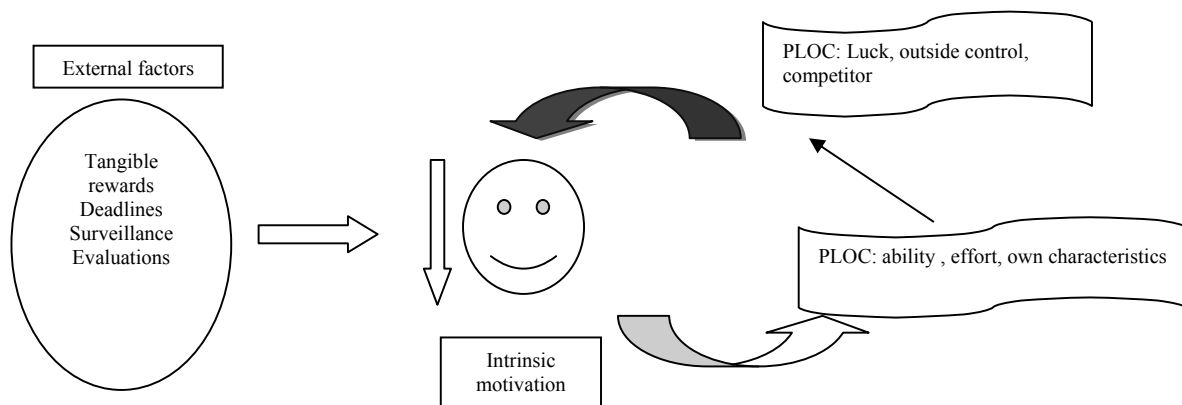


Figure 7: Locus of causality -PLOC

CET further suggests that feeling of **competence and autonomy** is important for intrinsic motivation. For example challenging activities and positive feedback are seen to be highly intrinsically motivating. People feel responsible for their performance. These are some of the findings of Fisher, 1978, Ryan 1982 and Deci, 1971. Later on, Deci and Ryan (1985) showed that people are tending to become amotivated by a negative feedback, which decreased their feeling of competence and undermined both the intrinsic and extrinsic motivation.

These undermining effects of CET, based on the assumption of the theory that people need to feel autonomous and competent in order to be intrinsic motivated, caused many debates and reasons for further research and many laboratory experiments. It was confirmed by Deci in 1999, that there are **limiting conditions** to this undermining effect and not always external factors decrease the intrinsic motivation. He proved that if the rewards are given independent of the working task (eg, salary) or when the rewards were not expected (bonuses) the intrinsic motivation was not weakened. Additionally, other researchers as Ryan, Mims and Koestner pointed out that when the rewards were as a result of good performance and the negative feedbacks were supportive not pressuring, the tangible rewards didn't have detrimental effect of the intrinsic motivation. The undermining of intrinsic motivation has been controversial since it was first motioned by Deci and even though his meta-analysis showed that definitively that tangible rewards undermine intrinsic motivation, recent theories still fails to accept it.

The Problems with CET as a theory of work motivation

In the 1970's and early 1980's, CET gained attention in the organizational literature, but later on it was weakened due to several reasons: most of the research was just laboratory experiments no organizational studies, it was difficult to incorporate CET in the behavior approaches, there were little practical value for the business world and complicated to use, the usage of monetary

rewards was looking practical and appealing. The last, most important reason, as it led to formulating later on the Self-Determination Theory, was that the concept of CET implied that managers should be faced in front of a choice: Either, promoting intrinsic motivation through participation and empowerment while minimizing the use of extrinsic factors or, alternatively, using rewards and other extrinsic tools to maximize extrinsic motivation, while ignoring the importance of intrinsic motivation.

The academic world focused its analysis at extrinsic motivation and came upon with the concept of internalization, which gave some light and new knowledge about the last critics mentioned above. In 1985 Ryan Connell and Deci first presented the idea, explaining how extrinsically motivated behavior can become autonomous. In order to formulate their Self-Determination Theory (SDT) they also combined another research about the individual differences in causality (locus of causality). SDT incorporated CET, but is much broader in scope. In this paper I present the SDT review and compare it to other work motivation theories

An Overview of the Structure of SDT

The effects of Extrinsic and Intrinsic motivators are in general explained by the Cognitive Evaluation theory. The fact that these two terms are so different and in the same time form one whole understanding of motivation, makes it difficult for researchers to apply the Cognitive Evaluation theory in work settings. Only after the extrinsic motivation was differentiated into types in terms of the degree of autonomy, Self – Determination theory (SDT) was formed and gained great attention in education, health and sport domains.

Edward L. Deci and Richard M. Ryan were the first to develop the Self Determination Theory. Their research was later refined and elaborated by many scholars around the world. Many of the articles connected with SDT look into the well being issue and go deeper into the intrinsic motivation.

However, there are few research papers investigating the correlation to work related topics and adding value to the organizational management. The overview of the theory with a business prospective was done by Marylene Gagne and Edward Deci, where they describe the SDT as a theory of work motivation. One of their works was published in the Journal of Organizational behavior (2005) and gives the main concepts, structure and relation of SDT to other literature dealing with work Motivation and Organizational Behavior. Thus, it is used in this graduation paper as main theoretical base for the analysis.

Central for the Self –Determination Theory is the distinction between Autonomous motivation and Controlled Motivation. Autonomous means endorsing one’s actions at the highest level of reflection (Dworkin 1988) “I work because it is fun”. As there is great interest in the activity, the action is performed wholly volitionally. On the contrast, the controlled motivation appears when the activity is done with a sense of pressure

SDT postulate: Autonomous and Controlled motivations differ in terms of both their underling regulatory process and their accompanied experiences. Further it suggests that behavior can be characterized in terms of the degree to which they are autonomous versus controlled. They are both intentional and together they stand in contrast to amotivation (lack of intention and motivation).

Autonomous Motivation	Controlled Motivation
Sense of volition	Sense of pressure
Having the experience of choice	“ having to engage” in the action
Intrinsic motivation	induced by Extrinsic rewards
“I work because it is fun”	

Figure 8: Autonomous and controlled motivation

Extrinsic motivation and the autonomy continuum

The Self-Determination Continuum can be better understood by exploring figure 9. It shows the amotivation – wholly lacking self-determination and the intrinsic motivation – invariantly self-determined in the two ends of the range. Between them lie the four types of extrinsic motivation. Close to the amotivation we can see the most controlled or the less self determined type – External regulation and close to the intrinsic motivation is positioned the integrated regulation – greatly autonomous. Integrated and identified extrinsic motivation expectedly can be found in the center of the continuum with the moderate index of controllability and autonomy.

Intrinsic motivated behavior is autonomous as the person is interested in the activity itself. In case something is not interesting it is not intrinsically motivating and requires extrinsic motivation like implicit (silent) approval or tangible (touchable) reward. In SDT is very important the aspect that extrinsic motivation can vary in the degree to which it is autonomous versus controlled.

SDT					
A motivation	Extrinsic motivation				Intrinsic motivation
	External regulation	Introjec ted regulation	Identif ied regulation	Integra ted regulation	
Abse nce of intentional regulation	Contingen cies of reward and punishment	Self- worthy contingent on performance; ego involvement	Importa nce of goals, values and regulations	Coheren ce among goals, values and regulations	Interes t and enjoyment of the task
lack of motivation	Controlle d motivation	Moderat ely controlled motivation	Moderat ely autonomous motivation	Autono mous motivation	Inhere ntly autonomous motivation

Figure 9: Self - determination theory

Externally regulation – is a classic type of extrinsic motivation and controlled motivation. Employee acts with the intention of obtaining something or avoiding undesired one. He/she is energized into action only when the action is instrumental (e.g. I work when the boss is watching)

Internalization – extrinsic motivation, which results when the employee regulates his/her behavior and makes subjective or personal the value associated with it. By definition it is when people take in values, attitudes or regulatory structures and the external regulator of a behavior is transformed into an internal regulation. (e.g. I work even when the boss is not watching) According to the SDT it is an overarching term that refers to three different processes: *introjections, identification and integration*

Both External regulation and Internalization are by most theories seen as classification into two opposed parts. That people change their behavior due to either external regulator or due to total internalization (incorporation of values and attitudes into oneself). Self –Determination Theory uses the controlled-to-autonomous continuum to describe the degree of internalization of the external regulator. The more internalized it is, the more autonomous will be the extrinsically motivated behavior.

Introjected regulation – that has been taken in by the employee, but has not been accepted as his or her own. The regulation is as if it is controlling the person. DeCharms and Ryan give an example with the self – esteem, which makes people behave in order to feel worthy and the ego involvement, which makes people to behave in order to support their fragile ego. “ I work because it makes me feel like a worthy person) this type of regulation is interesting as it is generated within the person, but it is relatively controlled form of internalized extrinsic motivation.

Identified regulation – characterized with greater freedom and volition, because the behavior is corresponding to employees personal goals and identities. People perceive the cause of their behavior to have internal PLOC in

other words to reflect an aspect of themselves. The employee is said to be autonomously extrinsically motivated as he or she identifies with the value of the behavior for their own self-selected goal. (e.g. I understand the importance of doing unpleasant tasks for the clients' well-being and feel relatively autonomous while performing them).

Integrated regulation – said to be the fullest type of internalization. It allows the extrinsic motivation to be truly autonomous or volitional. Integration and identification with other aspects (interests, identification and values) of oneself occurs. The employee behavior is with a full sense that it is an integral part of who they are and appreciate the importance of the unpleasant (uninteresting) activity. (e.g. I fully identify with the importance of the activity and it is me and I tend to behave like this in general). Integrated regulation is the most developed form of extrinsic motivation as it shares qualities with the other part of autonomous motivation – intrinsic motivation. Gagne and Deci postulate that even it seems to be very close to intrinsic motivation, it is not due to the fact that the person is not motivated because the activity is interesting, but because the activity is instrumentally important for personal goals. ***Autonomous motivation*** – characterizes with the two different types of motivation. From one side the Intrinsic motivation (I am interested in the activity, that motivates me) and the Integrated Extrinsic motivation (I understand and identify with the activity and its importance form my personal goal, that is what motivates me)

Gagne and Deci point out that the SDT is not a stage theory, which means that people don't move from stage to stage and show different behaviors. The theory describes the extent to which an employee for example has integrated the regulation of a certain behavior. The authors believe that a person can, at any time fully integrate a new regulation, or can integrate an existing one if it was partially integrated.

To conclude and summarise the SDT proposes two forms of motivation. Intrinsic motivation refers to performing an activity because it is enjoyable and

interesting. Extrinsic motivation refers to doing things for instrumental reasons. Extrinsic motivation can take two different forms and it is predominant in the work context. It can reflect a desire to gain rewards or avoid punishment, boost one's ego or avoid feeling of guilt, attain a valued personal goal or express one's sense of self. In other words external regulation, introjection, identification or integration. Because identification and integration are connected with high level of volition, together with the intrinsic motivation are considered to be forms of autonomous regulation. External regulation and introjection have more external influence and are considered as forms of controlled regulation. The concept of autonomous regulation overlaps with the conceptualisation of Macey and Schneider for state engagement. Moreover, the behavioural outcomes found to be associated with the autonomous regulation corresponds with what they describe as behavioural engagement.

5 Research Methodology

The following sections have the aim to describe the strategy and technics used in the case study. They are in chronological order, as this will give better understanding of the development of the case study as a whole, main issues, problems, way of generating the outcomes for analysis.

5.1 Improvement group - description

As mentioned above in the introduction of the Case Study, the Improvement group was formed in one of the weekly team meeting of the order management group and received assignment to investigate the issue in quality-doing things First Time Right. Since Quality – First Time Right is a very broad concept, on the first meeting the following measures were approved for defining the scope of interest:

1. Brainwriting excel fille was created and the task to be filled with information in the realted sections was assigned. Dead line: next meeting, responsible: everyone received responsibility for one area to concentrate on according to his or her best specialisation the the order management process: Sales order release, Material sourcing, Delivery
2. Research to be done about structure, plan and execution of the project, as it is not clear. Dead line: next meeting, responsible: Olga(the leader) and Dolores (the researcher)
3. It was agreed that a questionnaire should be done to collect the feadback of the team and some ideas.
4. Close relationship with the manager of the order management team to be established for feedback and aproval of the development of the improvement group
5. The relationship between employee engagement and service quality to be investigated: Dead line: 1st of May, responsible: Dolores (the researcher)

After sustainable reasearch in the literature and the different aproaches of improving quality as Lean, Kaizen, TQM and other Business Improvement stratagies the DMAIC model was aproved by the leader of the order management team, with the comment that it is not expected to be followed precisely.

The idea to investigate the relation between Employee Enagement and Service Quality was also welcomed and found very interesting.

Having established the quidelines to lead the activities in the improvement group, on the second one-hour meeting the disucssion was more structured and fruitful. Main topic was the Define stage of the DMAIC model, the analysis of the brainwritng results (the excel file), the execution of the qualitative questionare about Quality – First Time Right in the whole Order management team.

At this point I need to specify that the design of this diploma thesis was going paralel to the group activities. The qualitative questionare of the improvement group called “pilot” questionare in the diploma thesis report was designed by the group with the active participation of the author who had great level of freedom to choose the type of questions. Analysis of the results were used for creating section 14 - First Timer Right in the quantitative survey executed later on and main data source for this graduation paper.

There were two more meetings of the improvement group, in which main activity ware in to stages: analysis of the brainwrtng excel file and the design of the pilot questionare.

The excel file summarised all issues, faced in the each step of the order management process from order release to delivery and Root Case Analysis was executed.

Once the pilot questionare was sent and the results collected, there hasn't been any more meetings, discussions or activities of the improvement group. It was decided the author of the diploma thesis to develop and present the findings

and recommendations of the Case study “ The correlatuon between Employee Engagement and Service Quality” Then, the group will analyse all available information and finalise the first part of the DMAIC model – Define. If correlation between Employee Engagement and service quality is established, the improvement group will consider implementing relevant measures in the second part of the DMAIC model - Measure and the future development of the Busines Improvement Project.

5.2 Survey - description

The technical part of the research tests for correlation between service quality (represented by the fundamental features of Ueno (2010)) and the employee engagement of the order management team. These two variable were measured based on a data collected by specially designed empirical survey. The survey was sent online (via Google documents web application) to all 19 employees of the order mangement team. It was filled by 17 respondents which makes the results representative given that two of the employees who did not respond were at that time on materinty leave form more then 6 months and cannot be considered to be active members of the team.

The survey consists of 53 questions divided into 15 different sections each of which represents respectively a different aspect of the employee engagement, as follows: 1. The work itself; 2. Work Environment;3. Decision Making; 4. Quality, Customer Service and Work performance; 5. Inovation and change, 6. Reward and Recognition; 7. My supervisor; 8. Development/Opportunity; 9. Teamwork; 10.Communication; 11. Commitment to our company; 12. Culture; 13. Compliance; 14. First Time Right; and 15. Demografics.

The first 13 sections were designed by the consulting company Quatysoft. Section 14 is based on the pilot questionnaire about the magnitude of first time right in the team. The last section is demographics (employee’s years of working experience and position in the company).

Twenty two of the questions were designed to reflect service quality according to the classification of Ueno (2010). In order not to make it obvious to the respondents which are these questions, however, they were not separately positioned but deliberately dispersed across the main fifteen sections of the questionnaire. The choice of the questions were determined by Quantysoft who approved the inclusion of section 14 (based on the pilot survey) in a way that ensures that the measurement of employee engagement and service quality is accurate and by modifying the survey design there would not be lost specific components, which later can lead to wrong interpretation of the information.

The answers of all the questions in the questionnaire were designed in the Likert scale. Each of them presents a statement which the respondent is asked to assess on a five-level scale: Strongly Agree, Agree, Neutral, Disagree, Strongly disagree. It is important to point out that in this diploma thesis the Likert scale is considered and treated as interval scale which is quantified as follows:

Strongly agree	5
Agree	4
Neutral	3
Disagree	2
Strongly disagree	1

Latter on, the questions reflecting service quality were sorted out in a specific, so-called Virtual section (VS) for the purpose of the analysis. The measure of the employee engagement was respectively computed based only on the answers to the remaining 31 questions distributed according to the section to which they belong. The value of each section for given observation is given by the arithmetic average of the values of this observation for the questions that are included in the section. That is, it is assumed that each question within a section has an equal weight in the respondent's assessment of this section.

So, the correlation coefficient of Pearson was calculated for each of the 14 non-demographics sections with respect to the virtual section.

5.3 Correlation analysis

Formally, the correlation coefficient ρ between two vectors of random variables, X and Y , with means μ_x and μ_y and variances σ_x^2 and σ_y^2 is given by the following mathematical expression:

$$\rho = \text{Corr}(X, Y) = \frac{\text{Cov}(X, Y)}{\sigma_x \sigma_y} = \frac{E[(X - \mu_x)(Y - \mu_y)]}{\sqrt{E[(X - \mu_x)^2]E[(Y - \mu_y)^2]}}$$

The correlation coefficient is calculated by dividing the covariance between the vectors of the two sections analyzed on the product of their individual standard deviations.

The covariance is given by the product of the standard deviations of the two vectors. It shows the joint distribution of the estimated variables. If it is positive, high values of the one variable tend to be associated with high values of the other variable. When the covariance is negative, high values of the one vector tend to be associated with low values of the other vector. Or in the context of the present survey, when a respondent agrees with the statements of the questions in one of the two sections analyzed and the covariance between them is positive, this implies that with high probability she will also agree with the statements of the questions in the other of the two sections.

The covariance is divided by the product of the individual standard deviations in order to eliminate differences between vector values due to different scale measures⁵.

The calculation of the descriptive statistics was executed in Microsoft Excel. Then, the sections with high correlation coefficient (above 0.5) were divided into the following two categories:

⁵ Newbold (1994), pp. 427-429.

- **Class A** - with correlation coefficient above 0.7
- **Class B** - with correlation coefficient between 0.5 and 0.7

Next the correlation coefficients were statistically tested for significance as described below.

5.4 Test of significance

As the goal of this paper is to investigate the relationship between the two variables employee engagement and service quality, standard correlation analysis was used to test the significance of the strong relationships between the sections of class A and B and the virtual section. Since the correlation coefficients make sense only given that joint observations are normally distributed around a straight line, this (aka alternative) hypothesis needs to be tested against the unfavorable possibility (aka null hypothesis) that actually there is no linear relationship between them.

Formally, null hypothesis could be represented as follows:

$$H_0 : \rho = 0$$

It could be mathematically proven that the likelihood two jointly normally distributed variables not to be linearly related, i.e. the probability for the null hypothesis to be true, follows a Student's t-distribution with (n-2) degrees of freedom given by the following expression:

$$t = \frac{r}{\sqrt{(1-r^2)/(n-2)}}$$

where r is the sample correlation coefficient and n – number of observations.

Respectively, as further is the t-statistics calculated for the sample correlation coefficient from the standard mean, the lower will be the probability for the null hypothesis to hold.

In statistics, this probability is called p-value or confidence interval and the t-statistics value to which it corresponds is named critical value. Respectively, if the sample t-statistics exceeds the absolute critical value corresponding to given confidence interval, it is said that with that level of confidence the null hypothesis could be rejected that is alternative hypothesis could be considered to hold true. As lower is the confidence interval with which the null hypothesis could be reject the higher is the probability for the alternative hypothesis to hold. In other words, the more significant is the value of the coalculated correlation coefficient. If the confidence interval is large (above 0.10) however, there is not sufficient evidence to claim that the correlation coefficient differs significantly from zero which violates the basic linearity assumption required for using it as reliable dependence measure between two variables⁶.

The test of the significance of the correlation coefficients computed for the sections in class A and class B is the final step in the technical procedure for estimating the interdependence between employee engagement and service quality. The results should show which aspects of the employee engagement are measured to be interrelated the most to the measure of the service quality in the particular business case studied by the presented empirical survey.

Next chapter presents the main findings.

⁶ Newbold (1994), pp. 433-434.

6 Main Findings

Figure 10 bellow shows the results of the correlation analysis for all the sections:

	Quality(VS)	Significance	alpha 0.5	alpha 0.05	alpha 0.01
S4	0.85	Very Strong	Reject	Reject	Reject
S7	0.85	Very Strong	Reject	Reject	Reject
S10	0.72	Strong	Reject	Reject	Not Reject
S13	0.70	Strong	Reject	Reject	Not Reject
S1	0.66	Strong	Reject	Reject	Not Reject
S11	0.56	Strong	Reject	Reject	Not Reject
S5	0.50	Strong	Reject	Reject	Not Reject
S9	0.42	Mildly Strong	Reject	Not Reject	Not Reject
S3	-0.36	Weak	Not Reject	Not Reject	Not Reject
S6	0.25	Weak	Not Reject	Not Reject	Not Reject
S8	0.23	Weak	Not Reject	Not Reject	Not Reject
S15	0.15	Weak	Not Reject	Not Reject	Not Reject
S12	0.14	Weak	Not Reject	Not Reject	Not Reject
S2	0.13	Weak	Not Reject	Not Reject	Not Reject
S14	-0.09	Weak	Not Reject	Not Reject	Not Reject
Quality(VS)	1				

Figure 10: Correlation between Employee Engagement sections and Service Quality

6.1 Correlations - Class A

In figure 10 the results for Class A sections are denoted in bold.

The correlation matrix revealed very strong significant (at 0.01 confidence level) correlation between section 4 “Quality, Customer service and work performance”, section 7 “My supervisor” and the virtual section “Service Quality”.

In order to have better understanding what stays behind these two sections, below their correlation coefficients are further decomposed to the correlation coefficients of the questions that they include and the virtual section (figure 11 and 12).

Correlations of employee engagement, section “Quality, Customer service and work performance” with service quality

Employee Engagement		Quality - Virtual section		
Section	Question	Question	ρ	Factor
S-4 Quality, Customer service and work performance	10. My supervisor provides a strong commitment to quality excellence and customer service.	47. Quality of Sales Order release is the most important for our part of the supply chain.	0.74	First Time Right
	13. Our company provides products and services that meet or exceed customer expectations.	33. Overall communication to employees is effective.	1	Communication
		35. Information I receive from my supervisor is straightforward and honest.	0.73	Communication
		50. I think that better KPI measuring the Quality - First Time Right will improve our performance.	0.71	First Time Right
	14. I would want to be a customer of this organization.	35. Information I receive from my supervisor is straightforward and honest.	1	Communication
		33. Overall communication to employees is effective.	0.73	Communication

Figure 11: Correlation between Employee Engagement section “Quality, Customer service and work performance” and virtual section “Service Quality”

It seems that supervisors commitment to quality excellence is strongly related to the sales order release quality⁷. This findings identifies the key set of processes to be reviewed.

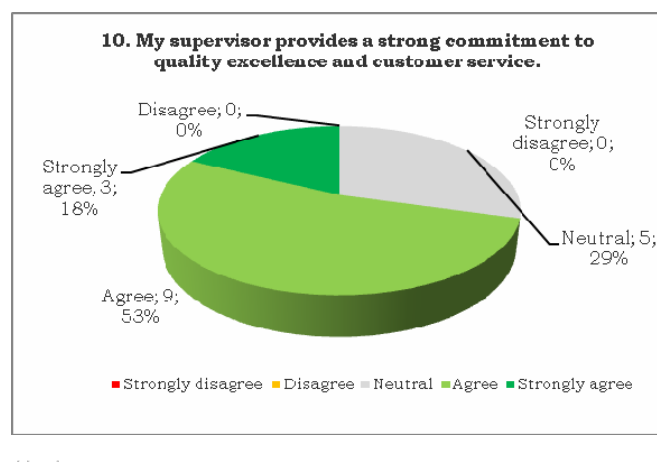
Attitude about products and services most correlates with the extend to which communication is percieved as effective. Higher levels of these perceptions

⁷ sales order release is the first step in the supply chain part of this order management team

will improve the working environment and support success, therefore it is good to find out if action is needed to raise the optimismus.

The claim of being a customer of the organisation show very strong relation with the supervisors expression of information in therms of honesty and straighforwardness. These correlation adds some more pieces to the puzzel and emphasises the supervisors role with in engagement and quality development.

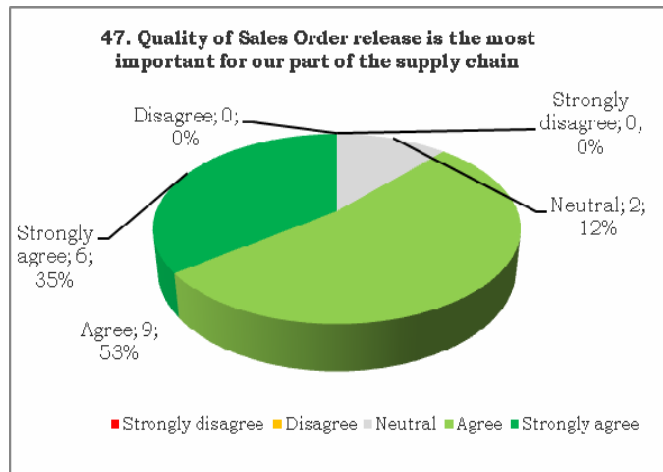
To identify which areas need more attention, the friquency of the observations are analysed and presented with graphs.



Graph 1: on line survey - question 10

Around 70% of the employee are satisfied with the commitment the supervisors has towards quality excellence and customer cervice (graph 1). This is can be interpreted as good signal for the atmosfere in the order management team. However, it should be pointed out that the 5 people out of 17 for some reason are not claiming possitive attitude with this statement. This fact emphasises the need of furher observation and research about the driver for this opinion and places supervisors commitment in this area in the list for improvements.

The picture gets clarified by the finding that supervisors commitment correlates very strong (0.74) with question 47 "Quality of sales order release is



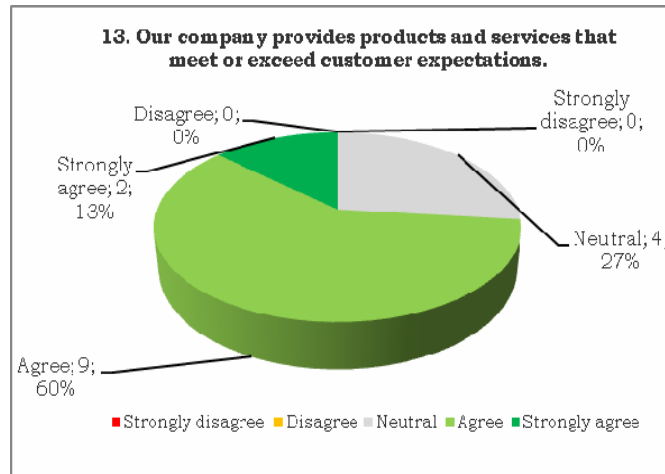
Graph 2: on line survey - question 47

the most important for our part of the supply chain”(graph 2).

Nearly two thirds of the employees agree with the statement. Importance of an activity is one of the drivers for identified and integrated motivation. Self -determination theory suggests that if employees strongly value customers comfort and understand the importance of doing their share of the task, the employees will feel relatively autonomous while performing such task.

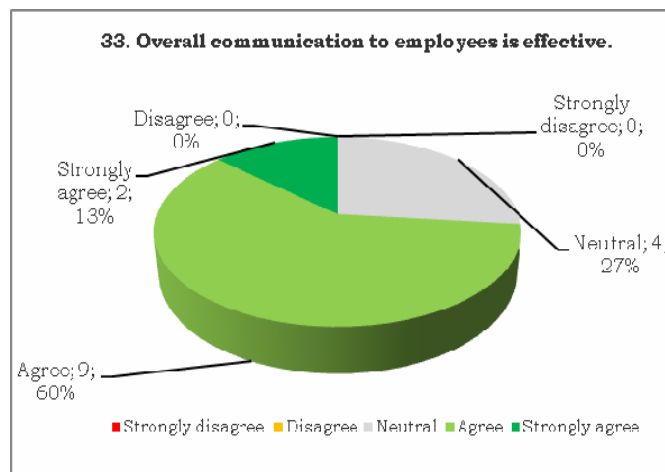
In sum supervisor’s commitment from one side and importance of sales order release from other, seem to be important, as any changes can influence the perception and reflect into the motivation of the employee. Furthermore, sales order release step of the order management proces is identified as key focus area for further investigation and analisis by the Improvement group in their Business improvement project.

The next group of correlations show connection between the perception of „Our company provides products and services that meet or exceed customer expectations”- Q13 (see graph 3).



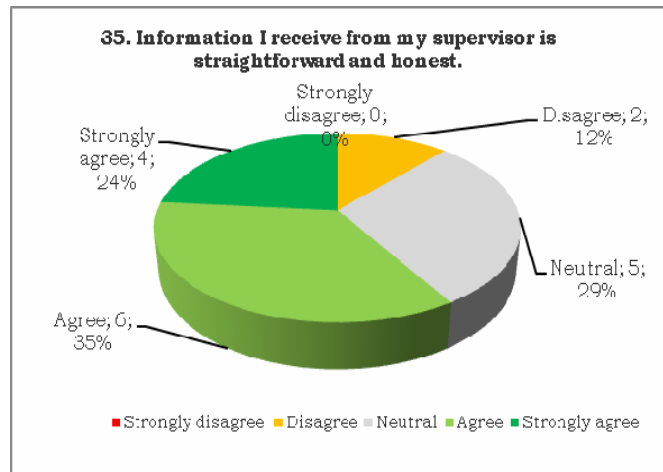
Graph 3: on line survey - question 13

The findings show, that perfect correlation exists with the attitudes about the “Overall communication to employees is effective”- Q33 (graph 4). Perfect correlation means for us that the answers of both questions were actually identical, so if any change in the perception occurs, the probability the other perceptions to move in the same direction is high.



Graph 4: on line survey - question 33

The frequency of the answers indicate optimism and only 27 % of the order management team have neutral attitude. The implications found so far place the employees in the autonomous part of the self-determination continuum, where goal values and regulations as identified or integrated.



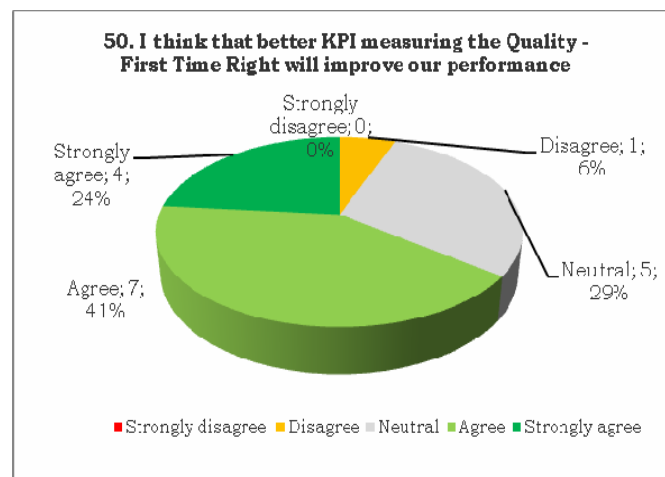
Graph 5: on line survey - question 35

Further, the identification of the employees with the products and services correlates with $\rho=0.73$ to the perception “Information I receive from my supervisor is straightforward and honest” – Q35 (graph 5).

In this statement the employee show less positive attitudes and even disagreement levels. Nevertheless, most of the observations are in the positive scale, where 10 out of 17 people generally agree and are satisfied with this aspect of the management style. In this context, improvement activities can be suggested. Positive change in the employees perception about supervisor’s trust will relate with positive change in the perception about the products and services. The way the supervisors is perceived is considered to be one of the main drivers for employee engagement as it supports intrinsic motivation and autonomous extrinsic motivation in the team and better performance levels can be expected. In case there are people doubting this statement it might reflect to the way they are motivated to work. Intrinsic motivation connected mainly with empowerment, interest in the job, participation and autonomy, can be pushed by the

management style in to the extrinsic directions. Employees might perform mainly because the activity is important due to lack of information or lack of trust.

The third question correlation with the perception of products and services is the representative of quality First Time Right, question 50 “ I think that better KPI measuring the quality FTR will improve our performance”



Graph 6: on line survey - question 50

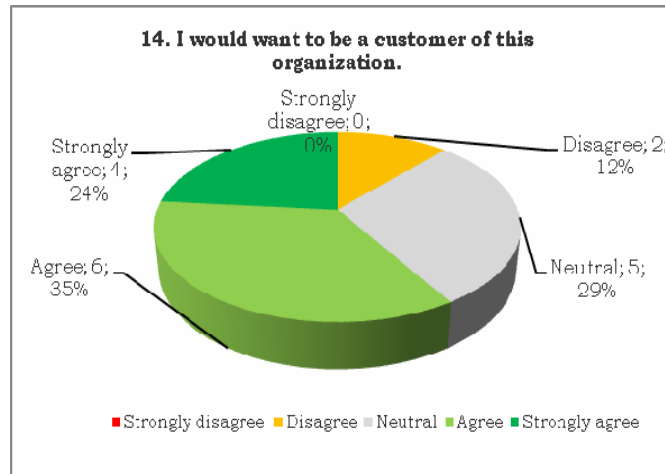
This is giving the suggestion that in improvement environment always better KPI will be needed and employees might be more engaged in them. In this case, the need of better key performance indicators is supported by the positive opinion of the employees (graph 6). The results show that 24 % strongly agree and 41 % of the team think that performance will be improved by introducing better measurements for individual performance. However, The knowledge of the Self-Determination Theory in this case will give further challenge in finding solutions for this issue. On one side the identification of the employee with the company, the trust and believe of the products are very much stimulation the intrinsic motivation as it gives empowerment feelings and increases the interest of the employee in the job, main driver for intrinsic motivation. On other side the KPI area is something easily influencing and changable by improvement programs, but as theory implies KPI measurements are symbol of control and something which has to be followed-characteristics of extrinsic motivation. When

people take, understand and accept the idea that better KPI are important and they might start feeling more competent, autonomous and related to this area. The regulations will be not only taken, but accepted and intergration of the extrinsic motivaton can be reached.

The group of questions correlating with the employee identification with products and services greatly correlates with communication effectiveness, supervisors style and the attitude about KPI. The last two topics can be added as next ponts in the improvement list, main goal of the diploma thesis.

The last pares of correlations in the section are connected with the employee identification with the customer. Question 14 “ I would want to be a customer of this organisation” (graph 7 below) correlates perfectly with question 35 presented above “Information I receive from my supervisor is straightforward and honest”. Less strong is the correlation (0.73) to question 33 “Overall communication to employees is effective”. As it was already mentioned, communication is considered to be in the satisfactory levels, so the focus in this relations on the attitude in the perfect correlation pare – customer identification and supervisors style of informing employees.

The research indicates perfect correlation or in other words perfect match of the employee answers on these questions. Nearly 60 % of the employee support the statemts, but 1/3 of the team shows neutral opinion, 2 even disagree, giving the impression and signal of unsatisfaction. On one side if beeing a customer and on the other with the quality of information provided by the supervisor in terms of trust and straightforwardness. These two areas are imprortant for the engagement as behaviour. Macay and Schneider (2008) point out that feeling of trust mediate the relationship between supervisors behaviour and behavioural engagement. Behavioral engagement as the extra role behaviour., characterised with organisational citisenchip behaviour, initiative, role expantion and adaptivness. The results show just above 50 % satisfaction in the team and natuarlly this pare of questions is placed in the improvement list.



Graph 7: on line survey - question 14

The main research findings from the correlation between Section 4 “Quality, Customer service and work performance” and the virtual section “Service Quality” can be summarised as following:

- Supervisors commitment to quality excellence and customer service correlates with the importance of sales order release quality
- Employee identification with the companies products and services correlates with overall communication to employees , the information received by the supervisor in terms of honesty and straightforwardness and the effectiveness of first time right related KPIs.
- Employee identification with the customer correlates with the information received by the supervisor in terms of honesty and straightforwardness and the overall communication to employees.

The research indicates that Communication is one of the factors supporting service quality (Ueno, 2010) at this stage of the analysis

Main improvement areas related to quality First Time right are identified as following:

- Better KPIs measuring performance

- Sales order release part of the supply chain
- Supervisors commitment to performance excellence and information
- Employees identification with products services and clients

These should be one of the priority areas to concentrate effort for improvement and investigate, further in depth not only the frequencies of the perceptions, but also additional research the causality of these areas.

Correlations of employee engagement section “ My Supervisor” with service quality

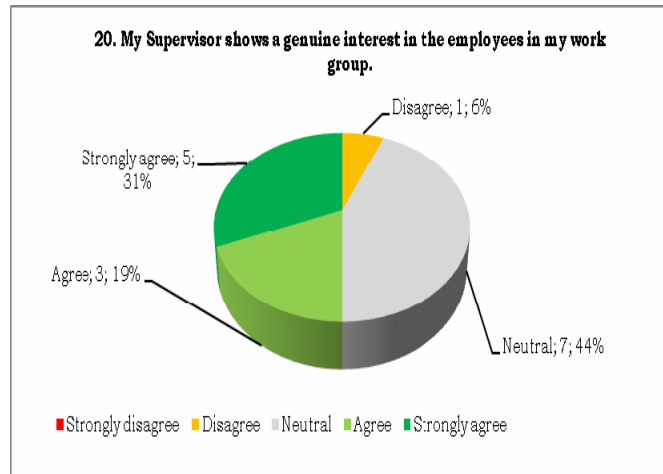
The second employee engagement section which is identified to have strong correlation with the virtual section – service quality is “ My Supervisor”. The main pairs of correlation (figure 12 below) are presented and analysed in the lines to follow.

On the side of employee engagement there are three questions which correlate most to service quality. “My Supervisor shows a genuine interest in the employees in my work group” “My supervisor keeps me informed about matters that affect me.” and “My supervisor provides performance feedback that is timely and on a consistent basis. The data indicates correlation mainly with two questions part of the service quality section: “Overall communication to employees is effective” and “Within my work group, employees are encouraged to exchange job ideas with each other.”

Employee Engagement		Quality - Virtual section		
Section	Question	Question	ρ	Factor
S-7 My Supervisor	20. My Supervisor shows a genuine interest in the employees in my work group.	33. Overall communication to employees is effective.	0.58	Communication
		7. Within my work group, employees are encouraged to exchange job ideas with each other.	0.71	Teamwork
	23. My supervisor keeps me informed about matters that affect me.	33. Overall communication to employees is effective.	0.77	Communication
		7. Within my work group, employees are encouraged to exchange job ideas with each other.	0.71	Teamwork
	25. My supervisor provides performance feedback that is timely and on a consist basis.	33. Overall communication to employees is effective.	0.64	Communication
		7. Within my work group, employees are encouraged to exchange job ideas with each other.	0.55	Teamwork

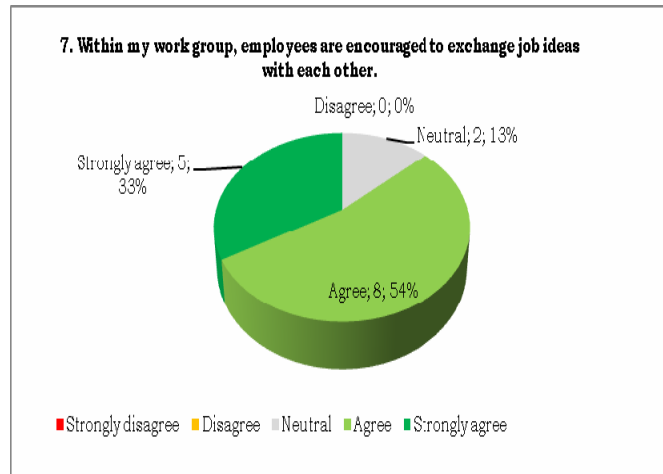
Figure 12: Correlation between Employee Engagement section “My Supervisor” and virtual section “Service Quality”

The genuine interest of the supervisor looks to be much stronger related to the exchange of job ideas than to the overall effectiveness of the communication. These statatements are symbols of autonomous extrinsic and intrinsic motivation, suporting better competence and relatedness. The data from the observations will reveal what is the status in the team and give indications, which areas are candidates for improvements.



Graph 8: on line survey - question 20

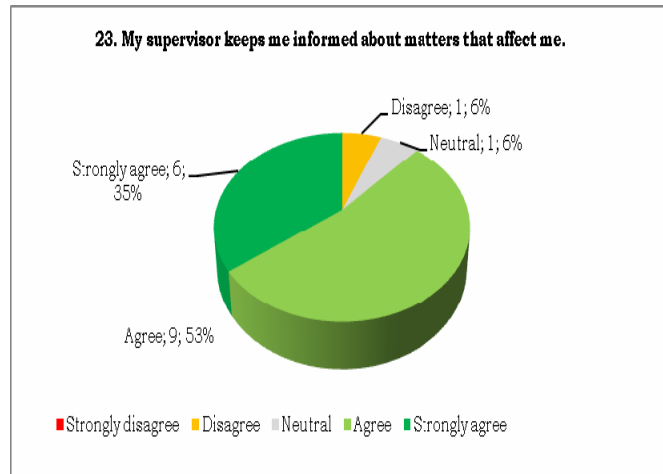
The research shows that 1/2 of the employees place their attitude towards the statement “My Supervisor shows a genuine interest in the employee in my work group” in the positive scale (graph 8). However “Neutral” part of the observations, reaching 44% is a fact, which can be taken as signal for improvement. This not possitive and not negative opinion can be interpreted not engagement in the topic and in any case cannot be taken as a possitive opinion., which supports the suggestion that the communication of the supervisor should be placed as a priority in the improvement plans. In other words, better exchange of ides with the supervisor or stronger genuine interst from his or her side, is very probable to raise the positive perception within the team and have effect on quality and engagement. As already mentioned above, there is stronger correlation with the exchange of ideas, then the effectiveness of the communication (graph 9).



Graph 9: on line survey - question 7

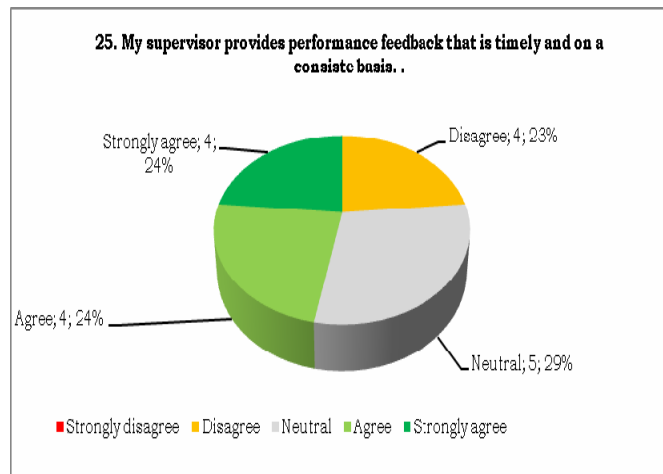
Both service quality representatives show very positive attitude and imply for satisfactory level of communication within the order management group in general. Employees seem to have strong interaction and social activity, even though there is small percentage of team members forming one more time neutral levels in their opinion in terms of effectiveness of this communication. Thus, state engagement as involvement is supported by the data, but it is not possible to conclude what is driving it most, the work attributes as variety, challenge and autonomy or the supervisor's style. This can be a topic of future research.

The next pairs of correlations imply that the supervisor provides sufficient information about the team, but there is a disagreement about the way he or she provides performance feedback (graphs 10 and 11 below).



Graph 10: on line survey - question 23

Large share of the employees disagree (23%) or are neutral (29%) in their claims about the performance feedback, which in total represents more than the half of the team. It is not possible to suggest what are the causality connections witing these correlations, it is pointed out that these areas are connected and change in the perception of the one, will influnce change in the perception of the other in the same direction.



Graph 11: on line survey - question 25

Supervisors feedback is one of the most powerfull social prices every employee is looking for. Extrinsic motivators as competiotions, tangible rewards

and other external drivers are not effective anymore in today's working environment. Employees look more and more for social rewards which give emotions and are said to be the best intrinsic motivators. Here it can be connected that the positive answers about the exchange of ideas and communication within the team are expression that employees are satisfied with the social exchange and emotional balance between each other within the team. The critic towards the manager on the other side gives the signal that these social needs are not totally fulfilled. As the causality analysis is not part of the research, only ideas about how to try to push both areas up into positive ranges will result in better satisfaction of the social need and motivation for work.

The main research findings from the correlation between Section 7 "My Supervisor" and the virtual section – Service Quality can be summarised as following:

- The genuine interest of the supervisor in the employees, the effective information he or she provides and the performance feedback – timely and consistent – correlate strongly with the effective communication flow and the exchange of job ideas within the team.

The research indicates that Communication and Teamwork, are the factors supporting service quality (Ueno, 2010) at this stage of the analysis.

Main improvement areas related to quality First Time Right are identified as following:

- Supervisor's performance feedback - timely and consistent bases
- Supervisor's genuine interest in the employees

Class A category of sections presents the very strong relationship between employee engagement in quality, customer service, work performance and supervisors style with factors supporting service quality.

It was identified that Communication and Teamwork are the main engagement connections and probably improvement in these areas will successfully improve the quality performance of the team.

A short summary of the findings is presented in order to build the milestones of the overall picture of the correlation between employee engagement and service quality. Class B correlations presented in the next chapter will support and give a better understanding and interpretation of the findings so far.

Class A findings are as follows:

- Supervisors commitment to quality excellence and customer service correlates with the importance of sales order release quality
- Employee identification with the companies products and services correlates with overall communication to employees , the information received by the supervisor in terms of honesty and straightforwardness and the effectiveness of first time right related KPIs.
- Employee identification with the customer correlates with the information received by the supervisor in terms of honesty and straightforwardness and the overall communication to employees.
- The genuine interest of the supervisor in the employees, the effective information he or she provides and the performance feedback – timely and consist correlate strongly with the effective communication flow and the exchange of job ideas within the team.

Class A improvement areas are as following

- Better KPIs measuring performance
- Sales order release part of the supply chain

- Supervisors commitment to performance excellence and information
- Employees identification with products services and clients
- Supervisor's performance feedback - timely and on consist bases
- Supervisor's genuine interest in the employees

The research gives information about the organisational environment of the order management team. It is evident the presence of employees' participation, internalisation of the importance of the work, supporting initiation, all symbols of autonomous extrinsic or intrinsic motivation. The second strong group of correlations, is essential for the presentation of the diploma thesis as a whole. Class B correlations, give more information about status in the perception and relations between engagement and service quality.

6.2 Correlations - Class B

In the chapter to follow I will show the correlations between Employee Engagement and Service Quality having not very strong significance, but still rejected from the null hypothesis and taken as essential. Investigating the most correlated questions within this section will reveal more pieces from the puzzle we I am trying to build. To create a well feasible picture of the main relations between engagement and quality and find out what are the areas which should be improved. Thus helping the Improvement group of this Order management team to define their activities and receive better results later on in their work with the DMAIC model of Six sigma. For now it is known that there are several points which need attention and this was presented in the lines above, however the information is not enough to make conclusions. The B class correlations uncover different areas, which placed together with this what is found will have the synergy effect and open the door to a more clear and structured world created from the perceptions of the employees.

Figure 13 shows the B class sections of Employee Enagement, which most correlate with the virtual section “Service Quality”. Leader in this group is section “Communication” (S10), followed by “Compliance”, “The work itself”, “Commitment to our company” and “Inovation and change”. In order to draw some usefull information the most strongly correlating questions from those sections were identified and analysed in order to answer the question “Is improvement needed?”

	Quality(VS)	Significance	alpha 0.5	alpha 0.05	apha 0.01
S10	0.72	Strong	Reject	Reject	Not Reject
S13	0.70	Strong	Reject	Reject	Not Reject
S1	0.66	Strong	Reject	Reject	Not Reject
S11	0.56	Strong	Reject	Reject	Not Reject
S5	0.50	Strong	Reject	Reject	Not Reject

Figure 13: Correlation between B class Employee Enagement sections and virtual section “Service Quality”

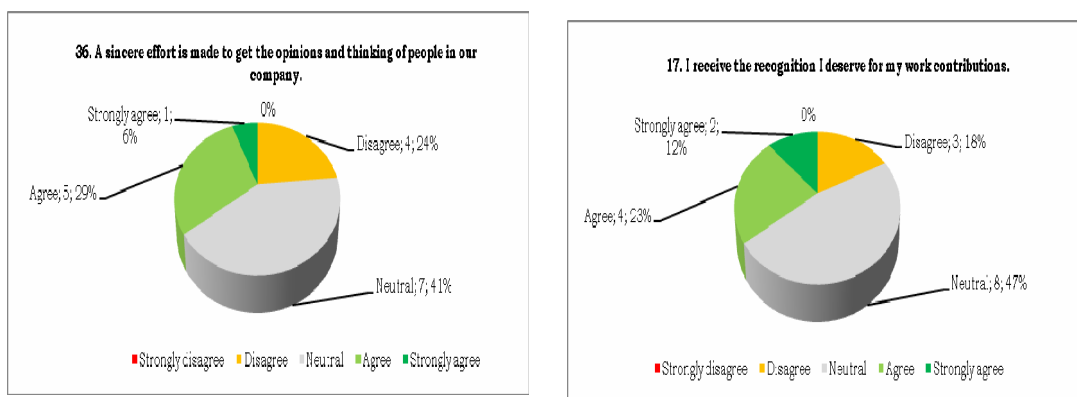
The leader in the B corelations between the Employee Enagement and Service Quality is section 10 - Communications. The strongest correlation within both sections is the relation between the effort made to get the opinions and thinking of people and the recognition received by the employees. In table 6 the strongest correlated questions are presented.

Class B correlations				
Employee Engagement		Quality (VS)		
Section	Question	Question	p	Factor
S10 - Communications	36. A sincere effort is made to get the opinions and thinking of people in our company.	17. I receive the recognition I deserve for my work contributions.	0.70	Performance appraisals and reward
S13 - Compliance	44. If I become aware of a fraud, theft, abuse or other illegal or unethical action, I will report the situation to the appropriate manager in our company.	43. People with diverse backgrounds are treated with respect in this company.	0.64	Culture
S1 - The work itself	1. I like the kind of work I do	33. Overall communication to employees is effective.	0.77	Communication
S11 - Commitment to our company	37. I am committed to working at our company for the foreseeable future	40. I have a clear understanding of our company's business objectives.	0.90	Culture
S5 - Innovation and change	16. Our company encourages positive change and new ways of doing things.	35. Information I receive from my supervisor is straightforward and honest.	0.75	Communication

Figure 14: Correlation between the questions in B class Employee Engagement sections and virtual section "Service Quality"

The relation between communication and performance appraisals and reward

The research shows that only 35% of the employees agree that the effort to get their opinion and thinking is sincere. This is strongly correlating with the perception about how their work contributions are recognized. It can be seen that most of the people have no positive claim about - 65 % do not agree that they receive the deserved recognition. Both of the questions have negative signals for the status in the team and should be placed in the list for improvement.



Graph 12 and 13: on line survey - question 36 and 17

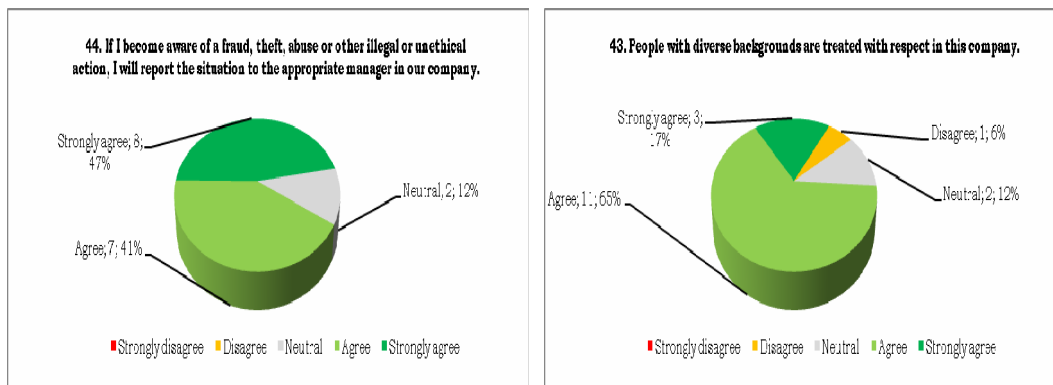
The correlations give positive relation, which suggests that any movement in the opinion about the effort will probably move the other too and vice versa in the same direction. For management and for the Improvement group is important to analyze further, what are the drivers for these areas and how the perceptions could be changed. Alarming is the number of employees in the “gray” zone – Neutral. Seven people out of 17 actually can neither agree nor disagree that a sincere effort is made, which from engagement point of view gives feeling of not engagement at all. The same is the tendency when speaking about recognition – 8 people forming in this small sample 47 %.

The results point out an area, which if improved may have great impact on quality performance, satisfactions from rewards and social communication. Recognition, opinion, way of thinking are associated with autonomous extrinsic motivation and are said to be drivers for intrinsic motivation, therefore negative

attitudes within those areas are placing the employees towards the more controlled extrinsic motivation zones and might be a signal for amotivation. It can be a barrier for satisfying basic psychological needs and reflecting in work outputs.

The relation between compliance and culture

Compliance is a topic very important for the employee engagement as it refers to obeying laws and regulations. People are expected to be honest, fair and trustworthy in their activities, to foster atmosphere of equal opportunities for every member of the team, to avoid conflicts and promote ethics.



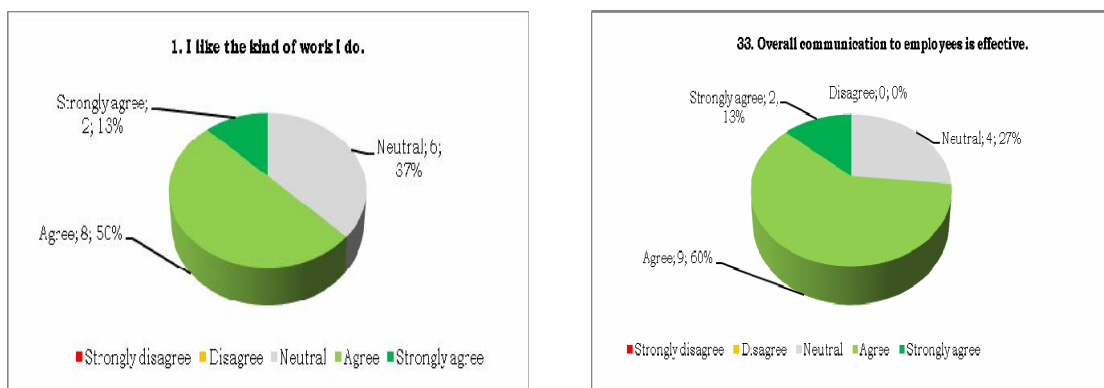
Graph 14 and 15: on line survey - question 44 and 42

Taking into consideration this points it is positive to find out that this team claims to comply if becomes aware if any diviations. It is not surprising that this question correlates with the opinion about if people with diverse backgrounds are treated with respect in the team. This type of the social behavior and culture can be sometimes crutial for the motivation of the employee if the psychological need of respect and ethics is not satisfied. In this case study both parts of the correlation show satisfactory levels. However, there is one person in the team who disagree and two who are not claiming any side, pointing out that some reconsideration in the the way how people are respected in the team should be made. Eventhough this is very small negative representation, it can have

strong effect in the behavior, motivation and work performance of those three employees, forming nearly 20% of the team.

The relation between the work itself and communication

This section is characterised with no negative attitudes, but strong representation of the Neutral level, which was already pointed out as symbol of not engagement with the topic or a “soft” negative answer. From the pies, presenting the frequency of the observations correlating with each other, is seen that nearly 37 % do claim that agree with the statement “ I like the kind of work I do” . In other words 6 people of the team are generally motivated by extrinsic drivers and not the interest in the work is making them motivated.

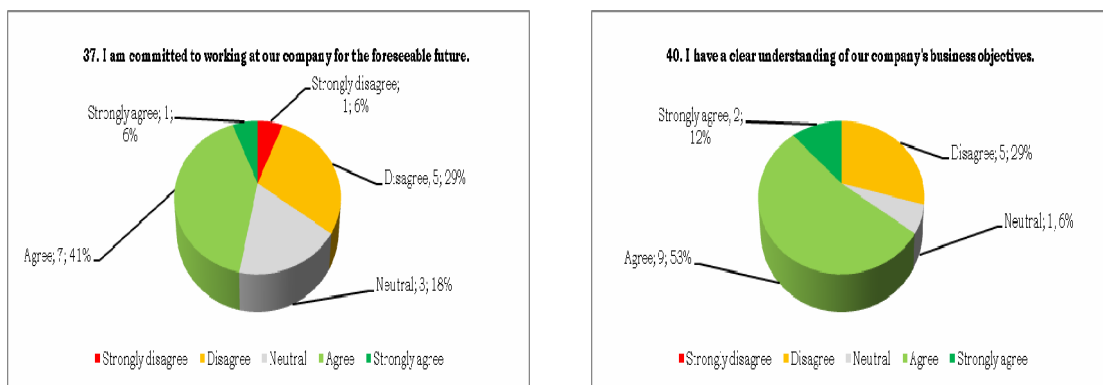


Graph 16 and 17: on line survey - question 1 and 33

Changes within this perception would change the claims in the perception about the communication effectiveness or the other way around. For example if some employees change their attitude and believe that their communication is more value adding, it might change their opinion about the enjoyment or interest in the working activities. On other side it is very possible that for some reason they will start liking their job more and thus will change their statements about the effectivity of communication. What ever the driver is, from this correlational findings is important to underline that in this team the enjoyment of work is correlated with the communication.

The relation between long-term work commitment and understanding of the company goals

The strongest correlation within section 11 of the Employee Engagement and the Service Quality is the relation between question 37 and 40, uncovering quite discussable results. The finding show that the commitment of the employee to work for the company in the future is related to the clear understandings of the companies goals. More then half of the employees don not commit to working for the company in the near future and very high 6 people out of 17 making 35% sem not to have clear understanding of the organisatioanl goals. This result puts a question on the commitment as a whole and obviously have impact on the work performance in terms of quality. Employees retention is strong signal of not engagement. Organisational commitment, as important facet of engagement shows the willingnes to exert energy in support of the otganisation.

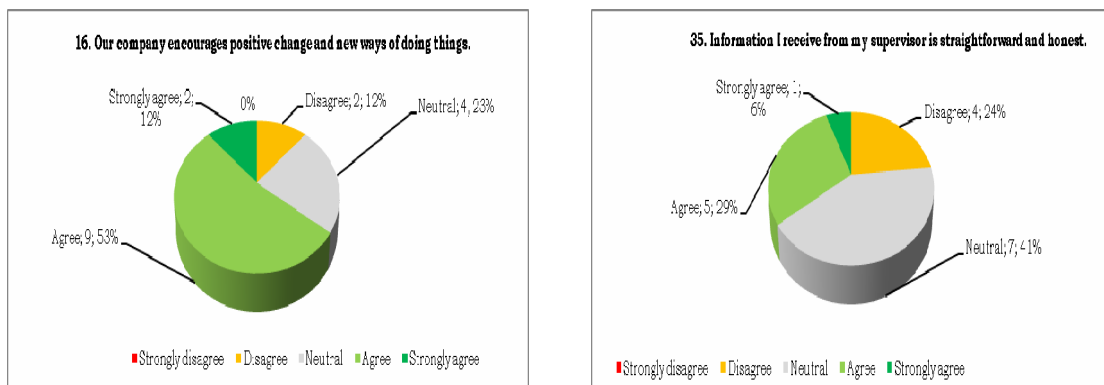


Graph 18 and 19: on line survey - question 37 and 40

Feeling pride beeing organisational member togwther with the identification with goals and objectives is esential for the personal ientification of the employee and drivers for better peformance results. From here it is derived the next areas where improvement activity is needed if the team wants to be more successful and show more satisfactory outcomes.

The relation between innovation, change and communication

The last area in the B correlations is the Innovation and change strongly correlation with the communication factor driving service quality. In this group of questions, the most strong relation has been identified between the perception how the positive change and new ways of working are encouraged in the team and the information received by the supervisor in terms of honesty and meaningfulness. Here we very positive attitudes and fact that the team is open to changes and the atmosphere in the group is supporting innovations. Thus, reflecting into the internalisation of the extrinsic motivation and becoming more identified then introjected. The coherence between goals, values and regulations, symbol of autonomous motivation and the extrinsic motivation integrated faces a barrier, as we could see from the relations already presented. Moreover it is registered by question 35, presenting the opinion about the quality of the supervisors informational flow, that once again it has importance in generating quality value within the team. Unfortunately more of the people haven't claim positive attitude about the honesty and straightforwardness of the supervisor, which undermines the autonomous motivation and limits the opportunities the employees to enter more intrinsic levels, where full integration of goals and values is achieved.



Graph 20 and 21: on line survey - question 16 and 35

In sum, the B correlations show, first of all relation between the employee recognition and the effort made to get the opinion and thinking of the employees. Secondly the compliance levels correlate with the opinion about the respectful treatment of employees with diversified backgrounds. Thirdly, the job enjoyment is identified to be related to communication effectiveness. Commitment about future employment will move together in this group according to the level how business objectives are understood and last but not the least the encouragement of changes and new ways of working correlates the most with the management style and especially if the information provided by the supervisor is straightforward and honest.

Main factors determining service quality, which popped up to have connection with employee engagement are: Performance appraisals, Culture and Communication

From these connections there were identified a few more areas where an effort should be made to improve the overall climate within the Order management team. Employees feel that the recognition for their work contribution can be more satisfactory and their way of thinking and opinion is not heard enough. Furthermore, there is a need for better understanding of the business objectives and change in the attitude regarding the future commitment of the employees.

7 Conclusions and Recommendations

There are many areas, that are considered to be significant for the quality improvement. The purpose of the presented research is to identify these of the areas that significantly matter for the strong positive correlation between the Employee Engagement and the Service Quality in a particular business case concerning business process improvement of an order management team in a multinational company. The significant areas are identified through a correlation analysis of the answers to an online survey. The results are used for further Measurement, Analysis, Improvement and Control of the key areas identified. The main findings are aimed to serve as a scientifically validated plan of action for the group in charge for the business process improvement in the order management team which is studied. Particularly, recommendations are provided how to increase the First Time Right performance metrics of the order management team through focus on the Define part of the DMAIC model in the Six Sigma methodology for business process improvement.

Main results of the research and answers of the questions stated in the introduction part are:

Q1: Which factors important for the service quality correlate significantly also with the employee engagement?

The correlation analysis of the answers that the team members give to the questions in the online survey provide sufficient evidence to claim with high confidence that the service quality factors which are significantly correlated also with the employee engagement are as follows: Communication, Teamwork, Performance appraisals and Culture

Q2: What are the areas, which need improvement in order to reach better engagement and service quality of the order management team?

By analysing the relationship between the employees' perception of the leadership style and the service quality as presented in section 6.1. , there are several areas identified unsatisfactory perception which need to be analyzed and addressed with much care in the future. This is practical outcome of the diploma thesis and main input to the Define activities of the improvement group. In this respect, the main recommendations to the supervisor could be summarized as follows.

- Supervisor's feedback must be timely and consistent
- The information provided by the supervisor must be honest and straightforward
- Supervisor must pay genuine interest in the employees
- Business objectives should be clear and easy to understand
- The voice of the employee – opinion and way of thinking – must be heard
- Employees' future commitment to working in the company must be encouraged
- Employees need to receive recognition of their work contributions
- Sales order release process needs to be paid a special attention, as because it is the most important in the order-management part of the supply chain
- KPI measuring First Time Right is not sufficient

The results of correlation analysis give the following implications concerning the working hypotheses:

H1: There is evidence for strong significant positive correlation between the employee engagement and the service quality factors in the answers of the respondents to the online survey questions.

The highest is the magnitude of the positive correlation with service quality of the following aspects of the employee engagement:

- supervisor's commitment to quality
- supervisor's timely and consistent feedback,
- supervisor's genuine interest in the employees and the preception of the communication effectiveness
- the honesty of the supervisor
- the importance of sales order release,
- the quality if the KPI and exchange the of ideas.

Less strong, but still significant correlations were identified between the service quality and the following aspects of the employee engagement:

- the employee recognition and the effort made by the supervisor to get the opinion and thinking of the employees;
- the compliance levels and the opinion about the respectful treatment of employees with diversed backgrounds;
- the job enjoyment and communication effectiveness;
- the commitment about future employment and understanding of business objectives, the encouragement of changes and new ways of working as well as how straightforward and honest is the information provided by the supervisor.

H2: The team members' perception of the leadership style is positively correlated with their perception of the service quality.

It is found that leadership style in terms of feedback, information and the interest in the employees has a significant positive correlation with the perception of service quality.

The main findings of the survey suggest that there are tight connections bewteen employee engagement and service quality and it is possible to create improvement activities based on the gaps withing both areas. The improvement

group – First Time Right, of this order management team has the challenging task to Define the main area of interest, create key performance indicators and to Measure them. Further, to Analyse the results, to Improve processes and to Control the service quality of First Time right in the entire supply chain from sales order release to delivery creation.

Influencing and changing employees perception about the supervisors style, business objectives and key performance indicators, needs great effort, long term strategy and full understanding of all factors involved. The future progress in these areas requires further focusing on the Define process towards the first step in order management supply chain – sales order release. The common opinion of the employees is that it is the most important area of the supply chain, where the most human mistakes appear because of the lack of key performance indicators. This employee perception shows that work motivation is driven by more autonomous extrinsic regulators and the values and goals are not only introjected, but rather identifiable or even integratable. Once the autonomous parts of the self-determination continuum are stimulated, the employees will have more opportunities to identify themselves with the values and goals of the activities within the sales order release process.

Finally, the limitations of the methodology could be summarized as follows:

- the statistical approach of the study is purely descriptive - correlation analysis gives information only about the strength but not causality of the relationship between the two variables, employee engagement and service quality
- the number of the respondents is relatively small ($n=17$) for the results to be representative. All solutions and recommendations refer only and exclusively to the particular business case studied
- due to the fact that the company do not follow any KPI measuring First Time Right, it was not possible to combine the research with other robust analytical procedures within this area.

As a natural continuation of the current work further research could be suggested on the intrinsic motivational levels within the team. This will give new knowledge how to effectively stimulate employee engagement as a determinant of the team's service quality.

8 Appendix 1

Service Quality- virtual section

Factor	Question
Empowerment	2. My work gives me a feeling of accomplishment.
Training	3. I have the resources, tools, computers, materials, and information I need to do job effectively.
Empowerment	5. I am generally able to balance my work and personal life.
	6. I have authority to make important decisions that affect my job and supporting customers.
Teamwork	7. Within my work group, employees are encouraged to exchange job ideas with each other.
Recruitment and selection	11. The people in my work group maintain high performance standard
	12. My work group almost always meets our deadlines and achieves our goals.
Performance appraisals and reward	17. I receive the recognition I deserve for my work contributions.
	18. I am fairly paid for the job I perform.
Training	26. I receive adequate training to do my job effectively.
Performance appraisals and reward	29. Performance appraisals and discussions are used to encourage employees to develop their capabilities or help them build on their own strengths.
Teamwork	31. In my work group, we communicate frequently and effectively.
Communication	32. Communication between work groups occurs on a regular and effective basis.
	33. Overall communication to employees is effective.
	35. Information I receive from my supervisor is straightforward and honest.
Culture	40. I have a clear understanding of our company's business objectives.
	42. People are treated with respect in this company, regardless of level or position
Culture	43. People with diverse backgrounds are treated with respect in this company.
First Time Right	47. Quality of Sales Order release is the most important for our part of the supply chain
	48. Most of the issues due to human mistake are in the Sales Order release part of our supply chain.
	50. I think that better KPI measuring the Quality - First Time Right will improve our performance
	51. I think that better communication and cooperation with our interfaces will improve our Quality - First Time Right

9 Appendix 2

Employee Engagement

Section	Question
S1 - The work itself	1. I like the kind of work I do.
S2 - Work Environment	4. There are enough people in my department/work group to handle the existing workload.
	8. People who make decisions that affect me seem to know what is going on at m level in the company.
S3- Desicion Making	9. Overall, I believe that top leaders of our company are making the right decision for the success of the company.
S4 - Quality, Customer service and work performance	10. My supervisor provides a strong commitment to quality excellence and customer service.
	13. Our company provides products and services that meet or exceed customer expectations.
	14. I would want to be a customer of this organization.
S5 - Inovation and change	15. I am encouraged to come up with innovative ideas on the job.
	16. Our company encourages positive change and new ways of doing things.
S6 - Reward and recognition	19. The benefits programs provided by our company are satisfactory and meet my expectations.
S7 - My supervisor	20. My Supervisor shows a genuine interest in the employees in my work group.
	21. My supervisor is actively involved in my work group.
	22. My supervisor is fair and consistent in applying the rules to all employees.
	23. My supervisor keeps me informed about matters that affect me.
	24. My supervisor provides performance feedback that is fair and useful to me.
	25. My supervisor provides performance feedback that is timely and on a consist basis.
S8 - Development/ Opportunity	27. Our company is committed to the growth of individual employees
	28. I am aware of promotional opportunities and feel I have a chance for advancement, if I am qualified.
S9 - Teamwork	30. There is good cooperation in my work group to work as a team and get the job done.
S10 - Communications	34. Information provided by the senior leadership team is straightforward and honest.
	36. A sincere effort is made to get the opinions and thinking of people in our company.
S11 - Commitment to our company	37. I am committed to working at our company for the foreseeable future.
	38. I am proud to work for this organization.
	39. I am optimistic about the long-term success of our company.
S12 - Culture	41. I believe our company overall is headed in the right direction.

S13 - Compliance	44. If I become aware of a fraud, theft, abuse or other illegal or unethical action, I will report the situation to the appropriate manager in our company.
	45. If I become aware of a fraud, theft, abuse or other illegal or unethical action, I know who to report the situation to in our company.
S14 - First Time Right	46. Sales Order release is the least interesting part of my job.
	49. I like releasing Sales Orders.

10 References

1. Author Unknown (2003) Linking Employee Satisfaction with Productivity, Performance and Customer Satisfaction, Corporate Leadership Council.
2. Author Unknown (2010) 8th Annual Global Survey of Supply Chain Progress, Computer Science Corporation
3. Author Unknown (2010) Report on Telecommunications Market, Barclays Capital.
4. Author Unknown (2010) The Shape of Emerging 'Deal', Global Workforce Study, Towers Watson.
5. Author Unknown (2011) Beyond the Numbers: A Practical Approach for Individuals, Managers and Executives, Employee Engagement Report, Blessing White Research.
6. Author Unknown (2011) Trends in Global Employee Engagement, Aon Hewitt.
7. Bedrnová, E a kolektiv (2007) Psychologie a Sociologie Řízení, Management Press.
8. Cook, S. (2008) Essential Guide to Employee Engagement: Better Business Performance Through Staff Satisfaction. London, GBR: Kogan Page Ltd.
9. Dahlgaard, S. (2001) The Human Dimension in TQM : Learning, Training and Motivation, Linköping Linköping Univ.
10. Eisen, A. (2011) Dialog on Leadership: Control is Not Enough, *European Business Review*, Vol. 1, pp. 41-46.
11. Gagné, M. and Deci, E. (2005) Self-determination Theory and Work Motivation, *Journal of Organizational Behavior*, Vol. 26 , pp. 331-362.
12. Gagné, M. (2009) A Model of Knowledge-Sharing Motivation, *Human Resource Management*, Vol. 48(4), pp. 571-589.
13. George, M. (2003a) Lean Six Sigma for Service.Blacklick, OH, USA: McGraw-Hill Professional Publishing.
14. George, M. (2002) Lean Six Sigma : Combining Six Sigma Quality with Lean Production Speed.Blacklick, OH, USA: McGraw-Hill Professional Publishing.

15. George, M. et al. (2003b); Rowlands, Dave; Kastle, Bill. What Is Lean Six Sigma?. Blacklick, OH, USA: McGraw-Hill Professional Publishing.
16. Harter, J (2003) Employee Engagement, Satisfaction, and Business-Unit-Level Outcomes: A Meta-Analysis, The Gallup Organization, Princeton, New Jersey.
17. Hammer M, and Champ M. (1993) Reengineering the Corporation. New York, NY: Harper-Business.
18. Macey, W., and Schneider, B. (2006) Employee Experiences and Customer Satisfaction: Toward a Framework for Survey Design with a Focus on Service Climate. In A. I. Kraut (Ed.), Getting action from organizational surveys (pp. 53–75). San Francisco: Jossey-Bass.
19. Macey, W., and Schneider, B. (2008) The Meaning of Employee Engagement, *Industrial and Organizational Psychology*, Vol. 1, p. 3-30.
20. Meyer, J. and Gagné, M. (2008) Employee Engagement from a Self-determination Theory Perspective, *Industrial and Organizational Psychology*, Vol. 1, pp. 60-62.
21. Miner, John B. (2006) Organizational Behavior 1: Essential Theories of Motivation and Leadership Armonk, NY, USA: M.E. Sharpe, Inc., 2006.
22. Olson, K (2010) The Relationship between Stewardship Theory of Management and Employee Engagement: A Case Study Exploration of the Leadership Philosophy of a Professional Services Firm, Working Paper, Benedictine University.
23. Pavlica, K. a kolektiv (1999) Sociální Výzkum, Podnik a Management, Ekopress.
24. Porter, L., and Lawler, E. (1968) Managerial Attitudes and Performance. Homewood, IL: Irwin-Dorsey.
25. Surynek, A. (2001) Základy Sociologického Výzkumu, Management Press.
26. Ueno, A. (2010) What are the Fundamental Features Supporting Service Quality, *Journal of Services Marketing*, Vol. 24/1, pp. 74-86.
27. Veber, J. (2009) Management -- Základy Moderní Managerské Přístupy Výkonnost a Prosperita.
28. Vroom, V. (1964) Work and Motivation. New York: Wiley.